APPLICATION FOR OPIOID ABATEMENT FUNDING

Rural Access for Holistic Substance Use and Behavioral Health Care

The Century Community Pharmacy

Submitted by Escambia Community Clinics, Inc., d/b/a Community Health Northwest Florida

Escambia County Notice of Funding Availability — Opioid Abatement Strategy, FY 2026–2027

Applications due Friday, September 11, 2026, 5:00 p.m.

Completeness Checklist

Project Name:	Rural Access for Holistic Substance Use and Behavioral Health Care
Project Applicant:	Escambia Community Clinics, Inc., d/b/a Community Health Northwest Florida

Application Component	Page #
1. Applicant Information	[redacted]
2. Project Information	[redacted]
3. Certification	[redacted]
4. Project Description (Narrative)	[redacted]
5. Quality of Service Questionnaire	[redacted]
6. Ability to Complete Activities Outline	[redacted]
7. Budget Narrative	[redacted]
8. Budget and Match Form	[redacted]
9. Project Outcomes	[redacted]
10. Required Attachments	[redacted]
Supplemental: Glossary of Terms and Acronyms	[redacted]

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1. Applicant Information

Organization Name	Escambia Community Clinics, Inc., d/b/a Community Health Northwest Florida
Authorized Organization Representative	Chandra Smiley, MSW — Chief Executive Officer
Address	2315 West Jackson Street
City, State/Zip	Pensacola, Florida 32505
Telephone	(850) 436-4630
Organization Website	https://healthcarewithinreach.org
Contact Person Name/Title	Walter Arrington, MSW — Director of Grants and Development
Contact Person Email	warrington@healthcarewithinreach.org
Unique Entity ID (SAM #)	VMLCLHQ1E2Q3
Federal Employer ID #	59-3105246

2. Project Information

Project Name	Rural Access for Holistic Substance Use and Behavioral Health Care
Project Address	9420 North Century Boulevard, Century, FL 32535
Total Funding Requested	$750,000.00
Number of Persons to be Served	250 (100 through the funded pharmacy project; 150 across match-funded service lines)
Project Status	New Project

Project Type (check all applicable)

☒ Medication Assisted Treatment

☒ Education Program

☒ Prevention

☒ Recovery

☒ Treatment (other than medication assisted)

☒ Overdose Reversal Medication Distribution

☒ Criminal Justice Training, Prevention, and Treatment

☒ Other — pharmacy services; mobile medical, dental, CORE, and MAT units

Specify model: Integrated behavioral health and psychiatry within an NCQA-recognized Patient-Centered Medical Home — counseling, therapy, and case management delivered under Florida DCF's Recovery Oriented System of Care, with pharmacist-led warm hand-offs.

Target Population (check all applicable)

☒ Chronically Homeless

☒ Families

☒ Single Individuals

☒ Unaccompanied Youth (ages 18–24)

☒ Victims of Domestic Violence

☒ Veterans

☒ LGBTQI+ Individuals/Families/Youth

☒ Individuals with Severe and Persistent Mental Illness

Target Service Location (check all applicable)

☐ City of Pensacola

☒ Town of Century

☒ Unincorporated Escambia County

☒ All of Escambia County

Is this project using a mobile based treatment model? ☒ Yes ☐ No

3. Certification

To the best of my knowledge, I certify that the information in this application is true and correct and that the document has been duly authorized by the governing body of the applicant. I will comply with the program rules and regulations if assistance is approved. I also certify that I am aware that providing false information on the application can subject the individual signing such application to criminal sanctions. I further certify that I am authorized to submit this application and have followed all policies and procedures of my agency regarding grant application submissions.

Authorized Organization Representative — Signature	*Chandra Smiley*
Typed Name	Chandra Smiley, MSW
Title	Chief Executive Officer
Date	9/3/2026

4. Project Description

What Century Is Missing

Century sits at the northern tip of Escambia County, about forty minutes from Pensacola. The town lost its hospital in 2016. Health care options there have been thin ever since.

Escambia County has been hit hard by opioids. In 2023 the county's opioid overdose death rate was 47 per 100,000 residents. The state rate was 25.3. We were nearly double.

There is real progress to report. Escambia County EMS runs the Coordinated Opioid Recovery program, known as CORE, and Community Health Northwest Florida is one of its two community partners. Suspected opioid deaths fell from 77 in 2023 to 55 in 2024. In April 2026 CORE marked its 600th patient. County officials report an 86 percent success rate keeping people engaged in recovery. Florida's Department of Children and Families named Escambia one of the top ten programs in the state.

Non-fatal overdoses went the other way. They rose about 4 percent in 2024, to 4,201. Every one of those is a person who lived. Every one is a chance.

The progress is also uneven. Nearly all of the infrastructure behind it sits in the south end of the county. Century has a clinic.

Century has one retail pharmacy. It is not integrated with a medication-assisted treatment program. It does not operate a sliding fee schedule. It is not clinically connected to the provider who wrote the order. For someone on Medicaid, or with no insurance at all, starting buprenorphine in Century today usually means a drive to Pensacola.

Forty minutes is not far if you have a car. If you do not, it is everything. And the window matters. When a person decides they are ready, that decision does not hold for a week. A first dose that does not happen is usually a patient we never see again.

Who We Are

Community Health Northwest Florida opened for service in 1992 as Escambia Community Clinics, Inc. We are a 501(c)(3) nonprofit. In 2007 the Health Resources and Services Administration designated us a Federally Qualified Health Center, and we remain the only one serving Escambia and Santa Rosa counties. We were founded on the belief that all human beings have a basic right to health care, and our mission is to serve all who walk through our doors.

Last year we cared for approximately 49,000 patients across 15 care sites and four mobile units in Escambia and Santa Rosa counties (HRSA Uniform Data System, 2025). We provide primary care, pediatrics, women's health, dental, behavioral health, psychiatry, and substance use disorder treatment. We have done it here without interruption for more than thirty years, far longer than the twenty-four months this NOFA requires.

We also run pharmacies. Four full-service pharmacies in Escambia and Santa Rosa counties, each one built into our clinical care and our sliding fee program. Century would be our fifth. It is something we already know how to do, moved to where it is needed.

We have expanded CORE before using Escambia County Opioid Abatement funding, and we reported the outcomes we promised.

We handle public money carefully. CHNWF manages its own grant portfolio of more than $8 million across federal, state, and local funders, on a cost-reimbursement basis, with monthly reporting and annual audits.

In August 2026 the Florida Agency for Health Care Administration and the federal Centers for Medicare and Medicaid Services announced awards under the Rural Health Transformation Program. CHNWF convened 15 partner organizations across Escambia, Santa Rosa, Okaloosa, and Walton counties and led that application. The region received $41.5 million over five years, which CHNWF oversees. Century's share is $8.7 million, with $3.99 million in year one.

That money is already at work. We are strengthening our Industrial Boulevard clinic in Century. We are reopening the Church Street site for women's health, behavioral health and psychiatry, and opioid use disorder treatment.

There is one thing that money cannot buy. RHTP funds cannot be used to open a pharmacy. We can build the exam rooms. We can hire the prescribers. We can put mobile units on the road. None of it can fill a prescription.

That is what we are asking the County to fund.

What We Will Do

We will open a community pharmacy at 9420 North Century Boulevard in Century. The request is $750,000, all of it for property and buildout at that address. None of it goes to salaries or administration, and none of it is spent at the Church Street site, whose services are paid for by match dollars.

The pharmacy will:

- Dispense MAT medications the same day. Buprenorphine products and naltrexone, filled when a provider at our Century clinics or on a mobile unit starts someone on treatment. At full operation we project 300 to 500 prescriptions a week.
- Distribute naloxone and provide overdose education, reaching at least 50 unique patients in year one.
- Fill everything else people need. Blood pressure medication, insulin, antibiotics, psychiatric medications. Untreated conditions drive relapse.
- Provide pharmacist counseling and warm hand-offs to CORE responders, clinic providers, and case managers.

No One Is Turned Away

No one will be denied care or medication under this project because they cannot pay. Not at intake, not at the counter, not after ninety days, not ever. That is not a policy we adopted and could drop later. It is a federal condition of our existence as a Federally Qualified Health Center.

The health center has programs to ensure persons who are unhoused or meet specific federal criteria will pay nothing for services past the 90 day intake period. The health center has specific federal mandates to utilize an approved sliding fee scale that is universally applied to all patients. These savings are passed directly on to the patient. Our real cost for each visit is $320.00 if a persons is on our slide they can pay as little as $20.00 per visit past the 90 day period for an appointment.

Naloxone and overdose education are free to every Escambia County resident, with no intake form and no questions about income or insurance. Prescriptions are free to the patient for the first ninety days, the stretch when a person in early recovery is most likely to die and least likely to have money. After that, our federally approved sliding fee schedule applies. That schedule is a discount, not a bill: charges scale down with income, and any remaining nominal charge is waived for a patient who cannot pay it. Nobody is turned away.

We expect to serve 250 people in year one: 100 through the funded pharmacy project and 150 across the service lines that match dollars pay for.

Care That Comes To You

The pharmacy does not sit still. CHNWF is bringing a full mobile fleet into Century as part of this project. A mobile medical unit. Two mobile dental units. Mobile CORE services. Mobile MAT delivered with Escambia County EMS. These units go to houses, encampments, shelters, day centers, and community sites. A person can get an overdose-response visit, a physical, and a dental cleaning without finding a ride.

The pharmacy is what makes the fleet work. A mobile visit that ends in a prescription is only useful if there is somewhere close enough to fill it that day. Without a pharmacy, mobile outreach hands out referrals. With one, it hands out treatment.

We have identified a shell space in the building for a walk-in clinic we intend to fund later.

Why We Think It Will Work

Medication-assisted treatment is not experimental. SAMHSA's Evidence-Based Practices Resource Center is clear that FDA-approved medications for opioid use disorder, paired with counseling, reduce overdose deaths and keep people in treatment. We also follow the WHO and UNODC Stop Overdose Safely framework for naloxone distribution, and Florida DCF's Recovery Oriented System of Care, which CORE puts into practice.

What is new here is the arrangement. A fixed dispensing point paired with a mobile fleet, in a town that has never had integrated CORE dispensing at all. And $750,000 in county funds unlocks the working capacity of a $41.5 million federal network that is already funded and already building.

CHNWF brings $2,250,000 in committed match to this request, drawn from the RHTP award. That is three dollars of other money for every one the County puts in. Award letters are attached.

The project fits the County's FY 2026–2027 Implementation Plan under Treatment and Recovery, in the Treatment Expansion sub-category. It advances Schedule A Core Strategies A, B, C, and E, with G supported through partner youth programming, and Schedule B Approved Uses A, B, C, D, and E.

We Are Not Doing This Alone

Recovery takes more than medicine. It takes somewhere to sleep and something to do in the morning.

Each partnership below is documented by an attached MOU or letter of support stating the scope of services, the number of participants expected to benefit, and the dollar value of the commitment.

- Housing: Area Housing Commission, Re-Entry Alliance Pensacola, and Bright Bridge Ministries.
- Workforce: CareerSource Escarosa, our local workforce development board, and Locklin Technical College.
- Physical health and insurance enrollment: CHNWF's own FQHC services and enrollment specialists, with charitable care through Health and Hope Clinic.
- Behavioral health: Lakeview Center, our CORE partner, and CHNWF psychiatry at Church Street.
- Emergency response: Escambia County EMS, our CORE and mobile MAT partner.
- Care coordination through Northwest Florida Health Council, food through Manna, veterans services through VetCV, mobile stroke care through Ascension, and youth prevention through Hope Above Fear.

CHNWF attends monthly Continuum of Care meetings, participates in the county's behavioral health collaboratives, and accepts referrals through Coordinated Entry. We practice warm hand-offs. Client and referral information goes directly to the receiving case manager, not handed to the patient as a phone number.

We also started early with the town itself. Conversations with the Mayor of Century and the Town Administrator began a year ago, so that this project answers Century's needs as its own residents define them. Commissioner Steven Barry, who represents District 5, supports the project.

What We Will Report

We will report monthly on all six County performance measures, against 2024 baselines of 55 suspected opioid deaths and 4,201 non-fatal overdoses, using our electronic health record, the Escambia County EMS overdose dashboard, FLHealthCHARTS, and Medical Examiner data.

Year one targets: 250 people served, naloxone placed with at least 50 unique patients, 50 net new CORE patients, and 5 percent reductions in overdoses and overdose deaths in the service area.

We set the 5 percent figure conservatively for a first year of operation. Previous CHNWF projects have demonstrated a 40 percent reduction in overdose deaths, eight times what we are committing to here.

The 50 CORE patients exist only because of this pharmacy. CORE's Century operations are funded separately and cannot begin until a pharmacy is open.

Tanesha Byrd, our Director of Quality Improvement, owns the data for this project and runs the monthly reporting.

After The Grant

This is a one-time request. Once the doors open, the pharmacy pays for itself through prescription reimbursement, sliding fee revenue, and CHNWF's existing FQHC infrastructure, the same way our other four pharmacies do. It will not come back next year asking to stay open.

Century has waited a long time. The clinics are coming. The providers are coming. The mobile units are coming. The missing piece is the counter where someone hands you the medicine on the day you finally asked for it.

Sources

- WUWF Public Media, “Escambia County CORE program reaches 200th patient milestone, as opioid overdose deaths decline,” Dec. 19, 2024 — source of the 77/55 suspected opioid death figures and the 4,201 non-fatal overdose figure.
- WUSF / WUWF Public Media, “Recovery program marks a 68% drop in overdose deaths in Escambia County,” Aug. 13–14, 2025 — source of the 2023 rate of 47 per 100,000 against a state rate of 25.3.
- WEAR-TV, “Escambia County EMS marks 600 patients in recovery through CORE opioid program,” Apr. 11, 2026.
- WEAR-TV, “State recognizes Escambia, Okaloosa CORE programs as overdose deaths fall across NWFL,” July 11, 2026 — source of the 86 percent engagement rate and the DCF top-ten recognition.
- WEAR-TV, “Century to get new, expanded clinics after $8.7 million rural health grant,” Aug. 2026 — source of the 2016 hospital closure and the $41.5 million regional total across 15 partners.
- NorthEscambia.com, “$8.7 Million Grant To Expand Healthcare Access In Century, Reopen Second Clinic Location,” Aug. 2026 — source of the $8.7 million award, the $3.99 million year-one allocation, and the Church Street services.
- Florida Phoenix, “$188 million headed to organizations to improve rural health in Florida,” Aug. 11, 2026 — Rural Health Transformation Program context.
- Community Health Northwest Florida, healthcarewithinreach.org — 1991 incorporation and 1992 opening, 2007 FQHC designation, mission statement, and four full-service pharmacies.
- HRSA Uniform Data System, 2025 — patient volume and care site count.
- SAMHSA Evidence-Based Practices Resource Center — medications for opioid use disorder.
- World Health Organization and UNODC, Stop Overdose Safely (S-O-S) initiative.

- Florida Department of Children and Families, Recovery Oriented System of Care.
- HRSA Health Center Program service delivery site directory — CHNWF is the only Federally Qualified Health Center serving Escambia and Santa Rosa counties.
- CHNWF internal program analysis — 40 percent reduction in overdose deaths across prior CHNWF opioid abatement projects. Supporting analysis is on file and available to the County on request.

5. Quality of Service Questionnaire

Question 1

Describe how the project aligns with Escambia County's Opioid Abatement Strategic Summary (Appendix 1).

This project sits in the Treatment and Recovery category of the FY 2026–2027 Implementation Plan, under Treatment Expansion. It is a new project, not an expansion of an existing program. It builds the dispensing infrastructure that medications for opioid use disorder require in rural Escambia County. A MAT prescription written in Century today cannot reliably be filled in Century today. This project closes that gap and turns the county's treatment capacity into treatment access for the north end.

The project advances four Schedule A Core Strategies. Strategy A, naloxone and other FDA-approved overdose reversal drugs, through pharmacy-based naloxone distribution and overdose education reaching at least 50 unique patients in year one. Strategy B, MAT distribution, as its central purpose, dispensing buprenorphine products and naltrexone same-day. All of our four pharmacies are open door as will be this one. We project that at full open door capacity a projected 300 to 500 prescriptions weekly will be filled. Strategy C, pregnant and postpartum women, through the match-funded prenatal and women's health care now coming to the Church Street site, where CHNWF also provides therapy and case management and partner organizations occupy match-funded workspace to deliver VA services, food pantry support, and teen substance use support at no cost. Strategy E, expansion of warm hand-off programs and recovery services, with the pharmacy serving as the fixed dispensing hub for the mobile fleet and pharmacist-led hand-offs among CORE responders, clinic providers, and case managers. Strategy G, prevention, is supported through partner youth programming.

On Schedule B, the project advances Use A, treat opioid use disorder, and Use B, support people in treatment and recovery, through MAT and whole-health dispensing that is free for the first 90 days and sliding-fee thereafter, with no person denied care or medication for inability to pay at any point, so that in practice the service is delivered at no cost to the population it serves. It advances Use C, connections to care, through the warm hand-off model and the surrounding partner network. It advances Use D, criminal-justice-involved persons, through CHNWF's self-funded program connecting people released from the Escambia County Jail to services, including MAT through this pharmacy. It advances Use E, pregnant or parenting women and their families, through the match-funded services at Church Street.

The alignment is structural. The pharmacy is the single piece of infrastructure that lets the Plan's Treatment Expansion strategy function where the need is greatest and the access is least.

Question 2

Explain how your agency is actively participating in the Homeless Continuum of Care (CoC) and existing Behavioral Health systems in Escambia County, and how this project will integrate with those systems.

CHNWF's participation in the Escambia Continuum of Care reaches its leadership. Chandra Smiley, our Chief Executive Officer, serves on the CoC Leadership Committee and Chairs the Quality Improvement sub-committee. Walter Arrington, this project's author, is a former CoC board member. We attend monthly CoC committee meetings, hold the region's PATH grant, participate in HMIS, and accept referrals through the Homeless Coordinated Entry System.

Within the county's behavioral health systems, CHNWF is a member of the Mental Health Task Force and the Northwest Florida Maternal Health Task Force. As one of two named community partners in Escambia County EMS's CORE program, we work inside that infrastructure daily. We receive warm hand-offs from EMS at the moment of overdose response and connect patients to addiction treatment, mental health care, and primary care.

Our engagement extends to Century's own government. Conversations with the Mayor of Century and the Town Administrator began a year ago, and the project has the support of Commissioner Steven Barry, who represents District 5.

This project deepens that integration rather than duplicating it. The Century pharmacy becomes a new fixed node in the existing system. Coordinated Entry and CoC referrals for north-county residents gain a physical access point that has never existed. CORE gains the dispensing capability its Century operations require. Behavioral health providers at the Church Street site gain same-day medication access for the patients they treat. The mobile fleet extends those pathways past any street address, reaching people in encampments, shelters, and homes and routing them back to the pharmacy for same-day fills.

Question 3

Describe your procedure for assessing participant needs and making client referrals to other service providers. Describe how you ensure that participants are connected to the services they request.

As a Level II Patient-Centered Medical Home recognized by the National Committee for Quality Assurance, CHNWF assesses every patient at intake across medical, behavioral, and social domains. That includes housing status, food security, transportation, insurance, and substance use. We update the assessment throughout the course of care.

Identified needs generate referrals inside our own system where possible, to primary care, behavioral health, psychiatry, dental, or pharmacy, and to formal partners where not.

Connection is ensured through the warm hand-off model this NOFA encourages and CHNWF already practices through CORE. Client and referral information transfers directly to the receiving case manager or provider. The patient is not handed a phone number and wished well. Referral completion is tracked in our electronic health record as a closed loop, and when a referral does not complete, staff follow up with the patient directly.

At the Century pharmacy the pharmacist becomes another set of eyes on that loop. A pharmacist sees a patient in early recovery more often than any physician does, and can flag an unmet need the week it appears rather than at the next quarterly visit. Mobile unit staff assess in the field using the same intake domains, so a person met on the mobile CORE or medical unit enters the same closed-loop referral system as a walk-in patient. Dental needs get scheduled onto the mobile dental units rather than deferred.

Question 4

Describe how the project will provide connections to permanent supportive solutions, including the extent to which this project will connect clients to mainstream services and community-based supports to ensure long-term stability.

CHNWF employs enrollment specialists who sit down with patients individually to identify, apply for, and obtain mainstream benefits. Medicaid and Marketplace coverage, SNAP, SSI and SSDI, TANF, and Veterans programs through our VetCV partnership.

Physical health care, prescriptions, and ongoing primary care are provided inside CHNWF's own FQHC system, with charitable care available through Health and Hope Clinic. Mental health services and substance use disorder treatment come from CHNWF behavioral health and psychiatry at Church Street and from Lakeview Center, our CORE partner.

Permanent supportive connections run through the project's formal partnerships. Housing through the Area Housing Commission, Re-Entry Alliance Pensacola, and Bright Bridge Ministries. Employment, training, and credentialing through CareerSource Escarosa and Locklin Technical College. Food security through Manna, which occupies space at our Church Street site. Youth programming through Hope Above Fear.

Community-based supports are written into individual care plans, including recovery support groups, faith communities, and civic organizations in Century. Long-term stability is held up by a community, not by a caseload.

The mobile fleet is part of that permanence. Untreated dental problems are a frequently cited barrier to employment and to self-image in early recovery. The mobile dental units address that directly, so that a person leaving treatment is ready for the job interview our workforce partners help arrange.

Question 5

Explain how your agency engages persons with lived experience and historically marginalized groups in the design and evaluation of programs and services. Include the number of persons engaged and their role.

As a Federally Qualified Health Center, CHNWF is governed by a consumer-majority board, as HRSA requires. We exceed the requirement. More than 60 percent of our board members are patients of the health center. The people who use our services, including residents of the rural and low-income communities this project serves, hold decision-making authority over our programs, budgets, and priorities.

Lived experience shapes this project directly. Its author is a person with lived experience of addiction, behavioral health struggles, and homelessness in this county. This project was not designed for the population from a distance.

CHNWF integrates certified peer support specialists into our CORE program and currently employs nine people who are licensed, trained, or in training as peer support specialists. Recovery experience is embedded in daily service delivery, not consulted occasionally.

The Century project itself originates in a community needs assessment of a rural, historically underserved population, and the CORE model is continuously shaped by feedback from the more than 600 people it has served.

Question 6

Explain your agency's experience providing services to individuals and families who have substance use or co-occurring disorders, including federal, state, and/or local government grant experience and capacity of the organization to administer the project and oversee all compliance requirements.

CHNWF has served Escambia County continuously since 1992 and cared for approximately 49,000 patients in 2025 across 15 care sites and four mobile units (HRSA Uniform Data System, 2025), including integrated behavioral health, psychiatry, and substance use disorder treatment.

We are one of two named community partners in Escambia County EMS's CORE program, which has served more than 600 people, reports an 86 percent engagement success rate, and was recognized by the Florida Department of Children and Families among the top ten programs statewide. We have previously expanded CORE with Escambia County Opioid Abatement funding and delivered the required outcomes and monthly reporting.

On administrative capacity, CHNWF manages its own grant portfolio of more than $8 million across federal, state, and local funders, including HRSA Section 330 funding and its full federal compliance regime. We operate on a cost-reimbursement basis with monthly reporting and audited financial statements. Separately from that portfolio, CHNWF serves as fiduciary agent for 14 partner organizations, administering more than $12 million a year on their behalf. The two figures describe different roles and are not components of a single portfolio total.

Separately, CHNWF leads and oversees the $41.5 million Rural Health Transformation collaborative, a five-year commitment spanning 15 partner organizations across four counties. Compliance oversight, reimbursement documentation, and monthly programmatic reporting are existing functions here, not new builds. The same is true of mobile service delivery, which CHNWF and its partners already operate across the region.

Question 7

Describe how your agency has worked to remove traditional barriers (i.e. no income, no insurance, no transportation) to services for individuals and families who have substance use or co-occurring disorders.

Barrier removal is why this organization exists, and this project is the clearest expression of it we have built.

Income and insurance. No person is denied care or medication because they cannot pay. That is not discretionary and it is not a marketing line. As a Federally Qualified Health Center, CHNWF is required by federal law to serve every patient regardless of ability to pay, to maintain a sliding fee schedule approved by HRSA, and to waive nominal charges for patients who cannot meet them. We have operated under that obligation since 2007 and we have not turned a patient away over money in that time.

Under this project, naloxone and overdose education are free to every Escambia County resident, with no intake form, no insurance check, and no income question. Prescriptions are free to the patient for the first 90 days, the highest-risk stretch of early recovery. After 90 days the sliding fee schedule applies, and it functions as a discount rather than a bill: charges scale down with household income and reach nominal or zero at the lowest tier, where any remaining charge is waived for a patient who cannot pay it. A person who is unhoused, uninsured, or unable to demonstrate ability to pay receives the same medication, from the same pharmacist, at no charge.

The practical effect for the population this project exists to serve is that services are provided at no cost. Meanwhile our enrollment specialists work to secure Medicaid or Marketplace coverage so that the cost barrier does not return later.

Transportation and geography. The project eliminates the forty-minute drive that currently stands between a Century resident and a filled MAT prescription. The mobile fleet, a mobile medical unit, two mobile dental units, mobile CORE services, and mobile MAT, carries care to residences, encampments, shelters, and community sites. Whole categories of care that rural residents routinely go without, dental care chief among them, arrive at the curb.

Trust and access. Interpretation services are provided for patients with limited English proficiency. An after-hours nurse line extends access beyond clinic hours. And a pharmacist who knows a patient by name lowers the threshold for someone deciding, in a fragile moment, whether to walk through the door at all.

Question 8

Describe how your agency evaluates program success.

Evaluation at CHNWF is continuous and externally validated. As an FQHC we report annually to HRSA through the Uniform Data System on clinical quality measures, patient demographics, and outcomes. HRSA has recognized CHNWF with Community Health Quality Recognition awards, including National Quality Leader designations.

Internally, CHNWF runs Plan-Do-Study-Act cycles under a standing Continuous Quality Improvement committee that meets monthly. Tanesha Byrd, Director of Quality Improvement, is responsible for PDSA cycles, CQI, and data, and serves as the named data owner for this project. All outcomes are captured in our electronic health record and, for grant-funded projects, reported monthly to funders against defined targets.

For this project we will report monthly against all six County performance measures. We will track prescriptions dispensed, naloxone placements, net new CORE enrollments, and service-area overdose trends against 2024 baselines of 55 suspected opioid deaths and 4,201 non-fatal overdoses, using our electronic health record, the Escambia County EMS overdose dashboard, FLHealthCHARTS, and Medical Examiner data.

Our year-one targets are 5 percent reductions in overdoses and overdose deaths. We set that figure conservatively for a first year of operation. Previous CHNWF projects have demonstrated a 40 percent reduction in overdose deaths, eight times the target we are committing to here.

Question 9

Describe how the agency will continue to provide quality services in the community in the case of reduced or loss of funding.

This project is deliberately structured so that County funding is a one-time investment rather than a recurring dependency. The requested $750,000 covers start-up capital only. Once operational, the pharmacy sustains itself through prescription reimbursement, sliding fee revenue, and CHNWF's established FQHC financial infrastructure, exactly as our four existing pharmacies do.

If the County awards less than the full request, the project still proceeds. A reduced award is applied first to property acquisition, with buildout phased across the term, and CHNWF closes the remaining gap from organizational reserves and other funding sources so that the pharmacy opens on schedule. We would rather open a smaller pharmacy than none.

The surrounding services, including the mobile medical, dental, CORE, and MAT units, are carried by the $41.5 million Rural Health Transformation collaborative over five years and by CHNWF's own diversified grant portfolio of more than $8 million across federal, state, and local funders. No single funding loss can collapse the model.

CHNWF has operated continuously in this county for more than three decades, through every funding cycle in that time. The Century pharmacy is designed to outlast this grant. It is a permanent community asset, with built-in space for a phase-two walk-in clinic, and it will not return each year asking to keep its doors open.

6. Ability to Complete Activities Outline

All grant funds are directed to pharmacy property acquisition and buildout. No grant funds support staffing or mobile operations. Those costs are carried by CHNWF general funds and matching grant funds, which is why match-funded services, including the mobile medical, dental, CORE, and MAT units, begin seeing patients within 30 days of the notice to proceed while the capital work proceeds in parallel. CHNWF has begun pre-work with the Florida Board of Pharmacy. Target completion of licensure, buildout, and full operation is 2028, within the one-year term.

Critical Tasks and Timeline

Critical Task / Activity	Responsible Staff	Start (Mo.)	Complete (Mo.)
Notice to proceed; project activity commenced	CEO / Director of Grants and Development	1	1
Property acquisition or lease execution — 9420 North Century Boulevard	CEO / CFO	1	6
Florida Board of Pharmacy licensure and permitting (pre-work underway)	Director of Pharmacy	1	6
Site buildout — dispensing area, consultation space, secure storage, phase-two shell	Facilities / contracted builder	2	9
Pharmacy technology and dispensing infrastructure installation	IT / Director of Pharmacy	8	10
Match-funded service lines seeing patients at Church Street	Clinical leadership	1	2
Mobile fleet scheduled into Century — medical, dental, CORE, MAT units	Clinical leadership	1	12
Pharmacy staffing hired and onboarded (CHNWF general funds and match)	HR / Director of Pharmacy	8	11
Pharmacy fully operational; dispensing begins (target January 2027)	Director of Pharmacy	11	12
Monthly outcome reporting to Escambia County	Director of Quality Improvement	1	12

Monthly Spending Plan and Draw-Down Schedule

Month	Planned Expenditures ($)	Cumulative ($)	Reporting Milestone
1	200,000	200,000	Acquisition or lease deposit and initial payments; monthly report
2	400,000	600,000	Property acquisition or lease complete; buildout and equipment contracts executed; monthly report
3	12,000	612,000	Buildout progress draw; monthly report
4	12,000	624,000	Buildout progress draw; licensure inspection preparation; monthly report
5	12,000	636,000	Buildout progress draw; monthly report
6	12,000	648,000	Buildout progress draw; monthly report
7	12,000	660,000	Buildout progress draw; monthly report
8	15,095.04	675,095.04	Buildout punch list; pharmacy technology installation begins; monthly report
9	40,000	715,095.04	Buildout complete; dispensing technology installation; monthly report
10	34,904.96	750,000.00	Technology installation complete; final capital draw; monthly report
11–12	0	750,000.00	Licensure, staffing, opening, and monthly outcome reporting; final report

Draw-down figures are proposed and will be reconciled to the executed property instrument and final contractor quotes.

7. Budget Narrative

a. Sources of committed match funds

CHNWF brings $2,250,000 in committed match to this $750,000 request, a ratio of three to one. The match is drawn from the $41.5 million Rural Health Transformation Program collaborative that CHNWF leads and oversees on behalf of 15 partner organizations across four counties, and specifically from the $8.7 million Century allocation, of which $3.99 million is available in year one. RHTP award letters are attached.

Match dollars fund the service infrastructure surrounding the pharmacy: staffing across all service lines, women's health and CORE services at Church Street, the mobile fleet of medical, dental, CORE, and MAT units, and dedicated partner workspace. This is why match-funded components will be seeing patients within 30 days of the notice to proceed, while the capital work funded by this request is still underway.

b. Personnel costs, including fringe benefits

$0 requested. No grant funds are directed to staffing. All personnel costs, including the pharmacist, pharmacy technicians, and supporting clinical and administrative staff, are carried by CHNWF general funds and matching grant funds. This concentrates the County's entire investment on a permanent capital asset and removes any recurring personnel dependency from the award.

c. Other program operation costs

$750,000, the full request, is directed to pharmacy property acquisition or rent, site buildout, and dispensing technology at 9420 North Century Boulevard in Century. No grant funds are spent at the Church Street site, whose services are funded entirely by match. Property acquisition or lease is $600,000.00. Site buildout and construction is $75,095.04, covering the dispensing area, patient consultation space, secure controlled-substance storage, cabinetry, and electrical and data cabling, together with the shell space reserved for the phase-two walk-in clinic. Pharmacy technology and dispensing infrastructure is $74,904.96, itemized as follows: PioneerRx pharmacy management system, $24,000.00; PioneerRx central business office module, $20,000.00; Eyecon dispensing verification system, $9,000.00; four workstations, $8,151.96; camera server, $3,600.00; copier, $3,500.00; firewall, $2,262.00; four telephones, $1,076.00; two label printers, $1,000.00; network switch, $675.00; four wireless access points, $640.00; printer, $500.00; and a 1500 VA uninterruptible power supply, $500.00. These are the fixed systems a licensed dispensing site cannot open without. They are one-time capital costs rather than recurring operating expenses, and none of them returns to the County after the grant term.

Allowability of property acquisition, buildout, and associated fixed equipment under this NOFA was confirmed with Escambia County staff prior to submission. Because this is a capital budget rather than a service budget, the reimbursement documentation differs from the payroll-based back-up the NOFA describes. CHNWF will support each reimbursement request with the executed property instrument, contractor invoices and draw schedules, proof of payment, and the monthly program report.

d. Administrative costs (maximum 5 percent)

$0 requested. Grant administration, accounting, and contract management are absorbed by CHNWF's existing grants management infrastructure at no cost to the award, leaving the full $750,000 for the capital project.

e. Timeframes and methods for obligating grant funds

Funds are obligated through the property transaction in months one and two and through executed buildout and equipment contracts in month two. Buildout draws run through month nine and technology installation completes in month ten, with full spend-down by month ten, two months ahead of the end of the term. This schedule matches the Critical Tasks and Timeline above line for line. CHNWF operates on a cost-reimbursement basis with the treasury capacity to front expenditures, and submits monthly reimbursement requests with invoices, invoice summaries, proof of payment, and the monthly program report. Florida Board of Pharmacy pre-work is already underway, which de-risks the licensure path.

f. Other services and programs, and their funding sources

The services surrounding the pharmacy are funded outside this award. The $41.5 million RHTP collaborative funds women's health, CORE services, therapy, case management, the mobile medical, dental, CORE, and MAT units, and partner workspace at Church Street. CHNWF general funds and HRSA Section 330 funding cover staffing and FQHC operations. CHNWF's justice-involved persons program is self-funded. CORE operations in Century are independently funded and commence once the pharmacy is operational. CHNWF's overall operating budget, including overhead and indirect rates, is attached.

8. Budget and Match Form

Year 1 (dates based on award date). Every eligible cost line is shown, with zero-dollar lines explained rather than left blank.

Eligible Costs	Quantity and Description	Annual Assistance Requested
Case Management	Staffing supported by CHNWF general funds and matching grant funds	$0
Peer Support Staff	Nine peer support specialists supported by CHNWF general funds and match	$0
Nursing Staff	Staffing supported by CHNWF general funds and matching grant funds	$0
Peer Specialist Certifications	Supported by CHNWF general funds	$0
Mobile Service Delivery Vehicles and Associated Costs	Mobile medical, dental, CORE, and MAT units supported by match funds	$0
Computers, Phones, and other equipment for program staff	Program staff computers and phones supported by CHNWF general funds; pharmacy dispensing technology itemized under Other Expenses below	$0
Program Related Supplies	Medications, harm reduction materials, and PPE supported by general funds and match	$0
Marketing and Educational Materials	Supported by CHNWF general funds	$0
Other Expenses — Property Acquisition or Rent	Pharmacy property acquisition or rent — 9420 North Century Boulevard, Century, FL 32535.	$600,000
Other Expenses — Site Buildout and Construction	Buildout and construction: dispensing area, patient consultation space, secure controlled-substance storage, cabinetry, electrical and data cabling, and phase-two shell space.	$75,095.04
Other Expenses — Pharmacy Technology and Dispensing Infrastructure	PioneerRx pharmacy management system $24,000; PioneerRx central business office $20,000; Eyecon dispensing verification $9,000; 4 workstations $8,151.96; camera server $3,600; copier $3,500; firewall $2,262; 4 phones $1,076; 2 label printers $1,000; switch $675; 4 access points $640; printer $500; UPS 1500 $500.	$74,904.96
Subtotal Requested		**$750,000.00**

Eligible Costs	Quantity and Description	Annual Assistance Requested
Admin Requested (max 5%)	Absorbed by CHNWF's existing grants management infrastructure	$0
TOTAL AMOUNT REQUESTED		**$750,000.00**

The split between property, buildout, and technology is proposed and will be reconciled to the executed property instrument and to final contractor and vendor quotes. The three lines total $750,000.00 in all cases.

Match

Match Source	Cash or In-Kind	Amount ($)	Letter Attached
Rural Health Transformation Program — Century allocation (CHNWF-led collaborative; CHNWF is fiduciary agent)	Cash	2,250,000	☒
Match ratio to request		**3 : 1**	

9. Project Outcomes

1. Reduced number of fatal overdoses.

Baseline Data (with source)	55 suspected opioid-related deaths in Escambia County in 2024, down from 77 in 2023 (Escambia County EMS, reported by WUWF, Dec. 19, 2024; Florida Medical Examiners Commission annual report).
Desired Outcome	5% reduction in service-area overdose deaths in year one.
Project component, achievement, and monitoring	Same-day MAT dispensing, naloxone distribution to at least 50 unique patients, and 50 net new CORE enrollments in a region that has had no integrated dispensing access. Monitored monthly through the electronic health record, the EMS overdose dashboard, and Medical Examiner data by Tanesha Byrd, Director of Quality Improvement. Previous CHNWF projects demonstrated a 40% reduction in overdose deaths, eight times this target.

2. Reduced number of EMS overdose responses.

Baseline Data (with source)	4,201 non-fatal overdoses in 2024, an increase of about 4% over 2023 (Escambia County EMS, reported by WUWF, Dec. 19, 2024); Escambia County EMS overdose dashboard.
Desired Outcome	5% reduction in service-area EMS overdose responses in year one.
Project component, achievement, and monitoring	Naloxone saturation, MAT retention, mobile CORE outreach, and warm hand-offs from EMS at the moment of response reduce repeat events. Monitored monthly against the EMS overdose dashboard.

3. Increase in substance use disorder treatment to reduce opioid overdoses.

Baseline Data (with source)	No integrated MAT dispensing currently serves Century; CHNWF and CORE current caseload per electronic health record; county admissions per FLHealthCHARTS.
Desired Outcome	50 net new unique CORE patients enrolled; 100 encounters through the funded pharmacy project.
Project component, achievement, and monitoring	The pharmacy is the enabling infrastructure. CORE operations in Century are independently funded and cannot begin until a pharmacy is operational. Mobile CORE and mobile MAT units generate inductions the pharmacy fills same-day. Enrollment and retention tracked in the electronic health record and reported monthly.

4. Increase in access to substance use disorder recovery programs.

Baseline Data (with source)	Zero MAT-integrated dispensing points in north Escambia County at baseline; nearest access approximately 40 minutes away.
Desired Outcome	One net new permanent access point operational by January 2027; 250 total persons served across funded and match-built service lines.
Project component, achievement, and monitoring	Property acquisition and buildout create the fixed hub anchoring the mobile fleet of medical, dental, CORE, and MAT units, alongside therapy and case management. Operational status, service volumes, and unique patients reported monthly.

5. Increase access to substance use prevention programs.

Baseline Data (with source)	Limited youth prevention programming currently available in Century; partner baseline data from Hope Above Fear.
Desired Outcome	Teen substance use prevention and diversion programming available at no cost at the Church Street site through match-funded partner workspace.
Project component, achievement, and monitoring	Community partners occupy dedicated match-funded workspace, and the mobile medical and dental units carry prevention education and screening into the community alongside clinical care. Participation counts collected from partners and included in monthly reports.

6. Increase in substance use disorder training, treatment, and prevention in the Criminal Justice Departments.

Baseline Data (with source)	CHNWF self-funded justice-involved persons program baseline caseload (electronic health record).
Desired Outcome	All persons released from the Escambia County Jail and engaged by the program are connected to services, including MAT through this pharmacy.
Project component, achievement, and monitoring	The self-funded jail-release program uses the pharmacy as its north-county MAT connection point and the mobile fleet to reach people who lack transportation on release (Schedule B Use D). Referral completion tracked as a closed loop in the electronic health record and reported monthly.

10. Required Attachments

The following documents accompany this application.

Threshold and eligibility

- [x] B. Applicant's annual operating budget
- [x] C. IRS Letter of Determination confirming 501(c)(3) status
- [x] D. Current W-9
- [x] E. Tax returns — 2024 or 2025 Form 990 with supporting forms
- [x] F. Two most recent years of financial statements, audited

Match and partnerships

- [x] G. RHTP award letters totaling $2,250,000 in committed match
- [x] H. Partnership MOUs and letters of support — Area Housing Commission, Re-Entry Alliance Pensacola, Bright Bridge Ministries, Health and Hope Clinic, Lakeview Center, Escambia County EMS, CareerSource Escarosa, Locklin Technical College, Northwest Florida Health Council, Manna, VetCV, Ascension, and Hope Above Fear — each stating scope of services, participants expected to benefit, and dollar value of the commitment
- [x] I. Letters of support — Town of Century (Mayor and Town Administrator)

Supplemental: Glossary of Terms and Acronyms

Term	Definition as used in this application
AHCA	Florida Agency for Health Care Administration — state administrator of the Rural Health Transformation Program.
BCC	Board of County Commissioners — Escambia County's governing body; final approver of awards.
CHNWF	Community Health Northwest Florida (legal name Escambia Community Clinics, Inc.) — the applicant, a Federally Qualified Health Center serving Escambia County since 1992.
CMS	Centers for Medicare and Medicaid Services — federal funder of the Rural Health Transformation Program.
CoC	Continuum of Care — the HUD-recognized regional planning body for homeless services; CHNWF's CEO serves on its Board of Directors.
CORE	Coordinated Opioid Recovery — Escambia County EMS's post-overdose recovery program; CHNWF and Lakeview Center are its two named community partners.
CQI	Continuous Quality Improvement — CHNWF's standing monthly quality committee.
DCF	Florida Department of Children and Families — recognized Escambia CORE among the top ten programs statewide.
EHR	Electronic Health Record — CHNWF's clinical data system and the source of record for outcome verification.
EMS	Emergency Medical Services — Escambia County EMS, CORE co-partner and mobile MAT collaborator.
FQHC	Federally Qualified Health Center — a HRSA-funded health center required to serve all patients regardless of ability to pay, use a sliding fee schedule, and maintain a consumer-majority governing board.
HMIS	Homeless Management Information System — the CoC's shared client data system, in which CHNWF participates.
HRSA	Health Resources and Services Administration — the federal agency funding and regulating FQHCs.
MAT / MOUD	Medication-Assisted Treatment / Medications for Opioid Use Disorder — FDA-approved medications, principally buprenorphine and naltrexone, paired with counseling.

Term	Definition as used in this application
Mobile fleet	The mobile medical, mobile dental, mobile CORE, and mobile MAT units brought into Century under this project; match-funded, with the Century pharmacy as their dispensing hub.
MOU	Memorandum of Understanding — formal partnership document stating scope, participants, and dollar value.
NOFA	Notice of Funding Availability — the County solicitation to which this application responds.
PATH	Projects for Assistance in Transition from Homelessness — federal SAMHSA program; CHNWF is the regional grant holder.
PCMH	Patient-Centered Medical Home — NCQA-recognized team-based care model used for whole-person intake assessment.
PDSA	Plan-Do-Study-Act — the iterative quality improvement cycle used under CHNWF's CQI committee.
REAP	Re-Entry Alliance Pensacola — housing partner anchoring re-entry housing.
RHTP	Rural Health Transformation Program — the CMS and AHCA program under which the CHNWF-led 15-partner collaborative secured $41.5 million regionally, including $8.7 million for Century; source of the $2.25 million match.
ROSC	Recovery Oriented System of Care — Florida DCF's recovery framework, operationalized statewide through CORE.
SAM / UEI	System for Award Management / Unique Entity ID — federal registration and identifier; source of the excluded parties check.
SAMHSA	Substance Abuse and Mental Health Services Administration — its Evidence-Based Practices Resource Center underpins the treatment model.
Schedule A / B	The NOFA's Core Strategies (A) and Approved Uses (B). This project advances Strategies A, B, C, and E, with G supported, and Uses A, B, C, D, and E.
Sliding fee schedule	The federally mandated, HRSA-approved discount schedule scaling charges to income; the basis for free care for the unhoused and those without demonstrated ability to pay.
S-O-S	Stop Overdose Safely — WHO and UNODC initiative pairing overdose education and naloxone access with treatment linkage.
SUD / OUD	Substance Use Disorder / Opioid Use Disorder — the conditions this project treats.
UDS	Uniform Data System — HRSA's annual FQHC reporting system; source of the 49,000-patient figure.

Term	Definition as used in this application
Warm hand-off	Direct transfer of a client and referral information to the receiving case manager, tracked to completion.

Community Health Northwest Florida
eCW Operating Budget - 2026

	FINAL Budget
Patient Visits	**153,440**

	2026
Gross Patient Revenue	**Budget**
Uninsured	$11,730,759
Medicaid	$19,727,448
Medicare	$6,011,634
Private	$6,673,820
Gross Patient Revenue	**$44,143,661**
Allowances	
Uninsured (90%)	($10,507,710)
Medicaid (70%)	($13,779,189)
Medicare (65%)	($3,918,101)
Private (66%)	($4,401,360)
Total Allowances	**($32,606,360)**
Net Patient Revenue	**$11,537,301**
Wraparound	**$7,650,325**
Capitation (Humana Only)	**$2,760,000**
Total Patient Revenue	**$21,947,626**
Other Revenue	
HRSA Base Funding	$4,043,813
LIP/County	$922,149
Hospital Subsidy	$1,100,000
340B Savings (Contract)	$2,400,000
Pharmacy, Net	$11,160,000
Other Income (See Tab)	$3,904,270
Other Revenue	**$23,530,232**
Total Revenue	**$45,477,859**
Operating Expense	
Salary and Wages	$21,553,531
Employee Benefits @ 20%	$4,310,706
Payroll Taxes @ 7.25%	$1,562,631
Bad Debt	$155,424
Medical/Administrative/Professional	$159,363
Medical Contractual/Other Services	$912,697
Rx 340B COGS @ 70% of Revenue	$1,680,000
Rx Pharmacy COGS @ 65% of Revenue	$7,254,000
Durable Medical Equipment	$559,441
Immunizations/Vaccinations	$420,137
Supplies	$460,943
Minor Equipment	$139,845
Insurance	$520,096
Maintenance/Repair/Fleet	$624,363
Leases	$1,816,723
Utilities	$557,595
CME/Conferences	$125,820
Software Fees	$1,257,325
Other Expenses	$1,785,358
Depreciation	$1,610,477
Total Operating Expense	**$47,466,475**
Non-Operating	
Contributions Received	$5,000
Meritain Benefit Rebate	$400,000
Interest Income	$5,000
Loss on Disposal of Assets	($6,000)
Charitable Contributions Made	($12,000)
Total Non-Operating	**$392,000**
Net Income / (Loss)	**($1,596,616)**
Factor in Depreciation + Bad Debt	***$1,765,901***
Adjusted Net Income / (Loss)	**$ 169,284**

Form **W-9**
(Rev. March 2024)
Department of the Treasury
Internal Revenue Service

Request for Taxpayer Identification Number and Certification

Go to *www.irs.gov/FormW9* for instructions and the latest information.

Give form to the requester. Do not send to the IRS.

Before you begin. For guidance related to the purpose of Form W-9, see *Purpose of Form*, below.

Print or type. See *Specific Instructions* on page 3.

1 Name of entity/individual. An entry is required. (For a sole proprietor or disregarded entity, enter the owner's name on line 1, and enter the business/disregarded entity's name on line 2.)

Escambia Community Clinics, Inc.

2 Business name/disregarded entity name, if different from above.

Community Health Northwest Florida

3a Check the appropriate box for federal tax classification of the entity/individual whose name is entered on line 1. Check only **one** of the following seven boxes.

☐ Individual/sole proprietor ☐ C corporation ☐ S corporation ☐ Partnership ☐ Trust/estate

☐ LLC. Enter the tax classification (C = C corporation, S = S corporation, P = Partnership) _____

Note: Check the "LLC" box above and, in the entry space, enter the appropriate code (C, S, or P) for the tax classification of the LLC, unless it is a disregarded entity. A disregarded entity should instead check the appropriate box for the tax classification of its owner.

☑ Other (see instructions) 501(c)(3) Not for Profit Corporation

3b If on line 3a you checked "Partnership" or "Trust/estate," or checked "LLC" and entered "P" as its tax classification, and you are providing this form to a partnership, trust, or estate in which you have an ownership interest, check this box if you have any foreign partners, owners, or beneficiaries. See instructions ☐

4 Exemptions (codes apply only to certain entities, not individuals; see instructions on page 3):

Exempt payee code (if any) _____

Exemption from Foreign Account Tax Compliance Act (FATCA) reporting code (if any) _____

(Applies to accounts maintained outside the United States.)

5 Address (number, street, and apt. or suite no.). See instructions.

2315 W Jackson Street

6 City, state, and ZIP code

Pensacola, FL 32505

Requester's name and address (optional)

7 List account number(s) here (optional)

Part I Taxpayer Identification Number (TIN)

Enter your TIN in the appropriate box. The TIN provided must match the name given on line 1 to avoid backup withholding. For individuals, this is generally your social security number (SSN). However, for a resident alien, sole proprietor, or disregarded entity, see the instructions for Part I, later. For other entities, it is your employer identification number (EIN). If you do not have a number, see *How to get a TIN*, later.

Note: If the account is in more than one name, see the instructions for line 1. See also *What Name and Number To Give the Requester* for guidelines on whose number to enter.

Social security number

			–			–				

or

Employer identification number

5	9	–	3	1	0	5	2	4	6

Part II Certification

Under penalties of perjury, I certify that:

1. The number shown on this form is my correct taxpayer identification number (or I am waiting for a number to be issued to me); and
2. I am not subject to backup withholding because (a) I am exempt from backup withholding, or (b) I have not been notified by the Internal Revenue Service (IRS) that I am subject to backup withholding as a result of a failure to report all interest or dividends, or (c) the IRS has notified me that I am no longer subject to backup withholding; and
3. I am a U.S. citizen or other U.S. person (defined below); and
4. The FATCA code(s) entered on this form (if any) indicating that I am exempt from FATCA reporting is correct.

Certification instructions. You must cross out item 2 above if you have been notified by the IRS that you are currently subject to backup withholding because you have failed to report all interest and dividends on your tax return. For real estate transactions, item 2 does not apply. For mortgage interest paid, acquisition or abandonment of secured property, cancellation of debt, contributions to an individual retirement arrangement (IRA), and, generally, payments other than interest and dividends, you are not required to sign the certification, but you must provide your correct TIN. See the instructions for Part II, later.

Sign Here | **Signature of U.S. person** [signature] **Date** 1.22.2026

General Instructions

Section references are to the Internal Revenue Code unless otherwise noted.

Future developments. For the latest information about developments related to Form W-9 and its instructions, such as legislation enacted after they were published, go to *www.irs.gov/FormW9*.

What's New

Line 3a has been modified to clarify how a disregarded entity completes this line. An LLC that is a disregarded entity should check the appropriate box for the tax classification of its owner. Otherwise, it should check the "LLC" box and enter its appropriate tax classification.

New line 3b has been added to this form. A flow-through entity is required to complete this line to indicate that it has direct or indirect foreign partners, owners, or beneficiaries when it provides the Form W-9 to another flow-through entity in which it has an ownership interest. This change is intended to provide a flow-through entity with information regarding the status of its indirect foreign partners, owners, or beneficiaries, so that it can satisfy any applicable reporting requirements. For example, a partnership that has any indirect foreign partners may be required to complete Schedules K-2 and K-3. See the Partnership Instructions for Schedules K-2 and K-3 (Form 1065).

Purpose of Form

An individual or entity (Form W-9 requester) who is required to file an information return with the IRS is giving you this form because they

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C.A5 Two most recently completed fiscal years of audited financial statements (federal fiscal years, state fiscal years, or the applicant's organizational fiscal years, as applicable to the entity type)

- Audit: Consolidated Financial Statements Performed by Warren Averett (2023/2024)
- Audit: Consolidated Financial Statements Performed by Warren Averett (2022/2023)

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ESCAMBIA COMMUNITY CLINICS, INC.
d/b/a COMMUNITY HEALTH
NORTHWEST FLORIDA

FINANCIAL STATEMENTS
AND SUPPLEMENTARY INFORMATION

DECEMBER 31, 2024 AND 2023

Warren Averett
CPAs AND ADVISORS
www.warrenaverett.com

The report accompanying this deliverable was issued by Warren Averett, LLC.

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ESCAMBIA COMMUNITY CLINICS, INC. d/b/a
COMMUNITY HEALTH NORTHWEST FLORIDA
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Warren Averett
CPAs AND ADVISORS

350 W Cedar Street, Suite 400
Pensacola, FL 32502
850.435.7400
warrenaverett.com

INDEPENDENT AUDITORS' REPORT

To the Board of Directors
Escambia Community Clinics, Inc.
d/b/a Community Health Northwest Florida

Opinion

We have audited the accompanying financial statements of Escambia Community Clinics, Inc.,(d/b/a Community Health Northwest Florida) (a nonprofit organization), which comprise the statements of financial position as of December 31, 2024 and 2023, and the related statements of activities, functional expenses and cash flows for the years then ended, and the related notes to the financial statements.

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of Escambia Community Clinics, Inc. as of December 31, 2024 and 2023, and the changes in their net assets and their cash flows for the years then ended in accordance with accounting principles generally accepted in the United States of America.

Basis for Opinion

We conducted our audits in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States. Our responsibilities under those standards are further described in the Auditors' Responsibilities for the Audit of the Financial Statements section of our report. We are required to be independent of Escambia Community Clinics, Inc. and to meet our other ethical responsibilities in accordance with the relevant ethical requirements relating to our audits. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinions.

Responsibilities of Management for the Financial Statements

Management is responsible for the preparation and fair presentation of the financial statements in accordance with accounting principles generally accepted in the United States of America, and for the design, implementation and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, management is required to evaluate whether there are conditions or events, considered in the aggregate, that raise substantial doubt about Escambia Community Clinics, Inc.'s ability to continue as a going concern within one year after the date that the financial statements are available to be issued.

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Auditors' Responsibilities for the Audit of the Financial Statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditors' report that includes our opinion. Reasonable assurance is a high level of assurance but is not absolute assurance and therefore is not a guarantee that an audit conducted in accordance with generally accepted auditing standards and *Government Auditing Standards* will always detect a material misstatement when it exists. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations or the override of internal control. Misstatements are considered material if there is a substantial likelihood that, individually or in the aggregate, they would influence the judgment made by a reasonable user based on the financial statements.

In performing an audit in accordance with generally accepted auditing standards and *Government Auditing Standards*, we:

- Exercise professional judgment and maintain professional skepticism throughout the audit.
- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, and design and perform audit procedures responsive to those risks. Such procedures include examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of Escambia Community Clinics, Inc.'s internal control. Accordingly, no such opinion is expressed.
- Evaluate the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluate the overall presentation of the financial statements.
- Conclude whether, in our judgment, there are conditions or events, considered in the aggregate, that raise substantial doubt about Escambia Community Clinics, Inc.'s ability to continue as a going concern for a reasonable period of time.

We are required to communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit, significant audit findings and certain internal control related matters that we identified during the audit.

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Other Matters

Supplementary Information

Our audit was conducted for the purpose of forming an opinion on the financial statements as a whole. The schedules of grants, contracts and reimbursements revenue, as listed in the table of contents, are presented for purposes of additional analysis and are not a required part of the financial statements. The accompanying schedule of expenditures of federal awards is presented for purposes of additional analysis as required by Title 2 U.S. *Code of Federal Regulations (CFR) Part 200, Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards*, and is also not a required part of the financial statements. Such information is the responsibility of management and was derived from and relates directly to the underlying accounting and other records used to prepare the financial statements. The information has been subjected to the auditing procedures applied in the audit of the financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the financial statements or to the financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the information is fairly stated in all material respects in relation to the financial statements as a whole.

Other Reporting Required by *Government Auditing Standards*

In accordance with *Government Auditing Standards*, we have also issued our report dated July 16, 2024 on our consideration of Escambia Community Clinics, Inc.'s internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, grant agreements and other matters. The purpose of that report is to describe the scope of our testing of internal control over financial reporting and compliance, and the results of that testing, and not to provide an opinion on internal control over financial reporting nor on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering Escambia Community Clinics, Inc.'s internal control over financial reporting and compliance.

Warren Averett, LLC

Pensacola, Florida
June 17, 2025

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ESCAMBIA COMMUNITY CLINICS, INC. d/b/a
COMMUNITY HEALTH NORTHWEST FLORIDA
STATEMENTS OF FINANCIAL POSITION
DECEMBER 31, 2024 AND 2023

ASSETS

	2024	2023
CURRENT ASSETS		
Cash	$ 3,091,177	$ 681,594
Patient services receivable, net	761,784	1,076,876
Other receivables	3,307,626	4,376,341
Prepaid expenses and other current assets	920,525	944,630
Total current assets	8,081,112	7,079,441
PROPERTY AND EQUIPMENT, NET	10,925,540	12,092,821
OPERATING LEASE RIGHT-OF-USE ASSETS, NET	2,782,961	4,031,573
GOODWILL	511,183	616,448
TOTAL ASSETS	$ 22,300,796	$ 23,820,283

LIABILITIES AND NET ASSETS

CURRENT LIABILITIES		
Accounts payable	$ 989,677	$ 658,161
Accrued salaries and related expenses	547,477	683,127
Accrued compensated absences	926,148	1,148,336
Other current liabilities	30,099	23,747
Current portion of operating lease liabilities	913,013	1,362,822
Line of credit	2,000,000	-
Total current liabilities	5,406,414	3,876,193
OPERATING LEASE LIABILITIES, NET	1,932,411	2,745,533
TOTAL LIABILITIES	7,338,825	6,621,726
NET ASSETS		
Without donor restrictions	14,961,971	17,198,557
TOTAL LIABILITIES AND NET ASSETS	$ 22,300,796	$ 23,820,283

See notes to the financial statements.

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ESCAMBIA COMMUNITY CLINICS, INC. d/b/a
COMMUNITY HEALTH NORTHWEST FLORIDA
STATEMENTS OF ACTIVITIES
FOR THE YEARS ENDED DECEMBER 31, 2024 AND 2023

	2024	2023
OPERATING REVENUES		
Net patient service revenues	$ 29,307,535	$ 28,071,044
340B prescription drug assistance program	4,387,084	5,921,334
Capitation revenue	3,668,429	4,610,289
Other	1,816,675	1,107,058
Total operating revenues	39,179,723	39,709,725
PUBLIC SUPPORT		
Grant, contracts and reimbursements	7,071,541	10,359,192
TOTAL OPERATING REVENUES AND PUBLIC SUPPORT	46,251,264	50,068,917
FUNCTIONAL EXPENSES		
Healthcare services	33,965,293	38,101,783
Support services	14,364,450	16,914,040
Total functional expenses	48,329,743	55,015,823
INCOME (LOSS) FROM OPERATIONS	(2,078,479)	(4,946,906)
OTHER INCOME (EXPENSES)		
Interest income	5,960	141,799
Interest expense	(140,735)	(111,017)
Gain on NMTC Unwind	-	2,100,540
Other income (loss)	(23,332)	8,405
Total other income (expenses)	(158,107)	2,139,727
CHANGE IN NET ASSETS	(2,236,586)	(2,807,179)
NET ASSETS AT BEGINNING OF YEAR	17,198,557	20,005,736
NET ASSETS AT END OF YEAR	$ 14,961,971	$ 17,198,557

See notes to the financial statements.

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ESCAMBIA COMMUNITY CLINICS, INC. d/b/a
COMMUNITY HEALTH NORTHWEST FLORIDA
STATEMENT OF FUNCTIONAL EXPENSES
FOR THE YEAR ENDED DECEMBER 31, 2024

	Healthcare Services	Support Services	Total
SALARIES AND RELATED EXPENSES			
Salaries	$ 12,541,819	$ 8,361,212	$ 20,903,031
Payroll taxes and fringe benefits	3,858,436	2,572,290	6,430,726
Total salaries and related expenses	16,400,254	10,933,503	27,333,757
OTHER EXPENSES			
Prescription drugs and 340B program	10,102,870	-	10,102,870
Occupancy and security	1,112,528	741,685	1,854,213
Contracted medical professionals	920,406	-	920,406
Supplies	1,052,803	701,868	1,754,671
Telephone and utilities	360,315	240,210	600,525
Conferences	103,570	25,893	129,463
Depreciation and amortization	1,249,269	312,317	1,561,586
Dues and memberships	103,388	68,926	172,314
Equipment rental	4,907	19,627	24,534
Miscellaneous	76,939	307,756	384,695
Postage and shipping	18,294	2,033	20,327
Professional fees	46,074	37,697	83,770
Recruitment cost	42,045	4,672	46,717
Repairs and maintenance	381,703	254,468	636,171
Insurance	360,819	240,546	601,365
Contractual services	731,788	38,515	770,303
Software fees	877,811	376,205	1,254,016
Advertising	19,510	58,529	78,038
Total other expenses	17,565,039	3,430,947	20,995,984
TOTAL EXPENSES	$ 33,965,293	$ 14,364,450	$ 48,329,741

See notes to the financial statements.

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ESCAMBIA COMMUNITY CLINICS, INC. d/b/a COMMUNITY HEALTH NORTHWEST FLORIDA
STATEMENT OF FUNCTIONAL EXPENSES
FOR THE YEAR ENDED DECEMBER 31, 2023

	Healthcare Services	Support Services	Total
SALARIES AND RELATED EXPENSES			
Salaries	$14,491,967	$9,661,311	$ 24,153,278
Payroll taxes and fringe benefits	4,591,094	3,060,730	7,651,824
Total salaries and related expenses	19,083,061	12,722,041	31,805,102
OTHER EXPENSES			
Prescription drugs and 340B program	9,958,743	-	9,958,743
Occupancy and security	1,317,325	878,216	2,195,541
Contracted medical professionals	1,145,091	-	1,145,091
Supplies	1,390,794	927,196	2,317,990
Telephone and utilities	406,643	271,095	677,738
Conferences	141,539	35,385	176,924
Depreciation and amortization	1,387,075	346,769	1,733,844
Dues and memberships	150,842	100,562	251,404
Equipment rental	2,445	9,781	12,226
Miscellaneous	73,476	293,906	367,382
Postage and shipping	38,333	4,259	42,592
Professional fees	192,878	157,810	350,688
Recruitment cost	70,946	7,883	78,829
Repairs and maintenance	475,357	316,905	792,262
Insurance	349,545	233,030	582,575
Contractual services	1,067,156	56,166	1,123,322
Software fees	777,221	333,095	1,110,316
Advertising	73,313	219,941	293,254
Total other expenses	19,018,722	4,191,999	23,210,721
TOTAL EXPENSES	$ 38,101,783	$ 16,914,040	$ 55,015,823

See notes to the financial statements.

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ESCAMBIA COMMUNITY CLINICS, INC. d/b/a
COMMUNITY HEALTH NORTHWEST FLORIDA
STATEMENTS OF CASH FLOWS
FOR THE YEARS ENDED DECEMBER 31, 2024 AND 2023

	2024	2023
CASH FLOWS FROM OPERATING ACTIVITIES		
Change in net assets	$ (2,236,586)	$ (2,807,179)
Adjustments to reconcile change in net assets to net cash provided by (used in) operating activities:		
Amortization	105,265	105,265
Depreciation	1,456,321	1,628,579
Amortization of right-of-use assets	1,397,827	2,035,240
Loss on disposal of asset	23,334	-
Debt forgiveness - NMTC Unwind	-	(2,100,540)
Changes in assets and liabilities:		
Patient services receivable, net	315,092	(253,139)
Other receivables	1,068,715	(294,808)
Prepaid expenses and other current assets	24,105	(254,951)
Accounts payable	331,516	(352,389)
Accrued salaries and related expenses	(135,650)	(446,314)
Accrued compensated absences	(222,188)	36,866
Operating lease liabilities	(1,412,146)	(2,021,741)
Other liabilities	6,352	84,756
Net cash provided by (used in) operating activities	721,957	(4,640,355)
CASH FLOWS FROM INVESTING ACTIVITIES		
Purchase of property and equipment	(312,374)	(619,575)
CASH FLOWS FROM FINANCING ACTIVITIES		
Principal payments on long-term debt	-	(3,332,586)
Draws on line of credit	2,000,000	-
Net cash used in financing activities	2,000,000	(3,332,586)
NET INCREASE (DECREASE) IN CASH	2,409,583	(8,592,516)
CASH AT BEGINNING OF YEAR	681,594	9,274,110
CASH AT END OF YEAR	$ 3,091,177	$ 681,594
SUPPLEMENTAL CASH FLOW INFORMATION		
Cash paid for interest	$ 140,735	$ 111,017

See notes to the financial statements.

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1. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES AND DESCRIPTION OF ORGANIZATION

Description of Organization

Escambia Community Clinics, Inc. (ECC) (d/b/a Community Health Northwest Florida) is a not-for-profit health care corporation incorporated under the laws of the state of Florida in January 1992. ECC is a Federally Qualified Health Center (FQHC) that receives federal grant funds pursuant to Section 330 of the Public Health Service Act, 42 U.S.C. 254b, a program, which is administrated by the Bureau of Primary Health Care with the United States Department of Health and Human Services (DHHS). The mission of ECC is to provide quality outpatient primary and acute health care services to citizens of Escambia County and surrounding areas, with a special focus to provide access to care for the underinsured, uninsured, working poor and the medically needy, regardless of their ability to pay for services.

In 2024, the Board of Directors of ECC established the Community Health Northwest Florida Foundation, Inc (the Foundation). Although the Foundation did not engage in any activities during 2024, management expects it to commence operations in 2025.

Financial Statement Presentation

ECC is required to report information regarding its financial position and activities according to two classes of net assets: with donor restrictions or without donor restrictions. Net assets are classified based on donor restrictions, if any, that may or may not be met by actions of management or by the passage of time. Currently, there are no net assets with donor restrictions.

Net Patient Service Revenue and Accounts Receivable

Patient care service revenue is reported at the amount that reflects the consideration to which ECC expects to be entitled in exchange for providing patient care. Patient receivables represent amounts due from patients and third-party payors (including health insurers and government payors).

ECC has agreements with third-party payors to charge rates at amounts different from its published rates. A summary of the payment arrangements with major third-party payors is as follows:

Medicaid – ECC, as an FQHC, receives reimbursement from Medicaid based upon its costs of providing services to Medicaid eligible patients. ECC is reimbursed for cost reimbursable items at a contracted rate with settlement determined on a quarterly basis after submission of wrap-around cost reports by ECC and audits thereof by the Medicaid fiscal intermediary. Additionally, ECC is paid a capitation payment from a managed care organization for a large portion of its Medicaid patients as a result of the state of Florida's reorganization of Medicaid.

Medicare – ECC is eligible for cost reimbursements from Medicare based upon its costs of providing services. Services rendered to Medicare patients are paid at a tentative rate with final settlement determined after submission of annual cost reports by ECC and audits thereof by the Medicare fiscal intermediary.

ECC reports patient accounts receivable for services rendered at net realizable amounts from third-party payors, patients and others. Net patient services revenue is recognized in the period services are provided at the estimated net realizable amount from Medicare, Medicaid, commercial insurers,

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other third-party payors and patients. Established rates are maintained for patient services provided; however, actual collectible revenue is normally realized at a discount to these rates. Contractual adjustments represent the difference between the amounts billed for these services and the amounts that are reimbursable by third-party payors.

Generally, patients who are covered by third-party payors are responsible for related deductibles and coinsurance, which vary in amount. ECC estimates the transaction price for patients with deductibles and coinsurance and for those who self-pay based on historical experience and current market conditions and reasonable and supportable forecasts. The initial estimate of the transaction price is determined by reducing the standard charge by any contractual adjustments, discounts and implicit price concessions based on historical collection experience and reasonable and supportable forecasts. Subsequent changes to the estimate of the transaction price are generally recorded as adjustments to patient service revenue in the period of the change.

Subsequent changes that are determined to be the result of an adverse change in the patient's ability to pay are recorded as credit losses. There are various factors that can impact the collection trends, such as a change in the general economy, which in turn have an impact on unemployment rates and the number of uninsured and underinsured patients, the increased burden of copayments to be made by patients with insurance and business practices related to collection efforts. These factors continuously change and can have an impact on collection trends and the revenue estimation process. As a practical expedient, ECC applies a portfolio approach for the patient service revenue stream to group contracts with similar characteristics and analyze historical cash collections trends. The contracts within the portfolio share the characteristics conducive to ensuring that the results do not materially differ if it were to be applied to individual patient contracts related to each patient encounter.

For receivables associated with services provided to patients who have third-party coverage, which includes patients with deductible and copayment balances due from which third-party coverage exists for part of the bill, ECC analyzes contractually due amounts and provides an allowance for implicit price concessions and a provision for implicit price concessions, if necessary. For receivables associated with self-pay patients, ECC records a significant provision for implicit price concessions in the period of service on the basis of its past experience and reasonable and supportable forecasts, which indicates that many patients are unable to pay the portion of their bill for which they are financially responsible. The difference between the billed rates and the amounts actually collected after all reasonable collection efforts have been exhausted is charged off against the allowance for implicit price concessions. ECC does not maintain a material allowance for implicit price concessions from third-party payors, nor did it have significant write-offs from third-party payors.

Charity Care

Quality medical care is provided to all persons requiring treatment regardless of their ability to pay. A patient is classified as a charity patient by reference to certain established policies of ECC. In assessing a patient's inability to pay, ECC utilizes the most recently published federal poverty income guidelines. In addition, charity services include charges for services provided to Medicaid patients less payments actually received. These charges are included in net patient service revenue. The cost of charity care provided by ECC for the years ended December 31, 2024 and 2023, was $8,630,691 and $9,234,818, respectively.

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Grant and Contract Revenue
Revenue from government grants and contracts designated for specific activities is recognized in the period when expenditures have been incurred in compliance with the grantor's restrictions. Grants and contracts awarded for the acquisition of long-lived assets are reported as changes to net assets, in the absence of donor stipulations to the contrary, during the year in which the assets are acquired. Cash received in advance of revenue recognized is recorded as deferred revenue. Grant and contract receivables are reported at their outstanding unpaid balances.

Capitation Revenue
ECC has agreements with managed care organizations and the Department of Public Health to provide medical services to subscribing participants. Under these agreements, ECC receives monthly capitation payments based on the number of each plan's participants assigned to ECC, regardless of services actually performed by ECC.

Section 340B Program of the Public Health Service Act
ECC offers reduced price medications to low-income, uninsured patients through arrangements with contracted pharmacies. Revenue is earned as prescriptions are filled and provided to patients.

Long-Lived Assets
Long-lived assets that are subject to depreciation and amortization are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. No impairment losses were recorded for the years ended December 31, 2024 and 2023.

Property and Equipment
Property and equipment is stated at cost. ECC capitalizes all property and equipment purchases in excess of $5,000. Donated property and equipment are recorded at estimated fair market value at the date of the donation. Depreciation is calculated using the straight-line method over the following estimated useful lives:

Buildings	39 years
Improvements	15 years
Machinery and equipment	3-7 years
Vehicles	5-6 years
Software	3 years

Property and equipment acquired with Section 330 grant funds are considered to be owned by ECC. However, the funding source has a reversionary interest in the property, as well as the right to determine the use of any proceeds from the sale of assets purchased with their funds.

Goodwill
Goodwill consists of the excess of cost over the fair value of net assets acquired. Goodwill is amortized over a ten-year period from the asset purchase date.

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Compensated Absences
ECC provides paid time off (PTO) benefits, which include vacation, holiday and sick time, for its full-time employees and some part-time employees who meet hourly work requirements. Employees are granted PTO benefits in varying amounts to specified maximums depending on tenure with ECC. Generally, after one year of service, employees are entitled to all accrued PTO upon termination or retirement up to 80 hours. A maximum accrual of PTO is limited to two times the annual accrual (or two years).

Donated Services
Contributions of donated services that create or enhance nonfinancial assets or that require specialized skills, which are provided by individuals possessing those skills and would typically need to be purchased if not provided by donation, are recorded at fair value in the period received. Donated services totaled $51,583 and $5,933 for the years ended December 31, 2024 and 2023, respectively.

Income Taxes
ECC has been granted an exemption from income taxes under Internal Revenue Code, Section 501(c)(3) as a not-for-profit corporation. ECC is not aware of any uncertain tax positions that would require disclosure or accrual in accordance with GAAP.

Functional Allocation of Expenses
The costs of providing the various programs and supporting activities have been summarized on a functional basis in the statements of activities. Accordingly, costs have been allocated among the program and supporting services benefited. The expenses that are allocated are compensation and benefits, which are allocated on the basis of estimates of time and effort; occupancy costs and depreciation, which are allocated on a square footage basis; and supplies, which are allocated based on average employee headcount.

Use of Estimates
The preparation of financial statements in accordance with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, the disclosure of contingent assets and liabilities as of the date of the financial statements, and the reported amounts of revenues, expenses and other changes in net assets during the reporting period. Actual results could differ from those estimates.

Right-Of-Use Lease Assets and Lease Liabilities
Right-of-use assets and liabilities are initially measured at the present value of lease payments over the lease term, discounted using the interest rate implicit in the lease at the commencement date. Right-of-use assets are adjusted for any lease payments made prior to lease commencement, lease incentives, and accrued rent. If the rate implicit in the lease cannot be readily determined, the ECC will use the risk-free interest rate. ECC's leases may include options to extend or terminate the lease. When it is reasonably certain that ECC will exercise such option, the lease term includes those periods. Lease expense for operating leases is recognized on a straight-line basis over the lease term. Some of the lease agreements include variable rental payments that periodically adjust to rates and charges stated in the agreements.

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Subsequent Events
Management has evaluated subsequent events for recognition or disclosure through June 17, 2025, the date the financial statements were available to be issued.

2. PATIENT SERVICES RECEIVABLE AND NET PATIENT SERVICE REVENUES

The opening balance of net accounts receivable was $823,737 at January 1, 2023. Accounts receivable recorded net of the allowance for implicit price concessions and allowance for contractual adjustments at December 31, 2024 and 2023, are as follows:

	2024	2023
Patient services receivable, gross	$ 2,157,304	$ 2,733,630
Allowance for contractual adjustments	(1,305,879)	(1,457,483)
Allowance for credit losses	(89,641)	(199,271)
Patient services receivable, net	$ 761,784	$ 1,076,876

Patient fees revenue, net of provision for contractual allowances and implicit price concessions, consists of the following for the years ended:

	2024	2023
Gross patient service revenues	$ 53,177,114	$ 53,907,044
Contractual adjustments and credit loss adjustments	(23,869,579)	(25,836,000)
Net patient service revenue	$ 29,307,535	$ 28,071,044

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3. PROPERTY AND EQUIPMENT

Property and equipment consisted of the following:

	2024	2023
Land	$ 385,335	$ 385,335
Buildings and leasehold improvements	11,931,057	11,942,561
Equipment	5,216,919	5,172,167
Vehicles	1,018,192	1,018,192
Software	1,248,733	1,234,763
Construction in progress	219,457	8,116
	20,019,693	19,761,134
Less accumulated depreciation	(9,094,153)	(7,668,313)
Property and equipment, net	$ 10,925,540	$ 12,092,821

Depreciation expense for the years ended December 31, 2024 and 2023, totaled $1,539,200 and $1,628,579, respectively.

4. GOODWILL

In April 2019, ECC acquired the assets of two pharmacies, which have historically served the underinsured, uninsured and working poor citizens of Escambia County. The purchase price was approximately $850,000 and was allocated to the tangible and intangible assets acquired. ECC recorded goodwill of $788,618 as of December 31, 2019, that is being amortized over ten years.

In August 2021, ECC acquired the assets of a pharmacy. The purchase price was approximately $270,000 and was allocated to the tangible and intangible assets acquired. ECC recorded goodwill of $264,031 as of December 31, 2021, that is being amortized over ten years.

Amortization expense related to goodwill assets was $105,265 for the each of the years ending December 31, 2024 and 2023.

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5. LINE OF CREDIT

ECC obtained a revolving line of credit (LOC) with a financial institution in the principal amount of $2,500,000. During 2024, ECC had outstanding borrowings of $2,000,000 under this LOC. The LOC is secured by property of ECC and bears interest at a variable rate based on the lender's prime rate.

ECC has certain financial covenants relating to its LOC. Management indicates it was in violation of these covenants as of December 31, 2024 and obtained a waiver of such violations from the financial institution. Subsequently, the LOC was further renewed through July 30, 2025 under similar terms.

6. NEW MARKET TAX CREDIT TRANSACTION

During 2016, ECC restructured operations and entered into transactions in order to make additional funds available through the New Markets Tax Credit (NMTC) Program. The additional funds were used to partially finance the construction of a new clinic, which was completed in January 2018.

In August 2023, the NMTC compliance period ended, and the Federal and State Investment Fund investors exercised their put option. As a result, ECC was able to gain control of and cancel the $6.4 million in notes payable, which is offset by its forgiveness of the $4.3 million note receivable from the State Investment Fund. For the year ended December 31, 2023, ECC recognized a net gain on the transaction of approximately $2.1 million.

7. LIQUIDITY AND AVAILABILITY OF FINANCIAL ASSETS

ECC has a policy to manage its liquidity and reserves following three guiding principles: operating within a prudent range of financial stability, maintaining adequate liquidity to fund near-term operations, and maintaining sufficient reserves to provide reasonable assurance that long-term obligations will be discharged.

	2024	2023
Cash	$ 3,091,177	$ 681,594
Patient services receivable, net	761,784	1,076,876
Other receivables	3,307,626	4,376,341
Financial assets available to meet cash needs for expenditures within one year	$ 7,160,587	$ 6,134,811

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8. RELATED PARTY TRANSACTIONS

ECC is a recipient of community benefit grant awards through agreements with Sacred Heart Health System, Inc. (SHH) and Baptist Hospital, Inc. (BH). The grant proceeds are to be used specifically to support the otherwise uncompensated costs (including general and administrative costs properly allocable under GAAP), which ECC reasonably projects it will incur in providing comprehensive, community-based, preventive and primary health and dental care, behavioral health services, related enabling services, outreach, health education and promotion, risk management and other appropriate services and programs that promote access to and availability of continuous care for the residents of the Escambia and Santa Rosa County service area. The Chairman and Vice Chairman positions of ECC's Board of Directors are held by executives from BH and SHH. The total amount of awards ECC received under these Community Benefit Grant Agreements for each of the years ended December 31, 2024 and 2023, was approximately $1,100,000.

9. RETIREMENT PLAN

ECC provides a 403(b)-retirement plan for its employees. ECC makes discretionary contributions up to 3% of the participant's elective deferral. Contributions were $547,752 and $1,054,562 for the years ended December 31, 2024 and 2023, respectively.

10. SELF-INSURANCE

ECC has in place a large deductible policy for health insurance for its employees and supplements the policy with reinsurance.

ECC is responsible for paying eligible claims up to the maximum deductible of $50,000 per employee, as well as the premium for the reinsurance. The maximum amount of losses for which ECC could be held responsible in any given policy period is $1,000,000. The insurance company administers the claims and payments as a third-party service provider.

ECC established reserves for open and expected claims of approximately $388,700 and $527,000 as of December 31, 2024 and 2023, respectively, which are included in accrued expenses in the accompanying financial statements. Further adjustments to the amounts recorded from estimates and final settlements will be recorded in the statements of activities when adjustments become known.

11. OPERATING LEASE LIABILITIES

ECC leases equipment, office and clinical space from various companies with lease terms that expire between 2025 through 2030. At December 31, 2024 and 2023, the weighted average discount rate was 1.89% and 1.76% respectively and the weighted average remaining term (in years) was 4.26 and 4.47, respectively. For the years ended December 31, 2024 and 2023, total operating lease costs were $1,476,054 and $1,426,401, respectively, and short-term lease

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expenses were $130,097 and $323,362, respectively. The future minimum lease payment for each of the succeeding five years and thereafter, remaining under the noncancelable operating lease, consisted of the following:

Year Ending December 31,	Amount
2025	$ 913,013
2026	621,768
2027	403,778
2028	314,272
2029	320,558
Thereafter	381,206
Total minimum lease payments	2,954,595
Less imputed interest	(109,171)
Present value of operating lease liabilities	2,845,424
Less current portion of operating lease liabilities	(913,013)
Remaining balance of operating lease liabilities	$ 1,932,411

Total cash paid for operating lease liabilities for the years ended December 31, 2024 and 2023, were $1,451,550 and $1,412,146, respectively.

12. CONCENTRATIONS AND CREDIT RISK

Concentrations

ECC's primary operations and service area include most communities of Escambia County, Florida. ECC grants credit without collateral to its patients, who are uninsured, insured under third-party payor arrangements, primarily with Medicare, Medicaid and various commercial insurance companies.

The significant concentrations of patient services receivable at December 31, 2024 and 2023, were approximately:

	2024	2023
Medicare	10%	5%
Medicaid	71%	78%
Other	15%	13%
Self-pay	4%	2%
	100%	98%

Approximately 9% and 15% of ECC's total revenues in 2024 and 2023, respectively, were provided by grants through DHHS. ECC is economically dependent on this funding source.

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Deposits
ECC occasionally maintains cash balances in excess of the insured limits provided by the Federal Deposit Insurance Corporation (FDIC). As of December 31, 2024 and 2023, deposits at financial institutions exceeded FDIC insured limits by approximately $3 million and $2 million, respectively.

13. MEDICAL MALPRACTICE CLAIMS COVERAGE

The Federally Supported Health Centers Assistance Act of 1992 and 1995 granted medical malpractice liability protection through the Federal Tort Claims Act to FQHCs. Under this legislation, ECC, employees and eligible contractors are considered federal employees immune from suit with the federal government acting as their primary insurer.

14. CONTINGENCIES

The healthcare industry is subject to numerous laws and regulations of federal, state and local governments. Compliance with these laws and regulations is subject to future government review and interpretation, as well as regulatory actions unknown or unasserted at this time. Government activity continues to increase with respect to investigations and allegations concerning possible violations by healthcare providers of fraud and abuse statutes and regulations, which could result in the imposition of significant fines and penalties, as well as significant repayments for patient service previously billed. Management is not aware of any material incidents of noncompliance; however, the possible future financial effects, if any, are not presently determinable.

During the normal course of business, ECC may become involved in various legal issues. In the opinion of management, any such matters will not have a material effect upon the financial position of ECC, and significant losses, if any, would be adequately covered by insurance.

15. SUBSEQUENT EVENTS

In 2025, ECC repaid $1 million towards the outstanding balance on the line of credit.

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SUPPLEMENTARY INFORMATION

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ESCAMBIA COMMUNITY CLINICS, INC. d/b/a
COMMUNITY HEALTH NORTHWEST FLORIDA
SCHEDULES OF GRANTS, CONTRACTS AND REIMBURSEMENTS REVENUE
FOR THE YEARS ENDED DECEMBER 31, 2024 AND 2023

	2024	2023
Federal government		
Health Resources and Services Administration	$ 4,398,666	$ 7,436,286
Total federal government	4,398,666	7,436,286
State government		
State of Florida Agency for Health Care Administration	1,034,872	1,204,382
Total state government	1,034,872	1,204,382
Community		
Sacred Heart Health System	535,417	535,417
Baptist Health Care	550,000	550,000
Total community	1,085,417	1,085,417
Other	552,586	633,107
TOTAL GRANTS, CONTRACTS AND REIMBURSEMENTS	$ 7,071,541	$ 10,359,192

See independent auditors' report.

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COMPLIANCE SECTION

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ESCAMBIA COMMUNITY CLINICS, INC. d/b/a
COMMUNITY HEALTH NORTHWEST FLORIDA
SCHEDULE OF EXPENDITURES OF FEDERAL AWARDS
FOR THE YEAR ENDED DECEMBER 31, 2024

Federal Agency Pass-Through Entity Federal Program	Assistance Listing Number	Contract/ Award	Pass-Through Entity Identifying Number	Federal Expenditures	Subrecipients
U.S. Department of Health & Human Services					
Health Center Cluster					
Health Center Program	93.224	6-H80CS08755-15-13	N/A	$ 3,902,774	$ -
Health Center Program	93.224	6 C16CS50441-01-03	N/A	285,786	-
Grants for New and Expanded Services					-
under the Health Center Program	93.527	6-H2ECS45574-02-01	N/A	83,336	-
COVID - 19 Grants for New and Expanded Services					
under the Health Center Program	93.527	1 H8LCS51971-01-00	N/A	126,770	-
Total Health Center Cluster				4,398,666	-
TOTAL EXPENDITURES OF FEDERAL AWARDS				$ 4,398,666	$ -

The accompanying notes are an integral part of this schedule.

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ESCAMBIA COMMUNITY CLINICS, INC. d/b/a COMMUNITY HEALTH NORTHWEST FLORIDA NOTES TO THE SCHEDULE OF EXPENDITURES OF FEDERAL AWARDS FOR THE YEAR ENDED DECEMBER 31, 2024

1. BASIS OF PRESENTATION

The information in this schedule is presented in accordance with the requirements of Title 2 U.S. *Code of Federal Regulations (CFR) Part 200, Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards* (Uniform Guidance). Since the schedule presents only a select portion of the operations of Escambia Community Clinics, Inc. (ECC), it is not intended to and does not present the financial position, changes in net assets or cash flows of ECC.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

The accompanying Schedule of Expenditures of Federal Awards (SEFA) includes the federal grant activity of ECC under programs of the federal government for the year ended December 31, 2024. Expenditures reported on the schedule are reported on the accrual basis of accounting. ECC did not elect to utilize the ten percent de minimis indirect cost rate allowed under the Uniform Guidance.

3. PROGRAM CLUSTERS

The U.S. Office of Management and Budget Compliance Supplement defines a cluster of programs as a grouping of closely related programs that share common compliance requirements. There was one program that met this criterion for the current fiscal year, Assistance Listing Number 93.224/ 93.527 – Health Center Program Cluster.

4. CONTINGENCY

The grant revenue accounts are subject to audit and adjustment. If any expenditures or expenses are disallowed by the grantor agencies as a result of such audit, any claim for reimbursement to the grant agencies would become a liability of ECC. In the opinion of management, all grant expenditures are in compliance with the terms of the grant agreements and applicable federal laws and regulations.

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Warren Averett
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INDEPENDENT AUDITORS' REPORT ON INTERNAL CONTROL OVER FINANCIAL REPORTING AND ON COMPLIANCE AND OTHER MATTERS BASED ON AN AUDIT OF FINANCIAL STATEMENTS PERFORMED IN ACCORDANCE WITH *GOVERNMENT AUDITING STANDARDS*

To the Board of Directors
Escambia Community Clinics, Inc.
d/b/a Community Health Northwest Florida

We have audited, in accordance with the auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards* issued by the Comptroller General of the United States, the financial statements of Escambia Community Clinics, Inc. (a nonprofit organization, ECC) (d/b/a Community Health Northwest Florida), which comprise the statement of financial position as of December 31, 2024, and the related statements of activities, functional expenses and cash flows for the year then ended, and the related notes to the financial statements, and have issued our report thereon dated June 17, 2025.

Report on Internal Control Over Financial Reporting
In planning and performing our audit of the financial statements, we considered ECC's internal control over financial reporting (internal control) as a basis for determining the audit procedures that are appropriate in the circumstances for the purpose of expressing our opinion on the financial statements, but not for the purpose of expressing an opinion on the effectiveness of ECC's internal control. Accordingly, we do not express an opinion on the effectiveness of ECC's internal control.

A *deficiency in internal control* exists when the design or operation of a control does not allow management or employees, in the normal course of performing their assigned functions, to prevent, or detect and correct, misstatements on a timely basis. A *material weakness* is a deficiency or a combination of deficiencies in internal control, such that there is a reasonable possibility that a material misstatement of ECC's financial statements will not be prevented, or detected and corrected, on a timely basis. A *significant deficiency* is a deficiency or a combination of deficiencies in internal control that is less severe than a material weakness, yet important enough to merit attention by those charged with governance.

Our consideration of internal control was for the limited purpose described in the first paragraph of this section and was not designed to identify all deficiencies in internal control that might be material weaknesses or significant deficiencies. Given these limitations, during our audit we did not identify any deficiencies in internal control that we consider to be material weaknesses. However, material weaknesses or significant deficiencies may exist that have not been identified.

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Report on Compliance and Other Matters

As part of obtaining reasonable assurance about whether ECC's financial statements are free from material misstatement, we performed tests of its compliance with certain provisions of laws, regulations, contracts and grant agreements, noncompliance with which could have a direct and material effect on the financial statements. However, providing an opinion on compliance with those provisions was not an objective of our audit, and accordingly, we do not express such an opinion. The results of our tests disclosed no instances of noncompliance or other matters that are required to be reported under *Government Auditing Standards*.

Purpose of This Report

The purpose of this report is solely to describe the scope of our testing of internal control and compliance and the results of that testing, and not to provide an opinion on the effectiveness of ECC's internal control nor on compliance. This report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering ECC's internal control and compliance. Accordingly, this communication is not suitable for any other purpose.

Warren Averett, LLC

Pensacola, Florida
June 17, 2025

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INDEPENDENT AUDITORS' REPORT ON COMPLIANCE FOR EACH MAJOR FEDERAL PROGRAM AND ON INTERNAL CONTROL OVER COMPLIANCE REQUIRED BY THE UNIFORM GUIDANCE

To the Board of Directors
Escambia Community Clinics, Inc.
d/b/a Community Health Northwest Florida

Report on Compliance for Each Major Federal Program

Opinion on Each Major Federal Program

We have audited Escambia Community Clinics, Inc.'s compliance with the types of compliance requirements identified as subject to audit in the OMB Compliance Supplement that could have a direct and material effect on each of Escambia Community Clinics, Inc.'s major federal program for the year ended December 31, 2024. Escambia Community Clinics, Inc.'s major federal program is identified in the summary of auditors' results section of the accompanying schedule of findings and questioned costs.

In our opinion, Escambia Community Clinics, Inc. complied, in all material respects, with the types of compliance requirements referred to above that could have a direct and material effect on its major federal program for the year ended December 31, 2024.

Basis for Opinion on Each Major Federal Program

We conducted our audit of compliance in accordance with auditing standards generally accepted in the United States of America; the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States; and the audit requirements of Title 2 U.S. *Code of Federal Regulations Part 200, Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards* (Uniform Guidance). Our responsibilities under those standards and the Uniform Guidance are further described in the Auditors' Responsibilities for the Audit of Compliance section of our report.

We are required to be independent of Escambia Community Clinics, Inc. and to meet our other ethical responsibilities in accordance with relevant ethical requirements relating to our audit. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion on compliance for each major federal program. Our audit does not provide a legal determination of Escambia Community Clinics, Inc.'s compliance with the compliance requirements referred to above.

Responsibilities of Management for Compliance

Management is responsible for compliance with the requirements referred to above and for the design, implementation and maintenance of effective internal control over compliance with the requirements of laws, statutes, regulations, rules and provisions of contracts or grant agreements applicable to Escambia Community Clinics, Inc.'s federal programs.

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Auditors' Responsibilities for the Audit of Compliance

Our objectives are to obtain reasonable assurance about whether material noncompliance with the compliance requirements referred to above occurred, whether due to fraud or error, and express an opinion on Escambia Community Clinics, Inc.'s compliance based on our audit. Reasonable assurance is a high level of assurance but is not absolute assurance and therefore is not a guarantee that an audit conducted in accordance with generally accepted auditing standards, *Government Auditing Standards*, and the Uniform Guidance will always detect material noncompliance when it exists. The risk of not detecting material noncompliance resulting from fraud is higher than for that resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations or the override of internal control. Noncompliance with the compliance requirements referred to above is considered material if there is a substantial likelihood that, individually or in the aggregate, it would influence the judgment made by a reasonable user of the report on compliance about Escambia Community Clinics, Inc.'s compliance with the requirements of each major federal program as a whole.

In performing an audit in accordance with generally accepted auditing standards, *Government Auditing Standards*, and the Uniform Guidance, we:

- Exercise professional judgment and maintain professional skepticism throughout the audit.
- Identify and assess the risks of material noncompliance, whether due to fraud or error, and design and perform audit procedures responsive to those risks. Such procedures include examining, on a test basis, evidence regarding Escambia Community Clinics, Inc.'s compliance with the compliance requirements referred to above and performing such other procedures as we considered necessary in the circumstances.
- Obtain an understanding of Escambia Community Clinics, Inc.'s internal control over compliance relevant to the audit in order to design audit procedures that are appropriate in the circumstances and to test and report on internal control over compliance in accordance with the Uniform Guidance, but not for the purpose of expressing an opinion on the effectiveness of Escambia Community Clinics, Inc.'s internal control over compliance. Accordingly, no such opinion is expressed.

We are required to communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and any significant deficiencies and material weaknesses in internal control over compliance that we identified during the audit.

Report on Internal Control Over Compliance

A *deficiency in internal control over compliance* exists when the design or operation of a control over compliance does not allow management or employees, in the normal course of performing their assigned functions, to prevent, or detect and correct, noncompliance with a type of compliance requirement of a federal program on a timely basis. A *material weakness in internal control over compliance* is a deficiency or combination of deficiencies in internal control over compliance, such that there is a reasonable possibility that material noncompliance with a type of compliance requirement of a federal program, will not be prevented, or detected and corrected, on a timely basis. A *significant deficiency in internal control over compliance* is a deficiency or a combination of deficiencies in internal control over compliance with a type of compliance requirement of a federal program that is less severe than a material weakness in internal control over compliance, yet important enough to merit attention by those charged with governance.

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Our consideration of internal control over compliance was for the limited purpose described in the Auditors' Responsibilities for the Audit of Compliance section above and was not designed to identify all deficiencies in internal control over compliance that might be material weaknesses or significant deficiencies in internal control over compliance. Given these limitations, during our audit we did not identify any deficiencies in internal control over compliance that we consider to be material weaknesses, as defined above. However, material weaknesses or significant deficiencies in internal control over compliance may exist that were not identified.

Our audit was not designed for the purpose of expressing an opinion on the effectiveness of internal control over compliance. Accordingly, no such opinion is expressed.

The purpose of this report on internal control over compliance is solely to describe the scope of our testing of internal control over compliance and the results of that testing based on the requirements of the Uniform Guidance. Accordingly, this report is not suitable for any other purpose.

Warren Averett, LLC

Pensacola, Florida
June 17, 2025

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ESCAMBIA COMMUNITY CLINICS, INC. d/b/a
COMMUNITY HEALTH NORTHWEST FLORIDA
SCHEDULE OF FINDINGS AND QUESTIONED COSTS
FOR THE YEAR ENDED DECEMBER 31, 2024

I. SUMMARY OF AUDITORS' RESULTS

Financial Statements

Type of auditors' report issued:		Unmodified	
Internal control over financial reporting:			
• Material weakness(es) identified?	____ Yes	X No	
• Significant deficiency(ies) identified that is/are not considered to be material weaknesses?	____ Yes	X	None Reported
Noncompliance material to financial statements noted?	____ Yes	X No	

Federal Awards

Internal control over major programs:			
• Material weakness(es) identified?	____ Yes	X No	
• Significant deficiency(ies) identified that is/are not considered to be material weaknesses?	____ Yes	X	None Reported
Type of auditors' report issued on compliance for major programs:		Unmodified	
• Any audit findings disclosed that are required to be reported in accordance with Uniform Guidance?	____ Yes	X No	

Identification of major programs:

Assistance Listing Number	Name of Federal Program or Cluster
93.224/93.527	Health Center Cluster

Dollar threshold used to distinguish between type A and type B programs:	$750,000
Auditee qualified as low-risk auditee?	X Yes ____ No

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ESCAMBIA COMMUNITY CLINICS, INC. d/b/a
COMMUNITY HEALTH NORTHWEST FLORIDA
SCHEDULE OF FINDINGS AND QUESTIONED COSTS
FOR THE YEAR ENDED DECEMBER 31, 2024

II. FINANCIAL STATEMENT FINDING

We noted no findings or matters that are required to be reported in accordance with *Government Auditing Standards.*

III. FINDINGS AND QUESTIONED COSTS FOR FEDERAL AWARDS

We noted no findings or matters that are required to be reported in accordance with the Uniform Guidance.

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ESCAMBIA COMMUNITY CLINICS, INC. d/b/a
COMMUNITY HEALTH NORTHWEST FLORIDA
SCHEDULE OF PRIOR YEAR FINDINGS
FOR THE YEAR ENDED DECEMBER 31, 2024

SUMMARY SCHEDULE OF PRIOR YEAR AUDIT FINDINGS

Finding 2023-001 – During our review of ECC's capital asset accounts, we noted multiple intangible assets, related to new software expenses and warranty costs, that had been incorrectly capitalized and depreciated during the fiscal year ended December 31, 2023.

Status - Finding was resolved in fiscal year 2024.

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ESCAMBIA COMMUNITY CLINICS, INC.
d/b/a COMMUNITY HEALTH
NORTHWEST FLORIDA

FINANCIAL STATEMENTS
AND SUPPLEMENTARY INFORMATION

DECEMBER 31, 2023 AND 2022

Warren Averett
CPAs AND ADVISORS
www.warrenaverett.com

The report accompanying this deliverable was issued by Warren Averett, LLC.

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ESCAMBIA COMMUNITY CLINICS, INC. d/b/a
COMMUNITY HEALTH NORTHWEST FLORIDA
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INDEPENDENT AUDITORS' REPORT

To the Board of Directors
Escambia Community Clinics, Inc.
d/b/a Community Health Northwest Florida

Opinion

We have audited the accompanying consolidated financial statements of Escambia Community Clinics, Inc.,(d/b/a Community Health Northwest Florida) (a nonprofit organization) and subsidiaries, which comprise the consolidated statements of financial position as of December 31, 2023 and 2022, and the related consolidated statements of activities, functional expenses and cash flows for the years then ended, and the related notes to the financial statements.

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of Escambia Community Clinics, Inc. and subsidiaries as of December 31, 2023 and 2022, and the changes in their net assets and their cash flows for the years then ended in accordance with accounting principles generally accepted in the United States of America.

Basis for Opinion

We conducted our audits in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States. Our responsibilities under those standards are further described in the Auditors' Responsibilities for the Audit of the Financial Statements section of our report. We are required to be independent of Escambia Community Clinics, Inc. and subsidiaries and to meet our other ethical responsibilities in accordance with the relevant ethical requirements relating to our audit. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinions.

Responsibilities of Management for the Financial Statements

Management is responsible for the preparation and fair presentation of the consolidated financial statements in accordance with accounting principles generally accepted in the United States of America, and for the design, implementation and maintenance of internal control relevant to the preparation and fair presentation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the consolidated financial statements, management is required to evaluate whether there are conditions or events, considered in the aggregate, that raise substantial doubt about Escambia Community Clinics, Inc. and subsidiaries' ability to continue as a going concern within one year after the date that the consolidated financial statements are available to be issued.

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Auditors' Responsibilities for the Audit of the Financial Statements

Our objectives are to obtain reasonable assurance about whether the consolidated financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditors' report that includes our opinion. Reasonable assurance is a high level of assurance but is not absolute assurance and therefore is not a guarantee that an audit conducted in accordance with generally accepted auditing standards and *Government Auditing Standards* will always detect a material misstatement when it exists. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations or the override of internal control. Misstatements are considered material if there is a substantial likelihood that, individually or in the aggregate, they would influence the judgment made by a reasonable user based on the consolidated financial statements.

In performing an audit in accordance with generally accepted auditing standards and *Government Auditing Standards*, we:

- Exercise professional judgment and maintain professional skepticism throughout the audit.
- Identify and assess the risks of material misstatement of the consolidated financial statements, whether due to fraud or error, and design and perform audit procedures responsive to those risks. Such procedures include examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of Escambia Community Clinics, Inc. and subsidiaries' internal control. Accordingly, no such opinion is expressed.
- Evaluate the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluate the overall presentation of the consolidated financial statements.
- Conclude whether, in our judgment, there are conditions or events, considered in the aggregate, that raise substantial doubt about Escambia Community Clinics, Inc. and subsidiaries' ability to continue as a going concern for a reasonable period of time.

We are required to communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit, significant audit findings and certain internal control related matters that we identified during the audit.

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Other Matters

Supplementary Information

Our audit was conducted for the purpose of forming an opinion on the consolidated financial statements as a whole. The schedules of grants, contracts and reimbursements revenue, as listed in the table of contents, are presented for purposes of additional analysis and are not a required part of the consolidated financial statements. The accompanying schedule of expenditures of federal awards is presented for purposes of additional analysis as required by Title 2 U.S. *Code of Federal Regulations (CFR) Part 200, Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards*, and is also not a required part of the consolidated financial statements. Such information is the responsibility of management and was derived from and relates directly to the underlying accounting and other records used to prepare the consolidated financial statements. The information has been subjected to the auditing procedures applied in the audit of the consolidated financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the consolidated financial statements or to the consolidated financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the information is fairly stated in all material respects in relation to the consolidated financial statements as a whole.

Other Reporting Required by *Government Auditing Standards*

In accordance with *Government Auditing Standards*, we have also issued our report dated July 16, 2024 on our consideration of Escambia Community Clinics, Inc. and subsidiaries' internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, grant agreements and other matters. The purpose of that report is to describe the scope of our testing of internal control over financial reporting and compliance, and the results of that testing, and not to provide an opinion on internal control over financial reporting nor on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering Escambia Community Clinics, Inc. and subsidiaries' internal control over financial reporting and compliance.

Warren Averett, LLC

Pensacola, Florida
July 16, 2024

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ESCAMBIA COMMUNITY CLINICS, INC. d/b/a COMMUNITY HEALTH NORTHWEST FLORIDA
STATEMENTS OF FINANCIAL POSITION
DECEMBER 31, 2023 AND 2022

ASSETS

	2023	2022
CURRENT ASSETS		
Cash	$ 681,594	$ 9,274,110
Patient services receivable, net	1,076,876	823,737
Other receivables	4,376,341	4,081,533
Prepaid expenses and other current assets	944,630	689,679
Interest rate swaps	-	79,410
Total current assets	7,079,441	14,948,469
PROPERTY AND EQUIPMENT, NET	12,092,821	13,101,825
OPERATING LEASE RIGHT-OF-USE ASSETS, NET	4,031,573	6,066,813
GOODWILL	616,448	721,713
OTHER ASSETS		
Long-term note receivable – NMTC	-	4,316,554
TOTAL ASSETS	$ 23,820,283	$ 39,155,374

LIABILITIES AND NET ASSETS

CURRENT LIABILITIES		
Accounts payable	$ 658,161	$ 1,010,550
Accrued salaries and related expenses	683,127	1,129,441
Accrued compensated absences	1,148,336	1,111,470
Other current liabilities	23,747	18,401
Current portion of operating lease liabilities	1,362,822	1,302,269
Current portion of long-term debt	-	3,299,901
Total current liabilities	3,876,193	7,872,032
OPERATING LEASE LIABILITIES, NET	2,745,533	4,827,827
LONG-TERM LIABILITIES		
NMTC – see note 6	-	6,417,094
Long-term debt, net of current portion	-	32,685
Total long-term liabilities	-	6,449,779
TOTAL LIABILITIES	6,621,726	19,149,638
NET ASSETS		
Without donor restrictions	17,198,557	20,005,736
TOTAL LIABILITIES AND NET ASSETS	$ 23,820,283	$ 39,155,374

See notes to the consolidated financial statements.

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ESCAMBIA COMMUNITY CLINICS, INC. d/b/a
COMMUNITY HEALTH NORTHWEST FLORIDA
STATEMENTS OF ACTIVITIES
FOR THE YEARS ENDED DECEMBER 31, 2023 AND 2022

	2023	2022
OPERATING REVENUES		
Net patient service revenues	$ 28,071,044	$ 21,970,861
340B prescription drug assistance program	5,921,334	12,674,527
Capitation revenue	4,610,289	3,880,658
Other	1,107,058	580,445
Total operating revenues	39,709,725	39,106,491
PUBLIC SUPPORT		
Grant, contracts and reimbursements	10,359,192	12,976,026
TOTAL OPERATING REVENUES AND PUBLIC SUPPORT	50,068,917	52,082,517
FUNCTIONAL EXPENSES		
Healthcare services	38,101,783	34,842,743
Support services	16,914,040	15,692,530
Total functional expenses	55,015,823	50,535,273
INCOME (LOSS) FROM OPERATIONS	(4,946,906)	1,547,244
OTHER INCOME (EXPENSES)		
Interest income	141,799	70,711
Interest expense	(111,017)	(302,186)
Gain on NMTC Unwind	2,100,540	-
Other income	8,405	112,632
Total other income (expenses)	2,139,727	(118,843)
CHANGE IN NET ASSETS	(2,807,179)	1,428,401
NET ASSETS AT BEGINNING OF YEAR	20,005,736	18,577,335
NET ASSETS AT END OF YEAR	$ 17,198,557	$ 20,005,736

See notes to the consolidated financial statements.

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ESCAMBIA COMMUNITY CLINICS, INC. d/b/a
COMMUNITY HEALTH NORTHWEST FLORIDA
STATEMENT OF FUNCTIONAL EXPENSES
FOR THE YEAR ENDED DECEMBER 31, 2023

	Healthcare Services	Support Services	Total
SALARIES AND RELATED EXPENSES			
Salaries	$ 14,491,967	$ 9,661,311	$ 24,153,278
Payroll taxes and fringe benefits	4,591,094	3,060,730	7,651,824
Total salaries and related expenses	19,083,061	12,722,041	31,805,102
OTHER EXPENSES			
Prescription drugs and 340B program	9,958,743	-	9,958,743
Occupancy and security	1,317,325	878,216	2,195,541
Contracted medical professionals	1,145,091	-	1,145,091
Supplies	1,390,794	927,196	2,317,990
Telephone and utilities	406,643	271,095	677,738
Conferences	141,539	35,385	176,924
Depreciation and amortization	1,387,075	346,769	1,733,844
Dues and memberships	150,842	100,562	251,404
Equipment rental	2,445	9,781	12,226
Miscellaneous	73,476	293,906	367,382
Postage and shipping	38,333	4,259	42,592
Professional fees	192,878	157,810	350,688
Recruitment cost	70,946	7,883	78,829
Repairs and maintenance	475,357	316,905	792,262
Insurance	349,545	233,030	582,575
Contractual services	1,067,156	56,166	1,123,322
Software fees	777,221	333,095	1,110,316
Advertising	73,313	219,941	293,254
Total other expenses	19,018,722	4,191,999	23,210,721
TOTAL EXPENSES	$ 38,101,783	$ 16,914,040	$ 55,015,823

See notes to the consolidated financial statements.

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ESCAMBIA COMMUNITY CLINICS, INC. d/b/a
COMMUNITY HEALTH NORTHWEST FLORIDA
STATEMENT OF FUNCTIONAL EXPENSES
FOR THE YEAR ENDED DECEMBER 31, 2022

	Healthcare Services	Support Services	Total
SALARIES AND RELATED EXPENSES			
Salaries	$ 13,583,355	$ 9,055,570	$ 22,638,925
Payroll taxes and fringe benefits	3,594,338	2,396,226	5,990,564
Total salaries and related expenses	17,177,693	11,451,796	28,629,489
OTHER EXPENSES			
Prescription drugs and 340B program	9,223,477	-	9,223,477
Occupancy and security	1,165,932	777,288	1,943,220
Contracted medical professionals	1,076,714	-	1,076,714
Supplies	2,056,411	1,370,941	3,427,352
Telephone and utilities	382,262	254,842	637,104
Conferences	199,886	49,971	249,857
Depreciation and amortization	1,197,277	299,320	1,496,597
Dues and memberships	141,259	94,172	235,431
Equipment rental	2,789	11,155	13,944
Miscellaneous	74,677	298,712	373,389
Postage and shipping	31,936	3,548	35,484
Professional fees	47,175	38,597	85,772
Recruitment cost	77,615	8,624	86,239
Repairs and maintenance	403,633	269,089	672,722
Insurance	248,834	165,889	414,723
Contractual services	802,697	42,247	844,944
Software fees	404,868	173,515	578,383
Advertising	127,608	382,824	510,432
Total other expenses	17,665,050	4,240,734	21,905,784
TOTAL EXPENSES	$ 34,842,743	$ 15,692,530	$ 50,535,273

See notes to the consolidated financial statements.

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ESCAMBIA COMMUNITY CLINICS, INC. d/b/a
COMMUNITY HEALTH NORTHWEST FLORIDA
STATEMENTS OF CASH FLOWS
FOR THE YEARS ENDED DECEMBER 31, 2023 AND 2022

	2023	2022
CASH FLOWS FROM OPERATING ACTIVITIES		
Change in net assets	$ (2,807,179)	$ 1,428,401
Adjustments to reconcile change in net assets to net cash provided by (used in) operating activities:		
Amortization	105,265	105,265
Depreciation	1,628,579	1,391,332
Amortization of right-of-use assets	2,035,240	1,253,586
Loss on disposal of asset	-	101,467
Debt forgiveness - NMTC Unwind	(2,100,540)	-
Changes in assets and liabilities:		
Patient services receivable, net	(253,139)	2,866,263
Other receivables	(294,808)	(626,922)
Prepaid expenses and other current assets	(254,951)	69,776
Accounts payable	(352,389)	66,900
Accrued salaries and related expenses	(446,314)	120,564
Accrued compensated absences	36,866	11,425
Operating lease liabilities	(2,021,741)	(1,190,303)
Other liabilities	84,756	(114,139)
Net cash provided by (used in) operating activities	(4,640,355)	5,483,615
CASH FLOWS FROM INVESTING ACTIVITIES		
Purchase of property and equipment	(619,575)	(3,546,576)
CASH FLOWS FROM FINANCING ACTIVITIES		
Principal payments on long-term debt	(3,332,586)	(346,781)
NET INCREASE (DECREASE) IN CASH	(8,592,516)	1,590,258
CASH AT BEGINNING OF YEAR	9,274,110	7,683,852
CASH AT END OF YEAR	$ 681,594	$ 9,274,110
SUPPLEMENTAL CASH FLOW INFORMATION		
Cash paid for interest	$ 111,017	$ 302,186

See notes to the consolidated financial statements.

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1. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES AND DESCRIPTION OF ORGANIZATION

Description of Organization

Escambia Community Clinics, Inc. (ECC) (d/b/a Community Health Northwest Florida) is a not-for-profit health care corporation incorporated under the laws of the state of Florida in January 1992. ECC is a Federally Qualified Health Center (FQHC) that receives federal grant funds pursuant to Section 330 of the Public Health Service Act, 42 U.S.C. 254b, a program, which is administrated by the Bureau of Primary Health Care with the United States Department of Health and Human Services (DHHS). The mission of ECC is to provide quality outpatient primary and acute health care services to citizens of Escambia County and surrounding areas, with a special focus to provide access to care for the underinsured, uninsured, working poor and the medically needy, regardless of their ability to pay for services.

Principles of Consolidation and Basis of Accounting

In accordance with generally accepted accounting principles (GAAP), the accompanying consolidated financial statements include the financial activities of ECC and two subsidiaries. Escambia Community Holdings (ECH) is a wholly owned subsidiary of ECC. Community Clinics Services (CCS) is wholly owned by ECC and ECH. All significant intercompany transactions have been eliminated in the accompanying consolidated financial statements. The consolidated financial statements of ECC are prepared under the accrual basis of accounting in accordance with accounting principles generally accepted in the United States of America. As disclosed below, both ECH and CCS were dissolved as of November 30, 2023, therefore the accompanying financial statements include the operations of these subsidiaries from January 1, 2023 through November 30, 2023.

Escambia Community Holdings, Inc.

ECH, a subsidiary, was incorporated and formed in 2008 to support the establishment and the continuation of health care facilities to serve the medically underserved population. This entity had two members, Sacred Heart Health System, Inc. (SHH) and Baptist Hospital, Inc. (BH), related parties (see Note 9). ECH held cash and owned land and a building. The building was previously rented to and occupied by ECC. In 2014, the building was severely flooded and unable to be occupied. In March 2016, SHH and BH transferred their interest in ECH to ECC. The ECH Board of Directors consists of one representative from the ECC Board, along with two independent board members. The ECH acquisition was critical to the New Market Tax Credit transaction that occurred in 2016. In November 2023, as a result of the new market tax credit unwind transaction described in Note 6, ECH was dissolved, and all assets were transferred to ECC.

Community Clinics Services, Inc.

In 2016, ECC formed CCS to meet certain census tracking requirements related to the new facility under construction. ECC and ECH are the two members of CCS. The CCS Board of Directors is substantively the same as the ECC Board of Directors. CCS is a Qualified Active Low-Income Business (QALICB), receiving proceeds from the New Market Tax Credit transaction to fund the new facility project. In November 2023, as a result of the new market tax credit unwind transaction described in Note 6, CCS was dissolved, and all assets were transferred to ECC.

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Financial Statement Presentation
ECC is required to report information regarding its financial position and activities according to two classes of net assets: with donor restrictions or without donor restrictions. Net assets are classified based on donor restrictions, if any, that may or may not be met by actions of management or by the passage of time. Currently, there are no net assets with donor restrictions.

Net Patient Service Revenue and Accounts Receivable
Patient care service revenue is reported at the amount that reflects the consideration to which ECC expects to be entitled in exchange for providing patient care. Patient receivables represent amounts due from patients and third-party payors (including health insurers and government payors).

ECC has agreements with third-party payors to charge rates at amounts different from its published rates. A summary of the payment arrangements with major third-party payors is as follows:

Medicaid – ECC, as an FQHC, receives reimbursement from Medicaid based upon its costs of providing services to Medicaid eligible patients. ECC is reimbursed for cost reimbursable items at a contracted rate with settlement determined on a quarterly basis after submission of wrap-around cost reports by ECC and audits thereof by the Medicaid fiscal intermediary. Additionally, ECC is paid a capitation payment from a managed care organization for a large portion of its Medicaid patients as a result of the state of Florida's reorganization of Medicaid.

Medicare – ECC is eligible for cost reimbursements from Medicare based upon its costs of providing services. Services rendered to Medicare patients are paid at a tentative rate with final settlement determined after submission of annual cost reports by ECC and audits thereof by the Medicare fiscal intermediary.

ECC reports patient accounts receivable for services rendered at net realizable amounts from third-party payors, patients and others. Net patient services revenue is recognized in the period services are provided at the estimated net realizable amount from Medicare, Medicaid, commercial insurers, other third-party payors and patients. Established rates are maintained for patient services provided; however, actual collectible revenue is normally realized at a discount to these rates. Contractual adjustments represent the difference between the amounts billed for these services and the amounts that are reimbursable by third-party payors.

Generally, patients who are covered by third-party payors are responsible for related deductibles and coinsurance, which vary in amount. ECC estimates the transaction price for patients with deductibles and coinsurance and for those who self-pay based on historical experience and current market conditions and reasonable and supportable forecasts. The initial estimate of the transaction price is determined by reducing the standard charge by any contractual adjustments, discounts and implicit price concessions based on historical collection experience and reasonable and supportable forecasts. Subsequent changes to the estimate of the transaction price are generally recorded as adjustments to patient service revenue in the period of the change.

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Subsequent changes that are determined to be the result of an adverse change in the patient's ability to pay are recorded as credit losses. There are various factors that can impact the collection trends, such as a change in the general economy, which in turn have an impact on unemployment rates and the number of uninsured and underinsured patients, the increased burden of copayments to be made by patients with insurance and business practices related to collection efforts. These factors continuously change and can have an impact on collection trends and the revenue estimation process. As a practical expedient, ECC applies a portfolio approach for the patient service revenue stream to group contracts with similar characteristics and analyze historical cash collections trends. The contracts within the portfolio share the characteristics conducive to ensuring that the results do not materially differ if it were to be applied to individual patient contracts related to each patient encounter.

For receivables associated with services provided to patients who have third-party coverage, which includes patients with deductible and copayment balances due from which third-party coverage exists for part of the bill, ECC analyzes contractually due amounts and provides an allowance for implicit price concessions and a provision for implicit price concessions, if necessary. For receivables associated with self-pay patients, ECC records a significant provision for implicit price concessions in the period of service on the basis of its past experience and reasonable and supportable forecasts, which indicates that many patients are unable to pay the portion of their bill for which they are financially responsible. The difference between the billed rates and the amounts actually collected after all reasonable collection efforts have been exhausted is charged off against the allowance for implicit price concessions. ECC does not maintain a material allowance for implicit price concessions from third-party payors, nor did it have significant write-offs from third-party payors.

Charity Care

Quality medical care is provided to all persons requiring treatment regardless of their ability to pay. A patient is classified as a charity patient by reference to certain established policies of ECC. In assessing a patient's inability to pay, ECC utilizes the most recently published federal poverty income guidelines. In addition, charity services include charges for services provided to Medicaid patients less payments actually received. These charges are included in net patient service revenue. The cost of charity care provided by ECC for the years ended December 31, 2023 and 2022, was $9,234,818 and $8,196,772, respectively.

Grant and Contract Revenue

Revenue from government grants and contracts designated for specific activities is recognized in the period when expenditures have been incurred in compliance with the grantor's restrictions. Grants and contracts awarded for the acquisition of long-lived assets are reported as changes to net assets, in the absence of donor stipulations to the contrary, during the year in which the assets are acquired. Cash received in advance of revenue recognized is recorded as deferred revenue. Grant and contract receivables are reported at their outstanding unpaid balances.

Capitation Revenue

ECC has agreements with managed care organizations and the Department of Public Health to provide medical services to subscribing participants. Under these agreements, ECC receives monthly capitation payments based on the number of each plan's participants assigned to ECC, regardless of services actually performed by ECC.

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Section 340B Program of the Public Health Service Act
ECC offers reduced price medications to low-income, uninsured patients through arrangements with contracted pharmacies. Revenue is earned as prescriptions are filled and provided to patients.

Long-Lived Assets
Long-lived assets that are subject to depreciation and amortization are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. No impairment losses were recorded for the years ended December 31, 2023 and 2022.

Property and Equipment
Property and equipment is stated at cost. ECC capitalizes all property and equipment purchases in excess of $5,000. Donated property and equipment are recorded at estimated fair market value at the date of the donation. Depreciation is calculated using the straight-line method over the following estimated useful lives:

Buildings	39 years
Improvements	15 years
Machinery and equipment	3-7 years
Vehicles	5-6 years
Software	3 years

Property and equipment acquired with Section 330 grant funds are considered to be owned by ECC. However, the funding source has a reversionary interest in the property, as well as the right to determine the use of any proceeds from the sale of assets purchased with their funds.

Goodwill
Goodwill consists of the excess of cost over the fair value of net assets acquired. Goodwill is amortized over a ten-year period from the asset purchase date.

Compensated Absences
ECC provides paid time off (PTO) benefits, which include vacation, holiday and sick time, for its full-time employees and some part-time employees who meet hourly work requirements. Employees are granted PTO benefits in varying amounts to specified maximums depending on tenure with ECC. Generally, after one year of service, employees are entitled to all accrued PTO upon termination or retirement up to 80 hours. A maximum accrual of PTO is limited to two times the annual accrual (or two years).

Donated Services
Contributions of donated services that create or enhance nonfinancial assets or that require specialized skills, which are provided by individuals possessing those skills and would typically need to be purchased if not provided by donation, are recorded at fair value in the period received. Donated services totaled $5,933 and $43,523 for the years ended December 31, 2023 and 2022, respectively.

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Income Taxes
ECC has been granted an exemption from income taxes under Internal Revenue Code, Section 501(c)(3) as a not-for-profit corporation. ECC is not aware of any uncertain tax positions that would require disclosure or accrual in accordance with GAAP.

Functional Allocation of Expenses
The costs of providing the various programs and supporting activities have been summarized on a functional basis in the statements of activities. Accordingly, costs have been allocated among the program and supporting services benefited. The expenses that are allocated are compensation and benefits, which are allocated on the basis of estimates of time and effort; occupancy costs and depreciation, which are allocated on a square footage basis; and supplies, which are allocated based on average employee headcount.

Use of Estimates
The preparation of consolidated financial statements in accordance with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, the disclosure of contingent assets and liabilities as of the date of the consolidated financial statements, and the reported amounts of revenues, expenses and other changes in net assets during the reporting period. Actual results could differ from those estimates.

Right-Of-Use Lease Assets and Lease Liabilities
Right-of-use assets and liabilities are initially measured at the present value of lease payments over the lease term, discounted using the interest rate implicit in the lease at the commencement date. Right-of-use assets are adjusted for any lease payments made prior to lease commencement, lease incentives, and accrued rent. If the rate implicit in the lease cannot be readily determined, the ECC will use the risk-free interest rate. ECC's leases may include options to extend or terminate the lease. When it is reasonably certain that ECC will exercise such option, the lease term includes those periods. Lease expense for operating leases is recognized on a straight-line basis over the lease term. Some of the lease agreements include variable rental payments that periodically adjust to rates and charges stated in the agreements.

Recently Adopted Accounting Pronouncements
Effective January 1, 2023, ECC adopted Accounting Standards Update (ASU) No. 2016-13, *Financial Instruments–Credit Losses* (Topic 326): *Measurement of Credit Losses on Financial Instruments*, which significantly changed how entities will measure credit losses for most financial assets and certain other instruments that are not measured at fair value through net income. The most significant change in this standard is a shift from the incurred loss model to the expected loss model for all financial assets measured at amortized cost. Under the standard, disclosures are required to provide users of the financial statements with useful information in analyzing a company's exposure to credit risk and the measurement of credit losses. Financial assets held by ECC that are subject to the FASB ASC 326 include accounts receivables. The impact of the adoption was not considered material to the consolidated financial statements and primarily resulted in new/enhanced disclosures only.

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Reclassifications
Certain minor reclassifications have been made to the 2022 amounts to conform with the 2023 classifications.

Subsequent Events
Management has evaluated subsequent events for recognition or disclosure through July 16, 2024, the date the consolidated financial statements were available to be issued.

2. PATIENT SERVICES RECEIVABLE AND NET PATIENT SERVICE REVENUES

The opening balance of net accounts receivable was $1,549,480 at January 1, 2022. Accounts receivable recorded net of the allowance for implicit price concessions and allowance for contractual adjustments at December 31, 2023 and 2022, are as follows:

	2023	2022
Patient services receivable, gross	$ 2,733,630	$ 2,355,768
Allowance for contractual adjustments	(1,457,483)	(1,492,209)
Allowance for credit losses	(199,271)	(39,822)
Patient services receivable, net	$ 1,076,876	$ 823,737

Patient fees revenue, net of provision for contractual allowances and implicit price concessions, consists of the following for the years ended:

	2023	2022
Gross patient service revenues	$ 53,907,044	$ 46,216,558
Contractual adjustments and credit loss adjustments	(25,836,000)	(24,245,697)
Net patient service revenue	$ 28,071,044	$ 21,970,861

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3. PROPERTY AND EQUIPMENT

Property and equipment consisted of the following:

	2023	2022
Land	$ 385,335	$ 385,335
Buildings and leasehold improvements	11,942,561	11,889,011
Equipment	5,172,167	4,653,235
Vehicles	1,018,192	1,018,192
Software	1,234,763	1,182,187
Construction in progress	8,116	13,596
	19,761,134	19,141,556
Less accumulated depreciation	(7,668,313)	(6,039,731)
Property and equipment, net	$ 12,092,821	$ 13,101,825

Depreciation expense for the years ended December 31, 2023 and 2022, totaled $1,628,579 and $1,391,332, respectively.

4. GOODWILL

In April 2019, ECC acquired the assets of two pharmacies, which have historically served the underinsured, uninsured and working poor citizens of Escambia County. The purchase price was approximately $850,000 and was allocated to the tangible and intangible assets acquired. ECC recorded goodwill of $788,618 as of December 31, 2019, that is being amortized over ten years.

In August 2021, ECC acquired the assets of a pharmacy. The purchase price was approximately $270,000 and was allocated to the tangible and intangible assets acquired. ECC recorded goodwill of $264,031 as of December 31, 2021, that is being amortized over ten years.

Amortization expense related to goodwill assets was $105,265 for the each of the years ending December 31, 2023 and 2022.

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5. LONG-TERM DEBT

ECC has the following long-term debt:

	2023	2022
Loan from a financing institution used to fund a leveraged loan to Stonehenge Florida NMTC Investment Fund V, LLC (see Note 6). The loan requires monthly payments of $17,500, beginning on October 1, 2017. The loan has a variable interest rate of 3.25%, plus one month ICE LIBOR. Final payment on the loan is due in September 2023.	$ -	$ 3,202,500
Loan payable to an individual for the purchase of assets of two pharmacies. The loan requires annual payments of $100,000 beginning on April 1, 2020. The loan has a fixed interest rate of 2% and is unsecured. Final payment on the loan is due in April 2024.	-	130,086
	-	3,332,586
Less current portion	-	(3,299,901)
Long-term debt, net	$ -	$ 32,685

6. NEW MARKET TAX CREDIT TRANSACTION

During 2016, ECC restructured operations and entered into transactions in order to make additional funds available through the New Markets Tax Credit (NMTC) Program. The additional funds were used to partially finance the construction of a new clinic, which was completed in January 2018.

As a part of the restructuring, a new 501(c)(3) entity named CCS was created and used to construct the new facility and lease the facility to ECC upon completion. The NMTC Program permits taxpayers to claim a credit against federal, and sometimes state, income taxes for Qualified Equity Investments (QEIs) in designated Community Development Entities (CDEs). These CDEs must use substantially all (85%) of the proceeds to make Qualified Low-Income Community Investments (QLICIs). The investor is provided with a tax credit, which is claimed over a seven-year period. The federal credit is equal to 5% of the QEI over the first three years and 6% annually for the final four years, resulting in a total credit amount of 39%.

On March 31, 2016, ECH borrowed $4.2 million from a local bank, which along with other ECH funds, was used to make a leveraged loan of $4,316,554 to the Stonehenge Florida NMTC Investment Fund V, LLC (the State Investment Fund). The State Investment Fund also received equity totaling $2,100,540 from a tax credit investor and then made a QEI of $6,417,094 in Stonehenge Community Development 102, LLC, (the State CDE), of which the State Investment Fund owns 99.99%. The remaining .01% is owned by Stonehenge Community Development, LLC.

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The State CDE made Loan D, totaling $3,417,094 to CCS, the QALICB. The remaining $3 million was used by the State CDE to make a $3 million leveraged loan to Twain Investment Fund, LLC (the Federal Investment Fund). The Federal Investment Fund also received equity totaling $270,427 from a tax credit investor and then made a QEI in Stonehenge Community Development 110, LLC, (the Federal CDE), of which the Federal Investment Fund owns 99.99%. The remaining .01% is owned by Stonehenge Community Development, LLC. The Federal CDE made three loans, loans A, B and C, totaling $3 million to CCS, (the QALICB).

ECH's leveraged loan receivable from the state investment fund earns interest at 1.40% per annum quarterly, with quarterly principal payments commencing January 20, 2024. Final maturity is October 2043. The loan receivable totals $4,316,554 as of December 31, 2022.

CCS's notes payable A, B and C require interest to be paid quarterly to Stonehenge Community Development 110, LLC (Lender) at 2.614% per annum, with quarterly principal payments commencing January 5, 2024. Final maturity is October 2050. Prepayments of principal are not allowed during the seven-year tax compliance period.

CCS's note payable D requires interest to be paid quarterly to Stonehenge Community Development 102, LLC (Lender) at 1.605% per annum, with quarterly principal payments commencing January 5, 2024. Final maturity is October 2050. Prepayments of principal are not allowed during the seven-year tax compliance period.

CCS pledged substantially all of its assets as collateral for Notes A, B and C. The Lender has a lien and security interest in the collateral.

In connection with making the loan, ECC entered into "put and call" agreements with the owners of the Federal and State Investment Funds. The agreement allows the owners to "put" their combined 100% interest in the Funds to ECC at the end of the seven-year tax credit investment period. If the owners exercise these puts, ECC will pay a purchase price of $1,000, plus any transfer or closing costs, to each owner. In the event the puts are not exercised, ECC can exercise "call" options to purchase the ownership interests in the Funds at amounts equal to the fair value of those ownership interests, as determined by an independent appraiser. No amounts have been recorded in these consolidated financial statements related to these put and call options.

In August 2023, the NMTC compliance period ended, and the Federal and State Investment Fund investors exercised their put option. As a result, ECC was able to gain control of and cancel the $6.4 million in notes payable, which is offset by its forgiveness of the $4.3 million note receivable from the State Investment Fund. For the year ended December 31, 2023, ECC recognized a net gain on the transaction of approximately $2.1 million.

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7. INTEREST RATE SWAPS

ECC entered into an interest rate swap agreement on March 31, 2016, with a notional amount of $4,200,000 and maturing in September 2023. ECC entered into an additional interest rate swap agreement on April 9, 2018, with a notional amount of $1,500,000 and maturing in May 2025. ECC has an asset recorded for the net amount of the fair value of its interest rate swap on its consolidated statements of financial position, in the amount of approximately $79,400 as of December 31, 2022. The fair value has been categorized based on pricing inputs, which are observable from actively quoted midmarket values. All interest rate swap agreements are considered Level 2 assets because a quoted price can be obtained from a number of dealer counterparties and other market sources based on observable interest rates and yield curves for the full term of the asset. Both agreements were terminated in fiscal year 2023 when related debt was extinguished.

8. LIQUIDITY AND AVAILABILITY OF FINANCIAL ASSETS

ECC has a policy to manage its liquidity and reserves following three guiding principles: operating within a prudent range of financial stability, maintaining adequate liquidity to fund near-term operations, and maintaining sufficient reserves to provide reasonable assurance that long-term obligations will be discharged.

	2023	2022
Cash	$ 681,594	$ 9,274,110
Patient services receivable, net	1,076,876	823,737
Other receivables	4,376,341	4,081,533
Financial assets available to meet cash needs for expenditures within one year	$ 6,134,811	$ 14,179,380

9. RELATED PARTY TRANSACTIONS

ECC is a recipient of community benefit grant awards through agreements with Sacred Heart Health System, Inc. (SHH) and Baptist Hospital, Inc. (BH). The grant proceeds are to be used specifically to support the otherwise uncompensated costs (including general and administrative costs properly allocable under GAAP), which ECC reasonably projects it will incur in providing comprehensive, community-based, preventive and primary health and dental care, behavioral health services, related enabling services, outreach, health education and promotion, risk management and other appropriate services and programs that promote access to and availability of continuous care for the residents of the Escambia and Santa Rosa County service area. The Chairman and Vice Chairman positions of ECC's Board of Directors are held by executives from BH and SHH. The total amount of awards ECC received under these Community Benefit Grant Agreements for each of the years ended December 31, 2023 and 2022, was approximately $1,100,000.

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10. RETIREMENT PLAN

ECC provides a 403(b)-retirement plan for its employees. ECC contributes 3.5% of eligible compensation to eligible participants. ECC also makes discretionary contributions up to 3% of the participant's elective deferral. Contributions were $1,054,562 and $932,910 for the years ended December 31, 2023 and 2022, respectively.

11. SELF-INSURANCE

ECC has in place a large deductible policy for health insurance for its employees and supplements the policy with reinsurance.

ECC is responsible for paying eligible claims up to the maximum deductible of $50,000 per employee, as well as the premium for the reinsurance. The maximum amount of losses for which ECC could be held responsible in any given policy period is $1,000,000. The insurance company administers the claims and payments as a third-party service provider.

ECC established reserves for open and expected claims of approximately $527,000 and $102,000 as of December 31, 2023 and 2022, respectively, which are included in accrued expenses in the accompanying consolidated financial statements. Further adjustments to the amounts recorded from estimates and final settlements will be recorded in the consolidated statements of activities when adjustments become known.

12. OPERATING LEASE LIABILITIES

ECC leases equipment, office and clinical space from various companies with lease terms that expire between 2024 through 2030. At December 31, 2023 and 2022, the weighted average discount rate was 1.76% and 1.58% respectively and the weighted average remaining term (in years) was 4.47% and 5.13%, respectively. For the years ended December 31, 2023 and 2022, total operating lease costs were $1,426,401 and $1,352,475, respectively, and short-term lease expenses were $323,362 and $190,281, respectively.

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The future minimum lease payment for each of the succeeding five years and thereafter, remaining under the noncancelable operating lease, consisted of the following:

Year Ending December 31,	Amount
2024	$ 1,362,822
2025	902,398
2026	612,910
2027	403,778
2028	314,272
Thereafter	679,910
Total minimum lease payments	4,276,090
Less imputed interest	(167,735)
Present value of operating lease liabilities	4,108,355
Less current portion of operating lease liabilities	1,362,822
Remaining balance of operating lease liabilities	$ 2,745,533

Total cash paid for operating lease liabilities for the years ended December 31, 2023 and 2022, were $1,325,614 and $1,289,192, respectively.

13. CONCENTRATIONS AND CREDIT RISK

Concentrations
ECC's primary operations and service area include most communities of Escambia County, Florida. ECC grants credit without collateral to its patients, who are uninsured, insured under third-party payor arrangements, primarily with Medicare, Medicaid and various commercial insurance companies.

The significant concentrations of patient services receivable at December 31, 2023 and 2022, were approximately:

	2023	2022
Medicare	5%	7%
Medicaid	77%	78%
Other	14%	13%
Self-pay	4%	2%
	100%	100%

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Approximately 20% of ECC's total revenues in 2023 and 2022, respectively, were provided by grants through DHHS. ECC is economically dependent on this funding source.

Deposits
ECC occasionally maintains cash balances in excess of the insured limits provided by the Federal Deposit Insurance Corporation (FDIC). As of December 31, 2023 and 2022, deposits at financial institutions exceeded FDIC insured limits by approximately $2 million and $9 million, respectively.

14. MEDICAL MALPRACTICE CLAIMS COVERAGE

The Federally Supported Health Centers Assistance Act of 1992 and 1995 granted medical malpractice liability protection through the Federal Tort Claims Act to FQHCs. Under this legislation, ECC, employees and eligible contractors are considered federal employees immune from suit with the federal government acting as their primary insurer.

15. CONTINGENCIES

The healthcare industry is subject to numerous laws and regulations of federal, state and local governments. Compliance with these laws and regulations is subject to future government review and interpretation, as well as regulatory actions unknown or unasserted at this time. Government activity continues to increase with respect to investigations and allegations concerning possible violations by healthcare providers of fraud and abuse statutes and regulations, which could result in the imposition of significant fines and penalties, as well as significant repayments for patient service previously billed. Management is not aware of any material incidents of noncompliance; however, the possible future financial effects, if any, are not presently determinable.

During the normal course of business, ECC may become involved in various legal issues. In the opinion of management, any such matters will not have a material effect upon the financial position of ECC, and significant losses, if any, would be adequately covered by insurance.

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SUPPLEMENTARY INFORMATION

Docusign Envelope ID: 90EEEBC2-895F-8500-81E8-721C82C066B8

ESCAMBIA COMMUNITY CLINICS, INC. d/b/a
COMMUNITY HEALTH NORTHWEST FLORIDA
SCHEDULES OF GRANTS, CONTRACTS AND REIMBURSEMENTS REVENUE
FOR THE YEARS ENDED DECEMBER 31, 2023 AND 2022

	2023	2022
Federal government		
Health Resources and Services Administration	$ 7,436,286	$ 9,660,161
Total federal government	7,436,286	9,660,161
State government		
State of Florida Agency for Health Care Administration	1,204,382	1,784,282
Total state government	1,204,382	1,784,282
Community		
Sacred Heart Health System	535,417	550,000
Baptist Health Care	550,000	550,000
Total community	1,085,417	1,100,000
Other	633,107	431,583
TOTAL GRANTS, CONTRACTS AND REIMBURSEMENTS	$ 10,359,192	$ 12,976,026

See independent auditors' report.

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COMPLIANCE SECTION

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ESCAMBIA COMMUNITY CLINICS, INC. d/b/a
COMMUNITY HEALTH NORTHWEST FLORIDA
SCHEDULE OF EXPENDITURES OF FEDERAL AWARDS
FOR THE YEAR ENDED DECEMBER 31, 2023

Federal Agency Pass-Through Entity Federal Program	Assistance Listing Number	Contract/ Award	Pass-Through Entity Identifying Number	Federal Expenditures	Subrecipients
U.S. Department of Health & Human Services					
Health Center Cluster					
Health Center Program	93.224	6-H80CS08755-15-13	N/A	$ 3,455,537	$ -
Health Center Program	93.224	1-C14CS39783-01-00	N/A	39,152	-
COVID-19 – Health Center Program	93.224	1-H8FCS40574-01-00	N/A	2,691,737	-
COVID-19 – Grants for New and Expanded Services under the Health Center Program	93.527	6-H2ECS45574-02-01	N/A	316,664	-
COVID-19 – Grants for New and Expanded Services under the Health Center Program	93.527	1-H8GCS48963-01-00	N/A	568,530	-
Total Health Center Cluster				7,071,620	-
COVID-19 – Health Center Infrastructure Support	93.526	1-C8ECS44556-01-00	N/A	364,665	-
TOTAL EXPENDITURES OF FEDERAL AWARDS				$ 7,436,285	$ -

The accompanying notes are an integral part of this schedule.

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ESCAMBIA COMMUNITY CLINICS, INC. d/b/a COMMUNITY HEALTH NORTHWEST FLORIDA NOTES TO THE SCHEDULE OF EXPENDITURES OF FEDERAL AWARDS FOR THE YEAR ENDED DECEMBER 31, 2023

1. BASIS OF PRESENTATION

The information in this schedule is presented in accordance with the requirements of Title 2 U.S. *Code of Federal Regulations (CFR) Part 200, Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards* (Uniform Guidance). Since the schedule presents only a select portion of the operations of Escambia Community Clinics, Inc. (ECC), it is not intended to and does not present the financial position, changes in net assets or cash flows of ECC.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

The accompanying Schedule of Expenditures of Federal Awards (SEFA) includes the federal grant activity of ECC under programs of the federal government for the year ended December 31, 2023. Expenditures reported on the schedule are reported on the accrual basis of accounting. ECC did not elect to utilize the ten percent de minimis indirect cost rate allowed under the Uniform Guidance.

3. PROGRAM CLUSTERS

The U.S. Office of Management and Budget Compliance Supplement defines a cluster of programs as a grouping of closely related programs that share common compliance requirements. There was one program that met this criterion for the current fiscal year, Assistance Listing Number 93.224/ 93.527 – Health Center Program Cluster.

4. CONTINGENCY

The grant revenue accounts are subject to audit and adjustment. If any expenditures or expenses are disallowed by the grantor agencies as a result of such audit, any claim for reimbursement to the grant agencies would become a liability of ECC. In the opinion of management, all grant expenditures are in compliance with the terms of the grant agreements and applicable federal laws and regulations.

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Warren Averett
CPAs AND ADVISORS

350 W Cedar Street, Suite 400
Pensacola, FL 32502
850.435.7400
warrenaverett.com

INDEPENDENT AUDITORS' REPORT ON INTERNAL CONTROL OVER FINANCIAL REPORTING AND ON COMPLIANCE AND OTHER MATTERS BASED ON AN AUDIT OF FINANCIAL STATEMENTS PERFORMED IN ACCORDANCE WITH *GOVERNMENT AUDITING STANDARDS*

To the Board of Directors
Escambia Community Clinics, Inc.
d/b/a Community Health Northwest Florida

We have audited, in accordance with the auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards* issued by the Comptroller General of the United States, the consolidated financial statements of Escambia Community Clinics, Inc. (a nonprofit organization, ECC) (d/b/a Community Health Northwest Florida), which comprise the consolidated statement of financial position as of December 31, 2023, and the related consolidated statements of activities, functional expenses and cash flows for the year then ended, and the related notes to the consolidated financial statements, and have issued our report thereon dated July 16, 2024.

Report on Internal Control Over Financial Reporting
In planning and performing our audit of the consolidated financial statements, we considered ECC's internal control over financial reporting (internal control) as a basis for determining the audit procedures that are appropriate in the circumstances for the purpose of expressing our opinion on the consolidated financial statements, but not for the purpose of expressing an opinion on the effectiveness of ECC's internal control. Accordingly, we do not express an opinion on the effectiveness of ECC's internal control.

A *deficiency in internal control* exists when the design or operation of a control does not allow management or employees, in the normal course of performing their assigned functions, to prevent, or detect and correct, misstatements on a timely basis. A *material weakness* is a deficiency or a combination of deficiencies in internal control, such that there is a reasonable possibility that a material misstatement of ECC's consolidated financial statements will not be prevented, or detected and corrected, on a timely basis. A *significant deficiency* is a deficiency or a combination of deficiencies in internal control that is less severe than a material weakness, yet important enough to merit attention by those charged with governance.

Our consideration of the internal control was for the limited purpose described in the first paragraph of this section and was not designed to identify all deficiencies in internal control that might be material weaknesses or significant deficiencies and therefore, material weaknesses or significant deficiencies may exist that were not identified. Given these limitations, during our audit we did not identify any deficiencies in internal control that we consider to be material weaknesses. We identified a certain deficiency in internal control, described in the accompanying schedule of findings and questioned costs as item finding 2023-001 that we consider to be a significant deficiency.

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Report on Compliance and Other Matters

As part of obtaining reasonable assurance about whether ECC's consolidated financial statements are free from material misstatement, we performed tests of its compliance with certain provisions of laws, regulations, contracts and grant agreements, noncompliance with which could have a direct and material effect on the consolidated financial statements. However, providing an opinion on compliance with those provisions was not an objective of our audit, and accordingly, we do not express such an opinion. The results of our tests disclosed no instances of noncompliance or other matters that are required to be reported under *Government Auditing Standards*.

ECC's Response to Finding

Government Auditing Standards requires the auditor to perform limited procedures on ECC's response to the finding identified in our audit and described in the accompanying schedule of findings and questioned costs. ECC's response was not subjected to the other auditing procedures applied in the audit of the financial statements and, accordingly, we express no opinion on the response.

Purpose of This Report

The purpose of this report is solely to describe the scope of our testing of internal control and compliance and the results of that testing, and not to provide an opinion on the effectiveness of ECC's internal control nor on compliance. This report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering ECC's internal control and compliance. Accordingly, this communication is not suitable for any other purpose.

Warren Averett, LLC

Pensacola, Florida
July 16, 2024

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Warren Averett
CPAs AND ADVISORS

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Pensacola, FL 32502
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INDEPENDENT AUDITORS' REPORT ON COMPLIANCE FOR EACH MAJOR FEDERAL PROGRAM AND ON INTERNAL CONTROL OVER COMPLIANCE REQUIRED BY THE UNIFORM GUIDANCE

To the Board of Directors
Escambia Community Clinics, Inc.
d/b/a Community Health Northwest Florida

Report on Compliance for Each Major Federal Program

Opinion on Each Major Federal Program

We have audited Escambia Community Clinics, Inc. and subsidiaries' compliance with the types of compliance requirements identified as subject to audit in the OMB Compliance Supplement that could have a direct and material effect on each of Escambia Community Clinics, Inc. and subsidiaries' major federal program for the year ended December 31, 2023. Escambia Community Clinics, Inc. and subsidiaries' major federal program is identified in the summary of auditors' results section of the accompanying schedule of findings and questioned costs.

In our opinion, Escambia Community Clinics, Inc. and subsidiaries complied, in all material respects, with the types of compliance requirements referred to above that could have a direct and material effect on its major federal program for the year ended December 31, 2023.

Basis for Opinion on Each Major Federal Program

We conducted our audit of compliance in accordance with auditing standards generally accepted in the United States of America; the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States; and the audit requirements of Title 2 U.S. *Code of Federal Regulations Part 200, Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards* (Uniform Guidance). Our responsibilities under those standards and the Uniform Guidance are further described in the Auditors' Responsibilities for the Audit of Compliance section of our report.

We are required to be independent of Escambia Community Clinics, Inc. and subsidiaries and to meet our other ethical responsibilities in accordance with relevant ethical requirements relating to our audit. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion on compliance for each major federal program. Our audit does not provide a legal determination of Escambia Community Clinics, Inc. and subsidiaries' compliance with the compliance requirements referred to above.

Responsibilities of Management for Compliance

Management is responsible for compliance with the requirements referred to above and for the design, implementation and maintenance of effective internal control over compliance with the requirements of laws, statutes, regulations, rules and provisions of contracts or grant agreements applicable to Escambia Community Clinics, Inc. and subsidiaries' federal programs.

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Auditors' Responsibilities for the Audit of Compliance

Our objectives are to obtain reasonable assurance about whether material noncompliance with the compliance requirements referred to above occurred, whether due to fraud or error, and express an opinion on Escambia Community Clinics, Inc. and subsidiaries' compliance based on our audit. Reasonable assurance is a high level of assurance but is not absolute assurance and therefore is not a guarantee that an audit conducted in accordance with generally accepted auditing standards, *Government Auditing Standards*, and the Uniform Guidance will always detect material noncompliance when it exists. The risk of not detecting material noncompliance resulting from fraud is higher than for that resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations or the override of internal control. Noncompliance with the compliance requirements referred to above is considered material if there is a substantial likelihood that, individually or in the aggregate, it would influence the judgment made by a reasonable user of the report on compliance about Escambia Community Clinics, Inc. and subsidiaries' compliance with the requirements of each major federal program as a whole.

In performing an audit in accordance with generally accepted auditing standards, *Government Auditing Standards*, and the Uniform Guidance, we:

- Exercise professional judgment and maintain professional skepticism throughout the audit.
- Identify and assess the risks of material noncompliance, whether due to fraud or error, and design and perform audit procedures responsive to those risks. Such procedures include examining, on a test basis, evidence regarding Escambia Community Clinics, Inc. and subsidiaries' compliance with the compliance requirements referred to above and performing such other procedures as we considered necessary in the circumstances.
- Obtain an understanding of Escambia Community Clinics, Inc. and subsidiaries' internal control over compliance relevant to the audit in order to design audit procedures that are appropriate in the circumstances and to test and report on internal control over compliance in accordance with the Uniform Guidance, but not for the purpose of expressing an opinion on the effectiveness of Escambia Community Clinics, Inc. and subsidiaries' internal control over compliance. Accordingly, no such opinion is expressed.

We are required to communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and any significant deficiencies and material weaknesses in internal control over compliance that we identified during the audit.

Report on Internal Control Over Compliance

A *deficiency in internal control over compliance* exists when the design or operation of a control over compliance does not allow management or employees, in the normal course of performing their assigned functions, to prevent, or detect and correct, noncompliance with a type of compliance requirement of a federal program on a timely basis. A *material weakness in internal control over compliance* is a deficiency or combination of deficiencies in internal control over compliance, such that there is a reasonable possibility that material noncompliance with a type of compliance requirement of a federal program, will not be prevented, or detected and corrected, on a timely basis. A *significant deficiency in internal control over compliance* is a deficiency or a combination of deficiencies in internal control over compliance with a type of compliance requirement of a federal program that is less severe than a material weakness in internal control over compliance, yet important enough to merit attention by those charged with governance.

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Our consideration of internal control over compliance was for the limited purpose described in the Auditors' Responsibilities for the Audit of Compliance section above and was not designed to identify all deficiencies in internal control over compliance that might be material weaknesses or significant deficiencies in internal control over compliance. Given these limitations, during our audit we did not identify any deficiencies in internal control over compliance that we consider to be material weaknesses, as defined above. However, material weaknesses or significant deficiencies in internal control over compliance may exist that were not identified.

Our audit was not designed for the purpose of expressing an opinion on the effectiveness of internal control over compliance. Accordingly, no such opinion is expressed.

The purpose of this report on internal control over compliance is solely to describe the scope of our testing of internal control over compliance and the results of that testing based on the requirements of the Uniform Guidance. Accordingly, this report is not suitable for any other purpose.

Warren Averett, LLC

Pensacola, Florida
July 16, 2024

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ESCAMBIA COMMUNITY CLINICS, INC. d/b/a COMMUNITY HEALTH NORTHWEST FLORIDA
SCHEDULE OF FINDINGS AND QUESTIONED COSTS
FOR THE YEAR ENDED DECEMBER 31, 2023

I. SUMMARY OF AUDITORS' RESULTS

Financial Statements

Type of auditors' report issued: Unmodified

Internal control over financial reporting:

• Material weakness(es) identified?	____	Yes	X	No
• Significant deficiency(ies) identified that is/are not considered to be material weaknesses?	X	Yes	____	None Reported
Noncompliance material to financial statements noted?	____	Yes	X	No

Federal Awards

Internal control over major programs:

• Material weakness(es) identified?	____	Yes	X	No
• Significant deficiency(ies) identified that is/are not considered to be material weaknesses?	____	Yes	X	None Reported

Type of auditors' report issued on compliance for major programs: Unmodified

• Any audit findings disclosed that are required to be reported in accordance with section 2 CFR §200.516 audit findings paragraph (a)?	____	Yes	X	No

Identification of major programs:

Assistance Listing Number	Name of Federal Program or Cluster
93.224/93.527	Health Center Cluster

Dollar threshold used to distinguish between type A and type B programs: $750,000

Auditee qualified as low-risk auditee?	X	Yes	____	No

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ESCAMBIA COMMUNITY CLINICS, INC. d/b/a
COMMUNITY HEALTH NORTHWEST FLORIDA
SCHEDULE OF FINDINGS AND QUESTIONED COSTS
FOR THE YEAR ENDED DECEMBER 31, 2023

II. FINANCIAL STATEMENT FINDING

Finding 2023-001 Capital Asset Recognition (Significant Deficiency)

Criteria: ECC should have adequate procedures surrounding capital asset identification and tracking to ensure the capitalization threshold is properly and consistently applied.

Condition: During our review of ECC's capital asset accounts, we noted multiple intangible assets, related to new software expenses and warranty costs, that had been incorrectly capitalized and depreciated during the fiscal year ended December 31, 2023.

Cause: ECC has experienced turnover in staffing as well as increased capital asset activity over the past few years due to software upgrades and changes post COVID.

Effect: ECC reported capital assets that did not qualify for capitalization, therefore, overstating intangible capital assets and understating ECC's expenses.

Recommendation: We recommend ECC conduct additional staff training surrounding capitalization of capital asset policies and procedures.

Views of Responsible Officials and Planned Corrective Action: ECC will conduct additional training of staff during the coming fiscal year.

III. FINDINGS AND QUESTIONED COSTS FOR FEDERAL AWARDS

We noted no findings or matters that are required to be reported in accordance with the Uniform Guidance.

IV. SUMMARY SCHEDULE OF PRIOR YEAR AUDIT FINDINGS

There were no findings reported in the prior year report.

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community health
northwest florida

ESCAMBIA COMMUNITY CLINICS, INC. d/b/a
COMMUNITY HEALTH NORTHWEST FLORIDA
CORRECTIVE ACTION PLAN
FOR THE YEAR ENDED DECEMBER 31, 2023

ECC respectfully submits the following corrective action plan for the year ended December 31, 2023.

Name and address of independent public accounting firm:
Warren Averett, LLC
350 W Cedar Street, Suite 400
Pensacola, Florida 32502

The finding from the schedule of findings and questioned costs is discussed below. The finding is numbered consistently with the number assigned in the schedule of findings and questioned costs.

Name of Contact Person for Completing Corrective Action Plan:
Athena Durant, MAcc
Director of Finance & Grants
850-436-4630
adurant@healthcarewithinreach.org

Expected date of completion is December 31, 2024

Finding 2023-001 Capital Asset Recognition (Significant Deficiency)
We have reviewed the finding and agree with the entries provided to correct the errors noted in capitalization of capital assets during the year. We will conduct additional staff training and provide clarification on policy for capitalization of intangible assets.

LET'S THRIVE TOGETHER

Warren Averett
CPAs AND ADVISORS
www.warrenaverett.com

TAX RETURN

We sincerely appreciate the opportunity to serve you. If you have any questions regarding the enclosed, please do not hesitate to call.

CLIENT COPY

TAX RETURN FILING INSTRUCTIONS

FORM 990

FOR THE YEAR ENDING
DECEMBER 31, 2024

PREPARED FOR:

ESCAMBIA COMMUNITY CLINICS INC.
2315 W JACKSON ST.
PENSACOLA, FL 32505

PREPARED BY:

WARREN AVERETT, LLC
350 W CEDAR STREET, SUITE 400
PENSACOLA, FL 32502

AMOUNT DUE OR REFUND:

NOT APPLICABLE

MAKE CHECK PAYABLE TO:

NOT APPLICABLE

MAIL TAX RETURN AND CHECK (IF APPLICABLE) TO:

NOT APPLICABLE

RETURN MUST BE MAILED ON OR BEFORE:

NOT APPLICABLE

SPECIAL INSTRUCTIONS:

THIS RETURN HAS BEEN PREPARED FOR ELECTRONIC FILING. IF YOU WISH TO HAVE IT TRANSMITTED ELECTRONICALLY TO THE IRS, PLEASE SIGN, DATE, AND RETURN FORM 8879-TE TO OUR OFFICE. WE WILL THEN SUBMIT THE ELECTRONIC RETURN TO THE IRS. DO NOT MAIL A PAPER COPY OF THE RETURN TO THE IRS. RETURN FORM 8879-TE TO US BY NOVEMBER 17, 2025

Form **8879-TE**

Department of the Treasury
Internal Revenue Service

IRS E-file Signature Authorization for a Tax Exempt Entity

For calendar year 2024, or fiscal year beginning _____ , 2024, and ending _____ , 20 ____

Do not send to the IRS. Keep for your records.
Go to www.irs.gov/Form8879TE for the latest information.

OMB No. 1545-0047

2024

Name of filer
ESCAMBIA COMMUNITY CLINICS INC.

EIN or SSN
59-3105246

Name and title of officer or person subject to tax CHANDRA SMILEY, MSW
CEO

Part I Type of Return and Return Information

Check the box for the return for which you are using this Form 8879-TE and enter the applicable amount, if any, from the return. Form 8038-CP and Form 5330 filers may enter dollars and cents. For all other forms, enter whole dollars only. If you check the box on line **1a, 2a, 3a, 4a, 5a, 6a, 7a, 8a, 9a,** or **10a** below, and the amount on that line for the return being filed with this form was blank, then leave line **1b, 2b, 3b, 4b, 5b, 6b, 7b, 8b, 9b,** or **10b,** whichever is applicable, blank (do not enter -0-). But, if you entered -0- on the return, then enter -0- on the applicable line below. **Do not** complete more than one line in Part I.

1a	**Form 990** check here	[X]	**b** **Total revenue,** if any (Form 990, Part VIII, column (A), line 12)	**1b**	46,432,086.
2a	**Form 990-EZ** check here ...		**b** **Total revenue,** if any (Form 990-EZ, line 9)	**2b**	
3a	**Form 1120-POL** check here		**b** **Total tax** (Form 1120-POL, line 22)	**3b**	
4a	**Form 990-PF** check here ...		**b** **Tax based on investment income** (Form 990-PF, Part V, line 5)	**4b**	
5a	**Form 8868** check here		**b** **Balance due** (Form 8868, line 3c)	**5b**	
6a	**Form 990-T** check here		**b** **Total tax** (Form 990-T, Part III, line 4)	**6b**	
7a	**Form 4720** check here		**b** **Total tax** (Form 4720, Part III, line 1)	**7b**	
8a	**Form 5227** check here		**b** **FMV of assets at end of tax year** (Form 5227, Item D)	**8b**	
9a	**Form 5330** check here		**b** **Tax due** (Form 5330, Part II, line 19)	**9b**	
10a	**Form 8038-CP** check here		**b** **Amount of credit payment requested** (Form 8038-CP, Part III, line 22)	**10b**	

Part II Declaration and Signature Authorization of Officer or Person Subject to Tax

Under penalties of perjury, I declare that [X] I am an officer of the above entity or I am a person subject to tax with respect to (name of entity) _____ , (EIN) _____ and that I have examined a copy of the 2024 electronic return and accompanying schedules and statements, and, to the best of my knowledge and belief, they are true, correct, and complete. I further declare that the amount in Part I above is the amount shown on the copy of the electronic return. I consent to allow my intermediate service provider, transmitter, or electronic return originator (ERO) to send the return to the IRS and to receive from the IRS **(a)** an acknowledgement of receipt or reason for rejection of the transmission, **(b)** the reason for any delay in processing the return or refund, and **(c)** the date of any refund. If applicable, I authorize the U.S. Treasury and its designated Financial Agent to initiate an electronic funds withdrawal (direct debit) entry to the financial institution account indicated in the tax preparation software for payment of the federal taxes owed on this return, and the financial institution to debit the entry to this account. To revoke a payment, I must contact the U.S. Treasury Financial Agent at 1-888-353-4537 no later than 2 business days prior to the payment (settlement) date. I also authorize the financial institutions involved in the processing of the electronic payment of taxes to receive confidential information necessary to answer inquiries and resolve issues related to the payment. I have selected a personal identification number (PIN) as my signature for the electronic return and, if applicable, the consent to electronic funds withdrawal.

PIN: check one box only

[X] I authorize WARREN AVERETT, LLC to enter my PIN 05246

ERO firm name

Enter five numbers, but do not enter all zeros

as my signature on the tax year 2024 electronically filed return. If I have indicated within this return that a copy of the return is being filed with a state agency(ies) regulating charities as part of the IRS Fed/State program, I also authorize the aforementioned ERO to enter my PIN on the return's disclosure consent screen.

As an officer or person subject to tax with respect to the entity, I will enter my PIN as my signature on the tax year 2024 electronically filed return. If I have indicated within this return that a copy of the return is being filed with a state agency(ies) regulating charities as part of the IRS Fed/State program, I will enter my PIN on the return's disclosure consent screen.

Signature of officer or person subject to tax _____ Date _____

Part III Certification and Authentication

ERO's EFIN/PIN. Enter your six-digit electronic filing identification number (EFIN) followed by your five-digit self-selected PIN. 59356059356

Do not enter all zeros

I certify that the above numeric entry is my PIN, which is my signature on the 2024 electronically filed return indicated above. I confirm that I am submitting this return in accordance with the requirements of **Pub. 4163,** Modernized e-File (MeF) Information for Authorized IRS *e-file* Providers for Business Returns.

ERO's signature _____ Date 11/10/25

ERO Must Retain This Form - See Instructions
Do Not Submit This Form to the IRS Unless Requested To Do So

EXTENDED TO NOVEMBER 17, 2025

Form **990**

Department of the Treasury
Internal Revenue Service

Return of Organization Exempt From Income Tax

Under section 501(c), 527, or 4947(a)(1) of the Internal Revenue Code (except private foundations)
Do not enter social security numbers on this form as it may be made public.
Go to www.irs.gov/Form990 for instructions and the latest information.

OMB No. 1545-0047

2024

Open to Public Inspection

A For the 2024 calendar year, or tax year beginning and ending

B Check if applicable: Address change; Name change; Initial return; Final return/ termin-ated; Amended return; Applica-tion pending

C Name of organization
ESCAMBIA COMMUNITY CLINICS INC.
Doing business as COMMUNITY HEALTH NORTHWEST FLORI

Number and street (or P.O. box if mail is not delivered to street address) Room/suite
2315 W JACKSON ST.

City or town, state or province, country, and ZIP or foreign postal code
PENSACOLA, FL 32505

F Name and address of principal officer: CHANDRA SMILEY, MSW
SAME AS C ABOVE

D Employer identification number
59-3105246

E Telephone number
850-436-4630

G Gross receipts $ 46,455,421.

H(a) Is this a group return for subordinates? Yes [X] No

H(b) Are all subordinates included? Yes No
If "No," attach a list. See instructions

H(c) Group exemption number

I Tax-exempt status: [X] 501(c)(3) 501(c) ( ) (insert no.) 4947(a)(1) or 527

J Website: WWW.HEALTHCAREWITHINREACH.ORG

K Form of organization: [X] Corporation Trust Association Other

L Year of formation: 1993 **M** State of legal domicile: FL

Part I Summary

Activities & Governance

1 Briefly describe the organization's mission or most significant activities: TO PROVIDE COMPREHENSIVE PRIMARY AND PREVENTIVE HEALTH CARE SERVICES TO RESIDENTS OF ESCAMBIA COUNTY

2 Check this box if the organization discontinued its operations or disposed of more than 25% of its net assets.

3	Number of voting members of the governing body (Part VI, line 1a)	3	14
4	Number of independent voting members of the governing body (Part VI, line 1b)	4	14
5	Total number of individuals employed in calendar year 2024 (Part V, line 2a)	5	437
6	Total number of volunteers (estimate if necessary)	6	15
7a	Total unrelated business revenue from Part VIII, column (C), line 12	7a	0.
b	Net unrelated business taxable income from Form 990-T, Part I, line 11	7b	0.

Revenue

		Prior Year	Current Year
8	Contributions and grants (Part VIII, line 1h)	10,435,404.	7,123,124.
9	Program service revenue (Part VIII, line 2g)	39,110,217.	37,561,245.
10	Investment income (Part VIII, column (A), lines 3, 4, and 7d)	-4,227,187.	-17,375.
11	Other revenue (Part VIII, column (A), lines 5, 6d, 8c, 9c, 10c, and 11e)	7,447,940.	1,765,092.
12	Total revenue - add lines 8 through 11 (must equal Part VIII, column (A), line 12)	52,766,374.	46,432,086.

Expenses

13	Grants and similar amounts paid (Part IX, column (A), lines 1-3)	421,688.	24,742.
14	Benefits paid to or for members (Part IX, column (A), line 4)	0.	0.
15	Salaries, other compensation, employee benefits (Part IX, column (A), lines 5-10)	31,669,089.	27,333,757.
16a	Professional fundraising fees (Part IX, column (A), line 11e)	0.	0.
b	Total fundraising expenses (Part IX, column (D), line 25) 0.		
17	Other expenses (Part IX, column (A), lines 11a-11d, 11f-24e)	23,482,776.	21,310,173.
18	Total expenses. Add lines 13-17 (must equal Part IX, column (A), line 25)	55,573,553.	48,668,672.
19	Revenue less expenses. Subtract line 18 from line 12	-2,807,179.	-2,236,586.

Net Assets or Fund Balances

		Beginning of Current Year	End of Year
20	Total assets (Part X, line 16)	23,820,283.	22,300,796.
21	Total liabilities (Part X, line 26)	6,621,726.	7,338,825.
22	Net assets or fund balances. Subtract line 21 from line 20	17,198,557.	14,961,971.

Part II Signature Block

Under penalties of perjury, I declare that I have examined this return, including accompanying schedules and statements, and to the best of my knowledge and belief, it is true, correct, and complete. Declaration of preparer (other than officer) is based on all information of which preparer has any knowledge.

Sign Here

CLIENT COPY
Signature of officer Date

CHANDRA SMILEY, MSW, CEO
Type or print name and title

Paid Preparer Use Only

Preparer's name	Preparer's signature	Date	Check if self-employed	PTIN
CLAIRE C. DUREN, CPA				P01577924

Firm's name WARREN AVERETT, LLC Firm's EIN 45-4084437

Firm's address 350 W CEDAR STREET, SUITE 400
PENSACOLA, FL 32502 Phone no. 850-435-7400

May the IRS discuss this return with the preparer shown above? See instructions [X] Yes No

SEE SCHEDULE O FOR ORGANIZATION MISSION STATEMENT CONTINUATION

Part III Statement of Program Service Accomplishments

Check if Schedule O contains a response or note to any line in this Part III X

1 Briefly describe the organization's mission:
THE MISSION OF ESCAMBIA COMMUNITY CLINICS, INC. IS TO PROVIDE COMPREHENSIVE PRIMARY AND PREVENTIVE HEALTH CARE SERVICES TO RESIDENTS OF ESCAMBIA COUNTY AND THE SURROUNDING AREA. ESCAMBIA COMMUNITY CLINICS, INC. IS COMMITTED TO ASSURING ACCESS TO CARE FOR THE

2 Did the organization undertake any significant program services during the year which were not listed on the prior Form 990 or 990-EZ? ..... Yes X No
If "Yes," describe these new services on Schedule O.

3 Did the organization cease conducting, or make significant changes in how it conducts, any program services? ..... Yes X No
If "Yes," describe these changes on Schedule O.

4 Describe the organization's program service accomplishments for each of its three largest program services, as measured by expenses. Section 501(c)(3) and 501(c)(4) organizations are required to report the amount of grants and allocations to others, the total expenses, and revenue, if any, for each program service reported.

4a (Code:) (Expenses $ 34,304,222. including grants of $ 24,742.) (Revenue $ 39,303,002.)
PATIENT SERVICES - TO PROVIDE QUALITY AMBULATORY MEDICAL CARE TO THE INDIGENT OF THE COMMUNITY REGARDLESS OF THE INDIVIDUAL'S ABILITY TO PAY.

4b (Code:) (Expenses $ including grants of $) (Revenue $)

4c (Code:) (Expenses $ including grants of $) (Revenue $)

4d Other program services (Describe on Schedule O.)
(Expenses $ including grants of $) (Revenue $)

4e Total program service expenses 34,304,222.

Part IV Checklist of Required Schedules

			Yes	No
1	Is the organization described in section 501(c)(3) or 4947(a)(1) (other than a private foundation)? *If "Yes," complete Schedule A*	1	X	
2	Is the organization required to complete *Schedule B, Schedule of Contributors*? See instructions	2	X	
3	Did the organization engage in direct or indirect political campaign activities on behalf of or in opposition to candidates for public office? *If "Yes," complete Schedule C, Part I*	3		X
4	**Section 501(c)(3) organizations.** Did the organization engage in lobbying activities, or have a section 501(h) election in effect during the tax year? *If "Yes," complete Schedule C, Part II*	4		X
5	Is the organization a section 501(c)(4), 501(c)(5), or 501(c)(6) organization that receives membership dues, assessments, or similar amounts as defined in Rev. Proc. 98-19? *If "Yes," complete Schedule C, Part III*	5		X
6	Did the organization maintain any donor advised funds or any similar funds or accounts for which donors have the right to provide advice on the distribution or investment of amounts in such funds or accounts? *If "Yes," complete Schedule D, Part I*	6		X
7	Did the organization receive or hold a conservation easement, including easements to preserve open space, the environment, historic land areas, or historic structures? *If "Yes," complete Schedule D, Part II*	7		X
8	Did the organization maintain collections of works of art, historical treasures, or other similar assets? *If "Yes," complete Schedule D, Part III*	8		X
9	Did the organization report an amount in Part X, line 21, for escrow or custodial account liability; serve as a custodian for amounts not listed in Part X; or provide credit counseling, debt management, credit repair, or debt negotiation services? *If "Yes," complete Schedule D, Part IV*	9		X
10	Did the organization, directly or through a related organization, hold assets in donor-restricted endowments or in quasi-endowments? *If "Yes," complete Schedule D, Part V*	10		X
11	If the organization's answer to any of the following questions is "Yes," then complete Schedule D, Parts VI, VII, VIII, IX, or X, as applicable.			
a	Did the organization report an amount for land, buildings, and equipment in Part X, line 10? *If "Yes," complete Schedule D, Part VI*	11a	X	
b	Did the organization report an amount for investments - other securities in Part X, line 12, that is 5% or more of its total assets reported in Part X, line 16? *If "Yes," complete Schedule D, Part VII*	11b		X
c	Did the organization report an amount for investments - program related in Part X, line 13, that is 5% or more of its total assets reported in Part X, line 16? *If "Yes," complete Schedule D, Part VIII*	11c		X
d	Did the organization report an amount for other assets in Part X, line 15, that is 5% or more of its total assets reported in Part X, line 16? *If "Yes," complete Schedule D, Part IX*	11d	X	
e	Did the organization report an amount for other liabilities in Part X, line 25? *If "Yes," complete Schedule D, Part X*	11e	X	
f	Did the organization's separate or consolidated financial statements for the tax year include a footnote that addresses the organization's liability for uncertain tax positions under FIN 48 (ASC 740)? *If "Yes," complete Schedule D, Part X*	11f	X	
12a	Did the organization obtain separate, independent audited financial statements for the tax year? *If "Yes," complete Schedule D, Parts XI and XII*	12a	X	
b	Was the organization included in consolidated, independent audited financial statements for the tax year? *If "Yes," and if the organization answered "No" to line 12a, then completing Schedule D, Parts XI and XII is optional*	12b		X
13	Is the organization a school described in section 170(b)(1)(A)(ii)? *If "Yes," complete Schedule E*	13		X
14a	Did the organization maintain an office, employees, or agents outside of the United States?	14a		X
b	Did the organization have aggregate revenues or expenses of more than $10,000 from grantmaking, fundraising, business, investment, and program service activities outside the United States, or aggregate foreign investments valued at $100,000 or more? *If "Yes," complete Schedule F, Parts I and IV*	14b		X
15	Did the organization report on Part IX, column (A), line 3, more than $5,000 of grants or other assistance to or for any foreign organization? *If "Yes," complete Schedule F, Parts II and IV*	15		X
16	Did the organization report on Part IX, column (A), line 3, more than $5,000 of aggregate grants or other assistance to or for foreign individuals? *If "Yes," complete Schedule F, Parts III and IV*	16		X
17	Did the organization report a total of more than $15,000 of expenses for professional fundraising services on Part IX, column (A), lines 6 and 11e? *If "Yes," complete Schedule G, Part I.* See instructions	17		X
18	Did the organization report more than $15,000 total of fundraising event gross income and contributions on Part VIII, lines 1c and 8a? *If "Yes," complete Schedule G, Part II*	18		X
19	Did the organization report more than $15,000 of gross income from gaming activities on Part VIII, line 9a? *If "Yes," complete Schedule G, Part III*	19		X
20a	Did the organization operate one or more hospital facilities? *If "Yes," complete Schedule H*	20a		X
b	If "Yes" to line 20a, did the organization attach a copy of its audited financial statements to this return?	20b		
21	Did the organization report more than $5,000 of grants or other assistance to any domestic organization or domestic government on Part IX, column (A), line 1? *If "Yes," complete Schedule I, Parts I and II*	21	X	

Part IV Checklist of Required Schedules *(continued)*

			Yes	No
22	Did the organization report more than $5,000 of grants or other assistance to or for domestic individuals on Part IX, column (A), line 2? *If "Yes," complete Schedule I, Parts I and III*	22		X
23	Did the organization answer "Yes" to Part VII, Section A, line 3, 4, or 5, about compensation of the organization's current and former officers, directors, trustees, key employees, and highest compensated employees? *If "Yes," complete Schedule J*	23	X	
24a	Did the organization have a tax-exempt bond issue with an outstanding principal amount of more than $100,000 as of the last day of the year, that was issued after December 31, 2002? *If "Yes," answer lines 24b through 24d and complete Schedule K. If "No," go to line 25a*	24a		X
b	Did the organization invest any proceeds of tax-exempt bonds beyond a temporary period exception?	24b		
c	Did the organization maintain an escrow account other than a refunding escrow at any time during the year to defease any tax-exempt bonds?	24c		
d	Did the organization act as an "on behalf of" issuer for bonds outstanding at any time during the year?	24d		
25a	**Section 501(c)(3), 501(c)(4), and 501(c)(29) organizations.** Did the organization engage in an excess benefit transaction with a disqualified person during the year? *If "Yes," complete Schedule L, Part I*	25a		X
b	Is the organization aware that it engaged in an excess benefit transaction with a disqualified person in a prior year, and that the transaction has not been reported on any of the organization's prior Forms 990 or 990-EZ? *If "Yes," complete Schedule L, Part I*	25b		X
26	Did the organization report any amount on Part X, line 5 or 22, for receivables from or payables to any current or former officer, director, trustee, key employee, creator or founder, substantial contributor, or 35% controlled entity or family member of any of these persons? *If "Yes," complete Schedule L, Part II*	26		X
27	Did the organization provide a grant or other assistance to any current or former officer, director, trustee, key employee, creator or founder, substantial contributor or employee thereof, a grant selection committee member, or to a 35% controlled entity (including an employee thereof) or family member of any of these persons? *If "Yes," complete Schedule L, Part III*	27		X
28	Was the organization a party to a business transaction with one of the following parties? (See the Schedule L, Part IV, instructions for applicable filing thresholds, conditions, and exceptions):			
a	A current or former officer, director, trustee, key employee, creator or founder, or substantial contributor? *If "Yes," complete Schedule L, Part IV*	28a		X
b	A family member of any individual described in line 28a? *If "Yes," complete Schedule L, Part IV*	28b		X
c	A 35% controlled entity of one or more individuals and/or organizations described in line 28a or 28b? *If "Yes," complete Schedule L, Part IV*	28c		X
29	Did the organization receive more than $25,000 in noncash contributions? *If "Yes," complete Schedule M*	29		X
30	Did the organization receive contributions of art, historical treasures, or other similar assets, or qualified conservation contributions? *If "Yes," complete Schedule M*	30		X
31	Did the organization liquidate, terminate, or dissolve and cease operations? *If "Yes," complete Schedule N, Part I*	31		X
32	Did the organization sell, exchange, dispose of, or transfer more than 25% of its net assets? *If "Yes," complete Schedule N, Part II*	32		X
33	Did the organization own 100% of an entity disregarded as separate from the organization under Regulations sections 301.7701-2 and 301.7701-3? *If "Yes," complete Schedule R, Part I*	33		X
34	Was the organization related to any tax-exempt or taxable entity? *If "Yes," complete Schedule R, Part II, III, or IV, and Part V, line 1*	34		X
35a	Did the organization have a controlled entity within the meaning of section 512(b)(13)?	35a		X
b	If "Yes" to line 35a, did the organization receive any payment from or engage in any transaction with a controlled entity within the meaning of section 512(b)(13)? *If "Yes," complete Schedule R, Part V, line 2*	35b		
36	**Section 501(c)(3) organizations.** Did the organization make any transfers to an exempt non-charitable related organization? *If "Yes," complete Schedule R, Part V, line 2*	36		X
37	Did the organization conduct more than 5% of its activities through an entity that is not a related organization and that is treated as a partnership for federal income tax purposes? *If "Yes," complete Schedule R, Part VI*	37		X
38	Did the organization complete Schedule O and provide explanations on Schedule O for Part VI, lines 11b and 19? **Note:** All Form 990 filers are required to complete Schedule O	38	X	

Part V Statements Regarding Other IRS Filings and Tax Compliance

Check if Schedule O contains a response or note to any line in this Part V ☐

				Yes	No
1a	Enter the number reported in box 3 of Form 1096. Enter -0- if not applicable	1a	24		
b	Enter the number of Forms W-2G included on line 1a. Enter -0- if not applicable	1b	0		
c	Did the organization comply with backup withholding rules for reportable payments to vendors and reportable gaming (gambling) winnings to prize winners?	1c		X	

Part V Statements Regarding Other IRS Filings and Tax Compliance *(continued)*

			Yes	No
2a	Enter the number of employees reported on Form W-3, Transmittal of Wage and Tax Statements, filed for the calendar year ending with or within the year covered by this return **2a** 437			
b	If at least one is reported on line 2a, did the organization file all required federal employment tax returns?	**2b**	X	
3a	Did the organization have unrelated business gross income of $1,000 or more during the year?	**3a**		X
b	If "Yes," has it filed a Form 990-T for this year? *If "No" to line 3b, provide an explanation on Schedule O*	**3b**		
4a	At any time during the calendar year, did the organization have an interest in, or a signature or other authority over, a financial account in a foreign country (such as a bank account, securities account, or other financial account)?	**4a**		X
b	If "Yes," enter the name of the foreign country _____ See instructions for filing requirements for FinCEN Form 114, Report of Foreign Bank and Financial Accounts (FBAR).			
5a	Was the organization a party to a prohibited tax shelter transaction at any time during the tax year?	**5a**		X
b	Did any taxable party notify the organization that it was or is a party to a prohibited tax shelter transaction?	**5b**		X
c	If "Yes" to line 5a or 5b, did the organization file Form 8886-T?	**5c**		
6a	Does the organization have annual gross receipts that are normally greater than $100,000, and did the organization solicit any contributions that were not tax deductible as charitable contributions?	**6a**		X
b	If "Yes," did the organization include with every solicitation an express statement that such contributions or gifts were not tax deductible?	**6b**		
7	**Organizations that may receive deductible contributions under section 170(c).**			
a	Did the organization receive a payment in excess of $75 made partly as a contribution and partly for goods and services provided to the payor?	**7a**		X
b	If "Yes," did the organization notify the donor of the value of the goods or services provided?	**7b**		
c	Did the organization sell, exchange, or otherwise dispose of tangible personal property for which it was required to file Form 8282?	**7c**		X
d	If "Yes," indicate the number of Forms 8282 filed during the year **7d**			
e	Did the organization receive any funds, directly or indirectly, to pay premiums on a personal benefit contract?	**7e**		X
f	Did the organization, during the year, pay premiums, directly or indirectly, on a personal benefit contract?	**7f**		X
g	If the organization received a contribution of qualified intellectual property, did the organization file Form 8899 as required?	**7g**		
h	If the organization received a contribution of cars, boats, airplanes, or other vehicles, did the organization file a Form 1098-C?	**7h**		
8	**Sponsoring organizations maintaining donor advised funds.** Did a donor advised fund maintained by the sponsoring organization have excess business holdings at any time during the year?	**8**		
9	**Sponsoring organizations maintaining donor advised funds.**			
a	Did the sponsoring organization make any taxable distributions under section 4966?	**9a**		
b	Did the sponsoring organization make a distribution to a donor, donor advisor, or related person?	**9b**		
10	**Section 501(c)(7) organizations.** Enter:			
a	Initiation fees and capital contributions included on Part VIII, line 12 **10a**			
b	Gross receipts, included on Form 990, Part VIII, line 12, for public use of club facilities **10b**			
11	**Section 501(c)(12) organizations.** Enter:			
a	Gross income from members or shareholders **11a**			
b	Gross income from other sources. (Do not net amounts due or paid to other sources against amounts due or received from them.) **11b**			
12a	**Section 4947(a)(1) non-exempt charitable trusts.** Is the organization filing Form 990 in lieu of Form 1041?	**12a**		
b	If "Yes," enter the amount of tax-exempt interest received or accrued during the year **12b**			
13	**Section 501(c)(29) qualified nonprofit health insurance issuers.**			
a	Is the organization licensed to issue qualified health plans in more than one state? **Note:** See the instructions for additional information the organization must report on Schedule O.	**13a**		
b	Enter the amount of reserves the organization is required to maintain by the states in which the organization is licensed to issue qualified health plans **13b**			
c	Enter the amount of reserves on hand **13c**			
14a	Did the organization receive any payments for indoor tanning services during the tax year?	**14a**		X
b	If "Yes," has it filed a Form 720 to report these payments? *If "No," provide an explanation on Schedule O*	**14b**		
15	Is the organization subject to the section 4960 tax on payment(s) of more than $1,000,000 in remuneration or excess parachute payment(s) during the year? If "Yes," see the instructions and file Form 4720, Schedule N.	**15**		X
16	Is the organization an educational institution subject to the section 4968 excise tax on net investment income? If "Yes," complete Form 4720, Schedule O.	**16**		X
17	**Section 501(c)(21) organizations.** Did the trust, or any disqualified or other person engage in any activities that would result in the imposition of an excise tax under section 4951, 4952 or 4953? If "Yes," complete Form 6069.	**17**		

Part VI Governance, Management, and Disclosure. *For each "Yes" response to lines 2 through 7b below, and for a "No" response to line 8a, 8b, or 10b below, describe the circumstances, processes, or changes on Schedule O. See instructions.*

Check if Schedule O contains a response or note to any line in this Part VI X

Section A. Governing Body and Management

				Yes	No
1a	Enter the number of voting members of the governing body at the end of the tax year	1a	14		
	If there are material differences in voting rights among members of the governing body, or if the governing body delegated broad authority to an executive committee or similar committee, explain on Schedule O.				
b	Enter the number of voting members included on line 1a, above, who are independent	1b	14		
2	Did any officer, director, trustee, or key employee have a family relationship or a business relationship with any other officer, director, trustee, or key employee?	2			X
3	Did the organization delegate control over management duties customarily performed by or under the direct supervision of officers, directors, trustees, or key employees to a management company or other person?	3			X
4	Did the organization make any significant changes to its governing documents since the prior Form 990 was filed?	4			X
5	Did the organization become aware during the year of a significant diversion of the organization's assets?	5			X
6	Did the organization have members or stockholders?	6			X
7a	Did the organization have members, stockholders, or other persons who had the power to elect or appoint one or more members of the governing body?	7a			X
b	Are any governance decisions of the organization reserved to (or subject to approval by) members, stockholders, or persons other than the governing body?	7b			X
8	Did the organization contemporaneously document the meetings held or written actions undertaken during the year by the following:				
a	The governing body?	8a		X	
b	Each committee with authority to act on behalf of the governing body?	8b		X	
9	Is there any officer, director, trustee, or key employee listed in Part VII, Section A, who cannot be reached at the organization's mailing address? *If "Yes," provide the names and addresses on Schedule O*	9			X

Section B. Policies *(This Section B requests information about policies not required by the Internal Revenue Code.)*

			Yes	No
10a	Did the organization have local chapters, branches, or affiliates?	10a		X
b	If "Yes," did the organization have written policies and procedures governing the activities of such chapters, affiliates, and branches to ensure their operations are consistent with the organization's exempt purposes?	10b		
11a	Has the organization provided a complete copy of this Form 990 to all members of its governing body before filing the form?	11a	X	
b	Describe on Schedule O the process, if any, used by the organization to review this Form 990.			
12a	Did the organization have a written conflict of interest policy? *If "No," go to line 13*	12a	X	
b	Were officers, directors, or trustees, and key employees required to disclose annually interests that could give rise to conflicts?	12b	X	
c	Did the organization regularly and consistently monitor and enforce compliance with the policy? *If "Yes," describe on Schedule O how this was done*	12c	X	
13	Did the organization have a written whistleblower policy?	13		X
14	Did the organization have a written document retention and destruction policy?	14	X	
15	Did the process for determining compensation of the following persons include a review and approval by independent persons, comparability data, and contemporaneous substantiation of the deliberation and decision?			
a	The organization's CEO, Executive Director, or top management official	15a	X	
b	Other officers or key employees of the organization	15b	X	
	If "Yes" to line 15a or 15b, describe the process on Schedule O. See instructions.			
16a	Did the organization invest in, contribute assets to, or participate in a joint venture or similar arrangement with a taxable entity during the year?	16a		X
b	If "Yes," did the organization follow a written policy or procedure requiring the organization to evaluate its participation in joint venture arrangements under applicable federal tax law, and take steps to safeguard the organization's exempt status with respect to such arrangements?	16b		

Section C. Disclosure

17 List the states with which a copy of this Form 990 is required to be filed FL

18 Section 6104 requires an organization to make its Forms 1023 (1024 or 1024-A, if applicable), 990, and 990-T (section 501(c)(3)s only) available for public inspection. Indicate how you made these available. Check all that apply.

Own website ☐ Another's website ☒ Upon request ☐ Other *(explain on Schedule O)*

19 Describe on Schedule O whether (and if so, how) the organization made its governing documents, conflict of interest policy, and financial statements available to the public during the tax year.

20 State the name, address, and telephone number of the person who possesses the organization's books and records

ATHENA DURANT - 850-436-4630

2315 WEST JACKSON STREET, PENSACOLA, FL 32505

Part VII Compensation of Officers, Directors, Trustees, Key Employees, Highest Compensated Employees, and Independent Contractors

Check if Schedule O contains a response or note to any line in this Part VII ☐

Section A. Officers, Directors, Trustees, Key Employees, and Highest Compensated Employees

1a Complete this table for all persons required to be listed. Report compensation for the calendar year ending with or within the organization's tax year.

- List all of the organization's **current** officers, directors, trustees (whether individuals or organizations), regardless of amount of compensation. Enter -0- in columns (D), (E), and (F) if no compensation was paid.
- List all of the organization's **current** key employees, if any. See the instructions for definition of "key employee."
- List the organization's five **current** highest compensated employees (other than an officer, director, trustee, or key employee) who received reportable compensation (box 5 of Form W-2, box 6 of Form 1099-MISC, and/or box 1 of Form 1099-NEC) of more than $100,000 from the organization and any related organizations.
- List all of the organization's **former** officers, key employees, and highest compensated employees who received more than $100,000 of reportable compensation from the organization and any related organizations.
- List all of the organization's **former directors or trustees** that received, in the capacity as a former director or trustee of the organization, more than $10,000 of reportable compensation from the organization and any related organizations.

See the instructions for the order in which to list the persons above.

☐ Check this box if neither the organization nor any related organization compensated any current officer, director, or trustee.

(A) Name and title	(B) Average hours per week (list any hours for related organizations below line)	(C) Position (do not check more than one box, unless person is both an officer and a director/trustee)						(D) Reportable compensation from the organization (W-2/1099-MISC/ 1099-NEC)	(E) Reportable compensation from related organizations (W-2/1099-MISC/ 1099-NEC)	(F) Estimated amount of other compensation from the organization and related organizations
		Individual trustee or director	Institutional trustee	Officer	Key employee	Highest compensated employee	Former			
(1) JOSEPH KLAWITTER	40.00									
CHIEF MEDICAL OFFICER				X				246,336.	0.	43,432.
(2) GEORGE SMITH	40.00									
MEDICAL DOCTOR						X		241,465.	0.	43,494.
(3) JUANITA FLEMING	40.00									
MD						X		224,049.	0.	35,642.
(4) GABRIEL HERNANDEZ	40.00									
CHIEF DENTAL OFFICER				X				248,278.	0.	10,083.
(5) JOSEPH MARDINI	40.00									
DDS						X		227,990.	0.	23,713.
(6) CHANDRA SMILEY	34.00									
CHIEF EXECUTIVE OFFICER	6.00			X				227,795.	0.	22,375.
(7) HALI PEARCE	40.00									
DO						X		221,877.	0.	11,425.
(8) MATTHEW SOUTHWICK	40.00									
MEDICAL DOCTOR						X		207,374.	0.	10,628.
(9) JASON BREWSTER	40.00									
CHIEF FINANCIAL OFFICER				X				161,432.	0.	39,520.
(10) DARRELL MILLER	40.00									
CHIEF PHARMACY OFFICER				X				172,833.	0.	15,564.
(11) JOHN CARNES	40.00									
CHIEF INFORMATION OFFICER				X				113,724.	0.	5,583.
(12) NATASHA HOWARD	40.00									
CHIEF OPERATIONS OFFICER				X				78,304.	0.	23,487.
(13) ANN OSINAME	0.50									
DIRECTOR	0.50	X						0.	0.	0.
(14) BOB WILSON	0.50									
DIRECTOR	0.50	X						0.	0.	0.
(15) BRETT ALDRIDGE	1.00									
SECRETARY	1.00	X		X				0.	0.	0.
(16) CLARA LONG	0.50									
DIRECTOR	0.50	X						0.	0.	0.
(17) DAISY WHITE	0.50									
DIRECTOR	0.50	X						0.	0.	0.

Part VII **Section A. Officers, Directors, Trustees, Key Employees, and Highest Compensated Employees** *(continued)*

(A) Name and title	(B) Average hours per week (list any hours for related organizations below line)	(C) Position (do not check more than one box, unless person is both an officer and a director/trustee)						(D) Reportable compensation from the organization (W-2/1099-MISC/ 1099-NEC)	(E) Reportable compensation from related organizations (W-2/1099-MISC/ 1099-NEC)	(F) Estimated amount of other compensation from the organization and related organizations
		Individual trustee or director	Institutional trustee	Officer	Key employee	Highest compensated employee	Former			
(18) DOROTHY FOSTER	0.50									
DIRECTOR	0.50	X						0.	0.	0.
(19) FREDDIE CATTOUSE	0.50									
DIRECTOR	0.50	X						0.	0.	0.
(20) GRACE MCCAFFERY	0.50									
DIRECTOR	0.50	X						0.	0.	0.
(21) JOHN PORTER	2.00									
PRESIDENT	3.00	X		X				0.	0.	0.
(22) JULES KARIHER	2.00									
VICE-PRESIDENT	2.00	X		X				0.	0.	0.
(23) JUSTIN LABRATO	2.00									
TREASURER	2.00	X		X				0.	0.	0.
(24) SEAN SEELY	0.50									
DIRECTOR	0.50	X						0.	0.	0.
(25) SHIRLEY HENDERSON	0.50									
DIRECTOR	0.50	X						0.	0.	0.
(26) THOMAS OWENS	0.50									
DIRECTOR	0.50	X						0.	0.	0.
1b Subtotal								2,371,457.	0.	284,946.
c Total from continuation sheets to Part VII, Section A								0.	0.	0.
d Total (add lines 1b and 1c)								2,371,457.	0.	284,946.

2 Total number of individuals (including but not limited to those listed above) who received more than $100,000 of reportable compensation from the organization 11

		Yes	No
3	Did the organization list any **former** officer, director, trustee, key employee, or highest compensated employee on line 1a? *If "Yes," complete Schedule J for such individual*		X
4	For any individual listed on line 1a, is the sum of reportable compensation and other compensation from the organization and related organizations greater than $150,000? *If "Yes," complete Schedule J for such individual*	X	
5	Did any person listed on line 1a receive or accrue compensation from any unrelated organization or individual for services rendered to the organization? *If "Yes," complete Schedule J for such person*		X

Section B. Independent Contractors

1 Complete this table for your five highest compensated independent contractors that received more than $100,000 of compensation from the organization. Report compensation for the calendar year ending with or within the organization's tax year.

(A) Name and business address	(B) Description of services	(C) Compensation
NONE		

2 Total number of independent contractors (including but not limited to those listed above) who received more than $100,000 of compensation from the organization 0

Part VIII Statement of Revenue

Check if Schedule O contains a response or note to any line in this Part VIII

				(A) Total revenue	(B) Related or exempt function revenue	(C) Unrelated business revenue	(D) Revenue excluded from tax under sections 512 - 514
Contributions, Gifts, Grants and Other Similar Amounts	1a	Federated campaigns	1a				
	b	Membership dues	1b				
	c	Fundraising events	1c				
	d	Related organizations	1d				
	e	Government grants (contributions)	1e	5,845,589.			
	f	All other contributions, gifts, grants, and similar amounts not included above	1f	1,277,535.			
	g	Noncash contributions included in lines 1a-1f	1g	$			
	h	**Total.** Add lines 1a-1f			7,123,124.		
Program Service Revenue			Business Code				
	2a	PATIENT SERVICES	621990		19,332,393.	19332393.	
	b	PHARMACY SERVICES	621990		10,173,339.	10173339.	
	c	340B PRESCRIPTION DRUG ASSISTANCE	621990		4,387,084.	4,387,084.	
	d	CAPITATION REVENUE	621990		3,668,429.	3,668,429.	
	e						
	f	All other program service revenue					
	g	**Total.** Add lines 2a-2f			37,561,245.		
Other Revenue	3	Investment income (including dividends, interest, and other similar amounts)			5,960.		5,960.
	4	Income from investment of tax-exempt bond proceeds					
	5	Royalties					
				(i) Real	(ii) Personal		
	6a	Gross rents	6a				
	b	Less: rental expenses	6b				
	c	Rental income or (loss)	6c				
	d	Net rental income or (loss)					
				(i) Securities	(ii) Other		
	7a	Gross amount from sales of assets other than inventory	7a				
	b	Less: cost or other basis and sales expenses	7b		23,335.		
	c	Gain or (loss)	7c		-23,335.		
	d	Net gain or (loss)			-23,335.	-23,335.	
	8a	Gross income from fundraising events (not including $ _____ of contributions reported on line 1c). See Part IV, line 18	8a				
	b	Less: direct expenses	8b				
	c	Net income or (loss) from fundraising events					
	9a	Gross income from gaming activities. See Part IV, line 19	9a				
	b	Less: direct expenses	9b				
	c	Net income or (loss) from gaming activities					
	10a	Gross sales of inventory, less returns and allowances	10a				
	b	Less: cost of goods sold	10b				
	c	Net income or (loss) from sales of inventory					
Miscellaneous Revenue			Business Code				
	11a	OTHER CLINIC REVENUE	812900	1,765,092.	1,765,092.		
	b						
	c						
	d	All other revenue					
	e	**Total.** Add lines 11a-11d		1,765,092.			
	12	**Total revenue.** See instructions		46,432,086.	39303002.	0.	5,960.

Part IX Statement of Functional Expenses

Section 501(c)(3) and 501(c)(4) organizations must complete all columns. All other organizations must complete column (A).

Check if Schedule O contains a response or note to any line in this Part IX ☐

Do not include amounts reported on lines 6b, 7b, 8b, 9b, and 10b of Part VIII.	(A) Total expenses	(B) Program service expenses	(C) Management and general expenses	(D) Fundraising expenses
1 Grants and other assistance to domestic organizations and domestic governments. See Part IV, line 21	24,742.	24,742.		
2 Grants and other assistance to domestic individuals. See Part IV, line 22				
3 Grants and other assistance to foreign organizations, foreign governments, and foreign individuals. See Part IV, lines 15 and 16				
4 Benefits paid to or for members				
5 Compensation of current officers, directors, trustees, and key employees	1,408,745.	845,247.	563,498.	
6 Compensation not included above to disqualified persons (as defined under section 4958(f)(1)) and persons described in section 4958(c)(3)(B)				
7 Other salaries and wages	19,654,329.	11,792,598.	7,861,731.	
8 Pension plan accruals and contributions (include section 401(k) and 403(b) employer contributions)				
9 Other employee benefits	4,738,204.	2,842,922.	1,895,282.	
10 Payroll taxes	1,532,479.	919,487.	612,992.	
11 Fees for services (nonemployees):				
a Management	37,697.		37,697.	
b Legal				
c Accounting	46,073.	46,073.		
d Lobbying				
e Professional fundraising services. See Part IV, line 17				
f Investment management fees				
g Other. (If line 11g amount exceeds 10% of line 25, column (A), amount, list line 11g expenses on Sch O.)	1,762,105.	1,718,918.	43,187.	
12 Advertising and promotion	78,038.	19,509.	58,529.	
13 Office expenses	44,861.	23,201.	21,660.	
14 Information technology	1,254,016.	877,811.	376,205.	
15 Royalties				
16 Occupancy	2,298,655.	1,316,760.	981,895.	
17 Travel				
18 Payments of travel or entertainment expenses for any federal, state, or local public officials				
19 Conferences, conventions, and meetings	129,463.	103,570.	25,893.	
20 Interest	140,735.	140,735.		
21 Payments to affiliates				
22 Depreciation, depletion, and amortization	1,561,586.	1,249,269.	312,317.	
23 Insurance	601,365.	360,819.	240,546.	
24 Other expenses. Itemize expenses not covered above. (List miscellaneous expenses on line 24e. If line 24e amount exceeds 10% of line 25, column (A), amount, list line 24e expenses on Schedule O.)				
a PRESCRIPTION DRUGS	8,941,879.	8,941,879.		
b SUPPLIES	2,915,661.	2,213,793.	701,868.	
c REPAIRS AND MAINTENANCE	636,171.	381,703.	254,468.	
d MISCELLANEOUS EXPENSE	391,357.	83,601.	307,756.	
e All other expenses	470,511.	401,585.	68,926.	
25 **Total functional expenses.** Add lines 1 through 24e	48,668,672.	34,304,222.	14,364,450.	0.
26 **Joint costs.** Complete this line only if the organization reported in column (B) joint costs from a combined educational campaign and fundraising solicitation. Check here ☐ if following SOP 98-2 (ASC 958-720)				

Part X Balance Sheet

Check if Schedule O contains a response or note to any line in this Part X ☐

			(A) Beginning of year		(B) End of year
Assets	1	Cash - non-interest-bearing	538,829.	1	2,992,611.
	2	Savings and temporary cash investments	142,765.	2	98,566.
	3	Pledges and grants receivable, net		3	
	4	Accounts receivable, net	5,453,217.	4	4,069,410.
	5	Loans and other receivables from any current or former officer, director, trustee, key employee, creator or founder, substantial contributor, or 35% controlled entity or family member of any of these persons		5	
	6	Loans and other receivables from other disqualified persons (as defined under section 4958(f)(1)), and persons described in section 4958(c)(3)(B)		6	
	7	Notes and loans receivable, net		7	
	8	Inventories for sale or use	586,620.	8	685,263.
	9	Prepaid expenses and deferred charges	308,882.	9	186,134.
	10a	Land, buildings, and equipment: cost or other basis. Complete Part VI of Schedule D — 10a: 20,019,694.			
	b	Less: accumulated depreciation — 10b: 9,094,154.	12,092,821.	10c	10,925,540.
	11	Investments - publicly traded securities		11	
	12	Investments - other securities. See Part IV, line 11		12	
	13	Investments - program-related. See Part IV, line 11		13	
	14	Intangible assets	616,448.	14	511,183.
	15	Other assets. See Part IV, line 11	4,080,701.	15	2,832,089.
	16	**Total assets.** Add lines 1 through 15 (must equal line 33)	23,820,283.	16	22,300,796.
Liabilities	17	Accounts payable and accrued expenses	2,512,871.	17	2,492,132.
	18	Grants payable		18	
	19	Deferred revenue	500.	19	0.
	20	Tax-exempt bond liabilities		20	
	21	Escrow or custodial account liability. Complete Part IV of Schedule D		21	
	22	Loans and other payables to any current or former officer, director, trustee, key employee, creator or founder, substantial contributor, or 35% controlled entity or family member of any of these persons		22	
	23	Secured mortgages and notes payable to unrelated third parties		23	
	24	Unsecured notes and loans payable to unrelated third parties		24	
	25	Other liabilities (including federal income tax, payables to related third parties, and other liabilities not included on lines 17-24). Complete Part X of Schedule D	4,108,355.	25	4,846,693.
	26	**Total liabilities.** Add lines 17 through 25	6,621,726.	26	7,338,825.
Net Assets or Fund Balances		**Organizations that follow FASB ASC 958, check here** ☒ **and complete lines 27, 28, 32, and 33.**			
	27	Net assets without donor restrictions	17,198,557.	27	14,961,971.
	28	Net assets with donor restrictions		28	
		Organizations that do not follow FASB ASC 958, check here ☐ **and complete lines 29 through 33.**			
	29	Capital stock or trust principal, or current funds		29	
	30	Paid-in or capital surplus, or land, building, or equipment fund		30	
	31	Retained earnings, endowment, accumulated income, or other funds		31	
	32	Total net assets or fund balances	17,198,557.	32	14,961,971.
	33	Total liabilities and net assets/fund balances	23,820,283.	33	22,300,796.

Part XI Reconciliation of Net Assets

Check if Schedule O contains a response or note to any line in this Part XI ☐

1	Total revenue (must equal Part VIII, column (A), line 12)	1	46,432,086.
2	Total expenses (must equal Part IX, column (A), line 25)	2	48,668,672.
3	Revenue less expenses. Subtract line 2 from line 1	3	-2,236,586.
4	Net assets or fund balances at beginning of year (must equal Part X, line 32, column (A))	4	17,198,557.
5	Net unrealized gains (losses) on investments	5	
6	Donated services and use of facilities	6	
7	Investment expenses	7	
8	Prior period adjustments	8	
9	Other changes in net assets or fund balances (explain on Schedule O)	9	0.
10	Net assets or fund balances at end of year. Combine lines 3 through 9 (must equal Part X, line 32, column (B))	10	14,961,971.

Part XII Financial Statements and Reporting

Check if Schedule O contains a response or note to any line in this Part XII ☒

			Yes	No
1	Accounting method used to prepare the Form 990: ☐ Cash ☒ Accrual ☐ Other _____ If the organization changed its method of accounting from a prior year or checked "Other," explain on Schedule O.			
2a	Were the organization's financial statements compiled or reviewed by an independent accountant? If "Yes," check a box below to indicate whether the financial statements for the year were compiled or reviewed on a separate basis, consolidated basis, or both: ☐ Separate basis ☐ Consolidated basis ☐ Both consolidated and separate basis	2a		X
b	Were the organization's financial statements audited by an independent accountant? If "Yes," check a box below to indicate whether the financial statements for the year were audited on a separate basis, consolidated basis, or both: ☒ Separate basis ☐ Consolidated basis ☐ Both consolidated and separate basis	2b	X	
c	If "Yes" to line 2a or 2b, does the organization have a committee that assumes responsibility for oversight of the audit, review, or compilation of its financial statements and selection of an independent accountant? If the organization changed either its oversight process or selection process during the tax year, explain on Schedule O.	2c	X	
3a	As a result of a federal award, was the organization required to undergo an audit or audits as set forth in the Uniform Guidance, 2 C.F.R. Part 200, Subpart F?	3a	X	
b	If "Yes," did the organization undergo the required audit or audits? If the organization did not undergo the required audit or audits, explain why on Schedule O and describe any steps taken to undergo such audits	3b	X	

SCHEDULE A
(Form 990)

Department of the Treasury
Internal Revenue Service

Public Charity Status and Public Support

Complete if the organization is a section 501(c)(3) organization or a section 4947(a)(1) nonexempt charitable trust.
Attach to Form 990 or Form 990-EZ.
Go to www.irs.gov/Form990 for instructions and the latest information.

OMB No. 1545-0047

2024

Open to Public Inspection

Name of the organization
ESCAMBIA COMMUNITY CLINICS INC.

Employer identification number
59-3105246

Part I Reason for Public Charity Status. (All organizations must complete this part.) See instructions.

The organization is not a private foundation because it is: (For lines 1 through 12, check only one box.)

1 A church, convention of churches, or association of churches described in **section 170(b)(1)(A)(i).**

2 A school described in **section 170(b)(1)(A)(ii).** (Attach Schedule E (Form 990).)

3 [X] A hospital or a cooperative hospital service organization described in **section 170(b)(1)(A)(iii).**

4 A medical research organization operated in conjunction with a hospital described in **section 170(b)(1)(A)(iii).** Enter the hospital's name, city, and state: _____

5 An organization operated for the benefit of a college or university owned or operated by a governmental unit described in **section 170(b)(1)(A)(iv).** (Complete Part II.)

6 A federal, state, or local government or governmental unit described in **section 170(b)(1)(A)(v).**

7 An organization that normally receives a substantial part of its support from a governmental unit or from the general public described in **section 170(b)(1)(A)(vi).** (Complete Part II.)

8 A community trust described in **section 170(b)(1)(A)(vi).** (Complete Part II.)

9 An agricultural research organization described in **section 170(b)(1)(A)(ix)** operated in conjunction with a land-grant college or university or a non-land-grant college of agriculture (see instructions). Enter the name, city, and state of the college or university: _____

10 An organization that normally receives (1) more than 33 1/3% of its support from contributions, membership fees, and gross receipts from activities related to its exempt functions, subject to certain exceptions; and (2) no more than 33 1/3% of its support from gross investment income and unrelated business taxable income (less section 511 tax) from businesses acquired by the organization after June 30, 1975. See **section 509(a)(2).** (Complete Part III.)

11 An organization organized and operated exclusively to test for public safety. See **section 509(a)(4).**

12 An organization organized and operated exclusively for the benefit of, to perform the functions of, or to carry out the purposes of one or more publicly supported organizations described in **section 509(a)(1)** or **section 509(a)(2)**. See **section 509(a)(3).** Check the box on lines 12a through 12d that describes the type of supporting organization and complete lines 12e, 12f, and 12g.

a **Type I.** A supporting organization operated, supervised, or controlled by its supported organization(s), typically by giving the supported organization(s) the power to regularly appoint or elect a majority of the directors or trustees of the supporting organization. **You must complete Part IV, Sections A and B.**

b **Type II.** A supporting organization supervised or controlled in connection with its supported organization(s), by having control or management of the supporting organization vested in the same persons that control or manage the supported organization(s). **You must complete Part IV, Sections A and C.**

c **Type III functionally integrated.** A supporting organization operated in connection with, and functionally integrated with, its supported organization(s) (see instructions). **You must complete Part IV, Sections A, D, and E.**

d **Type III non-functionally integrated.** A supporting organization operated in connection with its supported organization(s) that is not functionally integrated. The organization generally must satisfy a distribution requirement and an attentiveness requirement (see instructions). **You must complete Part IV, Sections A and D, and Part V.**

e Check this box if the organization received a written determination from the IRS that it is a Type I, Type II, Type III functionally integrated, or Type III non-functionally integrated supporting organization.

f Enter the number of supported organizations .....

g Provide the following information about the supported organization(s).

(i) Name of supported organization	(ii) EIN	(iii) Type of organization (described on lines 1-10 above (see instructions))	(iv) Is the organization listed in your governing document? Yes	(iv) No	(v) Amount of monetary support (see instructions)	(vi) Amount of other support (see instructions)
Total						

Part II Support Schedule for Organizations Described in Sections 170(b)(1)(A)(iv) and 170(b)(1)(A)(vi)

(Complete only if you checked the box on line 5, 7, or 8 of Part I or if the organization failed to qualify under Part III. If the organization fails to qualify under the tests listed below, please complete Part III.)

Section A. Public Support

Calendar year (or fiscal year beginning in)	(a) 2020	(b) 2021	(c) 2022	(d) 2023	(e) 2024	(f) Total
1 Gifts, grants, contributions, and membership fees received. (Do not include any "unusual grants.")						
2 Tax revenues levied for the organization's benefit and either paid to or expended on its behalf						
3 The value of services or facilities furnished by a governmental unit to the organization without charge						
4 **Total.** Add lines 1 through 3						
5 The portion of total contributions by each person (other than a governmental unit or publicly supported organization) included on line 1 that exceeds 2% of the amount shown on line 11, column (f)						
6 **Public support.** Subtract line 5 from line 4.						

Section B. Total Support

Calendar year (or fiscal year beginning in)	(a) 2020	(b) 2021	(c) 2022	(d) 2023	(e) 2024	(f) Total
7 Amounts from line 4						
8 Gross income from interest, dividends, payments received on securities loans, rents, royalties, and income from similar sources						
9 Net income from unrelated business activities, whether or not the business is regularly carried on						
10 Other income. Do not include gain or loss from the sale of capital assets (Explain in Part VI.)						
11 **Total support.** Add lines 7 through 10						

12 Gross receipts from related activities, etc. (see instructions) 12

13 **First 5 years.** If the Form 990 is for the organization's first, second, third, fourth, or fifth tax year as a section 501(c)(3) organization, check this box and **stop here** ☐

Section C. Computation of Public Support Percentage

14 Public support percentage for 2024 (line 6, column (f), divided by line 11, column (f)) ..... 14 %

15 Public support percentage from 2023 Schedule A, Part II, line 14 ..... 15 %

16a **33 1/3% support test - 2024.** If the organization did not check the box on line 13, and line 14 is 33 1/3% or more, check this box and **stop here.** The organization qualifies as a publicly supported organization ☐

b **33 1/3% support test - 2023.** If the organization did not check a box on line 13 or 16a, and line 15 is 33 1/3% or more, check this box and **stop here.** The organization qualifies as a publicly supported organization ☐

17a **10% -facts-and-circumstances test - 2024.** If the organization did not check a box on line 13, 16a, or 16b, and line 14 is 10% or more, and if the organization meets the facts-and-circumstances test, check this box and **stop here.** Explain in Part VI how the organization meets the facts-and-circumstances test. The organization qualifies as a publicly supported organization ☐

b **10% -facts-and-circumstances test - 2023.** If the organization did not check a box on line 13, 16a, 16b, or 17a, and line 15 is 10% or more, and if the organization meets the facts-and-circumstances test, check this box and **stop here.** Explain in Part VI how the organization meets the facts-and-circumstances test. The organization qualifies as a publicly supported organization ☐

18 **Private foundation.** If the organization did not check a box on line 13, 16a, 16b, 17a, or 17b, check this box and see instructions ☐

Part III Support Schedule for Organizations Described in Section 509(a)(2)

(Complete only if you checked the box on line 10 of Part I or if the organization failed to qualify under Part II. If the organization fails to qualify under the tests listed below, please complete Part II.)

Section A. Public Support

Calendar year (or fiscal year beginning in)	(a) 2020	(b) 2021	(c) 2022	(d) 2023	(e) 2024	(f) Total
1 Gifts, grants, contributions, and membership fees received. (Do not include any "unusual grants.")						
2 Gross receipts from admissions, merchandise sold or services performed, or facilities furnished in any activity that is related to the organization's tax-exempt purpose						
3 Gross receipts from activities that are not an unrelated trade or business under section 513						
4 Tax revenues levied for the organization's benefit and either paid to or expended on its behalf						
5 The value of services or facilities furnished by a governmental unit to the organization without charge						
6 **Total.** Add lines 1 through 5						
7a Amounts included on lines 1, 2, and 3 received from disqualified persons						
b Amounts included on lines 2 and 3 received from other than disqualified persons that exceed the greater of $5,000 or 1% of the amount on line 13 for the year						
c Add lines 7a and 7b						
8 **Public support.** (Subtract line 7c from line 6.)						

Section B. Total Support

Calendar year (or fiscal year beginning in)	(a) 2020	(b) 2021	(c) 2022	(d) 2023	(e) 2024	(f) Total
9 Amounts from line 6						
10a Gross income from interest, dividends, payments received on securities loans, rents, royalties, and income from similar sources						
b Unrelated business taxable income (less section 511 taxes) from businesses acquired after June 30, 1975						
c Add lines 10a and 10b						
11 Net income from unrelated business activities not included on line 10b, whether or not the business is regularly carried on						
12 Other income. Do not include gain or loss from the sale of capital assets (Explain in Part VI.)						
13 **Total support.** (Add lines 9, 10c, 11, and 12.)						

14 **First 5 years.** If the Form 990 is for the organization's first, second, third, fourth, or fifth tax year as a section 501(c)(3) organization, check this box and **stop here**

Section C. Computation of Public Support Percentage

15 Public support percentage for 2024 (line 8, column (f), divided by line 13, column (f))	15	%
16 Public support percentage from 2023 Schedule A, Part III, line 15	16	%

Section D. Computation of Investment Income Percentage

17 Investment income percentage for **2024** (line 10c, column (f), divided by line 13, column (f))	17	%
18 Investment income percentage from **2023** Schedule A, Part III, line 17	18	%

19a **33 1/3% support tests - 2024.** If the organization did not check the box on line 14, and line 15 is more than 33 1/3%, and line 17 is not more than 33 1/3%, check this box and **stop here.** The organization qualifies as a publicly supported organization

b **33 1/3% support tests - 2023.** If the organization did not check a box on line 14 or line 19a, and line 16 is more than 33 1/3%, and line 18 is not more than 33 1/3%, check this box and **stop here.** The organization qualifies as a publicly supported organization

20 **Private foundation.** If the organization did not check a box on line 14, 19a, or 19b, check this box and see instructions

Part IV Supporting Organizations

(Complete only if you checked a box on line 12 of Part I. If you checked box 12a, Part I, complete Sections A and B. If you checked box 12b, Part I, complete Sections A and C. If you checked box 12c, Part I, complete Sections A, D, and E. If you checked box 12d, Part I, complete Sections A and D, and complete Part V.)

Section A. All Supporting Organizations

			Yes	No
1	Are all of the organization's supported organizations listed by name in the organization's governing documents? *If "No," describe in* **Part VI** *how the supported organizations are designated. If designated by class or purpose, describe the designation. If historic and continuing relationship, explain.*	1		
2	Did the organization have any supported organization that does not have an IRS determination of status under section 509(a)(1) or (2)? *If "Yes," explain in* **Part VI** *how the organization determined that the supported organization was described in section 509(a)(1) or (2).*	2		
3a	Did the organization have a supported organization described in section 501(c)(4), (5), or (6)? *If "Yes," answer lines 3b and 3c below.*	3a		
b	Did the organization confirm that each supported organization qualified under section 501(c)(4), (5), or (6) and satisfied the public support tests under section 509(a)(2)? *If "Yes," describe in* **Part VI** *when and how the organization made the determination.*	3b		
c	Did the organization ensure that all support to such organizations was used exclusively for section 170(c)(2)(B) purposes? *If "Yes," explain in* **Part VI** *what controls the organization put in place to ensure such use.*	3c		
4a	Was any supported organization not organized in the United States ("foreign supported organization")? *If "Yes," and if you checked box 12a or 12b in Part I, answer lines 4b and 4c below.*	4a		
b	Did the organization have ultimate control and discretion in deciding whether to make grants to the foreign supported organization? *If "Yes," describe in* **Part VI** *how the organization had such control and discretion despite being controlled or supervised by or in connection with its supported organizations.*	4b		
c	Did the organization support any foreign supported organization that does not have an IRS determination under sections 501(c)(3) and 509(a)(1) or (2)? *If "Yes," explain in* **Part VI** *what controls the organization used to ensure that all support to the foreign supported organization was used exclusively for section 170(c)(2)(B) purposes.*	4c		
5a	Did the organization add, substitute, or remove any supported organizations during the tax year? *If "Yes," answer lines 5b and 5c below (if applicable). Also, provide detail in* **Part VI,** *including (i) the names and EIN numbers of the supported organizations added, substituted, or removed; (ii) the reasons for each such action; (iii) the authority under the organization's organizing document authorizing such action; and (iv) how the action was accomplished (such as by amendment to the organizing document).*	5a		
b	**Type I or Type II only.** Was any added or substituted supported organization part of a class already designated in the organization's organizing document?	5b		
c	**Substitutions only.** Was the substitution the result of an event beyond the organization's control?	5c		
6	Did the organization provide support (whether in the form of grants or the provision of services or facilities) to anyone other than (i) its supported organizations, (ii) individuals that are part of the charitable class benefited by one or more of its supported organizations, or (iii) other supporting organizations that also support or benefit one or more of the filing organization's supported organizations? *If "Yes," provide detail in* **Part VI.**	6		
7	Did the organization provide a grant, loan, compensation, or other similar payment to a substantial contributor (as defined in section 4958(c)(3)(C)), a family member of a substantial contributor, or a 35% controlled entity with regard to a substantial contributor? *If "Yes," complete Part I of Schedule L (Form 990).*	7		
8	Did the organization make a loan to a disqualified person (as defined in section 4958) not described on line 7? *If "Yes," complete Part I of Schedule L (Form 990).*	8		
9a	Was the organization controlled directly or indirectly at any time during the tax year by one or more disqualified persons, as defined in section 4946 (other than foundation managers and organizations described in section 509(a)(1) or (2))? *If "Yes," provide detail in* **Part VI.**	9a		
b	Did one or more disqualified persons (as defined on line 9a) hold a controlling interest in any entity in which the supporting organization had an interest? *If "Yes," provide detail in* **Part VI.**	9b		
c	Did a disqualified person (as defined on line 9a) have an ownership interest in, or derive any personal benefit from, assets in which the supporting organization also had an interest? *If "Yes," provide detail in* **Part VI.**	9c		
10a	Was the organization subject to the excess business holdings rules of section 4943 because of section 4943(f) (regarding certain Type II supporting organizations, and all Type III non-functionally integrated supporting organizations)? *If "Yes," answer line 10b below.*	10a		
b	Did the organization have any excess business holdings in the tax year? *(Use Schedule C, Form 4720, to determine whether the organization had excess business holdings.)*	10b		

Part IV Supporting Organizations *(continued)*

			Yes	No
11	Has the organization accepted a gift or contribution from any of the following persons?			
a	A person who directly or indirectly controls, either alone or together with persons described on lines 11b and 11c below, the governing body of a supported organization?	**11a**		
b	A family member of a person described on line 11a above?	**11b**		
c	A 35% controlled entity of a person described on line 11a or 11b above? *If "Yes" to line 11a, 11b, or 11c, provide detail in* **Part VI.**	**11c**		

Section B. Type I Supporting Organizations

			Yes	No
1	Did the governing body, members of the governing body, officers acting in their official capacity, or membership of one or more supported organizations have the power to regularly appoint or elect at least a majority of the organization's officers, directors, or trustees at all times during the tax year? *If "No," describe in* **Part VI** *how the supported organization(s) effectively operated, supervised, or controlled the organization's activities. If the organization had more than one supported organization, describe how the powers to appoint and/or remove officers, directors, or trustees were allocated among the supported organizations and what conditions or restrictions, if any, applied to such powers during the tax year.*	**1**		
2	Did the organization operate for the benefit of any supported organization other than the supported organization(s) that operated, supervised, or controlled the supporting organization? *If "Yes," explain in* **Part VI** *how providing such benefit carried out the purposes of the supported organization(s) that operated, supervised, or controlled the supporting organization.*	**2**		

Section C. Type II Supporting Organizations

			Yes	No
1	Were a majority of the organization's directors or trustees during the tax year also a majority of the directors or trustees of each of the organization's supported organization(s)? *If "No," describe in* **Part VI** *how control or management of the supporting organization was vested in the same persons that controlled or managed the supported organization(s).*	**1**		

Section D. All Type III Supporting Organizations

			Yes	No
1	Did the organization provide to each of its supported organizations, by the last day of the fifth month of the organization's tax year, (i) a written notice describing the type and amount of support provided during the prior tax year, (ii) a copy of the Form 990 that was most recently filed as of the date of notification, and (iii) copies of the organization's governing documents in effect on the date of notification, to the extent not previously provided?	**1**		
2	Were any of the organization's officers, directors, or trustees either (i) appointed or elected by the supported organization(s) or (ii) serving on the governing body of a supported organization? *If "No," explain in* **Part VI** *how the organization maintained a close and continuous working relationship with the supported organization(s).*	**2**		
3	By reason of the relationship described on line 2, above, did the organization's supported organizations have a significant voice in the organization's investment policies and in directing the use of the organization's income or assets at all times during the tax year? *If "Yes," describe in* **Part VI** *the role the organization's supported organizations played in this regard.*	**3**		

Section E. Type III Functionally Integrated Supporting Organizations

1 *Check the box next to the method that the organization used to satisfy the Integral Part Test during the year* **(see instructions).**

- **a** ☐ The organization satisfied the Activities Test. *Complete* **line 2** *below.*
- **b** ☐ The organization is the parent of each of its supported organizations. *Complete* **line 3** *below.*
- **c** ☐ The organization supported a governmental entity. *Describe in* **Part VI** *how you supported a governmental entity (see instructions).*

			Yes	No
2	Activities Test. **Answer lines 2a and 2b below.**			
a	*Did substantially all of the organization's activities during the tax year directly further the exempt purposes of the supported organization(s) to which the organization was responsive? If "Yes," then in* **Part VI identify those supported organizations and explain** *how these activities directly furthered their exempt purposes, how the organization was responsive to those supported organizations, and how the organization determined that these activities constituted substantially all of its activities.*	**2a**		
b	Did the activities described on line 2a, above, constitute activities that, but for the organization's involvement, one or more of the organization's supported organization(s) would have been engaged in? *If "Yes," explain in* **Part VI** *the reasons for the organization's position that its supported organization(s) would have engaged in these activities but for the organization's involvement.*	**2b**		
3	Parent of Supported Organizations. **Answer lines 3a and 3b below.**			
a	Did the organization have the power to regularly appoint or elect a majority of the officers, directors, or trustees of each of the supported organizations? If "Yes" or "No," provide details in **Part VI**.	**3a**		
b	Did the organization exercise a substantial degree of direction over the policies, programs, and activities of each of its supported organizations? If "Yes," describe in **Part VI** the role played by the organization in this regard.	**3b**		

Part V Type III Non-Functionally Integrated 509(a)(3) Supporting Organizations

1 ☐ Check here if the organization satisfied the Integral Part Test as a qualifying trust on Nov. 20, 1970 (*explain in* **Part VI**). **See instructions.** All other Type III non-functionally integrated supporting organizations must complete Sections A through E.

Section A - Adjusted Net Income		(A) Prior Year	(B) Current Year (optional)
1 Net short-term capital gain	**1**		
2 Recoveries of prior-year distributions	**2**		
3 Other gross income (see instructions)	**3**		
4 Add lines 1 through 3.	**4**		
5 Depreciation and depletion	**5**		
6 Portion of operating expenses paid or incurred for production or collection of gross income or for management, conservation, or maintenance of property held for production of income (see instructions)	**6**		
7 Other expenses (see instructions)	**7**		
8 **Adjusted Net Income** (subtract lines 5, 6, and 7 from line 4)	**8**		

Section B - Minimum Asset Amount		(A) Prior Year	(B) Current Year (optional)
1 Aggregate fair market value of all non-exempt-use assets (see instructions for short tax year or assets held for part of year):			
a Average monthly value of securities	**1a**		
b Average monthly cash balances	**1b**		
c Fair market value of other non-exempt-use assets	**1c**		
d **Total** (add lines 1a, 1b, and 1c)	**1d**		
e **Discount** claimed for blockage or other factors (*explain in detail in* **Part VI**):			
2 Acquisition indebtedness applicable to non-exempt-use assets	**2**		
3 Subtract line 2 from line 1d.	**3**		
4 Cash deemed held for exempt use. Enter 0.015 of line 3 (for greater amount, see instructions).	**4**		
5 Net value of non-exempt-use assets (subtract line 4 from line 3)	**5**		
6 Multiply line 5 by 0.035.	**6**		
7 Recoveries of prior-year distributions	**7**		
8 **Minimum Asset Amount** (add line 7 to line 6)	**8**		

Section C - Distributable Amount			Current Year
1 Adjusted net income for prior year (from Section A, line 8, column A)	**1**		
2 Enter 0.85 of line 1.	**2**		
3 Minimum asset amount for prior year (from Section B, line 8, column A)	**3**		
4 Enter greater of line 2 or line 3.	**4**		
5 Income tax imposed in prior year	**5**		
6 **Distributable Amount.** Subtract line 5 from line 4, unless subject to emergency temporary reduction (see instructions).	**6**		

7 ☐ Check here if the current year is the organization's first as a non-functionally integrated Type III supporting organization (see instructions).

Part V **Type III Non-Functionally Integrated 509(a)(3) Supporting Organizations** *(continued)*

Section D - Distributions		**Current Year**
1 Amounts paid to supported organizations to accomplish exempt purposes	**1**	
2 Amounts paid to perform activity that directly furthers exempt purposes of supported organizations, in excess of income from activity	**2**	
3 Administrative expenses paid to accomplish exempt purposes of supported organizations	**3**	
4 Amounts paid to acquire exempt-use assets	**4**	
5 Qualified set-aside amounts (prior IRS approval required - *provide details in* **Part VI**)	**5**	
6 Other distributions (describe in **Part VI**). See instructions.	**6**	
7 **Total annual distributions.** Add lines 1 through 6.	**7**	
8 Distributions to attentive supported organizations to which the organization is responsive (*provide details in* **Part VI**). See instructions.	**8**	
9 Distributable amount for 2024 from Section C, line 6	**9**	
10 Line 8 amount divided by line 9 amount	**10**	

Section E - Distribution Allocations (see instructions)	**(i)** **Excess Distributions**	**(ii)** **Underdistributions Pre-2024**	**(iii)** **Distributable Amount for 2024**
1 Distributable amount for 2024 from Section C, line 6			
2 Underdistributions, if any, for years prior to 2024 (reasonable cause required - *explain in* **Part VI**). See instructions.			
3 Excess distributions carryover, if any, to 2024			
a From 2019			
b From 2020			
c From 2021			
d From 2022			
e From 2023			
f **Total** of lines 3a through 3e			
g Applied to under distributions of prior years			
h Applied to 2024 distributable amount			
i Carryover from 2019 not applied (see instructions)			
j Remainder. Subtract lines 3g, 3h, and 3i from line 3f.			
4 Distributions for 2024 from Section D, line 7: $			
a Applied to underdistributions of prior years			
b Applied to 2024 distributable amount			
c Remainder. Subtract lines 4a and 4b from line 4.			
5 Remaining underdistributions for years prior to 2024, if any. Subtract lines 3g and 4a from line 2. For result greater than zero, *explain in* **Part VI.** See instructions.			
6 Remaining underdistributions for 2024. Subtract lines 3h and 4b from line 1. For result greater than zero, *explain in* **Part VI**. See instructions.			
7 **Excess distributions carryover to 2025.** Add lines 3j and 4c.			
8 Breakdown of line 7:			
a Excess from 2020			
b Excess from 2021			
c Excess from 2022			
d Excess from 2023			
e Excess from 2024			

Part VI **Supplemental Information.** Provide the explanations required by Part II, line 10; Part II, line 17a or 17b; Part III, line 12; Part IV, Section A, lines 1, 2, 3b, 3c, 4b, 4c, 5a, 6, 9a, 9b, 9c, 11a, 11b, and 11c; Part IV, Section B, lines 1 and 2; Part IV, Section C, line 1; Part IV, Section D, lines 2 and 3; Part IV, Section E, lines 1c, 2a, 2b, 3a and 3b; Part V, line 1; Part V, Section B, line 1e; Part V, Section D, lines 5, 6, and 8; and Part V, Section E, lines 2, 5, and 6. Also complete this part for any additional information. (See instructions.)

Schedule B (Form 990)
(Rev. December 2024)
Department of the Treasury
Internal Revenue Service

Schedule of Contributors

Attach to Form 990, 990-EZ, or 990-PF.
Go to www.irs.gov/Form990 for the latest information.

OMB No. 1545-0047

Name of the organization

ESCAMBIA COMMUNITY CLINICS INC.

Employer identification number

59-3105246

Organization type (check one):

Filers of:	**Section:**
Form 990 or 990-EZ	[X] 501(c)(3) (enter number) organization
	4947(a)(1) nonexempt charitable trust **not** treated as a private foundation
	527 political organization
Form 990-PF	501(c)(3) exempt private foundation
	4947(a)(1) nonexempt charitable trust treated as a private foundation
	501(c)(3) taxable private foundation

Check if your organization is covered by the **General Rule** or a **Special Rule.**
Note: Only a section 501(c)(7), (8), or (10) organization can check boxes for both the General Rule and a Special Rule. See instructions.

General Rule

[X] For an organization filing Form 990, 990-EZ, or 990-PF that received, during the year, contributions totaling $5,000 or more (in money or property) from any one contributor. Complete Parts I and II. See instructions for determining a contributor's total contributions.

Special Rules

For an organization described in section 501(c)(3) filing Form 990 or 990-EZ that met the 33 1/3% support test of the regulations under sections 509(a)(1) and 170(b)(1)(A)(vi), that checked Schedule A (Form 990), Part II, line 13, 16a, or 16b, and that received from any one contributor, during the year, total contributions of the greater of **(1)** $5,000; or **(2)** 2% of the amount on (i) Form 990, Part VIII, line 1h; or (ii) Form 990-EZ, line 1. Complete Parts I and II.

For an organization described in section 501(c)(7), (8), or (10) filing Form 990 or 990-EZ that received from any one contributor, during the year, total contributions of more than $1,000 *exclusively* for religious, charitable, scientific, literary, or educational purposes, or for the prevention of cruelty to children or animals. Complete Parts I (entering "N/A" in column (b) instead of the contributor name and address), II, and III.

For an organization described in section 501(c)(7), (8), or (10) filing Form 990 or 990-EZ that received from any one contributor, during the year, contributions *exclusively* for religious, charitable, etc., purposes, but no such contributions totaled more than $1,000. If this box is checked, enter here the total contributions that were received during the year for an *exclusively* religious, charitable, etc., purpose. Don't complete any of the parts unless the **General Rule** applies to this organization because it received *nonexclusively* religious, charitable, etc., contributions totaling $5,000 or more during the year ..... $ _____

Caution: An organization that isn't covered by the General Rule and/or the Special Rules doesn't file Schedule B (Form 990), but it **must** answer "No" on Part IV, line 2, of its Form 990; or check the box on line H of its Form 990-EZ or on its Form 990-PF, Part I, line 2, to certify that it doesn't meet the filing requirements of Schedule B (Form 990).

Name of organization

ESCAMBIA COMMUNITY CLINICS INC.

Employer identification number

59-3105246

Part I **Contributors** (see instructions). Use duplicate copies of Part I if additional space is needed.

(a) No.	(b) Name, address, and ZIP + 4	(c) Total contributions	(d) Type of contribution
1	SACRED HEART HOSPITAL 5151 N 9TH AVENUE PENSACOLA, FL 32504	$ 535,417.	Person [X] Payroll [ ] Noncash [ ] (Complete Part II for noncash contributions.)
2	BAPTIST HOSPITAL 1000 W MORENO STREET PENSACOLA, FL 32501	$ 550,000.	Person [X] Payroll [ ] Noncash [ ] (Complete Part II for noncash contributions.)
3	DELTA DENTAL COMMUNITY CARE FOUNDATION ONE DELTA DRIVE MECHANICSBURG, PA 17055	$ 30,000.	Person [X] Payroll [ ] Noncash [ ] (Complete Part II for noncash contributions.)
4	FLORIDA ASSOCIATION OF COMMUNITY HEALTH CENTERS 2340 HANSEN LN TALLAHASSEE, FL 32301	$ 88,286.	Person [X] Payroll [ ] Noncash [ ] (Complete Part II for noncash contributions.)
5	SUNDAY'S CHILD PO BOX 12972 PENSACOLA, FL 32591	$ 17,248.	Person [X] Payroll [ ] Noncash [ ] (Complete Part II for noncash contributions.)
6	FLORIDA PANHANDLE BREAST CANCER ASSOCIATION, INC. 8680 SCENIC HIGHWAY, UNIT 11 PENSACOLA, FL 32514	$ 50,000.	Person [X] Payroll [ ] Noncash [ ] (Complete Part II for noncash contributions.)

Name of organization

ESCAMBIA COMMUNITY CLINICS INC.

Employer identification number

59-3105246

Part I **Contributors** (see instructions). Use duplicate copies of Part I if additional space is needed.

(a) No.	(b) Name, address, and ZIP + 4	(c) Total contributions	(d) Type of contribution
7	FLORIDA BLUE FOUNDATION 4800 DEERWOOD CAMPUS PARKWAY JACKSONVILLE, FL 32246	$ 5,000.	Person [X] Payroll [ ] Noncash [ ] (Complete Part II for noncash contributions.)
		$	Person [ ] Payroll [ ] Noncash [ ] (Complete Part II for noncash contributions.)
		$	Person [ ] Payroll [ ] Noncash [ ] (Complete Part II for noncash contributions.)
		$	Person [ ] Payroll [ ] Noncash [ ] (Complete Part II for noncash contributions.)
		$	Person [ ] Payroll [ ] Noncash [ ] (Complete Part II for noncash contributions.)
		$	Person [ ] Payroll [ ] Noncash [ ] (Complete Part II for noncash contributions.)

Name of organization

ESCAMBIA COMMUNITY CLINICS INC.

Employer identification number

59-3105246

Part II **Noncash Property** (see instructions). Use duplicate copies of Part II if additional space is needed.

(a) No. from Part I	(b) Description of noncash property given	(c) FMV (or estimate) (See instructions.)	(d) Date received
		$	
(a) No. from Part I	(b) Description of noncash property given	(c) FMV (or estimate) (See instructions.)	(d) Date received
		$	
(a) No. from Part I	(b) Description of noncash property given	(c) FMV (or estimate) (See instructions.)	(d) Date received
		$	
(a) No. from Part I	(b) Description of noncash property given	(c) FMV (or estimate) (See instructions.)	(d) Date received
		$	
(a) No. from Part I	(b) Description of noncash property given	(c) FMV (or estimate) (See instructions.)	(d) Date received
		$	
(a) No. from Part I	(b) Description of noncash property given	(c) FMV (or estimate) (See instructions.)	(d) Date received
		$	

Name of organization

ESCAMBIA COMMUNITY CLINICS INC.

Employer identification number

59-3105246

Part III **Exclusively religious, charitable, etc., contributions to organizations described in section 501(c)(7), (8), or (10) that total more than $1,000 for the year from any one contributor.** Complete columns **(a)** through **(e) and** the following line entry. For organizations completing Part III, enter the total of exclusively religious, charitable, etc., contributions of **$1,000 or less** for the year. (Enter this info. once.) $

Use duplicate copies of Part III if additional space is needed.

(a) No. from Part I	(b) Purpose of gift	(c) Use of gift	(d) Description of how gift is held

(e) Transfer of gift

Transferee's name, address, and ZIP + 4	Relationship of transferor to transferee

(a) No. from Part I	(b) Purpose of gift	(c) Use of gift	(d) Description of how gift is held

(e) Transfer of gift

Transferee's name, address, and ZIP + 4	Relationship of transferor to transferee

(a) No. from Part I	(b) Purpose of gift	(c) Use of gift	(d) Description of how gift is held

(e) Transfer of gift

Transferee's name, address, and ZIP + 4	Relationship of transferor to transferee

(a) No. from Part I	(b) Purpose of gift	(c) Use of gift	(d) Description of how gift is held

(e) Transfer of gift

Transferee's name, address, and ZIP + 4	Relationship of transferor to transferee

SCHEDULE D
(Form 990)
(Rev. December 2024)
Department of the Treasury
Internal Revenue Service

Supplemental Financial Statements

Complete if the organization answered "Yes" on Form 990, Part IV, line 6, 7, 8, 9, 10, 11a, 11b, 11c, 11d, 11e, 11f, 12a, or 12b.
Attach to Form 990.
Go to www.irs.gov/Form990 for instructions and the latest information.

OMB No. 1545-0047

Open to Public Inspection

Name of the organization
ESCAMBIA COMMUNITY CLINICS INC.

Employer identification number
59-3105246

Part I Organizations Maintaining Donor Advised Funds or Other Similar Funds or Accounts.

Complete if the organization answered "Yes" on Form 990, Part IV, line 6.

		(a) Donor advised funds	(b) Funds and other accounts
1	Total number at end of year		
2	Aggregate value of contributions to (during year)		
3	Aggregate value of grants from (during year)		
4	Aggregate value at end of year		

5 Did the organization inform all donors and donor advisors in writing that the assets held in donor advised funds are the organization's property, subject to the organization's exclusive legal control? ☐ Yes ☐ No

6 Did the organization inform all grantees, donors, and donor advisors in writing that grant funds can be used only for charitable purposes and not for the benefit of the donor or donor advisor, or for any other purpose conferring impermissible private benefit? ☐ Yes ☐ No

Part II Conservation Easements.

Complete if the organization answered "Yes" on Form 990, Part IV, line 7.

1 Purpose(s) of conservation easements held by the organization (check all that apply).
- ☐ Preservation of land for public use (for example, recreation or education)
- ☐ Preservation of a historically important land area
- ☐ Protection of natural habitat
- ☐ Preservation of a certified historic structure
- ☐ Preservation of open space

2 Complete lines 2a through 2d if the organization held a qualified conservation contribution in the form of a conservation easement on the last day of the tax year.

			Held at the End of the Tax Year
a	Total number of conservation easements	2a	
b	Total acreage restricted by conservation easements	2b	
c	Number of conservation easements on a certified historic structure included on line 2a	2c	
d	Number of conservation easements included on line 2c acquired after July 25, 2006, and not on a historic structure listed in the National Register	2d	

3 Number of conservation easements modified, transferred, released, extinguished, or terminated by the organization during the tax year _____

4 Number of states where property subject to conservation easement is located _____

5 Does the organization have a written policy regarding the periodic monitoring, inspection, handling of violations, and enforcement of the conservation easements it holds? ☐ Yes ☐ No

6 Staff and volunteer hours devoted to monitoring, inspecting, handling of violations, and enforcing conservation easements during the year _____

7 Amount of expenses incurred in monitoring, inspecting, handling of violations, and enforcing conservation easements during the year _____

8 Does each conservation easement reported on line 2d above satisfy the requirements of section 170(h)(4)(B)(i) and section 170(h)(4)(B)(ii)? ☐ Yes ☐ No

9 In Part XIII, describe how the organization reports conservation easements in its revenue and expense statement and balance sheet, and include, if applicable, the text of the footnote to the organization's financial statements that describes the organization's accounting for conservation easements.

Part III Organizations Maintaining Collections of Art, Historical Treasures, or Other Similar Assets.

Complete if the organization answered "Yes" on Form 990, Part IV, line 8.

1a If the organization elected, as permitted under FASB ASC 958, not to report in its revenue statement and balance sheet works of art, historical treasures, or other similar assets held for public exhibition, education, or research in furtherance of public service, provide in Part XIII the text of the footnote to its financial statements that describes these items.

b If the organization elected, as permitted under FASB ASC 958, to report in its revenue statement and balance sheet works of art, historical treasures, or other similar assets held for public exhibition, education, or research in furtherance of public service, provide the following amounts relating to these items.

(i) Revenue included on Form 990, Part VIII, line 1 $ _____

(ii) Assets included in Form 990, Part X $ _____

2 If the organization received or held works of art, historical treasures, or other similar assets for financial gain, provide the following amounts required to be reported under FASB ASC 958 relating to these items:

a Revenue included on Form 990, Part VIII, line 1 $ _____

b Assets included in Form 990, Part X $ _____

Part III Organizations Maintaining Collections of Art, Historical Treasures, or Other Similar Assets *(continued)*

3 Using the organization's acquisition, accession, and other records, check any of the following that make significant use of its collection items (check all that apply).

a ☐ Public exhibition
b ☐ Scholarly research
c ☐ Preservation for future generations
d ☐ Loan or exchange program
e ☐ Other _____

4 Provide a description of the organization's collections and explain how they further the organization's exempt purpose in Part XIII.

5 During the year, did the organization solicit or receive donations of art, historical treasures, or other similar assets to be sold to raise funds rather than to be maintained as part of the organization's collection? ☐ Yes ☐ No

Part IV Escrow and Custodial Arrangements Complete if the organization answered "Yes" on Form 990, Part IV, line 9, or reported an amount on Form 990, Part X, line 21.

1a Is the organization an agent, trustee, custodian, or other intermediary for contributions or other assets not included on Form 990, Part X? ☐ Yes ☐ No

b If "Yes," explain the arrangement in Part XIII and complete the following table:

		Amount
c Beginning balance	1c	
d Additions during the year	1d	
e Distributions during the year	1e	
f Ending balance	1f	

2a Did the organization include an amount on Form 990, Part X, line 21, for escrow or custodial account liability? ☐ Yes ☐ No

b If "Yes," explain the arrangement in Part XIII. Check here if the explanation has been provided in Part XIII ☐

Part V Endowment Funds Complete if the organization answered "Yes" on Form 990, Part IV, line 10.

	(a) Current year	(b) Prior year	(c) Two years back	(d) Three years back	(e) Four years back
1a Beginning of year balance					
b Contributions					
c Net investment earnings, gains, and losses					
d Grants or scholarships					
e Other expenditures for facilities and programs					
f Administrative expenses					
g End of year balance					

2 Provide the estimated percentage of the current year end balance (line 1g, column (a)) held as:

a Board designated or quasi-endowment _____%
b Permanent endowment _____%
c Term endowment _____%

The percentages on lines 2a, 2b, and 2c should equal 100%.

3a Are there endowment funds not in the possession of the organization that are held and administered for the organization by:

		Yes	No
(i) Unrelated organizations?	3a(i)		
(ii) Related organizations?	3a(ii)		
b If "Yes" on line 3a(ii), are the related organizations listed as required on Schedule R?	3b		

4 Describe in Part XIII the intended uses of the organization's endowment funds.

Part VI Land, Buildings, and Equipment

Complete if the organization answered "Yes" on Form 990, Part IV, line 11a. See Form 990, Part X, line 10.

Description of property	(a) Cost or other basis (investment)	(b) Cost or other basis (other)	(c) Accumulated depreciation	(d) Book value
1a Land		385,335.		385,335.
b Buildings		12,150,514.	3,819,053.	8,331,461.
c Leasehold improvements				
d Equipment		5,216,920.	3,352,680.	1,864,240.
e Other		2,266,925.	1,922,421.	344,504.
Total. Add lines 1a through 1e. *(Column (d) must equal Form 990, Part X, line 10c, column (B))*				10,925,540.

Part VII Investments - Other Securities

Complete if the organization answered "Yes" on Form 990, Part IV, line 11b. See Form 990, Part X, line 12.

(a) Description of security or category (including name of security)	(b) Book value	(c) Method of valuation: Cost or end-of-year market value
(1) Financial derivatives		
(2) Closely held equity interests		
(3) Other		
(A)		
(B)		
(C)		
(D)		
(E)		
(F)		
(G)		
(H)		
Total. (Col. (b) must equal Form 990, Part X, line 12, col. (B))		

Part VIII Investments - Program Related.

Complete if the organization answered "Yes" on Form 990, Part IV, line 11c. See Form 990, Part X, line 13.

(a) Description of investment	(b) Book value	(c) Method of valuation: Cost or end-of-year market value
(1)		
(2)		
(3)		
(4)		
(5)		
(6)		
(7)		
(8)		
(9)		
Total. (Col. (b) must equal Form 990, Part X, line 13, col. (B))		

Part IX Other Assets

Complete if the organization answered "Yes" on Form 990, Part IV, line 11d. See Form 990, Part X, line 15.

(a) Description	(b) Book value
(1) DEPOSITS	49,128.
(2) RIGHT OF USE ASSET	2,782,961.
(3)	
(4)	
(5)	
(6)	
(7)	
(8)	
(9)	
Total. *(Column (b) must equal Form 990, Part X, line 15, col. (B))*	2,832,089.

Part X Other Liabilities

Complete if the organization answered "Yes" on Form 990, Part IV, line 11e or 11f. See Form 990, Part X, line 25.

1. (a) Description of liability	(b) Book value
(1) Federal income taxes	
(2) OPERATING LEASE LIABILITY	2,845,424.
(3) OTHER CURRENT LIABILITIES	1,269.
(4) LINE OF CREDIT	2,000,000.
(5)	
(6)	
(7)	
(8)	
(9)	
Total. *(Column (b) must equal Form 990, Part X, line 25, col. (B))*	4,846,693.

2. Liability for uncertain tax positions. In Part XIII, provide the text of the footnote to the organization's financial statements that reports the organization's liability for uncertain tax positions under FASB ASC 740. Check here if the text of the footnote has been provided in Part XIII ... X

Part XI Reconciliation of Revenue per Audited Financial Statements With Revenue per Return

Complete if the organization answered "Yes" on Form 990, Part IV, line 12a.

1	Total revenue, gains, and other support per audited financial statements			1	46,233,892.
2	Amounts included on line 1 but not on Form 990, Part VIII, line 12:				
a	Net unrealized gains (losses) on investments	2a			
b	Donated services and use of facilities	2b			
c	Recoveries of prior year grants	2c			
d	Other (Describe in Part XIII.)	2d			
e	Add lines 2a through 2d			2e	0.
3	Subtract line 2e from line 1			3	46,233,892.
4	Amounts included on Form 990, Part VIII, line 12, but not on line 1:				
a	Investment expenses not included on Form 990, Part VIII, line 7b	4a			
b	Other (Describe in Part XIII.)	4b	198,194.		
c	Add lines 4a and 4b			4c	198,194.
5	Total revenue. Add lines **3** and **4c.** *(This must equal Form 990, Part I, line 12.)*			5	46,432,086.

Part XII Reconciliation of Expenses per Audited Financial Statements With Expenses per Return

Complete if the organization answered "Yes" on Form 990, Part IV, line 12a.

1	Total expenses and losses per audited financial statements			1	48,470,478.
2	Amounts included on line 1 but not on Form 990, Part IX, line 25:				
a	Donated services and use of facilities	2a			
b	Prior year adjustments	2b			
c	Other losses	2c			
d	Other (Describe in Part XIII.)	2d			
e	Add lines 2a through 2d			2e	0.
3	Subtract line 2e from line 1			3	48,470,478.
4	Amounts included on Form 990, Part IX, line 25, but not on line 1:				
a	Investment expenses not included on Form 990, Part VIII, line 7b	4a			
b	Other (Describe in Part XIII.)	4b	198,194.		
c	Add lines 4a and 4b			4c	198,194.
5	Total expenses. Add lines **3** and **4c.** *(This must equal Form 990, Part I, line 18.)*			5	48,668,672.

Part XIII Supplemental Information

Provide the descriptions required for Part II, lines 3, 5, and 9; Part III, lines 1a and 4; Part IV, lines 1b and 2b; Part V, line 4; Part X, line 2; Part XI, lines 2d and 4b; and Part XII, lines 2d and 4b. Also complete this part to provide any additional information.

PART X, LINE 2:
ESCAMBIA COMMUNITY CLINICS, INC. (ECC) HAS BEEN GRANTED AN EXEMPTION FROM INCOME TAXES UNDER INTERNAL REVENUE CODE, SECTION 501(C)(3) AS A NOT-FOR-PROFIT CORPORATION. ECC IS NOT AWARE OF ANY UNCERTAIN TAX POSITIONS THAT WOULD REQUIRE DISCLOSURE OR ACCRUAL IN ACCORDANCE WITH GENERALLY ACCEPTED ACCOUNTING PRINCIPLES.

PART XI, LINE 4B - OTHER ADJUSTMENTS:
BAD DEBT 198,194.

PART XII, LINE 4B - OTHER ADJUSTMENTS:
BAD DEBT 198,194.

Part XIII Supplemental Information *(continued)*

SCHEDULE I (Form 990)

(Rev. December 2024)

Department of the Treasury
Internal Revenue Service

Grants and Other Assistance to Organizations, Governments, and Individuals in the United States

Complete if the organization answered "Yes" on Form 990, Part IV, line 21 or 22.

Attach to Form 990.

Go to www.irs.gov/Form990 for instructions and the latest information.

OMB No. 1545-0047

Open to Public Inspection

Name of the organization
ESCAMBIA COMMUNITY CLINICS INC.

Employer identification number
59-3105246

Part I General Information on Grants and Assistance

1 Does the organization maintain records to substantiate the amount of the grants or assistance, the grantees' eligibility for the grants or assistance, and the selection criteria used to award the grants or assistance? ..... [X] Yes [ ] No

2 Describe in Part IV the organization's procedures for monitoring the use of grant funds in the United States.

Part II Grants and Other Assistance to Domestic Organizations and Domestic Governments. Complete if the organization answered "Yes" on Form 990, Part IV, line 21, for any recipient that received more than $5,000. Part II can be duplicated if additional space is needed.

1 (a) Name and address of organization or government	(b) EIN	(c) IRC section (if applicable)	(d) Amount of cash grant	(e) Amount of noncash assistance	(f) Method of valuation (book, FMV, appraisal, other)	(g) Description of noncash assistance	(h) Purpose of grant or assistance
PENSACOLA STATE COLLEGE FOUNDATION, INC - 1000 COLLEGE BLVD - PENSACOLA, FL 32504	59-6173057	501(C)(3)	10,000.	0.			SCHOLARSHIP SUPPORT

2 Enter total number of section 501(c)(3) and government organizations listed in the line 1 table ..... 1.

3 Enter total number of other organizations listed in the line 1 table .....

Part III **Grants and Other Assistance to Domestic Individuals.** Complete if the organization answered "Yes" on Form 990, Part IV, line 22. Part III can be duplicated if additional space is needed.

(a) Type of grant or assistance	**(b)** Number of recipients	**(c)** Amount of cash grant	**(d)** Amount of non-cash assistance	**(e)** Method of valuation (book, FMV, appraisal, other)	**(f)** Description of noncash assistance

Part IV **Supplemental Information.** Provide the information required in Part I, line 2; Part III, column (b); and any other additional information.

SCHEDULE J (Form 990)

(Rev. December 2024)

Department of the Treasury
Internal Revenue Service

Compensation Information

For certain Officers, Directors, Trustees, Key Employees, and Highest Compensated Employees
Complete if the organization answered "Yes" on Form 990, Part IV, line 23.
Attach to Form 990.
Go to www.irs.gov/Form990 for instructions and the latest information.

OMB No. 1545-0047

Open to Public Inspection

Name of the organization

ESCAMBIA COMMUNITY CLINICS INC.

Employer identification number

59-3105246

Part I Questions Regarding Compensation

			Yes	No
1a	Check the appropriate box(es) if the organization provided any of the following to or for a person listed on Form 990, Part VII, Section A, line 1a. Complete Part III to provide any relevant information regarding these items.			
	☐ First-class or charter travel	☐ Housing allowance or residence for personal use		
	☐ Travel for companions	☐ Payments for business use of personal residence		
	☐ Tax indemnification and gross-up payments	☐ Health or social club dues or initiation fees		
	☐ Discretionary spending account	☐ Personal services (such as maid, chauffeur, chef)		
b	If any of the boxes on line 1a are checked, did the organization follow a written policy regarding payment or reimbursement or provision of all of the expenses described above? If "No," complete Part III to explain	**1b**		
2	Did the organization require substantiation prior to reimbursing or allowing expenses incurred by all directors, trustees, and officers, including the CEO/Executive Director, regarding the items checked on line 1a?	**2**		
3	Indicate which, if any, of the following the organization used to establish the compensation of the organization's CEO/Executive Director. Check all that apply. Do not check any boxes for methods used by a related organization to establish compensation of the CEO/Executive Director, but explain in Part III.			
	☐ Compensation committee	☐ Written employment contract		
	☐ Independent compensation consultant	☒ Compensation survey or study		
	☐ Form 990 of other organizations	☒ Approval by the board or compensation committee		
4	During the year, did any person listed on Form 990, Part VII, Section A, line 1a, with respect to the filing organization or a related organization:			
a	Receive a severance payment or change-of-control payment?	**4a**		X
b	Participate in or receive payment from a supplemental nonqualified retirement plan?	**4b**		X
c	Participate in or receive payment from an equity-based compensation arrangement?	**4c**		X
	If "Yes" to any of lines 4a-c, list the persons and provide the applicable amounts for each item in Part III.			
	Only section 501(c)(3), 501(c)(4), and 501(c)(29) organizations must complete lines 5-9.			
5	For persons listed on Form 990, Part VII, Section A, line 1a, did the organization pay or accrue any compensation contingent on the revenues of:			
a	The organization?	**5a**		X
b	Any related organization?	**5b**		X
	If "Yes" on line 5a or 5b, describe in Part III.			
6	For persons listed on Form 990, Part VII, Section A, line 1a, did the organization pay or accrue any compensation contingent on the net earnings of:			
a	The organization?	**6a**		X
b	Any related organization?	**6b**		X
	If "Yes" on line 6a or 6b, describe in Part III.			
7	For persons listed on Form 990, Part VII, Section A, line 1a, did the organization provide any nonfixed payments not described on lines 5 and 6? If "Yes," describe in Part III	**7**		X
8	Were any amounts reported on Form 990, Part VII, paid or accrued pursuant to a contract that was subject to the initial contract exception described in Regulations section 53.4958-4(a)(3)? If "Yes," describe in Part III	**8**		X
9	If "Yes" on line 8, did the organization also follow the rebuttable presumption procedure described in Regulations section 53.4958-6(c)?	**9**		

Part II **Officers, Directors, Trustees, Key Employees, and Highest Compensated Employees.** Use duplicate copies if additional space is needed.

For each individual whose compensation must be reported on Schedule J, report compensation from the organization on row (i) and from related organizations, described in the instructions, on row (ii). Do not list any individuals that aren't listed on Form 990, Part VII.

Note: The sum of columns (B)(i)-(iii) for each listed individual must equal the total amount of Form 990, Part VII, Section A, line 1a, applicable column (D) and (E) amounts for that individual.

(A) Name and Title		(B) Breakdown of W-2 and/or 1099-MISC and/or 1099-NEC compensation			(C) Retirement and other deferred compensation	(D) Nontaxable benefits	(E) Total of columns (B)(i)-(D)	(F) Compensation in column (B) reported as deferred on prior Form 990
		(i) Base compensation	(ii) Bonus & incentive compensation	(iii) Other reportable compensation				
(1) JOSEPH KLAWITTER	(i)	236,923.	9,413.	0.	7,533.	35,899.	289,768.	0.
CHIEF MEDICAL OFFICER	(ii)	0.	0.	0.	0.	0.	0.	0.
(2) GEORGE SMITH	(i)	231,750.	9,715.	0.	10,582.	32,912.	284,959.	0.
MEDICAL DOCTOR	(ii)	0.	0.	0.	0.	0.	0.	0.
(3) JUANITA FLEMING	(i)	188,098.	35,951.	0.	3,113.	32,529.	259,691.	0.
MD	(ii)	0.	0.	0.	0.	0.	0.	0.
(4) GABRIEL HERNANDEZ	(i)	215,000.	33,278.	0.	8,863.	1,220.	258,361.	0.
CHIEF DENTAL OFFICER	(ii)	0.	0.	0.	0.	0.	0.	0.
(5) JOSEPH MARDINI	(i)	203,936.	24,054.	0.	9,211.	14,502.	251,703.	0.
DDS	(ii)	0.	0.	0.	0.	0.	0.	0.
(6) CHANDRA SMILEY	(i)	218,491.	9,304.	0.	10,082.	12,293.	250,170.	0.
CHIEF EXECUTIVE OFFICER	(ii)	0.	0.	0.	0.	0.	0.	0.
(7) HALI PEARCE	(i)	220,002.	1,875.	0.	0.	11,425.	233,302.	0.
DO	(ii)	0.	0.	0.	0.	0.	0.	0.
(8) MATTHEW SOUTHWICK	(i)	193,100.	14,274.	0.	9,441.	1,187.	218,002.	0.
MEDICAL DOCTOR	(ii)	0.	0.	0.	0.	0.	0.	0.
(9) JASON BREWSTER	(i)	135,462.	25,970.	0.	7,110.	32,410.	200,952.	0.
CHIEF FINANCIAL OFFICER	(ii)	0.	0.	0.	0.	0.	0.	0.
(10) DARRELL MILLER	(i)	151,237.	21,596.	0.	4,931.	10,633.	188,397.	0.
CHIEF PHARMACY OFFICER	(ii)	0.	0.	0.	0.	0.	0.	0.
	(i)							
	(ii)							
	(i)							
	(ii)							
	(i)							
	(ii)							
	(i)							
	(ii)							
	(i)							
	(ii)							
	(i)							
	(ii)							

Part III Supplemental Information

Provide the information, explanation, or descriptions required for Part I, lines 1a, 1b, 3, 4a, 4b, 4c, 5a, 5b, 6a, 6b, 7, and 8, and for Part II. Also complete this part for any additional information.

SCHEDULE O (Form 990)
(Rev. December 2024)
Department of the Treasury
Internal Revenue Service

Supplemental Information to Form 990 or 990-EZ

Complete to provide information for responses to specific questions on Form 990 or 990-EZ or to provide any additional information.
Attach to Form 990 or Form 990-EZ.
Go to www.irs.gov/Form990 for instructions and the latest information.

OMB No. 1545-0047

Open to Public Inspection

Name of the organization
ESCAMBIA COMMUNITY CLINICS INC.

Employer identification number
59-3105246

FORM 990, ITEM C, DOING BUSINESS AS:
COMMUNITY HEALTH NORTHWEST FLORIDA

FORM 990, PART I, LINE 1, DESCRIPTION OF ORGANIZATION MISSION:
AND THE SURROUNDING AREA. ESCAMBIA COMMUNITY CLINICS, INC. IS COMMITTED TO ASSURING ACCESS TO CARE FOR THE MEDICALLY NEEDY, UNDER INSURED, UNINSURED, AND UNDERSERVED POPULATIONS. ESCAMBIA COMMUNITY CLINICS, INC. SHALL ENDEAVOR TO PROVIDE CARE WITH COMPASSION, DIGNITY AND RESPECT FOR EACH PERSON REGARDLESS OF ABILITY TO PAY FOR SERVICES.

FORM 990, PART III, LINE 1, DESCRIPTION OF ORGANIZATION MISSION:
MEDICALLY NEEDY, UNDER INSURED, UNINSURED, AND UNDERSERVED POPULATIONS. ESCAMBIA COMMUNITY CLINICS, INC. SHALL ENDEAVOR TO PROVIDE CARE WITH COMPASSION, DIGNITY AND RESPECT FOR EACH PERSON REGARDLESS OF ABILITY TO PAY FOR SERVICES.

FORM 990, PART VI, SECTION B, LINE 11B:
THE EXECUTIVE AND FINANCE COMMITTEE REVIEWS AND DISCUSSES THE RETURN AT THEIR MONTHLY MEETING PRIOR TO THE RETURN BEING FILED. THE CURRENT YEAR RETURN IS COMPARED TO THE PRIOR YEAR AND ANY ISSUES ARE DISCUSSED AND SETTLED AT THE MEETING.

FORM 990, PART VI, SECTION B, LINE 12C:
OFFICERS AND DIRECTORS ARE REQUIRED TO DISCLOSE ANNUALLY INTERESTS THAT COULD GIVE RISE TO CONFLICT.

FORM 990, PART VI, SECTION B, LINE 15:
THE EXECUTIVE DIRECTOR'S SALARY IN DETERMINED BY THE BOARD OF DIRECTORS. AN EXERCISE IS PERFORMED WHERE COMPARISONS ARE MADE TO LIKE POSITIONS WITHIN THE COMMUNITY AS WELL AS TO SALARY SURVEYS WITH BOTH THE NATIONAL ASSOCIATION OF COMMUNITY HEALTH CENTERS AND THE FLORIDA ASSOCIATION OF COMMUNITY HEALTH CENTERS THAT ARE PUBLISHED ANNUALLY. THESE FACTORS ALONG WITH THE PERFORMANCE EVALUATION ARE CONSIDERED IN ANNUAL SALARY DECISIONS. IT IS THE OBJECTIVE OF THE BOARD THAT THE EXECUTIVE DIRECTOR IS PAID WITHIN THE 40-50TH PERCENTILE OF COMPARABLE POSITIONS.

FOR OFFICERS, THE EXECUTIVE DIRECTOR IS RESPONSIBLE FOR SALARY DETERMINATIONS. HER PROCESS MIRRORS THE PROCESS OUTLINED ABOVE FOR THE EXECUTIVE DIRECTOR'S SALARY. ADDITIONALLY, SHE RECEIVED APPROVAL FROM THE HR COMMITTEE TO MAKE ADJUSTMENTS TO OFFICER SALARIES.

THESE PROCESSES ARE THE SAME FOR BOTH BASE SALARY AND YEAR-END BONUS DETERMINATIONS.

FORM 990, PART VI, SECTION C, LINE 19:
MANAGEMENT DISCLOSES GOVERNING DOCUMENTS IN RESPONSE TO WRITTEN REQUESTS OF THE DOCUMENTS.

Name of the organization
ESCAMBIA COMMUNITY CLINICS INC.

Employer identification number
59-3105246

FORM 990, PART XII, FINANCIAL STATEMENTS AND REPORTING

THE EXECUTIVE AND FINANCE COMMITTEE SERVES AS THE ORGANIZATION'S AUDIT COMMITTEE. THIS COMMITTEE ASSUMES THE RESPONSIBILITY FOR OVERSIGHT OF THE AUDIT OF THE ORGANIZATION'S FINANCIAL STATEMENTS AND THE SELECTION OF AN INDEPENDENT ACCOUNTANT.

Form **8868**
(Rev. January 2025)

Department of the Treasury
Internal Revenue Service

Application for Extension of Time To File an Exempt Organization Return or Excise Taxes Related to Employee Benefit Plans

File a separate application for each return.
Go to www.irs.gov/Form8868 for the latest information.

OMB No. 1545-0047

Electronic filing (e-file). You can electronically file Form 8868 to request up to a 6-month extension of time to file any of the forms listed below except for Form 8870, Information Return for Transfers Associated With Certain Personal Benefit Contracts. An extension request for Form 8870 must be sent to the IRS in a paper format (see instructions). For more details on the electronic filing of Form 8868, visit www.irs.gov/e-file-providers/e-file-for-charities-and-non-profits.

Caution: If you are going to make an electronic funds withdrawal (direct debit) with this Form 8868, see Form 8453-TE and Form 8879-TE for payment instructions.

All corporations required to file an income tax return other than Form 990-T (including 1120-C filers), partnerships, REMICs, and trusts must use Form 7004 to request an extension of time to file income tax returns.

Part I - Identification

Type or Print

File by the due date for filing your return. See instructions.

Name of exempt organization, employer, or other filer, see instructions.
ESCAMBIA COMMUNITY CLINICS INC.

Taxpayer identification number (TIN)
59-3105246

Number, street, and room or suite no. If a P.O. box, see instructions.
2315 W JACKSON ST.

City, town or post office, state, and ZIP code. For a foreign address, see instructions.
PENSACOLA, FL 32505

Enter the Return Code for the return that this application is for (file a separate application for each return) 01

Application Is For	Return Code	Application Is For	Return Code
Form 990 or Form 990-EZ	01	Form 4720 (other than individual)	09
Form 4720 (individual)	03	Form 5227	10
Form 990-PF	04	Form 6069	11
Form 990-T (sec. 401(a) or 408(a) trust)	05	Form 8870	12
Form 990-T (trust other than above)	06	Form 5330 (individual)	13
Form 990-T (corporation)	07	Form 5330 (other than individual)	14
Form 1041-A	08	Form 990-T (governmental entities)	15

- After you enter your Return Code, complete either Part II or Part III. Part III, including signature, is applicable only for an extension of time to file Form 5330.
- If this application is for an extension of time to file Form 5330, you must enter the following information.

Plan Name _____
Plan Number _____
Plan Year Ending (MM/DD/YYYY)

Part II - Automatic Extension of Time To File for Exempt Organizations (see instructions)

The books are in the care of ATHENA DURANT
2315 WEST JACKSON STREET - PENSACOLA, FL 32505

Telephone No. 850-436-4630 Fax No. _____

- If the organization does not have an office or place of business in the United States, check this box .....
- If this is for a Group Return, enter the organization's four-digit Group Exemption Number (GEN) _____. If this is for the whole group, check this box ..... ☐ . If it is for part of the group, check this box ... and attach a list with the names and TINs of all members the extension is for.

1 I request an automatic 6-month extension of time until NOVEMBER 15, 20 25, to file the exempt organization return for the organization named above. The extension is for the organization's return for:

☒ calendar year 20 24 or

tax year beginning _____, 20 _____, and ending _____, 20 _____

2 If the tax year entered in line 1 is for less than 12 months, check reason: Initial return Final return Change in accounting period

3a	If this application is for Forms 990-PF, 990-T, 4720, or 6069, enter the tentative tax, less any nonrefundable credits. See instructions.	**3a**	$	0.
b	If this application is for Forms 990-PF, 990-T, 4720, or 6069, enter any refundable credits and estimated tax payments made. Include any prior year overpayment allowed as a credit.	**3b**	$	0.
c	**Balance due.** Subtract line 3b from line 3a. Include your payment with this form, if required, by using EFTPS (Electronic Federal Tax Payment System). See instructions.	**3c**	$	0.

For Privacy Act and Paperwork Reduction Act Notice, see instructions. Form **8868** (Rev. 1-2025)

LHA 423841 01-02-25

Check-A-Charity

KNOW HOW YOUR MONEY IS BEING SPENT

ESCAMBIA COMMUNITY CLINICS, INC., **PENSACOLA, FL**

Also Soliciting as

Community Health Northwest Florida

Registration Number :CH31735

Expiration Date : 2/15/2027

Revenue Source : IRS 990 Form (12/31/2024)

Total Revenue : $46,432,086.00

Total Expenses : $48,668,672.00

Surplus/Deficit : -$2,236,586.00

Program Services Expenses : $34,304,222.00 **70%**

Administrative Expenses : $14,364,450.00 **30%**

Fundraising Expenses : $.00 **0%**

Docusign Envelope ID: 90EEEBC2-895F-8500-81E8-721C82C066B8

INTERNAL REVENUE SERVICE
DISTRICT DIRECTOR
C - 1130
ATLANTA, GA 30301

DEPARTMENT OF THE TREASURY

Date: JAN 12 1993

ESCAMBIA COMMUNITY CLINICS INC
BA [illegible]T HOSPITAL INC
C/O GARY B LEUCHTMAN ESQ
P O BOX 12950
PENSACOLA, FL 32576

Employer Identification Number:
59-3105246
Contact Person:
JERRY FINKLIN
Contact Telephone Number:
(404) 331-0172
Accounting Period Ending:
September 30
Form 990 Required:
Yes
Addendum Applies:
Yes

Dear Applicant:

Based on information supplied, and assuming your operations will be as stated in your application for recognition of exemption, we have determined you are exempt from Federal income tax under section 501(a) of the Internal Revenue Code as an organization described in section 501(c)(3).

We have further determined that you are not a private foundation within the meaning of section 509(a) of the Code, because you are an organization described in sections 509(a)(1) and 170(b)(1)(A)(iii).

If your sources of support, or your purposes, character, or method of operation change, please let us know so we can consider the effect of the change on your exempt status and foundation status. In the case of an amendment to your organizational document or bylaws, please send us a copy of the amended document or bylaws. Also, you should inform us of all changes in your name or address.

As of January 1, 1984, you are liable for taxes under the Federal Insurance Contributions Act (social security taxes) on remuneration of $100 or more you pay to each of your employees during a calendar year. You are not liable for the tax imposed under the Federal Unemployment Tax Act (FUTA).

Since you are not a private foundation, you are not subject to the excise taxes under Chapter 42 of the Code. However, you are not automatically exempt from other Federal excise taxes. If you have any questions about excise, employment, or other Federal taxes, please let us know.

Grantors and contributors may rely on this determination unless the Internal Revenue Service publishes notice to the contrary. However, if you lose your section 509(a)(1) status, a grantor or contributor may not rely on this determination if he or she was in part responsible for, or was aware of, the act or failure to act, or the substantial or material change on the part of the organization that resulted in your loss of such status, or if he or she acquired knowledge that the Internal Revenue Service had given notice that you would no longer be classified as a section 509(a)(1) organization.

Donors may deduct contributions to you as provided in section 170 of the

Letter 947(DO/CG)

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Code. Bequests, legacies, devises, transfers, or gifts to you or for your use are deductible for Federal estate and gift tax purposes if they meet the applicable provisions of Code sections 2055, 2106, and 2522.

Contribution deductions are allowable to donors only to the extent that their contributions are gifts, with no consideration received. Ticket purchases and similar payments in conjunction with fundraising events may not necessarily qualify as deductible contributions, depending on the circumstances. See Revenue Ruling 67-246, published in Cumulative Bulletin 1967-2, on page 104, which sets forth guidelines regarding the deductibility, as charitable contributions, of payments made by taxpayers for admission to or other participation in fundraising activities for charity.

In the heading of this letter we have indicated whether you must file Form 990, Return of Organization Exempt From Income Tax. If Yes is indicated, you are required to file Form 990 only if your gross receipts each year are normally more than $25,000. However, if you receive a Form 990 package in the mail, please file the return even if you do not exceed the gross receipts test. If you are not required to file, simply attach the label provided, check the box in the heading to indicate that your annual gross receipts are normally $25,000 or less, and sign the return.

If a return is required, it must be filed by the 15th day of the fifth month after the end of your annual accounting period. A penalty of $10 a day is charged when a return is filed late, unless there is reasonable cause for the delay. However, the maximum penalty charged cannot exceed $5,000 or 5 percent of your gross receipts for the year, whichever is less. This penalty may also be charged if a return is not complete, so please be sure your return is complete before you file it.

You are not required to file Federal income tax returns unless you are subject to the tax on unrelated business income under section 511 of the Code. If you are subject to this tax, you must file an income tax return on Form 990-T, Exempt Organization Business Income Tax Return. In this letter we are not determining whether any of your present or proposed activities are unrelated trade or business as defined in section 513 of the Code.

You need an employer identification number even if you have no employees. If an employer identification number was not entered on your application, a number will be assigned to you and you will be advised of it. Please use that number on all returns you file and in all correspondence with the Internal Revenue Service.

This determination is based on evidence that your funds are dedicated to the purposes listed in section 501(c)(3) of the Code. To assure your continued exemption, you should maintain records to show that funds are expended only for those purposes. If you distribute funds to other organizations, your records should show whether they are exempt under section 501(c)(3). In cases where the recipient organization is not exempt under section 501(c)(3), there should be evidence that the funds will remain

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dedicated to the required purposes and that they will be used for those purposes by the recipient.

If distributions are made to individuals, case histories regarding the recipients should be kept showing names, addresses, purposes of awards, manner of selection, relationship (if any) to members, officers, trustees or donors of funds to you, so that any and all distributions made to individuals can be substantiated upon request by the Internal Revenue Service. (Revenue Ruling 56-304, C.B. 1956-2, page 306.)

If we have indicated in the heading of this letter that an addendum applies, the enclosed addendum is an integral part of this letter.

Because this letter could help resolve any questions about your exempt status and foundation status, you should keep it in your permanent records.

We have sent a copy of this letter to your representative as indicated in your power of attorney.

If you have any questions, please contact the person whose name and telephone number are shown in the heading of this letter.

Sincerely yours,

Paul Williams
District Director

Enclosure(s):
Addendum

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ESCAMBIA COMMUNITY CLINICS INC

If your organization conducts fund-raising events such as benefit dinners, auctions, membership drives, etc., where something of value is received in return for contributions, you can help your donors avoid difficulties with their income tax returns by assisting them in determining the proper tax treatment of their contributions. To do this you should, in advance of the event, determine the fair market value of the benefit received and state it in your fund-raising materials such as solicitations, tickets, and receipts in such a way that your donors can determine how much is deductible and how much is not. To assist you in this, the Service has issued Publication 1391, Deductibility of Payments Made to Charities Conducting Fund-Raising Events. You may obtain copies of Publication 1391 from your local IRS Office. Guidelines for deductible amounts are also set forth in Revenue Ruling 67-246, 1967-2 C.B. 104 and Revenue Procedure 90-12, 1990-1 C.B. 471 and Revenue Procedure 92-49, 1992-26 I.R.B. 18.

The value of time or personal services contributed to your organization by volunteers is not deductible by those volunteers as a charitable contribution for Federal income tax purposes. You should advise your volunteers to this effect.

Town of Century
P.O. Box 790
Century, FL 32535-0790

September 2, 2026

Escambia County Opioid Abatement Performance Evaluation and Ranking Committee
c/o Elizabeth Kissel
Escambia County Administration Office
221 Palafox Place, 4th Floor
Pensacola, Florida 32502

RE: Application of Community Health Northwest Florida — "Rural Access for Holistic Substance Use and Behavioral Health Care," the Century Community Pharmacy

Members of the Committee:

I am the Mayor of Century, and I am asking you to fund Community Health Northwest Florida's application for a community pharmacy here.

Century is a town of about 1,700 people at the very top of the county. We are closer to Alabama than we are to Pensacola. Everybody here knows everybody, which means when somebody's son overdoses, the whole town knows, and the whole town grieves it. I have watched families in this town lose people. I have watched some of them get their people back. The difference between those two outcomes usually comes down to whether help was reachable on the day it was wanted.

Our hospital closed in 2016. Since then our people have driven forty miles for care, or they have gone without. Plenty go without. I want to be honest that this is not only about opioids for us. It is about a town that has had to be resourceful because the services other places take for granted are not here.

What is being proposed is a pharmacy in our town that will fill the medications that keep somebody in recovery, on the same day a doctor prescribes them, and will not turn a person away for not being able to pay. It will also fill the ordinary medications our people need, which matters more than it sounds like it does. And their mobile units will come to people at home, which in a place like ours is the difference between a service existing and a service being used.

I have gotten to know this organization over the past year. They came to Century and asked what we needed before they told us what they were bringing. That is not how it usually goes.

I know the County has more requests than it has money. I would only say that the north end of this county has gone without for a long time, and this is a chance to put something permanent here that does not go away when the grant does.

Thank you for considering it. You can reach me at (850) 256-3208.

Sincerely,

Benjamin Boutwell
Mayor
Town of Century, Florida

Town of Century
P.O. Box 790
Century, FL 32535-0790

September 2, 2026

Escambia County Opioid Abatement Performance Evaluation and Ranking Committee
c/o Elizabeth Kissel
Escambia County Administration Office
221 Palafox Place, 4th Floor
Pensacola, Florida 32502

RE: Application of Community Health Northwest Florida — "Rural Access for Holistic Substance Use and Behavioral Health Care," the Century Community Pharmacy

Members of the Committee:

I am writing on behalf of the Town of Century in support of Community Health Northwest Florida's application to open a community pharmacy at 9420 North Century Boulevard.

I took this job because Century has real problems that can be fixed with attention and follow-through. Health care access is one of them. We lost our hospital in 2016. Our residents drive to Pensacola for things that ought to be available here. For a town where a lot of families are working with one vehicle or none, that drive decides whether people get care or go without it.

I understand the opioid problem in this county from the town's side of it. Our people are not exempt from it because we are rural. What we have been exempt from is the treatment infrastructure. A prescription for medication-assisted treatment written in Century today cannot be filled in Century today in any way that works for someone without insurance or without a car. That is a gap this project closes.

The Town has worked with Community Health Northwest Florida for more than a year on planning for expanded services here, and I have found them to be straightforward about what they can and cannot deliver. They already operate a clinic on Industrial Boulevard and they are reopening the Church Street site. A pharmacy completes what those clinics can actually do for a patient.

Century has been promised things before that did not arrive. This one is already underway, and the pharmacy is the piece that makes the rest of it useful. The Town will do its part on the permitting and utility side to see it open on schedule.

I am glad to answer questions at (850) 256-3208.

Sincerely,

David Murzin
Town Administrator
Town of Century, Florida

RON DESANTIS
GOVERNOR

SHEVAUN L. HARRIS
SECRETARY

Subject: Rural Health Transformation Program – Notice of Award

Dear **Community Health Northwest Florida**

Congratulations! On behalf of the Agency for Health Care Administration, we are pleased to inform you that your organization has been **selected to receive a Rural Health Transformation Program (RHTP) award**. We are excited to partner with you on this groundbreaking work that will meaningfully strengthen rural health access, elevate care delivery, and support transformative outcomes for communities across the state.

Your award amount for Year 1 will be:

Bundle 1: Total Approved (NW)	**$5,100,801.82**
Initiative 2: Mobile Health	$2,226,359.30
Initiative 3: Community Paramedicine	$1,478,810.95
Initiative 10: RPTM	$1,037,879.50
Initiative 12: Retail Clinica/Pharmacy	$237,927.94
Initiative 13: HIE	$119,824.13

Bundle 2: Total Approved (NW)	**$3,715,019.44**
Initiative 4: Behavioral Health Tele	-
Initiative 5: Tele-Imaging	$477,879.83
Initiative 6: Tele-Intensive Care Unit	-
Initiative 7: Hub-and-Spoke Telestroke with Transfer	$2,147,364.60
Initiative 13: HIE	$106,125.01
Initiative 14: Diagnostic	$983,650.00

Initiative 1 (Rural and Satellite Clinics): Total Approved (NW)	**$3,900,000.00**

Initiative 8 (Workforce Development, Pathway 1): Total Approved (NW)	**$712,111.10**

Initiative 8 (Workforce Development, Pathway 2): Total Approved (NW)	**$716,509.30**

Initiative 9 (Health & Lifestyle): Total Approved (NW)	**$1,331,212.17**

Initiative 11 (Value Based Care): Total Approved (NW)	**$676,181.92**

Please note that **this message does not serve as an official contract**. A formal subaward agreement will be issued by the Agency in the coming weeks. Once the contract is executed, you will be assigned a **Regional Lead**, who will serve as your primary point of contact for all RHTP-related needs and support.

If your awarded amount differs from the amount requested in your application, an **updated budget and implementation plan will be due within 30 days of contract execution.** All implementation plans and budgets should be in the RHTP-approved templates attached.

IMPORTANT NOTE
Annual Convening – September 23–24, Jacksonville, Florida

As a newly selected awardee, we are delighted to invite you to the **mandatory 2026 RHTP Annual Convening**, taking place September 23–24 in Jacksonville, Florida.

The convening brings together awardees, partners, agency leadership, and federal collaborators to:
• Align on Year 1 implementation goals
• Build cross-initiative partnerships
• Share best practices and rural innovation strategies
• Strengthen coordination across the RHTP ecosystem

Each organization may bring **up to three (3) representatives/partners**.

Please ensure that all attendees complete the **registration form** below and book lodging through the **official room block** no later than **Monday, August 17**:

• **Registration Form:** https://forms.cloud.microsoft/g/S5LeJPRPBg
• **Hotel Room Block:** DoubleTree by Hilton Hotel Jacksonville Riverfront

Should you have any questions, please contact us through the **RHTP inbox** at **RHTP@ahca.myflorida.com**

Welcome to the Rural Health Transformation Program, we look forward to working with you and supporting the powerful impact your organization will bring to rural Florida.

Warm regards,



Antraneise Jackson, DrPH, MPH
Director
Rural Health Transformation Program
Agency for Health Care Administration

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RURAL HEALTH TRANSFORMATION PROGRAM (RHTP)
SECTION B – EXECUTIVE SUMMARY

Instructions:

- Include all required sections below.
- Use data-driven statements whenever possible.
- Use bullet points and short paragraphs to keep it easy to read.
- Follow the page limits in the RHTP Initiative Guidance.

Legal Organization Name: Escambia Community Clinics, Inc. D/B/A Community Health Northwest Florida

Initiative the Applicant Is Currently Applying For (Select One Per Application)

☐ Preventive Care & Care-at-Home Bundle (Bundle 1; Initiatives 2, 3, 10, 12, & 13)

☐ Specialty & Acute Care Bundle (Bundle 2; Initiatives 13, 14, & at least one from 4, 5, 6, 7)

Select which telehealth initiative is included with Bundle 2 (Must select at least one)

☐ Initiative 4 – Behavioral Health Telehealth & Telehub Psychiatry

☐ Initiative 5 – Tele-Specialties & Imaging

☐ Initiative 6 – Tele-Intensive Care Unit / eICU

☐ Initiative 7 – Hub-and-Spoke Telestroke with Transfer

■ Initiative 1 – Rural & Satellite Clinics

☐ Initiative 8 – Workforce Development

☐ Initiative 9 – Health & Lifestyle

☐ Initiative 11 – Value-Based Purchasing

A. Program Title & Summary: **Northwest Florida Rural & Satellite Clinics — A Six-Site, Three-County Expansion of Primary, Dental, Behavioral, and Substance Use Care in the Northwest Super Region.**

In the small towns and farming communities of the Florida Panhandle, the next primary care appointment is often thirty miles and several weeks away, and the next dentist is farther still. For families across these rural communities, that distance is the single biggest reason a chronic condition goes uncontrolled, a child stays in pain, or a person in early recovery stops showing up. This application offers a practical, regionally coordinated answer.

Community Health Northwest Florida (CHNWF), the region's largest Federally Qualified Health Center, is the lead applicant. The Northwest Florida Health Council (NWFHC) — the region's statutorily authorized Local Health Council under Florida Statutes §408.033 — serves as the project coordinator, never as a clinical provider (Florida Senate). Three partners will open the six satellite clinic sites — CHNWF, Point Washington Medical Clinic (PWMC), and Lakeview Center, Inc. (LCI) — with all other collaborative partners in support. Together the sites span three counties, with rural care-access impact reaching seven. CHNWF will open three sites: two distinct satellite clinics in the Town of Century (ZIP 32535, Escambia County) in Cohort 1, and one Crestview-area site in a HRSA RUCA-eligible rural ZIP in northern Okaloosa County in Cohort 2 (Community Health Northwest

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Florida, “About”). PWMC, a free medical and dental clinic operating in Walton County since 2017, will open two Cohort 1 sites in Freeport (ZIP 32439): a dental clinic and an adult primary care clinic (Point Washington Medical Clinic, “About Us”). LCI, a community behavioral health center serving the region since 1954, will open the sixth site — a behavioral health clinic adding integrated primary care in the Black Creek area of Walton County (ZIP 32436) in Cohort 1. Each of the three retains full, independent clinical, operational, and compliance oversight of its own sites.
At full empanelment, the six sites are projected to serve roughly 11,700 unique rural patient appointments a year — about 3,000 across the two Century sites, 4,000 at Crestview, 1,500 at Freeport Dental, 2,000 at Freeport Adult Primary Care, and 1,200 at Black Creek. Five-year funding requested is documented in Section J.

B. Program Goals:

1. **Goal 1 — Open six operational satellite clinic sites on schedule. Open the five Cohort 1 sites** (the five Cohort 1 sites within the Cohort 1 budget period and the Crestview-area site in Cohort 2), with EHR, Florida HIE, and Event Notification Service connectivity within 90 days of each go-live (RFA Section 6.4).
2. **Goal 2 — Reach an estimated 11,700 unique rural patient appointments annually at full empanelment.** Provide primary, pediatric, dental, and women's health care; behavioral health, psychiatry, and MOUD; case management; and specialty referral coordination across the six sites.
3. **Goal 3 — Strengthen chronic-disease management and prevention in rural communities**. Reduce avoidable emergency department use and preventable hospitalizations through a usual source of care, consistent with the well-documented impact of FQHCs and free clinics on rural outcomes (County Health Rankings & Roadmaps) (Commonwealth Fund).
4. **Goal 4 — Build a sustainable rural healthcare workforce pipeline.** Expand residency, NP/DNP, MSW, and dental training partnerships with FSU, UWF, and West Florida AHEC, so providers who train in rural Northwest Florida stay there.
5. **Goal 5 — Achieve full financial self-sufficiency for each site on or before November 1, 2031,** as required by Section 9 of the RHTP Standard Terms, through payer reimbursement, sliding-fee revenue, charitable giving, and braided funding detailed in Section H.

C. Target Population or Workforce:

1. ***Geographic Focus:*** All six sites sit in ZIP codes formally designated rural. The Century sites (32535, Escambia County) serve the Town of Century — a State-designated Rural Community since 2022 — and adjacent Jay (32565); the two Freeport sites (32439) and the Black Creek site (32436) sit in Walton County; and the Crestview-area site will sit in a HRSA RUCA-eligible rural ZIP in northern Okaloosa County, verified before lease execution. Eligibility is established under Florida Statute §288.0656 (Pathway A), the Rural Economic Development Initiative (Pathway B) (Florida Department of State), and HRSA RUCA criteria (Pathway D). Impact reaches into Holmes, Washington, and adjacent counties whose residents already cross county lines for care.
2. ***Demographics:*** These are working communities — agricultural labor, small business, retirees on fixed incomes, and military families from Eglin Air Force Base. The numbers are sobering. In Jay (32565), the poverty rate exceeds 26% and median household income is about $36,000 (Florida Demographics). In Holmes County, more than one in four children lives in poverty and about 15.4% of residents under 65 are uninsured (Data USA); Walton County's uninsured rate is roughly 14.1% (Point Washington Medical Clinic, “About Us”).

   The shortage is national and acute here. A February 2026 Florida House analysis found the state needs 1,434 more primary-care, 1,271 more dental, and 545 more mental-health practitioners to close its HPSA gaps (Florida House of Representatives). Florida also

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leads the nation in residents in dental HPSAs, and 66 of 67 counties have a documented dental workforce shortage (Floridians for Dental Access) (Hatter).

3. ***Workforce Targeted***
   CHNWF leads workforce efforts as collaborative lead and the area's largest FQHC, with an established program training MD, DO, PA, APRN, RN, CPRS, LCSW, and other students. West Florida AHEC and LCI run complementary programs. By tightening this collaboration, each partner's effort scales from a single-site program to a regional pipeline. Every clinic site, and every partner, will train students.

D. Proposed Model & Key Components:

Program Model: This is a **regional collaboration with independent clinical oversight**. CHNWF is the lead applicant and holds the award; NWFHC coordinates the partnership; and the three site-opening partners — CHNWF, PWMC, and LCI — run their own sites under their own clinical and compliance leadership, with all other collaborative partners in support. The model rests on three established strengths.

First, **all three site-opening partners are already in the room.** CHNWF has been the region's largest FQHC for over three decades, with 14 fixed sites, three mobile units, and existing Medicaid, Medicare, and commercial credentialing (Community Health Northwest Florida, “FAQs”). PWMC has run a free medical and dental clinic in Walton County since 2017, opening a purpose-built facility in 2024 (SoWal Connections) (South Walton Life). Lakeview Center, Inc. (LCI), an affiliate of LifeView Group, has delivered community behavioral health, psychiatry, and substance use care across the region since 1954. Each already holds the licenses, contracts, and community trust to open a new site without learning the basics on grant time.

Second, **the operating infrastructure is already paid for at the system level.** CHNWF is completing its enterprise transition to EPIC in late 2026, planned for over two years. All three CHNWF sites will operate inside EPIC from day one, with MyChart, Healthy Planet tools, and Florida HIE and Event Notification Service connections extended to each new site; PWMC exchanges information with CHNWF through the Florida HIE, and LCI will connect its Black Creek site to the same HIE and ENS. The 90-day connectivity requirement (RFA Section 6.4) is met by extending existing contracts, not building new systems.

Third, **the financial model rests on existing payer relationships.** CHNWF receives cost-based Medicaid PPS reimbursement with state wraparound payments ensuring full PPS recovery on every Medicaid managed-care encounter (National Association of Community Health Centers). PWMC's volunteer-anchored model has stayed solvent for eight years and produced more than four million dollars in documented community healthcare savings (South Walton Life). LCI sustains its services through Medicaid, state behavioral health funding, and LifeView Group's established revenue base.

Core Activities by Site

Site	Partner / Cohort	Services
Century Site A	CHNWF (FQHC) / Cohort 1	Adult and pediatric primary care
Century Site B	CHNWF (FQHC) / Cohort 1	Women's health (FSU OB/GYN); behavioral health; psychiatry; MOUD; case mgmt
Freeport Dental	PWMC (community-based dental) / Cohort 1	Full-scope adult and pediatric dental
Freeport Adult Primary Care	PWMC (volunteer-anchored primary care) / Cohort 1	Adult primary care; chronic-disease mgmt; preventive and behavioral-health screening

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Site	Partner / Cohort	Services
Crestview-Area Satellite	CHNWF (FQHC) / Cohort 2	Adult and pediatric primary care; integrated behavioral health, psychiatry, MOUD; case mgmt
Black Creek Behavioral Health	LCI (behavioral health center adding integrated primary care) / Cohort 1	Behavioral health; psychiatry and medication mgmt; substance use incl. MAT/MOUD; integrated primary care screening; care coordination

Care coordination across all six sites uses one closed-loop approach: tracked referrals, behavioral-health and substance-use screening at every primary-care visit, food-insecurity screening, and patient-portal access. Specialty referrals route through the NWFHC network and its regional hospital partnerships.

E. Anticipated Rural Impact:

Access:At full empanelment, the six sites provide a usual source of care to roughly 11,700 unduplicated rural patients a year. Few currently have a local, sustainable, professionally staffed option for these services. For an older adult with diabetes, a parent with a sick child, or a person in early recovery, care nearby instead of 30 miles away is often the difference between care and none at all.

Health Outcomes: FQHCs reduce unnecessary emergency-department use, lower preventable hospitalizations, and improve chronic-disease outcomes — an effect amplified in rural areas (County Health Rankings & Roadmaps) (Commonwealth Fund). PWMC's dental expansion will clear a waiting list and scale full-scope dental capacity in a designated dental HPSA (Florida Department of Health).

Workforce Stability: Every clinical FTE hired with startup funding is placed in a permanent payroll position from day one. The Crestview-area site will pursue HRSA HPSA designation to support NHSC loan repayment. Training partnerships with FSU, UWF, regional MSW programs, and West Florida AHEC build providers who train rural and stay rural.

Economic & System Benefits: Lower avoidable ED use reduces wasteful spend; new dental and behavioral health services cut productivity loss; the clinics create local jobs; and PWMC's volunteer-anchored model keeps marginal cost low, so services endure beyond the grant.

F. Alignment with RHTP Strategic Goals

RHTP Strategic Goal	Program Alignment
Make rural America healthy again	Primary, pediatric, dental, behavioral health, substance use, and women's health care through six new clinics in communities lacking local access, targeting the region's highest-burden chronic, dental, behavioral, and maternal needs.
Sustainable access	Six permanent sites under FQHC, free-clinic, and community behavioral health models, each with a self-sufficiency target by 1 November 2031; all qualify under §288.0656 and HRSA RUCA.
Workforce development	Grant-funded FTEs absorbed into partner payrolls from day one; NHSC loan repayment at the HPSA site; residency, NP/DNP, dental, and MSW pipelines with FSU, UWF, and West Florida AHEC.
Innovative care	Behavioral health, psychiatry, and MOUD in the primary-care visit; closed-loop referral tracking; FSU OB/GYN women's health at Century Site B; food-insecurity screening as a clinical risk factor.

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Tech innovation	EPIC EMR across CHNWF sites after the late-2026 transition, with MyChart and Florida HIE/ENS connections to each site within 90 days; telehealth from day one.

G. AOR Certification

AOR Signature: DocuSigned by: Chandra Smiley 4DFCC1FE660B433... **Printed Name:** Chandra Smiley

Date (MM/DD/YYY): 6/16/2026

D. Project Narrative

Cohort 1: Century Site A, Century Site B, Freeport Dental, Walton County Behavioral Health, and Freeport Adult Primary Care

D.1 Program Overview and Clinic Type

Rural Northwest Florida does not lack people who want care; it lacks places to get it. The five Cohort 1 sites — Century Site A, Century Site B, Freeport Dental, Freeport Adult Primary Care, and Black Creek Behavioral Health — are the partnership's answer to that gap. All five are **Satellite Clinics** under Section 2 of the RFA: each operates under the oversight of a parent organization in continuous operation far longer than the five years required by Section 3.2, and each sits in a rural area that independently satisfies the RFA's rural-eligibility pathways. Community Health Northwest Florida (CHNWF), the region's largest FQHC, will operate the two Century sites; Point Washington Medical Center (PWMC), a free medical and dental clinic in Walton County since 2017, will operate both Freeport sites (dental and adult primary care); and Lakeview Center, Inc. (LCI), a CARF-accredited community behavioral health center serving the region since 1954, will operate the Black Creek Behavioral Health site, adding integrated primary care. CHNWF is the lead applicant and holds the award for the collaborative. The Northwest Florida Health Council (NWFHC), the statutorily authorized Local Health Council under Florida Statute §408.033, serves as the contracted managing partner responsible for data collection, project coordination, and fiscal compliance — never as a clinical provider — while CHNWF retains final review and sign-off authority over all payments to the collaborative. CHNWF, PWMC, and LCI each retain independent clinical and operational oversight of their respective sites (Florida Senate).

Together, the five Cohort 1 sites are projected to serve approximately 8,700 unduplicated rural patient appointments annually at full empanelment: 3,000 across the two Century sites, 1,500 at Freeport Dental, 2,000 at Freeport Adult Primary Care, and 1,200 at Black Creek Behavioral Health. None of these patients has a local, sustainable, professionally staffed option for the services proposed.

Site Summary — Cohort 1

Site	Operating Partner / Clinic Type	Address, ZIP, County	Service Area and Rural Eligibility
Century Site A	CHNWF (FQHC) / Satellite Clinic — Adult Primary Care and Pediatrics	6021 Industrial Blvd, Century, FL 32535, Escambia County	Century (32535) and Jay (32565); Pathways A and D
Century Site B	CHNWF (FQHC) / Satellite Clinic — Women's Health (FSU OB/GYN partnership), Behavioral Health, Psychiatry, MOUD, Case Management	501 Church Street, Century, FL 32535, Escambia County	Century (32535) and Jay (32565); Pathways A and D

Freeport Dental	PWMC (community-based dental practice) / Satellite Clinic — Full-scope adult and pediatric dental services	Freeport, FL 32439, Walton County	Walton County (full county), with referral access for Holmes and Washington Counties; Pathways A and B
Freeport Adult Primary Care	PWMC (NP-/physician-led primary care practice) / Satellite Clinic — Adult primary care, chronic-disease management, preventive screening, integrated behavioral-health screening	Freeport, FL 32439, Walton County	Walton County (full county), with referral access for Holmes and Washington Counties; Pathways A and B
Black Creek Behavioral Health	LCI (behavioral health center adding integrated primary care) / Satellite Clinic — Behavioral health therapy, psychiatry and medication management, substance use services including MAT/MOUD, integrated primary care screening, care coordination and benefits navigation	Black Creek area, Walton County, FL 32436	Walton County, with referral reach into Holmes and Washington Counties; Pathways A and B (RUCA verified before lease)

D.2 Rural Eligibility, Service Area, and Documented Unmet Need

D.2.1 Century Sites A and B — Escambia and Santa Rosa Counties

Both Century sites sit inside ZIP 32535 in the Town of Century, in the far northern tip of Escambia County near the Alabama line. The Town has about 1,713 residents, and in 2022 the Florida Department of Economic Opportunity formally designated Century a Rural Community based on its agricultural base, sub-25,000 population, and economic-distress indicators including high poverty and below-average income (NorthEscambia.com). Rural eligibility is established under Florida Statute §288.0656 (Pathway A) and HRSA RUCA non-urban criteria (Pathway D). Both sites fall within CHNWF's existing HRSA-approved service area, so parent-organization oversight is in place on day one.

The Century sites will also serve Jay, FL (ZIP 32565), in northern Santa Rosa County — about 8 miles east, a 10-minute drive on Highway 4. Jay is a small agricultural town of fewer than 800 residents, with a poverty rate above 26% and a median household income near $36,000, less than half of Santa Rosa County's median of about $91,922 — and a long history of economic distress despite the agricultural and oil-and-gas activity that anchors the community (Jay, Florida; Florida Demographics). Jay has no full-time primary care medical home, no OB/GYN, and no behavioral health or psychiatry provider native to the town. Today, residents of Jay and Century who need anything beyond an after-hours urgent-care visit must drive to Pensacola, Pace, or across the Alabama line. For an older patient with diabetes, a pregnant woman in her

first trimester, or a person in early recovery from opioid use disorder, a 50-minute drive is not a minor inconvenience — it is often the reason care does not happen.

The need in Century and Jay tracks rural Florida and rural America. Ninety-two percent of U.S. rural counties are primary care HPSAs, and HRSA projects only 68% of rural primary-care physician demand will be met by 2037 (Commonwealth Fund). Escambia and Santa Rosa Counties both contain HPSA-designated rural tracts. FQHCs reduce unnecessary ED use, lower preventable hospitalizations, and improve chronic-disease outcomes — and in rural areas an FQHC is often the difference between a usual source of care and none (County Health Rankings & Roadmaps; Commonwealth Fund).

D.2.2 Freeport Sites (Dental and Adult Primary Care) — Walton County, with Service Reach into Holmes and Washington

Both Freeport sites — the dental clinic and the adult primary care clinic — are in the City of Freeport (ZIP 32439) in Walton County and share the same rural eligibility. Walton County qualifies as an eligible rural area under Florida Statute §288.0656 (Pathway A) and appears on Florida Commerce's REDI eligible-counties list (Pathway B), with the City of Freeport named on the REDI eligible-communities list (Florida Department of State). Walton County is a HRSA-designated dental HPSA, as are nearly all rural counties in Northwest Florida (Florida Department of Health). The dental site's primary service area is all of Walton County, with documented reach into Holmes and Washington Counties; specialty care PWMC does not provide directly is referred within the NWFHC collaborative network.

Florida's dental access crisis is well documented. Florida leads the nation in residents living in dental HPSAs — more than seven million people, including most of the rural Panhandle (Floridians for Dental Access) — and 66 of 67 counties have a documented dental workforce shortage (Hatter). In 2021, roughly 120,000 Floridians visited an emergency department for a preventable dental condition (Floridians for Dental Access). For uninsured and Medicaid-enrolled patients in Walton County, the nearest free or sliding-scale dental option is the DeFuniak Springs DOH clinic, which serves primarily children and faces capacity constraints (Florida Department of Health in Walton County). A free, volunteer-supported adult dental clinic in Freeport closes a measurable gap.

The same access gap exists on the medical side. Walton County is a federally designated primary care HPSA, its uninsured rate is about 14.1%, and roughly 11.4% of residents live below the federal poverty level (Point Washington Medical Clinic, "About Us"). For an uninsured adult in Freeport with diabetes, hypertension, or an untreated behavioral-health condition, the nearest free or sliding-scale primary care is often a county or two away. PWMC has carried this load on a volunteer basis since 2017; the Freeport adult primary care site formalizes and expands it, pairing a usual source of primary care with the dental, behavioral-health, and social services already coordinated through PWMC and the NWFHC network.

D.2.3 Black Creek Behavioral Health Site — Walton County

The third leg of the Walton County need is behavioral health. The Black Creek area sits in rural Walton County (ZIP 32436), an eligible rural area under Florida Statute §288.0656 and the REDI pathway, with RUCA eligibility for the lease address verified before execution. Walton County is a federally designated mental health HPSA, and Florida ranks 43rd nationally for behavioral health workforce — the rural Panhandle

fares worse still. For a Black Creek resident living with depression, anxiety, or opioid use disorder, the nearest psychiatric or MAT provider is often a long drive and a weeks-long wait away. Lakeview Center already serves rural Walton County with prevention, crisis response, counseling, psychiatry, and addiction treatment; the Black Creek satellite gives that work a permanent local home and adds integrated primary care, so physical-health needs surfaced in a behavioral health visit are addressed rather than deferred.

D.3 Primary and Preventive Services by Site

All services below are delivered by appropriately licensed Florida providers within their Florida-authorized scope of practice (RFA Section 6.1), with formal referral relationships in place when each site opens. Positive screenings trigger documented referrals with tracked follow-up, as required by the RFA.

D.3.1 Century Site A — Adult Primary Care and Pediatric Care

Century Site A at 6021 Industrial Blvd will operate as a full-spectrum primary care clinic for adults and children. Adult services include annual wellness visits; acute and episodic care; chronic-disease management (diabetes, hypertension, COPD, CHF, and related conditions); USPSTF-aligned preventive screenings; ACIP immunizations; smoking cessation; and care coordination for complex patients. Pediatric services include Bright Futures / Florida CHCUP (EPSDT) well-child visits, childhood immunizations, developmental and behavioral screening (M-CHAT, ASQ, PHQ-9), acute care, school and sports physicals, and asthma action plans. Same-day sick slots are reserved daily so families need not choose between a missed school day and a 50-minute drive. Every adult primary care visit includes a brief behavioral-health screen (PHQ-2/9, GAD-7, AUDIT-C or NIDA Quick Screen) and a Hunger Vital Sign food-insecurity screen. Positive screens trigger a documented, closed-loop referral — to the integrated behavioral health and MOUD team at Century Site B, and to community resources (SNAP/WIC, food banks, faith-based pantries) for food insecurity. Telehealth inside EPIC is offered from day one for chronic-disease follow-up, behavioral health, lactation support, and after-hours nurse triage (Vyas et al.; Lobaina et al.).

D.3.2 Century Site B — Women's Health, Behavioral Health, Psychiatry/MOUD, and Case Management

Century Site B at 501 Church Street answers two of the most acute rural gaps in Northwest Florida — maternal care and behavioral health — through four integrated service lines under one roof:

- **Women's Health and GYN services,** delivered through the CHNWF–FSU College of Medicine OB/GYN residency partnership. Services include well-woman exams; cervical cancer screening (Pap/HPV per USPSTF); breast cancer screening referrals with closed-loop tracking; family planning (LARC, oral and emergency contraception, sterilization counseling); STI testing and treatment; menopause care; and prenatal initiation and shared prenatal care (Section D.4).
- **Behavioral Health Therapy,** delivered by LCSWs providing individual therapy, brief intervention, trauma-informed care, and evidence-based modalities (CBT, motivational interviewing, behavioral activation). Florida ranks 43rd nationally for behavioral health workforce, and the rural Panhandle fares worse; Century Site B meets that need locally rather than referring patients into a system without capacity to receive them.

- **Psychiatry and Medication Management, including substance use services and MOUD,** delivered by a psychiatric provider under CHNWF's established CORE program, which pairs medication for opioid use disorder with intensive case management. The site offers buprenorphine induction and maintenance, naltrexone, and overdose prevention (naloxone distribution and training), with case management for every MOUD patient.
- **Case Management.** Medical and social-service case managers support patients across all Century Site B service lines — referrals, transportation, prescription assistance, benefits navigation (Medicaid, Marketplace, SNAP/WIC), and post-hospital follow-up via ENS alerts. CHNWF's workflows are already in production at its other fourteen sites; Century adds capacity, not a new model.

D.3.3 Freeport Dental — Comprehensive Oral Health Services

The Freeport Dental site will provide full-scope adult and pediatric dental services through PWMC's volunteer model adapted for dental scope: comprehensive and limited oral evaluations; prophylaxis and periodontal scaling/root planing; restorative dentistry; endodontic and oral surgery where volunteer specialists are credentialed; extractions; removable prosthodontics; and pediatric sealants and fluoride varnish. Services PWMC does not provide directly are referred into PWMC's medical operations (primary care, pediatrics, GYN, behavioral health, social services) and through the NWFHC collaborative for specialty care. The site will use teledentistry and store-and-forward photography for specialist review so patients are not forced to drive to Pensacola or Panama City.

D.3.4 Freeport Adult Primary Care — Comprehensive Primary and Preventive Services

The Freeport Adult Primary Care site operates as a full-spectrum adult primary care clinic through PWMC's volunteer-physician model, led by Dr. Patsy Vargo, MD, and Dr. Hillary Glenn, DNP, APRN. Services include annual wellness visits; acute and episodic care; chronic-disease management (diabetes, hypertension, COPD, CHF); USPSTF-aligned preventive screenings; ACIP immunizations; smoking cessation; and care coordination. Every visit includes a brief behavioral-health screen (PHQ-2/9, GAD-7, AUDIT-C) and a Hunger Vital Sign screen; positive screens trigger a documented, closed-loop referral to PWMC's on-site mental wellness and dental programs and, through the NWFHC network, to CHNWF's integrated behavioral health and MOUD capacity. Telehealth is offered from day one (Vyas et al.; Lobaina et al.). Because PWMC's clinicians are volunteers, grant support is directed to startup costs, equipment, technology, lease, and care-coordination staff rather than clinician salaries (RFA Section 5.3).

D.3.5 Black Creek — Integrated Behavioral Health

The Black Creek site brings Lakeview Center's behavioral health expertise into rural Walton County, delivered by appropriately licensed Florida providers within scope (RFA Section 6.1). LCSWs and LMHCs provide individual therapy, trauma-informed care, and evidence-based modalities (CBT, motivational interviewing). A psychiatrist or psychiatric nurse practitioner provides medication management, with telepsychiatry from day one. Substance use services follow Lakeview's established model — screening and brief intervention, buprenorphine and naltrexone for MAT, naloxone distribution, and intensive case management for every MAT/MOUD patient — under 42 CFR Part 2.

Integrated primary care, delivered by Lakeview's LPNs, RNs, ARNPs, and physicians, covers basic primary care, chronic-disease screening and management (e.g., hypertension, diabetes), and preventive screening, so physical-health needs surfaced in a behavioral health visit are addressed the same day. Every patient is screened for behavioral health, substance use, and social drivers, and an embedded Benefits Eligibility Specialist assists with Medicaid enrollment. Positive screens trigger documented, closed-loop referrals, including warm hand-offs to PWMC for dental and to CHNWF or the NWFHC network. Telehealth is offered from day one (Vyas et al.; Lobaina et al.).

D.4 Maternal Health: First-Trimester Risk Assessment, OB Referral Pathway, and High-Risk Monitoring

Maternal care in rural Florida is in real trouble. A 2024 March of Dimes analysis found roughly 19% of Florida counties are maternity care deserts (WUSF Public Media); about 20.8% of Florida women receive inadequate prenatal care and 10.8% live more than thirty minutes from a birthing hospital. Late or absent prenatal care carries three times the low-birth-weight rate and five times the neonatal mortality (Florida Department of Health). Because Century Site B will care for pregnant patients, the partnership built an obstetric protocol around three required elements: first-trimester risk assessment, a documented OB referral pathway, and high-risk maternal monitoring.

First-trimester risk assessment.

Every pregnant patient identified at Century Site B enters a structured first-trimester risk-assessment workflow at the initial visit, aiming to complete the first OB encounter by the end of the first trimester. The ACOG-aligned prenatal intake bundle in EPIC includes validated screens for depression (PHQ-9), anxiety (GAD-7), intimate partner violence, substance use, and social drivers; full medical, surgical, obstetric, and family history; medication and teratogen review; immunization status; baseline vitals and BMI; the routine first-trimester ACOG laboratory panel; aneuploidy and cell-free DNA counseling; and a risk-stratification note flagging high-risk criteria (chronic hypertension, pregestational diabetes, prior preterm birth or preeclampsia, advanced maternal age, multiple gestation, BMI ≥40, substance use disorder, or significant mental health comorbidity).

OB referral pathway.

Century Site B's primary OB referral pathway runs through CHNWF's established partnership with the FSU College of Medicine OB/GYN residency program. Patients identified as pregnant at Century are scheduled with the CHNWF/FSU OB/GYN service for shared prenatal care, available at Century Site B (in person and via telehealth) and at the FSU/CHNWF women's health hub in Pensacola. The referral is initiated in EPIC the same day pregnancy is confirmed, with the care coordinator following the closed-loop protocol in Section D.6 (outreach within 72 hours and again at 14 days). For delivery, patients are referred to Baptist Health Care or Ascension Sacred Heart Pensacola — the region's Level IV Maternal facility with the only Level III NICU in Northwest Florida — both holding transition-of-care MOUs with CHNWF (Ascension). Freeport-area patients who become pregnant enter the same pathway through PWMC's Sacred Heart Emerald Coast and Ascension Sacred Heart Pensacola relationships.

High-risk maternal monitoring protocols.

Patients flagged high-risk, or who develop a high-risk indication, are co-managed by the FSU/CHNWF OB/GYN team and, where appropriate, by maternal-fetal medicine at HCA Florida West (Fort Walton Beach) or the Sacred Heart Regional Perinatal Center (Pensacola). Every high-risk patient is reviewed in a weekly OB huddle with the CHNWF/FSU OB team, the Century Site B behavioral health and case-management leads, and (for MOUD patients) the CORE

D.5 Staffing Plan

Staffing is the most common source of rural clinic startup delay, so the partnership built the recruitment and credentialing schedule to mitigate it, relying on each partner's existing infrastructure rather than starting cold. Each site is scoped against RFA Section 6.2: a Florida-licensed primary care provider (MD, DO, NP, or PA), supporting RN/LPN and MA staff, front-desk/registration, and shared care-coordination capacity. The Freeport dental site uses the same framework adapted for dental scope, and the Freeport adult primary care site uses the Section 6.2 framework with PWMC's volunteer physicians and nurse practitioners.

Role	Site	Recruitment / Posting	Credentialing	Patient Care Start
Program Director / Clinical Lead (≥25% FTE)	Both Century sites (CHNWF)	Named pre-award	Existing CHNWF credentials	Day 1 of subaward
Primary Care Provider (MD/DO/NP/PA)	Century Site A	Y1 Q1 soft posting pre-award	≤60 days post-offer	≤90 days post-award
OB/GYN (FSU residency program); Psychiatric provider; LCSW/LMHC	Century Site B	Pre-award through existing FSU and CHNWF channels	≤60 days post-offer	≤90 days post-award
RN/LPN, MA, Front Desk (×2 sites)	Century A & B	Y1 Q1	License verification + onboarding	Y1 Q2
Care Coordinator (shared) and Case Management staff	Century A & B	Y1 Q1	N/A (non-licensed)	Y1 Q2
PWMC Dental Program Director / Clinical Lead (≥25% FTE)	Freeport	Named pre-award	Existing PWMC credentials	Day 1 of subaward

Volunteer Dentists (panel)	Freeport	Y1 Q1 ongoing	PWMC volunteer pipeline (≤45 days each)	Y1 Q3 first volunteers; rolling thereafter
Dental Hygienist; Dental Assistant(s); Operations / Volunteer Coordinator	Freeport	Y1 Q1–Q2	License/registration verified	Y1 Q3–Q4
PWMC Primary Care Program Director / Clinical Lead (≥25% FTE)	Freeport (Primary Care)	Named pre-award	Existing PWMC credentials	Day 1 of subaward
Volunteer Physicians / NPs (panel); RN/LPN, MA, Front Desk	Freeport (Primary Care)	Y1 Q1 ongoing	PWMC volunteer pipeline; license verification	Y1 Q3 first volunteers; rolling thereafter
LCI Black Creek Program Director / Clinical Lead (≥25% FTE)	Black Creek	Named pre-award	Existing LCI credentials	Day 1 of subaward
Behavioral Health Therapist; Psychiatric provider (in-person + telepsychiatry); MAT/MOUD provider & SUD Case Manager; integrated primary care staff; Benefits Eligibility Specialist	Black Creek	Y1 Q1 (LCI internal pipeline + regional recruiting)	LCI provider enrollment; license verification (≤60 days)	Y1 Q2–Q3 (≤90 days post-award)

Each new clinical FTE is credentialed under the hiring partner's existing organizational enrollment (CHNWF Medicaid, MCOs, Medicare, and commercial; PWMC's Florida licensure plus dental commercial and Medicaid; LCI's Florida behavioral health licensure and Medicaid enrollment). Because all three partners already hold these contracts, a new site is added through a standard service-location update, not a new contract. Sixty days of buffer are built into the Section F schedule for any MCO requiring separate satellite credentialing. CVs for the named Program Directors / Clinical Leads, CEO, CMO, COO, CFO, PWMC co-founders, and the LCI President are referenced attachments and do not count toward the page limit.

D.6 Care Coordination Approach

A rural clinic only works if it can reliably move a patient from screening to follow-through. The Century, Freeport, and Black Creek sites use one care-coordination chassis, customized to local workflow. Each patient who screens positive for a referral-warranting condition — behavioral health, substance use, food insecurity, IPV, abnormal cancer screen, abnormal A1c or BP, positive pregnancy test, or dental abscess — is assigned a closed-loop referral in EPIC (CHNWF), PWMC's dental system (Freeport), or LCI's EHR (Black Creek). The care coordinator contacts the patient within 72 hours and again at 14 days, documents scheduling and attendance, and pulls the consultant note back into the record — the same workflow proven in CHNWF's CORE and homeless programs and LCI's case-management programs. A Black Creek patient with an uncontrolled medical condition is connected to PWMC or CHNWF primary care; a Freeport or Century patient needing intensive behavioral or substance-use treatment is referred to LCI with a warm hand-off.

Hospital admissions and ED visits for empaneled patients trigger Florida HIE Event Notification Service alerts in EPIC. The home-site care coordinator owns post-discharge follow-up: a call within 48 hours, an in-person or telehealth visit within seven days, medication reconciliation, and a transition-of-care visit where applicable. Specialty referrals not native to a single partner route through the NWFHC network and its partnerships with Baptist Health Care, Ascension Sacred Heart, HCA Florida West, North Walton Doctors Hospital, and Sacred Heart on the Emerald Coast.

D.7 Health Information Technology Integration and 90-Day EHR/HIE/ENS Go-Live

RFA Section 6.4 requires EHR/EMR, Florida HIE, and ENS connectivity within 90 days of award. The partnership meets it at all five Cohort 1 sites by leveraging existing enterprise contracts. CHNWF is transitioning to EPIC in late 2026; the two Century sites go live on EPIC, and any site opening during the brief pre-cutover overlap stands up on the predecessor system and migrates on the enterprise schedule. PWMC extends its practice-management systems to both Freeport sites — a dental system at the dental clinic and an EMR at the primary care clinic — as site-adds, with HIE/ENS via the Florida HIE. LCI extends its EHR to Black Creek as a site-add, with Florida HIE/ENS within the 90-day window and 42 CFR Part 2 access controls for substance use records.

Deployment at each site is a site-add to existing enterprise contracts, not a net-new stand-up. In Days 0–30, the EHR (or dental practice-management system at Freeport) is configured for site-specific schedules, billing, encounter forms, and templates, with user provisioning, role-based access controls, and HIPAA audit logging activated. In Days 0–60, the existing organizational interface to the Florida HIE and ENS is extended to each site, with ADT workflows so hospital admission, discharge, and transfer events trigger care-coordination tasks at the home site. In Days 0–90, business-class broadband with cellular failover and HD-telehealth bandwidth is deployed. All ePHI is encrypted at rest (AES-256) and in transit (TLS 1.2+). Each partner maintains a written HIPAA Privacy and Security program under 45 CFR Parts 160 and 164, with annual Security Risk Analyses and third-party vulnerability assessments, multifactor authentication, endpoint detection and response, and a documented incident-response and breach-notification plan aligned to 45 CFR §§ 164.400–414 and Chapter 501.171, Florida Statutes.

D.8 Cohort 1 Startup Timeline

All five Cohort 1 sites are scoped to be operational well within the Cohort 1 envelope (Budget Periods 1 and 2). Site-level operational targets are measured from the subaward execution date, projected August 1, 2026.

- **Century Site A and Century Site B (CHNWF).** Site preparation completed for care delivery; credentialing submitted to all CHNWF payers; Florida HIE/ENS connectivity live; and first patient seen — all within 90 days of subaward execution (target on or before October 30, 2026).
- **Freeport Dental (PWMC).** Site operational — including build-out of the dental operatories within the existing 4,750-square-foot PWMC facility (opened January 2024), equipment installation, volunteer credentialing activation, HIE/ENS connectivity, and first patient seen — within 9 months of subaward execution (target on or before May 1, 2027). The longer Freeport timeline reflects dental-specific build-out scope, not recruitment uncertainty, since PWMC's model is volunteer-based and its credentialing pipeline is already in place.
- **Freeport Adult Primary Care (PWMC).** Site operational — including fit-out of primary care exam rooms within the existing 4,750-square-foot PWMC facility, equipment installation, volunteer credentialing activation, HIE/ENS connectivity, and first patient seen — within 6 months of subaward execution (target on or before February 1, 2027). Because exam space needs less specialized infrastructure than dental operatories and PWMC already operates medical services in the building, this site opens ahead of the dental site.
- **Black Creek Behavioral Health (LCI).** Site operational — including fit-out of behavioral health and integrated primary care space in a leased Black Creek-area facility, equipment installation, clinician credentialing under LCI's existing enrollments, Florida HIE/ENS connectivity, and first patient seen — within 6 months of subaward execution (target on or before February 1, 2027). LCI's established workforce and existing rural Walton County operations shorten the ramp and lower recruitment risk. Site preparation will meet Florida Building Code healthcare-occupancy requirements, ADA accessibility (28 CFR Part 36 and ADAAG), ASHRAE 170 ventilation with MERV-13 filtration in clinical areas, and infection-control standards (OSHA 29 CFR 1910.1030 and CDC guidance). Floor plans, ADA attestation, HVAC and electrical-capacity descriptions, infection-control plan, Certificate of Occupancy documentation, and a licensed-contractor scope and estimate for minor renovations are submitted as referenced attachments. The full master timeline — credentialing windows, HIE/ENS go-live, build-out milestones, payer activation, and the cross-partner Quarterly Progress Report calendar — is provided in Section F.

D.9 Why These Sites, Why Now

Century and Jay residents have long been told their towns are too small or too remote for a full-spectrum medical home; the data say otherwise. Roughly 2,500 people across two ZIP codes have clear unmet need for primary care, pediatrics, women's health, behavioral health, and MOUD, and Walton County's crisis is current — preventable ED visits and adults who cannot work for lack of a usual source of care. PWMC has proven over nine years that a free, volunteer-supported clinic is sustainable, and Lakeview Center has served rural Walton County for decades. These five Cohort 1 sites are exactly the net-new rural access points the Rural Health Transformation Program was created to support, and the partnership is ready to open them on the timeline above.

Attachments

- **Physical Plant Readiness Report (Century Pediatric Site)**
- **Certificate of Occupancy**
- **Floor Plan / Site Diagram Documents**
    - **Century Pediatrics Floor Plan**
    - **Window Sketch**
    - **Building Permit Specifications**
    - **Building Permit Drawings**
- **ADA Compliance Statement**
- **Infection Control Policy**

Physical Plant Readiness Report
Century Pediatric Site
501 Church Street, Century, FL 32535
Escambia Community Clinics Inc. D/B/A Community Health Northwest Florida

Escambia Community Clinics Inc. D/B/A Community Health Northwest Florida confirms that the proposed Century Pediatric clinical site located at 501 Church Street, Century, FL 32535 is intended for outpatient clinical use and meets the physical plant readiness requirements necessary to support the proposed RHTP-funded activities.

Certificate of Occupancy / Occupancy Classification (Page 4)
Community Health Northwest Florida confirms that the site is suitable for outpatient clinical operations and is approved, or will be maintained, for the proposed healthcare-related occupancy and use. The organization will retain applicable building-authority documentation, Certificate of Occupancy, Certificate of Completion, permit record, or equivalent local documentation in the project file as available.

Floor Plan / Site Diagram (Page 6)
Community Health Northwest Florida confirms that the submitted floor plan accurately reflects the proposed clinical layout for the site. The floor plan identifies multiple exam rooms, lab space, injection room, lobby/waiting areas, front desk, office manager space, work room, break area, IT room, HVAC/mechanical areas, water heater/HVAC space, and restrooms. The layout provides sufficient clinical and support space for patient intake, examination, documentation, and routine outpatient operations.

ADA Compliance (Page 774, Attestation 805)
Community Health Northwest Florida confirms that the site is intended to operate in compliance with applicable Americans with Disabilities Act accessibility requirements and Florida Building Code accessibility standards. The site includes accessible patient entry, accessible routes to patient-care areas, accessible restroom access, and clinical space intended to accommodate patients, visitors, and staff with disabilities.

HVAC System and MERV Filtration (Page 519)
Community Health Northwest Florida confirms that the HVAC system serving the site is maintained for outpatient clinical use and uses MERV-13 filtration (not MERV-8). The organization will maintain HVAC filtration and ventilation appropriate for patient-care areas, including exam rooms and clinical support spaces, and will retain applicable HVAC service, maintenance, or vendor documentation in the project file.

Electrical System Capacity (Page 543)
Community Health Northwest Florida confirms that the site has electrical capacity sufficient to support routine outpatient clinical operations, including exam room equipment, lab or injection-room functions, computers, EHR access, networking/IT infrastructure, lighting, and administrative operations. Any required electrical modifications related to RHTP-funded equipment or infrastructure will be completed in accordance with applicable code requirements.

Infection Control (Page 807)
Community Health Northwest Florida confirms that the site will follow organizational infection prevention and control policies for outpatient clinical care. The site will maintain procedures for routine cleaning and disinfection of exam rooms, lab/injection areas, patient-care surfaces, and shared clinical equipment. Sharps containers, regulated medical waste procedures, PPE storage, hand hygiene practices, and bloodborne pathogen precautions will be maintained in accordance with applicable clinical, OSHA, and organizational requirements.

Minor Renovations / Florida Building Code Compliance (Page 10)
Community Health Northwest Florida confirms that any minor renovations, equipment installation, IT infrastructure work, electrical modifications, HVAC modifications, plumbing modifications, or other site-preparation activities funded through RHTP will be completed in accordance with applicable Florida Building Code, local permitting, inspection, and contractor-licensing requirements. If minor renovation work is required, the organization will retain the scope of work, contractor estimate, permit documentation, and code compliance documentation in the project file.

By signing below, the authorized representative confirms that, to the best of the organization's knowledge, the Century Pediatric site meets the physical plant readiness requirements described above and will be maintained in compliance with applicable operational, accessibility, building, safety, and infection-control requirements.

Signature: _____

Printed Name: Chandra Smiley

Title: Chief Executive Officer

Organization: Escambia Community Clinics Inc. D/B/A Community Health Northwest Florida

Date: 6/16/2026

Floor Plan / Site Diagram Documents

Century Pediatrics Floor Plan

STATE OF FLORIDA
DEPARTMENT OF HEALTH
Operating Permit

17-BID-8121859

17-64-1773845

Biomedical Waste - Medical Doctor

Issued To: Community Health Northwest Florida - Century Adult and Family Care
6021 Industrial Boulevard
Centurv. FL 32535

Mail To: Attention: Denielle Satterfield
Community Health Northwest Florida
2315 W Jackson Street
Pensacola, FL 32505

Owner: Community Health Northwest Florida

County: **Escambia**
Amount Paid: $160.00
Date Paid: 09/26/2025
Issued Date: 10/01/2025
Expires On: 09/30/2026

Issued By:
Department of Health in Escambia County

(850) 595-6700

Original Customer: Community Health Northwest Florida - Century Adult and Family Care (NON-TRANS

DISPLAY CERTIFICATE IN A CONSPICUOUS PLACE

STATE OF FLORIDA
DEPARTMENT OF HEALTH
Operating Permit

17-BID-8121859

17-64-1773845

Biomedical Waste - Medical Doctor

Issued To: Community Health Northwest Florida - Century Adult and Family Care
6021 Industrial Boulevard
Centurv. FL 32535

Mail To: Attention: Denielle Satterfield
Community Health Northwest Florida
2315 W Jackson Street
Pensacola, FL 32505

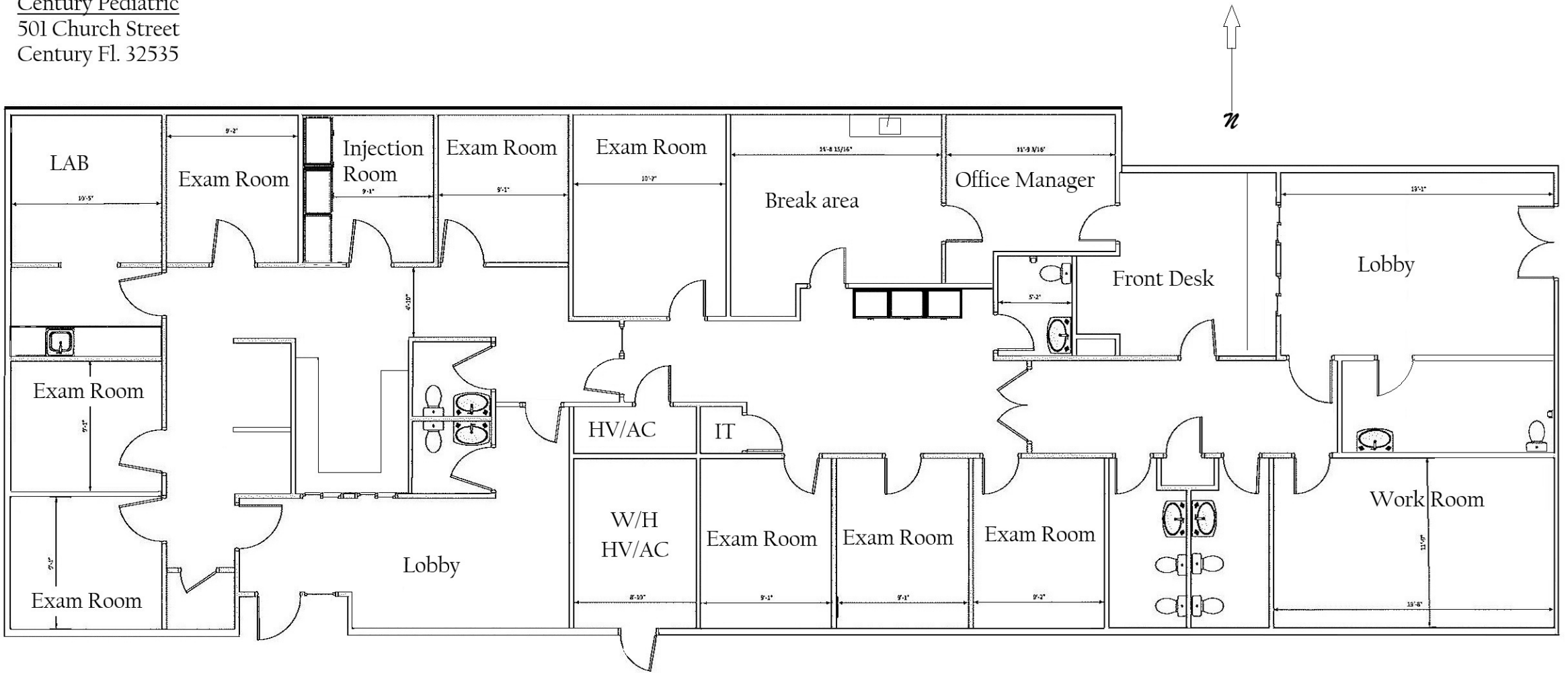
Owner: Community Health Northwest Florida

County: **Escambia**
Amount Paid: $160.00
Date Paid: 09/26/2025
Issued Date: 10/01/2025
Expires On: 09/30/2026

Issued By:
Department of Health in Escambia County

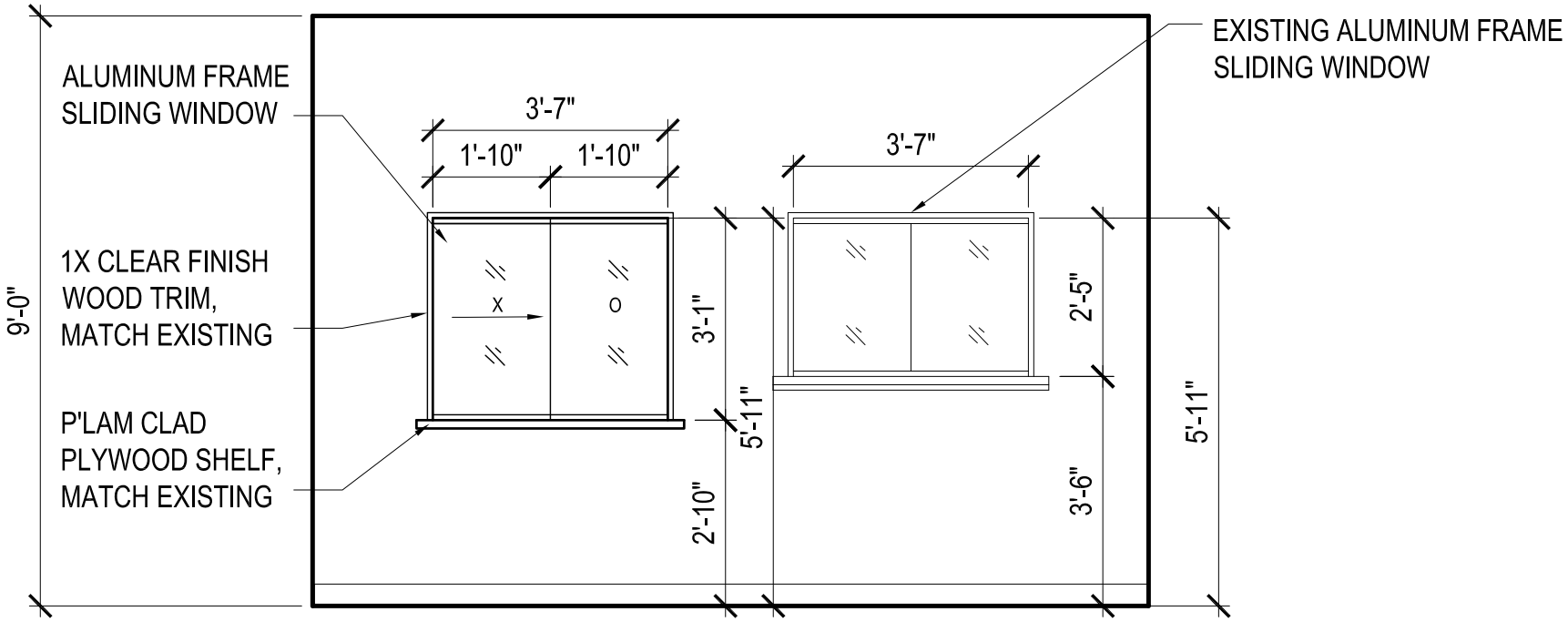
(850) 595-6700

Century Pediatric
501 Church Street
Century Fl. 32535



Floor Plan / Site Diagram Documents

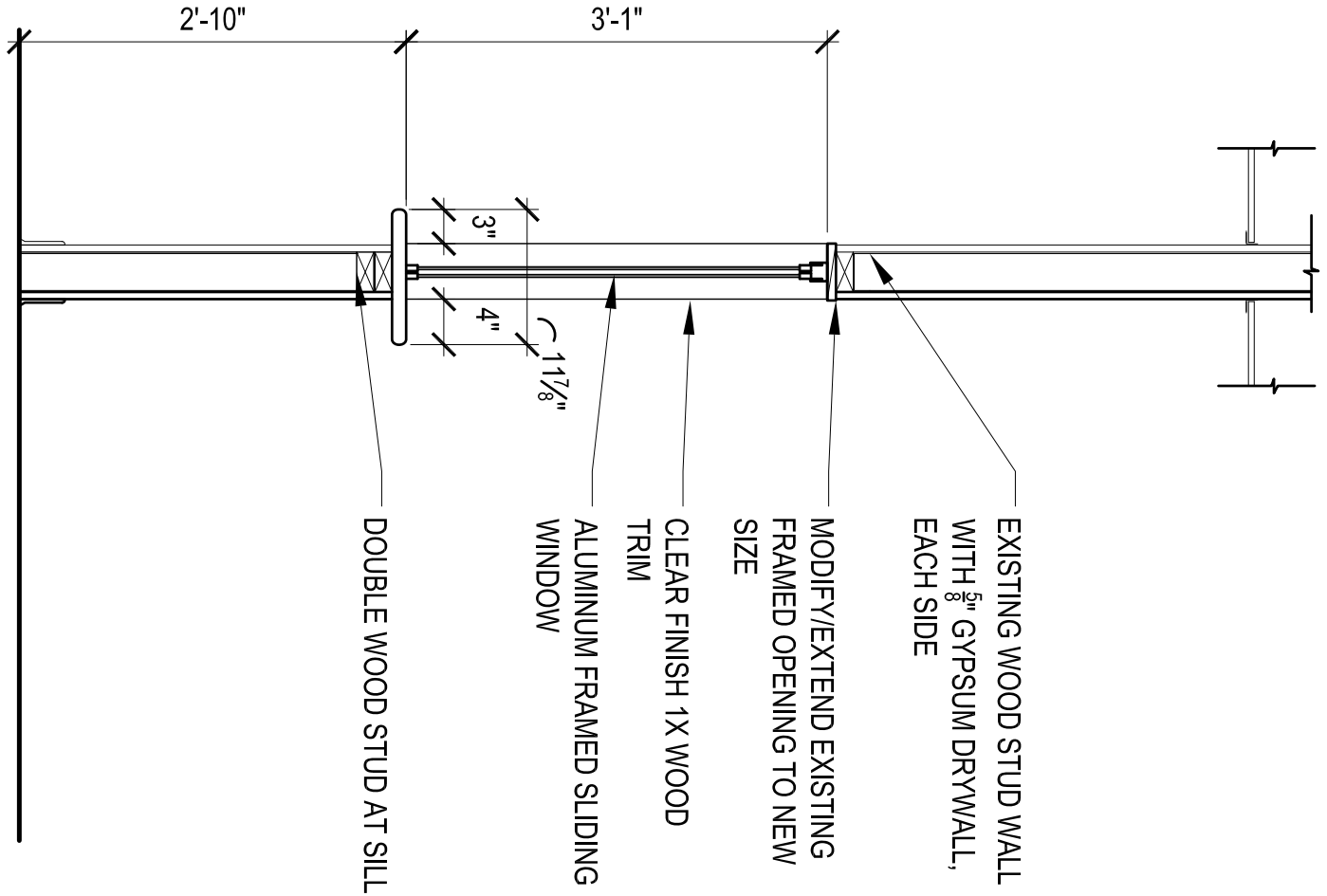
Window Sketch



2 / A102 ELEVATION

SCALE: 3/8" = 1'-0"

Window Sketch



Window Sketch

Floor Plan / Site Diagram Documents

Building Permit Specifications

CALDWELL
ASSOCIATES | ARCHITECTS

Lakeview Center
BAPTIST HEALTH CARE

community health
northwest florida

COMMUNITY HEALTH NWFL (ECC) / LAKEVIEW CENTER RENOVATION & ADDITION CENTURY, FLORIDA

SPECIFICATIONS

BUILDING PERMIT SET

CAA Project No. 6617
25 APRIL 2018

116 North Tarragona Street, Pensacola, FL 32502 (850) 432 9500 caldwell-assoc.com

TABLE OF CONTENTS - TECHNICAL SPECIFICATIONS DATE

DIVISION 00 - PROCUREMENT AND CONTRACTING REQUIREMENTS

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10 16 00	TOILET COMPARTMENTS	4/25/2018
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22 05 53	IDENTIFICATION FOR PLUMBING AND PIPING EQUIPMENT	4/25/2018
22 07 19	PLUMBING PIPING INSULATION	4/25/2018
22 11 00	FACILITY WATER DISTRIBUTION	4/25/2018
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23 05 93	TESTING, ADJUSTING AND BALANCING FOR HVAC	4/25/2018
23 07 13	DUCTWORK INSULATION	4/25/2018
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23 07 19	HVAC PIPING INSULATION	4/25/2018
23 23 00	REFRIGERANT PIPING	4/25/2018
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23 33 00	AIR DUCT ACCESSORIES	4/25/2018
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23 81 25	OUTSIDE AIR UNITS (SPLIT SYSTEM)	4/25/2018
23 81 29	VARIABLE REFRIGERANT FLOW SYSTEMS	4/25/2018
DI\ 26 00 00	ELECTRICAL GENERAL REQUIREMENTS	4/25/2018
26 05 19	LOW-VOLT. ELECTRICAL POWER CONDUCTORS, CABLES, AND DEVICES	4/25/2018
26 05 30	RACEWAYS AND BOXES FOR ELECTRICAL SYSTEMS	4/25/2018
26 27 13	SERVICE AND DISTRIBUTION	4/25/2018
26 32 13	GENERATOR SYSTEMS	4/25/2018
26 32 23	AUTOMATIC TRANSFER SWITCHES	4/25/2018
26 43 13	SURGE PROTECTION FOR LOW-VOLTAGE ELECTRICAL POWER CIRCUITS	4/25/2018
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26 51 19	LED INTERIOR LIGHTING	4/25/2018
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DI\ 31 00 00	EARTHWORK	4/25/2018
31 10 00	CLEARING AND GRUBBING	4/25/2018
31 31 16	TERMITE PEST CONTROL	4/25/2018

DI\	32 11 23	GRADED AGGREGATE BASE	4/25/2018
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	32 17 23	PAVEMENT MARKINGS	4/25/2018
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END OF SECTION 00 00 00

DOCUMENT 00 11 16 - INVITATION TO BID

PART 1 - GENERAL

1.1 PROJECT INFORMATION

A. Notice to Bidders: Prequalified bidders are invited to submit bids for Project as described in this Document according to the Instructions to Bidders.

A. Project Identification: Lakeview Center / Escambia County Clinic Renovation and Addition; CAA Project No.: 6617.

1. Project Location: 6021 Industrial Blvd, Century, FL 32536.

B. Owner: Lakeview Center, Incorporated.

1. Owner's Representative: Jim Richardson, (850) 469-3658, Jim.Richardson@bhcpns.org

C. Architect: Caldwell Associates Architects, Inc.

1. Architect's Representative: Michelle Burch, (850) 439-6578, michelle@caldwell-assoc.com

D. Project Description:

1. Renovation and expansion of the existing 4,777 SF (Square Foot) medical facility, to provide a new lobby with covered drop-off entrance, additional exam rooms, a dental suite, and related support spaces. Supporting sitework consisting of new parking areas, drives, landscaping, new storage building, relocated existing gazebo, and existing facility service extensions and reconfigurations will also be provided.

a. Renovation: Approximately 1,819 SF of the existing building structure shall be demolished, to facilitate the expansion. The remaining portion is to receive select interior finish upgrades and window replacement, as indicated on the drawings. Current building functions, including the multipurpose room, methadone treatment room, break room, restrooms, janitor’s closet and communications closet, shall remain operational in place during construction, and must be protected during all phases of construction.

1) Provisions to maintain functionality of existing building services including water, sewer, power and telecommunications shall be included in the Work.
2) Provisions to maintain personal safety, dust and weather protection shall be included in the Work.

b. Expansion: Approximately 4,270 SF of new building structure shall be constructed to provide additional area for the expanded building program. In addition, a 600 SF will be constructed. The new construction is to be wood-framed; similar to the existing.

1) A portion of the existing floor slab will be maintained for re-use in the area of new construction. Cutting and patching of the existing slab to install new under-slab utilities will be required.
2) A new 600 SF covered main entrance drop-off area shall be constructed, as indicated on the drawings.
3) A new 114 SF storage building with screened enclosure for a new emergency generator installation will also be constructed, adjacent to the expanded facility.

E. Construction Contract: Bids will be received for the following Work:

1. General Contract (all trades).

1.2 BID SUBMITTAL AND OPENING

A. Owner will receive sealed bids until the bid time and date at the location indicated below. Owner will consider bids prepared in compliance with the Instructions to Bidders issued by Owner, and delivered as follows:

1. Bid Date: 15 May 2018.
2. Bid Time: 2:00 p.m., local time.
3. Location: Caldwell Associates Architects, Inc., 116 N Tarragona Street, Pensacola, FL 32502.

B. Bids will be thereafter privately opened. Bid results or bid tabulation will not be made available for distribution.

C. Bids may be submitted electronically via e-mail only and will be accepted with a Time Stamp to verify they were sent prior to the 2:00 pm Deadline.

1.3 PREBID CONFERENCE

A. A prebid conference for all bidders will be held at 6021 Industrial Blvd, Century, FL (Project location) on 1 May 2018 at 10:00 AM, local time. Prospective bidders are requested to attend. Prospective sub-contractors are welcome.

1.4 DOCUMENTS

A. Bid Documents, bidder inquiries, and addendum will be provided on Architect's project management web site. Online access will be provided to prime bidders only.

1.5 TIME OF COMPLETION AND LIQUIDATED DAMAGES

A. Bidders shall begin the Work on receipt of the Notice to Proceed and shall complete the Work within the Contract Time.

B. Work is subject to liquidated damages. Liquidated damages in the amount of $1,500.00 per diem will be applied for each day after breach of established date of Substantial Completion.

1.6 BIDDER'S QUALIFICATIONS

A. Bidders must be prequalified by Owner.

B. Bidders must be properly licensed under the laws governing their respective trades and be able to obtain insurance and bonds required for the Work. Insurance in a form acceptable to Owner will be required of the successful Bidder.

C. A Performance and Payment Bond will not be required.

D. Contractor shall purchase Builders Risk Insurance for the Project.

END OF DOCUMENT 00 11 16

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SECTION 00 21 13 – INSTRUCTIONS TO BIDDERS

PART 1 –

1.1 EXPLANATION TO BIDDER

A. Any explanation desired by bidders regarding the meaning or interpretation of the drawings and specifications must be requested in writing and with sufficient time allowed for a reply to reach them before the submission of their bids. Oral explanations or instructions given before the award of the contract will not be binding. Any interpretation made will be in the form of an addendum to the specifications or drawings and will be furnished to all bidders, and its receipt by the bidder shall be acknowledged.

1.2 CONDITIONS AT SITE OF WORK

A. Bidders should visit the site to ascertain pertinent local conditions readily determined by inspection and inquiry, such as the location, and general character of the site, labor conditions, the character and extent of existing work within or adjacent thereto, and any other work being performed thereon.

1.3 PREPARATION OF BIDS

A. Bids shall be submitted on the forms furnished or copies thereof, and must be manually signed. If erasures or other changes appear on the forms, each such erasure or change must be initialed by the person signing the bid.

B. The form of bid will provide for quotation of a price, or prices, for one or more items which may be lump sum bids, alternate prices, scheduled items resulting in a bid on a unit of construction or a combination thereof. Where required on the bid form, bidders must quote on all items and they are warned that failure to do so may disqualify the bid. When quotations on all items are not required, bidders should insert the words "no bid" in the space provided for any item on which no quotation is made.

1.4 SUBMISSION OF BIDS

A. Bids must be submitted as directed in the Invitation to Bid.

1.5 RECEIPT AND OPENING OF BIDS

A. Bids shall be submitted prior to the time fixed in the Invitation to Bid. Bids received after the time so fixed are late bids and will be rejected.

B. No responsibility will attach to any employee of the Owner for the premature opening of, or the failure to open a bid not properly addressed and identified.

1.6 WITHDRAWAL OF BIDS

A. Bids may be withdrawn on written or telegraphic request received from bidders prior to the time fixed foropening. Negligence on the part of the bidder in preparing the bid confers no right for the withdrawal of the bid after it has been opened.

1.7 BIDDERS INTERESTED IN MORE THAN ONE BID

A. If more than one bid is offered by any one party, by or in the name of his or their clerk, partner, or other person, all such bids will be rejected. A party who has quoted prices to a bidder is not thereby disqualified from quoting prices to other bidders or from submitting a bid directly for the work.

1.8 AWARD OF CONTRACT

A. The Contract will be awarded as soon as practicable to the lowest qualified bidder, price and other factors considered, provided his bid is reasonable and it is to the interest of the Owner to accept it.

B. The Owner reserves the right to waive any informality in bids received when such waiver is in the interest of the Owner. In case of error in the extension of prices, the unit price will govern. The Owner further reserves the right to accept or reject any or all items of any bid, unless the bidder qualifies such bid by specific limitations; also to make an award to the bidder whose aggregate bid on any combination of bid items is low.

1.9 TERMINATION FOR CONVENIENCE

A. A contract may be terminated in whole or in part by the Owner at any time and for any reason in accordance with this clause whenever the Owner shall determine that such termination is in the best interest of the Owner.

B. Any such termination shall be effected by the delivery to the contractor at least five (5) working days before the effective date of a Notice of Termination specifying the extent to which performance shall be terminated and the date upon which termination becomes effective. An equitable adjustment in the contract price shall be made for the completed service, but no amount shall be allowed for anticipated profit on unperformed services.

1.10 REJECTION OF BIDS

A. The Owner reserves the right to reject any and all bids when such rejection is in the interest of the Owner; to reject the bid of a bidder who has previously failed to perform properly or complete on time contracts of a similar nature; and to reject the bid of a bidder who is not, in the opinion of the Owner, in a position to perform the contract.

END OF SECTION 00 21 13

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DOCUMENT 00 25 13 - PREBID MEETINGS

PART 1 -

1.1 PREBID MEETING

A. Architect will conduct a Prebid meeting as indicated below:

1. Meeting Date: Tuesday, 1 May 2018.
2. Meeting Time: 10:00 AM, local time.

B. Location: 6021 Industrial Blvd, Century, FL 32536.

C. Attendance:

1. Prime Bidders: Attendance at Prebid meeting is required.
2. Subcontractors: Attendance at Prebid meeting is recommended.

D. Agenda: Prebid meeting agenda will include review of topics that may affect proper preparation and submittal of bids, including the following:

1. Procurement and Contracting Requirements:

a. Instructions to Bidders.
b. Bonding.
c. Insurance.
d. Bid Security.
e. Bid Form and Attachments.
f. Bid Submittal Checklist.
g. Notice of Award.

2. Communication during Bidding Period:

a. Obtaining documents.
b. Access to Project Web site.
c. Bidder Inquiries .
d. Bidder's Substitution Request/Prior Approval Request.
e. Addenda.

3. Construction Documents:

a. Scopes of Work.
b. Temporary Facilities.
c. Use of Site.
d. Work Restrictions.
e. Allowances, and Unit Prices.
f. Substitutions following Award.

4. Separate Contracts:

    a. Work by Owner.
    b. Work of Other Contracts.

5. Schedule:

    a. Project Schedule.
    b. Contract Time.
    c. Liquidated Damages.
    d. Other Bidder Questions.

6. Site/facility visit or walkthrough.

END OF DOCUMENT 00 25 13

DOCUMENT 00 41 13 - BID FORM - STIPULATED SUM (SINGLE-PRIME CONTRACT)

PART 1 - GENERAL

1.1 BID INFORMATION

A. Bidder: _____.

B. Project Name: Lakeview Center / Escambia County Clinic Renovation and Addition.

C. Project Location: 6021 Industrial Blvd, Century, FL 32536.

D. Owner: Lakeview Center, Incorporated.

E. Architect: Caldwell Associates Architects, Inc.

F. Architect Project Number: 6617.

1.2 CERTIFICATIONS AND BASE BID

A. Base Bid, Single-Prime (All Trades) Contract: The undersigned Bidder, having carefully examined the Procurement and Contracting Requirements, Conditions of the Contract, Drawings, Specifications, and all subsequent Addenda, as prepared by Caldwell Associates Architects, Inc. and Architect's consultants, having visited the site, and being familiar with all conditions and requirements of the Work, hereby agrees to furnish all material, labor, equipment and services, including all scheduled Allowances identified in Section 01 21 00 “Allowances” of the Project Specifications, necessary to complete the construction of the above-named project, according to the requirements of the Procurement and Contracting Documents, for the stipulated sum of:

1. _____ Dollars ($_____).

1.3 TIME OF COMPLETION

A. The undersigned Bidder proposes and agrees hereby to commence the Work of the Contract Documents on a date specified in a written Notice to Proceed to be issued by Architect, and shall fully complete the Work within 270 calendar days.

B. The proposed Construction Schedule is as follows:

1.	Construction Start:	06/04/18	
2.	Substantial Completion:	11/02/18	(151 days)
3.	Final Completion:	11/30/18	(27 days)
4.	Total Construction Time:		(178 days)

1.4 ACKNOWLEDGEMENT OF ADDENDA

A. The undersigned Bidder acknowledges receipt of and use of the following Addenda in the preparation of this Bid:

1. Addendum No. A, dated _____.
2. Addendum No. B, dated _____.
3. Addendum No. C, dated _____.

1.5 BID SUPPLEMENTS

A. The following supplements are a part of this Bid Form and are attached hereto.

1. Proposed Schedule of Values.
2. Proposed Subcontractor's List.

1.6 CONTRACTOR'S LICENSE

A. The undersigned further states that it is a duly licensed contractor, for the type of work proposed, in the State of Florida, and that all fees, permits, etc., pursuant to submitting this proposal have been paid in full.

1.7 SUBMISSION OF BID

A. Respectfully submitted this ____ day of _____, 2018.

B. Submitted By:_____(Name of bidding firm or corporation).

C. Authorized Signature:_____(Handwritten signature).

D. Signed By:_____(Type or print name).

E. Title:_____(Owner/Partner/President/Vice President).

F. Witness By:_____(Handwritten signature).

G. Attest:_____(Handwritten signature).

H. By:_____(Type or print name).

I. Title:_____(Corporate Secretary or Assistant Secretary).

J. Street Address:_____.

K. City, State, Zip:_____.

L. Phone:_____.

M. License No.:_____.

N. Federal ID No.:_____(Affix Corporate Seal Here).

END OF DOCUMENT 00 41 13

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DOCUMENT 00 43 73 - PROPOSED SCHEDULE OF VALUES FORM

PART 1 -

1.1 BID FORM SUPPLEMENT

A. A completed Proposed Schedule of Values form is required to be attached to the Bid Form.

1.2 PROPOSED SCHEDULE OF VALUES FORM

A. Proposed Schedule of Values Form: Provide a breakdown of the bid amount, including alternates, in enough detail to facilitate continued evaluation of bid. Coordinate with the Project Manual table of contents. Provide multiple line items for principal material and subcontract amounts in excess of five percent of the Contract Sum.

B. Arrange schedule of values consistent with format of AIA Document G703.

1. Copies of AIA standard forms may be obtained from the American Institute of Architects; http://www.aia.org/contractdocs/purchase/index.htm; docspurchases@aia.org; (800) 942-7732.

END OF DOCUMENT 00 43 73

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DOCUMENT 00 43 93 - BID SUBMITTAL CHECKLIST

PART 1 -

1.1 BID INFORMATION

A. Bidder: _____.

B. Project Name: Lakeview Center / Escambia County Clinic Renovation and Addition.

C. Project Location: 6021 Industrial Blvd, Century, FL 32536.

D. Owner: Lakeview Center, Incorporated.

E. Architect: Caldwell Associates Architects, Inc.

F. Architect Project Number: 6617.

1.2 BIDDER'S CHECKLIST

A. In an effort to assist the Bidder in properly completing all documentation required, the following checklist is provided for the Bidder's convenience. The Bidder is solely responsible for verifying compliance with bid submittal requirements.

B. Attach this completed checklist to the outside of the Submittal envelope.

1. Used the Bid Form provided in the Project Manual.
2. Prepared the Bid Form as required by the Instructions to Bidders.
3. Indicated on the Bid Form the Addenda received.
4. Attached to the Bid Form: Proposed Schedule of Values Form.
5. Bid envelope shows name and address of the Bidder.
6. Bid envelope shows name of Project being bid.
7. Verified that the Bidder can provide Certificates of Insurance in the amounts indicated.

END OF DOCUMENT 00 43 93

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DOCUMENT 00 51 00 - NOTICE OF AWARD

1.1 BID INFORMATION

A. Bidder: _____

B. Bidder's Address: _____

C. Prime Contract: _____

D. Project Name: _____

E. Project Location: 6021 Industrial Blvd, Century, FL 32536.

F. Owner: Lakeview Center, Incorporated.

G. Architect: Caldwell Associates Architects, Inc.

H. Architect Project Number: 6617

1.2 NOTICE OF AWARD OF CONTRACT

A. Notice: The above Bidder is hereby notified that their bid, dated _____ for the above Contract has been considered and the Bidder is hereby awarded a contract for the renovation and expansion of the existing 4,777 Square Foot medical facility

B. Contract Sum: The Contract Sum is _____ dollars ($_____).

1.3 EXECUTION OF CONTRACT

A. Contract Documents: Copies of the Contract Documents will be made available to the Bidder immediately. The Bidder must comply with the following conditions precedent within 10 days of the above date of issuance of the Notice:

1. Deliver to Owner three sets of fully executed copies of the Contract Documents.
2. Deliver with the executed Contract Documents Bonds and Certificates of Insurance required by the Contract Documents.

B. Compliance: Failure to comply with conditions of this Notice within the time specified will entitle Owner to consider the Bidder in default, annul this Notice, and declare the Bidder's Bid security forfeited.

1. Within 10 days after the Bidder complies with the conditions of this Notice, Owner will return to the Bidder one fully executed copy of the Contract Documents.

1.4 NOTIFICATION

A. This Notice is issued by:

1. Owner:_____

2. Authorized Signature:

_____

3. Signed By: _____

4. Title: _____

END OF DOCUMENT 00 51 00

SECTION 01 01 00 – SUMMARY OF WORK

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

1. Project Information.
2. Work covered by Contract Documents.
3. Access to Site.
4. Work Restrictions.
5. Specification and Drawing Conventions.

B. Related Requirements:

1. Section 01 50 00 "Temporary Facilities and Controls" for limitations and procedures governing temporary use of Owner's facilities, and protection of the existing facility during construction.

1.3 PROJECT INFORMATION

A. Project Identification: Lakeview Center / Escambia County Clinic Renovation and Addition; CAA Project No.: 6617.

1. Project Location: 6021 Industrial Blvd, Century, FL 32536.

B. Owner: Lakeview Center, Incorporated.

1. Owner's Representative: Jim Richardson.

C. Architect: Caldwell Associates Architects, Inc.

1. Architect's Representative: Michelle Burch.

1.4 WORK COVERED BY CONTRACT DOCUMENTS

A. The Work of Project is defined by the Contract Documents and consists of the following:

1. Renovation and expansion of the existing 4,777 SF (Square Foot) medical facility, to provide a new lobby with covered drop-off entrance, additional exam rooms, a dental suite, and related support spaces. Supporting sitework consisting of new parking areas, drives, landscaping, new storage building, relocated existing gazebo, and existing facility service extensions and reconfigurations will also be provided.

    a. Renovation: Approximately 1,819 SF of the existing building structure shall be demolished, to facilitate the expansion. The remaining portion is to receive select interior finish upgrades and window replacement, as indicated on the drawings. Current building functions, including the multipurpose room, methadone treatment room, break room, restrooms, janitor's closet and communications closet, shall remain operational in place during construction, and must be protected during all phases of construction.

        1) Provisions to maintain functionality of existing building services including water, sewer, power and telecommunications shall be included in the Work.
        2) Provisions to maintain personal safety, dust and weather protection shall be included in the Work.

    b. Expansion: Approximately 4,270 SF of new building structure shall be constructed to provide additional area for the expanded building program. In addition, a 600 SF will be constructed. The new construction is to be wood-framed; similar to the existing.

        1) A portion of the existing floor slab will be maintained for re-use in the area of new construction. Cutting and patching of the existing slab to install new under-slab utilities will be required.
        2) A new 600 SF covered main entrance drop-off area shall be constructed, as indicated on the drawings.
        3) A new 114 SF storage building with screened enclosure for a new emergency generator installation will also be constructed, adjacent to the expanded facility.

2. Construction Type: Florida Building Code: Type V-B Construction; Mixed Use, Separated (Business Group B and Assembly Group A3).

1.5 ACCESS TO SITE

A. Use of Site: Limit use of Project site to work in areas defined by the site plan. Do not disturb portions of Project site beyond areas in which the Work is indicated.

1. Maintain access to existing building entry points that will remain in service during construction. Provide temporary walkways, with safety protection from adjacent new construction, where required. Do not close or obstruct walkways, corridors, or other access components of the existing occupied facility.
2. Notify Owner not less than 72 hours in advance of activities that will affect Owner's operations.

1.6 WORK RESTRICTIONS

A. Work Restrictions, General: Comply with restrictions on construction operations.

1. Comply with limitations on use of public streets and with other requirements of authorities having jurisdiction.

B. Existing Utility Interruptions: Do not interrupt utilities serving facilities occupied by Owner or others unless permitted under the following conditions and then only after providing temporary utility services according to requirements indicated:

1. Notify Owner not less than two days in advance of proposed utility interruptions.
2. Obtain Owner's written permission before proceeding with utility interruptions.

C. Noise, Vibration, and Odors: Coordinate operations that may result in high levels of noise and vibration, odors, or other disruption to adjacent occupied areas of the facility with Owner.

1. Notify Owner not less than two days in advance of proposed disruptive operations.
2. Obtain Owner's written permission before proceeding with disruptive operations.

B. Nonsmoking Building: Smoking is not permitted within the building or within 100 feet of entrances, operable windows, or outdoor-air intakes.

1.7 SPECIFICATION AND DRAWING CONVENTIONS

A. Specification Content: The Specifications use certain conventions for the style of language and the intended meaning of certain terms, words, and phrases when used in particular situations. These conventions are as follows:

1. Imperative mood and streamlined language are generally used in the Specifications. The words "shall," "shall be," or "shall comply with," depending on the context, are implied where a colon (:) is used within a sentence or phrase.
2. Specification requirements are to be performed by Contractor unless specifically stated otherwise.

B. Division 01 General Requirements: Requirements of Sections in Division 01 apply to the Work of all Sections in the Specifications.

C. Drawing Coordination: Requirements for materials and products identified on Drawings are described in detail in the Specifications. One or more of the following are used on Drawings to identify materials and products:

1. Terminology: Materials and products are identified by the typical generic terms used in the individual Specifications Sections.
2. Abbreviations: Materials and products are identified by abbreviations published as part of the U.S. National CAD Standard.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 01 01 00

SECTION 01 21 00 - ALLOWANCES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section includes administrative and procedural requirements governing allowances.

B. Types of allowances include the following:

1. Lump-sum allowances.

1.3 SELECTION AND PURCHASE

A. At the earliest practical date after award of the Contract, advise Architect of the date when final selection, or purchase and delivery, of each product or system described by an allowance must be completed by the Owner to avoid delaying the Work.

B. At Architect's request, obtain proposals for each allowance for use in making final selections. Include recommendations that are relevant to performing the Work.

C. Purchase products and systems selected by Architect from the designated supplier.

1.4 ACTION SUBMITTALS

A. Submit proposals for purchase of products or systems included in allowances in the form specified for Change Orders.

1.5 INFORMATIONAL SUBMITTALS

A. Submit invoices or delivery slips to show actual quantities of materials delivered to the site for use in fulfillment of each allowance.

B. Submit time sheets and other documentation to show labor time and cost for installation of allowance items that include installation as part of the allowance.

C. Coordinate and process submittals for allowance items in same manner as for other portions of the Work.

1.6 LUMP-SUM ALLOWANCES

A. Allowance shall include cost to Contractor of specific products and materials ordered by Owner or selected by Architect under allowance and shall include taxes, freight, and delivery to Project site, as applicable.

B. Unless otherwise indicated, Contractor's costs for receiving and handling at Project site, labor, installation, overhead and profit, and similar costs related to products and materials ordered by Owner or selected by Architect under allowance shall be included as part of the Contract Sum and not part of the allowance.

1.7 ADJUSTMENT OF ALLOWANCES

A. Allowance Adjustment: To adjust allowance amounts, prepare a Change Order proposal based on the difference between purchase amount and the allowance, multiplied by final measurement of work-in-place where applicable. If applicable, include reasonable allowances for cutting losses, tolerances, mixing wastes, normal product imperfections, and similar margins.

1. Include installation costs in purchase amount only where indicated as part of the allowance.
2. If requested, prepare explanation and documentation to substantiate distribution of overhead costs and other markups.
3. Submit substantiation of a change in scope of Work, if any, claimed in Change Orders related to unit-cost allowances.
4. Owner reserves the right to establish the quantity of work-in-place by independent quantity survey, measure, or count.

B. Submit claims for increased costs because of a change in scope or nature of the allowance described in the Contract Documents, whether for the purchase order amount or Contractor's handling, labor, installation, overhead, and profit.

1. Do not include Contractor's or subcontractor's indirect expense in the Change Order cost amount unless it is clearly shown that the nature or extent of Work has changed from what could have been foreseen from information in the Contract Documents.
2. No change to Contractor's indirect expense is permitted for selection of higher- or lower-priced materials or systems of the same scope and nature as originally indicated.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine products covered by an allowance promptly on delivery for damage or defects. Return damaged or defective products to manufacturer for replacement.

3.2 PREPARATION

A. Coordinate materials and their installation for each allowance with related materials and installations to ensure that each allowance item is completely integrated and interfaced with related work.

3.3 SCHEDULE OF ALLOWANCES

A. Allowance No. 1: Lump-Sum Allowance: Include the sum of Ten Thousand Dollars ($10,000) for Gulf Power-provided electrical service connection to the building.

1. This allowance includes material cost, receiving, handling, and installation of the systems and components indicated.

B. Allowance No. 2: Lump-Sum Allowance: Include the sum of Five Thousand Dollars ($10,000) for City of Century-provided water and sewer service connections to the building.

1. This allowance includes material cost, receiving, handling, and installation of the systems and components indicated.

C. Allowance No. 3: Lump-Sum Allowance: Include the sum of Five Thousand Dollars ($4,000) for all Permits and Fees associated with the Construction.

1. This allowance includes material cost, receiving, handling, and installation of the systems and components indicated.

END OF SECTION 01 21 00

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SECTION 01 25 00 - SUBSTITUTION PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section includes administrative and procedural requirements for substitutions.

B. Related Requirements:

1. Section 01 60 00 "Product Requirements" for requirements for submitting comparable product submittals for products by listed manufacturers.

1.3 DEFINITIONS

A. Substitutions: Changes in products, materials, equipment, and methods of construction from those required by the Contract Documents and proposed by Contractor.

1. Substitutions for Cause: Changes proposed by Contractor that are required due to changed Project conditions, such as unavailability of product, regulatory changes, or unavailability of required warranty terms.
2. Substitutions for Convenience: Changes proposed by Contractor or Owner that are not required in order to meet other Project requirements but may offer advantage to Contractor or Owner.

1.4 ACTION SUBMITTALS

A. Substitution Requests: Submit one copy of each request for consideration. Identify product or fabrication or installation method to be replaced. Include Specification Section number and title and Drawing numbers and titles.

1. Substitution Request Form: Use Architect's standard Substitution Request form which can be made available upon request.
2. Documentation: Show compliance with requirements for substitutions and the following, as applicable:

a. Statement indicating why specified product or fabrication or installation method cannot be provided, if applicable.
b. Coordination of information, including a list of changes or revisions needed to other parts of the Work and to construction performed by Owner and separate contractors that will be necessary to accommodate proposed substitution.

c. Detailed comparison of significant qualities of proposed substitutions with those of the Work specified. Include annotated copy of applicable Specification Section. Significant qualities may include attributes, such as performance, weight, size, durability, visual effect, sustainable design characteristics, warranties, and specific features and requirements indicated. Indicate deviations, if any, from the Work specified.
d. Product Data, including drawings and descriptions of products and fabrication and installation procedures.
e. Samples, where applicable or requested.
f. Certificates and qualification data, where applicable or requested.
g. List of similar installations for completed projects, with project names and addresses as well as names and addresses of architects and owners.
h. Material test reports from a qualified testing agency, indicating and interpreting test results for compliance with requirements indicated.
i. Research reports evidencing compliance with building code in effect for Project, from Florida Building Code, 6th Edition (2017).
j. Detailed comparison of Contractor's construction schedule using proposed substitutions with products specified for the Work, including effect on the overall Contract Time. If specified product or method of construction cannot be provided within the Contract Time, include letter from manufacturer, on manufacturer's letterhead, stating date of receipt of purchase order, lack of availability, or delays in delivery.
k. Cost information, including a proposal of change, if any, in the Contract Sum.
l. Contractor's certification that proposed substitution complies with requirements in the Contract Documents, except as indicated in substitution request, is compatible with related materials and is appropriate for applications indicated.
m. Contractor's waiver of rights to additional payment or time that may subsequently become necessary because of failure of proposed substitution to produce indicated results.

3. Architect's Action: If necessary, Architect will request additional information or documentation for evaluation within seven days of receipt of a request for substitution. Architect will notify Contractor of acceptance or rejection of proposed substitution within 15 days of receipt of request, or seven days of receipt of additional information or documentation, whichever is later.

    a. Forms of Acceptance: Change Order, Construction Change Directive, or Architect's Supplemental Instructions for minor changes in the Work.

1.5 QUALITY ASSURANCE

A. Compatibility of Substitutions: Investigate and document compatibility of proposed substitution with related products and materials. If necessary, contractor shall engage a qualified testing agency, at his expense, to perform compatibility tests recommended by manufacturers.

1.6 PROCEDURES

A. Coordination: Revise or adjust affected work as necessary to integrate work of the approved substitutions.

1.7 SUBSTITUTIONS

A. Substitutions for Cause: Submit requests for substitution immediately on discovery of need for change, but not later than 15 days prior to time required for preparation and review of related submittals.

1. Conditions: Architect will consider Contractor's request for substitution when the following conditions are satisfied. If the following conditions are not satisfied, Architect will return requests without action, except to record noncompliance with these requirements:

a. Requested substitution is consistent with the Contract Documents and will produce indicated results.
b. Substitution request is fully documented and properly submitted.
c. Requested substitution will not adversely affect Contractor's construction schedule.
d. Requested substitution has received necessary approvals of authorities having jurisdiction.
e. Requested substitution is compatible with other portions of the Work.
f. Requested substitution has been coordinated with other portions of the Work.
g. Requested substitution provides specified warranty.
h. If requested substitution involves more than one contractor, requested substitution has been coordinated with other portions of the Work, is uniform and consistent, is compatible with other products, and is acceptable to all contractors involved.

B. Substitutions for Convenience: Architect will consider requests for substitution if received within 60 days after the Notice to Proceed. Requests received after that time may be considered or rejected at discretion of Architect.

1. Conditions: Architect will consider Contractor's request for substitution when the following conditions are satisfied. If the following conditions are not satisfied, Architect will return requests without action, except to record noncompliance with these requirements:

a. Requested substitution offers Owner a substantial advantage in cost, time, energy conservation, or other considerations, after deducting additional responsibilities Owner must assume. Owner's additional responsibilities may include compensation to Architect for redesign and evaluation services, increased cost of other construction by Owner, and similar considerations.
b. Requested substitution does not require extensive revisions to the Contract Documents.

c. Requested substitution is consistent with the Contract Documents and will produce indicated results.
d. Substitution request is fully documented and properly submitted.
e. Requested substitution will not adversely affect Contractor's construction schedule.
f. Requested substitution has received necessary approvals of authorities having jurisdiction.
g. Requested substitution is compatible with other portions of the Work.
h. Requested substitution has been coordinated with other portions of the Work.
i. Requested substitution provides specified warranty.
j. If requested substitution involves more than one contractor, requested substitution has been coordinated with other portions of the Work, is uniform and consistent, is compatible with other products, and is acceptable to all contractors involved.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 01 25 00

SECTION 01 26 00 - CONTRACT MODIFICATION PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section includes administrative and procedural requirements for handling and processing Contract modifications.

1.3 MINOR CHANGES IN THE WORK

A. Architect will issue supplemental instructions authorizing minor changes in the Work, not involving adjustment to the Contract Sum or the Contract Time, on Architects form "Architects Supplemental Instructions".

1.4 PROPOSAL REQUESTS

A. Owner-Initiated Proposal Requests: Architect will issue a detailed description of proposed changes in the Work that may require adjustment to the Contract Sum or the Contract Time. If necessary, the description will include supplemental or revised Drawings and Specifications.

1. Work Change Proposal Requests issued by Architect are not instructions either to stop work in progress or to execute the proposed change.
2. Within 20 days, when not otherwise specified, after receipt of Proposal Request, submit a quotation estimating cost adjustments to the Contract Sum and the Contract Time necessary to execute the change.

a. Include a list of quantities of products required or eliminated and unit costs, with total amount of purchases and credits to be made. If requested, furnish survey data to substantiate quantities.
b. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
c. Include costs of labor and supervision directly attributable to the change.
d. Include an updated Contractor's construction schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start and finish times, and activity relationship. Use available total float before requesting an extension of the Contract Time.
e. Quotation Form: Use forms acceptable to Architect.

B. Contractor-Initiated Proposals: If latent or changed conditions require modifications to the Contract, Contractor may initiate a claim by submitting a request for a change to Architect.

1. Include a statement outlining reasons for the change and the effect of the change on the Work. Provide a complete description of the proposed change. Indicate the effect of the proposed change on the Contract Sum and the Contract Time.
2. Include a list of quantities of products required or eliminated and unit costs, with total amount of purchases and credits to be made. If requested, furnish survey data to substantiate quantities.
3. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
4. Include costs of labor and supervision directly attributable to the change.
5. Include an updated Contractor's construction schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start and finish times, and activity relationship. Use available total float before requesting an extension of the Contract Time.
6. Proposal Request Form: Use form acceptable to Architect.

1.5 CHANGE ORDER PROCEDURES

A. On Owner's approval of a Work Change Proposal Request, Architect will issue a Change Order for signatures of Owner and Contractor on AIA Document G701.

1.6 CONSTRUCTION CHANGE DIRECTIVE

A. Construction Change Directive: Architect may issue a Construction Change Directive on AIA Document G714. Construction Change Directive instructs Contractor to proceed with a change in the Work, for subsequent inclusion in a Change Order.

1. Construction Change Directive contains a complete description of change in the Work. It also designates method to be followed to determine change in the Contract Sum or the Contract Time.

B. Documentation: Maintain detailed records on a time and material basis of work required by the Construction Change Directive.

1. After completion of change, submit an itemized account and supporting data necessary to substantiate cost and time adjustments to the Contract.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 01 26 00

SECTION 01 29 00 - PAYMENT PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.3 SUMMARY

A. Section includes administrative and procedural requirements necessary to prepare and process Applications for Payment.

B. Related Requirements:

1. Section 01 26 00 "Contract Modification Procedures" for administrative procedures for handling changes to the Contract.

1.4 DEFINITIONS

A. Schedule of Values: A statement furnished by Contractor allocating portions of the Contract Sum to various portions of the Work and used as the basis for reviewing Contractor's Applications for Payment.

1.5 SCHEDULE OF VALUES

A. Coordination: Coordinate preparation of the schedule of values with preparation of Contractor's construction schedule.

1. Coordinate line items in the schedule of values with items required to be indicated as separate activities in Contractor's construction schedule.
2. Submit the schedule of values to Architect at earliest possible date, but no later than seven days before the date scheduled for submittal of initial Applications for Payment.
3. Subschedules for Separate Elements of Work: Where the Contractor's construction schedule defines separate elements of the Work, provide subschedules showing values coordinated with each element.

B. Format and Content: Use Project Manual table of contents as a guide to establish line items for the schedule of values. Provide at least one line item for each Specification Section.

1. Identification: Include the following Project identification on the schedule of values:

    a. Project name and location.
    b. Contractor's name and address.
    c. Date of submittal.

2. Arrange schedule of values consistent with format of AIA Document G703.
3. Provide a breakdown of the Contract Sum in enough detail to facilitate continued evaluation of Applications for Payment and progress reports. Provide multiple line items for principal subcontract amounts in excess of five percent of the Contract Sum.
4. Provide a separate line item in the schedule of values for each part of the Work where Applications for Payment may include materials or equipment purchased or fabricated and stored, but not yet installed.

    a. Differentiate between items stored on-site and items stored off-site.

5. Overhead Costs: Show cost of temporary facilities and other major cost items that are not direct cost of actual work-in-place as separate line items.
6. Schedule of Values Revisions: Revise the schedule of values when Change Orders or Construction Change Directives result in a change in the Contract Sum. Include at least one separate line item for each Change Order and Construction Change Directive.

1.6 APPLICATIONS FOR PAYMENT

A. Each Application for Payment following the initial Application for Payment shall be consistent with previous applications and payments as certified by Architect and paid for by Owner.

B. Payment Application Times: Submit Application for Payment to Architect by the 25th of the month. The period covered by each Application for Payment is one month, ending on the last day of the month.

C. Application for Payment Forms: Use AIA Document G702 and AIA Document G703 as form for Applications for Payment.

D. Application Preparation: Complete every entry on form. Notarize and execute by a person authorized to sign legal documents on behalf of Contractor. Architect will return incomplete applications without action.

1. Entries shall match data on the schedule of values and Contractor's construction schedule. Use updated schedules if revisions were made.
2. Include amounts for work completed following previous Application for Payment, whether or not payment has been received. Include only amounts for work completed at time of Application for Payment.
3. Include amounts of Change Orders and Construction Change Directives issued before last day of construction period covered by application.
4. Indicate separate amounts for work being carried out under Owner-requested project acceleration.

E. Stored Materials: Include in Application for Payment amounts applied for materials or equipment purchased or fabricated and stored, but not yet installed. Differentiate between items stored on-site and items stored off-site.

1. Provide certificate of insurance, evidence of transfer of title to Owner, and consent of surety to payment for stored materials.
2. Provide supporting documentation that verifies amount requested, such as paid invoices. Match amount requested with amounts indicated on documentation; do not include overhead and profit on stored materials.
3. Provide summary documentation for stored materials indicating the following:

    a. Value of materials previously stored and remaining stored as of date of previous Applications for Payment.
    b. Value of previously stored materials put in place after date of previous Application for Payment and on or before date of current Application for Payment.
    c. Value of materials stored since date of previous Application for Payment and remaining stored as of date of current Application for Payment.

F. Transmittal: Submit three signed and notarized original copies of each Application for Payment to Architect by a method ensuring receipt within 24 hours. One copy shall include waivers of lien and similar attachments if required.

1. Transmit each copy with a transmittal form listing attachments and recording appropriate information about application.

G. Waivers of Mechanic's Lien: With each Application for Payment, submit waivers of mechanic's lien from subcontractors, sub-subcontractors, and suppliers for construction period covered by the previous application.

1. Submit partial waivers on each item for amount requested in previous application, after deduction for retainage, on each item.
2. When an application shows completion of an item, submit conditional final or full waivers.
3. Owner reserves the right to designate which entities involved in the Work must submit waivers.
4. Submit final Application for Payment with or preceded by conditional final waivers from every entity involved with performance of the Work covered by the application who is lawfully entitled to a lien.
5. Waiver Forms: Submit executed waivers of lien on forms acceptable to Owner.

H. Initial Application for Payment/Startup Documents: Contractor shall submit an initial Application for Payment #0 within 14 days of Notice to Proceed. Administrative actions and submittals that must precede or coincide with submittal of first Application for Payment include the following:

1. List of subcontractors.
2. Schedule of values (shall have "No Work Completed" for this period and no other payments due at this time).
3. Contractor's construction schedule (preliminary if not final).

4. Submittal schedule (preliminary if not final).
5. List of Contractor's staff assignments.
6. Copies of building permits.
7. Copies of authorizations and licenses from authorities having jurisdiction for performance of the Work.
8. Report of preconstruction conference.

I. Application for Payment at Substantial Completion: After Architect issues the Certificate of Substantial Completion, submit an Application for Payment showing 100 percent completion for portion of the Work claimed as substantially complete.

1. Include documentation supporting claim that the Work is substantially complete and a statement showing an accounting of changes to the Contract Sum.
2. This application shall reflect Certificate(s) of Substantial Completion issued previously for Owner occupancy of designated portions of the Work.

J. Final Payment Application: After completing Project closeout requirements, which shall be conducted within 30 days of date of Substantial Completion, submit final Application for Payment with releases and supporting documentation not previously submitted and accepted, including, but not limited, to the following:

1. Evidence of completion of Project closeout requirements.
2. Insurance certificates for products and completed operations where required and proof that taxes, fees, and similar obligations were paid.
3. Updated final statement, accounting for final changes to the Contract Sum.
4. AIA Document G706.
5. AIA Document G706A.
6. Evidence that claims have been settled.
7. Final liquidated damages settlement statement.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 01 29 00

SECTION 01 31 00 - PROJECT MANAGEMENT AND COORDINATION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section includes administrative provisions for coordinating construction operations on Project including, but not limited to, the following:

1. General coordination procedures.
2. RFIs.
3. Project meetings.

1.3 DEFINITIONS

A. RFI: Request for Information. Request from Owner, Architect, or Contractor seeking information required by or clarifications of the Contract Documents.

1.4 INFORMATIONAL SUBMITTALS

A. Key Personnel Names: Within 15 days of starting construction operations, submit a list of key personnel assignments, including superintendent and other personnel in attendance at Project site. Identify individuals and their duties and responsibilities; list addresses and cellular telephone numbers and e-mail addresses. Provide names, addresses, and telephone numbers of individuals assigned as alternates in the absence of individuals assigned to Project.

1.5 GENERAL COORDINATION PROCEDURES

A. Coordination: Coordinate construction operations included in different Sections of the Specifications to ensure efficient and orderly installation of each part of the Work. Coordinate construction operations included in different Sections that depend on each other for proper installation, connection, and operation.

1. Schedule construction operations in sequence required to obtain the best results where installation of one part of the Work depends on installation of other components, before or after its own installation.
2. Coordinate installation of different components to ensure maximum performance and accessibility for required maintenance, service, and repair.
3. Make adequate provisions to accommodate items scheduled for later installation.

B. Prepare memoranda for distribution to each party involved, outlining special procedures required for coordination. Include such items as required notices, reports, and list of attendees at meetings.

1. Prepare similar memoranda for Owner and separate contractors if coordination of their Work is required.

C. Administrative Procedures: Coordinate scheduling and timing of required administrative procedures with other construction activities to avoid conflicts and to ensure orderly progress of the Work. Such administrative activities include, but are not limited to, the following:

1. Installation and removal of temporary facilities and controls.
2. Progress meetings.
3. Preinstallation conferences.
4. Project closeout activities.
5. Startup and adjustment of systems.

1.6 REQUEST FOR INFORMATION (RFI)

A. General: Immediately on discovery of the need for additional information, clarification, or interpretation of the Contract Documents, Contractor shall prepare and submit an RFI in the form specified.

1. Architect will return without response those RFIs submitted to Architect by other entities controlled by Contractor.
2. Coordinate and submit RFIs in a prompt manner, so as to avoid delays in Contractor's work or work of subcontractors.

B. Content of the RFI: Include a detailed, legible description of item needing information or interpretation and the following:

1. Project name.
2. Date.
3. RFI number, numbered sequentially.
4. RFI subject.
5. Specification Section number and title and related paragraphs, as appropriate.
6. Drawing number and detail references, as appropriate.
7. Field dimensions and conditions, as appropriate.
8. Contractor's suggested resolution. If Contractor's suggested resolution impacts the Contract Time or the Contract Sum, Contractor shall state impact in the RFI.
9. "Respond by" date request, as appropriate.
10. Attachments: Include sketches, descriptions, measurements, photos, Product Data, Shop Drawings, coordination drawings, and other information necessary to fully describe items needing interpretation.

C. RFI Forms: Software-generated form with substantially the same content as indicated above, acceptable to Architect.

1. Attachments shall be electronic files in PDF format.

D. Architect's Action: Architect will review each RFI, determine action required, and respond. Allow seven calendar days for Architect's response for each RFI. RFIs received by Architect after 1:00 p.m. will be considered as received the following working day.

1. The following Contractor-generated RFIs will be returned without action:

a. Requests for approval of submittals.
b. Requests for approval of substitutions.
c. Requests for approval of Contractor's means and methods.
d. Requests for coordination information already indicated in the Contract Documents.
e. Requests for adjustments in the Contract Time or the Contract Sum.
f. Requests for interpretation of Architect's actions on submittals.
g. Incomplete RFIs or inaccurately prepared RFIs.

2. Architect's action may include a request for additional information, in which case Architect's time for response will date from time of receipt by Architect of additional information.
3. Architect's action on RFIs that may result in a change to the Contract Time or the Contract Sum may be eligible for Contractor to submit Change Proposal according to Section 01 26 00 "Contract Modification Procedures."

a. If Contractor believes the RFI response warrants change in the Contract Time or the Contract Sum, notify Architect in writing within 7 days of receipt of the RFI response.

E. RFI Log: Prepare, maintain, and submit a tabular log of RFIs organized by the RFI number. Submit log bi-weekly. Software log with not less than the following:

1. Project name.
2. Name and address of Contractor.
3. Name and address of Architect.
4. RFI number including RFIs that were returned without action or withdrawn.
5. RFI description.
6. Date the RFI was submitted.
7. Date Architect's response was received.

F. On receipt of Architect's action, update the RFI log and immediately distribute the RFI response to affected parties. Review response and notify Architect within seven days if Contractor disagrees with response.

1.7 PROJECT MEETINGS

A. General: Schedule and conduct meetings and conferences at Project site unless otherwise indicated.

1. Attendees: Inform participants and others involved, and individuals whose presence is required, of date and time of each meeting. Notify Owner and Architect of scheduled meeting dates and times a minimum of 10 working days prior to meeting.
2. Agenda: Prepare the meeting agenda. Distribute the agenda to all invited attendees.
3. Minutes: Entity responsible for conducting meeting will record significant discussions and agreements achieved. Distribute the meeting minutes to everyone concerned, including Owner and Architect, within seven calendar days of the meeting.

B. Preconstruction Conference: Schedule and conduct a preconstruction conference before starting construction, at a time convenient to Owner and Architect, but no later than 15 days after execution of the Agreement.

1. Attendees: Authorized representatives of Owner, Owner's Commissioning Authority, Architect, and their consultants; Contractor and its superintendent; major subcontractors; suppliers; and other concerned parties shall attend the conference. Participants at the conference shall be familiar with Project and authorized to conclude matters relating to the Work.
2. Agenda: Discuss items of significance that could affect progress, including the following:

    a. Responsibilities and personnel assignments.
    b. Tentative construction schedule.
    c. Critical work sequencing and long lead items.
    d. Designation of key personnel and their duties.
    e. Lines of communications.
    f. Use of web-based Project software.
    g. Procedures for processing field decisions and Change Orders.
    h. Procedures for RFIs.
    i. Procedures for testing and inspecting.
    j. Procedures for processing Applications for Payment.
    k. Distribution of the Contract Documents.
    l. Submittal procedures.
    m. Preparation of Record Documents.
    n. Use of the premises and existing building.
    o. Work restrictions.
    p. Working hours.
    q. Owner's occupancy requirements.
    r. Responsibility for temporary facilities and controls.
    s. Procedures for moisture and mold control.
    t. Procedures for disruptions and shutdowns.
    u. Construction waste management and recycling.
    v. Parking availability.
    w. Office, work, and storage areas.
    x. Equipment deliveries and priorities.
    y. First aid.
    z. Security.
    aa. Progress cleaning.

3. Minutes: Entity responsible for conducting meeting will record and distribute meeting minutes.

C. Preinstallation Conferences: Conduct a preinstallation conference at Project site before each construction activity when required by other sections and when required for coordination with other construction.

1. Attendees: Installer and representatives of manufacturers and fabricators involved in or affected by the installation and its coordination or integration with other materials and installations that have preceded or will follow, shall attend the meeting. Advise Architect , and Owner's Commissioning Authority of scheduled meeting dates.
2. Agenda: Review progress of other construction activities and preparations for the particular activity under consideration, including requirements for the following:

    a. Contract Documents.
    b. Options.
    c. Related RFIs.
    d. Related Change Orders.
    e. Purchases.
    f. Deliveries.
    g. Submittals.
    h. Review of mockups.
    i. Possible conflicts.
    j. Compatibility requirements.
    k. Time schedules.
    l. Weather limitations.
    m. Manufacturer's written instructions.
    n. Warranty requirements.
    o. Compatibility of materials.
    p. Acceptability of substrates.
    q. Temporary facilities and controls.
    r. Space and access limitations.
    s. Regulations of authorities having jurisdiction.
    t. Testing and inspecting requirements.
    u. Installation procedures.
    v. Coordination with other work.
    w. Required performance results.
    x. Protection of adjacent work.
    y. Protection of construction and personnel.

3. Record significant conference discussions, agreements, and disagreements, including required corrective measures and actions.
4. Reporting: Distribute minutes of the meeting to each party present and to other parties requiring information.
5. Do not proceed with installation if the conference cannot be successfully concluded. Initiate whatever actions are necessary to resolve impediments to performance of the Work and reconvene the conference at earliest feasible date.

D. Project Closeout Conference: Schedule and conduct a project closeout conference, at a time convenient to Owner and Architect, but no later than 90 days prior to the scheduled date of Substantial Completion.

1. Conduct the conference to review requirements and responsibilities related to Project closeout.
2. Attendees: Authorized representatives of Owner, Owner's Commissioning Authority, Architect, and their consultants; Contractor and its superintendent; major subcontractors; suppliers; and other concerned parties shall attend the meeting. Participants at the meeting shall be familiar with Project and authorized to conclude matters relating to the Work.
3. Agenda: Discuss items of significance that could affect or delay Project closeout, including the following:

    a. Procedures required prior to inspection for Substantial Completion and for final inspection for acceptance.
    b. Submittal of written warranties.
    c. Requirements for preparing operations and maintenance data.
    d. Requirements for delivery of material samples, attic stock, and spare parts.
    e. Requirements for demonstration and training.
    f. Preparation of Contractor's punch list.
    g. Procedures for processing Applications for Payment at Substantial Completion and for final payment.
    h. Submittal procedures.
    i. Installation of Owner's furniture, fixtures, and equipment.
    j. Responsibility for removing temporary facilities and controls.

4. Minutes: Entity conducting meeting will record and distribute meeting minutes.

E. Progress Meetings: Conduct progress meetings on-site at monthly intervals and via conference call at weekly intervals.

1. Coordinate dates of meetings with preparation of payment requests.
2. Attendees: In addition to representatives of Owner, Owner's Commissioning Authority and Architect, each contractor, subcontractor, supplier, and other entity concerned with current progress or involved in planning, coordination, or performance of future activities shall be represented at these meetings. All participants at the meeting shall be familiar with Project and authorized to conclude matters relating to the Work.
3. Agenda: Review and correct or approve minutes of previous progress meeting. Review other items of significance that could affect progress. Include topics for discussion as appropriate to status of Project.

    a. Contractor's Construction Schedule: Review progress since the last meeting. Determine whether each activity is on time, ahead of schedule, or behind schedule, in relation to Contractor's construction schedule. Determine how construction behind schedule will be expedited; secure commitments from parties involved to do so. Discuss whether schedule revisions are required to ensure that current and subsequent activities will be completed within the Contract Time.

1) Review schedule for next period.

b. Review present and future needs of each entity present, including the following:

1) Sequence of operations.
2) Status of submittals.
3) Deliveries.
4) Off-site fabrication.
5) Site use.
6) Temporary facilities and controls.
7) Progress cleaning.
8) Quality and work standards.
9) Status of correction of deficient items.
10) Field observations.
11) Status of RFIs.
12) Status of Proposal Requests.
13) Pending changes.
14) Status of Change Orders.
15) Pending claims and disputes.
16) Documentation of information for payment requests.

4. Minutes: Entity responsible for conducting the meeting will record and distribute the meeting minutes to each party present and to parties requiring information.

a. Schedule Updating: Revise Contractor's construction schedule after each progress meeting where revisions to the schedule have been made or recognized. Issue revised schedule concurrently with the report of each meeting.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 01 31 00

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SECTION 01 33 00 - SUBMITTAL PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

1. Submittal schedule requirements.
2. Administrative and procedural requirements for submittals.

B. Related Requirements:

1. Section 01 29 00 "Payment Procedures" for submitting Applications for Payment and the schedule of values.
2. Section 01 31 00 "Project Management and Coordination" for submitting coordination drawings and subcontract list.
3. Section 01 40 00 "Quality Requirements" for submitting test and inspection reports, and schedule of tests and inspections.
4. Section 01 77 00 "Closeout Procedures" for submitting closeout submittals and maintenance material submittals.
5. Section 01 78 23 "Operation and Maintenance Data" for submitting operation and maintenance manuals.

1.3 DEFINITIONS

A. Action Submittals: Written and graphic information and physical samples that require Architect's responsive action. Action submittals are those submittals indicated in individual Specification Sections as "action submittals."

B. Informational Submittals: Written and graphic information and physical samples that do not require Architect's responsive action. Submittals may be rejected for not complying with requirements. Informational submittals are those submittals indicated in individual Specification Sections as "informational submittals."

1.4 SUBMITTAL SCHEDULE

A. Submittal Schedule: Submit, as an action submittal, a list of submittals, arranged in chronological order by dates required by construction schedule. Include time required for review, ordering, manufacturing, fabrication, and delivery when establishing dates. Include additional time required for making corrections or revisions to submittals noted by Architect and additional time for handling and reviewing submittals required by those corrections.

1. Coordinate submittal schedule with list of subcontracts, the schedule of values, and Contractor's construction schedule.
2. Initial Submittal: Submit concurrently with startup construction schedule. Include submittals required during the first 60 days of construction. List those submittals required to maintain orderly progress of the Work and those required early because of long lead time for manufacture or fabrication.
3. Final Submittal: Submit concurrently with the first complete submittal of Contractor's construction schedule.

4. Format: Arrange the following information in a tabular format:

    a. Scheduled date for first submittal.
    b. Specification Section number and title.
    c. Submittal Category: Action; informational.
    d. Description of the Work covered.
    e. Scheduled date for Architect's final release or approval.

1.5 SUBMITTAL FORMATS

A. Submittal Information: Include the following information in each submittal:

1. Project name.
2. Date.
3. Name of Architect.
4. Name of Contractor.
5. Name of firm or entity that prepared submittal.
6. Names of subcontractor, manufacturer, and supplier.
7. Unique submittal number. Include Specification Section number with sequential alphanumeric identifier (e.g., 06 10 00-01 - Blocking). Resubmittals shall be considered a different submittal altogether and will be sequentially numbered.
8. Indication of full or partial submittal.
9. Location(s) where product is to be installed, as appropriate.
10. Other necessary identification.
11. Remarks.
12. Stamp, Signature or other mark signifying Contractor has reviewed the information for accuracy and completeness of the submittal..

B. Options: Identify options in red requiring selection by Architect.

C. Architect reserves the right to re-number or re-sequence the unique submittal number.

D. Deviations and Additional Information: On each submittal, clearly indicate deviations from requirements in the Contract Documents, including minor variations and limitations; include relevant additional information and revisions, other than those requested by Architect on previous submittals. Indicate by highlighting on each submittal or noting on attached separate sheet.

E. PDF Submittals: Prepare submittals as a single PDF file, incorporating complete information into one PDF file. Name PDF file with submittal number (e.g., 06 10 00-01 - Blocking).

1.6 SUBMITTAL PROCEDURES

A. Prepare and submit submittals as required by individual Specification Sections. Types of submittals are indicated in individual Specification Sections.

1. Email: Prepare submittals as PDF package, and transmit to Architect by sending via email or by use of Architect's Project Management Website. Include PDF transmittal form. Include information in email subject line as requested by Architect.

    a. Architect will return annotated file. Annotate and retain one copy of file as a digital Project Record Document file.

2. Except for sample submittals, all submittals are to be electronic, .PDF type submittals.

B. Coordination: Coordinate preparation and processing of submittals with performance of construction activities.

1. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals, and related activities that require sequential activity.
2. Submit all submittal items required for each Specification Section concurrently unless partial submittals for portions of the Work are indicated on approved submittal schedule.
3. Submit action submittals and informational submittals required by the same Specification Section as separate packages under separate transmittals.
4. Coordinate transmittal of submittals for related parts of the Work specified in different Sections so processing will not be delayed because of need to review submittals concurrently for coordination.

    a. Architect reserves the right to withhold action on a submittal requiring coordination with other submittals until related submittals are received.

C. Processing Time: Allow time for submittal review, including time for resubmittals, as follows. Time for review shall commence on Architect's receipt of submittal. No extension of the Contract Time will be authorized because of failure to transmit submittals enough in advance of the Work to permit processing, including resubmittals.

1. Initial Review: Allow 14 calendar days for initial review of each submittal. Allow additional time if coordination with subsequent submittals is required. Architect will advise Contractor when a submittal being processed must be delayed for coordination.

2. Intermediate Review: If intermediate submittal is necessary, process it in same manner as initial submittal.
3. Resubmittal Review: Allow 14 calendar days for review of each resubmittal.
4. Sequential Review: Where sequential review of submittals by Architect's consultants, Owner, or other parties is indicated, allow 21 calendar days for initial review of each submittal.

D. Resubmittals: Make resubmittals in same form and number of copies as initial submittal.

1. Note date and content of previous submittal.
2. Note date and content of revision in label or title block and clearly indicate extent of revision.
3. Resubmit submittals until they are marked with approval notation from Architect's action stamp.

E. Distribution: Furnish copies of final submittals to manufacturers, subcontractors, suppliers, fabricators, installers, authorities having jurisdiction, and others as necessary for performance of construction activities. Show distribution on transmittal forms.

F. Use for Construction: Retain complete copies of submittals on Project site or maintain on Architect's Project Management Website for on-site access via wireless connection. Use only final action submittals that are marked with approval notation from Architect's action stamp.

1.7 SUBMITTAL REQUIREMENTS

A. Product Data: Collect information into a single submittal for each element of construction and type of product or equipment.

1. If information must be specially prepared for submittal because standard published data are unsuitable for use, submit as Shop Drawings, not as Product Data.
2. Mark each copy of each submittal to show which products and options are applicable.
3. Include the following information, as applicable:

a. Manufacturer's catalog cuts.
b. Manufacturer's product specifications.
c. Standard color charts. Architect reserves the right to request color Samples where color charts may be deemed inadequate to determine selection.
d. Statement of compliance with specified referenced standards.
e. Testing by recognized testing agency.
f. Application of testing agency labels and seals.
g. Notation of coordination requirements.

4. For equipment, include the following in addition to the above, as applicable:

a. Wiring diagrams that show factory-installed wiring.
b. Printed performance curves.
c. Operational range diagrams.

d. Clearances required to other construction, if not indicated on accompanying Shop Drawings.

5. Submit Product Data before Shop Drawings, and before or concurrent with Samples.

B. Shop Drawings: Prepare Project-specific information, drawn accurately to scale. Do not base Shop Drawings on reproductions of the Contract Documents or standard printed data.

1. Preparation: Fully illustrate requirements in the Contract Documents. Include the following information, as applicable:

a. Identification of products.
b. Schedules.
c. Compliance with specified standards.
d. Notation of coordination requirements.
e. Notation of dimensions established by field measurement.
f. Relationship and attachment to adjoining construction clearly indicated.
g. Seal and signature of professional engineer if specified.

2. PDF Paper Sheet Size: Except for templates, patterns, and similar full-size Drawings, submit Shop Drawings on sheets at least 8-1/2 by 11 inches , but no larger than 30 by 42 inches .

C. Samples: Submit Samples for review of kind, color, pattern, and texture for a check of these characteristics with other materials.

1. Transmit Samples that contain multiple, related components such as accessories together in one submittal package.
2. Identification: Permanently attach label on unexposed side of Samples that includes the following:

a. Project name and submittal number.
b. Generic description of Sample.
c. Product name and name of manufacturer.
d. Sample source.
e. Number and title of applicable Specification Section.
f. Specification paragraph number and generic name of each item.

3. Paper Transmittal: Include paper transmittal including complete submittal information indicated.
4. Disposition: Maintain sets of approved Samples at Project site, available for quality-control comparisons throughout the course of construction activity. Sample sets may be used to determine final acceptance of construction associated with each set.

a. Samples not incorporated into the Work, or otherwise designated as Owner's property, are the property of Contractor.

5. Samples for Initial Selection: Submit manufacturer's color charts consisting of units or sections of units showing the full range of colors, textures, and patterns available.

a. Number of Samples: Submit one full set(s) of available choices where color, pattern, texture, or similar characteristics are required to be selected from manufacturer's product line. Architect will return submittal with options selected.

6. Samples for Verification: Submit full-size units or Samples of size indicated, prepared from same material to be used for the Work, cured and finished in manner specified, and physically identical with material or product proposed for use, and that show full range of color and texture variations expected. Samples include, but are not limited to, the following: partial sections of manufactured or fabricated components; small cuts or containers of materials; complete units of repetitively used materials; swatches showing color, texture, and pattern; color range sets; and components used for independent testing and inspection.

   a. Number of Samples: Submit one sets of Samples. Architect will photograph or scan and retain zerorSample sets; all samples will be returned. Mark up and retain one returned Sample set on-site throughout construction as a project record Sample.

      1) Submit a single Sample where assembly details, workmanship, fabrication techniques, connections, operation, and other similar characteristics are to be demonstrated.
      2) If variation in color, pattern, texture, or other characteristic is inherent in material or product represented by a Sample, submit at least three sets of paired units that show approximate limits of variations.
      3) Architect may be required to submit one sample to Franchisor for approval. Additional time for Franchisor approval will be coordinated with Submittal Schedule once submitted for those items.

D. Product Schedule: As required in individual Specification Sections, prepare a written summary indicating types of products required for the Work and their intended location. Include the following information in tabular form:

1. Type of product. Include unique identifier for each product indicated in the Contract Documents or assigned by Contractor if none is indicated.
2. Manufacturer and product name, and model number if applicable.
3. Number and name of room or space.
4. Location within room or space.

E. Qualification Data: Prepare written information that demonstrates capabilities and experience of firm or person. Include lists of completed projects with project names and addresses, contact information of architects and owners, and other information specified.

F. Design Data: Prepare and submit written and graphic information indicating compliance with indicated performance and design criteria in individual Specification Sections. Include list of assumptions and summary of loads. Include load diagrams if applicable. Provide name and version of software, if any, used for calculations. Number each page of submittal.

G. Certificates:

1. Certificates and Certifications Submittals: Submit a statement that includes signature of entity responsible for preparing certification. Certificates and certifications shall be signed by an officer or other individual authorized to sign documents on behalf of that entity. Provide a notarized signature where indicated.
2. Installer Certificates: Submit written statements on manufacturer's letterhead certifying that Installer complies with requirements in the Contract Documents and, where required, is authorized by manufacturer for this specific Project.
3. Manufacturer Certificates: Submit written statements on manufacturer's letterhead certifying that manufacturer complies with requirements in the Contract Documents. Include evidence of manufacturing experience where required.
4. Material Certificates: Submit written statements on manufacturer's letterhead certifying that material complies with requirements in the Contract Documents.
5. Product Certificates: Submit written statements on manufacturer's letterhead certifying that product complies with requirements in the Contract Documents.
6. Welding Certificates: Prepare written certification that welding procedures and personnel comply with requirements in the Contract Documents. Submit record of Welding Procedure Specification and Procedure Qualification Record on AWS forms. Include names of firms and personnel certified.

H. Test and Research Reports:

1. Compatibility Test Reports: Submit reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of compatibility tests performed before installation of product. Include written recommendations for primers and substrate preparation needed for adhesion.
2. Field Test Reports: Submit written reports indicating and interpreting results of field tests performed either during installation of product or after product is installed in its final location, for compliance with requirements in the Contract Documents.
3. Material Test Reports: Submit reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting test results of material for compliance with requirements in the Contract Documents.
4. Preconstruction Test Reports: Submit reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of tests performed before installation of product, for compliance with performance requirements in the Contract Documents.
5. Product Test Reports: Submit written reports indicating that current product produced by manufacturer complies with requirements in the Contract Documents. Base reports on evaluation of tests performed by manufacturer and witnessed by a qualified testing agency, or on comprehensive tests performed by a qualified testing agency.
6. Research Reports: Submit written evidence, from a model code organization acceptable to authorities having jurisdiction, that product complies with building code in effect for Project. Include the following information:

    a. Name of evaluation organization.
    b. Date of evaluation.
    c. Time period when report is in effect.
    d. Product and manufacturers' names.
    e. Description of product.

f. Test procedures and results.
g. Limitations of use.

1.8 DELEGATED-DESIGN SERVICES

A. Performance and Design Criteria: Where professional design services or certifications by a design professional are specifically required of Contractor by the Contract Documents, provide products and systems complying with specific performance and design criteria indicated.

1. If criteria indicated are insufficient to perform services or certification required, submit a written request for additional information to Architect.

B. Delegated-Design Services Certification: In addition to Shop Drawings, Product Data, and other required submittals, submit digitally signed PDF file paper copies of certificate, signed and sealed by the responsible design professional, for each product and system specifically assigned to Contractor to be designed or certified by a design professional.

1. Indicate that products and systems comply with performance and design criteria in the Contract Documents. Include list of codes, loads, and other factors used in performing these services.

1.9 CONTRACTOR'S REVIEW

A. Action Submittals and Informational Submittals: Review each submittal and check for coordination with other Work of the Contract and for compliance with the Contract Documents. Note corrections and field dimensions. Mark with approval stamp before submitting to Architect.

B. Contractor's Approval: Indicate Contractor's approval for each submittal with a uniform approval stamp. Include name of reviewer, date of Contractor's approval, and statement certifying that submittal has been reviewed, checked, and approved for compliance with the Contract Documents.

1. Architect will not review submittals received from Contractor that do not have Contractor's review and approval.

1.10 ARCHITECT'S REVIEW

A. Action Submittals: Architect will review each submittal, indicate corrections or revisions required, and return it.

1. PDF Submittals: Architect will indicate, via markup on each submittal, the appropriate action.

a. "Furnish as Submitted": Architect has reviewed the submittal and approves the product for use in the project as submitted. Additional notations that are not necessarily corrections may be included for clarity and coordination with other work.

b. "Furnish as Corrected": Architect has reviewed the submittal and with the incorporation of comments and corrections as indicated on the submittal, approves the submittal for use in the project. Additional notations that are not necessarily corrections may be included for clarity and coordination with other work.

c. "Revise and Resubmit": Architect has reviewed the submittal and due to the critical nature of certain comments, requests the submittal be corrected and re-submitted for Architect's review. This comment may also be used to indicate missing submittal requirements that need to be reviewed before proceeding with the work outlined by the submittal.

d. Architect may use one or more of the above comments in combination to communicate the full scope and intent of his review and requests for additional information (if any).

B. Informational Submittals: Architect will review each submittal and will not return it, or will return it if it does not comply with requirements. Architect will forward each submittal to appropriate party.

C. Partial submittals prepared for a portion of the Work will be reviewed when use of partial submittals has received prior approval from Architect.

D. Incomplete submittals are unacceptable, will be considered nonresponsive, and will be returned for resubmittal without review.

E. Architect will return without review submittals received from sources other than Contractor.

F. Submittals not required by the Contract Documents will be returned by Architect without action.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 01 33 00

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SECTION 01 40 00 - QUALITY REQUIREMENTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section includes administrative and procedural requirements for quality assurance and quality control.

B. Testing and inspection services are required to verify compliance with requirements specified or indicated. These services do not relieve Contractor of responsibility for compliance with the Contract Document requirements.

1. Specific quality-assurance and quality-control requirements for individual work results are specified in their respective Specification Sections. Requirements in individual Sections may also cover production of standard products.
2. Requirements for Contractor to provide quality-assurance and quality-control services required by Architect, Owner, or authorities having jurisdiction are not limited by provisions of this Section.
3. Specific test and inspection requirements are not specified in this Section.

1.3 DEFINITIONS

A. Experienced: When used with an entity or individual, "experienced" unless otherwise further described means having successfully completed a minimum of five previous projects similar in nature, size, and extent to this Project; being familiar with special requirements indicated; and having complied with requirements of authorities having jurisdiction.

B. Field Quality-Control Tests: Tests and inspections that are performed on-site for installation of the Work and for completed Work.

C. Installer/Applicator/Erector: Contractor or another entity engaged by Contractor as an employee, Subcontractor, or Sub-subcontractor, to perform a particular construction operation, including installation, erection, application, assembly, and similar operations.

1. Use of trade-specific terminology in referring to a trade or entity does not require that certain construction activities be performed by accredited or unionized individuals, or that requirements specified apply exclusively to specific trade(s).

D. Mockups: Full-size physical assemblies that are constructed on-site either as freestanding temporary built elements or as part of permanent construction. Mockups are constructed to verify selections made under Sample submittals; to demonstrate aesthetic effects and qualities of materials and execution; to review coordination, testing, or operation; to show interface between dissimilar materials; and to demonstrate compliance with specified installation tolerances. Mockups are not Samples. Unless otherwise indicated, approved mockups establish the standard by which the Work will be judged.

1. Integrated Exterior Mockups: Mockups of the exterior envelope constructed on-site as freestanding temporary built elements or as part of permanent construction, consisting of multiple products, assemblies, and subassemblies.

E. Preconstruction Testing: Tests and inspections performed specifically for Project before products and materials are incorporated into the Work, to verify performance or compliance with specified criteria.

F. Product Tests: Tests and inspections that are performed by a nationally recognized testing laboratory (NRTL) according to 29 CFR 1910.7, by a testing agency accredited according to NIST's National Voluntary Laboratory Accreditation Program (NVLAP), or by a testing agency qualified to conduct product testing and acceptable to authorities having jurisdiction, to establish product performance and compliance with specified requirements.

G. Source Quality-Control Tests: Tests and inspections that are performed at the source; for example, plant, mill, factory, or shop.

H. Testing Agency: An entity engaged to perform specific tests, inspections, or both. Testing laboratory shall mean the same as testing agency.

I. Quality-Assurance Services: Activities, actions, and procedures performed before and during execution of the Work to guard against defects and deficiencies and substantiate that proposed construction will comply with requirements.

J. Quality-Control Services: Tests, inspections, procedures, and related actions during and after execution of the Work to evaluate that actual products incorporated into the Work and completed construction comply with requirements. Contractor's quality-control services do not include contract administration activities performed by Architect.

1.4 DELEGATED-DESIGN SERVICES

A. Performance and Design Criteria: Where professional design services or certifications by a design professional are specifically required of Contractor by the Contract Documents, provide products and systems complying with specific performance and design criteria indicated.

1. If criteria indicated are not sufficient to perform services or certification required, submit a written request for additional information to Architect.

1.5 CONFLICTING REQUIREMENTS

A. Conflicting Standards and Other Requirements: If compliance with two or more standards or requirements are specified and the standards or requirements establish different or conflicting requirements for minimum quantities or quality levels, comply with the most stringent requirement. Refer conflicting requirements that are different, but apparently equal, to Architect for direction before proceeding.

B. Minimum Quantity or Quality Levels: The quantity or quality level shown or specified shall be the minimum provided or performed. The actual installation may comply exactly with the minimum quantity or quality specified, or it may exceed the minimum within reasonable limits. To comply with these requirements, indicated numeric values are minimum or maximum, as appropriate, for the context of requirements. Refer uncertainties to Architect for a decision before proceeding.

1.6 ACTION SUBMITTALS

A. Shop Drawings: For integrated exterior mockups.

1. Include plans, sections, and elevations, indicating materials and size of mockup construction.
2. Indicate manufacturer and model number of individual components.
3. Provide axonometric drawings for conditions difficult to illustrate in two dimensions.

B. Delegated-Design Services Submittal: In addition to Shop Drawings, Product Data, and other required submittals, submit a statement signed and sealed by the responsible design professional, for each product and system specifically assigned to Contractor to be designed or certified by a design professional, indicating that the products and systems are in compliance with performance and design criteria indicated. Include list of codes, loads, and other factors used in performing these services.

1.7 INFORMATIONAL SUBMITTALS

A. Contractor's Quality-Control Plan: For quality-assurance and quality-control activities and responsibilities.

B. Qualification Data: For Contractor's quality-control personnel.

C. Contractor's Statement of Responsibility: When required by authorities having jurisdiction, submit copy of written statement of responsibility submitted to authorities having jurisdiction before starting work on the following systems:

1. Main wind-force-resisting system or a wind-resisting component listed in the Statement of Special Inspections.

D. Testing Agency Qualifications: For testing agencies specified in "Quality Assurance" Article to demonstrate their capabilities and experience. Include proof of qualifications in the form of a recent report on the inspection of the testing agency by a recognized authority.

E. Schedule of Tests and Inspections: Prepare in tabular form and include the following:

1. Specification Section number and title.
2. Entity responsible for performing tests and inspections.
3. Description of test and inspection.
4. Identification of applicable standards.
5. Identification of test and inspection methods.
6. Number of tests and inspections required.
7. Time schedule or time span for tests and inspections.
8. Requirements for obtaining samples.
9. Unique characteristics of each quality-control service.

F. Reports: Prepare and submit certified written reports and documents as specified.

1.8 CONTRACTOR'S QUALITY-CONTROL PLAN

A. Quality-Control Plan, General: Submit quality-control plan within 10 days of Notice to Proceed, and not less than five days prior to preconstruction conference. Submit in format acceptable to Architect. Identify personnel, procedures, controls, instructions, tests, records, and forms to be used to carry out Contractor's quality-assurance and quality-control responsibilities. Coordinate with Contractor's Construction Schedule.

B. Quality-Control Personnel Qualifications: Engage qualified personnel trained and experienced in managing and executing quality-assurance and quality-control procedures similar in nature and extent to those required for Project.

C. Submittal Procedure: Describe procedures for ensuring compliance with requirements through review and management of submittal process. Indicate qualifications of personnel responsible for submittal review.

D. Testing and Inspection: In quality-control plan, include a comprehensive schedule of Work requiring testing or inspection, including the following:

1. Contractor-performed tests and inspections including Subcontractor-performed tests and inspections. Include required tests and inspections and Contractor-elected tests and inspections. Distinguish source quality-control tests and inspections from field quality-control tests and inspections.
2. Special inspections required by authorities having jurisdiction and indicated on the Statement of Special Inspections.

E. Continuous Inspection of Workmanship: Describe process for continuous inspection during construction to identify and correct deficiencies in workmanship in addition to testing and inspection specified. Indicate types of corrective actions to be required to bring work into compliance with standards of workmanship established by Contract requirements and approved mockups.

F. Monitoring and Documentation: Maintain testing and inspection reports including log of approved and rejected results. Include work Architect has indicated as nonconforming or defective. Indicate corrective actions taken to bring nonconforming work into compliance with requirements. Comply with requirements of authorities having jurisdiction.

1.9 REPORTS AND DOCUMENTS

A. Test and Inspection Reports: Prepare and submit certified written reports specified in other Sections. Include the following:

1. Date of issue.
2. Project title and number.
3. Name, address, telephone number, and email address of testing agency.
4. Names of individuals making tests and inspections.
5. Description of the Work and test and inspection method.
6. Identification of product and Specification Section.
7. Complete test or inspection data.
8. Test and inspection results and an interpretation of test results.
9. Record of temperature and weather conditions at time of sample taking and testing and inspection.
10. Comments or professional opinion on whether tested or inspected Work complies with the Contract Document requirements.
11. Name and signature of laboratory inspector.
12. Recommendations on retesting and reinspecting.

B. Manufacturer's Technical Representative's Field Reports: Prepare written information documenting manufacturer's technical representative's tests and inspections specified in other Sections. Include the following:

1. Name, address, telephone number, and email address of technical representative making report.
2. Summary of installation procedures being followed, whether they comply with requirements and, if not, what corrective action was taken.
3. Statement whether conditions, products, and installation will affect warranty.
4. Other required items indicated in individual Specification Sections.

C. Factory-Authorized Service Representative's Reports: Prepare written information documenting manufacturer's factory-authorized service representative's tests and inspections specified in other Sections. Include the following:

1. Statement that equipment complies with requirements.

2. Results of operational and other tests and a statement of whether observed performance complies with requirements.
3. Statement whether conditions, products, and installation will affect warranty.
4. Other required items indicated in individual Specification Sections.

1.10 QUALITY ASSURANCE

A. General: Qualifications paragraphs in this article establish the minimum qualification levels required; individual Specification Sections specify additional requirements.

B. Manufacturer Qualifications: A firm experienced in manufacturing products or systems similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units. As applicable, procure products from manufacturers able to meet qualification requirements, warranty requirements, and technical or factory-authorized service representative requirements.

C. Fabricator Qualifications: A firm experienced in producing products similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units.

D. Testing Agency Qualifications: An NRTL, an NVLAP, or an independent agency with the experience and capability to conduct testing and inspection indicated, as documented according to ASTM E 329; and with additional qualifications specified in individual Sections; and, where required by authorities having jurisdiction, that is acceptable to authorities.

E. Manufacturer's Technical Representative Qualifications: An authorized representative of manufacturer who is trained and approved by manufacturer to observe and inspect installation of manufacturer's products that are similar in material, design, and extent to those indicated for this Project.

F. Factory-Authorized Service Representative Qualifications: An authorized representative of manufacturer who is trained and approved by manufacturer to inspect installation of manufacturer's products that are similar in material, design, and extent to those indicated for this Project.

G. Integrated Exterior Mockups: Construct integrated exterior mockup . Coordinate installation of exterior envelope materials and products for which mockups are required in individual Specification Sections, along with supporting materials. Comply with requirements in "Mockups" Paragraph.

1.11 QUALITY CONTROL

A. Owner Responsibilities: Where quality-control services are indicated as Owner's responsibility, Owner will engage a qualified testing agency to perform these services.

1. Owner will furnish Contractor with names, addresses, and telephone numbers of testing agencies engaged and a description of types of testing and inspection they are engaged to perform.
2. Payment for these services will be made from testing and inspection allowances, as authorized by Change Orders.
3. Costs for retesting and reinspecting construction that replaces or is necessitated by work that failed to comply with the Contract Documents will be charged to Contractor.

B. Contractor Responsibilities: Tests and inspections not explicitly assigned to Owner are Contractor's responsibility. Perform additional quality-control activities, whether specified or not, to verify and document that the Work complies with requirements.

1. Unless otherwise indicated, provide quality-control services specified and those required by authorities having jurisdiction. Perform quality-control services required of Contractor by authorities having jurisdiction, whether specified or not.
2. Engage a qualified testing agency to perform quality-control services.

    a. Contractor shall not employ same entity engaged by Owner, unless agreed to in writing by Owner.

3. Notify testing agencies at least 24 hours in advance of time when Work that requires testing or inspection will be performed.
4. Where quality-control services are indicated as Contractor's responsibility, submit a certified written report, in duplicate, of each quality-control service.
5. Testing and inspection requested by Contractor and not required by the Contract Documents are Contractor's responsibility.
6. Submit additional copies of each written report directly to authorities having jurisdiction, when they so direct.

C. Retesting/Reinspecting: Regardless of whether original tests or inspections were Contractor's responsibility, provide quality-control services, including retesting and re-inspecting, for construction that replaced Work that failed to comply with the Contract Documents.

D. Testing Agency Responsibilities: Cooperate with Architect and Contractor in performance of duties. Provide qualified personnel to perform required tests and inspections.

1. Notify Architect and Contractor promptly of irregularities or deficiencies observed in the Work during performance of its services.
2. Determine the locations from which test samples will be taken and in which in-situ tests are conducted.
3. Conduct and interpret tests and inspections and state in each report whether tested and inspected work complies with or deviates from requirements.
4. Submit a certified written report, in duplicate, of each test, inspection, and similar quality-control service through Contractor.
5. Do not release, revoke, alter, or increase the Contract Document requirements or approve or accept any portion of the Work.
6. Do not perform duties of Contractor.

E. Manufacturer's Field Services: Where indicated, engage a factory-authorized service representative to inspect field-assembled components and equipment installation, including service connections. Report results in writing as specified in Section 01 33 00 "Submittal Procedures."

F. Manufacturer's Technical Services: Where indicated, engage a manufacturer's technical representative to observe and inspect the Work. Manufacturer's technical representative's services include participation in preinstallation conferences, examination of substrates and conditions, verification of materials, observation of Installer activities, inspection of completed portions of the Work, and submittal of written reports.

G. Associated Contractor Services: Cooperate with agencies and representatives performing required tests, inspections, and similar quality-control services, and provide reasonable auxiliary services as requested. Notify agency sufficiently in advance of operations to permit assignment of personnel. Provide the following:

1. Access to the Work.
2. Incidental labor and facilities necessary to facilitate tests and inspections.
3. Adequate quantities of representative samples of materials that require testing and inspection. Assist agency in obtaining samples.
4. Facilities for storage and field curing of test samples.
5. Delivery of samples to testing agencies.
6. Preliminary design mix proposed for use for material mixes that require control by testing agency.
7. Security and protection for samples and for testing and inspection equipment at Project site.

H. Coordination: Coordinate sequence of activities to accommodate required quality-assurance and quality-control services with a minimum of delay and to avoid necessity of removing and replacing construction to accommodate testing and inspection.

1. Schedule times for tests, inspections, obtaining samples, and similar activities.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 TEST AND INSPECTION LOG

A. Test and Inspection Log: Prepare a record of tests and inspections. Include the following:

1. Date test or inspection was conducted.
2. Description of the Work tested or inspected.
3. Date test or inspection results were transmitted to Architect.
4. Identification of testing agency or special inspector conducting test or inspection.

B. Maintain log at Project site. Post changes and revisions as they occur. Provide access to test and inspection log for Architect's reference during normal working hours.

1. Submit log at Project closeout as part of Project Record Documents.

3.2 REPAIR AND PROTECTION

A. General: On completion of testing, inspection, sample taking, and similar services, repair damaged construction and restore substrates and finishes.

1. Provide materials and comply with installation requirements specified in other Specification Sections or matching existing substrates and finishes. Restore patched areas and extend restoration into adjoining areas with durable seams that are as invisible as possible. Comply with the Contract Document requirements for cutting and patching in Section 01 73 00 "Execution."

B. Protect construction exposed by or for quality-control service activities.

C. Repair and protection are Contractor's responsibility, regardless of the assignment of responsibility for quality-control services.

END OF SECTION 01 40 00

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SECTION 01 42 00 - REFERENCES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 DEFINITIONS

A. General: Basic Contract definitions are included in the Conditions of the Contract.

B. "Approved": When used to convey Architect's action on Contractor's submittals, applications, and requests, "approved" is limited to Architect's duties and responsibilities as stated in the Conditions of the Contract.

C. "Directed": A command or instruction by Architect. Other terms including "requested," "authorized," "selected," "required," and "permitted" have the same meaning as "directed."

D. "Indicated": Requirements expressed by graphic representations or in written form on Drawings, in Specifications, and in other Contract Documents. Other terms including "shown," "noted," "scheduled," and "specified" have the same meaning as "indicated."

E. "Regulations": Laws, ordinances, statutes, and lawful orders issued by authorities having jurisdiction, and rules, conventions, and agreements within the construction industry that control performance of the Work.

F. "Furnish": Supply and deliver to Project site, ready for unloading, unpacking, assembly, installation, and similar operations.

G. "Install": Unload, temporarily store, unpack, assemble, erect, place, anchor, apply, work to dimension, finish, cure, protect, clean, and similar operations at Project site.

H. "Provide": Furnish and install, complete and ready for the intended use.

I. "Project Site": Space available for performing construction activities. The extent of Project site is shown on Drawings and may or may not be identical with the description of the land on which Project is to be built.

1.3 INDUSTRY STANDARDS

A. Applicability of Standards: Unless the Contract Documents include more stringent requirements, applicable construction industry standards have the same force and effect as if bound or copied directly into the Contract Documents to the extent referenced. Such standards are made a part of the Contract Documents by reference.

B. Publication Dates: Comply with standards in effect as of date of the Contract Documents unless otherwise indicated.

C. Copies of Standards: Each entity engaged in construction on Project should be familiar with industry standards applicable to its construction activity. Copies of applicable standards are not bound with the Contract Documents.

1. Where copies of standards are needed to perform a required construction activity, obtain copies directly from publication source.

1.4 ABBREVIATIONS AND ACRONYMS

A. Industry Organizations: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities in the following list. This information is subject to change and is believed to be accurate as of the date of the Contract Documents.

1. AABC - Associated Air Balance Council; www.aabc.com.
2. AAMA - American Architectural Manufacturers Association; www.aamanet.org.
3. AASHTO - American Association of State Highway and Transportation Officials; www.transportation.org.
4. ACI - American Concrete Institute; (Formerly: ACI International); www.abma.com.
5. ACPA - American Concrete Pipe Association; www.concrete-pipe.org.
6. AF&PA - American Forest & Paper Association; www.afandpa.org.
7. AGA - American Gas Association; www.aga.org.
8. AHAM - Association of Home Appliance Manufacturers; www.aham.org.
9. AHRI - Air-Conditioning, Heating, and Refrigeration Institute (The); www.ahrinet.org.
10. AI - Asphalt Institute; www.asphaltinstitute.org.
11. AIA - American Institute of Architects (The); www.aia.org.
12. AISC - American Institute of Steel Construction; www.aisc.org.
13. AISI - American Iron and Steel Institute; www.steel.org.
14. AITC - American Institute of Timber Construction; www.aitc-glulam.org.
15. AMCA - Air Movement and Control Association International, Inc.; www.amca.org.
16. ANSI - American National Standards Institute; www.ansi.org.
17. APA - APA - The Engineered Wood Association; www.apawood.org.
18. API - American Petroleum Institute; www.api.org.
19. ARI - Air-Conditioning & Refrigeration Institute; (See AHRI).
20. ARI - American Refrigeration Institute; (See AHRI).
21. ASCE - American Society of Civil Engineers; www.asce.org.
22. ASHRAE - American Society of Heating, Refrigerating and Air-Conditioning Engineers; www.ashrae.org.
23. ASME - ASME International; (American Society of Mechanical Engineers); www.asme.org.
24. ASSE - American Society of Safety Engineers (The); www.asse.org.
25. ASSE - American Society of Sanitary Engineering; www.asse-plumbing.org.
26. AWI - Architectural Woodwork Institute; www.awinet.org.
27. AWS - American Welding Society; www.aws.org.
28. AWWA - American Water Works Association; www.awwa.org.

29. BHMA - Builders Hardware Manufacturers Association; www.buildershardware.com.
30. CDA - Copper Development Association; www.copper.org.
31. CEA - Consumer Electronics Association; www.ce.org.
32. CFSEI - Cold-Formed Steel Engineers Institute; www.cfsei.org.
33. CGA - Compressed Gas Association; www.cganet.com.
34. CISCA - Ceilings & Interior Systems Construction Association; www.cisca.org.
35. CLFMI - Chain Link Fence Manufacturers Institute; www.chainlinkinfo.org.
36. CPA - Composite Panel Association; www.pbmdf.com.
37. CRI - Carpet and Rug Institute (The); www.carpet-rug.org.
38. CRSI - Concrete Reinforcing Steel Institute; www.crsi.org.
39. CSI - Construction Specifications Institute (The); www.csinet.org.
40. CTI - Cooling Technology Institute; (Formerly: Cooling Tower Institute); www.cti.org.
41. DASMA - Door and Access Systems Manufacturers Association; www.dasma.com.
42. DHI - Door and Hardware Institute; www.dhi.org.
43. ECIA - Electronic Components Industry Association; www.eciaonline.org.
44. EIMA - EIFS Industry Members Association; www.eima.com.
45. FCI - Fluid Controls Institute; www.fluidcontrolsinstitute.org.
46. FM Approvals - FM Approvals LLC; www.fmglobal.com.
47. FM Global - FM Global; (Formerly: FMG - FM Global); www.fmglobal.com.
48. FRSA - Florida Roofing, Sheet Metal & Air Conditioning Contractors Association, Inc.; www.floridaroof.com.
49. FSA - Fluid Sealing Association; www.fluidsealing.com.
50. FSC - Forest Stewardship Council U.S.; www.fscus.org.
51. GA - Gypsum Association; www.gypsum.org.
52. GANA - Glass Association of North America; www.glasswebsite.com.
53. GS - Green Seal; www.greenseal.org.
54. HI - Hydraulic Institute; www.pumps.org.
55. HI/GAMA - Hydronics Institute/Gas Appliance Manufacturers Association; (See AHRI).
56. HMMA - Hollow Metal Manufacturers Association; (See NAAMM).
57. HPVA - Hardwood Plywood & Veneer Association; www.hpva.org.
58. HPW - H. P. White Laboratory, Inc.; www.hpwhite.com.
59. IAS - International Accreditation Service; www.iasonline.org.
60. IAS - International Approval Services; (See CSA).
61. ICC - International Code Council; www.iccsafe.org.
62. IEEE - Institute of Electrical and Electronics Engineers, Inc. (The); www.ieee.org.
63. IES - Illuminating Engineering Society; (Formerly: Illuminating Engineering Society of North America); www.ies.org.
64. IEST - Institute of Environmental Sciences and Technology; www.iest.org.
65. IGMA - Insulating Glass Manufacturers Alliance; www.igmaonline.org.
66. Intertek - Intertek Group; (Formerly: ETL SEMCO; Intertek Testing Service NA); www.intertek.com.
67. ISAS - Instrumentation, Systems, and Automation Society (The); (See ISA).
68. ISFA - International Surface Fabricators Association; (Formerly: International Solid Surface Fabricators Association); www.isfanow.org.
69. ISO - International Organization for Standardization; www.iso.org.
70. ISSFA - International Solid Surface Fabricators Association; (See ISFA).
71. LMA - Laminating Materials Association; (See CPA).
72. MBMA - Metal Building Manufacturers Association; www.mbma.com.

73. MCA - Metal Construction Association; www.metalconstruction.org.
74. MFMA - Metal Framing Manufacturers Association, Inc.; www.metalframingmfg.org.
75. MHIA - Material Handling Industry of America; www.mhia.org.
76. MPI - Master Painters Institute; www.paintinfo.com.
77. MSS - Manufacturers Standardization Society of The Valve and Fittings Industry Inc.; www.mss-hq.org.
78. NAAMM - National Association of Architectural Metal Manufacturers; www.naamm.org.
79. NACE - NACE International; (National Association of Corrosion Engineers International); www.nace.org.
80. NAIMA - North American Insulation Manufacturers Association; www.naima.org.
81. NBI - New Buildings Institute; www.newbuildings.org.
82. NCMA - National Concrete Masonry Association; www.ncma.org.
83. NEBB - National Environmental Balancing Bureau; www.nebb.org.
84. NECA - National Electrical Contractors Association; www.necanet.org.
85. NEMA - National Electrical Manufacturers Association; www.nema.org.
86. NETA - InterNational Electrical Testing Association; www.netaworld.org.
87. NFPA - National Fire Protection Association; www.nfpa.org.
88. NFRC - National Fenestration Rating Council; www.nfrc.org.
89. NLGA - National Lumber Grades Authority; www.nlga.org.
90. NOMMA - National Ornamental & Miscellaneous Metals Association; www.nomma.org.
91. NRCA - National Roofing Contractors Association; www.nrca.net.
92. NRMCA - National Ready Mixed Concrete Association; www.nrmca.org.
93. NSF - NSF International; www.nsf.org.
94. NSPE - National Society of Professional Engineers; www.nspe.org.
95. OSHA - Occupational Safety and Health Administration; www.osha.gov
96. PDI - Plumbing & Drainage Institute; www.pdionline.org.
97. RCSC - Research Council on Structural Connections; www.boltcouncil.org.
98. RFCI - Resilient Floor Covering Institute; www.rfci.com.
99. SAE - SAE International; www.sae.org.
100. SDI - Steel Deck Institute; www.sdi.org.
101. SDI - Steel Door Institute; www.steeldoor.org.
102. SEI/ASCE - Structural Engineering Institute/American Society of Civil Engineers; (See ASCE).
103. SIA - Security Industry Association; www.siaonline.org.
104. SJI - Steel Joist Institute; www.steeljoist.org.
105. SMACNA - Sheet Metal and Air Conditioning Contractors' National Association; www.smacna.org.
106. SPFA - Spray Polyurethane Foam Alliance; www.sprayfoam.org.
107. SPIB - Southern Pine Inspection Bureau; www.spib.org.
108. SPRI - Single Ply Roofing Industry; www.spri.org.
109. SSPC - SSPC: The Society for Protective Coatings; www.sspc.org.
110. STI - Steel Tank Institute; www.steeltank.com.
111. SWPA - Submersible Wastewater Pump Association; www.swpa.org.
112. TCNA - Tile Council of North America, Inc.; www.tileusa.com.
113. TIA - Telecommunications Industry Association (The); (Formerly: TIA/EIA - Telecommunications Industry Association/Electronic Industries Alliance); www.tiaonline.org.

114. TIA/EIA - Telecommunications Industry Association/Electronic Industries Alliance; (See TIA).
115. TMS - The Masonry Society; www.masonrysociety.org.
116. UL - Underwriters Laboratories Inc.; www.ul.com.
117. UNI - Uni-Bell PVC Pipe Association; www.uni-bell.org.
118. USGBC - U.S. Green Building Council; www.usgbc.org.
119. WCMA - Window Covering Manufacturers Association; www.wcmanet.org.
120. WDMA - Window & Door Manufacturers Association; www.wdma.com.
121. WI - Woodwork Institute; www.wicnet.org.

B. Code Agencies: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities in the following list. This information is believed to be accurate as of the date of the Contract Documents.

1. ICC - International Code Council; www.iccsafe.org.

C. Standards and Regulations: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the standards and regulations in the following list. This information is subject to change and is believed to be accurate as of the date of the Contract Documents.

1. CFR - Code of Federal Regulations; Available from Government Printing Office; www.gpo.gov/fdsys.
2. FS - Federal Specification; Available from DLA Document Services; www.quicksearch.dla.mil.

    a. Available from Defense Standardization Program; www.dsp.dla.mil.
    b. Available from General Services Administration; www.gsa.gov.
    c. Available from National Institute of Building Sciences/Whole Building Design Guide; www.wbdg.org/ccb.

3. USAB - United States Access Board; www.access-board.gov.
4. USATBCB - U.S. Architectural & Transportation Barriers Compliance Board; (See USAB).

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 01 42 00

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SECTION 01 50 00 - TEMPORARY FACILITIES AND CONTROLS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section includes requirements for temporary utilities, support facilities, and security and protection facilities.

B. Related Requirements:

1. Section 01 10 00 "Summary" for work restrictions and limitations on utility interruptions.
2. Section 02 41 19 "Selective Demolition" for demolition of existing building components.

1.3 USE CHARGES

A. General: Installation and removal of and use charges for temporary facilities shall be included in the Contract Sum unless otherwise indicated. Allow other entities engaged in the Project to use temporary services and facilities without cost, including, but not limited to, Owner's representatives, Architect, testing agencies, and authorities having jurisdiction.

1.4 INFORMATIONAL SUBMITTALS

A. Site Utilization Plan: Show temporary facilities, temporary utility lines and connections, staging areas, construction site entrances, vehicle circulation, and parking areas for construction personnel.

B. Project Identification and Temporary Signs: Show fabrication and installation details, including plans, elevations, details, layouts, typestyles, graphic elements, and message content.

C. Erosion- and Sedimentation-Control Plan: Show compliance with requirements of EPA Construction General Permit or authorities having jurisdiction, whichever is more stringent.

D. Fire-Safety Program: Show compliance with requirements of NFPA 241 and authorities having jurisdiction. Indicate Contractor personnel responsible for management of fire-prevention program.

E. Moisture-and Mold-Protection Plan: Describe procedures and controls for protecting materials and construction from water absorption and damage and mold.

F. Weather Intrusion Plan: Describe and illustrate procedures and controls, including protective temporary barriers, for protecting existing constructions to remain from damage due to weather intrusion.

G. Dust- and HVAC-Control Plan: Submit coordination drawing and narrative that indicates the dust- and HVAC-control measures proposed for use, proposed locations, and proposed time frame for their operation. Include the following:

1. Locations of dust-control partitions at each phase of work.
2. HVAC system isolation schematic drawing.
3. Location of proposed air-filtration system discharge.
4. Waste-handling procedures.
5. Other dust-control measures.

1.5 QUALITY ASSURANCE

A. Electric Service: Comply with NECA, NEMA, and UL standards and regulations for temporary electric service. Install service to comply with NFPA 70.

B. Tests and Inspections: Arrange for authorities having jurisdiction to test and inspect each temporary utility before use. Obtain required certifications and permits.

C. Accessible Temporary Egress: Comply with applicable provisions in the United States Access Board's ADA-ABA Accessibility Guidelines.

1.6 PROJECT CONDITIONS

A. Temporary Use of Permanent Facilities: Engage Installer of each permanent service to assume responsibility for operation, maintenance, and protection of each permanent service during its use as a construction facility before Owner's acceptance, regardless of previously assigned responsibilities.

PART 2 - PRODUCTS

2.1 TEMPORARY FACILITIES

A. Field Offices, General: Prefabricated or mobile units with serviceable finishes, temperature controls, and foundations adequate for normal loading.

B. Common-Use Field Office: Of sufficient size to accommodate needs of Owner, Architect, Construction Manager~~]~~, and construction personnel office activities and to accommodate Project meetings specified in other Division 01 Sections. Keep office clean and orderly.

2.2 EQUIPMENT

A. Fire Extinguishers: Portable, UL rated; with class and extinguishing agent as required by locations and classes of fire exposures.

1. Provide additional temporary fire extinguishers to provide a maximum travel distance of 75 feet from any point in the area of work to an extinguisher. Extinguishers shall be a minimum 4A:60BC:C 10-pound capacity type.

B. HVAC Equipment: Provide vented, self-contained, liquid-propane-gas or fuel-oil heaters with individual space thermostatic control.

1. Use of gasoline-burning space heaters, open-flame heaters, or salamander-type heating units is prohibited.
2. Heating Units: Listed and labeled for type of fuel being consumed, by a qualified testing agency acceptable to authorities having jurisdiction, and marked for intended location and application.

C. Air-Filtration Units: Primary and secondary HEPA-filter-equipped portable units with four-stage filtration. Provide single switch for emergency shutoff. Configure to run continuously.

PART 3 - EXECUTION

3.1 TEMPORARY FACILITIES, GENERAL

A. Conservation: Coordinate construction and use of temporary facilities with consideration given to conservation of energy, water, and materials. Coordinate use of temporary utilities to minimize waste.

1. Salvage materials and equipment involved in performance of, but not actually incorporated into, the Work. See other Sections for disposition of salvaged materials that are designated as Owner's property.

3.2 INSTALLATION, GENERAL

A. Locate facilities where they will serve Project adequately and result in minimum interference with performance of the Work. Relocate and modify facilities as required by progress of the Work.

1. Locate facilities to limit site disturbance as specified in Section 01 10 00 "Summary."

B. Provide each facility ready for use when needed to avoid delay. Do not remove until facilities are no longer needed or are replaced by authorized use of completed permanent facilities.

3.3 TEMPORARY UTILITY INSTALLATION

A. General: Install temporary service or connect to existing service.

1. Arrange with utility company, Owner, and existing users for time when service can be interrupted, if necessary, to make connections for temporary services.

B. Sewers and Drainage: Provide temporary utilities to remove effluent lawfully.

1. Connect temporary sewers to municipal system as directed by authorities having jurisdiction.

C. Water Service: Install water service and distribution piping in sizes and pressures adequate for construction.

D. Sanitary Facilities: Provide temporary toilets, wash facilities, and drinking water for use of construction personnel. Comply with requirements of authorities having jurisdiction for type, number, location, operation, and maintenance of fixtures and facilities.

E. Temporary Heating and Cooling: Provide temporary heating and cooling required by construction activities for curing or drying of completed installations or for protecting installed construction from adverse effects of low temperatures or high humidity. Select equipment that will not have a harmful effect on completed installations or elements being installed.

1. Provide temporary dehumidification systems when required to reduce ambient and substrate moisture levels to level required to allow installation or application of finishes and their proper curing or drying.

F. Isolation of Work Areas in Occupied Facilities: Prevent dust, fumes, and odors from entering occupied areas.

G. Electric Power Service: Provide electric power service and distribution system of sufficient size, capacity, and power characteristics required for construction operations.

1. Install electric power service overhead, unless otherwise indicated.

H. Lighting: Provide temporary lighting with local switching that provides adequate illumination for construction operations, observations, inspections, and traffic conditions.

1. Install and operate temporary lighting that fulfills security and protection requirements without operating entire system.

3.4 SUPPORT FACILITIES INSTALLATION

A. General: Comply with the following:

1. Provide construction for temporary offices, shops, and sheds located within construction area or within 30 feet of building lines that is noncombustible according to ASTM E 136. Comply with NFPA 241.

2. Maintain support facilities until Architect schedules Substantial Completion inspection. Remove before Substantial Completion. Personnel remaining after Substantial Completion will be permitted to use permanent facilities, under conditions acceptable to Owner.

B. Temporary Roads and Paved Areas: Construct and maintain temporary roads and paved areas adequate for construction operations. Locate temporary roads and paved areas within construction limits indicated on Drawings.

1. Provide dust-control treatment that is nonpolluting and nontracking. Reapply treatment as required to minimize dust.

C. Traffic Controls: Comply with requirements of authorities having jurisdiction.

1. Protect existing site improvements to remain including curbs, pavement, and utilities.
2. Maintain access for fire-fighting equipment and access to fire hydrants.

D. Parking: Use designated areas of Owner's existing parking areas for construction personnel.

E. Dewatering Facilities and Drains: Comply with requirements of authorities having jurisdiction. Maintain Project site, excavations, and construction free of water.

1. Dispose of rainwater in a lawful manner that will not result in flooding Project or adjoining properties or endanger permanent Work or temporary facilities.

F. Project Signs: Provide Project signs as indicated. Unauthorized signs are not permitted.

1. Identification Signs: Provide Project identification signs as coordinated by Owner and Architect. If necessary, provide mounting location for Architect's job sign on temporary site enclosure fence.
2. Temporary Signs: Provide other signs as indicated and as required to inform public and individuals seeking entrance to Project.

3. Maintain and touch up signs so they are legible at all times.

G. Waste Disposal Facilities: Comply with requirements specified in Section 01 74 19 "Construction Waste Management and Disposal."

H. Lifts and Hoists: Provide facilities necessary for hoisting materials and personnel.

1. Truck cranes and similar devices used for hoisting materials are considered "tools and equipment" and not temporary facilities.

I. Temporary Stairs and Steps: Until permanent stairs are available, provide temporary stairs where ladders are not adequate.

J. Temporary Use of Permanent Stairs and Steps: Use of new stairs and steps for construction traffic will be permitted, provided stairs are protected and finishes restored to new condition at time of Substantial Completion.

3.5 SECURITY AND PROTECTION FACILITIES INSTALLATION

A. Protection of Existing Facilities: Protect existing vegetation, equipment, structures, utilities, and other improvements at Project site and on adjacent properties, except those indicated to be removed or altered. Repair damage to existing facilities.

1. Where access to adjacent properties is required in order to affect protection of existing facilities, obtain written permission from adjacent property owner to access property for that purpose.

B. Environmental Protection: Provide protection, operate temporary facilities, and conduct construction as required to comply with environmental regulations and that minimize possible air, waterway, and subsoil contamination or pollution or other undesirable effects.

C. Temporary Erosion and Sedimentation Control: Comply with requirements of FDEP Generic Permit for Stormwater Discharge from Large and Small Construction Activities or other authorities having jurisdiction, whichever is more stringent and requirements specified in Section 31 00 00 " Site Clearing."

D. Temporary Erosion and Sedimentation Control: Provide measures to prevent oil erosion and discharge of soil-bearing water runoff and airborne dust to undisturbed areas and to adjacent properties and walkways, according to requirements of FDEP Generic Permit for Stormwater Discharge from Large and Small Construction Activities or other authorities having jurisdiction, whichever is more stringent.

1. Verify that flows of water redirected from construction areas or generated by construction activity do not enter or cross tree- or plant-protection zones.
2. Inspect, repair, and maintain erosion- and sedimentation-control measures during construction until permanent vegetation has been established.
3. Clean, repair, and restore adjoining properties and roads affected by erosion and sedimentation from Project site during the course of Project.
4. Remove erosion and sedimentation controls and restore and stabilize areas disturbed during removal.

E. Stormwater Control: Comply with requirements of authorities having jurisdiction. Provide barriers in and around excavations and subgrade construction to prevent flooding by runoff of stormwater from heavy rains.

F. Tree and Plant Protection: Install temporary fencing located as indicated or outside the drip line of trees to protect vegetation from damage from construction operations. Protect tree root systems from damage, flooding, and erosion.

G. Pest Control: Engage pest-control service to recommend practices to minimize attraction and harboring of rodents, roaches, and other pests and to perform extermination and control procedures at regular intervals so Project will be free of pests and their residues at Substantial Completion. Perform control operations lawfully, using materials approved by authorities having jurisdiction.

H. Site Enclosure Fence: Before construction operations begin, furnish and install site enclosure fence in a manner that will prevent people from easily entering site except by entrance gates.

1. Extent of Fence: As required to enclose entire Project site or portion determined sufficient to accommodate construction operations.
2. Maintain security by limiting number of keys and restricting distribution to authorized personnel. Furnish one set of keys to Owner.

I. Security Enclosure and Lockup: Install temporary enclosure around partially completed areas of construction. Provide lockable entrances to prevent unauthorized entrance, vandalism, theft, and similar violations of security. Lock entrances at end of each workday.

J. Barricades, Warning Signs, and Lights: Comply with requirements of authorities having jurisdiction for erecting structurally adequate barricades, including warning signs and lighting.

K. Temporary Egress: Maintain temporary egress from existing occupied facilities as indicated and as required by authorities having jurisdiction.

L. Temporary Enclosures: Provide temporary enclosures for protection of construction, in progress and completed, from exposure, foul weather, other construction operations, and similar activities. Provide temporary weathertight enclosure for building exterior.

1. Where heating or cooling is needed and permanent enclosure is incomplete, insulate temporary enclosures.

M. Temporary Fire Protection: Install and maintain temporary fire-protection facilities of types needed to protect against reasonably predictable and controllable fire losses. Comply with NFPA 241; manage fire-prevention program.

1. Prohibit smoking in construction areas. Comply with additional limits on smoking specified in other Sections.
2. Supervise welding operations, combustion-type temporary heating units, and similar sources of fire ignition according to requirements of authorities having jurisdiction.
3. Develop and supervise an overall fire-prevention and -protection program for personnel at Project site. Review needs with local fire department and establish procedures to be followed. Instruct personnel in methods and procedures. Post warnings and information.
4. Provide temporary standpipes and hoses for fire protection. Hang hoses with a warning sign stating that hoses are for fire-protection purposes only and are not to be removed. Match hose size with outlet size and equip with suitable nozzles.

3.6 MOISTURE AND MOLD CONTROL

A. Contractor's Moisture-Protection Plan: Describe delivery, handling, storage, installation, and protection provisions for materials subject to water absorption or water damage.

1. Indicate procedures for discarding water-damaged materials, protocols for mitigating water intrusion into completed Work, and replacing water-damaged Work.

2. Indicate sequencing of work that requires water, such as concrete cutting, and describe plans for dealing with water from these operations. Show procedures for verifying that wet construction has dried sufficiently to permit installation of finish materials.
3. Indicate methods to be used to avoid trapping water in finished work.

B. Contractor's Weather Intrusion Plan: Describe and illustrate procedures and controls, including protective temporary barriers, for protecting existing constructions to remain from damage due to weather intrusion.

1. Provide annotated plan drawing, for review and approval by Architect, showing type and location of proposed protective barriers.
2. Identify sequencing of installation relative to Exposed and Partially Enclosed construction periods identified below.

C. Exposed Construction Period: Before installation of weather barriers, when materials are subject to wetting and exposure and to airborne mold spores, protect as follows:

1. Protect porous materials from water damage.
2. Protect stored and installed material from flowing or standing water.
3. Keep porous and organic materials from coming into prolonged contact with concrete.
4. Remove standing water from decks.
5. Keep deck openings covered or dammed.

D. Partially Enclosed Construction Period: After installation of weather barriers but before full enclosure and conditioning of building, when installed materials are still subject to infiltration of moisture and ambient mold spores, protect as follows:

1. Do not load or install drywall or other porous materials or components, or items with high organic content, into partially enclosed building.
2. Keep interior spaces reasonably clean and protected from water damage.
3. Periodically collect and remove waste containing cellulose or other organic matter.
4. Discard or replace water-damaged material.
5. Do not install material that is wet.
6. Discard and replace stored or installed material that begins to grow mold.
7. Perform work in a sequence that allows wet materials adequate time to dry before enclosing the material in gypsum board or other interior finishes.

E. Controlled Construction Period: After completing and sealing of the building enclosure but prior to the full operation of permanent HVAC systems, maintain as follows:

1. Control moisture and humidity inside building by maintaining effective dry-in conditions.
2. Use temporary or permanent HVAC system to control humidity within ranges specified for installed and stored materials.
3. Comply with manufacturer's written instructions for temperature, relative humidity, and exposure to water limits.

3.7 OPERATION, TERMINATION, AND REMOVAL

A. Supervision: Enforce strict discipline in use of temporary facilities. To minimize waste and abuse, limit availability of temporary facilities to essential and intended uses.

B. Maintenance: Maintain facilities in good operating condition until removal.

1. Maintain operation of temporary enclosures, heating, cooling, humidity control, ventilation, and similar facilities on a 24-hour basis where required to achieve indicated results and to avoid possibility of damage.

C. Temporary Facility Changeover: Do not change over from using temporary security and protection facilities to permanent facilities until Substantial Completion.

D. Termination and Removal: Remove each temporary facility when need for its service has ended, when it has been replaced by authorized use of a permanent facility, or no later than Substantial Completion. Complete or, if necessary, restore permanent construction that may have been delayed because of interference with temporary facility. Repair damaged Work, clean exposed surfaces, and replace construction that cannot be satisfactorily repaired.

1. Materials and facilities that constitute temporary facilities are property of Contractor. Owner reserves right to take possession of Project identification signs.
2. At Substantial Completion, repair, renovate, and clean permanent facilities used during construction period. Comply with final cleaning requirements specified in Section 01 77 00 "Closeout Procedures."

END OF SECTION 01 50 00

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SECTION 01 60 00 - PRODUCT REQUIREMENTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section includes administrative and procedural requirements for selection of products for use in Project; product delivery, storage, and handling; manufacturers' standard warranties on products; special warranties; and comparable products.

B. Related Requirements:

1. Section 01 25 00 "Substitution Procedures" for requests for substitutions.
2. Section 01 42 00 "References" for applicable industry standards for products specified.

1.3 DEFINITIONS

A. Products: Items obtained for incorporating into the Work, whether purchased for Project or taken from previously purchased stock. The term "product" includes the terms "material," "equipment," "system," and terms of similar intent.

1. Named Products: Items identified by manufacturer's product name, including make or model number or other designation shown or listed in manufacturer's published product literature that is current as of date of the Contract Documents.
2. Comparable Product: Product that is demonstrated and approved by Architect through submittal process to have the indicated qualities related to type, function, dimension, in-service performance, physical properties, appearance, and other characteristics that equal or exceed those of specified product.

B. Basis-of-Design Product Specification: A specification in which a single manufacturer's product is named and accompanied by the words "basis-of-design product," including make or model number or other designation. In addition to the basis-of-design product description, product attributes and characteristics may be listed to establish the significant qualities related to type, function, in-service performance and physical properties, weight, dimension, durability, visual characteristics, and other special features and requirements for purposes of evaluating comparable products of additional manufacturers named in the specification.

C. Subject to Compliance with Requirements: Where the phrase "Subject to compliance with requirements" introduces a product selection procedure in an individual Specification Section, provide products qualified under the specified product procedure. In the event that a named product or product by a named manufacturer does not meet the other requirements of the specifications, select another named product or product from another named manufacturer that does meet the requirements of the specifications. Submit a comparable product request, if applicable.

1.4 ACTION SUBMITTALS

A. Comparable Product Request Submittal: Submit request for consideration of each comparable product. Identify basis-of-design product or fabrication or installation method to be replaced. Include Specification Section number and title and Drawing numbers and titles.

1. Include data to indicate compliance with the requirements specified in "Comparable Products" Article.
2. Architect's Action: If necessary, Architect will request additional information or documentation for evaluation within seven days of receipt of a comparable product request. Architect will notify Contractor of approval or rejection of proposed comparable product request within 15 days of receipt of request, or seven days of receipt of additional information or documentation, whichever is later.

    a. Form of Architect's Approval of Submittal: As specified in Section 01 33 00 "Submittal Procedures."
    b. Use product specified if Architect does not issue a decision on use of a comparable product request within time allocated.

B. Basis-of-Design Product Specification Submittal: Comply with requirements in Section 01 33 00 "Submittal Procedures." Show compliance with requirements.

1.5 QUALITY ASSURANCE

A. Compatibility of Options: If Contractor is given option of selecting between two or more products for use on Project, select product compatible with products previously selected, even if previously selected products were also options.

B. Identification of Products: Except for required labels and operating data, do not attach or imprint manufacturer or product names or trademarks on exposed surfaces of products or equipment that will be exposed to view in occupied spaces or on the exterior.

1. Labels: Locate required product labels and stamps on a concealed surface, or, where required for observation following installation, on a visually accessible surface that is not conspicuous.
2. Equipment Nameplates: Provide a permanent nameplate on each item of service-connected or power-operated equipment. Locate on a visually accessible but inconspicuous surface. Include information essential for operation, including the following:

a. Name of product and manufacturer.
b. Model and serial number.
c. Capacity.
d. Speed.
e. Ratings.

3. See individual identification sections in Divisions 21, 22, 23, and 26 for additional identification requirements.

1.6 PRODUCT DELIVERY, STORAGE, AND HANDLING

A. Deliver, store, and handle products using means and methods that will prevent damage, deterioration, and loss, including theft and vandalism. Comply with manufacturer's written instructions.

B. Delivery and Handling:

1. Schedule delivery to minimize long-term storage at Project site and to prevent overcrowding of construction spaces.
2. Coordinate delivery with installation time to ensure minimum holding time for items that are flammable, hazardous, easily damaged, or sensitive to deterioration, theft, and other losses.
3. Deliver products to Project site in an undamaged condition in manufacturer's original sealed container or other packaging system, complete with labels and instructions for handling, storing, unpacking, protecting, and installing.
4. Inspect products on delivery to determine compliance with the Contract Documents and to determine that products are undamaged and properly protected.

C. Storage:

1. Store products to allow for inspection and measurement of quantity or counting of units.
2. Store materials in a manner that will not endanger Project structure.
3. Store products that are subject to damage by the elements, under cover in a weathertight enclosure above ground, with ventilation adequate to prevent condensation.
4. Protect foam plastic from exposure to sunlight, except to extent necessary for period of installation and concealment.
5. Comply with product manufacturer's written instructions for temperature, humidity, ventilation, and weather-protection requirements for storage.
6. Protect stored products from damage and liquids from freezing.

1.7 PRODUCT WARRANTIES

A. Warranties specified in other Sections shall be in addition to, and run concurrent with, other warranties required by the Contract Documents. Manufacturer's disclaimers and limitations on product warranties do not relieve Contractor of obligations under requirements of the Contract Documents.

1. Manufacturer's Warranty: Written warranty furnished by individual manufacturer for a particular product and specifically endorsed by manufacturer to Owner.
2. Special Warranty: Written warranty required by the Contract Documents to provide specific rights for Owner.

B. Special Warranties: Prepare a written document that contains appropriate terms and identification, ready for execution.

1. Manufacturer's Standard Form: Modified to include Project-specific information and properly executed.
2. Specified Form: When specified forms are included with the Specifications, prepare a written document using indicated form properly executed.
3. See other Sections for specific content requirements and particular requirements for submitting special warranties.

C. Submittal Time: Comply with requirements in Section 01 77 00 "Closeout Procedures."

PART 2 - PRODUCTS

2.1 PRODUCT SELECTION PROCEDURES

A. General Product Requirements: Provide products that comply with the Contract Documents, are undamaged and, unless otherwise indicated, are new at time of installation.

1. Provide products complete with accessories, trim, finish, fasteners, and other items needed for a complete installation and indicated use and effect.
2. Standard Products: If available, and unless custom products or nonstandard options are specified, provide standard products of types that have been produced and used successfully in similar situations on other projects.
3. Owner reserves the right to limit selection to products with warranties meeting requirements of the Contract Documents.
4. Where products are accompanied by the term "as selected," Architect will make selection.

B. Product Selection Procedures:

1. Sole Product: Where Specifications name a single manufacturer and product, provide the named product that complies with requirements. Comparable products or substitutions for Contractor's convenience will not be considered.
2. Sole Manufacturer/Source: Where Specifications name a single manufacturer or source, provide a product by the named manufacturer or source that complies with requirements. Comparable products or substitutions for Contractor's convenience will not be considered.
3. Limited List of Products: Where Specifications include a list of names of both manufacturers and products, provide one of the products listed that complies with requirements. Comparable products or substitutions for Contractor's convenience will not be considered unless otherwise indicated.

4. Basis-of-Design Product: Where Specifications name a product, or refer to a product indicated on Drawings, and include a list of manufacturers, provide the specified or indicated product or a comparable product by one of the other named manufacturers. Drawings and Specifications indicate sizes, profiles, dimensions, and other characteristics that are based on the product named. Comply with requirements in "Comparable Products" Article for consideration of an unnamed product by one of the other named manufacturers.

    a. For approval of products by unnamed manufacturers, comply with requirements in Section 01 25 00 "Substitution Procedures" for substitutions for convenience.

C. Visual Matching Specification: Where Specifications require "match Architect's sample," provide a product that complies with requirements and matches Architect's sample. Architect's decision will be final on whether a proposed product matches.

D. Visual Selection Specification: Where Specifications include the phrase "as selected by Architect from manufacturer's full range" or similar phrase, select a product that complies with requirements. Architect will select color, gloss, pattern, density, or texture from manufacturer's product line that includes both standard and premium items.

2.2 COMPARABLE PRODUCTS

A. Conditions for Consideration of Comparable Products: Architect will consider Contractor's request for comparable product when the following conditions are satisfied. If the following conditions are not satisfied, Architect may return requests without action, except to record noncompliance with these requirements:

1. Evidence that proposed product does not require revisions to the Contract Documents, is consistent with the Contract Documents, will produce the indicated results, and is compatible with other portions of the Work. Detailed comparison of significant qualities of proposed product with those named in the Specifications. Significant product qualities include attributes such as type, function, in-service performance and physical properties, weight, dimension, durability, visual characteristics, and other specific features and requirements.
2. Evidence that proposed product provides specified warranty.
3. List of similar installations for completed projects with project names and addresses and names and addresses of architects and owners, if requested.
4. Samples, if requested.

B. Submittal Requirements: Approval by the Architect of Contractor's request for use of comparable product is not intended to satisfy other submittal requirements. Comply with specified submittal requirements.

PART 3 - EXECUTION (Not Used)

END OF SECTION 01 60 00

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SECTION 01 73 00 - EXECUTION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section includes general administrative and procedural requirements governing execution of the Work including, but not limited to, the following:

1. Construction layout.
2. Field engineering and surveying.
3. Installation of the Work.
4. Cutting and patching.
5. Progress cleaning.
6. Starting and adjusting.
7. Protection of installed construction.

B. Related Requirements:

1. Section 01 10 00 "Summary" for limits on use of Project site.
2. Section 01 33 00 "Submittal Procedures" for submitting surveys.
3. Section 01 77 00 "Closeout Procedures" for submitting final property survey with Project Record Documents, recording of Owner-accepted deviations from indicated lines and levels, replacing defective work, and final cleaning.
4. Section 02 41 19 “Selective Demolition” for demolition and removal of existing building components.

1.3 DEFINITIONS

A. Cutting: Removal of in-place construction necessary to permit installation or performance of subsequent work.

B. Patching: Fitting and repair work required to restore construction to original conditions after installation of subsequent work.

1.4 PREINSTALLATION MEETINGS

A. Selective Demolition and Cutting and Patching Conference: Conduct conference at Project site.

1. Prior to commencing work requiring demolition, and cutting and patching, review extent of cutting and patching anticipated and examine procedures for ensuring satisfactory result from cutting and patching work. Require representatives of each entity directly concerned with cutting and patching to attend, including the following:

    a. Contractor's superintendent.
    b. Trade supervisor responsible for cutting operations.
    c. Trade supervisor(s) responsible for patching of each type of substrate.
    d. Mechanical, electrical, and utilities subcontractors' supervisors, to the extent each trade is affecting by cutting and patching operations.

2. Review areas of potential interference and conflict. Coordinate procedures and resolve potential conflicts before proceeding.

1.5 INFORMATIONAL SUBMITTALS

A. Qualification Data: For professional engineer.

B. Certificates: Submit certificate signed by professional engineer certifying that location and elevation of improvements comply with requirements.

C. Cutting and Patching Plan: Submit plan describing procedures at least 10 days prior to the time cutting and patching will be performed. Include the following information:

1. Extent: Describe reason for and extent of each occurrence of cutting and patching.
2. Changes to In-Place Construction: Describe anticipated results. Include changes to structural elements and operating components as well as changes in building appearance and other significant visual elements.
3. Dates: Indicate when cutting and patching will be performed.
4. Utilities and Mechanical and Electrical Systems: List services and systems that cutting and patching procedures will disturb or affect. List services and systems that will be relocated and those that will be temporarily out of service. Indicate length of time permanent services and systems will be disrupted.

D. Final Property Survey: Submit five copies showing the Work performed and record survey data.

1.6 QUALITY ASSURANCE

A. Cutting and Patching: Comply with requirements for and limitations on cutting and patching of construction elements.

1. Structural Elements: When cutting and patching structural elements, notify Architect of locations and details of cutting and await directions from Architect before proceeding. Shore, brace, and support structural elements during cutting and patching. Do not cut and patch structural elements in a manner that could change their load-carrying capacity or increase deflection.

2. Operational Elements: Do not cut and patch operating elements and related components in a manner that results in reducing their capacity to perform as intended or that results in increased maintenance or decreased operational life or safety. Operational elements include the following:

    a. Primary operational systems and equipment.
    b. Fire separation assemblies.
    c. Fire-suppression systems.
    d. Plumbing piping systems.
    e. Mechanical systems piping and ducts.
    f. Fire-detection and -alarm systems.
    g. Electrical wiring systems.

3. Other Construction Elements: Do not cut and patch other construction elements or components in a manner that could change their load-carrying capacity, that results in reducing their capacity to perform as intended, or that results in increased maintenance or decreased operational life or safety. Other construction elements include but are not limited to the following:

    a. Water, moisture, or vapor barriers.
    b. Membranes and flashings.
    c. Exterior curtain-wall construction.
    d. Piping, ductwork, vessels, and equipment.

B. Manufacturer's Installation Instructions: Obtain and maintain on-site manufacturer's written recommendations and instructions for installation of products and equipment.

PART 2 - PRODUCTS

2.1 MATERIALS

A. General: Comply with requirements specified in other Sections.

B. In-Place Materials: Use materials for patching identical to in-place materials. For exposed surfaces, use materials that visually match in-place adjacent surfaces to the fullest extent possible.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Existing Conditions: The existence and location of underground and other utilities and construction indicated as existing are not guaranteed. Before beginning sitework, investigate and verify the existence and location of underground utilities, mechanical and electrical systems, and other construction affecting the Work.

1. Before construction, verify the location and invert elevation at points of connection of sanitary sewer, storm sewer, and water-service piping; underground electrical services; and other utilities.
2. Furnish location data for work related to Project that must be performed by public utilities serving Project site.

B. Written Report: Where a written report listing conditions detrimental to performance of the Work is required by other Sections, include the following:

1. Description of the Work.
2. List of detrimental conditions, including substrates.
3. List of unacceptable installation tolerances.
4. Recommended corrections.

C. Proceed with installation only after unsatisfactory conditions have been corrected. Proceeding with the Work indicates acceptance of surfaces and conditions.

3.2 PREPARATION

A. Existing Utility Information: Furnish information to local utility that is necessary to adjust, move, or relocate existing utility structures, utility poles, lines, services, or other utility appurtenances located in or affected by construction. Coordinate with authorities having jurisdiction.

B. Field Measurements: Take field measurements as required to fit the Work properly. Recheck measurements before installing each product. Where portions of the Work are indicated to fit to other construction, verify dimensions of other construction by field measurements before fabrication. Coordinate fabrication schedule with construction progress to avoid delaying the Work.

C. Space Requirements: Verify space requirements and dimensions of items shown diagrammatically on Drawings.

D. Review of Contract Documents and Field Conditions: Immediately on discovery of the need for clarification of the Contract Documents caused by differing field conditions outside the control of Contractor, submit a request for information to Architect according to requirements in Section 01 31 00 "Project Management and Coordination."

3.3 CONSTRUCTION LAYOUT

A. Verification: Before proceeding to lay out the Work, verify layout information shown on Drawings, in relation to the property survey and existing benchmarks. If discrepancies are discovered, notify Architect promptly.

B. General: Engage a professional engineer to lay out the Work using accepted surveying practices.

1. Establish benchmarks and control points to set lines and levels at each story of construction and elsewhere as needed to locate each element of Project.
2. Establish limits on use of Project site.
3. Establish dimensions within tolerances indicated. Do not scale Drawings to obtain required dimensions.
4. Inform installers of lines and levels to which they must comply.
5. Check the location, level and plumb, of every major element as the Work progresses.
6. Notify Architect when deviations from required lines and levels exceed allowable tolerances.
7. Close site surveys with an error of closure equal to or less than the standard established by authorities having jurisdiction.

C. Site Improvements: Locate and lay out site improvements, including pavements, grading, fill and topsoil placement, utility slopes, and rim and invert elevations.

D. Building Lines and Levels: Locate and lay out control lines and levels for structures, building foundations, column grids, and floor levels, including those required for mechanical and electrical work. Transfer survey markings and elevations for use with control lines and levels. Level foundations and piers from two or more locations.

E. Record Log: Maintain a log of layout control work. Record deviations from required lines and levels. Include beginning and ending dates and times of surveys, weather conditions, name and duty of each survey party member, and types of instruments and tapes used. Make the log available for reference by Architect.

3.4 FIELD ENGINEERING

A. Identification: Owner will identify existing benchmarks, control points, and property corners.

B. Reference Points: Locate existing permanent benchmarks, control points, and similar reference points before beginning the Work. Preserve and protect permanent benchmarks and control points during construction operations.

1. Do not change or relocate existing benchmarks or control points without prior written approval of Architect. Report lost or destroyed permanent benchmarks or control points promptly. Report the need to relocate permanent benchmarks or control points to Architect before proceeding.
2. Replace lost or destroyed permanent benchmarks and control points promptly. Base replacements on the original survey control points.

C. Benchmarks: Establish and maintain a minimum of two permanent benchmarks on Project site, referenced to data established by survey control points. Comply with authorities having jurisdiction for type and size of benchmark.

1. Record benchmark locations, with horizontal and vertical data, on Project Record Documents.
2. Where the actual location or elevation of layout points cannot be marked, provide temporary reference points sufficient to locate the Work.

3. Remove temporary reference points when no longer needed. Restore marked construction to its original condition.

D. Certified Survey: On completion of foundation walls, major site improvements, and other work requiring field-engineering services, prepare a certified survey showing dimensions, locations, angles, and elevations of construction and sitework.

E. Final Property Survey: Engage a professional engineer to prepare a final property survey showing significant features (real property) for Project. Include on the survey a certification, signed by professional engineer, that principal metes, bounds, lines, and levels of Project are accurately positioned as shown on the survey.

1. Show boundary lines, monuments, streets, site improvements and utilities, existing improvements and significant vegetation, adjoining properties, acreage, grade contours, and the distance and bearing from a site corner to a legal point.
2. Recording: At Substantial Completion, have the final property survey recorded by or with authorities having jurisdiction as the official "property survey."

3.5 INSTALLATION

A. General: Locate the Work and components of the Work accurately, in correct alignment and elevation, as indicated.

1. Make vertical work plumb and make horizontal work level.
2. Where space is limited, install components to maximize space available for maintenance and ease of removal for replacement.
3. Conceal pipes, ducts, and wiring in finished areas unless otherwise indicated.
4. Maintain minimum headroom clearance of 96 inches in occupied spaces and 90 inches in unoccupied spaces.

B. Comply with manufacturer's written instructions and recommendations for installing products in applications indicated.

C. Install products at the time and under conditions that will ensure the best possible results. Maintain conditions required for product performance until Substantial Completion.

D. Conduct construction operations so no part of the Work is subjected to damaging operations or loading in excess of that expected during normal conditions of occupancy.

E. Sequence the Work and allow adequate clearances to accommodate movement of construction items on site and placement in permanent locations.

F. Tools and Equipment: Where possible, select tools or equipment that minimize production of excessive noise levels.

G. Templates: Obtain and distribute to the parties involved templates for work specified to be factory prepared and field installed. Check Shop Drawings of other portions of the Work to confirm that adequate provisions are made for locating and installing products to comply with indicated requirements.

H. Attachment: Provide blocking and attachment plates and anchors and fasteners of adequate size and number to securely anchor each component in place, accurately located and aligned with other portions of the Work. Where size and type of attachments are not indicated, verify size and type required for load conditions.

1. Mounting Heights: Where mounting heights are not indicated, mount components at heights directed by Architect.
2. Allow for building movement, including thermal expansion and contraction.
3. Coordinate installation of anchorages. Furnish setting drawings, templates, and directions for installing anchorages, including sleeves, concrete inserts, anchor bolts, and items with integral anchors, that are to be embedded in concrete or masonry. Deliver such items to Project site in time for installation.

I. Joints: Make joints of uniform width. Where joint locations in exposed work are not indicated, arrange joints for the best visual effect. Fit exposed connections together to form hairline joints.

J. Repair or remove and replace damaged, defective, or nonconforming Work.

1. Comply with Section 01 77 00 "Closeout Procedures" for repairing or removing and replacing defective Work.

3.6 SELECTIVE DEMOLITION AND CUTTING AND PATCHING

A. Selective Demolition and Cutting and Patching, General: Employ skilled workers to perform work required. Proceed with selective demolition and cutting as required for sequencing of new construction, and to facilitate uninterrupted Owner operation in portions of the existing building to remain.

B. Temporary Support: Provide temporary support of work to be cut.

C. Adjacent Occupied Areas: Where interference with use of adjoining areas or interruption of free passage to adjoining areas is unavoidable, coordinate cutting and patching according to requirements in Section 01 10 00 "Summary."

D. Existing Utility Services and Mechanical/Electrical Systems: Where existing services/systems are required to be removed, relocated, or abandoned, bypass such services/systems before cutting to minimize interruption to occupied areas.

E. Cutting: Cut in-place construction by sawing, drilling, breaking, chipping, grinding, and similar operations, including excavation, using methods least likely to damage elements retained or adjoining construction. If possible, review proposed procedures with original Installer; comply with original Installer's written recommendations.

1. In general, use hand or small power tools designed for sawing and grinding, not hammering and chopping. Cut holes and slots neatly to minimum size required, and with minimum disturbance of adjacent surfaces. Temporarily cover openings when not in use.
2. Finished Surfaces: Cut or drill from the exposed or finished side into concealed surfaces.
3. Concrete: Cut using a cutting machine, such as an abrasive saw or a diamond-core drill.
4. Excavating and Backfilling: Comply with requirements in applicable Sections where required by cutting and patching operations.
5. Mechanical and Electrical Services: Cut off pipe or conduit in walls or partitions to be removed. Cap, valve, or plug and seal remaining portion of pipe or conduit to prevent entrance of moisture or other foreign matter after cutting.

3.7 PROGRESS CLEANING

A. General: Clean Project site and work areas daily, including common areas. Enforce requirements strictly. Dispose of materials lawfully.

1. Comply with requirements in NFPA 241 for removal of combustible waste materials and debris.
2. Do not hold waste materials more than seven days during normal weather or three days if the temperature is expected to rise above 80 deg F.

B. Site: Maintain Project site free of waste materials and debris.

C. Work Areas: Clean areas where work is in progress to the level of cleanliness necessary for proper execution of the Work.

1. Remove liquid spills promptly.
2. Where dust would impair proper execution of the Work, broom-clean or vacuum the entire work area, as appropriate.

D. Installed Work: Keep installed work clean. Clean installed surfaces according to written instructions of manufacturer or fabricator of product installed, using only cleaning materials specifically recommended. If specific cleaning materials are not recommended, use cleaning materials that are not hazardous to health or property and that will not damage exposed surfaces.

E. Concealed Spaces: Remove debris from concealed spaces before enclosing the space.

F. Exposed Surfaces in Finished Areas: Clean exposed surfaces and protect as necessary to ensure freedom from damage and deterioration at time of Substantial Completion.

G. Waste Disposal: Do not bury or burn waste materials on-site. Do not wash waste materials down sewers or into waterways. Comply with waste disposal requirements in Section 01 74 19 "Construction Waste Management and Disposal."

H. During handling and installation, clean and protect construction in progress and adjoining materials already in place. Apply protective covering where required to ensure protection from damage or deterioration at Substantial Completion.

I. Clean and provide maintenance on completed construction as frequently as necessary through the remainder of the construction period. Adjust and lubricate operable components to ensure operability without damaging effects.

J. Limiting Exposures: Supervise construction operations to ensure that no part of the construction, completed or in progress, is subject to harmful, dangerous, damaging, or otherwise deleterious exposure during the construction period.

3.8 STARTING AND ADJUSTING

A. Start equipment and operating components to confirm proper operation. Remove malfunctioning units, replace with new units, and retest.

B. Adjust equipment for proper operation. Adjust operating components for proper operation without binding.

C. Test each piece of equipment to verify proper operation. Test and adjust controls and safeties. Replace damaged and malfunctioning controls and equipment.

D. Manufacturer's Field Service: Comply with qualification requirements in Section 01 40 00 "Quality Requirements."

3.9 PROTECTION OF INSTALLED CONSTRUCTION

A. Provide final protection and maintain conditions that ensure installed Work is without damage or deterioration at time of Substantial Completion.

B. Protection of Existing Items: Provide protection and ensure that existing items to remain undisturbed by construction are maintained in condition that existed at commencement of the Work.

C. Comply with manufacturer's written instructions for temperature and relative humidity.

END OF SECTION 01 73 00

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SECTION 01 74 19 - CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section includes administrative and procedural requirements for the following:

1. Disposing of nonhazardous demolition and construction waste.

B. Related Requirements:

1. Section 02 41 19 "Selective Demolition" for disposition of waste resulting from partial demolition of buildings, structures, and site improvements.

1.3 DEFINITIONS

A. Construction Waste: Building and site improvement materials and other solid waste resulting from construction, remodeling, renovation, or repair operations. Construction waste includes packaging.

B. Demolition Waste: Building and site improvement materials resulting from demolition or selective demolition operations.

C. Disposal: Removal off-site of demolition and construction waste and subsequent sale, recycling, reuse, or deposit in landfill or incinerator acceptable to authorities having jurisdiction.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 DISPOSAL OF WASTE

A. General: Except for items or materials to be salvaged, recycled, or otherwise reused, remove waste materials from Project site and legally dispose of them in a landfill or incinerator acceptable to authorities having jurisdiction.

1. Except as otherwise specified, do not allow waste materials that are to be disposed of accumulate on-site.

2. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.

B. Burning: Do not burn waste materials.

C. Burning: Burning of waste materials is permitted only at designated areas on Owner's property, provided required permits are obtained. Provide full-time monitoring for burning materials until fires are extinguished.

D. Disposal: Remove waste materials from Owner's property and legally dispose of them.

END OF SECTION 01 74 19

SECTION 01 77 00 - CLOSEOUT PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section includes administrative and procedural requirements for contract closeout, including, but not limited to, the following:

1. Substantial Completion procedures.
2. Final completion procedures.
3. Warranties.
4. Final cleaning.
5. Repair of the Work.

B. Related Requirements:

1. Section 01 78 23 "Operation and Maintenance Data" for additional operation and maintenance manual requirements.
2. Section 01 78 39 "Project Record Documents" for submitting Record Drawings, Record Specifications, and Record Product Data.
3. Section 01 79 00 "Demonstration and Training" for requirements to train the Owner's maintenance personnel to adjust, operate, and maintain products, equipment, and systems.

1.3 ACTION SUBMITTALS

A. Contractor's List of Incomplete Items: Initial submittal at Substantial Completion.

B. Contractor's List of Incomplete Items: Initial submittal at Substantial Completion.

C. Certified List of Incomplete Items: Final submittal at final completion.

1.4 CLOSEOUT SUBMITTALS

A. Certificates of Release: From authorities having jurisdiction.

B. Certificate of Insurance: For continuing coverage.

C. Field Report: For pest control inspection.

1.5 MAINTENANCE MATERIAL SUBMITTALS

A. Schedule of Maintenance Material Items: For maintenance material submittal items specified in other Sections.

1.6 SUBSTANTIAL COMPLETION PROCEDURES

A. Contractor's List of Incomplete Items: Prepare and submit a list of items to be completed and corrected (Contractor's punch list), indicating the value of each item on the list and reasons why the Work is incomplete.

B. Submittals Prior to Substantial Completion: Complete the following a minimum of 10 days prior to requesting inspection for determining date of Substantial Completion. List items below that are incomplete at time of request.

1. Certificates of Release: Obtain and submit releases from authorities having jurisdiction permitting Owner unrestricted use of the Work and access to services and utilities. Include occupancy permits, operating certificates, and similar releases.
2. Submit closeout submittals specified in other Division 01 Sections, including project record documents, operation and maintenance manuals, damage or settlement surveys, property surveys, and similar final record information.
3. Submit closeout submittals specified in individual Sections, including specific warranties, workmanship bonds, maintenance service agreements, final certifications, and similar documents.
4. Submit maintenance material submittals specified in individual Sections, including tools, spare parts, extra materials, and similar items, and deliver to location designated by Architect. Label with manufacturer's name and model number.
5. Submit testing, adjusting, and balancing records.
6. Submit changeover information related to Owner's occupancy, use, operation, and maintenance.

C. Procedures Prior to Substantial Completion: Complete the following a minimum of 10 days prior to requesting inspection for determining date of Substantial Completion. List items below that are incomplete at time of request.

1. Advise Owner of pending insurance changeover requirements.
2. Make final changeover of permanent locks and deliver keys to Owner. Advise Owner's personnel of changeover in security provisions.
3. Complete startup and testing of systems and equipment.
4. Perform preventive maintenance on equipment used prior to Substantial Completion.
5. Instruct Owner's personnel in operation, adjustment, and maintenance of products, equipment, and systems. Submit demonstration and training video recordings specified in Section 01 79 00 "Demonstration and Training."
6. Participate with Owner in conducting inspection and walkthrough with local emergency responders.
7. Terminate and remove temporary facilities from Project site, along with mockups, construction tools, and similar elements.
8. Complete final cleaning requirements.

9. Touch up paint and otherwise repair and restore marred exposed finishes to eliminate visual defects.
10. Advise Owner of changeover in utility services.

D. Inspection: Submit a written request for inspection to determine Substantial Completion a minimum of 10 days prior to date the Work will be completed and ready for final inspection and tests. On receipt of request, Architect will either proceed with inspection or notify Contractor of unfulfilled requirements. Architect will prepare the Certificate of Substantial Completion after inspection or will notify Contractor of items, either on Contractor's list or additional items identified by Architect, that must be completed or corrected before certificate will be issued.

1. Request reinspection when the Work identified in previous inspections as incomplete is completed or corrected.
2. Results of completed inspection will form the basis of requirements for final completion.

1.7 FINAL COMPLETION PROCEDURES

A. Submittals Prior to Final Completion: Before requesting final inspection for determining final completion, complete the following:

1. Submit a final Application for Payment according to Section 01 29 00 "Payment Procedures."
2. Certified List of Incomplete Items: Submit certified copy of Architect's Substantial Completion inspection list of items to be completed or corrected (punch list), endorsed and dated by Architect. Certified copy of the list shall state that each item has been completed or otherwise resolved for acceptance.
3. Certificate of Insurance: Submit evidence of final, continuing insurance coverage complying with insurance requirements.
4. Submit pest-control final inspection report.

B. Inspection: Submit a written request for final inspection to determine acceptance a minimum of 10 days prior to date the work will be completed and ready for final inspection and tests. On receipt of request, Architect will either proceed with inspection or notify Contractor of unfulfilled requirements. Architect will prepare a final Certificate for Payment after inspection or will notify Contractor of construction that must be completed or corrected before certificate will be issued.

1. Request reinspection when the Work identified in previous inspections as incomplete is completed or corrected.
2. Final Completion is to be achieved within 30 days of date of Certificate of Substantial Completion.

1.8 LIST OF INCOMPLETE ITEMS (PUNCH LIST)

A. Organization of List: Include name and identification of each space and area affected by construction operations for incomplete items and items needing correction including, if necessary, areas disturbed by Contractor that are outside the limits of construction.

1. Organize list of spaces in sequential order, starting with exterior areas first and proceeding from lowest floor to highest floor.
2. Organize items applying to each space by major element, including categories for ceiling, individual walls, floors, equipment, and building systems.
3. Include the following information at the top of each page:

a. Project name.
b. Date.
c. Page number.

4. Submit list of incomplete items in the following format:

a. MS Excel electronic file. Architect will return annotated file.

1.9 SUBMITTAL OF PROJECT WARRANTIES

A. Time of Submittal: Submit written warranties on request of Architect for designated portions of the Work where warranties are indicated to commence on dates other than date of Substantial Completion, or when delay in submittal of warranties might limit Owner's rights under warranty.

B. Organize warranty documents into an orderly sequence based on the table of contents of Project Manual.

C. Warranties in Paper Form:

1. Bind warranties and bonds in heavy-duty, three-ring, vinyl-covered, loose-leaf binders, thickness as necessary to accommodate contents, and sized to receive 8-1/2-by-11-inch paper.
2. Provide heavy paper dividers with plastic-covered tabs for each separate warranty. Mark tab to identify the product or installation. Provide a typed description of the product or installation, including the name of the product and the name, address, and telephone number of Installer.
3. Identify each binder on the front and spine with the typed or printed title "WARRANTIES," Project name, and name of Contractor.

D. Provide additional copies of each warranty to include in operation and maintenance manuals.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Cleaning Agents: Use cleaning materials and agents recommended by manufacturer or fabricator of the surface to be cleaned. Do not use cleaning agents that are potentially hazardous to health or property or that might damage finished surfaces.

PART 3 - EXECUTION

3.1 FINAL CLEANING

A. General: Perform final cleaning. Conduct cleaning and waste-removal operations to comply with local laws and ordinances and Federal and local environmental and antipollution regulations.

B. Cleaning: Employ experienced workers or professional cleaners for final cleaning. Clean each surface or unit to condition expected in an average commercial building cleaning and maintenance program. Comply with manufacturer's written instructions.

1. Complete the following cleaning operations before requesting inspection for certification of Substantial Completion for entire Project or for a designated portion of Project:

a. Clean Project site, yard, and grounds, in areas disturbed by construction activities, including landscape development areas, of rubbish, waste material, litter, and other foreign substances.
b. Sweep paved and asphalt areas broom clean. Remove petrochemical spills, stains, and other foreign deposits. Remove all loose gravel, sand, clay or other deposits to a level required to accept paint or stripping.
c. Rake grounds that are not planted, mulched, or paved to a smooth, even-textured surface.
d. Remove tools, construction equipment, machinery, and surplus material from Project site.
e. Clean exposed exterior and interior hard-surfaced finishes to a dirt-free condition, free of stains, films, and similar foreign substances. Avoid disturbing natural weathering of exterior surfaces. Restore reflective surfaces to their original condition.
f. Remove debris and surface dust from limited access spaces, including roofs, plenums, shafts, trenches, equipment vaults, manholes, attics, and similar spaces.
g. Sweep concrete floors broom clean in unoccupied spaces.
h. Vacuum carpet and similar soft surfaces, removing debris and excess nap; clean according to manufacturer's recommendations if visible soil or stains remain.
i. Clean transparent materials, including mirrors and glass in doors and windows. Remove glazing compounds and other noticeable, vision-obscuring materials. Polish mirrors and glass, taking care not to scratch surfaces.
j. Remove labels that are not permanent.

k. Wipe surfaces of mechanical and electrical equipment and similar equipment. Remove excess lubrication, paint and mortar droppings, and other foreign substances.
l. Clean plumbing fixtures to a sanitary condition, free of stains, including stains resulting from water exposure.
m. Replace disposable air filters and clean permanent air filters. Clean exposed surfaces of diffusers, registers, and grills.
n. Clean ducts, blowers, and coils if units were operated without filters during construction or that display contamination with particulate matter on inspection.
o. Clean light fixtures, lamps, globes, and reflectors to function with full efficiency.
p. Leave Project clean and ready for occupancy.

C. Pest Control: Comply with pest control requirements in Section 01 50 00 "Temporary Facilities and Controls." Prepare written report.

D. Construction Waste Disposal: Comply with waste disposal requirements in Section 01 50 00 "Temporary Facilities and Controls."

3.2 REPAIR OF THE WORK

A. Complete repair and restoration operations before requesting inspection for determination of Substantial Completion.

B. Repair, or remove and replace, defective construction. Repairing includes replacing defective parts, refinishing damaged surfaces, touching up with matching materials, and properly adjusting operating equipment. Where damaged or worn items cannot be repaired or restored, provide replacements. Remove and replace operating components that cannot be repaired. Restore damaged construction and permanent facilities used during construction to specified condition.

1. Remove and replace chipped, scratched, and broken glass, reflective surfaces, and other damaged transparent materials.
2. Touch up and otherwise repair and restore marred or exposed finishes and surfaces. Replace finishes and surfaces that that already show evidence of repair or restoration.

    a. Do not paint over "UL" and other required labels and identification, including mechanical and electrical nameplates. Remove paint applied to required labels and identification.

3. Replace parts subject to operating conditions during construction that may impede operation or reduce longevity.
4. Replace burned-out bulbs, bulbs noticeably dimmed by hours of use, and defective and noisy starters in fluorescent and mercury vapor fixtures to comply with requirements for new fixtures.

END OF SECTION 01 77 00

SECTION 01 78 23 - OPERATION AND MAINTENANCE DATA

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section includes administrative and procedural requirements for preparing operation and maintenance manuals, including the following:

1. Systems and equipment operation manuals.
2. Systems and equipment maintenance manuals.
3. Product maintenance manuals.

B. Related Requirements:

1. Section 01 33 00 "Submittal Procedures" for submitting copies of submittals for operation and maintenance manuals.

1.3 DEFINITIONS

A. System: An organized collection of parts, equipment, or subsystems united by regular interaction.

B. Subsystem: A portion of a system with characteristics similar to a system.

1.4 CLOSEOUT SUBMITTALS

A. Submit operation and maintenance manuals indicated. Provide content for each manual as specified in individual Specification Sections, and as reviewed and approved at the time of Section submittals. Submit reviewed manual content formatted and organized as required by this Section.

1. Architect will comment on whether content of operation and maintenance submittals is acceptable.
2. Where applicable, clarify and update reviewed manual content to correspond to revisions and field conditions.

B. Format: Submit operation and maintenance manuals in the following format:

1. Submit on digital media acceptable to Architect. Enable reviewer comments on draft submittals as a final record set.

2. Submit one paper copy. Architect will return copies to owner after any requested corrections have been made.

C. Comply with Section 01 77 00 "Closeout Procedures" for schedule for submitting operation and maintenance documentation.

1.5 FORMAT OF OPERATION AND MAINTENANCE MANUALS

A. Manuals, Electronic Files: Submit manuals in the form of a multiple file composite electronic PDF file for each manual type required.

1. Electronic Files: Use electronic files prepared by manufacturer where available. Where scanning of paper documents is required, configure scanned file for minimum readable file size.

B. Manuals, Paper Copy: Submit manuals in the form of hard-copy, bound and labeled volumes.

1. Binders: Heavy-duty, three-ring, vinyl-covered, loose-leaf binders, in thickness necessary to accommodate contents, sized to hold 8-1/2-by-11-inch paper; with clear plastic sleeve on spine to hold label describing contents and with pockets inside covers to hold folded oversize sheets.

a. If two or more binders are necessary to accommodate data of a system, organize data in each binder into groupings by subsystem and related components. Cross-reference other binders if necessary to provide essential information for proper operation or maintenance of equipment or system.
b. Identify each binder on front and spine, with printed title "OPERATION AND MAINTENANCE MANUAL," Project title or name, and subject matter of contents. Indicate volume number for multiple-volume sets.

2. Dividers: Heavy-paper dividers with plastic-covered tabs for each section of the manual. Mark each tab to indicate contents or provide a table of contents referencing numbered tabs.
3. Protective Plastic Sleeves: Transparent plastic sleeves designed to enclose diagnostic software storage media for computerized electronic equipment. Enclose title pages and directories in clear plastic sleeves.
4. Supplementary Text: Prepared on 8-1/2-by-11-inch white bond paper.
5. Drawings: Attach reinforced, punched binder tabs on drawings and bind with text.

a. If oversize drawings are necessary, fold drawings to same size as text pages and use as foldouts.
b. If drawings are too large to be used as foldouts, fold and place drawings in labeled envelopes and bind envelopes in rear of manual. At appropriate locations in manual, insert typewritten pages indicating drawing titles, descriptions of contents, and drawing locations.

C. Do not use original project record documents as part of operation and maintenance manuals.

1.6 SYSTEMS AND EQUIPMENT OPERATION MANUALS

A. Systems and Equipment Operation Manual: Assemble a complete set of data indicating operation of each system, subsystem, and piece of equipment not part of a system. Include information required for daily operation and management, operating standards, and routine and special operating procedures.

1. Engage a factory-authorized service representative to assemble and prepare information for each system, subsystem, and piece of equipment not part of a system.
2. Prepare a separate manual for each system and subsystem, in the form of an instructional manual for use by Owner's operating personnel.

B. Content: In addition to requirements in this Section, include operation data required in individual Specification Sections and the following information:

1. System, subsystem, and equipment descriptions. Use designations for systems and equipment indicated on Contract Documents.
2. Performance and design criteria if Contractor has delegated design responsibility.
3. Operating standards.
4. Operating procedures.
5. Operating logs.
6. Wiring diagrams.
7. Control diagrams.
8. Piped system diagrams.
9. Precautions against improper use.
10. License requirements including inspection and renewal dates.

C. Descriptions: Include the following:

1. Product name and model number. Use designations for products indicated on Contract Documents.
2. Manufacturer's name.
3. Equipment identification with serial number of each component.
4. Equipment function.
5. Operating characteristics.
6. Limiting conditions.
7. Performance curves.
8. Engineering data and tests.
9. Complete nomenclature and number of replacement parts.

D. Operating Procedures: Include the following, as applicable:

1. Startup procedures.
2. Equipment or system break-in procedures.
3. Routine and normal operating instructions.
4. Regulation and control procedures.
5. Instructions on stopping.
6. Normal shutdown instructions.
7. Seasonal and weekend operating instructions.

8. Required sequences for electric or electronic systems.
9. Special operating instructions and procedures.

E. Systems and Equipment Controls: Describe the sequence of operation, and diagram controls as installed.

F. Piped Systems: Diagram piping as installed, and identify color coding where required for identification.

G. Drawings: Prepare drawings supplementing manufacturer's printed data to illustrate the relationship of component parts of equipment and systems and to illustrate control sequence and flow diagrams. Coordinate these drawings with information contained in record Drawings to ensure correct illustration of completed installation.

1. Do not use original project documents as part of operation and maintenance manuals.

1.7 SYSTEMS AND EQUIPMENT MAINTENANCE MANUALS

A. Systems and Equipment Maintenance Manuals: Assemble a complete set of data indicating maintenance of each system, subsystem, and piece of equipment not part of a system. Include manufacturers' maintenance documentation, preventive maintenance procedures and frequency, repair procedures, wiring and systems diagrams, lists of spare parts, and warranty information.

B. Content: For each system, subsystem, and piece of equipment not part of a system, include source information, manufacturers' maintenance documentation, maintenance procedures, maintenance and service schedules, spare parts list and source information, maintenance service contracts, and warranties and bonds as described below.

C. Manufacturers' Maintenance Documentation: Include the following information for each component part or piece of equipment:

1. Standard maintenance instructions and bulletins; include only sheets pertinent to product or component installed. Mark each sheet to identify each product or component incorporated into the Work. If data include more than one item in a tabular format, identify each item using appropriate references from the Contract Documents. Identify data applicable to the Work and delete references to information not applicable.

    a. Prepare supplementary text if manufacturers' standard printed data are not available and where the information is necessary for proper operation and maintenance of equipment or systems.

2. Drawings, diagrams, and instructions required for maintenance, including disassembly and component removal, replacement, and assembly.
3. Identification and nomenclature of parts and components.
4. List of items recommended to be stocked as spare parts.

D. Maintenance Procedures: Include the following information and items that detail essential maintenance procedures:

1. Test and inspection instructions.
2. Troubleshooting guide.
3. Precautions against improper maintenance.
4. Disassembly; component removal, repair, and replacement; and reassembly instructions.
5. Aligning, adjusting, and checking instructions.
6. Demonstration and training video recording, if available.

E. Maintenance and Service Schedules: Include service and lubrication requirements, list of required lubricants for equipment, and separate schedules for preventive and routine maintenance and service with standard time allotment.

1. Scheduled Maintenance and Service: Tabulate actions for daily, weekly, monthly, quarterly, semiannual, and annual frequencies.
2. Maintenance and Service Record: Include manufacturers' forms for recording maintenance.

F. Spare Parts List and Source Information: Include lists of replacement and repair parts, with parts identified and cross-referenced to manufacturers' maintenance documentation and local sources of maintenance materials and related services.

G. Maintenance Service Contracts: Include copies of maintenance agreements with name and telephone number of service agent.

H. Warranties and Bonds: Include copies of warranties and bonds and lists of circumstances and conditions that would affect validity of warranties or bonds.

1. Include procedures to follow and required notifications for warranty claims.

I. Drawings: Prepare drawings supplementing manufacturers' printed data to illustrate the relationship of component parts of equipment and systems and to illustrate control sequence and flow diagrams. Coordinate these drawings with information contained in record Drawings to ensure correct illustration of completed installation.

1. Do not use original project record documents as part of maintenance manuals.

1.8 PRODUCT MAINTENANCE MANUALS

A. Product Maintenance Manual: Assemble a complete set of maintenance data indicating care and maintenance of each product, material, and finish incorporated into the Work.

B. Content: Organize manual into a separate section for each product, material, and finish. Include source information, product information, maintenance procedures, repair materials and sources, and warranties and bonds, as described below.

C. Source Information: List each product included in manual, identified by product name and arranged to match manual's table of contents. For each product, list name, address, and telephone number of Installer or supplier and maintenance service agent, and cross-reference Specification Section number and title in Project Manual and drawing or schedule designation or identifier where applicable.

D. Product Information: Include the following, as applicable:

1. Product name and model number.
2. Manufacturer's name.
3. Color, pattern, and texture.
4. Material and chemical composition.
5. Reordering information for specially manufactured products.

E. Maintenance Procedures: Include manufacturer's written recommendations and the following:

1. Inspection procedures.
2. Types of cleaning agents to be used and methods of cleaning.
3. List of cleaning agents and methods of cleaning detrimental to product.
4. Schedule for routine cleaning and maintenance.
5. Repair instructions.

F. Repair Materials and Sources: Include lists of materials and local sources of materials and related services.

G. Warranties and Bonds: Include copies of warranties and bonds and lists of circumstances and conditions that would affect validity of warranties or bonds.

1. Include procedures to follow and required notifications for warranty claims.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 01 78 23

SECTION 01 78 39 - PROJECT RECORD DOCUMENTS

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes administrative and procedural requirements for project record documents, including the following:

1. Record Drawings.
2. Record Specifications.
3. Record Product Data.

B. Related Requirements:

1. Section 01 73 00 "Execution" for final property survey.
2. Section 01 78 23 "Operation and Maintenance Data" for operation and maintenance manual requirements.

1.2 CLOSEOUT SUBMITTALS

A. Record Drawings: Comply with the following:

1. Definition: Wherever identified as “marked-up record prints”, Record Drawings are based on the Contractor’s original marked-up “Red Line” field set.

2. Number of Copies: Submit copies of record Drawings as follows:

a. Initial Submittal:

1) Submit one color printed paper-copy set of marked-up record prints.
2) Submit PDF electronic files of scanned marked-up record prints.
3) Architect will indicate whether general scope of changes, additional information recorded, and quality of drafting are acceptable.

b. Final Submittal:

1) Submit one color printed paper-copy set of marked-up record prints.
2) Submit PDF electronic files of scanned marked-up record prints.
3) Print each drawing, whether or not changes and additional information were recorded.

B. Record Specifications: Submit one paper copy and annotated PDF electronic files of Project's Specifications, including addenda and contract modifications.

C. Record Product Data: Submit one paper copy and annotated PDF electronic files and directories of each submittal.

1. Where record Product Data are required as part of operation and maintenance manuals, submit duplicate marked-up Product Data as a component of manual.

1.3 RECORD DRAWINGS

A. Record Prints: Maintain one set of marked-up paper copies of the Contract Drawings and Shop Drawings, incorporating new and revised drawings as modifications are issued.

1. Preparation: Mark record prints to show the actual installation where installation varies from that shown originally. Require individual or entity who obtained record data, whether individual or entity is Installer, subcontractor, or similar entity, to provide information for preparation of corresponding marked-up record prints.

    a. Give particular attention to information on concealed elements that would be difficult to identify or measure and record later.
    b. Accurately record information in an acceptable drawing technique.
    c. Record data as soon as possible after obtaining it.
    d. Record and check the markup before enclosing concealed installations.
    e. Cross-reference record prints to corresponding photographic documentation.

2. Content: Types of items requiring marking include, but are not limited to, the following:

    a. Dimensional changes to Drawings.
    b. Revisions to details shown on Drawings.
    c. Depths of foundations.
    d. Locations and depths of underground utilities.
    e. Revisions to routing of piping and conduits.
    f. Revisions to electrical circuitry.
    g. Actual equipment locations.
    h. Duct size and routing.
    i. Locations of concealed internal utilities.
    j. Changes made by Change Order or Construction Change Directive.
    k. Changes made following Architect's written orders.
    l. Details not on the original Contract Drawings.
    m. Field records for variable and concealed conditions.
    n. Record information on the Work that is shown only schematically.

3. Mark the Contract Drawings and Shop Drawings completely and accurately. Use personnel proficient at recording graphic information in production of marked-up record prints.
4. Mark record sets with erasable, red-colored pencil. Use other colors to distinguish between changes for different categories of the Work at same location.
5. Mark important additional information that was either shown schematically or omitted from original Drawings.
6. Note Construction Change Directive numbers, alternate numbers, Change Order numbers, and similar identification, where applicable.

B. Format: Identify and date each record Drawing; include the designation "PROJECT RECORD DRAWING" in a prominent location.

1. Record Prints: Organize record prints into manageable sets. Bind each set with durable paper cover sheets. Include identification on cover sheets.
2. Format: Annotated PDF electronic file with comment function enabled.
3. Identification: As follows:

    a. Project name.
    b. Date.
    c. Designation "PROJECT RECORD DRAWINGS."
    d. Name of Architect.
    e. Name of Contractor.

1.4 RECORD SPECIFICATIONS

A. Preparation: Mark Specifications to indicate the actual product installation where installation varies from that indicated in Specifications, addenda, and contract modifications.

1. Give particular attention to information on concealed products and installations that cannot be readily identified and recorded later.
2. Mark copy with the proprietary name and model number of products, materials, and equipment furnished, including substitutions and product options selected.
3. Record the name of manufacturer, supplier, Installer, and other information necessary to provide a record of selections made.
4. For each principal product, indicate whether record Product Data has been submitted in operation and maintenance manuals instead of submitted as record Product Data.
5. Note related Change Orders, record Product Data, and record Drawings where applicable.

B. Format: Submit record Specifications as a combined, annotated PDF electronic file or scanned PDF electronic file of marked-up paper copy of Specifications.

1.5 RECORD PRODUCT DATA

A. Recording: Maintain one copy of each submittal during the construction period for project record document purposes. Post changes and revisions to project record documents as they occur; do not wait until end of Project.

B. Preparation: Mark Product Data to indicate the actual product installation where installation varies substantially from that indicated in Product Data submittal.

1. Give particular attention to information on concealed products and installations that cannot be readily identified and recorded later.
2. Include significant changes in the product delivered to Project site and changes in manufacturer's written instructions for installation.

3. Note related Change Orders, record Specifications, and record Drawings where applicable.

C. Format: Submit record Product Data as a combined annotated PDF electronic file or scanned PDF electronic file of marked-up paper copy of Product Data.

1. Include record Product Data directory organized by Specification Section number and title, electronically linked to each item of record Product Data.

1.6 MAINTENANCE OF RECORD DOCUMENTS

A. Maintenance of Record Documents: Store record documents in the field office apart from the Contract Documents used for construction. Do not use project record documents for construction purposes. Maintain record documents in good order and in a clean, dry, legible condition, protected from deterioration and loss. Provide access to project record documents for Architect's reference during normal working hours.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 01 78 39

SECTION 01 82 00 - DEMONSTRATION AND TRAINING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes administrative and procedural requirements for instructing Owner's personnel, including the following:

1. Demonstration of operation of systems, subsystems, and equipment.
2. Training in operation and maintenance of systems, subsystems, and equipment.
3. Demonstration and training videotapes.

B. See Divisions 2 through 33 Sections for specific requirements for demonstration and training for products in those Sections.

1.3 SUBMITTALS

A. Instruction Program: Submit two copies of outline of instructional program for demonstration and training, including a schedule of proposed dates, times, length of instruction time, and instructors' names for each training module. Include learning objective and outline for each training module.

B. Demonstration and Training Videotapes: Submit two copies within seven days of end of each training module.

1.4 QUALITY ASSURANCE

A. Facilitator Qualifications: A firm or individual experienced in training or educating maintenance personnel in a training program similar in content and extent to that indicated for this Project, and whose work has resulted in training or education with a record of successful learning performance.

B. Instructor Qualifications: A factory-authorized service representative, complying with requirements in Division 1 Section "Quality Requirements," experienced in operation and maintenance procedures and training.

C. Preinstruction Conference: Conduct conference at Project site, coordinate with UWF. Review methods and procedures related to demonstration and training.

D. Coordinate content of training modules with content of approved emergency, operation, and maintenance manuals. Do not submit instruction program until operation and maintenance data has been reviewed and approved by Architect.

PART 2 - PRODUCTS

2.1 INSTRUCTION PROGRAM

A. Program Structure: Develop an instruction program that includes individual training modules for each system and equipment not part of a system, as required by individual Specification Sections:

B. Training Modules: Develop a learning objective and teaching outline for each module. Include a description of specific skills and knowledge that participant is expected to master. For each module, include instruction for the following:

1. Basis of System Design, Operational Requirements, and Criteria: Include system and equipment descriptions, operating standards, regulatory requirements, equipment function, operating characteristics, limiting conditions, and performance curves.

2. Documentation: Review emergency, operations, and maintenance manuals; Project Record Documents; identification systems; warranties and bonds; and maintenance service agreements.

3. Emergencies: Include instructions on stopping; shutdown instructions; operating instructions for conditions outside normal operating limits; instructions on meaning of warnings, trouble indications, and error messages; and required sequences for electric or electronic systems.

4. Operations: Include startup, break-in, control, and safety procedures; stopping and normal shutdown instructions; routine, normal, seasonal, and weekend operating instructions; operating procedures for emergencies and equipment failure; and required sequences for electric or electronic systems.

5. Adjustments: Include alignments and checking, noise, vibration, economy, and efficiency adjustments.

6. Troubleshooting: Include diagnostic instructions and test and inspection procedures.
7. Maintenance: Include inspection procedures, types of cleaning agents, methods of cleaning, procedures for preventive and routine maintenance, and instruction on use of special tools.

8. Repairs: Include diagnosis, repair, and disassembly instructions; instructions for identifying parts; and review of spare parts needed for operation and maintenance.

PART 3 - EXECUTION

3.1 INSTRUCTION

A. Facilitator: Engage a qualified facilitator to prepare instruction program and training modules, to coordinate instructors, and to coordinate between Contractor and Owner for number of participants, instruction times, and location.

B. Engage qualified instructors to instruct Owner's personnel for day and night shifts to adjust, operate, and maintain systems, subsystems, and equipment not part of a system.

1. Owner will furnish an instructor to describe Owner's operational philosophy.

C. Scheduling: Provide instruction at mutually agreed on times. For equipment that requires seasonal operation, provide similar instruction at start of each season.

1. Schedule training with Owner with at least seven days' advance notice.

D. Evaluation: At conclusion of each training module, assess and document each participant's mastery of module by use of a written or a demonstration performance-based test.

3.2 DEMONSTRATION AND TRAINING VIDEOTAPES

A. General: Engage a qualified commercial photographer to record demonstration and training videotapes. Record each training module separately. Include classroom instructions and demonstrations, board diagrams, and other visual aids, but not student practice.

1. At beginning of each training module, record each chart containing learning objective and lesson outline.

B. Videotape Format: Provide high-quality VHS color videotape in full-size cassettes.

C. Narration: Describe scenes on videotape by audio narration by microphone while or dubbing audio narration off-site after videotape is recorded. Include description of items being viewed. Describe vantage point, indicating location, direction (by compass point), and elevation or story of construction.

END OF SECTION 01 82 00

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SECTION 02 41 19 - SELECTIVE DEMOLITION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

1. Demolition and removal of selected portions of building or structure.
2. Demolition and removal of selected site elements.

B. Related Sections:

1. Section 01 50 00 "Temporary Facilities and Controls" for temporary provisions required to maintain existing facility functionality during construction.

1.3 DEFINITIONS

A. Remove: Detach items from existing construction and legally dispose of them off-site.

B. Remove and Reinstall: Detach items from existing construction, prepare for reuse, and reinstall where indicated.

C. Existing to Remain: Existing items of construction that are not to be permanently removed and that are not otherwise indicated to be removed, or removed and reinstalled.

1.4 PREINSTALLATION MEETINGS

A. Predemolition Conference: Conduct conference at Project site.

1.5 INFORMATIONAL SUBMITTALS

A. Predemolition Photographs: Submit before Work begins.

1.6 CLOSEOUT SUBMITTALS

A. Landfill Records: Indicate receipt and acceptance of hazardous wastes by a landfill facility licensed to accept hazardous wastes.

1.7 QUALITY ASSURANCE

A. Refrigerant Recovery Technician Qualifications: Certified by an EPA-approved certification program.

1.8 FIELD CONDITIONS

A. Owner will occupy portions of building immediately adjacent to selective demolition area. Conduct selective demolition so Owner's operations will not be disrupted.

B. Conditions existing at time of inspection for bidding purpose will be maintained by Owner as far as practical.

1. Any salvageable items of interest to the Owner will be identified at that time and will be removed by the Owner prior to construction.

C. Notify Architect of discrepancies between existing conditions and Drawings before proceeding with selective demolition.

D. Hazardous Materials: It is not expected that hazardous materials will be encountered in the Work.

1. Hazardous materials will be removed by Owner before start of the Work.
2. If suspected hazardous materials are encountered, do not disturb; immediately notify Architect and Owner. Hazardous materials will be removed by Owner under a separate contract.

E. Storage or sale of removed items or materials on-site is not permitted.

F. Utility Service: Maintain existing utilities indicated to remain in service and protect them against damage during selective demolition operations.

1. Maintain fire-protection facilities in service during selective demolition operations.

PART 2 - PRODUCTS

2.1 PEFORMANCE REQUIREMENTS

A. Regulatory Requirements: Comply with governing EPA notification regulations before beginning selective demolition.

1. Comply with all applicable federal, state and local regulations, including local Public Health Authority and to authorities having jurisdiction.
2. Comply with hauling and disposal regulations of authorities having jurisdiction.

B. Standards: Comply with ANSI/ASSE A10.6 and NFPA 241.

1. Comply with applicable OSHA Standards, including OSHA 1926.1153 for exposure to respirable crystalline silica.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Verify that utilities have been disconnected and capped before starting selective demolition operations.

B. Survey existing conditions and correlate with requirements indicated to determine extent of selective demolition required.

C. When unanticipated mechanical, electrical, or structural elements that conflict with intended function or design are encountered, investigate and measure the nature and extent of conflict. Promptly submit a written report to Architect.

D. Perform Engage a professional engineer to perform an engineering survey of condition of building to determine whether removing any element might result in structural deficiency or unplanned collapse of any portion of structure or adjacent structures during selective building demolition operations.

E. Survey of Existing Conditions: Record existing conditions by use of measured drawings preconstruction photographs and templates.

3.2 UTILITY SERVICES AND MECHANICAL/ELECTRICAL SYSTEMS

A. Existing Services/Systems to Remain: Maintain services/systems indicated to remain and protect them against damage.

1. Comply with requirements for existing services/systems interruptions specified in Section 01 10 00 "Summary."
2. Notify and coordinate work with Owner to arrange temporary outage of services/ systems required by the new construction.

B. Existing Services/Systems to Be Removed, Relocated, or Abandoned: Locate, identify, disconnect, and seal or cap off indicated utility services and mechanical/electrical systems serving areas to be selectively demolished.

1. If services/systems are required to be removed, relocated, or abandoned, provide temporary services/systems that bypass area of selective demolition and that maintain continuity of services/systems to other parts of building.
2. Disconnect, demolish, and remove fire-suppression systems, plumbing, and HVAC systems, equipment, and components indicated to be removed.

    a. Piping to Be Removed: Remove portion of piping indicated to be removed and cap or plug remaining piping with same or compatible piping material.

b. Piping to Be Abandoned in Place: Drain piping and cap or plug piping with same or compatible piping material.
c. Equipment to Be Removed: Disconnect and cap services and remove equipment.
d. Equipment to Be Removed and Reinstalled: Disconnect and cap services and remove, clean, and store equipment; when appropriate, reinstall, reconnect, and make equipment operational.
e. Ducts to Be Removed: Remove portion of ducts indicated to be removed and plug remaining ducts with same or compatible ductwork material.
f. Ducts to Be Abandoned in Place: Cap or plug ducts with same or compatible ductwork material.

C. Refrigerant: Remove refrigerant from mechanical equipment to be selectively demolished according to 40 CFR 82 and regulations of authorities having jurisdiction.

3.3 PREPARATION

A. Provide, erect, and maintain temporary barriers and security devices.

B. Notify and coordinate work with Owner, adjacent buildings, and potential affected parties which may affect their property, potential noise, utility outage, or disruption.

C. Protect existing items which are not indicated to be removed.

D. Provide all sediment and erosion protection devices as required to prevent sediment migration off-site during construction activities.

E. Site Access and Temporary Controls: Conduct selective demolition and debris-removal operations to ensure minimum interference with roads, streets, walks, walkways, and other adjacent occupied and used facilities.

1. Comply with requirements for access and protection specified in Section 01 50 00 "Temporary Facilities and Controls."

F. Temporary Facilities: Provide temporary barricades and other protection required to prevent weather intrusion, injury to people and damage to adjacent areas and facilities to remain.

G. Temporary Shoring: Provide and maintain shoring, bracing, and structural supports as required to preserve stability and prevent movement, settlement, or collapse of construction and finishes to remain, and to prevent unexpected or uncontrolled movement or collapse of construction being demolished.

3.4 SELECTIVE DEMOLITION, GENERAL

A. Inspect conditions prior to work to identify scope and type of work required. Notify Owner of work requiring interruption to building services or Owner's operations.

B. Maintain protected egress and access at all times. Do not close or obstruct roadways without permission of Owner and local jurisdictions.

C. Perform work with workmen skilled in the trades involved. Prepare sample area of each type of work involved for approval.

D. Conduct operations with minimum interference to public or private accesses.

E. Follow OSHA 1926.1153 standards for protection from exposure to respirable crystalline silica. This includes, but is not limited to, worker training and protection, measurement and control methods, and equipment dust control/containment.

F. Demolish and remove existing construction only to the extent required by new construction and as indicated. Execute in an orderly and careful manner, in sequence as necessary to support planned construction schedule. Use methods required to complete the Work within limitations of governing regulations and as follows:

1. Neatly cut openings and holes plumb, square, and true to dimensions required. Use cutting methods least likely to damage construction to remain or adjoining construction. Use hand tools or small power tools designed for sawing or grinding, not hammering and chopping, to minimize disturbance of adjacent surfaces. Temporarily cover openings to remain.

    a. All cutting of exposed brick and concrete edges shall be by saw cutting.

2. Cut or drill from the exposed or finished side into concealed surfaces to avoid marring existing finished surfaces.
3. Do not use cutting torches until work area is cleared of flammable materials. At concealed spaces, such as duct and pipe interiors, verify condition and contents of hidden space before starting flame-cutting operations. Maintain portable fire-suppression devices during flame-cutting operations.
4. Locate selective demolition equipment and remove debris and materials so as not to impose excessive loads on supporting walls, floors, or framing.
5. Dispose of demolished items and materials promptly. Comply with requirements in Section 01 74 19 "Construction Waste Management and Disposal."

G. Existing Items to Remain: Protect construction indicated to remain against damage and soiling during selective demolition. When permitted by Architect, items may be removed to a suitable, protected storage location during selective demolition, cleaned and reinstalled in their original locations after selective demolition operations are complete.

3.5 DISPOSAL OF DEMOLISHED MATERIALS

A. General: Except for items or materials indicated to be reused, reinstalled, or otherwise indicated to remain Owner's property, remove demolished materials from Project site and legally dispose of them in an approved landfill.

1. Do not allow demolished materials to accumulate on-site.

2. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.
3. Leave areas of work in clean condition.
4. Comply with requirements specified in Section 01 74 19 "Construction Waste Management and Disposal."

B. Burning: Do not burn demolished materials.

C. Disposal: Transport demolished materials off Owner's property and legally dispose of them.

3.6 CLEANING

A. Clean adjacent structures and improvements of dust, dirt, and debris caused by selective demolition operations. Return adjacent areas to condition existing before selective demolition operations began.

END OF SECTION 02 41 19

SECTION 03 30 00 - CAST-IN-PLACE CONCRETE

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section includes cast-in-place concrete, including formwork, reinforcement, concrete materials, admixtures, mixture design, placement procedures, and finishes, for the following:

1. Footings.
2. Slabs-on-grade.

1.3 DEFINITIONS

A. Cementitious Materials: Portland cement alone or in combination with one or more of the following: blended hydraulic cement, fly ash and other pozzolans, ground granulated blast-furnace slag, and silica fume; subject to compliance with requirements.

1.4 SUBMITTALS

A. Product Data: For each type of product indicated.

B. Design Mixtures: For each concrete mixture. Submit alternate design mixtures when characteristics of materials, Project conditions, weather, test results, or other circumstances warrant adjustments.

1. Indicate amounts of mixing water to be withheld for later addition at Project site.

C. Steel Reinforcement Shop Drawings: Placing drawings that detail fabrication, bending, and placement. Include bar sizes, lengths, material, grade, bar schedules, stirrup spacing, bent bar diagrams, bar arrangement, splices and laps, mechanical connections, tie spacing, hoop spacing, and supports for concrete reinforcement.

D. Formwork Shop Drawings: Prepared by or under the supervision of a qualified professional engineer detailing fabrication, assembly, and support of formwork.

E. Construction Joint Layout: Indicate proposed construction joints required to construct the structure.

1. Location of construction joints is subject to approval of the Architect.

F. Qualification Data: For manufacturer.

G. Welding certificates.

H. Material Certificates: For each of the following, signed by manufacturers:

1. Cementitious materials.
2. Admixtures.
3. Form materials and form-release agents.
4. Steel reinforcement and accessories.
5. Curing compounds.
6. Bonding agents.
7. Vapor retarders.
8. Repair materials.

I. Material Test Reports: For the following, from a qualified testing agency, indicating compliance with requirements:

1. Aggregates. Include service record data indicating absence of deleterious expansion of concrete due to alkali aggregate reactivity.

J. Floor surface flatness and levelness measurements indicating compliance with specified tolerances.

K. Field quality-control test and inspection reports.

L. Minutes of preinstallation conference.

1.5 QUALITY ASSURANCE

A. Manufacturer Qualifications: A firm experienced in manufacturing ready-mixed concrete products and that complies with ASTM C 94/C 94M requirements for production facilities and equipment.

1. Manufacturer certified according to NRMCA's "Certification of Ready Mixed Concrete Production Facilities."

B. Testing Agency Qualifications: An independent agency, acceptable to authorities having jurisdiction, qualified according to ASTM C 1077 and ASTM E 329 for testing indicated.

1. Personnel conducting field tests shall be qualified as ACI Concrete Field Testing Technician, Grade 1, according to ACI CP-1 or an equivalent certification program.
2. Personnel performing laboratory tests shall be ACI-certified Concrete Strength Testing Technician and Concrete Laboratory Testing Technician - Grade I. Testing Agency laboratory supervisor shall be an ACI-certified Concrete Laboratory Testing Technician - Grade II.

C. Source Limitations: Obtain each type or class of cementitious material of the same brand from the same manufacturer's plant, obtain aggregate from single source, and obtain admixtures from single source from single manufacturer.

D. ACI Publications: Comply with the following unless modified by requirements in the Contract Documents:

1. ACI 301, "Specifications for Structural Concrete," Sections 1 through 5.
2. ACI 117, "Specifications for Tolerances for Concrete Construction and Materials."

E. OSHA Standards: In addition to other applicable OSHA Standards, comply with OSHA 1926.1153 for exposure to respirable crystalline silica.

F. Concrete Testing Service: Engage a qualified independent testing agency to perform material evaluation tests and to design concrete mixtures.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Steel Reinforcement: Deliver, store, and handle steel reinforcement to prevent bending and damage.

PART 2 - PRODUCTS

2.1 CONCRETE, GENERAL

A. ACI Publications: Comply with the following unless modified by requirements in the Contract Documents:

1. ACI 301 (ACI 301M).
2. ACI 303.1.

2.2 FORM-FACING MATERIALS

A. Rough-Formed Finished Concrete: Plywood, lumber, metal, or another approved material. Provide lumber dressed on at least two edges and one side for tight fit.

B. Form-Release Agent: Commercially formulated form-release agent that will not bond with, stain, or adversely affect concrete surfaces and will not impair subsequent treatments of concrete surfaces.

1. Formulate form-release agent with rust inhibitor for steel form-facing materials.

C. Surface Retarder: Chemical liquid set retarder, for application on form-facing materials, capable of temporarily delaying final hardening of newly placed concrete surface to depth of reveal specified.

2.3 STEEL REINFORCEMENT

A. Reinforcing Bars: ASTM A 615/A 615M, Grade 60 (Grade 420), deformed.

B. Plain-Steel Wire: ASTM A 82/A 82M,.

C. Deformed-Steel Wire: ASTM A 496/A 496M.

D. Plain-Steel Welded Wire Reinforcement: ASTM A 185/A 185M, plain, fabricated from as-drawn steel wire into flat sheets.

E. Deformed-Steel Welded Wire Reinforcement: ASTM A 497/A 497M, flat sheet.

2.4 REINFORCEMENT ACCESSORIES

A. Bar Supports: Bolsters, chairs, spacers, and other devices for spacing, supporting, and fastening reinforcing bars and welded wire reinforcement in place. Manufacture bar supports from steel wire, plastic, or precast concrete according to CRSI's "Manual of Standard Practice," of greater compressive strength than concrete and as follows:

1. For concrete surfaces exposed to view where legs of wire bar supports contact forms, use CRSI Class 1 plastic-protected steel wire or CRSI Class 2 stainless-steel bar supports.

2.5 CONCRETE MATERIALS

A. Cementitious Material: Use the following cementitious materials, of the same type, brand, and source, throughout Project:

1. Portland Cement: ASTM C 150 Type I/II,.

a. Fly Ash: ASTM C 618, Class F or C.

B. Normal-Weight Aggregates: ASTM C 33, Class 3M coarse aggregate or better, graded. Provide aggregates from a single source.

1. Maximum Coarse-Aggregate Size: 1 inch (25 mm) nominal.
2. Fine Aggregate: Free of materials with deleterious reactivity to alkali in cement.

C. Chemical Admixtures: Certified by manufacturer to be compatible with other admixtures and that does not contribute water-soluble chloride ions exceeding those permitted in hardened concrete. Do not use calcium chloride or admixtures containing calcium chloride.

1. Water-Reducing Admixture: ASTM C 494/C 494M, Type A.

2. Retarding Admixture: ASTM C 494/C 494M, Type B.

3. Water-Reducing and Retarding Admixture: ASTM C 494/C 494M, Type D.

4. High-Range, Water-Reducing Admixture: ASTM C 494/C 494M, Type F.

5. High-Range, Water-Reducing and Retarding Admixture: ASTM C 494/C 494M, Type G.
6. Plasticizing and Retarding Admixture: ASTM C 1017/C 1017M, Type II.

D. Water: ASTM C 94/C 94M and potable.

2.6 ADMIXTURES

A. Air-Entraining Admixture: ASTM C 260.

B. Chemical Admixtures: Provide admixtures certified by manufacturer to be compatible with other admixtures and that will not contribute water-soluble chloride ions exceeding those permitted in hardened concrete. Do not use calcium chloride or admixtures containing calcium chloride.

1. Water-Reducing Admixture: ASTM C 494/C 494M, Type A.
2. Retarding Admixture: ASTM C 494/C 494M, Type B.
3. Water-Reducing and Retarding Admixture: ASTM C 494/C 494M, Type D.
4. High-Range, Water-Reducing Admixture: ASTM C 494/C 494M, Type F.
5. High-Range, Water-Reducing and Retarding Admixture: ASTM C 494/C 494M, Type G.
6. Plasticizing and Retarding Admixture: ASTM C 1017/C 1017M, Type II.

2.7 VAPOR RETARDERS

A. Sheet Vapor Retarder: ASTM E 1745, Class C. Include manufacturer's recommended adhesive or pressure-sensitive joint tape.

1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:

    a. Raven Industries Inc.; Vapor Block 6.
    b. Reef Industries, Inc.; Griffolyn Type-65.
    c. Stego Industries, LLC; Stego Wrap, 10 mil Class C.

2. Water-Vapor Permeance: 0.02 perms ASTM E 154.
3. Tensile Strength: 140 lbf/inch (24.5 kN/m); ASTM E 154.
4. Puncture Resistance: 90 lbf (400N); ASTM E 154.

2.8 CURING MATERIALS

A. Evaporation Retarder: Waterborne, monomolecular film forming, manufactured for application to fresh concrete.

1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:

a. Axim Italcementi Group, Inc.; CATEXOL CimFilm.
b. BASF Construction Chemicals - Building Systems; Confilm.
c. ChemMasters; SprayFilm.
d. Conspec by Dayton Superior; Aquafilm.
e. Symons by Dayton Superior; Finishing Aid.
f. TK Products, Division of Sierra Corporation; TK-2120 TRI-FILM.
g. Unitex; PRO-FILM.
h. Vexcon Chemicals, Inc.; Certi-Vex Envio Set.

B. Absorptive Cover: AASHTO M 182, Class 2, burlap cloth made from jute or kenaf, weighing approximately 9 oz./sq. yd. (305 g/sq. m) when dry.

C. Moisture-Retaining Cover: ASTM C 171, polyethylene film or white burlap-polyethylene sheet.

D. Water: Potable.

E. Clear, Waterborne, Membrane-Forming Curing Compound: ASTM C 309, Type 1, Class B, dissipating.

1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:

a. Anti-Hydro International, Inc.; AH Curing Compound #2 DR WB.
b. BASF Construction Chemicals - Building Systems; Kure 200.
c. ChemMasters; Safe-Cure Clear.
d. TK Products, Division of Sierra Corporation; TK-2519 DC WB.
e. Vexcon Chemicals, Inc.; Certi-Vex Enviocure 100.

F. Clear, Waterborne, Membrane-Forming Curing Compound: ASTM C 309, Type 1, Class B, nondissipating, certified by curing compound manufacturer to not interfere with bonding of floor covering.

1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:

a. Anti-Hydro International, Inc.; AH Clear Cure WB.
b. BASF Construction Chemicals - Building Systems; Kure-N-Seal WB.
c. ChemMasters; Safe-Cure & Seal 20.
d. TK Products, Division of Sierra Corporation; TK-2519 WB.
e. Vexcon Chemicals, Inc.; Starseal 309.

G. Clear, Waterborne, Membrane-Forming Curing Compound: ASTM C 309, Type 1, Class B, 18 to 25 percent solids, nondissipating, certified by curing compound manufacturer to not interfere with bonding of floor covering.

1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:

a. BASF Construction Chemicals - Building Systems; Kure-N-Seal W.
b. ChemMasters; Safe-Cure Clear.
c. Conspec by Dayton Superior; High Seal.
d. Symons by Dayton Superior; Cure & Seal 18 Percent E.
e. Vexcon Chemicals, Inc.; Starseal 0800.

H. Clear, Solvent-Borne, Membrane-Forming Curing and Sealing Compound: ASTM C 1315, Type 1, Class A.

1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:

a. BASF Construction Chemicals - Building Systems; Kure-N-Seal 25 LV.
b. ChemMasters; Spray-Cure & Seal Plus.
c. Conspec by Dayton Superior; Sealcure 1315.
d. Right Pointe; Right Sheen 30.
e. Vexcon Chemicals, Inc.; Certi-Vex AC 1315.

I. Clear, Waterborne, Membrane-Forming Curing and Sealing Compound: ASTM C 1315, Type 1, Class A.

1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:

a. BASF Construction Chemicals - Building Systems; Kure 1315.
b. ChemMasters; Polyseal WB.
c. Conspec by Dayton Superior; Sealcure 1315 WB.
d. Symons by Dayton Superior; Cure & Seal 31 Percent E.
e. Vexcon Chemicals, Inc.; Vexcon Starseal 1315.

2.9 REPAIR MATERIALS

A. Bonding Agent: ASTM C 1059/C 1059M, Type II, non-redispersible, acrylic emulsion or styrene butadiene.

B. Epoxy Bonding Adhesive: ASTM C 881, two-component epoxy resin, capable of humid curing and bonding to damp surfaces, of class suitable for application temperature and of grade to suit requirements, and as follows:

1. Types IV and V, load bearing, for bonding hardened or freshly mixed concrete to hardened concrete.

2.10 CONCRETE MIXTURES, GENERAL

A. Obtain each size, type, and variety of concrete mixture from single manufacturer with resources to provide cast-in-place architectural concrete of consistent quality in appearance and physical properties.

B. Prepare design mixtures for each type and strength of concrete, proportioned on the basis of laboratory trial mixture or field test data, or both, according to ACI 301.

1. Use a qualified independent testing agency for preparing and reporting proposed mixture designs based on laboratory trial mixtures.

C. Cementitious Materials: Use fly ash to reduce the total amount of portland cement, which would otherwise be used. Limit percentage, by weight, of cementitious materials other than portland cement in concrete as follows:

1. Fly Ash: 25 percent, unless noted otherwise on drawings

D. Limit water-soluble, chloride-ion content in hardened concrete to 0.30 percent by weight of cement.

E. Admixtures: Use admixtures according to manufacturer's written instructions.

1. Use water-reducing high-range water-reducing or plasticizing admixture in concrete, as required, for placement and workability.
2. Use water-reducing and retarding admixture when required by high temperatures, low humidity, or other adverse placement conditions.
3. Use water-reducing admixture in pumped concrete, concrete for heavy-use industrial slabs and parking structure slabs, concrete required to be watertight, and concrete with a water-cementitious materials ratio below 0.50.

F. Concrete Mixtures:

1. Compressive Strength (28 Days): as indicated
2. Maximum W/C Ratio: 0.46.
3. Slump Limit: Per ready mix design, plus or minus 1 inch (25 mm).
4. Air Content: 3.0% percent, plus or minus 1.5 percent at point of delivery.

2.11 FABRICATING REINFORCEMENT

A. Fabricate steel reinforcement according to CRSI's "Manual of Standard Practice."

2.12 CONCRETE MIXING

A. Ready-Mixed Concrete: Measure, batch, mix, and deliver concrete according to ASTM C 94/C 94M, and furnish batch ticket information.

1. When air temperature is between 85 and 90 deg F (30 and 32 deg C), reduce mixing and delivery time from 1-1/2 hours to 75 minutes; when air temperature is above 90 deg F (32 deg C), reduce mixing and delivery time to 60 minutes.
2. When air temperature is between 85 and 90 deg F (30 and 32 deg C), reduce mixing and delivery time from 1-1/2 hours to 75 minutes; when air temperature is above 90 deg F (32 deg C), reduce mixing and delivery time to 60 minutes.

PART 3 - EXECUTION

3.1 FORMWORK

A. Design, erect, shore, brace, and maintain formwork, according to ACI 301, to support vertical, lateral, static, and dynamic loads, and construction loads that might be applied, until structure can support such loads.

B. Construct formwork so concrete members and structures are of size, shape, alignment, elevation, and position indicated, within tolerance limits of ACI 117.

C. Limit deflection of form-facing panels to not exceed ACI 303.1 requirements. Limit concrete surface irregularities, designated by ACI 347 as abrupt or gradual, as follows:

1. Class A, 1/8 inch (3.2 mm) for smooth-formed finished surfaces.
2. Class B, 1/4 inch (6 mm) for rough-formed finished surfaces.

D. Fabricate forms for easy removal without hammering or prying against concrete surfaces. Provide crush or wrecking plates where stripping may damage cast concrete surfaces. Provide top forms for inclined surfaces steeper than 1.5 horizontal to 1 vertical.

1. Install keyways, reglets, recesses, and the like, for easy removal.
2. Do not use rust-stained steel form-facing material.

E. Set edge forms, bulkheads, and intermediate screed strips for slabs to achieve required elevations and slopes in finished concrete surfaces. Provide and secure units to support screed strips; use strike-off templates or compacting-type screeds.

F. Provide temporary openings for cleanouts and inspection ports where interior area of formwork is inaccessible. Close openings with panels tightly fitted to forms and securely braced to prevent loss of concrete mortar. Locate temporary openings in forms at inconspicuous locations.

G. Chamfer exterior corners and edges of permanently exposed concrete.

H. Form openings, chases, offsets, sinkages, keyways, reglets, blocking, screeds, and bulkheads required in the Work. Determine sizes and locations from trades providing such items.

I. Clean forms and adjacent surfaces to receive concrete. Remove chips, wood, sawdust, dirt, and other debris just before placing concrete.

J. Retighten forms and bracing before placing concrete, as required, to prevent mortar leaks and maintain proper alignment.

K. Coat contact surfaces of forms with form-release agent, according to manufacturer's written instructions, before placing reinforcement.

3.2 EMBEDDED ITEMS

A. Place and secure anchorage devices and other embedded items required for adjoining work that is attached to or supported by cast-in-place concrete. Use setting drawings, templates, diagrams, instructions, and directions furnished with items to be embedded.

1. Install anchor rods, accurately located, to elevations required and complying with tolerances in Section 7.5 of AISC's "Code of Standard Practice for Steel Buildings and Bridges."

3.3 REMOVING AND REUSING FORMS

A. Leave formwork for slabs and other structural elements in place until concrete has achieved at least 70 percent of its 28-day design compressive strength.

B. Clean and repair surfaces of forms to be reused in the Work. Split, frayed, delaminated, or otherwise damaged form-facing material will not be acceptable for exposed surfaces. Apply new form-release agent.

C. When forms are reused, clean surfaces, remove fins and laitance, and tighten to close joints. Align and secure joints to avoid offsets. Do not use patched forms for exposed concrete surfaces unless approved by Architect.

3.4 VAPOR RETARDERS

A. Sheet Vapor Retarders: Place, protect, and repair sheet vapor retarder according to ASTM E 1643 and manufacturer's written instructions.

1. Lap joints 6 inches (150 mm) and seal with manufacturer's recommended tape.

3.5 STEEL REINFORCEMENT

A. General: Comply with CRSI's "Manual of Standard Practice" for placing reinforcement.

1. Do not cut or puncture vapor retarder. Repair damage and reseal vapor retarder before placing concrete.

B. Clean reinforcement of loose rust and mill scale, earth, ice, and other foreign materials that would reduce bond to concrete.

C. Accurately position, support, and secure reinforcement against displacement. Locate and support reinforcement with bar supports to maintain minimum concrete cover. Do not tack weld crossing reinforcing bars.

D. Set wire ties with ends directed into concrete, not toward exposed concrete surfaces.

E. Install welded wire reinforcement in longest practicable lengths on bar supports spaced to minimize sagging. Lap edges and ends of adjoining sheets at least one mesh spacing. Offset laps of adjoining sheet widths to prevent continuous laps in either direction. Lace overlaps with wire.

3.6 JOINTS

A. General: Construct joints true to line with faces perpendicular to surface plane of concrete.

B. Contraction Joints in Slabs-on-Grade: Form weakened-plane contraction joints, sectioning concrete into areas as indicated. Construct contraction joints for a depth equal to at least one-fourth of concrete thickness as follows:

1. Sawed Joints: Form contraction joints with power saws equipped with shatterproof abrasive or diamond-rimmed blades. Cut 1/8-inch- (3.2-mm-) wide joints into concrete when cutting action will not tear, abrade, or otherwise damage surface and before concrete develops random contraction cracks.

3.7 CONCRETE PLACEMENT

A. Before placing concrete, verify that installation of formwork, reinforcement, and embedded items is complete and that required inspections have been performed.

B. Follow OSHA 1926.1153 standards for protection from exposure to respirable crystalline silica, as applicable. This includes, but is not limited to, worker training and protection, measurement and control methods, and equipment dust control/containment.

C. Do not add water to concrete during delivery, at Project site, or during placement unless approved by Architect.

D. Before test sampling and placing concrete, water may be added at Project site, subject to limitations of ACI 301.

1. Do not add water to concrete after adding high-range water-reducing admixtures to mixture.

E. Deposit concrete continuously in one layer or in horizontal layers of such thickness that no new concrete will be placed on concrete that has hardened enough to cause seams or planes of weakness. If a section cannot be placed continuously, provide construction joints as indicated. Deposit concrete to avoid segregation.

1. Deposit concrete in horizontal layers of depth to not exceed formwork design pressures and in a manner to avoid inclined construction joints.
2. Consolidate placed concrete with mechanical vibrating equipment according to ACI 301.
3. Do not use vibrators to transport concrete inside forms. Insert and withdraw vibrators vertically at uniformly spaced locations to rapidly penetrate placed layer and at least 6 inches (150 mm) into preceding layer. Do not insert vibrators into lower layers of concrete that have begun to lose plasticity. At each insertion, limit duration of vibration

to time necessary to consolidate concrete and complete embedment of reinforcement and other embedded items without causing mixture constituents to segregate.

F. Deposit and consolidate concrete for floors and slabs in a continuous operation, within limits of construction joints, until placement of a panel or section is complete.

1. Consolidate concrete during placement operations so concrete is thoroughly worked around reinforcement and other embedded items and into corners.
2. Maintain reinforcement in position on chairs during concrete placement.
3. Screed slab surfaces with a straightedge and strike off to correct elevations.
4. Slope surfaces uniformly to drains where required.
5. Begin initial floating using bull floats or darbies to form a uniform and open-textured surface plane, before excess bleedwater appears on the surface. Do not further disturb slab surfaces before starting finishing operations.

G. Cold-Weather Placement: Comply with ACI 306.1 and as follows. Protect concrete work from physical damage or reduced strength that could be caused by frost, freezing actions, or low temperatures.

1. When average high and low temperature is expected to fall below 40 deg F (4.4 deg C) for three successive days, maintain delivered concrete mixture temperature within the temperature range required by ACI 301.
2. Do not use frozen materials or materials containing ice or snow. Do not place concrete on frozen subgrade or on subgrade containing frozen materials.
3. Do not use calcium chloride, salt, or other materials containing antifreeze agents or chemical accelerators unless otherwise specified and approved in mixture designs.

H. Hot-Weather Placement: Comply with ACI 301 and as follows:

1. Maintain concrete temperature below 90 deg F (32 deg C) at time of placement. Chilled mixing water or chopped ice may be used to control temperature, provided water equivalent of ice is calculated to total amount of mixing water. Using liquid nitrogen to cool concrete is Contractor's option.
2. Fog-spray forms, steel reinforcement, and subgrade just before placing concrete. Keep subgrade uniformly moist without standing water, soft spots, or dry areas.

3.8 FINISHING FORMED SURFACES

A. Rough-Formed Finish: As-cast concrete texture imparted by form-facing material with tie holes and defects repaired and patched. Remove fins and other projections that exceed specified limits on formed-surface irregularities.

1. Apply to concrete surfaces not exposed to public view.

B. Smooth-Formed Finish: As-cast concrete texture imparted by form-facing material, arranged in an orderly and symmetrical manner with a minimum of seams. Repair and patch tie holes and defects. Remove fins and other projections that exceed specified limits on formed-surface irregularities.

1. Apply to concrete surfaces exposed to public view, to receive a rubbed finish, to be covered with a coating or covering material applied directly to concrete.

C. Related Unformed Surfaces: At tops of walls, horizontal offsets, and similar unformed surfaces adjacent to formed surfaces, strike off smooth and finish with a texture matching adjacent formed surfaces. Continue final surface treatment of formed surfaces uniformly across adjacent unformed surfaces unless otherwise indicated.

3.9 FINISHING FLOORS AND SLABS

A. General: Comply with ACI 302.1R recommendations for screeding, restraightening, and finishing operations for concrete surfaces. Do not wet concrete surfaces.

B. Scratch Finish: While still plastic, texture concrete surface that has been screeded and bull-floated or darbied. Use stiff brushes, brooms, or rakes to produce a profile amplitude of 1/4 inch (6 mm) in one direction.

1. Apply scratch finish to surfaces to receive concrete floor toppings to receive mortar setting beds for bonded cementitious floor finishes.

C. Float Finish: Consolidate surface with power-driven floats or by hand floating if area is small or inaccessible to power driven floats. Restraighten, cut down high spots, and fill low spots. Repeat float passes and restraightening until surface is left with a uniform, smooth, granular texture.

1. Apply float finish to surfaces to receive trowel finish and to be covered with fluid-applied or sheet waterproofing, built-up or membrane roofing, or sand-bed terrazzo.

D. Trowel Finish: After applying float finish, apply first troweling and consolidate concrete by hand or power-driven trowel. Continue troweling passes and restraighten until surface is free of trowel marks and uniform in texture and appearance. Grind smooth any surface defects that would telegraph through applied coatings or floor coverings.

1. Apply a trowel finish to surfaces exposed to view or to be covered with resilient flooring, carpet, ceramic or quarry tile set over a cleavage membrane, paint, or another thin-film-finish coating system.

2. Finish and measure surface so gap at any point between concrete surface and an unleveled, freestanding, 10-ft.- (3.05-m-) long straightedge resting on two high spots and placed anywhere on the surface does not exceed 1/8 inch (3.2 mm).

E. Trowel and Fine-Broom Finish: Apply a first trowel finish to surfaces where ceramic or quarry tile is to be installed by either thickset or thin-set method. While concrete is still plastic, slightly scarify surface with a fine broom.

1. Comply with flatness and levelness tolerances for trowel-finished floor surfaces.

F. Broom Finish: Apply a broom finish to exterior concrete platforms, steps, ramps, and elsewhere as indicated.

1. Immediately after float finishing, slightly roughen trafficked surface by brooming with fiber-bristle broom perpendicular to main traffic route. Coordinate required final finish with Architect before application.

G. Slip-Resistive Finish: Before final floating, apply slip-resistive aggregate finish where indicated and to concrete stair treads, platforms, and ramps. Apply according to manufacturer's written instructions and as follows:

1. Uniformly spread 25 lb/100 sq. ft. (12 kg/10 sq. m) of dampened slip-resistive aggregate over surface in one or two applications. Tamp aggregate flush with surface, but do not force below surface.
2. After broadcasting and tamping, apply float finish.
3. After curing, lightly work surface with a steel wire brush or an abrasive stone and water to expose slip-resistive aggregate.

3.10 MISCELLANEOUS CONCRETE ITEMS

A. Filling In: Fill in holes and openings left in concrete structures after work of other trades is in place unless otherwise indicated. Mix, place, and cure concrete, as specified, to blend with in-place construction. Provide other miscellaneous concrete filling indicated or required to complete the Work.

B. Curbs: Provide monolithic finish to interior curbs by stripping forms while concrete is still green and by steel-troweling surfaces to a hard, dense finish with corners, intersections, and terminations slightly rounded.

C. Equipment Bases and Foundations: Provide machine and equipment bases and foundations as shown on Drawings. Set anchor bolts for machines and equipment at correct elevations, complying with diagrams or templates from manufacturer furnishing machines and equipment.

3.11 CONCRETE PROTECTING AND CURING

A. General: Protect freshly placed concrete from premature drying and excessive cold or hot temperatures. Comply with ACI 306.1 for cold-weather protection and ACI 301 for hot-weather protection during curing.

B. Evaporation Retarder: Apply evaporation retarder to unformed concrete surfaces if hot, dry, or windy conditions cause moisture loss approaching 0.2 lb/sq. ft. x h (1 kg/sq. m x h) before and during finishing operations. Apply according to manufacturer's written instructions after placing, screeding, and bull floating or darbying concrete, but before float finishing.

C. Formed Surfaces: Cure formed concrete surfaces, including underside of beams, supported slabs, and other similar surfaces. If forms remain during curing period, moist cure after

loosening forms. If removing forms before end of curing period, continue curing for the remainder of the curing period.

D. Unformed Surfaces: Begin curing immediately after finishing concrete. Cure unformed surfaces, including floors and slabs, concrete floor toppings, and other surfaces.

E. Cure concrete according to ACI 308.1, by one or a combination of the following methods:

1. Moisture Curing: Keep surfaces continuously moist for not less than seven days with the following materials:

    a. Water.
    b. Continuous water-fog spray.
    c. Absorptive cover, water saturated, and kept continuously wet. Cover concrete surfaces and edges with 12-inch (300-mm) lap over adjacent absorptive covers.

2. Moisture-Retaining-Cover Curing: Cover concrete surfaces with moisture-retaining cover for curing concrete, placed in widest practicable width, with sides and ends lapped at least 12 inches (300 mm), and sealed by waterproof tape or adhesive. Cure for not less than seven days. Immediately repair any holes or tears during curing period using cover material and waterproof tape.

    a. Moisture cure or use moisture-retaining covers to cure concrete surfaces to receive floor coverings.
    b. Moisture cure or use moisture-retaining covers to cure concrete surfaces to receive penetrating liquid floor treatments.
    c. Cure concrete surfaces to receive floor coverings with either a moisture-retaining cover or a curing compound that the manufacturer certifies will not interfere with bonding of floor covering used on Project.

3. Curing Compound: Apply uniformly in continuous operation by power spray or roller according to manufacturer's written instructions. Recoat areas subjected to heavy rainfall within three hours after initial application. Maintain continuity of coating and repair damage during curing period.

    a. Removal: After curing period has elapsed, remove curing compound without damaging concrete surfaces by method recommended by curing compound manufacturer unless manufacturer certifies curing compound will not interfere with bonding of floor covering used on Project.

4. Curing and Sealing Compound: Apply uniformly to floors and slabs indicated in a continuous operation by power spray or roller according to manufacturer's written instructions. Recoat areas subjected to heavy rainfall within three hours after initial application. Repeat process 24 hours later and apply a second coat. Maintain continuity of coating and repair damage during curing period.

3.12 CONCRETE SURFACE REPAIRS

A. Defective Concrete: Repair and patch defective areas when approved by Architect. Remove and replace concrete that cannot be repaired and patched to Architect's approval.

B. Patching Mortar: Mix dry-pack patching mortar, consisting of one part portland cement to two and one-half parts fine aggregate passing a No. 16 (1.18-mm) sieve, using only enough water for handling and placing.

C. Repairing Formed Surfaces: Surface defects include texture irregularities, cracks, spalls, air bubbles, honeycombs, rock pockets, fins and other projections on the surface, and stains and other discolorations that cannot be removed by cleaning.

1. Immediately after form removal, cut out honeycombs, rock pockets, and voids more than 1/2 inch (13 mm) in any dimension to solid concrete. Limit cut depth to 3/4 inch (19 mm). Make edges of cuts perpendicular to concrete surface. Clean, dampen with water, and brush-coat holes and voids with bonding agent. Fill and compact with patching mortar before bonding agent has dried. Fill form-tie voids with patching mortar or cone plugs secured in place with bonding agent.
2. Repair defects on surfaces exposed to view by blending white portland cement and standard portland cement so that, when dry, patching mortar will match surrounding. Patch a test area at inconspicuous locations to verify mixture match before proceeding with patching. Compact mortar in place and strike off slightly higher than surrounding surface.
3. Repair defects on concealed formed surfaces that affect concrete's durability and structural performance as determined by Architect.

D. Repairing Unformed Surfaces: Test unformed surfaces, such as floors and slabs, for finish and verify surface tolerances specified for each surface. Correct low and high areas. Test surfaces sloped to drain for trueness of slope and smoothness; use a sloped template.

1. Repair finished surfaces containing defects. Surface defects include spalls, popouts, honeycombs, rock pockets, crazing and cracks in excess of 0.01 inch (0.25 mm) wide or that penetrate to reinforcement or completely through unreinforced sections regardless of width, and other objectionable conditions.
2. After concrete has cured at least 14 days, correct high areas by grinding.
3. Correct localized low areas during or immediately after completing surface finishing operations by cutting out low areas and replacing with patching mortar. Finish repaired areas to blend into adjacent concrete.
4. Correct other low areas scheduled to receive floor coverings with a repair underlayment. Prepare, mix, and apply repair underlayment and primer according to manufacturer's written instructions to produce a smooth, uniform, plane, and level surface. Feather edges to match adjacent floor elevations.
5. Correct other low areas scheduled to remain exposed with a repair topping. Cut out low areas to ensure a minimum repair topping depth of 1/4 inch (6 mm) to match adjacent floor elevations. Prepare, mix, and apply repair topping and primer according to manufacturer's written instructions to produce a smooth, uniform, plane, and level surface.

6. Repair defective areas, except random cracks and single holes 1 inch (25 mm) or less in diameter, by cutting out and replacing with fresh concrete. Remove defective areas with clean, square cuts and expose steel reinforcement with at least a 3/4-inch (19-mm) clearance all around. Dampen concrete surfaces in contact with patching concrete and apply bonding agent. Mix patching concrete of same materials and mixture as original concrete except without coarse aggregate. Place, compact, and finish to blend with adjacent finished concrete. Cure in same manner as adjacent concrete.
7. Repair random cracks and single holes 1 inch (25 mm) or less in diameter with patching mortar. Groove top of cracks and cut out holes to sound concrete and clean off dust, dirt, and loose particles. Dampen cleaned concrete surfaces and apply bonding agent. Place patching mortar before bonding agent has dried. Compact patching mortar and finish to match adjacent concrete. Keep patched area continuously moist for at least 72 hours.

E. Perform structural repairs of concrete, subject to Architect's approval, using epoxy adhesive and patching mortar.

F. Repair materials and installation not specified above may be used, subject to Architect's approval.

3.13 FIELD QUALITY CONTROL

A. Testing and Inspecting: Contractor shall engage a qualified testing and inspecting agency to perform tests and inspections and to submit reports.

B. Inspection of vapor retarder installation

C. Concrete Tests: Testing of composite samples of fresh concrete obtained according to ASTM C 172 shall be performed according to the following requirements:

1. Testing Frequency: Obtain one composite sample for each day's pour of each concrete mixture exceeding 5 cu. yd. (4 cu. m), but less than 25 cu. yd. (19 cu. m), plus one set for each additional 50 cu. yd. (38 cu. m) or fraction thereof.

    a. When frequency of testing will provide fewer than five compressive-strength tests for each concrete mixture, testing shall be conducted from at least five randomly selected batches or from each batch if fewer than five are used.

2. Slump: ASTM C 143/C 143M; one test at point of placement for each composite sample, but not less than one test for each day's pour of each concrete mixture. Perform additional tests when concrete consistency appears to change.
3. Air Content: ASTM C 231, pressure method, for normal-weight concrete; one test for each composite sample, but not less than one test for each day's pour of each concrete mixture.
4. Concrete Temperature: ASTM C 1064/C 1064M; one test hourly when air temperature is 40 deg F (4.4 deg C) and below and when 80 deg F (27 deg C) and above, and one test for each composite sample.
5. Compression Test Specimens: ASTM C 31/C 31M.

a. Cast and laboratory cure two sets of two standard cylinder specimens for each composite sample.

6. Compressive-Strength Tests: ASTM C 39/C 39M; test one set of two laboratory-cured specimens at 7 days and one set of two specimens at 28 days.
   a. A compressive-strength test shall be the average compressive strength from a set of two specimens obtained from same composite sample and tested at age indicated.

7. Strength of each concrete mixture will be satisfactory if every average of any three consecutive compressive-strength tests equals or exceeds specified compressive strength and no compressive-strength test value falls below specified compressive strength by more than 500 psi (3.4 MPa).
8. Test results shall be reported in writing to Architect, concrete manufacturer, and Contractor within 48 hours of testing. Reports of compressive-strength tests shall contain Project identification name and number, date of concrete placement, name of concrete testing and inspecting agency, location of concrete batch in Work, design compressive strength at 28 days, concrete mixture proportions and materials, compressive breaking strength, and type of break for both 7- and 28-day tests.
9. Nondestructive Testing: Impact hammer, sonoscope, or other nondestructive device may be permitted by Architect but will not be used as sole basis for approval or rejection of concrete.
10. Additional Tests: Testing and inspecting agency shall make additional tests of concrete when test results indicate that slump, air entrainment, compressive strengths, or other requirements have not been met, as directed by Architect. Testing and inspecting agency may conduct tests to determine adequacy of concrete by cored cylinders complying with ASTM C 42/C 42M or by other methods as directed by Architect.
11. Additional testing and inspecting, at Contractor's expense, will be performed to determine compliance of replaced or additional work with specified requirements.
12. Correct deficiencies in the Work that test reports and inspections indicate do not comply with the Contract Documents.

3.14 PROTECTION OF LIQUID FLOOR TREATMENTS

A. Protect liquid floor treatment from damage and wear during the remainder of construction period. Use protective methods and materials, including temporary covering, recommended in writing by liquid floor treatments installer.

END OF SECTION 03 30 00

SECTION 04 20 00 - UNIT MASONRY

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

1. Concrete masonry units.
2. Pre-cast concrete items.

1.3 DEFINITIONS

A. CMU(s): Concrete masonry unit(s).

B. Reinforced Masonry: Masonry containing reinforcing steel in grouted cells.

1.4 ACTION SUBMITTALS

A. Product Data: For each type of product.

1.5 INFORMATIONAL SUBMITTALS

A. Material Certificates: For each type and size of product. For masonry units, include data on material properties.

1.6 QUALITY ASSURANCE

A. Masonry Standard: Comply with ACI 530.1/ASCE 6/TMS 602 unless modified by requirements in the Contract Documents.

B. OSHA Standards: In addition to other applicable OSHA Standards, comply with OSHA 1926.1153 for exposure to respirable crystalline silica.

1.6 FIELD CONDITIONS

A. Cold-Weather Requirements: Comply with cold-weather construction requirements contained in TMS 602/ACI 530.1/ASCE 6.

B. Hot-Weather Requirements: Comply with hot-weather construction requirements contained in TMS 602/ACI 530.1/ASCE 6.

PART 2 - PRODUCTS

2.1 UNIT MASONRY, GENERAL

A. Masonry Standard: Comply with TMS 602/ACI 530.1/ASCE 6, except as modified by requirements in the Contract Documents.

B. Defective Units: Referenced masonry unit standards may allow a certain percentage of units to contain chips, cracks, or other defects exceeding limits stated. Do not use units where such defects are exposed in the completed Work.

2.2 CONCRETE MASONRY UNITS

A. CMUs: ASTM C 90.

1. Unit Compressive Strength: Provide units with minimum average net-area compressive strength of 2800 psi .
2. Density Classification: Normal weight.

2.3 MORTAR AND GROUT MATERIALS

A. Portland Cement: ASTM C 150/C 150M, Type I or II, except Type III may be used for cold-weather construction. Provide natural color or white cement as required to produce mortar color indicated.

B. Hydrated Lime: ASTM C 207, Type S.

C. Portland Cement-Lime Mix: Packaged blend of portland cement and hydrated lime containing no other ingredients.

D. Masonry Cement: ASTM C 91/C 91M.

E. Aggregate for Mortar: ASTM C 144.

1. For joints less than 1/4 inch thick, use aggregate graded with 100 percent passing the No. 16 sieve.

F. Aggregate for Grout: ASTM C 404.

G. Cold-Weather Admixture: Nonchloride, noncorrosive, accelerating admixture complying with ASTM C 494/C 494M, Type C, and recommended by manufacturer for use in masonry mortar of composition indicated.

H. Water: Potable.

2.4 REINFORCEMENT

A. Uncoated-Steel Reinforcing Bars: ASTM A 615/A 615M or ASTM A 996/A 996M, Grade 60 .

B. Masonry-Joint Reinforcement, General: ASTM A 951/A 951M.

2.5 MORTAR AND GROUT MIXES

A. General: Do not use admixtures, including pigments, air-entraining agents, accelerators, retarders, water-repellent agents, antifreeze compounds, or other admixtures unless otherwise indicated.

1. Do not use calcium chloride in mortar or grout.
2. For exterior reinforced masonry, use [portland cement-lime] [or] [masonry cement] mortar.
3. Add cold-weather admixture (if used) at same rate for all mortar that will be exposed to view, regardless of weather conditions, to ensure that mortar color is consistent.

B. Preblended, Dry Mortar Mix: Furnish dry mortar ingredients in form of a preblended mix. Measure quantities by weight to ensure accurate proportions, and thoroughly blend ingredients before delivering to Project site.

C. Mortar for Unit Masonry: Comply with ASTM C 270, Proportion Property Specification. Provide the following types of mortar for applications stated unless another type is indicated or needed to provide required compressive strength of masonry.

1. For reinforced masonry, use Type M.

D. Grout for Unit Masonry: Comply with ASTM C 476.

1. Use grout of type indicated or, if not otherwise indicated, of type (fine or coarse) that will comply with TMS 602/ACI 530.1/ASCE 6 for dimensions of grout spaces and pour height.
2. Proportion grout in accordance with ASTM C 476, Table 1 or paragraph 4.2.2 for specified 28-day compressive strength indicated, but not less than 2000 psi.
3. Provide grout with a slump of 8 to 11 inches as measured according to ASTM C 143/C 143M.

2.6 PRE-CAST CONCRETE ITEMS

A. Pre-Cast Concrete Items: Items be factory-made units from a plant regularly engaged in producing pre-cast concrete units. Unless otherwise indicated, concrete shall be 3,000 p.s.i. minimum, conforming to Section 03 30 00 “Cast-In-Place Concrete”.

1. Pre-Cast concrete column and wall caps shall be as detailed on the drawings. Reinforcement shall be manufacturer’s standard.

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

A. Use full-size units without cutting if possible. If cutting is required to provide a continuous pattern or to fit adjoining construction, cut units with motor-driven saws; provide clean, sharp, unchipped edges. Allow units to dry before laying unless wetting of units is specified. Install cut units with cut surfaces and, where possible, cut edges concealed.

B. Select and arrange units for exposed unit masonry to produce a uniform blend of colors and textures. Mix units from several pallets or cubes as they are placed.

C. Follow OSHA 1926.1153 standards for protection from exposure to respirable crystalline silica. This includes, but is not limited to, worker training and protection, measurement and control methods, and equipment dust control/containment.

3.2 TOLERANCES

A. Dimensions and Locations of Elements:

1. For dimensions in cross section or elevation, do not vary by more than plus 1/2 inch or minus 1/4 inch .

B. Lines and Levels:

1. For vertical lines and surfaces, do not vary from plumb by more than 1/4 inch in 10 feet , 3/8 inch in 20 feet , or 1/2-inch maximum.
2. For lines and surfaces, do not vary from straight by more than 1/4 inch in 10 feet , 3/8 inch in 20 feet , or 1/2-inch maximum.

C. Joints:

1. For bed joints, do not vary from thickness indicated by more than plus or minus 1/8 inch , with a maximum thickness limited to 1/2 inch .
2. For exposed head joints, do not vary from thickness indicated by more than plus or minus 1/8 inch .

3.3 LAYING MASONRY WALLS

A. Lay out walls in advance for accurate spacing of surface bond patterns with uniform joint thicknesses and for accurate location of openings, movement-type joints, returns, and offsets. Avoid using less-than-half-size units, particularly at corners, jambs, and, where possible, at other locations.

B. Bond Pattern for Exposed Masonry: Unless otherwise indicated, lay exposed masonry in running bond; do not use units with less-than-nominal 4-inch horizontal face dimensions at corners or jambs.

3.4 MORTAR BEDDING AND JOINTING

A. Lay CMUs as follows:

1. Bed face shells in mortar and make head joints of depth equal to bed joints.
2. Bed webs in mortar in grouted masonry, including starting course on footings.

B. Tool exposed joints slightly concave when thumbprint hard, using a jointer larger than joint thickness unless otherwise indicated.

3.5 REINFORCED UNIT MASONRY INSTALLATION

A. Temporary Formwork and Shores: Construct formwork and shores as needed to support reinforced masonry elements during construction.

1. Construct formwork to provide shape, line, and dimensions of completed masonry as indicated. Make forms sufficiently tight to prevent leakage of mortar and grout. Brace, tie, and support forms to maintain position and shape during construction and curing of reinforced masonry.
2. Do not remove forms and shores until reinforced masonry members have hardened sufficiently to carry their own weight and that of other loads that may be placed on them during construction.

B. Placing Reinforcement: Comply with requirements in TMS 602/ACI 530.1/ASCE 6.

C. Grouting: Do not place grout until entire height of masonry to be grouted has attained enough strength to resist grout pressure.

1. Comply with requirements in TMS 602/ACI 530.1/ASCE 6 for cleanouts and for grout placement, including minimum grout space and maximum pour height.
2. Limit height of vertical grout pours to not more than 60 inches.

3.6 REPAIRING, POINTING, AND CLEANING

A. In-Progress Cleaning: Clean unit masonry as work progresses by dry brushing to remove mortar fins and smears before tooling joints.

B. Final Cleaning: After mortar is thoroughly set and cured, clean exposed masonry as follows:

1. Remove large mortar particles by hand with wooden paddles and nonmetallic scrape hoes or chisels.

3.7 MASONRY WASTE DISPOSAL

A. Waste Disposal as Fill Material: Dispose of clean masonry waste, including excess or soil-contaminated sand, waste mortar, and broken masonry units, by crushing and mixing with fill material as fill is placed.

1. Do not dispose of masonry waste as fill within 18 inches of finished grade.

B. Excess Masonry Waste: Remove excess clean masonry waste that cannot be used as fill, as described above, and other masonry waste, and legally dispose of off Owner's property.

END OF SECTION 04 20 00

SECTION 04 21 13 - BRICK MASONRY

PART 1 – GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

1. Face brick at cavity walls with wood stud backup wall.
2. Mortar
3. Joint reinforcing, ties and anchors.
4. Embedded flashing.
5. Rigid insulation inside cavity walls.
6. Miscellaneous masonry accessories.
7. Installation of steel lintels and shelf angles.

B. Related Sections:

1. Section 06 10 00 “Rough Carpentry” for wood stud backup walls.
2. Section 05 50 00 "Metal Fabrications" for furnishing steel lintels for brick masonry.
3. Section 07 21 00 “Thermal Insulation” for extruded-polystyrene board insulation in exterior wall cavity behind masonry veneer.

1.3 ACTION SUBMITTALS

A. Product Data: For each type of product indicated, including the following:

1. Masonry Units
2. Mortar
3. Masonry accessories
4. Cavity Drainage material
5. Weeps/vents.
6. Through-wall flashing

B. Samples for Verification:

1. Face brick.

C. Material Certificates: For each type and size of the following:

1. Masonry units.

a. Include data on material properties.
b. For brick, include size-variation data verifying that actual range of sizes falls within specified tolerances.
c. For exposed brick, include test report for efflorescence according to ASTM C 67.

2. Cementitious materials. Include brand, type, and name of manufacturer.
3. Preblended, dry mortar mixes. Include description of type and proportions of ingredients.
4. Anchors, ties, and metal accessories.

D. Cold-Weather and Hot-Weather Procedures: Detailed description of methods, materials, and equipment to be used to comply withrequirements.

1.4 QUALITY ASSURANCE

A. Source Limitations for Masonry Units: Obtain exposed masonry units of a uniform texture and color, or a uniform blend within the ranges accepted for these characteristics, from single source from single manufacturer for each product required.

B. Source Limitations for Mortar Materials: Obtain mortar ingredients of a uniform quality, including color for exposed masonry, from single manufacturer for each cementitious component and from single source or producer for each aggregate.

C. Masonry Standard: Comply with ACI 530.1/ASCE 6/TMS 602 unless modified by requirements in the Contract Documents.

D. OSHA Standards: In addition to other applicable OSHA Standards, comply with OSHA 1926.1153 for exposure to respirable crystalline silica.

E. Pre-installation Conference: A pre-installation conference shall be held at the project site prior to commencement of work, to establish procedures to maintain optimum working conditions and to coordinate this work with related and adjacent work.

1. Agenda for meeting shall include review of all cavity wall components, including rigid insulation, mortar net, brick ties, wall and opening flashings.

F. Mockups: Build mockups to verify selections made under sample submittals and to demonstrate aesthetic effects and set quality standards for materials and execution.

1. Build mockup of typical wall area, approximately 48 inches long by 48inches high by full thickness, including accessories.

a. Include a sealant-filled joint at least 16 inches long in each mockup.
b. Include lower corner of window opening at upper corner of exterior wall mockup. Make opening approximately 12 inches wide by 16 inches high.
c. Include through-wall flashing installed for a 24-inch length, with a 12-inch length of flashing left exposed to view (omit masonry above half of flashing).

d. Include wood studs, sheathing, air barrier, veneer anchors, flashing, cavity drainage material, and weep holes in mockup.

2. Clean one-half of exposed faces of mockups with masonry cleaner as indicated.
3. Protect accepted mockups from the elements with weather-resistant membrane.
4. Approval of mockups is for color, texture, and blending of masonry units; relationship of mortar and sealant colors to masonry unit colors; tooling of joints; and aesthetic qualities of workmanship.

a. Approval of mockups is also for other material and construction qualities specifically approved by Architect in writing.
b. Approval of mockups does not constitute approval of deviations from the Contract Documents contained in mockups unless such deviations are specifically approved by Architect in writing.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Store masonry units on elevated platforms in a dry location. If units are not stored in an enclosed location, cover tops and sides of stacks with waterproof sheeting, securely tied. If units become wet, do not install until they are dry.

B. Store cementitious materials on elevated platforms, under cover, and in a dry location. Do not use cementitious materials that have becomedamp.

C. Store aggregates where grading and other required characteristics can be maintained and contamination avoided.

D. Deliver preblended, dry mortar mix in moisture-resistant containers designed for use with dispensing silos. Store preblended, dry mortar mix in delivery containers on elevated platforms, under cover, and in a dry location or in covered weatherproof dispensing silos.

E. Store masonry accessories, including metal items, to prevent corrosion and accumulation of dirt and oil.

1.6 PROJECT CONDITIONS

A. Protection of Masonry: During construction, cover tops of walls, projections, and sills with waterproof sheeting at end of each day's work. Cover partially completed masonry when construction is not in progress.

1. Extend cover a minimum of 24 inches down both sides of walls and hold cover securely in place.

B. Stain Prevention: Prevent grout, mortar, and soil from staining the face of masonry to be left exposed or painted. Immediately remove grout, mortar, and soil that come in contact with such masonry.

1. Protect base of walls from rain-splashed mud and from mortar splatter by spreading coverings on ground and over wall surface.
2. Protect sills, ledges, and projections from mortar droppings.
3. Protect surfaces of window and door frames, as well as similar products with painted and integral finishes, from mortar droppings.
4. Turn scaffold boards near the wall on edge at the end of each day to prevent rain from splashing mortar and dirt onto completed masonry.

C. Cold-Weather Requirements: Comply with cold-weather construction requirements contained in ACI 530.1/ASCE 6/TMS 602.

1. Cold-Weather Cleaning: Use liquid cleaning methods only when air temperature is 40 deg F (4 deg C) and higher and will remain so until masonry has dried, but not less than seven days after completing cleaning.

D. Hot-Weather Requirements: Comply with hot-weather construction requirements contained in ACI 530.1/ASCE 6/TMS 602.

PART 2 - PRODUCTS

2.1 MASONRY UNITS, GENERAL

A. Defective Units: Referenced masonry unit standards may allow a certain percentage of units to contain chips, cracks, or other defects exceeding limits stated in the standard.

1. Do not use units where such defects will be exposed in the completed Work.

2.2 FACE BRICK

A. General: Provide shapes indicated on drawings and as follows, with exposed surfaces matching finish and color of exposed faces of adjacent units.

1. For ends of sills and caps and for similar applications that would otherwise expose unfinished brick surfaces, provide units without cores or frogs and with exposed surfaces finished.
2. Provide special shapes for applications where stretcher units cannot accommodate special conditions, including those at corners, movement joints, and lintels.
3. Provide special shapes for applications requiring brick of size, form, color, and texture on exposed surfaces that cannot be produced by sawing.

B. Manufacturers:

1. Products: New face brick shall match appearance of existing brick in size, color and face texture. Subject to compliance with requirements available products that may be incorporated into the Work include, but are not limited to, the following:

a. Belden Brick
b. Cherokee Brick and Tile
c. Taylor Clay Products
d. ACME Brick

C. Properties: Facing brick complying with ASTM C 216.

1. Grade: SW.
2. Type: FBS
3. Initial Rate of Absorption: Less than 30 g/30 sq. in. per minute when tested per ASTM C 67.
4. Efflorescence: Provide brick tested according to ASTM C 67 and rated "not effloresced."
5. Size (Actual Dimensions): 3-5/8 inches wide by 2-1/4 inches high by 7- 5/8 inches long.

2.3 MORTAR MATERIALS

A. Portland Cement: ASTM C 150, Type I or II, except Type III may be used for cold-weather construction. Provide white cement to produce mortar color indicated.

B. Hydrated Lime: ASTM C 207, Type S.

C. Cement Product: Packaged blend made from portland cement and hydrated lime masonry cement or mortar cement all complying with specified requirements, and containing no other ingredients.

D. Aggregate for Mortar: ASTM C 144.

1. For mortar that is exposed to view, use washed aggregate consisting of natural sand or crushed stone.
2. For joints less than 1/4 inch thick, use aggregate graded with 100 percent passing the No. 16 sieve.
3. White-Mortar Aggregates: Natural white sand or crushed white stone.

E. Water: potable

2.4 REINFORCEMENT

A. Masonry Joint Reinforcement, General: ASTM A 951/A 951M.

2.5 TIES AND ANCHORS

A. Materials: Provide ties and anchors specified in this article that are made from materials that comply with the following unless otherwise indicated:

1. Hot-Dip Galvanized, Carbon-Steel Wire: ASTM A 82/A 82M; with ASTM A 153/A 153M, Class B-2 coating.

B. Adjustable Brick Masonry-Veneer Anchors:

1. Screw- Attached, Masonry-Veneer Anchors: Units consisting of a hot-dip galvanized metal wire tie and a hot-dip galvanized metal anchor section. Provide anchors that allow vertical adjustment but resist tension and compression forces perpendicular to plane of wall, for attachment over sheathing to wood studs, and as follows:

a. Structural Performance Characteristics: Capable of withstanding a 100-lbf load in both tension and compression without deforming or developing play in excess of 0.05 inch.
b. Brick Anchor Spacing: wall cavity from stud to outside of brick shall have brick ties at 32” on center vertically and horizontally with an offset pattern (diamond).

2.6 EMBEDDED FLASHING MATERIALS

A. Flexible Flashing: Use one of the following unless otherwise indicated: Flexible flashing product must be compatible with fluid applied air barrier system.

1. Rubberized-Asphalt Flashing: Composite flashing product consisting of a pliable, adhesive rubberized-asphalt compound, bonded to a high-density, cross-laminated polyethylene film to produce an overall thickness of not less than 0.030 inch.

a. Products: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

1) Carlisle Coatings & Waterproofing; CCW-705-TWF Thru-Wall Flashing.
2) Dayton Superior Corporation, Dur-O-Wal Division; Dur-O-Barrier Thru-Wall Flashing.
3) Grace Construction Products, W. R. Grace & Co. - Conn.; Perm-A-Barrier Wall Flashing.
4) Heckmann Building Products Inc.; No. 82 Rubberized-Asphalt Thru-Wall Flashing.

b. Accessories: Provide preformed corners, end dams, other special shapes, and seaming materials produced by flashing manufacturer.

2. Elastomeric Thermoplastic Flashing: Composite flashing product consisting of a polyester-reinforced ethylene interpolymer alloy.

a. Products: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

1) DuPont; Thru-Wall Flashing.
2) Hohmann & Barnard, Inc.; Flex-Flash.
3) Mortar Net USA, Ltd.; Total Flash.

b. Monolithic Sheet: Elastomeric thermoplastic flashing, 0.040 inch thick.
c. Self-Adhesive Sheet: Elastomeric thermoplastic flashing, 0.025 inch thick, with a 0.015-inch- thick coating of adhesive.
d. Accessories: Provide preformed corners, end dams, other special shapes, and seaming materials produced by flashing manufacturer.

2.7 MISCELLANEOUS MASONRY ACCESSORIES

A. Compressible Filler: Premolded filler strips complying with ASTM D 1056, Grade 2A1; compressible up to 35 percent; of width and thickness indicated; formulated from neoprene, urethane, or PVC.

B. Bond-Breaker Strips: Asphalt-saturated, organic roofing felt complying with ASTM D 226, Type I (No. 15 asphalt felt).

C. Weep/Vents: One-piece, free-draining mesh; made from polymer strands, full height and width of head joint and depth 1/8 inch less than depth of outer wythe.

a. Products: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
1) Mortar Net USA, Ltd.; Mortar Net Weep Vents.
2) Dayton Superior Corporation, Dur-O-Wal Division; Cell Vents
3) Hohmann & Barnard, Inc.; Quadro-Vent

D. Cavity Drainage Material: Free-draining mesh, made from polymer strands that will not degrade within the wall cavity.

1. Products: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

a. Advanced Building Products Inc.; Mortar Break II.
b. Archovations, Inc.; CavClear Masonry Mat.
c. Dayton Superior Corporation, Dur-O-Wal Division; Polytite MortarStop.
d. Mortar Net USA, Ltd.; Mortar Net.

2. Provide the following configuration:

a. Strips, not less than 1-1/2 inches thick and 10 inches high, designed to catch mortar droppings and prevent weep holes from clogging with mortar.

2.8 MASONRY CLEANERS

A. Proprietary Acidic Cleaner: Manufacturer's standard-strength cleaner designed for removing mortar/grout stains, efflorescence, and other new construction stains from new masonry without discoloring or damaging masonry surfaces.

B. Use product expressly approved for intended use by cleaner manufacturer and manufacturer of masonry units being cleaned.

C. Job-Mixed Detergent Solution: Solution of 1/2 cup dry measure tetrasodium polyphosphate and ½ cup dry measure laundry detergent dissolved in 1 gallon of water.

2.9 MORTAR MIXES

A. General: Do not use admixtures, including pigments, air-entraining agents, accelerators, retarders, water-repellent agents, antifreeze compounds, or other admixtures unless otherwise indicated.

1. Do not use calcium chloride in mortar.
2. Add cold-weather admixture (if used) at the same rate for all mortar, regardless of weather conditions, to ensure that mortar color is consistent.

B. Preblended, Dry Mortar Mix: Furnish dry mortar ingredients in form of a preblended mix. Measure quantities by weight to ensure accurate proportions, and thoroughly blend ingredients before delivering to Project site.

C. Mortar for Unit Masonry: Comply with ASTM C 270, Proportion Specification. Provide Type N unless another type is indicated.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

C. Follow OSHA 1926.1153 standards for protection from exposure to respirable crystalline silica. This includes, but is not limited to, worker training and protection, measurement and control methods, and equipment dust control/containment.

3.2 INSTALLATION OF FACE BRICK, GENERAL

A. Install brick veneer in accordance with applicable industry standards, including those identified in Technical Notes on Brick Construction published by the Brick Industry Association (BIA).

B. Leave openings for equipment to be installed before completing masonry. After installing equipment, complete masonry to match the construction immediately adjacent to opening.

C. Use full-size units without cutting if possible. If cutting is required to provide a continuous pattern or to fit adjoining construction, cut units with motor-driven saws; provide clean, sharp, unchipped edges. Allow units to dry before laying unless wetting of units is specified. Install cut units with cut surfaces and, where possible, cut edges concealed.

D. Select and arrange units for exposed unit masonry to produce a uniform blend of colors and textures. Mix units from several pallets or cubes as they are placed.

E. Wetting of Brick: Wet brick before laying if initial rate of absorption exceeds 30 g/30 sq. in. (30 g/194 sq. cm) per minute when tested per ASTM C 67. Allow units to absorb water so they are damp but not wet at time of laying.

3.3 TOLERANCES

A. Dimensions and Locations of Elements:

1. For dimensions in cross section or elevation do not vary by more than plus 1/2 inch or minus 1/4 inch.
2. For location of elements in plan do not vary from that indicated by more than plus or minus 1/2 inch.
3. For location of elements in elevation do not vary from that indicated by more than plus or minus 1/4 inch in a story height or 1/2 inch total.

B. Lines and Levels:

1. For conspicuous horizontal lines, such as lintels, sills, parapets, and reveals, do not vary from level by more than 1/8 inch in 10 feet 1/4 inch in 20 feet, or 1/2 inch maximum.
2. For vertical lines and surfaces do not vary from plumb by more than 1/4 inch in 10 feet, 3/8 inch in 20 feet, or 1/2 inch maximum.
3. For conspicuous vertical lines, such as external corners, door jambs, reveals, and expansion and control joints, do not vary from plumb by more than 1/8 inch in 10 feet, 1/4 inch in 20 feet, or 1/2 inch maximum.
4. For lines and surfaces do not vary from straight by more than 1/4 inch in 10 feet, 3/8 inch in 20 feet (or 1/2 inch maximum.
5. For vertical alignment of exposed head joints, do not vary from plumb by more than 1/4 inch in 10 feet, or 1/2 inch maximum.
6. For faces of adjacent exposed masonry units, do not vary from flush alignment by more than 1/16 inch except due to warpage of masonry units within tolerances specified for warpage of units.

C. Joints:

1. For bed joints, do not vary from thickness indicated by more than plus or minus 1/8 inch, with a maximum thickness limited to 1/2 inch; do not vary from bed-joint thickness of adjacent courses by more than 1/8 inch.
2. For exposed head joints, do not vary from thickness indicated by more than plus or minus 1/8 inch.

3.4 LAYING MASONRY WALLS

A. Lay out walls in advance for accurate spacing of surface bond patterns with uniform joint thicknesses and for accurate location of openings, movement-type joints, returns, and offsets. Avoid using less-than-half-size units, particularly at corners, jambs, and, where possible, at other locations.

B. Bond Pattern for Exposed Masonry: Unless otherwise indicated, lay exposed masonry in running bond, unless a special bond pattern is indicated on Drawings; do not use units with less than nominal 4-inch horizontal face dimensions at corners or jambs.

C. Stopping and Resuming Work: Stop work by racking back units in each course from those in course below; do not tooth. When resuming work, clean masonry surfaces that are to receive mortar, remove loose masonry units and mortar, and wet brick if required before laying fresh masonry.

D. Built-in Work: As construction progresses, build in items specified in this and other Sections. Fill in solidly with masonry around built-initems.

3.5 MORTAR BEDDING AND JOINTING

A. Lay hollow brick with entire units, including areas under cells, fully bedded in mortar at starting course on footings.

B. Tool exposed joints slightly concave when thumbprint hard, using a jointer larger than joint thickness unless otherwise indicated.

3.6 ANCHORING MASONRY VENEERS

A. Anchor masonry veneers to wall framing with masonry-veneer anchors to comply with the following requirements:

1. Fasten screw-attached anchors through insulation and sheathing to wall framing and backup with metal fasteners of type indicated. Use two fasteners unless anchor design only uses one fastener.
2. Embed tie sections in masonry joints. Provide not less than 2 inches of air space between back of masonry veneer and face of sheathing.
3. Locate anchor sections to allow maximum vertical differential movement of ties up and down.
4. Space anchors as indicated, but not more than 18 inches o.c. vertically and 24 inches o.c. horizontally, with not less than 1 anchor for each 2 sq. ft. of wall area. Install additional anchors within 12 inches of openings and at intervals, not exceeding 8 inches, around perimeter.
5. Space anchors as indicated, but not more than 16 inches o.c. vertically and 24 inches o.c. horizontally with not less than 1 anchor for each 2.67 sq. ft. of wall area. Install additional anchors within 12 inches of openings and at intervals, not exceeding 36 inches, around perimeter.

3.7 EXPANSION JOINTS

A. General: Install expansion joint materials in unit masonry as masonry progresses. Do not allow materials to span expansion joints without provision to allow for in-plane wall or partition movement.

B. Form expansion joints in brick as follows:

1. Build flanges of factory-fabricated, expansion-joint units into masonry.
2. Build in compressible joint fillers where indicated.

3. Form open joint full depth of brick wythe and of width indicated, but not less than 3/8 inch for installation of sealant and backer rod specified in Division 07 Section "Joint Sealants."

C. Provide horizontal, pressure-relieving joints by either leaving an air space or inserting a compressible filler of width required for installing sealant and backer rod specified in Division 07 Section "Joint Sealants," but not less than 3/8 inch.

1. Locate horizontal, pressure-relieving joints beneath shelf angles supporting masonry.

3.11 LINTELS

A. Install steel lintels where indicated.

B. Provide minimum bearing of 8 inches at each jamb unless otherwise indicated.

3.12 FLASHING, WEEP HOLES, CAVITY DRAINAGE, AND VENTS

A. General: Install embedded flashing and weep holes in masonry at shelf angles, lintels, ledges, other obstructions to downward flow of water in wall, and where indicated. Install vents at shelf angles, ledges, and other obstructions to upward flow of air in cavities, and where indicated.

B. Install flashing as follows unless otherwise indicated:

1. Prepare masonry surfaces so they are smooth and free from projections that could puncture flashing. Where flashing is within mortar joint, place through-wall flashing on sloping bed of mortar and cover with mortar. Before covering with mortar, seal penetrations in flashing with adhesive, sealant, or tape as recommended by flashing manufacturer.
2. At masonry-veneer walls, extend flashing through veneer, across air space behind veneer, and up face of sheathing at least 8 inches. Lap with fluid-applied air barrier as recommended by air barrier manufacturer.
3. At lintels and shelf angles, extend flashing a minimum of 6 inches into masonry at each end. At heads and sills, extend flashing 6 inches at ends and turn up not less than 2 inches to form end dams.

4. Cut flexible flashing off flush with face of wall after masonry wall construction is completed.

C. Install weep holes in head joints in exterior wythes of first course of masonry immediately above embedded flashing and as follows:

1. Use specified weep/vent products to form weep holes.
2. Use wicking material to form weep holes above flashing under brick sills. Turn wicking down at lip of sill to be as inconspicuous as possible.
3. Space weep holes 24 inches o.c. unless otherwise indicated.
4. Space weep holes formed from plastic tubing or wicking material 16 inches o.c.
5. Trim wicking material flush with outside face of wall after mortar has set.

D. Place cavity drainage material in cavities to comply with configuration requirements for cavity drainage material in "Miscellaneous Masonry Accessories" Article.

E. Install vents in head joints in exterior wythes at spacing indicated. Use specified weep/vent products to form vents.

1. Close cavities off vertically and horizontally with blocking in manner indicated. Install through-wall flashing and weep holes above horizontal blocking.

3.13 REPAIRING, POINTING, AND CLEANING

A. Remove and replace masonry units that are loose, chipped, broken, stained, or otherwise damaged or that do not match adjoining units. Install new units to match adjoining units; install in fresh mortar, pointed to eliminate evidence of replacement.

B. Pointing: During the tooling of joints, enlarge voids and holes, except weep holes, and completely fill with mortar. Point up joints, including corners, openings, and adjacent construction, to provide a neat, uniform appearance. Prepare joints for sealant application, where indicated.

C. In-Progress Cleaning: Clean unit masonry as work progresses by dry-brushing to remove mortar fins and smears before tooling joints.

D. Final Cleaning: After mortar is thoroughly set and cured, clean exposed masonry as follows:

1. Remove large mortar particles by hand with wooden paddles and nonmetallic scrape hoes or chisels.
2. Test cleaning methods on sample wall panel; leave one-half of panel uncleaned for comparison purposes. Obtain Architect's approval of sample cleaning before proceeding with cleaning of masonry.
3. Protect adjacent nonmasonry surfaces from contact with cleaner by covering them with liquid strippable masking agent or polyethylene film and waterproof masking tape.

4. Wet wall surfaces with water before applying cleaners; remove cleaners promptly by rinsing surfaces thoroughly with clear water.
5. Clean brick by bucket-and-brush hand-cleaning method described in "BIA Technical Notes 20."
6. Clean masonry with a proprietary acidic cleaner applied according to manufacturer's written instructions.

3.14 MASONRY WASTE DISPOSAL

A. Salvageable Materials: Unless otherwise indicated, excess masonry materials are Contractor's property. At completion of unit masonry work, remove from Project site.

3.15 FIELD QUALITY CONTROL

A. Contractor shall arrange and conduct a visual inspection of the installed masonry veneer system, complete with all related components, in the presence of the Architect, after a representative area of the finish work has been completed.

1. Proceed the remainder of work after the inspection has been conducted, and any deficiencies that have been identified have been addressed.

3.13 PROTECTION AND CLEANING

A. Protect waterproofing from damage and wear during remainder of construction period.

END OF SECTION 04 21 13

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SECTION 05 50 00 - METAL FABRICATIONS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

1. Miscellaneous steel trim.
2. Steel lintel angles.
3. Metal ladders.

1.2 ACTION SUBMITTALS

A. Shop Drawings: Show fabrication and installation details. Include plans, elevations, sections, and details of metal fabrications and their connections. Show anchorage and accessory items.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

A. Structural Performance of Aluminum Ladders: Aluminum ladders shall withstand the effects of loads and stresses within limits and under conditions specified in ANSI A14.3.

2.2 METALS

A. Metal Surfaces, General: Provide materials with smooth, flat surfaces unless otherwise indicated. For metal fabrications exposed to view in the completed Work, provide materials without seam marks, roller marks, rolled trade names, or blemishes.

B. Steel Plates, Shapes, and Bars: ASTM A 36/A 36M.

C. Steel Tubing: ASTM A 500/A 500M, cold-formed steel tubing.

D. Steel Pipe: ASTM A 53/A 53M, Standard Weight (Schedule 40) unless otherwise indicated.

2.3 FASTENERS

A. General: Unless otherwise indicated, provide Type 304 or Type 316 stainless-steel fasteners for exterior use and zinc-plated fasteners with coating complying with ASTM B 633 or ASTM F 1941, Class Fe/Zn 5, at exterior walls. Select fasteners for type, grade, and class required.

1. Provide stainless-steel fasteners for fastening aluminum.

2.4 MISCELLANEOUS MATERIALS

A. Universal Shop Primer: Fast-curing, lead- and chromate-free, universal modified-alkyd primer complying with MPI#79 and compatible with topcoat.

B. Galvanizing Repair Paint: High-zinc-dust-content paint complying with SSPC-Paint 20 and compatible with paints specified to be used over it.

2.5 FABRICATION, GENERAL

A. Shop Assembly: Preassemble items in the shop to greatest extent possible. Use connections that maintain structural value of joined pieces.

B. Cut, drill, and punch metals cleanly and accurately. Remove burrs and ease edges. Remove sharp or rough areas on exposed surfaces.

C. Weld corners and seams continuously to comply with the following:

1. Use materials and methods that minimize distortion and develop strength and corrosion resistance of base metals.
2. Obtain fusion without undercut or overlap.
3. Remove welding flux immediately.
4. At exposed connections, finish exposed welds and surfaces smooth and blended.

D. Form exposed connections with hairline joints, flush and smooth, using concealed fasteners or welds where possible. Locate joints where least conspicuous.

E. Fabricate seams and other connections that are exposed to weather in a manner to exclude water. Provide weep holes where water may accumulate.

F. Where units are indicated to be cast into concrete or built into masonry, equip with integrally welded steel strap anchors minimum 8 inches from ends and corners of units and 24 inches o.c.

2.6 MISCELLANEOUS STEEL TRIM

A. Unless otherwise indicated, fabricate units from steel shapes, plates, and bars of profiles shown with continuously welded joints and smooth exposed edges. Miter corners and use concealed field splices where possible.

B. Provide cutouts, fittings, and anchorages as needed to coordinate assembly and installation with other work.

C. Galvanize all exterior miscellaneous steel trim and lintel angles.

2.7 METAL LADDERS

A. General:

1. Comply with ANSI A14.3.
2. Ladder design shall be OSHA-compliant.
3. Ladder assembly shall include OSHA-compliant, side-mounted retractable top extension bar.

B. Steel Ladders:

1. Space siderails 16 inches apart unless otherwise indicated.
4. Siderails: Continuous, 1/2-by-2-1/2-inch steel flat bars, with eased edges.
5. Rungs: 3/4-inch diameter steel bars.
6. Provide nonslip surfaces on top of each rung.
7. Galvanize ladders, including brackets.

C. Aluminum Ladders:

1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

    a) ACL Industries, Inc.
    b) Alco Lite Industrial Products.
    c) Halliday Products.
    d) Precision Ladders, LLC.
    e) Thompson Fabricating, LLC.

2. Space siderails 16 inches apart unless otherwise indicated.
3. Siderails: Continuous extruded-aluminum channels or tubes, not less than 2-1/2 inches deep, 3/4-inch-wide, and 1/8-inch-thick.
4. Rungs: Extruded-aluminum tubes, not less than 3/4-inch-deep and not less than 1/8-inch-thick, with ribbed tread surfaces.

2.8 FINISHES, GENERAL

A. Finish metal fabrications after assembly.

2.9 STEEL AND IRON FINISHES

A. Galvanizing: Hot-dip galvanize items as indicated to comply with ASTM A 153/A 153M for steel and iron hardware and with ASTM A 123/A 123M for other steel and iron products.

B. Shop prime iron and steel items not indicated to be galvanized unless they are to be embedded in concrete or masonry, or unless otherwise indicated.

1. Shop prime with universal shop primer.

C. Preparation for Shop Priming: Prepare surfaces to comply with requirements indicated below:

1. Other Items: SSPC-SP 3, "Power Tool Cleaning."

D. Shop Priming: Apply shop primer to comply with SSPC-PA 1, "Paint Application Specification No. 1: Shop, Field, and Maintenance Painting of Steel," for shop painting.

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

A. Cutting, Fitting, and Placement: Perform cutting, drilling, and fitting required for installing metal fabrications. Set metal fabrications accurately in location, alignment, and elevation; with edges and surfaces level, plumb, true, and free of rack; and measured from established lines and levels.

B. Fit exposed connections accurately together to form hairline joints. Weld connections that are not to be left as exposed joints but cannot be shop welded because of shipping size limitations. Do not weld, cut, or abrade surfaces of exterior units that have been hot-dip galvanized after fabrication and are for bolted or screwed field connections.

C. Field Welding: Comply with the following requirements:

1. Use materials and methods that minimize distortion and develop strength and corrosion resistance of base metals.
2. Obtain fusion without undercut or overlap.
3. Remove welding flux immediately.
4. At exposed connections, finish exposed welds and surfaces smooth and blended so no roughness shows after finishing, and contour of welded surface matches that of adjacent surface.

D. Fastening to In-Place Construction: Provide anchorage devices and fasteners where metal fabrications are required to be fastened to in-place construction.

3.2 INSTALLING METAL LADDERS

A. Anchor ladders to stud wall construction securely with anchor bolts, to meet weight load requirements, per manufacturer's written installation instructions.

B. Ladder installation shall meet all applicable OSHA requirements, including clearances to wall mounting surface and clearances to adjacent constructions including abutting walls.

C. Install side-mounted retractable top extension bar to provide OSHA-compliant transition to the attic platform level.

3.2 INSTALLING STEEL LINTELS

A. Install steel lintels over exterior wall openings where indicated on the structural drawings, and where required by exterior wall installations.

B. Provide minimum bearing of 8 inches at each jamb, unless otherwise indicated on the drawings.

C. Touch up cut lintel ends and any abrasions or imperfections in steel galvanizing with galvanizing repair paint.

3.3 ADJUSTING AND CLEANING

A. Touchup Painting: Immediately after erection, clean field welds, bolted connections, and abraded areas. Paint uncoated and abraded areas with the same material as used for shop painting to comply with SSPC-PA 1 for touching up shop-painted surfaces.

B. Galvanized Surfaces: Clean field welds, bolted connections, and abraded areas and repair galvanizing to comply with ASTM A 780/A 780M.

END OF SECTION 05 50 00

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SECTION 06 10 00 - ROUGH CARPENTRY

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Framing with dimension lumber.
2. Framing with engineered wood products.
3. Wood blocking, cants, and nailers.
4. Plywood backing panels.

1.2 ACTION SUBMITTALS

A. Product Data: For each type of process and factory-fabricated product.

1.3 INFORMATIONAL SUBMITTALS

A. Material Certificates: For dimension lumber specified to comply with minimum allowable unit stresses. Indicate species and grade selected for each use and design values approved by the ALSC Board of Review.

B. Evaluation Reports: For the following, from ICC-ES:

1. Wood-preservative-treated wood.
2. Fire-retardant-treated wood.
3. Power-driven fasteners.
4. Post-installed anchors.
5. Metal framing anchors.

PART 2 - PRODUCTS

2.1 WOOD PRODUCTS, GENERAL

A. Lumber: DOC PS 20 and applicable rules of grading agencies indicated. If no grading agency is indicated, comply with the applicable rules of any rules-writing agency certified by the ALSC Board of Review. Grade lumber by an agency certified by the ALSC Board of Review to inspect and grade lumber under the rules indicated.

1. Factory mark each piece of lumber with grade stamp of grading agency.
2. For exposed lumber indicated to receive a stained or natural finish, mark grade stamp on end or back of each piece.
3. Dress lumber, S4S, unless otherwise indicated.

B. Maximum Moisture Content of Lumber: 15 percent for 2-inch nominal thickness or less; 19 percent for more than 2-inch nominal thickness unless otherwise indicated.

2.2 WOOD-PRESERVATIVE-TREATED LUMBER

A. Preservative Treatment by Pressure Process: AWPA U1; Use Category UC2 for interior construction not in contact with ground, Use Category UC3b for exterior construction not in contact with ground, and Use Category UC4a for items in contact with ground.

1. Preservative Chemicals: Acceptable to authorities having jurisdiction and containing no arsenic or chromium. Do not use inorganic boron (SBX) for sill plates.

B. Kiln-dry lumber after treatment to a maximum moisture content of 19 percent. Do not use material that is warped or that does not comply with requirements for untreated material.

C. Mark lumber with treatment quality mark of an inspection agency approved by the ALSC Board of Review.

D. Application: Treat items indicated on Drawings, and the following:

1. Wood cants, nailers, curbs, equipment support bases, blocking, stripping, and similar members in connection with roofing, flashing, vapor barriers, and waterproofing.
2. Wood sills, blocking, furring, and similar concealed members in contact with masonry or concrete.

2.3 FIRE-RETARDANT-TREATED MATERIALS

A. General: Where fire-retardant-treated materials are indicated, materials shall comply with requirements in this article, that are acceptable to authorities having jurisdiction, and with fire-test-response characteristics specified as determined by testing identical products per test method indicated by a qualified testing agency.

B. Fire-Retardant-Treated Lumber and Plywood by Pressure Process: Products with a flame-spread index of 25 or less when tested according to ASTM E 84, and with no evidence of significant progressive combustion when the test is extended an additional 20 minutes, and with the flame front not extending more than 10.5 feet beyond the centerline of the burners at any time during the test.

1. Interior Type A: Treated materials shall have a moisture content of 28 percent or less when tested according to ASTM D 3201 at 92 percent relative humidity. Use where exterior type is not indicated.

C. Kiln-dry plywood after treatment to maximum moisture content of 15 percent.

D. Identify fire-retardant-treated wood with appropriate classification marking of qualified testing agency.

E. Application: Treat items indicated on Drawings, including plywood backing panels.

1. Plywood backing panels.

2.4 DIMENSION LUMBER FRAMING

A. Non-Load-Bearing Interior Partitions: Construction or No. 2 grade.

1. Application: All interior partitions.
2. Species:

    a. Southern pine or mixed southern pine; SPIB.
    b. Northern species; NLGA.
    c. Eastern softwoods; NeLMA.
    d. Western woods; WCLIB or WWPA.

B. Framing Other Than Non-Load-Bearing Partitions: No. 2 grade.

1. Application: Framing other than interior partitions.
2. Species:

    a. Southern pine; SPIB.
    b. Southern pine or mixed southern pine; SPIB.

C. Framing Other Than Non-Load-Bearing Partitions: Any species and grade with a modulus of elasticity of at least 1,400,000 psi and an extreme fiber stress in bending of at least 1100 psi for 2-inch nominal thickness and 12-inch nominal width for single-member use.

1. Application: Framing other than interior partitions.

D. Exposed Framing: Hand-select material for uniformity of appearance and freedom from characteristics, on exposed surfaces and edges, that would impair finish appearance, including decay, honeycomb, knot-holes, shake, splits, torn grain, and wane.

1. Species and Grade: As indicated above for load-bearing construction of same type.

2.5 MISCELLANEOUS LUMBER

A. General: Provide miscellaneous lumber indicated and lumber for support or attachment of other construction, including the following:

1. Blocking.
2. Nailers.
3. Furring.

B. Dimension Lumber Items: Construction or No. 2 grade lumber of any species.

C. Concealed Boards: Construction or No. 2 grade lumber of any species.

2.6 PLYWOOD BACKING PANELS

A. Equipment Backing Panels: Plywood, DOC PS 1, Exposure 1, C-D Plugged, fire-retardant treated, in thickness indicated or, if not indicated, not less than 3/4-inch nominal thickness.

2.7 FASTENERS

A. General: Fasteners shall be of size and type indicated and shall comply with requirements specified in this article for material and manufacture.

1. Where rough carpentry is exposed to weather, in ground contact, pressure-preservative treated, or in area of high relative humidity, provide fasteners of Type 304 stainless steel.

B. Power-Driven Fasteners: Fastener systems with an evaluation report acceptable to authorities having jurisdiction, based on ICC-ES AC70.

C. Post-Installed Anchors: Fastener systems with an evaluation report acceptable to authorities having jurisdiction, based on ICC-ES standards appropriate for the substrate.

2.8 METAL FRAMING ANCHORS

A. Manufacturers: Subject to compliance with requirements, provide products by the following:

1. Simpson Strong-Tie Co., Inc.

B. Allowable design loads, as published by manufacturer, shall meet or exceed those indicated. Manufacturer's published values shall be determined from empirical data or by rational engineering analysis and demonstrated by comprehensive testing performed by a qualified independent testing agency. Framing anchors shall be punched for fasteners adequate to withstand same loads as framing anchors.

C. Galvanized-Steel Sheet: Hot-dip, zinc-coated steel sheet complying with ASTM A 653/A 653M, G60 coating designation.

1. Use for interior locations unless otherwise indicated.

D. Hot-Dip, Heavy-Galvanized Steel Sheet: ASTM A 653/A 653M; structural steel (SS), high-strength low-alloy steel Type A, or high-strength low-alloy steel Type B (HSLAS Type B); G185 coating designation; and not less than 0.036 inch thick.

1. Use for wood-preservative-treated lumber and where indicated.

2.9 MISCELLANEOUS MATERIALS

A. Sill-Sealer Gaskets: Closed-cell neoprene foam, 1/4 inch thick, selected from manufacturer's standard widths to suit width of sill members indicated.

B. Flexible Flashing: Composite, self-adhesive, flashing product consisting of a pliable, butyl rubber or rubberized-asphalt compound, bonded to a high-density polyethylene film, aluminum foil, or spunbonded polyolefin to produce an overall thickness of not less than 0.025 inch.

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

A. Framing Standard: Comply with AF&PA's WCD 1, "Details for Conventional Wood Frame Construction," unless otherwise indicated.

B. Framing with Engineered Wood Products: Install engineered wood products to comply with manufacturer's written instructions.

C. Set rough carpentry to required levels and lines, with members plumb, true to line, cut, and fitted. Fit rough carpentry accurately to other construction. Locate furring, nailers, blocking, grounds, and similar supports to comply with requirements for attaching other construction.

D. Install metal framing anchors to comply with manufacturer's written instructions. Install fasteners through each fastener hole.

E. Do not splice structural members between supports unless otherwise indicated.

F. Comply with AWPA M4 for applying field treatment to cut surfaces of preservative-treated lumber.

G. Where wood-preservative-treated lumber is installed adjacent to metal decking, install continuous flexible flashing separator between wood and metal decking.

H. Securely attach rough carpentry work to substrate by anchoring and fastening as indicated, complying with the following:

1. Table 2304.9.1, "Fastening Schedule," in ICC's International Building Code (IBC).
2. Table R602.3(1), "Fastener Schedule for Structural Members," and Table R602.3(2), "Alternate Attachments," in ICC's International Residential Code for One- and Two-Family Dwellings.
3. ICC-ES evaluation report for fastener.

3.2 PROTECTION

A. Protect wood that has been treated with inorganic boron (SBX) from weather. If, despite protection, inorganic boron-treated wood becomes wet, apply EPA-registered borate treatment. Apply borate solution by spraying to comply with EPA-registered label.

B. Protect rough carpentry from weather. If, despite protection, rough carpentry becomes [wet] [wet enough that moisture content exceeds that specified], apply EPA-registered borate treatment. Apply borate solution by spraying to comply with EPA-registered label.

END OF SECTION 06 10 00

SECTION 06 16 00 - SHEATHING

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Wall sheathing.
2. Roof sheathing.

B. Related Sections:

1. Section 06 10 00 "Rough Carpentry" for plywood backing panels.

1.2 ACTION SUBMITTALS

A. Product Data: For each type of process and factory-fabricated product.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

A. Fire-Resistance Ratings: As tested according to ASTM E 119; testing by a qualified testing agency. Identify products with appropriate markings of applicable testing agency.

1. Fire-Resistance Ratings: Indicated by design designations from UL's "Fire Resistance Directory" or from the listings of another qualified testing agency.

2.2 WALL SHEATHING

A. Plywood Sheathing: DOC PS 2, Exposure 1, Structural I Exposure 1 sheathing.

1. Thickness: As indicated on the drawings

B. Oriented-Strand-Board Sheathing: DOC PS 2, Exposure 1, Structural I Exposure 1 sheathing.

1. Thickness: 1/2 inch thick.

2.3 ROOF SHEATHING

A. Plywood Sheathing: DOC PS 2, Exposure 1, Structural I Exposure 1 sheathing.

1. Thickness: As indicated on the drawings

B. Oriented-Strand-Board Sheathing: DOC PS 2, Exposure 1, Structural I Exposure 1 sheathing.

1. Thickness: 1/2 inch thick.

2.4 FASTENERS

A. General: Provide fasteners of size and type indicated that comply with requirements specified in this article for material and manufacture.

1. For roof and wall sheathing, provide fasteners with hot-dip zinc coating complying with ASTM A 153/A 153M.

2.5 MISCELLANEOUS MATERIALS

A. Adhesives for Field Gluing Panels to Wood Framing: Formulation complying with ASTM D 3498 that is approved for use with type of construction panel indicated by manufacturers of both adhesives and panels.

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

A. Do not use materials with defects that impair quality of sheathing or pieces that are too small to use with minimum number of joints or optimum joint arrangement. Arrange joints so that pieces do not span between fewer than three support members.

B. Cut panels at penetrations, edges, and other obstructions of work; fit tightly against abutting construction unless otherwise indicated.

C. Securely attach to substrate by fastening as indicated, complying with the following:

1. Table 2304.9.1, "Fastening Schedule," in the ICC's International Building Code.
2. Table R602.3(1), "Fastener Schedule for Structural Members," and Table R602.3(2), "Alternate Attachments," in the ICC's International Residential Code for One- and Two-Family Dwellings.
3. ICC-ES evaluation report for fastener.

D. Do not bridge building expansion joints; cut and space edges of panels to match spacing of structural support elements.

END OF SECTION 06 16 00

SECTION 06 17 53 - SHOP-FABRICATED WOOD TRUSSES

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Wood roof trusses.

1.2 ACTION SUBMITTALS

A. Shop Drawings: Show fabrication and installation details for trusses.

1. Show location, pitch, span, camber, configuration, and spacing for each type of truss required.
2. Indicate sizes, stress grades, and species of lumber.
3. Indicate locations of permanent bracing required to prevent buckling of individual truss members due to design loads.
4. Indicate locations, sizes, and materials for permanent bracing required to prevent buckling of individual truss members due to design loads.
5. Indicate type, size, material, finish, design values, orientation, and location of metal connector plates.
6. Show splice details and bearing details.

B. Delegated-Design Submittal: For metal-plate-connected wood trusses indicated to comply with performance requirements and design criteria, including analysis data signed and sealed by the qualified professional engineer responsible for their preparation.

1.3 QUALITY ASSURANCE

A. Metal Connector-Plate Manufacturer Qualifications: A manufacturer that is a member of TPI and that complies with quality-control procedures in TPI 1 for manufacture of connector plates.

1. Manufacturer's responsibilities include providing professional engineering services needed to assume engineering responsibility.

1.4 DELIVERY, STORAGE, AND HANDLING

A. Handle and store trusses to comply with recommendations in SBCA BCSI, "Building Component Safety Information: Guide to Good Practice for Handling, Installing, Restraining, & Bracing Metal Plate Connected Wood Trusses."

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

A. Delegated Design: Engage a qualified professional engineer, as defined in Section 01 40 00 "Quality Requirements," to design metal-plate-connected wood trusses.

2.2 DIMENSION LUMBER

A. Lumber: DOC PS 20 and applicable rules of any rules-writing agency certified by the American Lumber Standard Committee (ALSC) Board of Review. Provide lumber graded by an agency certified by the ALSC Board of Review to inspect and grade lumber under the rules indicated.

B. Permanent Bracing: Provide wood bracing that complies with requirements for miscellaneous lumber in Section 061000 "Rough Carpentry."

2.3 FASTENERS

A. General: Provide fasteners of size and type indicated that comply with requirements specified in this article for material and manufacture.

1. Where trusses are exposed to weather, in ground contact, or in area of high relative humidity, provide fasteners with hot-dip zinc coating complying with ASTM A 153/A 153M.

2.4 METAL FRAMING ANCHORS AND ACCESSORIES

A. Galvanized-Steel Sheet: Hot-dip, zinc-coated steel sheet complying with ASTM A 653/A 653M, G60 coating designation.

2.5 FABRICATION

A. Assemble truss members in design configuration indicated; use jigs or other means to ensure uniformity and accuracy of assembly, with joints closely fitted to comply with tolerances in TPI 1. Position members to produce design camber indicated.

1. Fabricate wood trusses within manufacturing tolerances in TPI 1.

B. Connect truss members by metal connector plates located and securely embedded simultaneously in both sides of wood members by air or hydraulic press.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Install wood trusses only after supporting construction is in place and is braced and secured.

B. If trusses are delivered to Project site in more than one piece, assemble trusses before installing.

C. Hoist trusses in place by lifting equipment suited to sizes and types of trusses required, exercising care not to damage truss members or joints by out-of-plane bending or other causes.

D. Install and brace trusses according to TPI recommendations and as indicated.

E. Anchor trusses securely at bearing points; use metal truss tie-downs or floor truss hangers as applicable. Install fasteners through each fastener hole in metal framing anchors according to manufacturer's fastening schedules and written instructions.

F. Securely connect each truss ply required for forming built-up girder trusses.

G. Install and fasten permanent bracing during truss erection and before construction loads are applied. Anchor ends of permanent bracing where terminating at walls or beams.

1. Install bracing to comply with Section 06 10 00 "Rough Carpentry."
2. Install and fasten strongback bracing vertically against vertical web of parallel-chord floor trusses at centers indicated.

H. Install wood trusses within installation tolerances in TPI 1.

I. Do not alter trusses in field. Do not cut, drill, notch, or remove truss members.

J. Replace wood trusses that are damaged or do not comply with requirements.

END OF SECTION 06 17 53

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SECTION 06 18 00 - GLUED-LAMINATED CONSTRUCTION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section includes framing using structural glued-laminated timber.

B. Related Requirements:

1. Section 061000 "Rough Carpentry" for dimension lumber items associated with structural glued-laminated timber.

1.3 DEFINITIONS

A. Structural Glued-Laminated (Glulam) Timber: An engineered, stress-rated timber product assembled from selected and prepared wood laminations bonded together with adhesives and with the grain of the laminations approximately parallel longitudinally.

1.4 ACTION SUBMITTALS

A. Product Data: For each type of process and factory-fabricated product.

1. Include data on lumber, adhesives, fabrication, and protection.
2. For preservative-treated wood products. Include chemical treatment manufacturer's written instructions for handling, storing, installing, and finishing treated material.
3. For connectors. Include installation instructions.

B. Shop Drawings:

1. Show layout of structural glued-laminated timber system and full dimensions of each member.
2. Indicate species and laminating combination.
3. Include large-scale details of connections.

C. Delegated-Design Submittal: For structural glued-laminated timber and timber connectors.

1.5 INFORMATIONAL SUBMITTALS

A. Certificates of Conformance: Issued by a qualified testing and inspecting agency indicating that structural glued-laminated timber complies with requirements in AITC A190.1.

B. Material Certificates: For preservative-treated wood products, from manufacturer. Indicate type of preservative used and net amount of preservative retained.

C. Research/Evaluation Reports: For structural glued-laminated timber, from ICC-ES.

1.6 QUALITY ASSURANCE

A. Manufacturer Qualifications: An AITC- or APA-EWS-licensed firm certified for chain of custody by an FSC-accredited certification body.

1.7 DELIVERY, STORAGE, AND HANDLING

A. General: Comply with provisions in AITC 111.

B. Individually wrap members using plastic-coated paper covering with water-resistant seams.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

A. Structural Performance: Structural glued-laminated timber and connectors shall withstand the effects of structural loads shown on Drawings without exceeding allowable design working stresses listed in AITC 117 or determined according to ASTM D3737 and acceptable to authorities having jurisdiction.

2.2 STRUCTURAL GLUED-LAMINATED TIMBER

A. General: Provide structural glued-laminated timber that complies with AITC A190.1 and AITC 117 or research/evaluation reports acceptable to authorities having jurisdiction.

1. Factory mark each piece of structural glued-laminated timber with AITC Quality Mark or APA-EWS trademark. Place mark on surfaces that are not exposed in the completed Work.
2. Provide structural glued-laminated timber made from single species.
3. Provide structural glued-laminated timber made from solid lumber laminations; do not use laminated veneer lumber.
4. Provide structural glued-laminated timber made with wet-use adhesive complying with AITC A190.1.

B. Species and Grades for Structural Glued-Laminated Timber: Southern pine in grades needed to comply with "Performance Requirements" Article, and with structural properties indicated.

C. Species and Grades for Beams:

1. Species and Beam Stress Classification: Southern pine, 24F-1.8E.
2. Lay-up: Balanced.
3. Species and Combination Symbol: 24F-1.8E.

D. Appearance Grade: Premium, complying with AITC 110.

1. For Premium and Architectural appearance grades, fill voids as required by AITC 110. For Premium appearance grade, use clear wood inserts, of matching grain and color, for filling voids and knot holes more than 1/4 inch wide.

2.3 PRESERVATIVE TREATMENT

A. Preservative Treatment: Where preservative-treated structural glued-laminated timber is indicated, comply with AWPA U1, Use Category 3B.

1. Use preservative solution without water repellents or substances that might interfere with application of indicated finishes.
2. Preservative-treated structural glued-laminated timber components shall include beams and columns used for exterior applications.

B. Preservative: One of the following:

1. Oxine copper (copper-8-quinolinolate) in a light petroleum solvent.
2. Pentachlorophenol in light petroleum solvent.
3. Propiconazole tebuconazole imidacloprid (PTI) in a water emulsion.

2.4 MISCELLANEOUS MATERIALS

A. End Sealer: Manufacturer's standard, transparent, colorless wood sealer that is effective in retarding the transmission of moisture at cross-grain cuts and is compatible with indicated finish.

B. Penetrating Sealer: Manufacturer's standard, transparent, penetrating wood sealer that is compatible with indicated finish.

2.5 FABRICATION

A. Shop fabricate for connections to greatest extent possible, including cutting to length and drilling bolt holes.

1. Dress exposed surfaces as needed to remove planing and surfacing marks.

B. Where preservative-treated members are indicated, fabricate (cut, drill, surface, and sand) before treatment to greatest extent possible. Where fabrication must be done after treatment, apply a field-treatment preservative to comply with AWPA M4.

1. Use inorganic boron (SBX) treatment for members not in contact with the ground and continuously protected from liquid water.
2. Use copper naphthenate treatment for members in contact with the ground or not continuously protected from liquid water.

C. End-Cut Sealing: Immediately after end cutting each member to final length and after preservative treatment, apply a saturation coat of end sealer to ends and other cross-cut surfaces, keeping surfaces flood coated for not less than 10 minutes.

D. Seal Coat: After fabricating, sanding, and end-coat sealing, apply a heavy saturation coat of penetrating sealer on surfaces of each unit except for preservative-treated wood where treatment included a water repellent.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates in areas to receive structural glued-laminated timber, with Installer present, for compliance with requirements, installation tolerances, and other conditions affecting performance of the Work.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

A. General: Erect structural glued-laminated timber true and plumb and with uniform, close-fitting joints. Provide temporary bracing to maintain lines and levels until permanent supporting members are in place.

1. Handle and temporarily support glued-laminated timber to prevent surface damage, compression, and other effects that might interfere with indicated finish.

B. Cutting: Avoid extra cutting after fabrication. Where field fitting is unavoidable, comply with requirements for shop fabrication.

C. Install timber connectors as indicated.

1. Unless otherwise indicated, install bolts with same orientation within each connection and in similar connections.
2. Install bolts with orientation as indicated or, if not indicated, as directed by Architect.

3.3 ADJUSTING

A. Repair damaged surfaces and finishes after completing erection. Replace damaged structural glued-laminated timber if repairs are not approved by Architect.

3.4 PROTECTION

A. Do not remove wrappings on individually wrapped members until they no longer serve a useful purpose, including protection from weather, sunlight, soiling, and damage from work of other trades.

1. Coordinate wrapping removal with finishing work. Retain wrapping where it can serve as a painting shield.
2. Slit underside of wrapping to prevent accumulation of moisture inside the wrapping.

END OF SECTION 06 18 00

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SECTION 06 20 13 - EXTERIOR FINISH CARPENTRY

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

1. Exterior wood trim.

PART 2 - PRODUCTS

2.1 MATERIALS, GENERAL

A. Lumber: DOC PS 20 and applicable rules of grading agencies indicated. If no grading agency is indicated, comply with applicable rules of any rules-writing agency certified by the American Lumber Standard Committee's (ALSC) Board of Review. Grade lumber by an agency certified by the ALSC's Board of Review to inspect and grade lumber under the rules indicated.

1. For exposed lumber, mark grade stamp on end or back of each piece, or omit grade stamp and provide certificates of grade compliance issued by inspection agency.

2.2 EXTERIOR TRIM

A. Lumber Trim for Semitransparent-Stained Finish:

1. Species and Grade: Hem-fir; pressure-preservative treated; NLGA, WCLIB, or WWPA 2 Common.
2. Species and Grade: Southern pine; pressure-preservative treated; SPIB C & Btr.
3. Maximum Moisture Content: 19with at least 85 percent of shipment at 12 percent or less.
4. Finger Jointing: Not allowed.
5. Face Surface: Smooth.
6. Type: 7/16-inch- thick, shiplap-edge panels; with grooves 3-5/8 inches o.c., simulating wood drop siding.
7. Type: 1/2-inch- thick, shiplap-edge panels; with grooves 5-1/2 inches o.c., simulating wood drop siding.

2.3 MISCELLANEOUS MATERIALS

A. Fasteners for Exterior Finish Carpentry: Provide nails or screws, in sufficient length to penetrate not less than 1-1/2 inches into wood substrate.

B. Flashing: Comply with requirements in Section 07 62 00 "Sheet Metal Flashing and Trim" for flashing materials installed in exterior finish carpentry.

PART 3 - EXECUTION

3.1 PREPARATION

A. Clean substrates of projections and substances detrimental to application.

B. Cut to required lengths and seal ends.

1. Comply with requirements in Section 09 91 13 "Exterior Painting."

3.2 INSTALLATION, GENERAL

A. Install exterior finish carpentry level, plumb, true, and aligned with adjacent materials.

1. Use concealed shims where necessary for alignment.
2. Scribe and cut exterior finish carpentry to fit adjoining work.
3. Refinish and seal cuts as recommended by manufacturer.
4. Install to tolerance of 1/8 inch in 96 inches for level and plumb. Install adjoining exterior finish carpentry with 1/32-inch maximum offset for flush installation and 1/16-inch maximum offset for reveal installation.
5. Coordinate exterior finish carpentry with materials and systems in or adjacent to it.
6. Provide cutouts for mechanical and electrical items that penetrate exterior finish carpentry.
7. Plane backs of casings to provide uniform thickness across joints, where necessary for alignment.

B. Where face fastening is unavoidable, countersink fasteners, fill surface flush, and sand unless otherwise indicated.
1. Install continuous metal flashing at horizontal panel joints.
2. Apply battens and corner trim as indicated.
3. Conceal fasteners to greatest practical extent by placing in grooves of siding pattern or by concealing with applied trim or battens as detailed.

C. Flashing: Install metal flashing as indicated on Drawings.

D. Finish: Apply finish within two weeks of installation.

END OF SECTION 06 20 13

SECTION 06 41 16 - PLASTIC-LAMINATE-FACED ARCHITECTURAL CABINETS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

1. Plastic-laminate-faced architectural cabinets.

Wood furring, blocking, shims, and hanging strips for installing plastic-laminate-faced architectural cabinets unless concealed within other construction before cabinet installation.

B. Related Requirements:

1. Section 12 36 61.16 "Solid Surfacing Countertops."

1.3 ACTION SUBMITTALS

A. Product Data: For each type of product high-pressure decorative laminate cabinet hardware and accessories.

B. Shop Drawings: Show location of each item, dimensioned plans and elevations, large-scale details, attachment devices, and other components.

Samples:

1. Plastic laminates, for each color, pattern, and surface finish.

Thermoset decorative panels, for each color, pattern, and surface finish.

1.4 QUALITY ASSURANCE

A. Fabricator Qualifications: Shop that employs skilled workers who custom-fabricate products similar to those required for this Project and whose products have a record of successful in-service performance.

1.5 FIELD CONDITIONS

A. Environmental Limitations: Do not deliver or install cabinets until building is enclosed, wet work is complete, and HVAC system is operating and maintaining temperature and relative humidity at occupancy levels during the remainder of the construction period.

PART 2 - PRODUCTS

2.1 PLASTIC-LAMINATE-FACED ARCHITECTURAL CABINETS

A. Quality Standard: Unless otherwise indicated, comply with the "Architectural Woodwork Standards" for grades of architectural plastic-laminate cabinets indicated for fabrication, construction, finishes, installation, and other requirements.

B. Grade: Custom or better.

Type of Construction: Frameless

Cabinet, Door, and Drawer Front Interface Style: Full overlay.

High-Pressure Decorative Laminate: NEMA LD 3, grades as indicated or if not indicated, as required by woodwork quality standard.

1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

a) Formica Corporation.
b) Lamin-Art, Inc.
c) Wilsonart International; Div. of Premark International, Inc.

C. Laminate Cladding for Exposed Surfaces:

1. Horizontal Surfaces: Grade HGS.
Vertical Surfaces: Grade VGS.

D. Materials for Semiexposed Surfaces:

1. Surfaces Other Than Drawer Bodies: Thermoset decorative panels.
Drawer Sides and Backs: Thermoset decorative panels with PVC or polyester edge banding.
Drawer Bottoms: Hardwood plywood.

Colors, Patterns, and Finishes: Provide materials and products that result in colors and textures of exposed laminate surfaces complying with the following requirements:

2. As selected by Architect from laminate manufacturer's full range in the following categories:

a) Solid colors, matte finish.
b) Solid colors with core same color as surface, matte finish.
c) Wood grains and Patterns, matte finish.

2.2 WOOD MATERIALS

A. Wood Products: Provide materials that comply with requirements of referenced quality standard for each type of woodwork and quality grade specified unless otherwise indicated.

1. Wood Moisture Content: 8 to 13 percent.

B. Composite Wood and Agrifiber Products: Provide materials that comply with requirements of referenced quality standard for each type of woodwork and quality grade specified unless otherwise indicated. Products shall be made using ultra-low-emitting formaldehyde resins as defined in the California Air Resources Board's "Airborne Toxic Control Measure to Reduce Formaldehyde Emissions from Composite Wood Products" or shall be made with no added formaldehyde.

1. Medium-Density Fiberboard: ANSI A208.2.

Softwood Plywood: DOC PS 1, medium-density overlay.

Veneer-Faced Panel Products (Hardwood Plywood): HPVA HP-1.

Thermoset Decorative Panels: Particleboard or medium-density fiberboard finished with thermally fused, melamine-impregnated decorative paper and complying with requirements of NEMA LD 3, Grade VGL, for test methods 3.3, 3.4, 3.6, 3.8, and 3.10.

2.3 CABINET HARDWARE AND ACCESSORIES

A. General: Provide cabinet hardware and accessory materials associated with architectural cabinets except for items specified in Section 08 71 11 "Door Hardware (Descriptive Specification)."

B. Frameless Concealed Hinges (European Type): BHMA A156.9, B01602, 135 degrees of opening.

Wire Pulls: Back mounted, solid metal, 4 inches long, 5/16 inch in diameter.

Adjustable Shelf Standards and Supports: BHMA A156.9, B04071; with shelf rests, B04081.

Drawer Slides: BHMA A156.9.

1. Grade 1 and Grade 2: Side mounted and extending under bottom edge of drawer; full-extension type; zinc-plated steel with polymer rollers.

For drawers not more than 3 inches high and not more than 24 inches wide, provide Grade 1.

For drawers more than 3 inches high but not more than 6 inches high and not more than 24 inches wide, provide Grade 1.

For drawers more than 6 inches high or more than 24 inches wide, provide Grade 1HD-100.

C. Door and Drawer Silencers: BHMA A156.16, L03011.

D. Exposed Hardware Finishes: For exposed hardware, provide finish that complies with BHMA A156.18 for BHMA finish number indicated.

2.4 MISCELLANEOUS MATERIALS

A. Furring, Blocking, Shims, and Hanging Strips: Softwood or hardwood lumber, kiln dried to less than 15 percent moisture content.

Anchors: Select material, type, size, and finish required for each substrate for secure anchorage. Provide metal expansion sleeves or expansion bolts for post-installed anchors. Use nonferrous-metal or hot-dip galvanized anchors and inserts at inside face of exterior walls and at floors.

Adhesives: Do not use adhesives that contain urea formaldehyde.

Adhesive for Bonding Plastic Laminate: Contact cement.

1. Adhesive for Bonding Edges: Hot-melt adhesive or adhesive specified above for faces.

2.5 FABRICATION

A. Complete fabrication, including assembly and hardware application, to maximum extent possible before shipment to Project site. Disassemble components only as necessary for shipment and installation. Where necessary for fitting at site, provide ample allowance for scribing, trimming, and fitting.

Shop-cut openings to maximum extent possible to receive hardware, appliances, electrical work, and similar items. Locate openings accurately and use templates or roughing-in diagrams to produce accurately sized and shaped openings. Sand edges of cutouts to remove splinters and burrs.

PART 3 - EXECUTION

3.1 PREPARATION

A. Before installation, condition cabinets to average prevailing humidity conditions in installation areas.

3.2 INSTALLATION

A. Grade: Install cabinets to comply with same grade as item to be installed.

Install cabinets level, plumb, true, and straight. Shim as required with concealed shims. Install level and plumb to a tolerance of 1/8 inch in 96 inches.

Scribe and cut cabinets to fit adjoining work, refinish cut surfaces, and repair damaged finish at cuts.

Anchor cabinets to anchors or blocking built in or directly attached to substrates. Secure with countersunk, concealed fasteners and blind nailing. Use fine finishing nails or finishing screws for exposed fastening, countersunk and filled flush with woodwork.

Cabinets: Install without distortion so doors and drawers fit openings properly and are accurately aligned. Adjust hardware to center doors and drawers in openings and to provide unencumbered operation. Complete installation of hardware and accessory items as indicated.

1. Install cabinets with no more than 1/8 inch in 96-inch sag, bow, or other variation from a straight line.

Fasten wall cabinets through back, near top and bottom, and at ends not more than 16 inches o.c. with toggle bolts through metal backing or metal framing behind wall finish.

END OF SECTION 06 41 16

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SECTION 07 21 00 - THERMAL INSULATION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

1. Glass-fiber blanket.
2. Loose-fill insulation.
3. Acoustical insulation.
4. Extruded-Polystyrene Board Cavity Wall Insulation.

1.3 ACTION SUBMITTALS

A. Product Data: For each type of product.

1.4 INFORMATIONAL SUBMITTALS

A. Product test reports.

PART 2 - PRODUCTS

2.1 GLASS-FIBER BLANKET

A. Glass-Fiber Blanket, Unfaced: ASTM C 665, Type I; with maximum flame-spread and smoke-developed indexes of 25 and 50, respectively, per ASTM E 84; passing ASTM E 136 for combustion characteristics.

1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

a) CertainTeed Corporation.
b) Johns Manville; a Berkshire Hathaway company.
c) Owens Corning.

2.2 LOOSE-FILL INSULATION

1. Glass-Fiber Insulation: ASTM C 764, Type II, loose fill; with maximum flame-spread and smoke-developed indexes of 5, per ASTM E 84.

2.3 ACOUSTICAL INSULATION

B. Glass-fiber blanket or mineral-fiber unfaced sound attenuation batts or blankets for tight friction fit between framing members, meeting requirements of ASTM C665, as applicable. Insulation type and thickness shall provide the sound transmission class (STC) wall assembly rating indicated on the drawings.

1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

a) CertainTeed Corporation.
b) Johns Manville; a Berkshire Hathaway company.
c) Owens Corning.

2.3 CAVITY WALL INSULATION

A. Extruded-Polystyrene Board Insulation: ASTM C 578, of type and minimum compressive strength indicated below, with maximum flame-spread and smoke-developed indexes of 75 and 450, respectively, per ASTM E 84.

1. Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

a. Dow Chemical Company (The); Cavitymate Plus
b. Owens Corning; Foamular; 250 Rigid Foam Insulation
c. Pactiv Building Products; GreenGuard Insulation Board
d. DiversiFoam Products; Certifoam 25 SE

2. Type IV, 25 psi (173 kPa).

B. Insulation board thickness: As indicated on the drawings

C. Seal joints with manufacturer's self-adhering, flashing grade tape.

D. Adhesive for Bonding Insulation: Manufacturer's recommended product with demonstrated capability to bond insulation securely to substrates without damaging insulation and substrates.

2.2 ACCESSORIES

SECTION 07 27 15 – NON-BITUMINOUS SELF-ADHERING SHEET AIR BARRIERS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

1. Self-adhering, vapor-retarding, nonbituminous sheet air barriers.

1.3 PREINSTALLATION MEETINGS

B. Preinstallation Conference: Conduct conference at Project site.

1.4 ACTION SUBMITTALS

A. Product Data: For each type of product.

1.5 INFORMATIONAL SUBMITTALS

A. Product Certificates: For each type of nonbituminous self-adhering sheet air barrier.

B. Product test reports.

C. Field quality-control reports.

1.6 QUALITY ASSURANCE

A. Installer Qualifications: An entity that employs installers and supervisors who are trained and approved by manufacturer.

PART 2 - PRODUCTS

1.2 PERFORMANCE REQUIREMENTS

A. Air-Barrier Performance: Air-barrier assembly and seals with adjacent construction shall be capable of performing as a continuous air barrier and as a liquid-water drainage plane flashed to discharge to the exterior incidental condensation or water penetration.

B. Air-barrier assemblies shall be capable of accommodating substrate movement and of sealing substrate expansion and control joints, construction material changes, penetrations, and transitions at perimeter conditions without deterioration and air leakage exceeding specified limits.

C. Air-Barrier Assembly Air Leakage: Maximum 0.04 cfm/sq. ft. of surface area at 1.57 lbf/sq. ft., when tested according to ASTM E 2357.

2.2 NONBITUMINOUS SHEET AIR BARRIER

A. Vapor-Retarding Nonbituminous Sheet: Minimum 10-mil- thick, self-adhering sheet consisting of 5 mils of air-barrier film and a 5-mil- thick, acrylic adhesive with release liner on adhesive side.

1. Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:

    a) 3M Products; 3M Self-Adhered Air and Vapor Barrier Membrane 3015.

2. Physical and Performance Properties:

    a) Air Permeance: Maximum 0.004 cfm/sq. ft. of surface area at 1.57-lbf/sq. ft. pressure difference; ASTM E 2178.
    b) Puncture Resistance: Minimum 40 lbf ; ASTM E 154/E 154M.
    c) Vapor Permeance: Maximum 1.0 perm; ASTM E 96/E 96M, Desiccant Method.
    d) Adhesion to Substrate: Minimum 16 lbf/sq. in. when tested according to ASTM D 4541 as modified by ABAA.
    e) Fire Propagation Characteristics: Passes NFPA 285 testing as part of an approved assembly.
    f) UV Resistance: Can be exposed to sunlight for 150 days according to manufacturer's written instructions.

2.3 ACCESSORY MATERIALS

A. Requirement: Provide primers, transition strips, termination strips, joint sealants, counterflashing strips, flashing sheets and metal termination bars, termination mastic, substrate patching materials, adhesives, tapes, foam sealants, lap sealants, and other accessory materials that are recommended in writing by air-barrier manufacturer to produce a complete air-barrier assembly and that are compatible with primary air-barrier material and adjacent construction to which they may seal.

B. Primer: Liquid primer recommended for substrate by air-barrier material manufacturer.

PART 2 - EXECUTION

2.1 SURFACE PREPARATION

A. Clean, prepare, treat, fill, and seal substrate and joints and cracks in substrate according to manufacturer's written instructions and details. Provide clean, dust-free, and dry substrate for air-barrier application.

B. Mask off adjoining surfaces not covered by air barrier to prevent spillage and overspray affecting other construction.

C. At changes in substrate plane, apply sealant or termination mastic beads at sharp corners and edges to form a smooth transition from one plane to another.

D. Bridge expansion joints and discontinuous wall-to-wall, deck-to-wall, and deck-to-deck joints with air-barrier accessory material that accommodates joint movement according to manufacturer's written instructions and details.

3.2 INSTALLATION

A. Install materials according to air-barrier manufacturer's written instructions and details to form a seal with adjacent construction and ensure continuity of air and water barrier.

1. Unless manufacturer recommends in writing against priming, apply primer to substrates at required rate and allow it to dry.

B. Apply primer to substrates at required rate and allow it to dry. Limit priming to areas that will be covered by air-barrier sheet on same day. Reprime areas exposed for more than 24 hours.

C. Apply and firmly adhere air-barrier sheets over area to receive air barrier. Accurately align sheets and maintain uniform 2-1/2-inch- minimum lap widths and end laps, or as recommended by manufacturer. Overlap and seal seams, and stagger end laps to ensure airtight installation.

1. Apply sheets in a shingled manner to shed water.
2. Roll sheets firmly to enhance adhesion to substrate.

D. Install air-barrier sheet and accessory materials to form a seal with adjacent construction and to maintain a continuous air barrier.

E. Connect and seal exterior wall air-barrier sheet continuously to roofing-membrane air barrier, concrete below-grade structures, floor-to-floor construction, exterior glazing and window systems, glazed curtain-wall systems, storefront systems, exterior louvers, exterior door framing, and other construction used in exterior wall openings, using accessory materials.

F. Repair punctures, voids, and deficient lapped seams in air barrier. Slit and flatten fishmouths and blisters. Patch with air-barrier sheet extending 6 inches beyond repaired areas in all directions.

G. Correct deficiencies in or remove air barrier that does not comply with requirements; repair substrates and reapply air-barrier components.

3.3 FIELD QUALITY CONTROL

A. Testing Agency: At owner’s option, engage a qualified testing agency to perform tests and inspections.

B. Tests: As determined by testing agency from among the following tests:

1. Air-Leakage-Location Testing: Air-barrier assemblies will be tested for evidence of air leakage according to ASTM E 1186, chamber pressurization or depressurization with smoke tracers or ASTM E 1186, chamber depressurization using detection liquids.
2. Air-Leakage-Volume Testing: Air-barrier assemblies will be tested for air-leakage rate according to ASTM E 783 or ASTM E 2357.
3. Adhesion Testing: Air-barrier assemblies will be tested for required adhesion to substrate according to ASTM D 4541 for each 600 sq. ft. of installed air barrier or part thereof.

C. Air barriers will be considered defective if they do not pass tests and inspections.

1. Apply additional air-barrier material, according to manufacturer's written instructions, where inspection results indicate insufficient thickness.
2. Remove and replace deficient air-barrier components for retesting as specified above.

D. Repair damage to air barriers caused by testing; follow manufacturer's written instructions.

E. Prepare test and inspection reports.

3.4 CLEANING AND PROTECTION

A. Protect air-barrier system from damage during application and remainder of construction period, according to manufacturer's written instructions.

END OF SECTION 07 27 15

A. Insulation for Miscellaneous Voids:

1. Glass Fiber Insulation: ASTM C 764, Type II, loose fill; with maximum flame spread and smoke developed indexes of 5, per ASTM E 84.

B. Insulation Anchors, Spindles, and Standoffs: As recommended by manufacturer.

C. Adhesive for Bonding Insulation: Product compatible with insulation and air and water barrier materials, and with demonstrated capability to bond insulation securely to substrates without damaging insulation and substrates.

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

A. Comply with insulation manufacturer's written instructions applicable to products and applications.

B. Install insulation that is undamaged, dry, and unsoiled and that has not been left exposed to ice, rain, or snow at any time.

C. Extend insulation to envelop entire area to be insulated. Fit tightly around obstructions and fill voids with insulation. Remove projections that interfere with placement.

D. Provide sizes to fit applications and selected from manufacturer's standard thicknesses, widths, and lengths. Apply single layer of insulation units unless multiple layers are otherwise shown or required to make up total thickness or to achieve R-value.

E. Install loose fill insulation in above-ceiling areas by pouring or blowing in insulation material to the appropriate depth and density required to achieve the R-Values indicated on the drawings.

1. Increase existing insulation thickness in existing attic area by adding additional loose-fill insulation to achieve the required R-Value. Remove any existing debris prior to adding new insulation.

3.2 INSTALLATION OF INSULATION IN FRAMED CONSTRUCTION

A. Blanket Insulation: Install in cavities formed by framing members according to the following requirements:

1. Place insulation in cavities formed by framing members to produce a friction fit between edges of insulation and adjoining framing members.

2. Use insulation widths and lengths that fill the cavities formed by framing members. If more than one length is required to fill the cavities, provide lengths that will produce a snug fit between ends.

3. Maintain 3-inch clearance of insulation around recessed lighting fixtures not rated for or protected from contact with insulation.
4. For wood-framed wall cavities where cavity heights exceed 96 inches, support unfaced blankets mechanically.

B. Acoustical Insulation: Install tightly in cavities formed by framing members, with no voids of insulation, and according to the following requirements:

1. Provide adhesive, tape or other appropriate fasteners where required to hold insulation tightly in place.
2. Openings and penetrations in acoustical walls and partitions shall be sealed airtight.

3.1 INSTALLATION OF CAVITY-WALL INSULATION

A. Extruded-Polystyrene Board Insulation: Install pads of adhesive spaced approximately 24 inches o.c. both ways on inside face, and as recommended by manufacturer.

B. Fit courses of insulation between wall ties, wall furring, and other obstructions, with edges butted tightly in both directions. Press units firmly against inside substrates. Seal joints and penetrations as recommended by manufacturer.

C. Extend extruded polystyrene board insulation up the full height of the wall cavity, from base of wall to termination at top sill plate, as indicated on the drawings.

1. Areas of exterior walls to receive extruded polystyrene board insulation include all exterior wall surfaces to receive cement-board siding, as indicated on the drawings.

END OF SECTION 07 21 00

SECTION 07 27 26 - FLUID-APPLIED MEMBRANE AIR BARRIERS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

1. Vapor-permeable, fluid-applied air barriers.

1.3 PREINSTALLATION MEETINGS

A. Preinstallation Conference: Conduct conference at Project site.

1.4 ACTION SUBMITTALS

A. Product Data: For each type of product.

1. Include details for substrate joints and cracks, counterflashing strips, penetrations, inside and outside corners, terminations, and tie-ins with adjoining construction.

1.5 INFORMATIONAL SUBMITTALS

A. Product certificates.

B. Product test reports.

C. Field quality-control test and inspection reports.

1.6 QUALITY ASSURANCE

A. Installer Qualifications: An entity that employs installers and supervisors who are trained and approved by manufacturer.

B. Mockups: Build mockups to set quality standards for materials and execution.

1. Build integrated mockups of exterior wall assembly, incorporating backup wall construction, external cladding, window, storefront, door frame and sill, insulation, ties and other penetrations, and flashing to demonstrate surface preparation, crack and joint treatment, application of air barriers, and sealing of gaps, terminations, and penetrations of air-barrier assembly.

    a. Coordinate construction of mockups to permit inspection and testing of air barrier before external insulation and cladding are installed.
    b. Include junction building corner condition, and foundation wall intersection.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

A. Air-Barrier Performance: Air-barrier assembly and seals with adjacent construction shall be capable of performing as a continuous air barrier and as a liquid-water drainage plane flashed to discharge to the exterior incidental condensation or water penetration. Air-barrier assemblies shall be capable of accommodating substrate movement and of sealing substrate expansion and control joints, construction material changes, penetrations, and transitions at perimeter conditions without deterioration and air leakage exceeding specified limits.

B. Air-Barrier Assembly Air Leakage: Maximum 0.04 cfm/sq. ft. of surface area at 1.57 lbf/sq. ft., when tested according to ASTM E 2357.

2.2 MEDIUM-BUILD AIR BARRIERS, VAPOR RETARDING

A. Medium-Build, Vapor-Retarding Air Barrier: Synthetic polymer material with an installed dry film thickness, according to manufacturer's written instructions, of 17 to 30 mils over smooth, void-free substrates.

1. Products: Subject to compliance with requirements available products that may be incorporated into the Work include, but are not limited to, the following:

    a. BASF Corporation; Wall Systems; Senershield-VB.
    b. PROSOCO, Inc; R-Guard VB.
    c. Sto Corp; StoGuard VaporSeal.
    d. W.R. Grace; Perm-A. Barrier.

2. Physical and Performance Properties:

    a. Air Permeance: Maximum 0.004 cfm/sq. ft. of surface area at 1.57-lbf/sq. ft. pressure difference; ASTM E 2178.
    b. Vapor Permeance: Maximum 0.1 perm; ASTM E 96/E 96M, Desiccant Method.
    c. Ultimate Elongation: Minimum 350 percent; ASTM D 412, Die C.
    d. Adhesion to Substrate: Minimum 16 lbf/sq. in. when tested according to ASTM D 4541.

e. Fire Propagation Characteristics: Passes NFPA 285 testing as part of an approved assembly.
f. UV Resistance: Can be exposed to sunlight for 90 days according to manufacturer's written instructions.

2.3 ACCESSORY MATERIALS

A. Requirements: Provide primers, transition strips, termination strips, joint reinforcing fabric and strips, joint sealants, counterflashing strips, flashing sheets and metal termination bars, termination mastic, substrate patching materials, adhesives, tapes, foam sealants, lap sealants, and other accessory materials that are recommended in writing by air-barrier manufacturer to produce a complete air-barrier assembly and that are compatible with primary air-barrier material and adjacent construction to which they may seal.

PART 3 - EXECUTION

3.1 SURFACE PREPARATION

A. Clean, prepare, treat, fill, and seal substrate and joints and cracks in substrate according to manufacturer's written instructions and details. Provide clean, dust-free, and dry substrate for air-barrier application.

B. Mask off adjoining surfaces not covered by air barrier to prevent spillage and overspray affecting other construction.

C. Remove fins, ridges, mortar, and other projections and fill honeycomb, aggregate pockets, holes, and other voids in concrete with substrate-patching material.

D. Remove excess mortar from masonry ties, shelf angles, and other obstructions.

E. At changes in substrate plane, apply sealant or termination mastic beads at sharp corners and edges to form a smooth transition from one plane to another.

F. Bridge isolation joints, expansion joints and discontinuous wall-to-wall, deck-to-wall, and deck-to-deck joints with air-barrier accessory material that accommodates joint movement according to manufacturer's written instructions and details.

3.2 INSTALLATION

A. Install materials according to air-barrier manufacturer's written instructions and details to form a seal with adjacent construction and ensure continuity of air and water barrier.

1. Coordinate the installation of air barrier with installation of roofing membrane and base flashing to ensure continuity of air barrier with roofing membrane.
2. Install transition strip on roofing membrane or base flashing so that a minimum of 3 inches of coverage is achieved over each substrate.

3. Unless manufacturer recommends in writing against priming, apply primer to substrates at required rate and allow it to dry.
4. Apply primer to substrates at required rate and allow it to dry. Limit priming to areas that will be covered by air-barrier material on same day. Reprime areas exposed for more than 24 hours.

B. Connect and seal exterior wall air-barrier material continuously to roofing-membrane air barrier, concrete below-grade structures, floor-to-floor construction, exterior glazing and window systems, glazed curtain-wall systems, storefront systems, exterior louvers, exterior door framing, and other construction used in exterior wall openings, using accessory materials.

C. Wall Openings: Prime concealed, perimeter frame surfaces of windows, curtain walls, storefronts, and doors. Apply transition strip so that a minimum of 3 inches of coverage is achieved over each substrate. Maintain 3 inches of full contact over firm bearing to perimeter frames, with not less than 1 inch of full contact.

D. Repair punctures, voids, and deficient lapped seams in strips and transition strips. Slit and flatten fishmouths and blisters. Patch with transition strips extending 6 inches beyond repaired areas in strip direction.

E. Medium-Build Air Barriers: Apply continuous unbroken air-barrier material to substrates according to the following thickness. Apply an increased thickness of air-barrier material in full contact around protrusions such as masonry ties.

1. Vapor-Retarding, Medium-Build Air Barrier: Total dry film thickness as recommended in writing by manufacturer to comply with performance requirements, applied in one or more equal coats. Apply additional material as needed to achieve void- and pinhole-free surface.

F. Do not cover air barrier until it has been tested and inspected by testing agency.

G. Correct deficiencies in or remove air barrier that does not comply with requirements; repair substrates and reapply air-barrier components.

3.3 FIELD QUALITY CONTROL

A. Testing Agency: Contractor shall Engage a qualified testing agency to perform tests and inspections.

B. Tests: As determined by testing agency from among the following tests:

1. Air-barrier dry film thickness.
2. Air-Leakage-Location Testing: Air-barrier assemblies will be tested for evidence of air leakage according to ASTM E 1186, chamber pressurization or depressurization with smoke tracers or ASTM E 1186, chamber depressurization using detection liquids.
3. Air-Leakage-Volume Testing: Air-barrier assemblies will be tested for air-leakage rate according to ASTM E 783 or ASTM E 2357.

4. Adhesion Testing: Air-barrier assemblies will be tested for required adhesion to substrate according to ASTM D 4541 for each 600 sq. ft. of installed air barrier or part thereof.

C. Air barriers will be considered defective if they do not pass tests and inspections.

1. Apply additional air-barrier material, according to manufacturer's written instructions, where inspection results indicate insufficient thickness.
2. Remove and replace deficient air-barrier components for retesting as specified above.

D. Repair damage to air barriers caused by testing; follow manufacturer's written instructions.

E. Prepare test and inspection reports.

3.4 CLEANING AND PROTECTION

A. Protect air-barrier system from damage during application and remainder of construction period, according to manufacturer's written instructions.

B. Remove masking materials after installation.

END OF SECTION 07 27 26

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SECTION 07 31 13 - ASPHALT SHINGLES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

1. Asphalt shingles.
2. Underlayment.
3. Ridge vents.
4. Metal flashing and trim.

B. Related Requirements:

1. Section 06 16 00 "Sheathing" for roof sheathing.

1.3 PREINSTALLATION MEETINGS

A. Preinstallation Conference: Conduct conference at Project site.

1.4 ACTION SUBMITTALS

A. Product Data: For each type of product.

B. Samples: For each exposed product and for each color and texture specified.

1.5 INFORMATIONAL SUBMITTALS

A. Product test reports.

B. Evaluation reports.

1.6 CLOSEOUT SUBMITTALS

A. Maintenance data.

1.7 QUALITY ASSURANCE

A. Installer Qualifications: An authorized representative who is trained and approved by manufacturer.

1.8 WARRANTY

A. Manufacturer's Warranty: Manufacturer agrees to repair or replace asphalt shingles that fail within specified warranty period.

1. Material Warranty Period: 25 years from date of Substantial Completion, prorated, with first three years non-prorated.
2. Wind-Speed Warranty Period: Asphalt shingles will resist blow-off or damage caused by the maximum wind speed indicated on the drawings for five years from date of Substantial Completion.
3. Algae-Resistance Warranty Period: Asphalt shingles will not discolor for five years from date of Substantial Completion.
4. Workmanship Warranty Period: Two years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

A. Exterior Fire-Test Exposure: Provide asphalt shingles and related roofing materials identical to those of assemblies tested for Class A fire resistance according to ASTM E 108 or UL 790 by Underwriters Laboratories, Inc. or another testing and inspecting agency acceptable to authorities having jurisdiction. Identify products with appropriate markings of applicable testing agency.

2.2 GLASS-FIBER-REINFORCED ASPHALT SHINGLES

A. Three-Dimensional, Laminated-Strip Asphalt Shingles: ASTM D 3462/D 3462M, laminated, multi-ply overlay construction, glass-fiber reinforced, mineral-granule surfaced, and self-sealing.

1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

a. Atlas Roofing Corporation.
b. CertainTeed Corporation.
c. GAF Materials Corporation.
d. Owens Corning.
e. PABCO Roofing Products.
f. TAMKO Building Products, Inc.

2. Butt Edge: Straight cut.
3. Strip Size: Manufacturer's standard.
4. Algae Resistance: Granules resist algae discoloration.
5. Impact Resistance: UL 2218, Class 4.
6. Color and Blends: As selected by Architect from manufacturer's full range.

B. Hip and Ridge Shingles: Manufacturer's standard units to match asphalt shingles.

2.3 UNDERLAYMENT MATERIALS

A. Self-Adhering Sheet Underlayment, Polyethylene Faced: ASTM D 1970/D 1970M, minimum of 40-mil- thick, slip-resisting, polyethylene-film-reinforced top surface laminated to SBS-modified asphalt adhesive, with release backing; cold applied.

1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
   a. Atlas Roofing Corporation.
   b. CertainTeed Corporation.
   c. GAF Materials Corporation.
   d. Grace, W. R. & Co. - Conn.
   e. Owens Corning.
   f. TAMKO Building Products, Inc.

2.4 RIDGE VENTS

A. Rigid Ridge Vent: Manufacturer's standard, rigid section high-density polypropylene or other UV-stabilized plastic ridge vent for use under ridge shingles.

1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

   a. Air Vent, Inc.; a Gibraltar Industries company.
   b. Cor-A-Vent, Inc.
   c. GAF Materials Corporation.
   d. Lomanco, Inc.
   e. Owens Corning.
   f. The Tapco Group; Mid-America Siding Components.

2. Width: Manufacturer’s standard, minimum 12 inches.
3. Thickness: Manufacturer’s standard.
4. Features:

   a. Nonwoven geotextile filter strips.
   b. External deflector baffles.

2.5 ACCESSORIES

A. Asphalt Roofing Cement: ASTM D 4586, Type II, asbestos free.

B. Roofing Nails: ASTM F 1667; aluminum, stainless-steel, copper, or hot-dip galvanized-steel wire shingle nails, minimum 0.120-inch- diameter, sharp-pointed, with a minimum 3/8-inch-diameter flat head and of sufficient length to penetrate 3/4 inch into solid wood decking or extend at least 1/8 inch through OSB or plywood sheathing.

1. Shank: Barbed.
2. Where nails are in contact with metal flashing, use nails made from same metal as flashing.

C. Synthetic-Underlayment Fasteners: As recommended in writing by synthetic-underlayment manufacturer for application indicated.

2.6 METAL FLASHING AND TRIM

A. General: Comply with requirements in Section 07 62 00 "Sheet Metal Flashing and Trim."

1. Sheet Metal: Aluminum, prefinished.

B. Fabricate sheet metal flashing and trim to comply with recommendations in SMACNA's "Architectural Sheet Metal Manual" that apply to design, dimensions, metal, and other characteristics of the item.

PART 3 - EXECUTION

3.1 UNDERLAYMENT INSTALLATION

A. General: Comply with underlayment manufacturer's written installation instructions applicable to products and applications indicated unless more stringent requirements apply.

B. Self-Adhering Sheet Underlayment: Install, wrinkle free, on roof deck. Comply with low-temperature installation restrictions of underlayment manufacturer if applicable. Install lapped in direction that sheds water. Lap sides not less than 3-1/2 inches. Lap ends not less than 6 inches staggered 24 inches between courses. Roll laps with roller. Cover underlayment within seven days.

3.2 METAL FLASHING INSTALLATION

A. General: Install metal flashings and other sheet metal to comply with requirements in Section 07 62 00 "Sheet Metal Flashing and Trim."

1. Install metal flashings according to recommendations in ARMA's "Residential Asphalt Roofing Manual" and NRCA's "NRCA Guidelines for Asphalt Shingle Roof Systems."

3.3 ASPHALT-SHINGLE INSTALLATION

A. General: Install asphalt shingles according to manufacturer's written instructions, recommendations in ARMA's "Residential Asphalt Roofing Manual," and recommendations in NRCA's "NRCA Guidelines for Asphalt Shingle Roof Systems."

B. Install starter strip along lowest roof edge, consisting of an asphalt-shingle stripwith self-sealing strip face up at roof edge.

1. Extend asphalt shingles 3/4 inch over fasciae at eaves and rakes.
2. Install starter strip along rake edge.

C. Install first and remaining courses of asphalt shingles stair-stepping diagonally across roof deck with manufacturer's recommended offset pattern at succeeding courses, maintaining uniform exposure.

D. Install first and remaining courses of asphalt shingles stair-stepping diagonally across roof deck with manufacturer's recommended offset pattern at succeeding courses, maintaining uniform exposure.

E. Install asphalt shingles by single-strip column or racking method, maintaining uniform exposure. Install full-length first course followed by cut second course, repeating alternating pattern in succeeding courses.

F. Fasten asphalt-shingle strips with the minimum of roofing nails calculated and located according to manufacturer's written instructions to meet wind speeds indicated on the drawings.

1. Where roof slope is less than 4:12, seal asphalt shingles with asphalt roofing cement spots.
2. When ambient temperature during installation is below 50 deg F, seal asphalt shingles with asphalt roofing cement spots.

G. Woven Valleys: Extend succeeding asphalt-shingle courses from both sides of valley the manufacturer’s recommended distance beyond center of valley, weaving intersecting shingle-strip courses over each other. Use one-piece shingle strips without joints in valley.

1. Do not nail asphalt shingles within 6 inches of valley center.

H. Ridge Vents: Install continuous ridge vents over asphalt shingles according to manufacturer's written instructions. Fasten with roofing nails of sufficient length to penetrate sheathing.

I. Hip and Ridge Shingles: Maintain same exposure of cap shingles as roofing shingle exposure. Lap cap shingles at ridges to shed water away from direction of prevailing winds. Fasten with roofing nails of sufficient length to penetrate sheathing.

1. Fasten ridge cap asphalt shingles to cover ridge vent without obstructing airflow.

END OF SECTION 07 31 13

SECTION 07 46 46 - FIBER-CEMENT SIDING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section includes fiber-cement siding and soffit.

B. Related Sections:

1. Section 06 10 00 “Rough Carpentry” for wood furring strips in exterior wall cavity behind fiber cement siding.
2. Section 07 21 00 “Thermal Insulation” for extruded-polystyrene board insulation in exterior wall cavity behind fiber cement siding.
3. Section 07 92 00 “Joint Sealants” for joint sealing of fiber cement siding.
4. Section 09 91 13 “Exterior Painting” for painting of fiber cement siding.

1.3 PREINSTALLATION MEETINGS

A. Preinstallation Conference: Conduct conference at Project site.

1.4 ACTION SUBMITTALS

A. Product Data: For each type of product.

B. Samples: For fiber-cement siding, soffit and trim, including related accessories.

1.5 INFORMATIONAL SUBMITTALS

A. Product certificates.

B. Product test reports.

C. Research/evaluation reports.

1.6 CLOSEOUT SUBMITTALS

A. Maintenance data.

1.7 QUALITY ASSURANCE

A. Mockups: Build mockups to verify selections made under Sample submittals and to demonstrate aesthetic effects and to set quality standards for fabrication and installation.

1. Build mockup of typical wall area as shown on Drawings.
2. Subject to compliance with requirements, approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

1.8 WARRANTY

A. Special Warranty: Manufacturer agrees to repair or replace products that fail in materials or workmanship within specified warranty period.

1. Warranty Period: 10 years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 FIBER-CEMENT SIDING

A. General: ASTM C 1186, Type A, Grade II, fiber-cement board, noncombustible when tested according to ASTM E 136; with a flame-spread index of 25 or less when tested according to ASTM E 84.

1. Basis-of-Design Product: Subject to compliance with requirements, provide James Hardie Building Product products indicated on Drawings or comparable product by one of the following:

a. CertainTeed Corporation.
b. GAF Materials Corporation.

B. Labeling: Provide fiber-cement siding that is tested and labeled according to ASTM C 1186 by a qualified testing agency acceptable to authorities having jurisdiction.

C. Nominal Thickness: Not less than 5/16 inch.

D. Horizontal Pattern: Lap Siding style boards 7-1/4 to 7-1/2 inches wide in plain style.

1. Texture: Wood grain.

E. Factory Priming: Manufacturer's standard acrylic primer.

2.2 FIBER-CEMENT SOFFIT

A. General: ASTM C 1186, Type A, Grade II, fiber-cement board, noncombustible when tested according to ASTM E 136; with a flame-spread index of 25 or less when tested according to ASTM E 84.

1. Basis-of-Design Product: Subject to compliance with requirements, provide James Hardie Building Product products indicated on Drawings or comparable product by one of the following:

    a. CertainTeed Corporation.
    b. GAF Materials Corporation.

B. Nominal Thickness: Not less than 5/16 inch.

C. Pattern: 24-inch-wide wood-grain sheets, and as required on the drawings.

1. Texture: Wood grain.
2. Venting: Provide factory perforations with insect screening for continuous vent strip in soffit.

D. Factory Priming: Manufacturer's standard acrylic primer.

2.3 ACCESSORIES

A. Siding Accessories, General: Provide starter strips, edge trim, outside and inside corner caps, and other items as recommended by siding manufacturer for building configuration.

B. Flashing: Provide aluminum stainless-steel Insert metal flashing complying with Section 07 62 00 "Sheet Metal Flashing and Trim" at window and door heads and where indicated.

1. Finish for Aluminum Flashing: High-performance organic finish. Color to be selected by Architect from manufacturer’s full range to match paint color of siding and trim.

C. Fasteners:

1. For fastening to wood, use siding nails ribbed bugle-head screws of sufficient length to penetrate a minimum of 1 inch into substrate.
2. For fastening fiber cement, use hot-dip galvanized stainless-steel fasteners.

PART 3 - EXECUTION

3.1 INSTALLATION

A. General: Comply with manufacturer's written installation instructions applicable to products and applications indicated unless more stringent requirements apply.

1. Install fasteners, spaced per manufacturer’s recommendations to meet wind loads indicated on the drawings.

B. Install joint sealants as specified in Section 07 92 00 "Joint Sealants" and to produce a weathertight installation.

3.2 ADJUSTING AND CLEANING

A. Remove damaged, improperly installed, or otherwise defective materials and replace with new materials complying with specified requirements.

B. Clean finished surfaces according to manufacturer's written instructions and maintain in a clean condition during construction.

END OF SECTION 07 46 46

SECTION 07 62 00 - SHEET METAL FLASHING AND TRIM

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

1. Formed roof-drainage systems.
2. Formed wall opening flashings.

B. Related Sections:

1. Division 07 Section "Joint Sealants" for field-applied sealants between flashings and adjacent materials.
2. Division 33 Section “Storm Drainage Utilities” for manufactured downspout boot connectors.

1.3 PREINSTALLATION MEETINGS

B. Preinstallation Conference: Conduct conference at Project site, to ensure coordination with curtain wall and window installations, and with manufactured specialty items,

1.4 ACTION SUBMITTALS

A. Product Data: For each type of product.

B. Shop Drawings: For sheet metal flashing and trim.

1. Include plans, elevations, sections, and attachment details.
2. Distinguish between shop- and field-assembled work.
3. Include identification of finish for each item.
4. Include pattern of seams and details of termination points, expansion joints and expansion-joint covers, direction of expansion, roof-penetration flashing, and connections to adjoining work.

C. Samples: For each exposed product and for each color and texture specified.

1.5 INFORMATIONAL SUBMITTALS

A. Product certificates.

B. Product test reports.

1.6 QUALITY ASSURANCE

A. Fabricator Qualifications: Employs skilled workers who custom fabricate sheet metal flashing and trim similar to that required for this Project and whose products have a record of successful in-service performance.

1.7 WARRANTY

A. Special Warranty on Finishes: Manufacturer agrees to repair finish or replace sheet metal flashing and trim that shows evidence of deterioration of factory-applied finishes within specified warranty period.

1. Finish Warranty Period: 10 years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

A. General: Sheet metal flashing and trim assemblies shall withstand wind loads, structural movement, thermally induced movement, and exposure to weather without failure due to defective manufacture, fabrication, installation, or other defects in construction. Completed sheet metal flashing and trim shall not rattle, leak, or loosen, and shall remain watertight.

B. Sheet Metal Standard for Flashing and Trim: Comply with SMACNA's "Architectural Sheet Metal Manual" requirements for dimensions and profiles shown unless more stringent requirements are indicated.

C. SPRI Wind Design Standard: Manufacture and install copings and roof edge flashings tested according to SPRI ES-1 and capable of resisting the following design pressure:

1. Design Pressure: As indicated on Drawings provided by metal building manufacturer.

D. Thermal Movements: Allow for thermal movements from ambient and surface temperature changes.

1. Temperature Change: 120 deg F, ambient; 180 deg F, material surfaces.

2.2 SHEET METALS

A. General: Protect mechanical and other finishes on exposed surfaces from damage by applying strippable, temporary protective film before shipping.

B. Aluminum Sheet: ASTM B 209 , alloy as standard with manufacturer for finish required, with temper as required to suit forming operations and performance required.

1. Exposed Coil-Coated Finish:

    a) Two-Coat Fluoropolymer: AAMA 2605. Fluoropolymer finish containing not less than 70 percent PVDF resin by weight in both color coat and clear topcoats. Prepare, pretreat, and apply coating to exposed metal surfaces to comply with coating and resin manufacturers' written instructions.
    b) Color: As selected by Architect from manufacturer's full range to match colors indicated on the drawings.

C. Stainless-Steel Sheet: ASTM A 240/A 240M, Type 304, dead soft, fully annealed; 2B (bright, cold rolled).

D. Metallic-Coated Steel Sheet: Provide zinc-coated (galvanized) steel sheet according to ASTM A 653/A 653M, G90 coating designation or aluminum-zinc alloy-coated steel sheet according to ASTM A 792/A 792M, Class AZ50 coating designation, Grade 40; prepainted by coil-coating process to comply with ASTM A 755/A 755M.

1. Exposed Coil-Coated Finish:

    a) Two-Coat Fluoropolymer: AAMA 621. Fluoropolymer finish containing not less than 70 percent PVDF resin by weight in color coat. Prepare, pretreat, and apply coating to exposed metal surfaces to comply with coating and resin manufacturers' written instructions.
    b) Color: As selected by Architect from manufacturer's full range to match colors indicated on the drawings.

2.3 UNDERLAYMENT MATERIALS

A. Synthetic Underlayment: Laminated or reinforced, woven polyethylene or polypropylene, synthetic roofing underlayment; bitumen free; slip resistant; suitable for high temperatures over 220 deg F; and complying with physical requirements of ASTM D 226/D 226M for Type I and Type II felts.

2.4 MISCELLANEOUS MATERIALS

A. General: Provide materials and types of fasteners, solder, protective coatings, sealants, and other miscellaneous items as required for complete sheet metal flashing and trim installation and as recommended by manufacturer of primary sheet metal or manufactured item unless otherwise indicated.

B. Fasteners: Wood screws, annular threaded nails, self-tapping screws, self-locking rivets and bolts, and other suitable fasteners designed to withstand design loads and recommended by manufacturer of primary sheet metal or manufactured item.

1. General: Blind fasteners or self-drilling screws, gasketed, with hex-washer head.

a) Exposed Fasteners: Heads matching color of sheet metal using plastic caps or factory-applied coating. Provide metal-backed EPDM or PVC sealing washers under heads of exposed fasteners bearing on weather side of metal.
b) Blind Fasteners: High-strength aluminum or stainless-steel rivets suitable for metal being fastened.

2. Fasteners for Aluminum Sheet: Aluminum or Series 300 stainless steel.
3. Fasteners for Stainless-Steel Sheet: Series 300 stainless steel.

C. Sealant Tape: Pressure-sensitive, 100 percent solids, polyisobutylene compound sealant tape with release-paper backing. Provide permanently elastic, nonsag, nontoxic, nonstaining tape 1/2 inch wide and 1/8 inch thick.

D. Elastomeric Sealant: ASTM C 920, elastomeric polyurethane, polysulfide or silicone polymer sealant; of type, grade, class, and use classifications required to seal joints in sheet metal flashing and trim and remain watertight.

E. Epoxy Seam Sealer: Two-part, noncorrosive, aluminum seam-cementing compound, recommended by aluminum manufacturer for exterior nonmoving joints, including riveted joints.

2.5 FABRICATION, GENERAL

A. General: Custom fabricate sheet metal flashing and trim to comply with details shown and recommendations in cited sheet metal standard that apply to design, dimensions, geometry, metal thickness, and other characteristics of item required. Fabricate sheet metal flashing and trim in shop to greatest extent possible.

1. Obtain field measurements for accurate fit before shop fabrication.
2. Form sheet metal flashing and trim to fit substrates without excessive oil canning, buckling, and tool marks; true to line, levels, and slopes; and with exposed edges folded back to form hems.
3. Conceal fasteners and expansion provisions where possible. Do not use exposed fasteners on faces exposed to view.

B. Expansion Provisions: Form metal for thermal expansion of exposed flashing and trim.

1. Form expansion joints of intermeshing hooked flanges, not less than 1 inch deep, filled with butyl sealant concealed within joints.
2. Use lapped expansion joints only where indicated on Drawings.

C. Sealant Joints: Where movable, nonexpansion-type joints are required, form metal to provide for proper installation of elastomeric sealant according to cited sheet metal standard.

D. Fabricate cleats and attachment devices from same material as accessory being anchored or from compatible, noncorrosive metal.

E. Fabricate cleats and attachment devices of sizes as recommended by cited sheet metal standard for application, but not less than thickness of metal being secured.

F. Seams: Fabricate nonmoving seams with flat-lock seams. Tin edges to be seamed, form seams, and solder.

G. Seams: Fabricate nonmoving seams with flat-lock seams. Form seams and seal with elastomeric sealant unless otherwise recommended by sealant manufacturer for intended use.

H. Seams for Aluminum: Fabricate nonmoving seams with flat-lock seams. Form seams and seal with epoxy seam sealer.

2.6 ROOF DRAINAGE FABRICATIONS

A. Gutters and Downspouts: Fabricated or prefinished, manufactured components as follows:

1. Gutters: Fabricated from prefinished aluminum. Fabricate to box profile indicated on the drawings.
2. Downspouts: Fabricated from prefinished aluminum with continuous flat lock seam. Fabricate to square profile indicated on the drawings.
3. Downspout Elbows: Manufactured from roll-formed aluminum, with fully welded seams; factory finished after fabrication.
4. Gutter Straps: Fabricated from prefinished, heavy gage aluminum bar stock, to configurations shown on the drawings.
5. Downspout Clamps: Manufactured, clamps with factory finish.
6. Finish: Two-Coat Fluoropolymer; AAMA 2605. Fluoropolymer finish containing not less than 70 percent PVDF resin by weight. Provide on all gutter and downspout components.

    a. Color: As selected by Architect from manufacturer’s full range of colors to match colors indicated on the drawings.

2.7 WALL SHEET METAL FABRICATIONS

A. Opening Flashings in Brick Veneer Clad Wall Construction: Fabricate head, sill, and similar flashings to extend beyond wall openings, as indicated in the drawings. Form head and sill flashing with 2-inch- high, end dams. Fabricate from the following material:

1. Aluminum: 0.032 inch thick. Match clear anodized finish of storefront components.

PART 3 - EXECUTION

3.1 UNDERLAYMENT INSTALLATION

A. Synthetic Underlayment: Install synthetic underlayment, wrinkle free, according to manufacturers' written instructions, and using adhesive where possible to minimize use of mechanical fasteners under sheet metal.

3.2 INSTALLATION, GENERAL

A. General: Anchor sheet metal flashing and trim and other components of the Work securely in place, with provisions for thermal and structural movement. Use fasteners, protective coatings, separators, sealants, and other miscellaneous items as required to complete sheet metal flashing and trim system.

1. Install sheet metal flashing and trim in accordance with SMACNA's "Architectural Sheet Metal Manual" requirements, including recommended dimensions for laps and roof- to-wall transitions.
2. Install sheet metal flashing and trim true to line, levels, and slopes. Provide uniform, neat seams with minimum exposure of solder, welds, and sealant
3. Install sheet metal flashing and trim to fit substrates and to result in watertight performance. Verify shapes and dimensions of surfaces to be covered before fabricating sheet metal.
4. Space cleats not more than 12 inches apart. Attach each cleat with at least two fasteners. Bend tabs over fasteners.
5. Install exposed sheet metal flashing and trim with limited oil canning, and free of buckling and tool marks.
6. Torch cutting of sheet metal flashing and trim is not permitted.

B. Metal Protection: Where dissimilar metals contact each other, or where metal contacts pressure-treated wood or other corrosive substrates, protect against galvanic action or corrosion by painting contact surfaces with bituminous coating or by other permanent separation as recommended by sheet metal manufacturer or cited sheet metal standard.

1. Coat concealed side of uncoated-aluminum and stainless-steel sheet metal flashing and trim with bituminous coating where flashing and trim contact wood, ferrous metal, or cementitious construction.
2. Underlayment: Where installing sheet metal flashing and trim directly on cementitious or wood substrates, install underlayment and cover with slip sheet.

C. Expansion Provisions: Provide for thermal expansion of exposed flashing and trim. Space movement joints at maximum of 10 feet with no joints within 24 inches of corner or intersection.

1. Form expansion joints of intermeshing hooked flanges, not less than 1 inch deep, filled with sealant concealed within joints.
2. Use lapped expansion joints only where indicated on Drawings.

D. Fasteners: Use fastener sizes that penetrate substrate not less than recommended by fastener manufacturer to achieve maximum pull-out resistance.

E. Conceal fasteners and expansion provisions where possible in exposed work and locate to minimize possibility of leakage. Cover and seal fasteners and anchors as required for a tight installation.

F. Seal joints as required for watertight construction. Prepare joints and apply sealants to comply with requirements in Section 07 92 00 "Joint Sealants."

3.3 ROOF-EDGE DRAINAGE-SYSTEM INSTALLATION

A. General: Install components to produce a complete roof-edge drainage system, including gutters and downspouts indicated on the drawings.

1. Install roof-edge drainage system components to meet wind loads indicated on the drawings.

3.4 WALL FLASHING INSTALLATION

A. General: Install sheet metal wall flashing to intercept and exclude penetrating moisture according to cited sheet metal standard unless otherwise indicated.

1. Coordinate installation of wall flashing with installation of wall-opening components, including windows, doors, and louvers.
2. Configuration of wall flashings shall be as indicated on the drawings.

B. Through-Wall Flashing: Installation of through-wall flashing is specified in Section 04 21 13 “Brick Masonry.”

3.5 CLEANING AND PROTECTION

A. Clean exposed metal surfaces of substances that interfere with uniform oxidation and weathering.

B. Clean and neutralize flux materials. Clean off excess solder.

C. Clean off excess sealants.

C. Remove temporary protective coverings and strippable films as sheet metal flashing and trim are installed unless otherwise indicated in manufacturer's written installation instructions.

END OF SECTION 07 62 00

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SECTION 07 84 10 - THROUGH-PENETRATION FIRESTOP SYSTEMS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

1.2 Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.3 SUMMARY

A. This Section includes through-penetration firestop systems for penetrations through fire-resistance-rated constructions, including both empty openings and openings containing penetrating items.

1.4 PERFORMANCE REQUIREMENTS

A. General: For penetrations through fire-resistance-rated constructions, including both empty openings and openings containing penetrating items, provide through-penetration firestop systems that are produced and installed to resist spread of fire according to requirements indicated, resist passage of smoke and other gases, and maintain original fire-resistance rating of construction penetrated.

B. Rated Systems: Provide through-penetration firestop systems with the following ratings determined per ASTM E 814 or UL 1479:

1. F-Rated Systems: Provide through-penetration firestop systems with F-ratings indicated, but not less than that equaling, or exceeding fire-resistance rating of constructions penetrated.

C. For through-penetration firestop systems exposed to view, traffic, moisture, and physical damage, provide products that, after curing, do not deteriorate when exposed to these conditions both during and after construction.

1. For piping penetrations for plumbing and wet-pipe sprinkler systems, provide moisture-resistant through-penetration firestop systems.
2. For penetrations involving insulated piping, provide through-penetration firestop systems not requiring removal of insulation.

D. For through-penetration firestop systems exposed to view, provide products with flame-spread and smoke-developed indexes of less than 25 and 450, respectively, as determined per ASTM E 84.

1.5 SUBMITTALS

A. Product Data: For each type of product indicated.

B. Shop Drawings: For each through-penetration firestop system, submit documentation, including illustrations, from a qualified testing and inspecting agency, showing each type of construction condition penetrated, relationships to adjoining construction, and type of penetrating item.

1.6 QUALITY ASSURANCE

A. Installation Responsibility: Assign installation of through-penetration firestop systems in Project to a single qualified installer.

B. Fire-Test-Response Characteristics: Provide through-penetration firestop systems that comply with the following requirements and those specified in Part 1 "Performance Requirements" Article:

1. Through-penetration firestop systems are identical to those tested per testing standard referenced in "Part 1 Performance Requirements" Article. Provide rated systems bearing classification marking of qualified testing and inspecting agency.

C. Coordinate construction of openings and penetrating items to ensure that through-penetration firestop systems are installed according to specified requirements.

D. Do not cover up through-penetration firestop system installations that will become concealed behind other construction until each installation has been examined by building inspector, if required by authorities having jurisdiction.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Available Products: Subject to compliance with requirements, through-penetration firestop systems that may be incorporated into the Work include, but are not limited to, those systems that are produced by one of the following manufacturers:

1. A/D Fire Protection Systems Inc.
2. Grace, W. R. & Co. - Conn.
3. Hilti, Inc.
4. Johns Manville.
5. Nelson Firestop Products.
6. NUCO Inc.
7. RectorSeal Corporation (The).
8. Specified Technologies Inc.
9. 3M; Fire Protection Products Division.
10. Tremco; Sealant/Weatherproofing Division.
11. USG Corporation.

2.2 FIRESTOPPING

A. Compatibility: Provide through-penetration firestop systems that are compatible with one another; with the substrates forming openings; and with the items, if any, penetrating through-penetration firestop systems, under conditions of service and application, as demonstrated by through-penetration firestop system manufacturer based on testing and field experience.

B. Accessories: Provide components for each through-penetration firestop system that are needed to install fill materials and to comply with Part 1 "Performance Requirements" Article. Use only components specified by through-penetration firestop system manufacturer and approved by qualified testing and inspecting agency for firestop systems indicated.

PART 3 - EXECUTION

3.1 THROUGH-PENETRATION FIRESTOP SYSTEM INSTALLATION

A. General: Install through-penetration firestop systems to comply with Part 1 "Performance Requirements" Article and with firestop system manufacturer's written installation instructions and published drawings for products and applications indicated.

B. Install forming/damming/backing materials and other accessories of types required to support fill materials during their application and in the position needed to produce cross-sectional shapes and depths required to achieve fire ratings indicated.

1. After installing fill materials and allowing them to fully cure, remove combustible forming materials and other accessories not indicated as permanent components of firestop systems.

C. Install fill materials for firestop systems by proven techniques to produce the following results:

1. Fill voids and cavities formed by openings, forming materials, accessories, and penetrating items as required to achieve fire-resistance ratings indicated.
2. Apply materials so they contact and adhere to substrates formed by openings and penetrating items.
3. For fill materials that will remain exposed after completing Work, finish to produce smooth, uniform surfaces that are flush with adjoining finishes.

END OF SECTION 07 84 10

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SECTION 07 92 00 - JOINT SEALANTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

1. Nonstaining silicone joint sealants.
2. Urethane joint sealants.
3. Mildew-resistant joint sealants.
4. Acoustical joint sealants

1.3 PREINSTALLATION MEETINGS

A. Preinstallation Conference: Conduct conference at Project site.

1.4 ACTION SUBMITTALS

A. Product Data: For each joint-sealant product.

B. Samples: For each kind and color of joint sealant required.

C. Joint-Sealant Schedule: Include the following information:

1. Joint-sealant application, joint location, and designation.
2. Joint-sealant manufacturer and product name.
3. Joint-sealant formulation.
4. Joint-sealant color.

1.5 INFORMATIONAL SUBMITTALS

A. Product test reports.

B. Field-adhesion-test reports.

C. Sample warranties.

D. Joint sealant schedule.

1.6 QUALITY ASSURANCE

A. Source Limitations: Obtain each type of joint sealant through one source from a single manufacturer

B. Preconstruction Field-Adhesion Testing: Before installing sealants, field test their adhesion to Project joint substrates. Test joint sealants according to Method A, Field-Applied Sealant Joint Hand Pull Tab, in Appendix X1.1 in ASTM C 1193 or Method A, Tail Procedure, in ASTM C 1521.

1.7 WARRANTY

A. Special Installer's Warranty: Installer agrees to repair or replace joint sealants that do not comply with performance and other requirements specified in this Section within specified warranty period.

1. Warranty Period: Two years from date of Substantial Completion.

B. Special Manufacturer's Warranty: Manufacturer agrees to furnish joint sealants to repair or replace those joint sealants that do not comply with performance and other requirements specified in this Section within specified warranty period.

1. Warranty Period: Five years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 JOINT SEALANTS, GENERAL

A. Colors of Exposed Joint Sealants: As selected by Architect from manufacturer's full range.

2.2 NONSTAINING SILICONE JOINT SEALANTS

A. Nonstaining Joint Sealants: No staining of substrates when tested according to ASTM C 1248.

B. Silicone, Nonstaining, S, NS, 100/50, NT: Nonstaining, single-component, nonsag, plus 100 percent and minus 50 percent movement capability, nontraffic-use, neutral-curing silicone joint sealant; ASTM C 920, Type S, Grade NS, Class 100/50, Use NT.

2.3 URETHANE JOINT SEALANTS

A. Urethane, S, NS, 25, NT: Single-component, nonsag, nontraffic-use, plus 25 percent and minus 25 percent movement capability, urethane joint sealant; ASTM C 920, Type S, Grade NS, Class 25, Use NT.

2.4 MILDEW-RESISTANT JOINT SEALANTS

Mildew-Resistant Joint Sealants: Formulated for prolonged exposure to humidity with fungicide to prevent mold and mildew growth.

A. Silicone, Mildew Resistant, Acid Curing, S, NS, 25, NT: Mildew-resistant, single-component, nonsag, plus 25 percent and minus 25 percent movement capability, nontraffic-use, acid-curing silicone joint sealant; ASTM C 920, Type S, Grade NS, Class 25, Use NT.

2.5 ACOUSTICAL JOINT SEALANTS

A. Acoustical Sealant for Exposed and Concealed Joints: Manufacturer's standard nonsag, paintable, nonstaining latex sealant complying with ASTM C 834 and the following:

1. Product effectively reduces airborne sound transmission through perimeter joints and openings in building construction as demonstrated by testing representative assemblies according to ASTM E 90.

2.6 JOINT-SEALANT BACKING

A. Cylindrical Sealant Backings: ASTM C 1330, Type C (closed-cell material with a surface skin), and of size and density to control sealant depth and otherwise contribute to producing optimum sealant performance.

B. Bond-Breaker Tape: Polyethylene tape or other plastic tape recommended by sealant manufacturer.

2.7 MISCELLANEOUS MATERIALS

A. Primer: Material recommended by joint-sealant manufacturer where required for adhesion of sealant to joint substrates indicated, as determined from preconstruction joint-sealant-substrate tests and field tests.

B. Cleaners for Nonporous Surfaces: Chemical cleaners acceptable to manufacturers of sealants and sealant backing materials.

C. Masking Tape: Nonstaining, nonabsorbent material compatible with joint sealants and surfaces adjacent to joints.

PART 3 - EXECUTION

3.1 PREPARATION

A. Surface Cleaning of Joints: Clean out joints immediately before installing joint sealants to comply with joint-sealant manufacturer's written instructions and the following requirements:

1. Remove laitance and form-release agents from concrete.
2. Clean nonporous joint substrate surfaces with chemical cleaners or other means that do not stain, harm substrates, or leave residues capable of interfering with adhesion.

B. Joint Priming: Prime joint substrates where recommended by joint-sealant manufacturer or as indicated by preconstruction joint-sealant-substrate tests or prior experience.

3.2 INSTALLATION OF JOINT SEALANTS

A. General: Comply with ASTM C 1193 and joint-sealant manufacturer's written installation instructions for products and applications indicated, unless more stringent requirements apply.

B. Install bond-breaker tape behind sealants where sealant backings are not used between sealants and backs of joints.

C. Install sealants using proven techniques that comply with the following and at the same time backings are installed:

1. Place sealants so they directly contact and fully wet joint substrates.
2. Completely fill recesses in each joint configuration.
3. Produce uniform, cross-sectional shapes and depths relative to joint widths that allow optimum sealant movement capability.

3.3 FIELD QUALITY CONTROL

A. Field-Adhesion Testing: Field test joint-sealant adhesion to joint substrates as follows:

1. Extent of Testing: Test completed and cured sealant joints as follows:

a. Perform 5 tests for the first 1000 feet of joint length for each kind of sealant and joint substrate.
b. Perform one test for each 1000 feet of joint length thereafter or one test per each floor per elevation.

2. Test Method: Test joint sealants according to Method A, Field-Applied Sealant Joint Hand Pull Tab, in Appendix X1 in ASTM C 1193 or Method A, Tail Procedure, in ASTM C 1521.

B. Evaluation of Field-Adhesion-Test Results: Sealants not evidencing adhesive failure from testing or noncompliance with other indicated requirements will be considered satisfactory. Remove sealants that fail to adhere to joint substrates during testing or to comply with other requirements. Retest failed applications until test results prove sealants comply with indicated requirements.

END OF SECTION 07 92 00

SECTION 08 11 13 - HOLLOW METAL DOORS AND FRAMES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section includes:

1. Exterior standard steel doors and frames.

1.3 ACTION SUBMITTALS

A. Product Data: For each type of product.

B. Shop Drawings: Include the following:

1. Elevations of each door type.
2. Details of doors, including vertical- and horizontal-edge details and metal thicknesses.
3. Frame details for each frame type, including dimensioned profiles and metal thicknesses.

C. Product Schedule: For hollow-metal doors and frames, prepared by or under the supervision of supplier, using same reference numbers for details and openings as those on Drawings. Coordinate with final door hardware schedule.

1.4 INFORMATIONAL SUBMITTALS

A. Product test reports.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

1. Amweld International, LLC.
2. Ceco Door; ASSA ABLOY.
3. Curries Company; ASSA ABLOY.
4. Deansteel Manufacturing Company, Inc.
5. Steelcraft; an Ingersoll-Rand company.

2.2 PERFORMANCE REQUIREMENTS

A. Thermally Rated Door Assemblies: Provide door assemblies with U-factor of not more than 0.50 deg Btu/F x h x sq. ft. when tested according to ASTM C 518.

2.3 INTERIOR STANDARD STEEL FRAMES

A. Construct hollow-metal frames to comply with standards indicated for materials, fabrication, hardware locations, hardware reinforcement, tolerances, and clearances, and as specified.

B. Heavy-Duty Frames: SDI A250.8, Level B.

1. Frames:

    a. Materials: Uncoated, steel sheet, minimum thickness of 0.053 inch.
    b. Construction: Knocked down.

2. Exposed Finish: Prime.

2.4 EXTERIOR STANDARD STEEL DOORS AND FRAMES

A. Construct hollow-metal doors and frames to comply with standards indicated for materials, fabrication, hardware locations, hardware reinforcement, tolerances, and clearances, and as specified.

B. Heavy-Duty Doors and Frames: SDI A250.8, Level 2; SDI A250.4, Level B.

1. Doors:

    a. Type: As indicated in the Door and Frame Schedule.
    b. Thickness: 1-3/4 inches.
    c. Face: Metallic-coated steel sheet, minimum thickness of 0.042 inch, with minimum A60 (ZF180) coating.
    d. Edge Construction: Model 2, Seamless.
    e. Edge Bevel: Provide manufacturer's standard beveled or square edges.
    f. Top Edge Closures: Close top edges of doors with flush closures of same material as face sheets. Seal joints against water penetration.
    g. Bottom Edges: Close bottom edges of doors with end closures or channels of same material as face sheets. Provide weep-hole openings in bottoms of exterior doors.
    h. Core: Manufacturer's standard insulated core.

2. Frames:

    a. Materials: Metallic-coated steel sheet, minimum thickness of 0.053 inch with minimum A60 (ZF180) coating.
    b. Construction: Full profile welded.

2.5 FRAME ANCHORS

A. Jamb Anchors: Anchors of minimum size, type and quantity required by applicable door and frame standard, and suitable for performance level indicated.

B. Material: ASTM A 879/A 879M, Commercial Steel (CS), 04Z (12G) coating designation; mill phosphatized.

1. For anchors built into exterior walls, steel sheet complying with ASTM A 1008/A 1008M or ASTM A 1011/A 1011M; hot-dip galvanized according to ASTM A 153/A 153M, Class B.

2.6 MATERIALS

A. Cold-Rolled Steel Sheet: ASTM A 1008/A 1008M, Commercial Steel (CS), Type B; suitable for exposed applications.

B. Hot-Rolled Steel Sheet: ASTM A 1011/A 1011M, Commercial Steel (CS), Type B; free of scale, pitting, or surface defects; pickled and oiled.

C. Metallic-Coated Steel Sheet: ASTM A 653/A 653M, Commercial Steel (CS), Type B.

D. Frame Anchors: ASTM A 879/A 879M, Commercial Steel (CS), 04Z coating designation; mill phosphatized.

E. Inserts, Bolts, and Fasteners: Hot-dip galvanized according to ASTM A 153/A 153M.

F. Mineral-Fiber Insulation: ASTM C 665, Type I (blankets without membrane facing); consisting of fibers manufactured from slag or rock wool; with maximum flame-spread and smoke-developed indexes of 25 and 50, respectively; passing ASTM E 136 for combustion characteristics.

2.7 FABRICATION

A. Door Astragals: Provide overlapping astragal on one leaf of pairs of doors where required for wind performance rating or where indicated. Extend minimum 3/4 inch beyond edge of door on which astragal is mounted or as required to comply with published listing of qualified testing agency.

B. Hollow-Metal Frames: Fabricate in one piece.

1. Provide countersunk, flat- or oval-head exposed screws and bolts for exposed fasteners unless otherwise indicated.
2. Door Silencers: Except on weather-stripped frames, drill stops to receive door silencers as follows. Keep holes clear during construction.

C. Hardware Preparation: Factory prepare hollow-metal work to receive templated mortised hardware; include cutouts, reinforcement, mortising, drilling, and tapping according to SDI A250.6, the Door Hardware Schedule, and templates.

1. Reinforce doors and frames to receive nontemplated, mortised, and surface-mounted door hardware.
2. Comply with applicable requirements in SDI A250.6 and BHMA A156.115 for preparation of hollow-metal work for hardware.

2.8 STEEL FINISHES

A. Prime Finish: Clean, pretreat, and apply manufacturer's standard primer.

1. Shop Primer: Manufacturer's standard, fast-curing, lead- and chromate-free primer complying with SDI A250.10; recommended by primer manufacturer for substrate; compatible with substrate and field-applied coatings despite prolonged exposure.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Hollow-Metal Frames: Install hollow-metal frames for doors and other openings, of size and profile indicated. Comply with SDI A250.11 as required by standards specified.

1. Set frames accurately in position; plumbed, aligned, and braced securely until permanent anchors are set. After wall construction is complete, remove temporary braces without damage to completed Work.

    a. Install frames with removable stops located on secure side of opening.

2. Solidly pack mineral-fiber insulation inside frames.
3. Installation Tolerances: Adjust hollow-metal frames to the following tolerances:

    a. Squareness: Plus or minus 1/16 inch, measured at door rabbet on a line 90 degrees from jamb perpendicular to frame head.
    b. Alignment: Plus or minus 1/16 inch, measured at jambs on a horizontal line parallel to plane of wall.
    c. Twist: Plus or minus 1/16 inch, measured at opposite face corners of jambs on parallel lines, and perpendicular to plane of wall.
    d. Plumbness: Plus or minus 1/16 inch, measured at jambs at floor.

B. Hollow-Metal Doors: Fit and adjust hollow-metal doors accurately in frames, within clearances specified below.

1. Non-Fire-Rated Steel Doors: Comply with SDI A250.8.

C.

3.2 CLEANING AND TOUCHUP

A. Prime-Coat Touchup: Immediately after erection, sand smooth rusted or damaged areas of prime coat and apply touchup of compatible air-drying, rust-inhibitive primer.

1. Cleaning and touchup of abraded areas of paint are specified in painting Sections.

B. Metallic-Coated Surface Touchup: Clean abraded areas and repair with galvanizing repair paint according to manufacturer's written instructions.

END OF SECTION 08 11 13

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SECTION 08 14 16 - FLUSH WOOD DOORS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

1. Interior solid-core doors with wood veneer faces.
2. Factory finished flush wood doors.
3. Factory machined flush wood doors to fit frames and hardware.

B. Related Sections:

1. Division 08 Section "Glass and Glazing" for glass panels in interior hollow metal frames and in flush wood doors.

1.3 SUBMITTALS

A. Product Data: For each type of door indicated. Not limited to Cut Sheets.

B. Shop Drawings: Indicate location, size, and hand of each door; elevation of each kind of door; construction details not covered in Product Data; location and extent of hardware blocking; and other pertinent data.

1. Indicate dimensions and locations of mortises and holes for hardware.
2. Indicate dimensions and locations of cutouts.
3. Indicate requirements for veneer matching.
4. Indicate doors to be factory finished and finish requirements.

C. Samples: For factory finished doors.

D. Manufacturer’s Warranty

1.4 QUALITY ASSURANCE

A. Provide doors manufactured with low-emitting adhesives, and no added urea formaldehyde (UF).

B. Quality Standard: In addition to requirements specified, comply with the following:

1. AWI Architectural Woodwork Standards, Section 9-Doors.
2. WDMA Finish System TR-6, Catalyzed Polyurethane.
3. WDMA I.S. 1A-Architectural Wood Flush Doors.
4. WDMA I.S. 10- Industry Standard for Testing Cellulosic Composite Materials for Use in Fenestration Products.

C. Warranty:

1. Warrant solid core, interior doors for life of installation against warpage, delamination and defects in materials and workmanship.
2. Defect noted during warranty period shall be corrected at no cost to Owner. Corrective work shall include labor and material for repair, replacement, refinishing and rehanging as required.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

1. VT Industries.
2. Marshfield Door Systems.
3. Eggers Industries.

2.2 DOOR CONSTRUCTION, GENERAL

A. WDMA I.S.1-A Performance Grade:

1. Extra Heavy Duty Only.

B. Fire-Rated Wood Doors: Doors complying with NFPA 80 that are listed and labeled by a qualified testing agency, for fire-protection ratings indicated, based on testing at positive pressure according to NFPA 252.

1. Cores: Provide core specified or mineral core as needed to provide fire-protection rating indicated.

C. Particleboard-Core Doors:

1. Particleboard: ANSI A208.1, Grade LD-1.
2. Particleboard: Straw-based particleboard complying with ANSI A208.1, Grade LD-2 or M-2, except for density.
3. Blocking: Provide wood blocking in particleboard-core doors as needed to eliminate through-bolting hardware.
4. Provide doors with structural-composite-lumber cores instead of particleboard cores for doors indicated to receive exit devices.

D. Mineral-Core Doors:

1. Core: Noncombustible mineral product complying with requirements of referenced quality standard and testing and inspecting agency for fire-protection rating indicated.
2. Blocking: Provide composite blocking with improved screw-holding capability approved for use in doors of fire-protection ratings indicated as needed to eliminate through-bolting hardware.
3. Edge Construction: At hinge stiles, provide laminated-edge construction with improved screw-holding capability and split resistance. Comply with specified requirements for exposed edges. Veneer edgeband applied to outer edge to match face veneer. Minimum of 1/16 inch thickness.

E. 5-ply Construction Only. Stiles and rails are bonded to core, then entire unit abrasive planed before veneering.

1. 7-ply Not Acceptable.

2.3 VENEERED-FACED DOORS FOR FACTORY STAINED, TRANSPARENT FINISH

F. Interior Solid-Core Doors:

1. Grade: A.
2. Species: Birch.
3. Cut: Quarter Sliced.
4. Match between Veneer Leaves: Book match.
5. Assembly of Veneer Leaves on Door Faces: Balance match.
6. Pair and Set Match: Provide for doors hung in same opening or separated only by mullions.
7. Core: Particleboard-Core or Mineral-Core, dependent on door rating.
8. Finish: Factory stained and finished. Color to be selected by Architect from manufacturer's full range of colors to match existing doors to remain.

2.4 LOUVERS AND LIGHT FRAMES

A. Metal Frames for Light Openings in Non-Rated Doors: Manufacturer's standard frame formed of 0.048-inch thick, cold-rolled steel sheet; factory primed for field finish.

2.5 FABRICATION

A. Factory fit doors to suit frame-opening sizes indicated. Comply with clearance requirements of referenced quality standard for fitting unless otherwise indicated.

1. Comply with NFPA 80 requirements for fire-rated doors.

B. Factory machine doors for hardware that is not surface applied.

C. Openings: Cut and trim openings through doors in factory.

1. Light Openings: Trim openings with moldings of material and profile indicated.
2. Glazing: Factory install glazing in doors indicated to be factory finished. Comply with applicable requirements in Division 08 Section "Glazing."

2.6 FACTORY FINISHING

A. General: Comply with referenced quality standard for factory finishing. Complete fabrication, including fitting doors for openings and machining for hardware that is not surface applied, before finishing.

1. Finish faces, edges, edges of cutouts, and mortises.
2. Factory seal top and top bottom rails.

B. Finish doors at factory that are indicated to receive stained, transparent finish.

C. Transparent Finish:

1. Grade: Premium
2. Finish: Manufacturer’s Low-VOC catalyzed polyurethane system.
3. Staining: As selected by Architect from manufacturer’s full range.
4. Effect: Filled
5. Sheen: Satin.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine doors and installed door frames, with Installer present, before hanging doors.

1. Verify that installed frames comply with indicated requirements for type, size, location, and swing characteristics and have been installed with level heads and plumb jambs.
2. Reject doors with defects.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

A. Hardware: For installation, see Division 08 Section "Door Hardware."

B. Installation Instructions: Install doors to comply with manufacturer's written instructions and the referenced quality standard, and as indicated.

1. Install fire-rated doors according to NFPA 80.

C. Factory-Fitted Doors: Align in frames for uniform clearance at each edge.

D. Factory-Finished Doors: Restore finish before installation if fitting or machining is required at Project site.

3.3 ADJUSTING

A. Operation: Rehang or replace doors that do not swing or operate freely.

B. Finished Doors: Replace doors that are damaged or that do not comply with requirements. Doors may be repaired or refinished if Work complies with requirements and shows no evidence of repair or refinishing.

END OF SECTION 08 14 16

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SECTION 08 31 13 - ACCESS DOORS AND FRAMES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section includes:

1. Access doors and frames for walls and ceilings.

1.3 ACTION SUBMITTALS

A. Product Data: For each type of product.

B. Product Schedule: For access doors and frames.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

A. Fire-Rated Access Doors and Frames: Assemblies complying with NFPA 80 that are listed and labeled by a qualified testing agency, for fire-protection ratings indicated, according to NFPA 252 or UL 10B.

2.2 ACCESS DOORS AND FRAMES

A. Flush Access Doors with Concealed Flanges:

1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

a. Acudor Products, Inc.
b. Babcock-Davis.
c. Metropolitan Door Industries Corp.
d. MIFAB, Inc.
e. Nystrom, Inc.

2. Description: Face of door flush with frame; with concealed flange for gypsum board installation and concealed hinge.
3. Locations: Wall and ceiling.
4. Metallic-Coated Steel Sheet for Door: Nominal 0.064 inch, 16 gage. Factory primed.
5. Frame Material: Same material, thickness and finish as door.
6. Latch and Lock: Cam latch, key operated.

2.3 FIRE-RATED ACCESS DOORS AND FRAMES

A. Fire-Rated, Flush Access Doors with Concealed Flanges.

1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

    a. Acudor Products, Inc.
    b. Babcock-Davis.
    c. Metropolitan Door Industries Corp.
    d. MIFAB, Inc.
    e. Nystrom, Inc.

2. Description: Door face flush with frame, uninsulated with concealed flange for gypsum board installation, self-closing door, and concealed hinge.
3. Locations: Wall and ceiling.
4. Fire-Resistance Rating: Not less than that of adjacent construction.
5. Metallic-Coated Steel Sheet for Door: Nominal 0.040 inch, 20 gage, factory primed.
6. Frame Material: Same material, thickness, and finish as door finish.
7. Latch and Lock: Self-closing, self-latching door hardware, operated by key.

2.4 DRAFT STOP ACCESS DOORS

A. Non-Rated, Draft Stop Access Doors.

1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

    a. Acudor Products, Inc.
    b. Babcock-Davis.
    c. MIFAB, Inc.
    d. Nystrom, Inc.

2. Description: Door face flush with frame, uninsulated with exposed flange, self-closing door, and concealed hinge on long-side.
3. Size: 30 inches by 48 inches.
4. Locations: Wall.

5. Metallic-Coated Steel Sheet for Door: Nominal 0.080 inch, 14 gage; factory primed or powder coated.
6. Frame Material: Same material, thickness, and finish as door finish.
7. Latch: Manufacturer's standard self-closing, self-latching door hardware.

2.5 FIRE-RATED UPWARD OPENING ACCESS DOORS

A. Fire-Rated, Upward opening Access Doors.

1. Basis-of-Design Product: Subject to compliance with requirements, provide Nystrom product indicated on the drawings or comparable product by one of the following:

    a. Acudor Products, Inc.
    b. Babcock-Davis.
    c. MIFAB, Inc.

2. Description: Insulated, fire-rated upward opening access door; hinged on long-side.
3. Size: 30 inches by 48 inches.
4. Fire-Resistance Rating: Not less than that of adjacent construction.
5. Insulation: Fire-rated mineral fiber, minimum R-8.
6. Metallic-Coated Steel Sheet for Door: Manufacturer's standard, factory primed.
7. Frame Material: Same material, thickness, and finish as door finish.
8. Latch and Lock: Manufacturer's standard self-latching door hardware.

2.6 MATERIALS

A. Steel Plates, Shapes, and Bars: ASTM A 36/A 36M.

B. Metallic-Coated Steel Sheet: ASTM A 653/A 653M, Commercial Steel (CS), Type B; with minimum G60 or A60 metallic coating.

C. Frame Anchors: Same material as door face.

D. Inserts, Bolts, and Anchor Fasteners: Hot-dip galvanized steel according to ASTM A 153/A 153M or ASTM F 2329.

2.7 FABRICATION

A. Metal Surfaces: For metal surfaces exposed to view in the completed Work, provide materials with smooth, flat surfaces without blemishes. Do not use materials with exposed pitting, seam marks, roller marks, rolled trade names, or roughness.

B. Doors and Frames: Grind exposed welds smooth and flush with adjacent surfaces. Furnish mounting holes, attachment devices and fasteners of type required to secure access doors to types of supports indicated.

C. Latch and Lock Hardware:

1. Quantity: Furnish number of latches and locks required to hold doors tightly closed.
2. Keys: Furnish two keys per lock and key all locks alike.

2.8 FINISHES

A. Painted Finishes: Comply with manufacturer's written instructions for cleaning, conversion coating, and applying finish.

1. Factory Primed: Apply manufacturer's standard, lead- and chromate-free, universal primer immediately after surface preparation and pretreatment.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Comply with manufacturer's written instructions for installing access doors and frames.

B. Adjust doors and hardware, after installation, for proper operation.

END OF SECTION 08 31 13

SECTION 08 41 13 - ALUMINUM-FRAMED ENTRANCES AND STOREFRONTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

1. Storefront framing.
2. Exterior manual-swing entrance doors.
3. Entrance door hardware.

1.3 PREINSTALLATION MEETINGS

A. Preinstallation Conference: Conduct conference at Project site.

1.4 ACTION SUBMITTALS

A. Product Data: For each type of product.

B. Shop Drawings: Include plans, elevations, sections, full-size details, and attachments to other work.

1. Show connection to and continuity with adjacent thermal, weather, air, and vapor barriers.
2. Provide detailed wiring diagrams, specially developed for each opening, indicating all electric hardware, security equipment and access control equipment, and door and frame rough-ins required for specific opening.

C. Samples: For each exposed finish required.

D. Entrance Door Hardware Schedule: Prepared by or under supervision of supplier, detailing fabrication and assembly of entrance door hardware, as well as procedures and diagrams.

E. Delegated-Design Submittal: For aluminum-framed entrances and storefronts indicated to comply with performance requirements and design criteria, including analysis data signed and sealed by the qualified professional engineer responsible for their preparation.

F. Water Penetration under Static Pressure: Test according to ASTM E 331 as follows:

1. No evidence of water penetration through fixed glazing and framing areas when tested according to a minimum static air pressure differential of 20 percent of positive wind load design pressure, but not less than 6.24 lbf/sq. ft.

1.5 INFORMATIONAL SUBMITTALS

A. Energy Performance Certificates: NFRC-certified energy performance values from manufacturer.

B. Product test reports.

C. Field quality control test and inspection reports.

D. Sample warranties.

1.6 CLOSEOUT SUBMITTALS

A. Maintenance data.

1.7 QUALITY ASSURANCE

A. Installer Qualifications: An entity that employs installers and supervisors who are trained and approved by manufacturer.

B. Product Options: Information on Drawings and in Specifications establishes requirements for aesthetic effects and performance characteristics of assemblies. Aesthetic effects are indicated by dimensions, arrangements, alignment, and profiles of components and assemblies as they relate to sightlines, to one another, and to adjoining construction.

1. Do not change intended aesthetic effects, as judged solely by Architect, except with Architect's approval. If changes are proposed, submit comprehensive explanatory data to Architect for review.

1.8 WARRANTY

A. Special Warranty: Installer agrees to repair or replace components of aluminum-framed entrances and storefronts that do not comply with requirements or that fail in materials or workmanship within specified warranty period.

1. Warranty Period: Five years from date of Substantial Completion.

B. Special Finish Warranty: Standard form in which manufacturer agrees to repair finishes or replace aluminum that shows evidence of deterioration of factory-applied finishes within specified warranty period.

1. Warranty Period: Ten years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

A. Delegated Design: Engage a qualified professional engineer, as defined in Section 01 40 00 "Quality Requirements," to design aluminum-framed entrances and storefronts.

B. General Performance: Comply with performance requirements specified, as determined by testing of aluminum-framed entrances and storefronts representing those indicated for this Project without failure due to defective manufacture, fabrication, installation, or other defects in construction.

1. Aluminum-framed entrances and storefronts shall withstand movements of supporting structure including, but not limited to, story drift, twist, column shortening, long-term creep, and deflection from uniformly distributed and concentrated live loads.
2. Failure also includes the following:

a) Thermal stresses transferring to building structure.
b) Glass breakage.
c) Noise or vibration created by wind and thermal and structural movements.
d) Loosening or weakening of fasteners, attachments, and other components.
e) Failure of operating units.

C. Structural Loads:

1. Wind Loads: As indicated on Drawings.

D. Deflection of Framing Members: At design wind pressure, as follows:

1. Deflection Normal to Wall Plane: Limited to 1/175 of clear span for spans up to 13 feet 6 inches and to 1/240 of clear span plus 1/4 inch for spans greater than 13 feet 6 inches or an amount that restricts edge deflection of individual glazing lites to 3/4 inch, whichever is less.
2. Deflection Parallel to Glazing Plane: Limited to 1/360 of clear span or 1/8 inch, whichever is smaller.

a) Operable Units: Provide a minimum 1/16-inch clearance between framing members and operable units.

3. Cantilever Deflection: Where framing members overhang an anchor point, as follows:

a) Perpendicular to Plane of Wall: No greater than 1/240 of clear span plus 1/4 inch for spans greater than 11 feet 8-1/4 inches or 1/175 times span, for spans less than 11 feet 8-1/4 inches.

E. Structural: Test according to ASTM E 330 as follows:

1. When tested at positive and negative wind-load design pressures, assemblies do not evidence deflection exceeding specified limits.

2. When tested at 150 percent of positive and negative wind-load design pressures, assemblies, including anchorage, do not evidence material failures, structural distress, or permanent deformation of main framing members exceeding 0.2 percent of span.
3. Test Durations: As required by design wind velocity, but not less than 10 seconds.

F. Air Infiltration: Test according to ASTM E 283 for infiltration as follows:

1. Fixed Framing and Glass Area:

a) Maximum air leakage of 0.06 cfm/sq. ft. at a static-air-pressure differential of 1.57 lbf/sq. ft.

2. Entrance Doors:

a) Pair of Doors: Maximum air leakage of 1.0 cfm/sq. ft. at a static-air-pressure differential of 1.57 lbf/sq. ft.
b) Single Doors: Maximum air leakage of 0.5 cfm/sq. ft. at a static-air-pressure differential of 1.57 lbf/sq. ft.

G. Water Penetration under Static Pressure: Test according to ASTM E 331 as follows:

1. No evidence of water penetration through fixed glazing and framing areas when tested according to a minimum static-air-pressure differential of 20 percent of positive wind-load design pressure, but not less than 6.24 lbf/sq. ft..

H. Energy Performance: Certify and label energy performance according to NFRC as follows:

1. Thermal Transmittance (U-factor): Fixed glazing and framing areas shall have U-factor of not more than 0.57 Btu/sq. ft. x h x deg F as determined according to NFRC 100.

2. Solar Heat Gain Coefficient: Fixed glazing and framing areas shall have a solar heat gain coefficient of no greater than 0.20 as determined according to NFRC 200.

3. Condensation Resistance: Fixed glazing and framing areas shall have an NFRC-certified condensation resistance rating of no less than 35 as determined according to NFRC 500.

I. Windborne-Debris Impact Resistance: Pass missile-impact and cyclic-pressure tests when tested according to ASTM E 1886 and testing information in ASTM E 1996 for Wind Zone 3.

1. Large-Missile Test: For glazed openings located within 30 feet of grade.

J. Thermal Movements: Allow for thermal movements resulting from ambient and surface temperature changes:

1. Temperature Change: 120 deg F, ambient; 180 deg F, material surfaces.

2.2 MANUFACTURERS

A. Available Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

1. EFCO Corporation.
2. Kawneer North America.
3. YKK AP America Inc.
4. Vista Wall.
5. Coral.

2.3 FRAMING

A. Framing Members: Manufacturer's extruded- or formed-aluminum framing members of thickness required and reinforced as required to support imposed loads.

1. Construction: Thermally broken.
2. Glazing System: Retained mechanically with gaskets on four sides.
3. Glazing Plane: Center or Front.
4. Finish: Color anodic finish or High Performance organic finish.
5. Fabrication Method: Field-fabricated stick system.

B. Backer Plates: Manufacturer's standard, continuous backer plates for framing members, if not integral, where framing abuts adjacent construction.

C. Brackets and Reinforcements: Manufacturer's standard high-strength aluminum with nonstaining, nonferrous shims for aligning system components.

D. Materials:

1. Aluminum: Alloy and temper recommended by manufacturer for type of use and finish indicated.

a) Sheet and Plate: ASTM B 209.
b) Extruded Bars, Rods, Profiles, and Tubes: ASTM B 221.
c) Extruded Structural Pipe and Tubes: ASTM B 429/B 429M.
d) Structural Profiles: ASTM B 308/B 308M.

2. Steel Reinforcement: Manufacturer's standard zinc-rich, corrosion-resistant primer complying with SSPC-PS Guide No. 12.00; applied immediately after surface preparation and pretreatment. Select surface preparation methods according to recommendations in SSPC-SP COM and prepare surfaces according to applicable SSPC standard.

a) Structural Shapes, Plates, and Bars: ASTM A 36/A 36M.
b) Cold-Rolled Sheet and Strip: ASTM A 1008/A 1008M.
c) Hot-Rolled Sheet and Strip: ASTM A 1011/A 1011M.

2.4 ENTRANCE DOOR SYSTEMS

A. Entrance Doors: Manufacturer's standard glazed entrance doors for manual-swing operation.

1. Door Construction: 1-3/4-inch overall thickness, with minimum 0.125-inch- thick, extruded-aluminum tubular rail and stile members. Mechanically fasten corners with reinforcing brackets that are deeply penetrated and fillet welded or that incorporate concealed tie rods.

    a) Thermal Construction: High-performance plastic connectors separate aluminum members exposed to the exterior from members exposed to the interior.

2. Door Design: Medium stile; 3-1/2-inch nominal width.
3. Glazing Stops and Gaskets: Square, snap-on, extruded-aluminum stops and preformed gaskets.

    a) Provide nonremovable glazing stops on outside of door.

2.5 ENTRANCE DOOR HARDWARE

A. General: Provide entrance door hardware and entrance door hardware sets indicated in door and frame schedule for each entrance door to comply with requirements in this Section.

1. Entrance Door Hardware Sets: Provide quantity, item, size, finish or color indicated, and products equivalent in function and comparable in quality to named products.
2. Sequence of Operation: Provide electrified door hardware function, sequence of operation, and interface with other building control systems indicated.
3. Opening-Force Requirements:

    a) Egress Doors: Not more than 15 lbf to release the latch and not more than 30 lbf to set the door in motion.

B. Designations: Requirements for design, grade, function, finish, size, and other distinctive qualities of each type of entrance door hardware are indicated in "Entrance Door Hardware Sets" Article. Products are identified by using entrance door hardware designations as follows:

1. Named Manufacturers' Products: Manufacturer and product designation are listed for each door hardware type required for the purpose of establishing minimum requirements. Manufacturers' names are abbreviated in "Entrance Door Hardware Sets" Article.
2. References to BHMA Standards: Provide products complying with these standards and requirements for description, quality, and function.

C. Butt Hinges: BHMA A156.1, Grade 1, radius corner.

1. Nonremovable Pins: Provide set screw in hinge barrel that, when tightened into a groove in hinge pin, prevents removal of pin while entrance door is closed.
2. Exterior Hinges: Stainless steel, with stainless-steel pin. Tamper-proof style.

3. Quantities:

    a) For doors up to 87 inches high, provide three hinges per leaf.

D. Continuous-Gear Hinges: Manufacturer's standard with stainless-steel bearings between knuckles, fabricated to full height of door and frame.

E. Mortise Auxiliary Locks: BHMA A156.5, Grade 1.

F. Manual Flush Bolts: BHMA A156.16, Grade 1.

G. Automatic and Self-Latching Flush Bolts: BHMA A156.3, Grade 1.

H. Panic Exit Devices: BHMA A156.3, Grade 1, listed and labeled by a testing and inspecting agency acceptable to authorities having jurisdiction, for panic protection, based on testing according to UL 305.

I. Cylinders: As specified in Section 08 71 00 "Door Hardware."

1. Keying: Master key system. Permanently inscribe each key with a visual key control number and include notation to be furnished by Owner.

J. Strikes: Provide strike with black-plastic dust box for each latch or lock bolt; fabricated for aluminum framing.

K. Operating Trim: BHMA A156.6.

L. Removable Mullions: BHMA A156.3, extruded aluminum.

1. When used with panic exit devices, provide removable mullions listed and labeled by a testing and inspecting agency acceptable to authorities having jurisdiction, for panic protection, based on testing according to UL 305. Use only mullions that have been tested with exit devices to be used.

M. Closers: BHMA A156.4, Grade 1, with accessories required for a complete installation, sized as required by door size, exposure to weather, and anticipated frequency of use; adjustable to comply with field conditions and requirements for opening force.

N. Concealed Overhead Holders: BHMA A156.8, Grade 1.

O. Surface-Mounted Holders: BHMA A156.16, Grade 1.

P. Door Stops: BHMA A156.16, Grade 1, floor or wall mounted, as appropriate for door location indicated, with integral rubber bumper.

Q. Weather Stripping: Manufacturer's standard replaceable components.

R. Weather Sweeps: Manufacturer's standard exterior-door bottom sweep with concealed fasteners on mounting strip.

S. Silencers: BHMA A156.16, Grade 1.

T. Thresholds: BHMA A156.21, raised thresholds with vinyl, neoprene or silicone rubber insert in face of stop. Maximum height of stop shall be 1/2 inch.

U. Access Control Hardware: Exterior entrance doors indicated on the drawings shall be fitted with access control hardware, consisting of electrified panic hardware, electrified latches, power supply and transfer devices, as indicated in the door hardware sets described in this Section.

1. Doors and frames shall be designed and furnished to facilitate wiring of electrified access control devices on doors, including remote power supply and transfer devices.
2. Card reader devices shall be Owner Furnished, Owner Installed (OFOI). Coordinate the selection and installation of Contractor-provided access control hardware with OFOI-provided manufacturer-specific devices.

2.6 GLAZING

A. Glazing: Comply with Section 08 80 00 "Glazing."

B. Glazing Gaskets: Manufacturer's standard sealed-corner pressure-glazing system of black, resilient elastomeric glazing gaskets, setting blocks, and shims or spacers.

C. Glazing Sealants: As recommended by manufacturer.

2.7 FABRICATION

A. Form or extrude aluminum shapes before finishing.

B. Fabricate components that, when assembled, have the following characteristics:

1. Profiles that are sharp, straight, and free of defects or deformations.
2. Accurately fitted joints with ends coped or mitered.
3. Physical and thermal isolation of glazing from framing members.
4. Accommodations for thermal and mechanical movements of glazing and framing to maintain required glazing edge clearances.
5. Provisions for field replacement of glazing from exterior.
6. Fasteners, anchors, and connection devices that are concealed from view to greatest extent possible.

C. Mechanically Glazed Framing Members: Fabricate for flush glazing without projecting stops.

D. Entrance Door Frames: Reinforce as required to support loads imposed by door operation and for installing entrance door hardware.

E. Entrance Doors: Reinforce doors as required for installing entrance door hardware.

F. Entrance Door Hardware Installation: Factory install entrance door hardware to the greatest extent possible. Cut, drill, and tap for factory-installed entrance door hardware before applying finishes.

G. After fabrication, clearly mark components to identify their locations in Project according to Shop Drawings.

2.8 ALUMINUM FINISHES

A. Color Anodic Finish: AAMA 611, AA-M12C22A42/A44, Class I, 0.018 mm or thicker.

1. Color: Clear Anodized.

PART 3 - EXECUTION

3.1 INSTALLATION

A. General:

1. Comply with manufacturer's written instructions.
2. Do not install damaged components.
3. Fit joints to produce hairline joints free of burrs and distortion.
4. Rigidly secure nonmovement joints.
5. Install anchors with separators and isolators to prevent metal corrosion and electrolytic deterioration and to prevent impeding movement of moving joints.
6. Seal perimeter and other joints watertight unless otherwise indicated.

B. Metal Protection:

1. Where aluminum is in contact with dissimilar metals, protect against galvanic action by painting contact surfaces with materials recommended by manufacturer for this purpose or by installing nonconductive spacers.
2. Where aluminum is in contact with concrete or masonry, protect against corrosion by painting contact surfaces with bituminous paint.

C. Set continuous sill members and flashing in full sealant bed as specified in Section 07 92 00 "Joint Sealants" to produce weathertight installation.

D. Install components plumb and true in alignment with established lines and grades.

E. Install operable units level and plumb, securely anchored, and without distortion. Adjust weather-stripping contact and hardware movement to produce proper operation.

F. Install glazing as specified in Section 08 80 00 "Glazing."

G. Entrance Doors: Install doors to produce smooth operation and tight fit at contact points.

1. Exterior Doors: Install to produce weathertight enclosure and tight fit at weather stripping.
2. Field-Installed Entrance Door Hardware: Install surface-mounted entrance door hardware according to entrance door hardware manufacturers' written instructions using concealed fasteners to greatest extent possible.

3.2 FIELD QUALITY CONTROL

A. Testing Agency: Contractor shall engage a qualified testing agency to perform tests and inspections.

B. Field Quality-Control Testing: Perform the following test on representative areas of aluminum-framed entrances and storefronts.

1. Water-Spray Test: Before installation of interior finishes has begun, areas designated by Architect shall be tested according to AAMA 501.2 and shall not evidence water penetration.

C. Aluminum-framed entrances and storefronts will be considered defective if they do not pass tests and inspections.

D. Prepare test and inspection reports.

3.3 ADJUSTING

A. Adjust moving components to operate smoothly, easily, and quietly, free of binding, warp, excessive deflection, distortion, nonalignment, misplacement, disruption, or malfunction, throughout entire operational range. Confirm that latches and locks engage accurately and securely without forcing or binding. Lubricate hardware and other moving parts.

3.4 CLEANING AND PROTECTION

A. Provide temporary protection on entrance doors and frames, and on any permanent door hardware installed for use during construction.

1. Provide temporary protective coverings and strippable films on door base panels, and on door pulls and latches, to avoid damage to factory finishes during the construction period.

B. Remove temporary protective coverings and strippable films prior to Substantial Completion. Clean installed products in accordance with manufacturer’s instructions before Owner’s acceptance. Do not use abrasive cleaners.

1. Inspect components for surface (finish) damage. Any components that have sustained damage during construction shall be replaced at no cost to the owner.

3.5 HARDWARE SCHEDULE

A. Entrance door hardware schedule shall be prepared using manufacturer's standard hardware, suited for exterior applications.

B. Impact Resistant exterior entrance door hardware shall include, but not be limited to, the following components:

1. Deadbolt package
2. Hinges
3. Concealed vertical rod panic hardware
4. Offset pull sets
5. Concealed vertical rod latchsets
6. Mortise/rim cylinders
7. Permanent cores (to match building standard)
8. ADA-Compliant surface mounted closers (with coordinators for door pairs)
9. Drip caps
10. Weatherstripping package
11. ADA-Compliant lip-type thresholds with weatherstripping

END OF SECTION 08 41 13

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SECTION 08 71 00 - DOOR HARDWARE

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

1. Mechanical and electrified door hardware for the following:

a) Swinging doors.

2. Cylinders for door hardware specified in other Sections.

1.2 PREINSTALLATION MEETINGS

A. Preinstallation Conference: Conduct conference at Project site.

B. Keying Conference: Conduct conference at Project site.

1.3 ACTION SUBMITTALS

A. Product Data: For each type of product.

B. Shop Drawings: For electrified door hardware.

1. Include diagrams for power, signal, and control wiring.
2. Include details of interface of electrified door hardware and building security systems.
3. Provide detailed wiring diagrams, specially developed for each opening, indicating all electric hardware, security equipment and access control equipment, and door and frame rough-ins required for specific opening.

C. Samples: For each exposed product in each finish specified.

D. Door hardware schedule.

E. Keying schedule.

1.4 CLOSEOUT SUBMITTALS

A. Maintenance data.

1.5 QUALITY ASSURANCE

A. Installer Qualifications: Supplier of products and an employer of workers trained and approved by product manufacturers and of an Architectural Hardware Consultant who is available during the course of the Work to consult Contractor, Architect, and Owner about door hardware and keying.

1. Scheduling Responsibility: Preparation of door hardware and keying schedule.

B. Architectural Hardware Consultant Qualifications: A person who is experienced in providing consulting services for door hardware installations that are comparable in material, design, and extent to that indicated for this Project and who is currently certified by DHI as an Architectural Hardware Consultant (AHC).

1.6 WARRANTY

A. Special Warranty: Manufacturer agrees to repair or replace components of door hardware that fail in materials or workmanship within specified warranty period.

1. Warranty Period: Three years from date of Substantial Completion unless otherwise indicated below:

a) Exit Devices: Two years from date of Substantial Completion.
b) Manual Closers: 10 years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

A. Fire-Rated Door Assemblies: Where fire-rated doors are indicated, provide door hardware complying with NFPA 80 that is listed and labeled by a qualified testing agency, for fire-protection ratings indicated, based on testing at positive pressure according to NFPA 252 or UL 10C.

B. Means of Egress Doors: Latches do not require more than 15 lbf to release the latch. Locks do not require use of a key, tool, or special knowledge for operation.

C. Accessibility Requirements: For door hardware on doors in an accessible route, comply with the DOJ's "2010 ADA Standards for Accessible Design".

2.2 SCHEDULED DOOR HARDWARE

A. Provide products for each door that comply with requirements indicated in Part 2 and door hardware scheduled in Part 3.

2.3 HINGES

A. Hinges: BHMA A156.1. Provide template-produced hinges for hinges installed on hollow-metal doors and hollow-metal frames.

1. Basis-of-Design Product: Subject to compliance with requirements, provide product indicated in door hardware schedule Insert manufacturer's name; product name or designation or comparable product by one of the following:

a) Hager Companies.
b) Stanley Commercial Hardware; a division of Stanley Security Solutions.
c) Ives; a division of Allegion, PLC.

2.4 SELF-CLOSING HINGES AND PIVOTS

A. Basis-of-Design Product: Subject to compliance with requirements, provide product indicated in door hardware schedule or comparable product by one of the following:

1. Hager Companies.
2. Stanley Commercial Hardware; a division of Stanley Security Solutions.

2.5 CONTINUOUS HINGES

A. Continuous Hinges: BHMA A156.26; minimum 0.120-inch- thick, hinge leaves with minimum overall width of 4 inches ; fabricated to full height of door and frame and to template screw locations; with components finished after milling and drilling are complete.

2.6 MECHANICAL LOCKS AND LATCHES

A. Lock Functions: As indicated in door hardware schedule.

B. Lock Throw: Comply with testing requirements for length of bolts required for labeled fire doors, and as follows:

1. Bored Locks: Minimum 1/2-inch latchbolt throw.

C. Lock Backset: 2-3/4 inches unless otherwise indicated.

D. Bored Locks: BHMA A156.2; Grade 2; Series 4000.

1. Basis-of-Design Product: Subject to compliance with requirements, provide product indicated in door hardware schedule or comparable product by one of the following:

a) Hager Companies.
b) Stanley Commercial Hardware; a division of Stanley Security Solutions.
c) Schlage; a division of Allegion PLC.
d) Falcon; division of Allegion PLC.

2.7 LOCK CYLINDERS

A. Lock Cylinders: Tumbler type, constructed from brass or bronze, stainless steel, or nickel silver. Provide cylinder from same manufacturer of locking devices.

B. Standard Lock Cylinders: BHMA A156.5; Grade 2 permanent cores; face finished to match lockset.

1. Core Type: Interchangeable.

2.8 SURFACE BOLTS

A. Surface Bolts: BHMA A156.16.

1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

a) Allegion plc.
b) Door Controls International, Inc.
c) Trimco.

2.9 KEYING

A. Keying System: Factory registered, complying with guidelines in BHMA A156.28, appendix. Provide one extra key blank for each lock. Incorporate decisions made in keying conference.

1. No Master Key System: Only change keys operate cylinders.
2. Existing System:

a) Master key or grand master key locks to Owner's existing system.

B. Keys: Nickel silver.

1. Stamping: Permanently inscribe each key with a visual key control number and include the following notation:

a) Notation: "DO NOT DUPLICATE."

2.10 ACCESSORIES FOR PAIRS OF DOORS

A. Coordinators: BHMA A156.3; consisting of active-leaf, hold-open lever and inactive-leaf release trigger; fabricated from steel with nylon-coated strike plates; with built-in, adjustable safety release; and with internal override.

B. Astragals: BHMA A156.22.

2.11 SURFACE CLOSERS

A. Surface Closers: BHMA A156.4; rack-and-pinion hydraulic type with adjustable sweep and latch speeds controlled by key-operated valves and forged-steel main arm. Comply with manufacturer's written instructions for size of door closers depending on size of door, exposure to weather, and anticipated frequency of use. Provide factory-sized closers, adjustable to meet field conditions and requirements for opening force.

2.12 MECHANICAL STOPS AND HOLDERS

A. Wall- and Floor-Mounted Stops: BHMA A156.16.

B. Contractor to provide blocking in walls for wall stops

2.13 DOOR GASKETING

A. Door Gasketing: BHMA A156.22; with resilient or flexible seal strips that are easily replaceable and readily available from stocks maintained by manufacturer.

2.14 THRESHOLDS

A. Thresholds: BHMA A156.21; raised thresholds with vinyl, neoprene or silicone rubber insert in face of stop. Maximum height of stop shall be 1/2 inch.

2.15 FINISHES

A. Provide finishes complying with BHMA A156.18 as indicated in door hardware schedule.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Mounting Heights: Mount door hardware units at heights to comply with the following unless otherwise indicated or required to comply with governing regulations.

1. Standard Steel Doors and Frames: ANSI/SDI A250.8.
2. Custom Steel Doors and Frames: HMMA 831.
3. Wood Doors: DHI's "Recommended Locations for Architectural Hardware for Wood Flush Doors”.

B. Install each door hardware item to comply with manufacturer's written instructions. Where cutting and fitting are required to install door hardware onto or into surfaces that are later to be painted or finished in another way, coordinate removal, storage, and reinstallation of surface protective trim units with finishing work. Do not install surface-mounted items until finishes have been completed on substrates involved.

C. Stops: Provide floor stops for doors unless wall or other type stops are indicated in door hardware schedule. Do not mount floor stops where they will impede traffic.

D. Perimeter Gasketing: Apply to head and jamb, forming seal between door and frame.

1. Do not notch perimeter gasketing to install other surface-applied hardware.

E. Meeting Stile Gasketing: Fasten to meeting stiles, forming seal when doors are closed.

F. Door Bottoms: Apply to bottom of door, forming seal with threshold when door is closed.

3.2 ADJUSTING

A. Adjust and check each operating item of door hardware and each door to ensure proper operation or function of every unit. Replace units that cannot be adjusted to operate as intended. Adjust door control devices to compensate for final operation of heating and ventilating equipment and to comply with referenced accessibility requirements.

3.3 DOOR HARDWARE SCHEDULE

A. The contractor's Hardware Consultant shall develop a hardware schedule based on the functionality-based hardware sets indicated on the drawings.

B. Submit final hardware sets as shop drawings for review and approval.

END OF SECTION 08 71 00

SECTION 08 80 00 – GLASS AND GLAZING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section includes:

1. Glass for windows, doors, interior borrowed lites, and storefront framing.
2. Glazing sealants and accessories.
3. Film-backed glass mirrors qualifying as safety glazing.

1.3 COORDINATION

A. Coordinate glazing channel dimensions to provide necessary bite on glass, minimum edge and face clearances, and adequate sealant thicknesses, with reasonable tolerances.

1.4 ACTION SUBMITTALS

A. Product Data: For each type of product.

B. Glass Samples: For insulating glass unit.

C. Glazing Schedule: List glass types and thicknesses for each size opening and location. Use same designations indicated on Drawings.

1.5 INFORMATIONAL SUBMITTALS

A. Preconstruction adhesion and compatibility test report.

1.6 WARRANTY

A. Manufacturer's Special Warranty for Coated-Glass Products: Manufacturer agrees to replace coated-glass units that deteriorate within specified warranty period. Deterioration of coated glass is defined as defects developed from normal use that are not attributed to glass breakage or to maintaining and cleaning coated glass contrary to manufacturer's written instructions. Defects include peeling, cracking, and other indications of deterioration in coating.

1. Warranty Period: 10 years from date of Substantial Completion.

B. Manufacturer's Special Warranty for Laminated Glass: Manufacturer agrees to replace laminated-glass units that deteriorate within specified warranty period. Deterioration of laminated glass is defined as defects developed from normal use that are not attributed to glass breakage or to maintaining and cleaning laminated glass contrary to manufacturer's written instructions. Defects include edge separation, delamination materially obstructing vision through glass, and blemishes exceeding those allowed by referenced laminated-glass standard.

1. Warranty Period: 10 years from date of Substantial Completion.

C. Manufacturer's Special Warranty for Insulating Glass: Manufacturer agrees to replace insulating-glass units that deteriorate within specified warranty period. Deterioration of insulating glass is defined as failure of hermetic seal under normal use that is not attributed to glass breakage or to maintaining and cleaning insulating glass contrary to manufacturer's written instructions. Evidence of failure is the obstruction of vision by dust, moisture, or film on interior surfaces of glass.

1. Warranty Period: 10 years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Basis-of-Design Product: Subject to compliance with requirements, provide PPG Industries Solarban 70XL Optigray product indicated on the drawings for exterior glazing, or comparable product by one of the following:

1. AGC Glass
2. Oldcastle Building EnvelopeTM.
3. Pilkington North America.

2.2 PERFORMANCE REQUIREMENTS

A. Structural Performance: Glazing shall withstand the following design loads within limits and under conditions indicated determined according to the International Building Code and ASTM E 1300.

1. Design Wind Pressures: As indicated on Drawings.
2. Differential Shading: Design glass to resist thermal stresses induced by differential shading within individual glass lites.

B. Windborne-Debris-Impact Resistance: Exterior glazing shall comply with basic -protection testing requirements in ASTM E 1996 for Wind Zone 3 when tested according to ASTM E 1886. Test specimens shall be no smaller in width and length than glazing indicated for use on Project and shall be installed in same manner as glazing indicated for use on Project.

1. Large-Missile Test: For glazing located within 30 feet of grade.

C. Safety Glazing: Where safety glazing is indicated, provide glazing that complies with 16 CFR 1201, Category II.

D. Thermal and Optical Performance Properties: Provide glass with performance properties specified, as indicated in manufacturer's published test data, based on procedures indicated below:

1. U-Factors: Center-of-glazing values, according to NFRC 100 and based on LBL's WINDOW 5.2 computer program, expressed as Btu/sq. ft. x h x deg F.
2. Solar Heat-Gain Coefficient and Visible Transmittance: Center-of-glazing values, according to NFRC 200 and based on LBL's WINDOW 5.2 computer program.
3. Visible Reflectance: Center-of-glazing values, according to NFRC 300.

2.3 GLASS PRODUCTS, GENERAL

A. Glazing Publications: Comply with published recommendations of glass product manufacturers and organizations below unless more stringent requirements are indicated. See these publications for glazing terms not otherwise defined in this Section or in referenced standards.

1. GANA Publications: "Laminated Glazing Reference Manual" and "Glazing Manual."
2. IGMA Publication for Insulating Glass: SIGMA TM-3000, "North American Glazing Guidelines for Sealed Insulating Glass Units for Commercial and Residential Use."

B. Safety Glazing Labeling: Where safety glazing is indicated, permanently mark glazing with certification label of the SGCC or another certification agency acceptable to authorities having jurisdiction. Label shall indicate manufacturer's name, type of glass, thickness, and safety glazing standard with which glass complies.

C. Thickness: Where glass thickness is indicated, it is a minimum. Provide glass that complies with performance requirements and is not less than the thickness indicated.

D. Strength: Where annealed float glass is indicated, provide annealed float glass, heat-strengthened float glass, or fully tempered float glass as needed to comply with "Performance Requirements" Article. Where heat-strengthened float glass is indicated, provide heat-strengthened float glass or fully tempered float glass as needed to comply with "Performance Requirements" Article. Where fully tempered float glass is indicated, provide fully tempered float glass.

2.4 GLASS PRODUCTS

A. Clear Annealed Float Glass: ASTM C 1036, Type I, Class 1 (clear), Quality-Q3.

B. Fully Tempered Float Glass: ASTM C 1048, Kind FT (fully tempered), Condition A (uncoated) unless otherwise indicated, Type I, Class 1 (clear) or Class 2 (tinted) as indicated, Quality-Q3.

C. Heat-Strengthened Float Glass: ASTM C 1048, Kind HS (heat strengthened), Type I, Condition A (uncoated) unless otherwise indicated, Type I, Class 1 (clear) or Class 2 (tinted) as indicated, Quality-Q3.

2.5 LAMINATED GLASS

A. Windborne-Debris-Impact-Resistant Laminated Glass: ASTM C 1172. Use materials that have a proven record of no tendency to bubble, discolor, or lose physical and mechanical properties after fabrication and installation.

1. Construction: Laminate glass with polyvinyl butyral interlayer to comply with interlayer manufacturer's written instructions.
2. Interlayer Thickness: Provide thickness not less than that indicated and as needed to comply with requirements.
3. Interlayer Color: Clear unless otherwise indicated.

2.6 INSULATING GLASS

A. Insulating-Glass Units: Factory-assembled units consisting of sealed lites of glass separated by a dehydrated interspace, qualified according to ASTM E 2190.

1. Sealing System: Dual seals.
2. Spacer: Manufacturer's standard spacer material and construction.

2.7 GLAZING SEALANTS

A. General:

1. Compatibility: Compatible with one another and with other materials they contact, including glass products, seals of insulating-glass units, and glazing channel substrates, under conditions of service and application, as demonstrated by sealant manufacturer based on testing and field experience.
2. Suitability: Comply with sealant and glass manufacturers' written instructions for selecting glazing sealants suitable for applications indicated and for conditions existing at time of installation.
3. Colors of Exposed Glazing Sealants: As indicated by manufacturer's designations.

B. Glazing Sealant: Neutral-curing silicone glazing sealant complying with ASTM C 920, Type S, Grade NS, Class 100/50, Use NT.

1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:

a) Dow Corning Corporation; 790.
b) GE Construction Sealants; Momentive Performance Materials Inc; SilPruf LM SCS2700.

c) May National Associates, Inc.; Bondaflex Sil 290.
d) Pecora Corporation; 890NST.
e) Sika Corporation; Sikasil WS-290.
f) Tremco Incorporated; Spectrem 1.

2.7 GLAZING TAPES

A. Back-Bedding Mastic Glazing Tapes: Preformed, butyl-based, 100 percent solids elastomeric tape; nonstaining and nonmigrating in contact with nonporous surfaces; with or without spacer rod as recommended in writing by tape and glass manufacturers for application indicated; and complying with ASTM C 1281 and AAMA 800 for products indicated below:

1. AAMA 806.3 tape, for glazing applications in which tape is subject to continuous pressure.
2. AAMA 807.3 tape, for glazing applications in which tape is not subject to continuous pressure.

B. Expanded Cellular Glazing Tapes: Closed-cell, PVC foam tapes; factory coated with adhesive on both surfaces; and complying with AAMA 800 for the following types:

1. AAMA 810.1, Type 1, for glazing applications in which tape acts as the primary sealant.
2. AAMA 810.1, Type 2, for glazing applications in which tape is used in combination with a full bead of liquid sealant.

2.8 MISCELLANEOUS GLAZING MATERIALS

A. Cleaners, Primers, and Sealers: Types recommended by sealant or gasket manufacturer.

B. Setting Blocks: Elastomeric material with a Shore, Type A durometer hardness of 85, plus or minus 5.

C. Spacers: Elastomeric blocks or continuous extrusions of hardness required by glass manufacturer to maintain glass lites in place for installation indicated.

D. Edge Blocks: Elastomeric material of hardness needed to limit glass lateral movement (side walking).

E. Cylindrical Glazing Sealant Backing: ASTM C 1330, Type O (open-cell material), of size and density to control glazing sealant depth and otherwise produce optimum glazing sealant performance.

PART 3 - EXECUTION

3.1 GLAZING, GENERAL

A. Comply with combined written instructions of manufacturers of glass, sealants, gaskets, and other glazing materials, unless more stringent requirements are indicated, including those in referenced glazing publications.

B. Protect glass edges from damage during handling and installation. Remove damaged glass from Project site and legally dispose of off Project site. Damaged glass includes glass with edge damage or other imperfections that, when installed, could weaken glass, impair performance, or impair appearance.

C. Apply primers to joint surfaces where required for adhesion of sealants, as determined by preconstruction testing.

D. Install setting blocks in sill rabbets, sized and located to comply with referenced glazing publications, unless otherwise required by glass manufacturer. Set blocks in thin course of compatible sealant suitable for heel bead.

E. Do not exceed edge pressures stipulated by glass manufacturers for installing glass lites.

F. Provide spacers for glass lites where length plus width is larger than 50 inches.

G. Provide edge blocking where indicated or needed to prevent glass lites from moving sideways in glazing channel, as recommended in writing by glass manufacturer and according to requirements in referenced glazing publications.

3.2 TAPE GLAZING

A. Position tapes on fixed stops so that, when compressed by glass, their exposed edges are flush with or protrude slightly above sightline of stops.

B. Install tapes continuously, but not necessarily in one continuous length. Do not stretch tapes to make them fit opening.

C. Cover vertical framing joints by applying tapes to heads and sills first, then to jambs. Cover horizontal framing joints by applying tapes to jambs, then to heads and sills.

D. Place joints in tapes at corners of opening with adjoining lengths butted together, not lapped. Seal joints in tapes with compatible sealant approved by tape manufacturer.

E. Apply heel bead of elastomeric sealant.

F. Center glass lites in openings on setting blocks, and press firmly against tape by inserting dense compression gaskets formed and installed to lock in place against faces of removable stops. Start gasket applications at corners and work toward centers of openings.

G. Apply cap bead of elastomeric sealant over exposed edge of tape.

3.3 GASKET GLAZING (DRY)

A. Cut compression gaskets to lengths recommended by gasket manufacturer to fit openings exactly, with allowance for stretch during installation.

B. Insert soft compression gasket between glass and frame or fixed stop so it is securely in place with joints miter cut and bonded together at corners.

C. Installation with Drive-in Wedge Gaskets: Center glass lites in openings on setting blocks, and press firmly against soft compression gasket by inserting dense compression gaskets formed and installed to lock in place against faces of removable stops. Start gasket applications at corners and work toward centers of openings. Compress gaskets to produce a weathertight seal without developing bending stresses in glass. Seal gasket joints with sealant recommended by gasket manufacturer.

D. Installation with Pressure-Glazing Stops: Center glass lites in openings on setting blocks, and press firmly against soft compression gasket. Install dense compression gaskets and pressure-glazing stops, applying pressure uniformly to compression gaskets. Compress gaskets to produce a weathertight seal without developing bending stresses in glass. Seal gasket joints with sealant recommended by gasket manufacturer.

E. Install gaskets so they protrude past face of glazing stops.

3.4 SEALANT GLAZING (WET)

A. Install continuous spacers, or spacers combined with cylindrical sealant backing, between glass lites and glazing stops to maintain glass face clearances and to prevent sealant from extruding into glass channel and blocking weep systems until sealants cure. Secure spacers or spacers and backings in place and in position to control depth of installed sealant relative to edge clearance for optimum sealant performance.

B. Force sealants into glazing channels to eliminate voids and to ensure complete wetting or bond of sealant to glass and channel surfaces.

C. Tool exposed surfaces of sealants to provide a substantial wash away from glass.

3.5 CLEANING AND PROTECTION

A. Immediately after installation remove nonpermanent labels and clean surfaces.

B. Protect glass from contact with contaminating substances resulting from construction operations. Examine glass surfaces adjacent to or below exterior concrete and other masonry surfaces at frequent intervals during construction, but not less than once a month, for buildup of dirt, scum, alkaline deposits, or stains.

1. If, despite such protection, contaminating substances do come into contact with glass, remove substances immediately as recommended in writing by glass manufacturer. Remove and replace glass that cannot be cleaned without damage to coatings.

C. Remove and replace glass that is damaged during construction period.

3.6 MONOLITHIC GLASS SCHEDULE

A. Glass Type G-1: Clear annealed, fully tempered float glass.

1. Minimum Thickness: 1/4 inch.
2. Safety glazing required.

3.7 LAMINATED GLASS SCHEDULE

A. Glass Type G-2: Tinted, laminated glass with two plies of heat-strengthened float glass.

1. Outdoor Lite: 1/4 inch PPG Industries Solarban 70XL Optigray.
2. Interlayer Thickness: 0.060 inch minimum.
3. Indoor Lite: 1/4 inch heat-strengthened float glass.
4. Safety glazing required on exposed faces of glass lite.

3.8 INSULATING-LAMINATED-GLASS SCHEDULE

A. Glass Type G-3: Low-E coated, tinted, insulating, tempered, laminated glass.

1. Overall Unit Thickness: 1-5/16 inch.
2. Minimum Thickness of Outdoor Lite: 1/4 inch.
3. Outdoor Lite: Fully tempered 1/4 inch PPG Industries Solarban 70XL Optigray.
4. Interspace Content: 1/2 inch air fill.
5. Indoor Lite: Clear laminated glass with two plies of heat-strengthened float glass.

    a) Minimum Thickness of Each Glass Ply: 1/4 inch.
    b) Interlayer Thickness: 0.090 inch minimum.

6. Winter Nighttime U-Factor: 0.28 maximum.
7. Summer Daytime U-Factor: 0.26 maximum.
8. Solar Heat Gain Coefficient: 0.24 maximum.

B. Glass Type G-4: Low-E-coated, tinted, insulating, laminated glass.

1. Overall Unit Thickness: 1-5/16 inch.
2. Minimum Thickness of Outdoor Lite: 1/4 inch.
3. Outdoor Lite: 1/4 inch PPG Industries Solarban 70XL Optigray.
4. Interspace Content: 1/2 inch air fill.
5. Indoor Lite: Clear laminated glass with two plies of heat-strengthened float glass.

a) Minimum Thickness of Each Glass Ply: 1/4 inch.
b) Interlayer Thickness: 0.090 inch minimum.

6. Winter Nighttime U-Factor: 0.28 maximum.
7. Summer Daytime U-Factor: 0.26 maximum.
8. Solar Heat Gain Coefficient: 0.24 maximum.

END OF SECTION 08 80 00

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SECTION 08 88 13 - FIRE-RESISTANT GLAZING

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Fire-resistance rated glazing.

1.2 COORDINATION

A. Coordinate glazing channel dimensions to provide necessary bite on glass, minimum edge and face clearances, and adequate sealant thicknesses, with reasonable tolerances.

1.3 ACTION SUBMITTALS

A. Product Data: For each type of product.

B. Glass Samples: For each type of glass product; 12 inches square.

C. Glazing Schedule: List glass types and thicknesses for each size opening and location. Use same designations indicated on Drawings.

1.4 WARRANTY

A. Manufacturer's Special Warranty on Laminated Glass: Manufacturer agrees to replace laminated-glass units that deteriorate within specified warranty period. Deterioration of laminated glass is defined as defects developed from normal use that are not attributed to glass breakage or to maintaining and cleaning laminated glass contrary to manufacturer's written instructions. Defects include edge separation, delamination materially obstructing vision through glass, and blemishes exceeding those allowed by referenced laminated-glass standard.

1. Warranty Period: Five years from date of Substantial Completion.

B. Manufacturer's Special Warranty on Double Glazing Units with Clear Gel Fill: Manufacturer agrees to replace units that deteriorate within specified warranty period. Deterioration of double glazing units with clear gel fill is defined as failure of hermetic seal under normal use that is not attributed to glass breakage or to maintaining and cleaning glass contrary to manufacturer's written instructions. Evidence of failure is the leakage of gel fill from units, air bubbles within units, or obstruction of vision by contamination or deterioration of gel.

1. Warranty Period: 10 years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 GLASS PRODUCTS, GENERAL

A. Glazing Publications: Comply with published recommendations of glass product manufacturers and organization below unless more stringent requirements are indicated. Refer to these publications for glazing terms not otherwise defined in this Section or in referenced standards.

1. GANA Publications: “Glazing Manual."

B. Safety Glazing Labeling: Permanently mark glazing with certification label of the Safety Glazing Certification Council or another certification agency acceptable to authorities having jurisdiction or the manufacturer. Label shall indicate manufacturer's name, type of glass, glass thickness, and safety glazing standard with which glass complies.

2.2 GLASS PRODUCTS

A. Tempered Float Glass: ASTM C 1048, Kind FT (fully tempered), Condition A (uncoated) unless otherwise indicated, Type I, Class I (clear) unless otherwise indicated, Quality-Q3.

2.3 FIRE-RESISTANCE-RATED GLAZING

A. Fire-Resistance-Rated Glazing: Listed and labeled by a testing agency acceptable to authorities having jurisdiction, for fire-resistance ratings indicated, based on testing according to ASTM E 119 or UL 263.

B. Fire-Resistance-Rated Glazing Labeling: Permanently mark fire-resistance-rated glazing with certification label of a testing agency acceptable to authorities having jurisdiction. Label shall indicate manufacturer's name, test standard, that the glazing is approved for use in walls, and the fire-resistance rating in minutes.

C. Laminated Glass with Intumescent Interlayers: Laminated glass made from multiple plies of uncoated, ultraclear float glass; with intumescent interlayers; and complying with 16 CFR 1201, Category II.

1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:

a. InterEdge Technologies by AGC Flat Glass; Pyrobel.
b. Pilkington North America; Pyrostop.
c. Technical Glass Products; Pyrostop.
d. Vetrotech Saint-Gobain; SGG Contraflam.
e. Insert manufacturer's name; product name or designation.

2.4 GLAZING ACCESSORIES

A. Provide glazing gaskets, glazing sealants, glazing tapes, setting blocks, spacers, edge blocks, and other glazing accessories that are compatible with glazing products and each other and are approved by testing agencies that listed and labeled fire-resistant glazing products with which products are used for applications and fire-protection ratings indicated.

B. Glazing Sealants for Fire-Rated Glazing Products: Neutral-curing silicone glazing sealant complying with ASTM C 920, Type S, Grade NS, Class 50, Use NT. Comply with sealant and glass manufacturers' written instructions for selecting glazing sealants suitable for applications indicated.

1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:

a. Dow Corning Corporation; 795.
b. GE Construction Sealants; Momentive Performance Materials Inc; SilGlaze II SCS2800.
c. Tremco Incorporated; Spectrem 2.
d. Insert manufacturer's name; product name or designation.

2. Colors of Exposed Glazing Sealants: As selected by Architect from manufacturer's full range.

PART 3 - EXECUTION

3.1 GLAZING

A. Use methods approved by testing agencies that listed and labeled fire-resistant glazing products.

B. Comply with combined written instructions of manufacturers of glass, sealants, gaskets, and other glazing materials unless more stringent requirements are indicated, including those in referenced glazing publications.

C. Protect glass edges from damage during handling and installation. Remove damaged glass from Project site and legally dispose of off Project site. Damaged glass is glass with edge damage or other imperfections that, when installed, could weaken glass and impair performance and appearance.

D. Apply primers to joint surfaces where required for adhesion of sealants, as determined by preconstruction testing.

E. Install setting blocks in sill rabbets, sized and located to comply with referenced glazing publications unless otherwise required by glass manufacturer. Set blocks in thin course of compatible sealant suitable for heel bead.

F. Do not exceed edge pressures stipulated by glass manufacturers for installing glass lites.

G. Provide spacers for glass lites where length plus width is larger than 50 inches.

H. Provide edge blocking where indicated or needed to prevent glass lites from moving sideways in glazing channel, as recommended in writing by glass manufacturer and according to requirements in referenced glazing publications.

3.2 CLEANING AND PROTECTION

A. Immediately after installation, remove nonpermanent labels and clean surfaces.

B. Protect glass from contact with contaminating substances resulting from construction operations. Examine glass surfaces adjacent to or below exterior concrete and other masonry surfaces at frequent intervals during construction, but not less than once a month, for buildup of dirt, scum, alkaline deposits, or stains.

1. If, despite such protection, contaminating substances do come into contact with glass, remove substances immediately as recommended in writing by glass manufacturer.

C. Remove and replace glass that is damaged during construction period.

END OF SECTION 08 88 13

SECTION 09 21 16 - GYPSUM BOARD SHAFT WALL ASSEMBLIES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes: Gypsum board shaft wall assemblies.

1.3 ACTION SUBMITTALS

A. Product Data: For each component of gypsum board shaft wall assembly.

1.4 INFORMATIONAL SUBMITTALS

A. Evaluation Reports: For shaft wall assemblies and firestop tracks, from ICC-ES.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Store materials inside under cover and keep them dry and protected against weather, condensation, direct sunlight, construction traffic, and other potential causes of damage. Stack panels flat and supported on risers on a flat platform to prevent sagging.

1.7 FIELD CONDITIONS

A. Environmental Limitations: Comply with ASTM C 840 requirements or with gypsum board manufacturer's written recommendations, whichever are more stringent.

B. Do not install interior products until installation areas are enclosed and conditioned.

C. Do not install panels that are wet, moisture damaged, or mold damaged.

1. Indications that panels are wet or moisture damaged include, but are not limited to, discoloration, sagging, and irregular shape.
2. Indications that panels are mold damaged include, but are not limited to, fuzzy or splotchy surface contamination and discoloration.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

A. Fire-Resistance-Rated Assemblies: For fire-resistance-rated assemblies, provide materials and construction identical to those tested in assembly indicated according to ASTM E 119 by an independent testing agency.

2.2 GYPSUM BOARD SHAFT WALL ASSEMBLIES

A. Fire-Resistance Rating: As indicated in Drawings.

B. Studs: Manufacturer's standard profile for repetitive members, corner and end members, and fire-resistance-rated assembly indicated.

1. Depth: As indicated on Drawings.
2. Minimum Base-Metal Thickness: 0.018 inch.

C. Runner Tracks: Manufacturer's standard J-profile track with manufacturer's standard long-leg length, but at least 2 inches long and matching studs in depth.

1. Minimum Base-Metal Thickness: Matching steel studs.

D. Firestop Tracks: Provide firestop track at head of shaft wall on each floor level.

E. Shaft-Side Finish: As indicated

2.3 PANEL PRODUCTS

A. Panel Size: Provide in maximum lengths and widths available that will minimize joints in each area and that correspond with support system indicated.

B. Gypsum Shaftliner Board, Type X: ASTM C 1396/C 1396M; manufacturer's proprietary fire-resistive liner panels with paper faces.

1. Products: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

a. American Gypsum; M-BLOC Shaft Liner.
b. CertainTeed Corp.; ProRoc Shaftliner.
c. Georgia-Pacific Gypsum LLC, Subsidiary of Georgia Pacific; ToughRock Fireguard Shaftliner.
d. National Gypsum Company; Gold Bond Brand Fire-Shield Shaftliner.
e. USG Corporation; Sheetrock Brand Gypsum Liner Panel.

2. Thickness: 1 inch.
3. Long Edges: Double bevel.

C. Gypsum Board: As specified in Section 09 29 00 "Gypsum Board."

2.4 NON-LOAD-BEARING STEEL FRAMING

A. Steel Framing Members: Comply with ASTM C 645 requirements for metal unless otherwise indicated.

1. Protective Coating: ASTM A 653/A 653M, G40 (Z120), hot-dip galvanized unless otherwise indicated.

B. Firestop Tracks: Top runner manufactured to allow partition heads to expand and contract with movement of the structure while maintaining continuity of fire-resistance-rated assembly indicated; in thickness not less than indicated for studs and in width to accommodate depth of studs.

1. Products: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

a. Fire Trak Corp.; Fire Trak System attached to studs with Fire Trak Posi Klip.
b. Grace Construction Products; FlameSafe FlowTrak System.
c. Metal-Lite, Inc.; The System.
d. Steel Network Inc. (The); VertiClip SLD or VertiTrack VTD Series.

2.5 AUXILIARY MATERIALS

A. General: Provide auxiliary materials that comply with manufacturer's written recommendations.

B. Trim Accessories: Cornerbead, edge trim, and control joints of material and shapes as specified in that comply with gypsum board shaft wall assembly manufacturer's written recommendations for application indicated.

C. Steel Drill Screws: ASTM C 1002 unless otherwise indicated.

D. Track Fasteners: Power-driven fasteners of size and material required to withstand loading conditions imposed on shaft wall assemblies without exceeding allowable design stress of track, fasteners, or structural substrates in which anchors are embedded.

E. Sound Attenuation Blankets: As specified in Division 09 Section "Gypsum Board."

F. Acoustical Sealant: As specified in Division 09 Section "Gypsum Board."

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates to which gypsum board shaft wall assemblies attach or abut, with Installer present. Examine for compliance with requirements for installation tolerances and other conditions affecting performance.

B. Examine panels before installation. Reject panels that are wet, moisture damaged, or mold damaged.

C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

A. General: Install gypsum board shaft wall assemblies to comply with requirements of fire-resistance-rated assemblies indicated, manufacturer's written installation instructions, and ASTM C 754 other than stud-spacing requirements.

B. Do not bridge building expansion joints with shaft wall assemblies; frame both sides of expansion joints with furring and other support.

C. Install supplementary framing in gypsum board shaft wall assemblies around openings and as required for blocking, bracing, and support of gravity and pullout loads of fixtures, equipment,

services, heavy trim, furnishings, wall-mounted door stops, and similar items that cannot be supported directly by shaft wall assembly framing.

1. Reinforcing: Where handrails directly attach to gypsum board shaft wall assemblies, provide galvanized steel reinforcing strip with 0.033-inch minimum thickness of base metal (uncoated), accurately positioned and secured behind at least one layer of face panel.

D. Penetrations: At penetrations in shaft wall, maintain fire-resistance rating of shaft wall assembly by installing supplementary steel framing around perimeter of penetration and fire protection behind boxes containing wiring devices, elevator call buttons, elevator floor indicators, and similar items.

E. Isolate perimeter of gypsum panels from building structure to prevent cracking of panels, while maintaining continuity of fire-rated construction.

F. Firestop Tracks: Where indicated, install to maintain continuity of fire-resistance-rated assembly indicated.

G. Control Joints: Install control joints according to ASTM C 840 and in specific locations

approved by Architect while maintaining fire-resistance rating of gypsum board shaft wall assemblies.

H. Installation Tolerance: Install each framing member so fastening surfaces vary not more than 1/8 inch from the plane formed by faces of adjacent framing.

3.3 PROTECTION

A. Protect installed products from damage from weather, condensation, direct sunlight, construction, and other causes during remainder of the construction period.

B. Remove and replace panels that are wet, moisture damaged, or mold damaged.

1. Indications that panels are wet or moisture damaged include, but are not limited to, discoloration, sagging, and irregular shape.
2. Indications that panels are mold damaged include, but are not limited to, fuzzy or splotchy surface contamination and discoloration.

END OF SECTION 09 21 16

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SECTION 09 29 00 - GYPSUM BOARD

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

1. Interior gypsum board.
2. Tile backing panels.

1.3 ACTION SUBMITTALS

A. Product Data: For each type of product.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

A. Fire-Resistance-Rated Assemblies: For fire-resistance-rated assemblies, provide materials and construction identical to those tested in assembly indicated according to ASTM E 119 by an independent testing agency.

B. STC-Rated Assemblies: For STC-rated assemblies, provide materials and construction identical to those tested in assembly indicated according to ASTM E 90 and classified according to ASTM E 413 by an independent testing agency.

2.2 GYPSUM BOARD, GENERAL

A. Size: Provide maximum lengths and widths available that will minimize joints in each area and that correspond with support system indicated.

2.3 INTERIOR GYPSUM BOARD

A. Gypsum Wallboard: ASTM C 1396/C 1396M.

1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

a. American Gypsum.
b. CertainTeed Corporation.
c. Georgia-Pacific Building Products.
d. National Gypsum Company.
e. USG Corporation.

2. Thickness: 5/8 inch.
3. Long Edges: Tapered.

B. Gypsum Board, Type X: ASTM C 1396/C 1396M.

1. Manufacturers: Subject to compliance with requirements available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

a. American Gypsum.
b. CertainTeed Corporation.
c. Georgia-Pacific Building Products.
d. National Gypsum Company.
e. USG Corporation.

2. Thickness: 5/8 inch.
3. Long Edges: Tapered.

C. Gypsum Ceiling Board: ASTM C 1396/C 1396M.

1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

a. American Gypsum.
b. CertainTeed Corporation.
c. Georgia-Pacific Building Products.
d. National Gypsum Company.
e. USG Corporation.

2. Thickness: 5/8 inch.
3. Long Edges: Tapered.

D. Sound-Dampening Gypsum Board: ASTM C 1396/C 1396M.

1. Basis-of-Design Product: Subject to compliance with requirements, provide PABCO Gypsum “QuietRock” product indicated on the drawings or comparable product by one of the following:

a. CertainTeed Corporation.
b. National Gypsum Company.

2. Core: 5/8 inch,

3. STC Rating: 52-74 (ASTM E90).
4. Long Edges: Tapered.

E. Mold-Resistant Gypsum Board: ASTM C 1396/C 1396M. With moisture- and mold-resistant core and paper surfaces.

1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

a. American Gypsum.
b. CertainTeed Corporation.
c. Georgia-Pacific Building Products.
d. National Gypsum Company.
e. USG Corporation.

2. Core: 5/8 inch, Type X.
3. Long Edges: Tapered.
4. Mold Resistance: ASTM D 3273, score of 10 as rated according to ASTM D 3274.

2.4 TILE BACKING PANELS

A. Glass-Mat, Water-Resistant Backing Board: ASTM C 1178/C 1178M, with manufacturer's standard edges.

1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

a. CertainTeed Corporation.
b. Georgia-Pacific Building Products.
c. National Gypsum Company.
d. Temple-Inland Building Products by Georgia-Pacific.
e. USG Corporation.

2. Core: 5/8 inch, Type X.
3. Mold Resistance: ASTM D 3273, score of 10 as rated according to ASTM D 3274.

B. Cementitious Backer Units: ANSI A118.9 and ASTM C 1288 or ASTM C 1325, with manufacturer's standard edges.

1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

a. CertainTeed Corporation.
b. Custom Building Products.
c. James Hardie Building Products, Inc.

d. National Gypsum Company.
e. USG Corporation.

2. Thickness: 5/8 inch.
3. Mold Resistance: ASTM D 3273, score of 10 as rated according to ASTM D 3274.

2.5 TRIM ACCESSORIES

A. Interior Trim: ASTM C 1047.

1. Material: Galvanized or aluminum-coated steel sheet or rolled zinc..
2. Shapes:

a. Cornerbead.
b. LC-Bead: J-shaped; exposed long flange receives joint compound.
c. L-Bead: L-shaped; exposed long flange receives joint compound.
d. U-Bead: J-shaped; exposed short flange does not receive joint compound.
e. Expansion (control) joint.

2.6 JOINT TREATMENT MATERIALS

A. General: Comply with ASTM C 475/C 475M.

B. Joint Tape:

1. Interior Gypsum Board: Paper.
2. Tile Backing Panels: As recommended by panel manufacturer.

C. Joint Compound for Interior Gypsum Board: For each coat, use formulation that is compatible with other compounds applied on previous or for successive coats.

1. Prefilling: At open joints and damaged surface areas, use setting-type taping compound.
2. Embedding and First Coat: For embedding tape and first coat on joints, fasteners, and trim flanges, use drying-type, all-purpose compound.

a. Use setting-type compound for installing paper-faced metal trim accessories.

3. Fill Coat: For second coat, use drying-type, all-purpose compound.
4. Finish Coat: For third coat, use drying-type, all-purpose compound.
5. Skim Coat: For final coat of Level 5 finish, use drying-type, all-purpose compound or high-build interior coating product designed for application by airless sprayer and to be used instead of skim coat to produce Level 5 finish.

D. Joint Compound for Tile Backing Panels:

1. Glass-Mat, Water-Resistant Backing Panel: As recommended by backing panel manufacturer.
2. Cementitious Backer Units: As recommended by backer unit manufacturer.

2.7 AUXILIARY MATERIALS

A. General: Provide auxiliary materials that comply with referenced installation standards and manufacturer's written instructions.

B. Steel Drill Screws: ASTM C 1002 unless otherwise indicated.

1. Use screws complying with ASTM C 954 for fastening panels to steel members from 0.033 to 0.112 inch thick.
2. For fastening cementitious backer units, use screws of type and size recommended by panel manufacturer.

PART 3 - EXECUTION

3.1 APPLYING AND FINISHING PANELS

A. Examine panels before installation. Reject panels that are wet, moisture damaged, and mold damaged.

B. Comply with ASTM C 840.

C. Isolate perimeter of gypsum board applied to non-load-bearing partitions at structural abutments. Provide 1/4- to 1/2-inch- wide spaces at these locations and trim edges with edge trim where edges of panels are exposed. Seal joints between edges and abutting structural surfaces with acoustical sealant.

D. For trim with back flanges intended for fasteners, attach to framing with same fasteners used for panels. Otherwise, attach trim according to manufacturer's written instructions.

E. Prefill open joints and damaged surface areas.

F. Apply joint tape over gypsum board joints, except for trim products specifically indicated as not intended to receive tape.

G. Gypsum Board Finish Levels: Finish panels to levels indicated below and according to ASTM C 840:

1. Level 1: Ceiling plenum areas, concealed areas, and where indicated.
2. Level 2: Panels that are substrate for tile.
3. Level 4: At panel surfaces that will be exposed to view unless otherwise indicated.

a. Primer and its application to surfaces are specified in Section 09 91 23 "Interior Painting."

H. Glass-Mat Faced Panels: Finish according to manufacturer's written instructions.

I. Cementitious Backer Units: Finish according to manufacturer's written instructions.

3.2 PROTECTION

A. Protect installed products from damage from weather, condensation, direct sunlight, construction, and other causes during remainder of the construction period.

B. Remove and replace panels that are wet, moisture damaged, and mold damaged.

END OF SECTION 09 29 00

SECTION 09 30 13 - CERAMIC TILING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

1. Porcelain tile.
2. Crack isolation membrane.
3. Metal edge strips.

1.3 PREINSTALLATION MEETINGS

A. Preinstallation Conference: Conduct conference at Project site to discuss tile installation, including final joint layout and color changes, prior to the commencement of any work.

1.4 ACTION SUBMITTALS

A. Product Data: For each type of product.

B. Samples:

1. Each type and composition of tile and for each color and finish required.

1.5 INFORMATIONAL SUBMITTALS

A. Qualification Data: For Installer.

1.6 MAINTENANCE MATERIAL SUBMITTALS

A. Furnish extra materials that match and are from same production runs as products installed and that are packaged with protective covering for storage and identified with labels describing contents.

1. Tile and Trim Units: Furnish quantity of full-size units equal to 3 percent of amount installed for each type, composition, color, pattern, and size indicated.

1.7 QUALITY ASSURANCE

A. Installer Qualifications:

1. Installer employs Ceramic Tile Education Foundation Certified Installers or installers recognized by the U.S. Department of Labor as Journeyman Tile Layers.

B. Mockups: Build mockups to verify selections made under Sample submittals and to demonstrate aesthetic effects and set quality standards for materials and execution.

1. Build mockup of floor tile installation.
2. Build mockup of wall tile installation.
3. Subject to compliance with requirements, approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

PART 2 - PRODUCTS

2.1 PRODUCTS, GENERAL

A. ANSI Ceramic Tile Standard: Provide Standard-grade tile that complies with ANSI A137.1 for types, compositions, and other characteristics indicated.

B. ANSI Standards for Tile Installation Materials: Provide materials complying with ANSI A108.02, ANSI standards referenced in other Part 2 articles, ANSI standards referenced by TCNA installation methods specified in tile installation schedules, and other requirements specified.

2.2 TILE PRODUCTS

A. Ceramic Tile – Unglazed Porcelain Tile

1. Basis-of-Design Product: Subject to compliance with requirements, provide Daltile products indicated on the drawings or comparable product by one of the following:

a. American Marazzi Tile, Inc.
b. American Olean; a division of Dal-Tile Corporation.
c. Crossville, Inc.
d. Florida Tile, Inc.
e. Grupo Porcelanite.

2. Certification: Tile certified by the Porcelain Tile Certification Agency.
3. Face Size: As indicated on the drawings.
4. Face Size Variation: Rectified.
5. Thickness: 3/8 inch.
6. Face: Textured.
7. Dynamic Coefficient of Friction: Not less than 0.42.
8. Tile Color and Pattern: As indicated on the drawings.
9. Grout Color: As indicated on the drawings.

B. Ceramic Tile - Glazed Porcelain Tile

1. Basis-of-Design Product: Subject to compliance with requirements, provide Daltile products indicated on the drawings or comparable product by one of the following:

    a. American Marazzi Tile, Inc.
    b. American Olean; a division of Dal-Tile Corporation.
    c. Crossville, Inc.
    d. Florida Tile, Inc.
    e. Grupo Porcelanite.

2. Certification: Tile certified by the Porcelain Tile Certification Agency.
3. Face Size: As indicated on the drawings.
4. Face Size Variation: Rectified.
5. Thickness: 3/8 inch.
6. Face: As indicated on the drawings.
7. Dynamic Coefficient of Friction: Not less than 0.42.
8. Tile Color, Glaze, and Pattern: As indicated on the drawings.
9. Grout Color: As indicated on the drawings.
10. Trim Units: As indicated on the drawings.

2.3 CRACK ISOLATION MEMBRANE

A. General: Manufacturer's standard product that complies with ANSI A118.12 for high performance and is recommended by the manufacturer for the application indicated. Include reinforcement and accessories recommended by manufacturer.

B. Polyethylene Sheet: Polyethylene faced on both sides with fleece webbing; 0.008-inch nominal thickness.

1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

    a. Compotite Corporation
    b. Laticrete
    c. Schluter Systems L.P.

C. Fabric-Reinforced, Modified-Bituminous Sheet: Self-adhering, modified-bituminous sheet with fabric reinforcement facing; 0.040-inch nominal thickness.

1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

    a. Boiardi Products Corporation; a QEP company.
    b. Carlisle Coatings and Waterproofing
    c. National Applied Construction Products, Inc.

2.4 SETTING MATERIALS

A. Modified Dry-Set Mortar (Thinset): ANSI A118.4. (Interior Applications)

1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

    a. Boiardi Products Corporation; a QEP company
    b. Bostik, Inc.
    c. LATICRETE SUPERCAP, LLC.
    d. MAPEI Corporation.
    e. Southern Grouts & Mortars, Inc.

2. Provide prepackaged, dry-mortar mix combined with liquid-latex additive at Project site.
3. For wall applications, provide nonsagging mortar.

2.5 GROUT MATERIALS

A. Sand-Portland Cement Grout: ANSI A108.10, consisting of white or gray cement and white or colored aggregate as required to produce color indicated.

B. High-Performance Tile Grout: ANSI A118.7.

1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

    a. Boiardi Products Corporation; a QEP company.
    b. Bostik, Inc.
    c. LATICRETE SUPERCAP, LLC.
    d. MAPEI Corporation.
    e. Southern Grouts & Mortars, Inc.

2. Polymer Type: Liquid-latex form for addition to prepackaged dry-grout mix.

2.6 MISCELLANEOUS MATERIALS

A. Trowelable Underlayments and Patching Compounds: Latex-modified, portland cement-based formulation provided or approved by manufacturer of tile-setting materials for installations indicated.

B. Floor Sealer: Manufacturer's standard product for sealing grout joints and that does not change color or appearance of grout.

1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

    a. Bonsal American, an Oldcastle company.
    b. Custom Building Products.
    c. Jamo Inc.
    d. Southern Grouts & Mortars, Inc.
    e. Summitville Tiles, Inc.

C. Metal Edge Strips: Angle or L-shape, height to match tile and setting-bed thickness, metallic or combination of metal and PVC or neoprene base, designed specifically for exterior and interior flooring applications indicated on the drawings; silver stainless-steel, ASTM A 666, 300 Series exposed-edge material.

1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

    a. Blanke Corporation.
    b. Ceramic Tool Company, Inc.
    c. Schluter Systems L.P.

2. Provide metal edge strips at the following locations, and as indicated in the drawings:

    a. Leading edge of tiled floor transition to non-tiled floor.
    b. Top edge of partial height wall tile.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates, areas, and conditions where tile will be installed, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.

1. Verify that substrates for setting tile are firm; dry; clean; free of coatings that are incompatible with tile-setting materials, including curing compounds and other substances that contain soap, wax, oil, or silicone; and comply with flatness tolerances required by ANSI A108.01 for installations indicated.
2. Verify that concrete substrates for tile floors installed with thinset mortar comply with surface finish requirements in ANSI A108.01 for installations indicated.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. Fill cracks, holes, and depressions in concrete substrates for tile floors installed with adhesives or thinset mortar with trowelable leveling and patching compound specifically recommended by tile-setting material manufacturer.

B. Where indicated, prepare substrates to receive waterproofing by applying a reinforced mortar bed that complies with ANSI A108.1A and is sloped 1/4 inch per foot toward drains.

C. Blending: For tile exhibiting color variations, verify that tile has been factory blended and packaged so tile units taken from one package show same range of colors as those taken from other packages and match approved Samples. If not factory blended, either return to manufacturer or blend tiles at Project site before installing.

3.3 CERAMIC TILE INSTALLATION

A. Comply with TCNA's "Handbook for Ceramic, Glass, and Stone Tile Installation" for TCNA installation methods specified in tile installation schedules. Comply with parts of the ANSI A108 series "Specifications for Installation of Ceramic Tile" that are referenced in TCNA installation methods, specified in tile installation schedules, and apply to types of setting and grouting materials used.

1. For the following installations, follow procedures in the ANSI A108 series of tile installation standards for providing 95 percent mortar coverage:

    a. Tile floors consisting of tiles 8 by 8 inches or larger.
    b. Tile floors consisting of rib-backed tiles.

B. Extend tile work into recesses and under or behind equipment and fixtures to form complete covering without interruptions unless otherwise indicated. Terminate work neatly at obstructions, edges, and corners without disrupting pattern or joint alignments.

C. Accurately form intersections and returns. Perform cutting and drilling of tile without marring visible surfaces. Carefully grind cut edges of tile abutting trim, finish, or built-in items for straight aligned joints. Fit tile closely to electrical outlets, piping, fixtures, and other penetrations so plates, collars, or covers overlap tile.

D. Provide manufacturer's standard trim shapes where necessary to eliminate exposed tile edges.

E. Where accent tile differs in thickness from field tile, vary setting bed thickness so that tiles are flush.

F. Jointing Pattern: Lay tile in grid pattern unless otherwise indicated. Lay out tile work and center tile fields in both directions in each space or on each wall area. Lay out tile work to minimize the use of pieces that are less than half of a tile. Provide uniform joint widths.

G. Joint Widths: Unless otherwise indicated or recommended by the manufacturer, install porcelain tile with 1/8 inch joint widths.

H. Lay out tile wainscots to dimensions indicated or to next full tile beyond dimensions indicated.

I. Expansion Joints: Provide expansion joints and other sealant-filled joints, including control, contraction, and isolation joints, where indicated. Form joints during installation of setting materials, mortar beds, and tile. Do not saw-cut joints after installing tiles.

1. Where joints occur in concrete substrates, locate joints in tile surfaces directly above them.

J. Metal Edge Strips: Install where exposed edge of tile flooring meets carpet, wood, or other flooring that finishes flush with or below top of tile and no threshold is indicated.

K. Floor Sealer: Apply floor sealer to grout joints according to floor-sealer manufacturer's written instructions. As soon as floor sealer has penetrated grout joints, remove excess sealer and sealer from tile faces by wiping with soft cloth.

L. At tile backing panels, and use modified dry-set mortar for bonding material unless otherwise directed in manufacturer's written instructions.

M. Install crack isolation membrane to comply with ANSI A108.17 and manufacturer's written instructions to produce membrane of uniform thickness that is bonded securely to substrate.

3.4 INTERIOR CERAMIC TILE INSTALLATION SCHEDULE

A. Interior Floor Installations, Concrete Subfloor:

1. Ceramic Tile Installation: TCNA F113; thinset mortar.

a. Ceramic Tile Type: As indicated on the drawings.
b. Thinset Mortar: Modified dry-set mortar.
c. Grout: High-performance sanded grout.

B. Interior Wall Installations, Wood Studs or Furring:

1. Ceramic Tile Installation: TCNA W244C or TCNA W244F; thinset mortar on cementitious backer units or fiber-cement backer board.

a. Ceramic Tile Type: As indicated on the drawings.
b. Thinset Mortar: Improved modified dry-set mortar.
c. Grout: High-performance sanded grout.

2. Ceramic Tile Installation: TCNA W245 or TCNA W248; thinset mortar on glass-mat, water-resistant gypsum backer board.

a. Ceramic Tile Type: As indicated on the drawings.
b. Thinset Mortar: Modified dry-set mortar.
c. Grout: High-performance sanded grout.

END OF SECTION 09 30 13

SECTION 09 51 23 - ACOUSTICAL TILE CEILINGS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

1. Acoustical tiles for interior ceilings.
2. Fully concealed, direct-hung, suspension systems.

1.3 PREINSTALLATION MEETINGS

A. Preinstallation Conference: Conduct conference at Project site.

1.4 ACTION SUBMITTALS

A. Product Data: For each type of product.

B. Samples: For each exposed product and for each color and texture specified.

1.5 INFORMATIONAL SUBMITTALS

A. Coordination Drawings: Reflected ceiling plans, drawn to scale, and coordinated with each other, using input from installers of the items involved.

B. Product test reports.

C. Research reports.

D. Field quality-control reports.

1.6 CLOSEOUT SUBMITTALS

A. Maintenance data.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

A. Surface-Burning Characteristics: Comply with ASTM E 84; testing by a qualified testing agency. Identify products with appropriate markings of applicable testing agency.

1. Flame-Spread Index: Class A according to ASTM E 1264.
2. Smoke-Developed Index: 50 or less.

2.2 ACOUSTICAL TILES - ACT-1

A. Basis-of-Design Product: Subject to compliance with requirements, provide Armstrong product indicated on Drawings or comparable product by one of the following:

1. CertainTeed Corporation.
2. United States Gypsum Company.

B. Acoustical Tile Standard: Provide manufacturer's standard tiles of configuration indicated that comply with ASTM E 1264 classifications as designated by type, form, pattern, acoustical rating, and light reflectance unless otherwise indicated.

C. Color: White.

D. Light Reflectance (LR): Not less than 0.89.

E. Ceiling Attenuation Class (CAC): Not less than 33.

F. Edge/Joint Detail: Square, Lay-In.

G. Thickness: 5/8 inch.

H. Modular Size: 24 inch by 24 inch.

I. Grid Size: 15/16 inch.

J. Antimicrobial Treatment: Manufacturer's standard broad spectrum, antimicrobial formulation that inhibits fungus, mold, mildew, and gram-positive and gram-negative bacteria and showing no mold, mildew, or bacterial growth when tested according to ASTM D 3273, ASTM D 3274, or ASTM G 21 and evaluated according to ASTM D 3274 or ASTM G 21.

2.3 METAL SUSPENSION SYSTEM

A. Basis-of-Design Product: Subject to compliance with requirements, provide Armstrong Prelude 15/16 inch wide grid products indicated on the drawings or comparable product by one of the following:

1. Chicago Metallic

2. Hunter Douglas
3. United States Gypsum Company.

B. Metal Suspension-System Standard: Manufacturer's standard, direct-hung, fully concealed, metal suspension system that complies with applicable requirements in ASTM C 635/C 635M.

C. Recycled Content: Postconsumer recycled content plus one-half of preconsumer recycled content not less than 25 percent.

D. Direct-Hung, Double-Web Suspension System: Main and cross runners roll formed from and capped with cold-rolled steel sheet, pre-painted, electrolytically zinc coated, or hot-dip galvanized, G30 coating designation.

2.4 ACCESSORIES

A. Attachment Devices: Size for five times the design load indicated in ASTM C 635/C 635M, Table 1, "Direct Hung," unless otherwise indicated. Comply with seismic design requirements.

2.5 METAL EDGE MOLDINGS AND TRIM

A. Basis-of-Design Product: Subject to compliance with requirements, provide Armstrong products indicated on the drawings or comparable products by one of the following:

1. Chicago Metallic Corporation.
2. Hunter Douglas
3. United States Gypsum Company.

B. Roll-Formed, Sheet-Metal Edge Moldings and Trim: Type and profile indicated or, if not indicated, manufacturer's standard moldings for edges and penetrations; formed from sheet metal of same material, finish, and color as that used for of suspension-system runners.

PART 3 - EXECUTION

3.1 PREPARATION

A. Measure each ceiling area and establish layout of acoustical tiles to balance border widths at opposite edges of each ceiling. Avoid using less-than-half-width tiles at borders unless otherwise indicated.

B. Layout openings for penetrations centered on the penetrating items.

3.2 INSTALLATION OF SUSPENDED ACOUSTICAL TILE CEILINGS

A. Install suspended acoustical tile ceilings according to ASTM C 636/C 636M and manufacturer's written instructions.

B. Install edge moldings and trim of type indicated at perimeter of acoustical ceiling area and where necessary to conceal edges of acoustical tiles.

1. Apply acoustical sealant in a continuous ribbon concealed on back of vertical legs of moldings before they are installed.
2. Do not use exposed fasteners, including pop rivets, on moldings and trim.

END OF SECTION 09 51 23

SECTION 09 65 13 - RESILIENT BASE AND ACCESSORIES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

1. Resilient base.

1.3 ACTION SUBMITTALS

A. Product Data: For each type of product.

C. Samples: For each exposed product and for each color and texture specified.

PART 2 - PRODUCTS

2.2 THERMOPLASTIC-RUBBER BASE

A. Basis of Design Product: Subject to compliance with requirements, provide Burke Flooring product indicated on Drawings.

B. Product Standard: ASTM F 1861, Type TP (rubber, thermoplastic).

1. Group: I (solid, homogeneous).
2. Style A, Straight.

C. Thickness: 1/8 inch.

D. Height: 4 inches.

E. Lengths: Coils in manufacturer's standard length.

F. Outside Corners: Job formed.

G. Inside Corners: Job formed.

H. Colors: As indicated on the drawings.

2.3 INSTALLATION MATERIALS

A. Trowelable Leveling and Patching Compounds: Latex-modified, portland cement based or blended hydraulic-cement-based formulation provided or approved by resilient-product manufacturer for applications indicated.

B. Adhesives: Water-resistant type recommended by resilient-product manufacturer for resilient products and substrate conditions indicated.

PART 3 - EXECUTION

3.1 PREPARATION

A. Prepare substrates according to manufacturer's written instructions to ensure adhesion of resilient products.

B. Fill cracks, holes, and depressions in substrates with trowelable leveling and patching compound; remove bumps and ridges to produce a uniform and smooth substrate.

C. Do not install resilient products until they are the same temperature as the space where they are to be installed.

D. Immediately before installation, sweep and vacuum clean substrates to be covered by resilient products.

3.2 RESILIENT BASE INSTALLATION

A. Comply with manufacturer's written instructions for installing resilient base.

B. Apply resilient base to walls, columns, pilasters, casework and cabinets in toe spaces, and other permanent fixtures in rooms and areas where base is required.

C. Install resilient base in lengths as long as practical without gaps at seams and with tops of adjacent pieces aligned.

D. Tightly adhere resilient base to substrate throughout length of each piece, with base in continuous contact with horizontal and vertical substrates.

E. Do not stretch resilient base during installation.

F. Job-Formed Corners:

1. Outside Corners: Use straight pieces of maximum lengths possible and form with returns not less than 3 inches in length.

a) Form without producing discoloration (whitening) at bends.

2. Inside Corners: Use straight pieces of maximum lengths possible and form with returns not less than 3 inches in length.

a) Miter or cope corners to minimize open joints.

3.3 CLEANING AND PROTECTION

A. Comply with manufacturer's written instructions for cleaning and protecting resilient products.

B. Cover resilient products subject to wear and foot traffic until Substantial Completion.

END OF SECTION 09 65 13

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SECTION 09 65 19 - RESILIENT TILE FLOORING

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Solid vinyl luxury tile.

1.2 ACTION SUBMITTALS

A. Product Data: For each type of product.

B. Shop Drawings: For each type of floor tile. Include floor tile layouts, edges, columns, doorways, enclosing partitions, built-in furniture, cabinets, and cutouts.

1. Show details of special patterns.

C. Samples: Full-size units of each color and pattern of floor tile required.

1.3 CLOSEOUT SUBMITTALS

A. Maintenance data.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

A. Fire-Test-Response Characteristics: For resilient tile flooring, as determined by testing identical products according to ASTM E 648 or NFPA 253 by a qualified testing agency.

1. Critical Radiant Flux Classification: Class I, not less than 0.45 W/sq. cm.

2.2 LUXURY VINYL FLOOR TILE

A. Basis of Design Product: Subject to compliance with requirements, provide Burke Flooring “Country Naturals” series product indicated on Drawings.

1. Class: Class III, printed film vinyl tile.
2. Type: B, embossed surface

B. Thickness: 0.125 inch (3.05 mm).

C. Size: 6 inch by 48 inch plank

D. Style: Hand-scraped with beveled edge.

E. Color and Pattern: As indicated on the drawings.

2.3 INSTALLATION MATERIALS

A. Trowelable Leveling and Patching Compounds: Latex-modified, portland cement based or blended hydraulic-cement-based formulation provided or approved by floor tile manufacturer for applications indicated.

B. Adhesives: Water-resistant type recommended by floor tile and adhesive manufacturers to suit floor tile and substrate conditions indicated.

PART 3 - EXECUTION

3.1 PREPARATION

A. Prepare substrates according to floor tile manufacturer's written instructions to ensure adhesion of resilient products.

B. Concrete Substrates: Prepare according to ASTM F 710.

1. Verify that substrates are dry and free of curing compounds, sealers, and hardeners.
2. Remove substrate coatings and other substances that are incompatible with adhesives and that contain soap, wax, oil, or silicone, using mechanical methods recommended by floor tile manufacturer. Do not use solvents.
3. Alkalinity and Adhesion Testing: Perform tests recommended by floor tile manufacturer. Proceed with installation only after substrate alkalinity falls within range on pH scale recommended by manufacturer in writing.
4. Moisture Testing: Proceed with installation only after substrates pass testing according to floor tile manufacturer's written recommendations.

C. Access Flooring Panels: Remove protective film of oil or other coating using method recommended by access flooring manufacturer.

D. Fill cracks, holes, and depressions in substrates with trowelable leveling and patching compound; remove bumps and ridges to produce a uniform and smooth substrate.

E. Do not install floor tiles until they are the same temperature as the space where they are to be installed.

F. Immediately before installation, sweep and vacuum clean substrates to be covered by resilient floor tile.

3.2 FLOOR TILE INSTALLATION

A. Comply with manufacturer's written instructions for installing floor tile.

B. Lay out floor tiles from center marks established with principal walls, discounting minor offsets, so tiles at opposite edges of room are of equal width. Adjust as necessary to avoid using cut widths that equal less than one-half tile at perimeter.

1. Lay tiles in patterns indicated on Finish Plans.

C. Match floor tiles for color and pattern by selecting tiles from cartons in the same sequence as manufactured and packaged, if so numbered. Discard broken, cracked, chipped, or deformed tiles.

1. Lay tiles in patterns indicated on Finish Plans.

D. Scribe, cut, and fit floor tiles to butt neatly and tightly to vertical surfaces and permanent fixtures including built-in furniture, cabinets, pipes, outlets, and door frames.

E. Extend floor tiles into toe spaces, door reveals, closets, and similar openings. Extend floor tiles to center of door openings.

F. Maintain reference markers, holes, and openings that are in place or marked for future cutting by repeating on floor tiles as marked on substrates. Use chalk or other nonpermanent marking device.

G. Install floor tiles on covers for telephone and electrical ducts, building expansion-joint covers, and similar items in finished floor areas. Maintain overall continuity of color and pattern between pieces of tile installed on covers and adjoining tiles. Tightly adhere tile edges to substrates that abut covers and to cover perimeters.

H. Adhere floor tiles to flooring substrates using a full spread of adhesive applied to substrate to produce a completed installation without open cracks, voids, raising and puckering at joints, telegraphing of adhesive spreader marks, and other surface imperfections.

3.3 CLEANING AND PROTECTION

A. Comply with manufacturer's written instructions for cleaning and protecting floor tile.

B. Cover finished floor tile installation for protection until Substantial Completion.

END OF SECTION 09 65 19

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SECTION 09 91 13 - EXTERIOR PAINTING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section includes surface preparation and the application of paint systems on exterior

substrates.

1. Miscellaneous steel and iron building components.
2. Galvanized metal building components.
3. Concrete masonry units.
4. Precast concrete items.
5. Cement board siding and trim.
6. Glue-laminated timber components.

1.3 DEFINITIONS

A. MPI Gloss Level 1: Not more than five units at 60 degrees and 10 units at 85 degrees, according to ASTM D 523.

B. MPI Gloss Level 3: 10 to 25 units at 60 degrees and 10 to 35 units at 85 degrees, according to ASTM D 523.

C. MPI Gloss Level 4: 20 to 35 units at 60 degrees and not less than 35 units at 85 degrees, according to ASTM D 523.

D. MPI Gloss Level 5: 35 to 70 units at 60 degrees, according to ASTM D 523.

E. MPI Gloss Level 6: 70 to 85 units at 60 degrees, according to ASTM D 523.

F. MPI Gloss Level 7: More than 85 units at 60 degrees, according to ASTM D 523.

G. MPI Gloss Level 11: 35 to 70 units at 60 degrees, according to ASTM D 523.

1.4 ACTION SUBMITTALS

A. Product Data: For each type of product. Include preparation requirements and application instructions.

1. Include printout of current "MPI Approved Products List" for each product category specified, with the proposed product highlighted.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Basis of Design Product: Subject to compliance with requirements, provide Glidden products to match colors indicated on the drawings.

2.2 PAINT, GENERAL

A. MPI Standards: Products shall comply with MPI standards indicated and shall be listed in its "MPI Approved Products Lists."

B. Material Compatibility:

1. Materials for use within each paint system shall be compatible with one another and substrates indicated, under conditions of service and application as demonstrated by manufacturer, based on testing and field experience.
2. For each coat in a paint system, products shall be recommended in writing by topcoat manufacturers for use in paint system and on substrate indicated.

C. Colors: As indicated on the drawings or as selected by Architect from manufacturer’s full range.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates and conditions, with Applicator present, for compliance with requirements for maximum moisture content and other conditions affecting performance of the Work.

B. Verify suitability of substrates, including surface conditions and compatibility with existing finishes and primers.

C. Proceed with coating application only after unsatisfactory conditions have been corrected.

1. Application of coating indicates acceptance of surfaces and conditions.

3.2 PREPARATION

A. Comply with manufacturer's written instructions and recommendations in "MPI Architectural Painting Specification Manual" applicable to substrates and paint systems indicated.

B. Remove hardware, covers, plates, and similar items already in place that are removable and are not to be painted. If removal is impractical or impossible because of size or weight of item, provide surface-applied protection before surface preparation and painting.

1. After completing painting operations, use workers skilled in the trades involved to reinstall items that were removed. Remove surface-applied protection.

3.3 APPLICATION

A. Apply paints according to manufacturer's written instructions and recommendations in "MPI Manual."

B. Apply paints to produce surface films without cloudiness, spotting, holidays, laps, brush marks, roller tracking, runs, sags, ropiness, or other surface imperfections. Cut in sharp lines and color breaks.

3.4 CLEANING AND PROTECTION

A. Protect work of other trades against damage from paint application. Correct damage to work of other trades by cleaning, repairing, replacing, and refinishing, as approved by Architect, and leave in an undamaged condition.

B. At completion of construction activities of other trades, touch up and restore damaged or defaced painted surfaces.

3.5 EXTERIOR PAINTING SCHEDULE

A. Concrete Masonry Units:

1. Exterior Latex Coating System MPI EXT 4.2A:

a) Prime Coat: Block filler, latex, interior/exterior, MPI #4.
b) Intermediate Coat: Exterior latex, matching topcoat.
c) Topcoat: Exterior latex, semi-gloss (MPI Gloss Level 5), MPI #11.

B. Miscellaneous Steel and Iron Substrates: (Note: Excludes all exterior structural steel beams, tubes and columns to receive High Performance Coating System, specified in Section 09 96 00.)

1. Water-Based Light Industrial Coating System MPI EXT 5.1C:

a) Prime Coat: Primer, alkyd, anti-corrosive for metal, MPI #79.
b) Prime Coat: Shop primer specified in Section where substrate is specified.
c) Intermediate Coat: Light industrial coating, exterior, water based, matching topcoat.
d) Topcoat: Light industrial coating, exterior, water based, semi-gloss (MPI Gloss Level 5), MPI #163.

C. Galvanized-Metal Substrates:

1. Water-Based Light Industrial Coating System MPI EXT 5.1C:

a) Prime Coat: Primer, galvanized, water based, MPI #134.
b) Intermediate Coat: Light industrial coating, exterior, water based, matching topcoat.
c) Topcoat: Light industrial coating, exterior, water based, semi-gloss (MPI Gloss Level 5), MPI #163.

D. Cement Board Siding and Pre-Cast Concrete Items:

1. Water-Based Light Industrial Coating System MPI EXT 3.3C:

a) Prime Coat: Primer, alkali resistant, water based, MPI #3.
b) Intermediate Coat: Light industrial coating, exterior, water based, matching topcoat.
c) Topcoat: Light industrial coating, exterior, water based, semi-gloss (MPI Gloss Level 5), MPI #163.

E. Glue-laminated Columns, Beams, and Wood Trim:

1. Exterior Wood Stain, Semi-Transparent, Solvent-based MPI EXT 6.2L:

a) Base Coat: Exterior wood stain, semi-transparent, MPI #13
b) Topcoat: Exterior wood stain, semi-transparent, MPI #13.

END OF SECTION 09 91 13

SECTION 09 91 23 - INTERIOR PAINTING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section includes surface preparation and the application of paint systems on interior substrates.

1. Concrete.
2. Steel and iron.
3. Galvanized metal.
4. Gypsum board.

1.3 DEFINITIONS

A. MPI Gloss Level 1: Not more than five units at 60 degrees and 10 units at 85 degrees, according to ASTM D 523.

B. MPI Gloss Level 2: Not more than 10 units at 60 degrees and 10 to 35 units at 85 degrees, according to ASTM D 523.

C. MPI Gloss Level 3: 10 to 25 units at 60 degrees and 10 to 35 units at 85 degrees, according to ASTM D 523.

D. MPI Gloss Level 4: 20 to 35 units at 60 degrees and not less than 35 units at 85 degrees, according to ASTM D 523.

E. MPI Gloss Level 5: 35 to 70 units at 60 degrees, according to ASTM D 523.

F. MPI Gloss Level 6: 70 to 85 units at 60 degrees, according to ASTM D 523.

G. MPI Gloss Level 7: More than 85 units at 60 degrees, according to ASTM D 523.

H. MPI Gloss Level 11: 35 to 70 units at 60 degrees, according to ASTM D 523.

1.4 ACTION SUBMITTALS

A. Product Data: For each type of product. Include preparation requirements and application instructions.

1. Include Printout of current "MPI Approved Products List" for each product category specified, with the proposed product highlighted.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Basis-of-Design Product: Subject to compliance with requirements, provide Glidden products to match colors indicated on the drawings.

2.2 PAINT, GENERAL

A. MPI Standards: Products shall comply with MPI standards indicated and shall be listed in its "MPI Approved Products Lists."

B. Material Compatibility:

1. Materials for use within each paint system shall be compatible with one another and substrates indicated, under conditions of service and application as demonstrated by manufacturer, based on testing and field experience.
2. For each coat in a paint system, products shall be recommended in writing by topcoat manufacturers for use in paint system and on substrate indicated.

C. Colors: As indicated in a color schedule.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates and conditions, with Applicator present, for compliance with requirements for maximum moisture content and other conditions affecting performance of the Work.

B. Maximum Moisture Content of Substrates: When measured with an electronic moisture meter as follows:

1. Concrete: 12 percent.
2. Gypsum Board: 12 percent.
3. Wood: 15 percent.

C. Verify suitability of substrates, including surface conditions and compatibility with existing finishes and primers.

D. Proceed with coating application only after unsatisfactory conditions have been corrected.

1. Application of coating indicates acceptance of surfaces and conditions.

3.2 PREPARATION

A. Comply with manufacturer's written instructions and recommendations in "MPI Architectural Painting Specification Manual" applicable to substrates and paint systems indicated.

B. Remove hardware, covers, plates, and similar items already in place that are removable and are not to be painted. If removal is impractical or impossible because of size or weight of item, provide surface-applied protection before surface preparation and painting.

1. After completing painting operations, use workers skilled in the trades involved to reinstall items that were removed. Remove surface-applied protection if any.

3.3 APPLICATION

A. Apply paints according to manufacturer's written instructions and recommendations in "MPI Architectural Painting Specification Manual."

B. Apply paints to produce surface films without cloudiness, spotting, holidays, laps, brush marks, roller tracking, runs, sags, ropiness, or other surface imperfections. Cut in sharp lines and color breaks.

3.4 INTERIOR PAINTING SCHEDULE

A. Concrete Substrates:

1. Water-Based Concrete Floor Sealer System MPI INT 3.2G:

a) First Coat: Sealer, water based, for concrete floors, matching topcoat.
b) Topcoat: Sealer, water based, for concrete floors, MPI #99.

2. Solvent-Based, Low-VOC Concrete Floor Sealer System MPI INT 3.2G:

a) First Coat: Sealer, solvent based, for concrete floors, matching topcoat.
b) Topcoat: Sealer, solvent based, for concrete floors, MPI #104.

B. Steel Substrates:

1. Institutional Low-Odor/VOC Latex System MPI INT 5.1S:

a) Prime Coat: Primer, rust inhibitive, water based MPI #107.
b) Intermediate Coat: Latex, interior, institutional low odor/VOC, matching topcoat.
c) Topcoat: Latex, interior, institutional low odor/VOC, flat (MPI Gloss Level 1), MPI#143.
d) Topcoat: Latex, interior, institutional low odor/VOC, semi-gloss (MPI Gloss Level 5), MPI#147.

C. Galvanized-Metal Substrates:

1. Institutional Low-Odor/VOC Latex System MPI INT 5.3N:

a) Prime Coat: Primer, galvanized, water based, MPI #134.
b) Intermediate Coat: Latex, interior, institutional low odor/VOC, matching topcoat.
c) Topcoat: Latex, interior, institutional low odor/VOC, semi-gloss (MPI Gloss Level 5), MPI#147.

D. Gypsum Board and Plaster Substrates:

1. Institutional Low-Odor/VOC Latex System MPI INT 9.2M:

a) Prime Coat: Primer sealer, interior, institutional low odor/VOC, MPI #149.
b) Intermediate Coat: Latex, interior, institutional low odor/VOC, matching topcoat.
c) Topcoat: Latex, interior, institutional low odor/VOC, flat (MPI Gloss Level 1), MPI #143.
d) Topcoat: Latex, interior, institutional low odor/VOC (MPI Gloss Level 3), MPI #145.

E. Insulation-Covering Substrates: Including pipe and duct coverings.

1. Institutional Low-Odor/VOC Latex System MPI INT 10.1D:

a) Prime Coat: Primer sealer, latex, interior, MPI #50.
b) Intermediate Coat: Latex, interior, institutional low odor/VOC, matching topcoat.
c) Topcoat: Latex, interior, institutional low odor/VOC, flat (MPI Gloss Level 1), MPI #143.

END OF SECTION 09 91 23

SECTION 10 14 23 - PANEL SIGNAGE

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section includes room-identification signs that are directly attached to the building.

1.2 ACTION SUBMITTALS

A. Product Data: For each type of product.

B. Shop Drawings: For room-identification signs.

1. Include fabrication and installation details and attachments to other work.
2. Show sign mounting heights, locations of supplementary supports to be provided by other installers, and accessories.
3. Show message list, typestyles, graphic elements, including raised characters and Braille, and layout for each sign at least half size.

C. Samples: For each exposed product and for each color and texture specified.

1.3 CLOSEOUT SUBMITTALS

A. Maintenance data.

1.4 WARRANTY

A. Special Warranty: Manufacturer agrees to repair or replace components of signs that fail in materials or workmanship within specified warranty period.

1. Warranty Period: Five years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

A. Accessibility Standard: Comply with applicable provisions in the USDOJ's "2010 ADA Standards for Accessible Design".

2.2 ROOM-IDENTIFICATION SIGNS

A. Room-Identification Sign: Sign with smooth, uniform surfaces; with message and characters having uniform faces, sharp corners, and precisely formed lines and profiles; and as follows:

1. Basis-of-Design Product: Subject to compliance with requirements, provide product indicated on Drawings or comparable product by similar manufacturer.
2. Laminated-Sheet Sign: Brushed aluminum face sheet with raised graphics laminated over subsurface graphics to acrylic backing sheet to produce composite sheet.

a) Composite-Sheet Thickness: Manufacturer's standard for size of sign.
b) Subsurface Graphics: Reverse etch image.
c) Color: As selected by Architect from manufacturer's full range.

3. Mounting: Manufacturer's standard method for substrates indicated with two-face tape.

2.3 FABRICATION

A. General: Provide manufacturer's standard sign assemblies.

B. Subsurface-Applied Graphics: Apply graphics to back face of clear face-sheet material to produce precisely formed image. Image shall be free of rough edges.

C. Subsurface-Etched Graphics: Reverse etch back face of clear face-sheet material. Fill resulting copy with manufacturer's standard enamel. Apply opaque manufacturer's standard background color coating over enamel-filled copy.

PART 3 - EXECUTION

3.1 INSTALLATION

A. General: Install signs using mounting methods indicated and according to manufacturer's written instructions.

1. Install signs level, plumb, true to line, and at locations and heights indicated, with sign surfaces free of distortion and other defects in appearance.
2. Install signs so they do not protrude or obstruct according to the accessibility standard.
3. Before installation, verify that sign surfaces are clean and free of materials or debris that would impair installation.

B. Mounting Methods:

1. Two-Face Tape: Clean bond-breaking materials from substrate surface and remove loose debris. Apply tape strips symmetrically to back of sign and of suitable quantity to support weight of sign without slippage. Keep strips away from edges to prevent visibility at sign edges. Place sign in position and push to engage tape adhesive.

END OF SECTION 10 14 23

SECTION 10 16 00 - TOILET COMPARTMENTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

1. Solid-polymer, floor mounted, overhead-braced toilet compartments
2. Solid-polymer, wall-hung urinal screens.

B. Related Sections:

1. Division 10 Section "Toilet, Bath, and Laundry Accessories" for toilet tissue dispensers, grab bars, and similar accessories.

1.3 ACTION SUBMITTALS

A. Product Data: For each type of product indicated. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes.

B. Shop Drawings: For toilet compartments. Include plans, elevations, sections, details, and attachments to other work.

1. Show locations of cutouts for compartment-mounted toilet accessories.
2. Show locations of reinforcements for compartment-mounted grab bars.
3. Show locations of centerlines of toilet fixtures.

D. Samples for Initial Selection: For each type of unit indicated. Include Samples of hardware and accessories involving material and color selection.

1.4 INFORMATIONAL SUBMITTALS

A. Product Certificates: For each type of toilet compartment, from manufacturer.

1.5 CLOSEOUT SUBMITTALS

A. Maintenance Data: For toilet compartments to include in maintenance manuals.

1.6 QUALITY ASSURANCE

A. Comply with requirements in GSA's CID-A-A-60003, "Partitions, Toilets, Complete."

B. Surface-Burning Characteristics: As determined by testing identical products according to ASTM E 84, or another standard acceptable to authorities having jurisdiction, by a qualified testing agency. Identify products with appropriate markings of applicable testing agency.

1. Flame-Spread Index: 75 or less.
2. Smoke-Developed Index: 450 or less.

C. Regulatory Requirements: Comply with applicable provisions in the U.S. Architectural & Transportation Barriers Compliance Board's "Americans with Disabilities Act (ADA) and Architectural Barriers Act (ABA) Accessibility Guidelines for Buildings and Facilities" and the Florida Building Code for toilet compartments designated as accessible.

1.7 PROJECT CONDITIONS

A. Field Measurements: Verify actual locations of toilet fixtures, walls, columns, ceilings, and other construction contiguous with toilet compartments by field measurements before fabrication.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Stainless-Steel Sheet: ASTM A 666, Type 304, stretcher-leveled standard of flatness.

B. Stainless-Steel Castings: ASTM A 743/A 743M.

2.2 SOLID-POLYMER UNITS

A. Manufacturers: Provide toilet partitions by Scranton Products or a comparable product by one of the following:

1. Accurate Partitions Corporation.
2. Ampco, Inc.
3. Bradley Corporation; Mills Partitions.
4. Santana Products, Inc.

B. Toilet-Enclosure Style: Floor-mounted, overhead-braced.

C. Urinal-Screen Style: Wall hung.

D. Door, Panel, Screen, and Pilaster Construction: Solid, high-density polyethylene (HDPE) panel material, not less than 1 inch (25 mm) thick, seamless, with eased edges, and with homogenous color and pattern throughout thickness of material.

1. Integral Hinges: Configure doors and pilasters to receive integral hinges.
2. Heat-Sink Strip: Manufacturer's standard continuous, stainless-steel strip fastened to exposed bottom edges of solid-polymer components to prevent burning.
3. Color: as indicated on Drawings.

E. Pilaster Shoes and Sleeves (Caps): Manufacturer's standard design; stainless steel.

F. Brackets (Fittings):

1. Full-Height (Continuous) Type: Manufacturer's standard design; stainless steel.

2.3 ACCESSORIES

A. Hardware and Accessories: Manufacturer's standard design, heavy-duty operating hardware and accessories.

1. Material: Stainless steel
2. Hinges: Manufacturer's standard integral hinge for solid-polymer doors
3. Latch and Keeper: Manufacturer's standard latch unit designed for emergency access and with combination rubber-faced door strike and keeper. Provide units that comply with regulatory requirements for accessibility at compartments designated as accessible.
4. Coat Hook: Manufacturer's standard combination hook and rubber-tipped bumper, sized to prevent in-swinging door from hitting compartment-mounted accessories.
5. Door Pull: Manufacturer's standard unit at out-swinging doors that complies with regulatory requirements for accessibility. Provide units on both sides of doors at compartments designated as accessible.

B. Overhead Bracing: Manufacturer's standard continuous, extruded-aluminum head rail with anti-grip profile and in manufacturer's standard finish.

C. Anchorages and Fasteners: Manufacturer's standard exposed fasteners of stainless steel or chrome-plated steel or brass, finished to match the items they are securing, with theft-resistant- type heads. Provide sex-type bolts for through-bolt applications. For concealed anchors, use stainless steel, hot-dip galvanized steel, or other rust-resistant, protective-coated steel.

2.4 FABRICATION

A. Overhead-Braced Units: Provide manufacturer's standard corrosion-resistant supports, leveling mechanism, and anchors at pilasters to suit floor conditions. Provide shoes at pilasters to conceal supports and leveling mechanism.

B. Floor-Anchored Units: Provide manufacturer's standard corrosion-resistant anchoring assemblies with leveling adjustment nuts at pilasters for structural connection to floor. Provide shoes at pilasters to conceal anchorage.

C. Door Size and Swings: Unless otherwise indicated, provide 24-inch- (610-mm-) wide, in-swinging doors for standard toilet compartments and 36-inch- (914-mm-) wide, out-swinging doors with a minimum 32-inch- (813-mm-) wide, clear opening for compartments designated as accessible.

PART 3 - EXECUTION

3.1 INSTALLATION

A. General: Comply with manufacturer's written installation instructions. Install units rigid, straight, level, and plumb. Secure units in position with manufacturer's recommended anchoring devices.

B. Overhead-Braced Units: Secure pilasters to floor and level, plumb, and tighten. Set pilasters with anchors penetrating not less than 1-3/4 inches (44 mm) into structural floor unless otherwise indicated in manufacturer's written instructions. Secure continuous head rail to each pilaster with no fewer than two fasteners. Hang doors to align tops of doors with tops of panels, and adjust so tops of doors are parallel with overhead brace when doors are in closed position.

C. Floor-Anchored Units: Set pilasters with anchors penetrating not less than 2 inches (51 mm) into structural floor unless otherwise indicated in manufacturer's written instructions. Level, plumb, and tighten pilasters. Hang doors and adjust so tops of doors are level with tops of pilasters when doors are in closed position.

D. Urinal Screens: Attach with anchoring devices to suit supporting structure. Set units level and plumb, rigid, and secured to resist lateral impact.

3.2 ADJUSTING

A. Hardware Adjustment: Adjust and lubricate hardware according to hardware manufacturer's written instructions for proper operation. Set hinges on in-swinging doors to hold doors open approximately 30 degrees from closed position when unlatched. Set hinges on out-swinging doors to return doors to fully closed position.

END OF SECTION 10 16 00

SECTION 10 28 00 - TOILET, BATH, AND LAUNDRY ACCESSORIES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

1. Public-use washroom accessories.
2. Childcare accessories.
3. Healthcare accessories.
4. Underlavatory guards.
5. Custodial accessories.

1.3 ACTION SUBMITTALS

A. Product Data: For each type of product.

1.4 CLOSEOUT SUBMITTALS

A. Maintenance data.

1.5 WARRANTY

A. Manufacturer's Special Warranty for Mirrors: Manufacturer agrees to repair or replace mirrors that fail in materials or workmanship within specified warranty period.

1. Warranty Period: 15 years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 PUBLIC-USE WASHROOM ACCESSORIES

A. Toilet Tissue (Roll) Dispenser: (Owner Furnished, Contractor Installed)

1. Contractor to coordinate blocking requirements with Owner-furnished accessories.

B. Liquid-Soap Dispenser: (Owner Furnished, Contractor Installed)

1. Contractor to coordinate blocking requirements with Owner-furnished accessories.

C. Grab Bar:

1. Manufacturers: Available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

    a. A&J Washroom Accessories, Inc.
    b. American Specialties, Inc.; ASI Group.
    c. Bobrick Washroom Equipment, Inc.
    d. Bradley Corporation.
    e. GAMCO Specialty Accessories; a division of Bobrick.

2. Mounting: Flanges with concealed fasteners.
3. Material: Stainless steel, 0.05 inch thick.

    a. Finish: Smooth, No. 4 finish satin.

4. Outside Diameter: 1-1/2 inches.
5. Configuration and Length: As indicated on Drawings.

D. Sanitary-Napkin Disposal Unit:

1. Manufacturers: Available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

    a. A&J Washroom Accessories, Inc.
    b. American Specialties, Inc.; ASI Group.
    c. Bobrick Washroom Equipment, Inc.
    d. Bradley Corporation.
    e. GAMCO Specialty Accessories; a division of Bobrick.

2. Mounting: Surface mounted.
3. Door or Cover: Self-closing, disposal-opening cover.
4. Receptacle: Removable.
5. Material and Finish: Stainless steel, No. 4 finish (satin).

E. Mirror Unit with Frame:

1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

    a. A&J Washroom Accessories, Inc.
    b. American Specialties, Inc.; ASI Group.
    c. Bobrick Washroom Equipment, Inc.
    d. Bradley Corporation.
    e. GAMCO Specialty Accessories; a division of Bobrick.

2. Frame: Stainless-steel angle, 0.05 inch thick Stainless-steel channel Stainless steel, fixed tilt Stainless steel, adjustable tilt.

    a. Corners: Welded and ground smooth.

3. Hangers: Produce rigid, tamper- and theft-resistant installation, using method indicated below.

    a. Wall bracket of galvanized steel, equipped with concealed locking devices requiring a special tool to remove.

4. Size: 24 inches by 36 inches.

F. Coat Hook:

1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

    a. A&J Washroom Accessories, Inc.
    b. American Specialties, Inc.; ASI Group.
    c. Bobrick Washroom Equipment, Inc.
    d. Bradley Corporation.
    e. GAMCO Specialty Accessories; a division of Bobrick.

2. Description: Single-prong unit.
3. Material and Finish: Stainless steel, No. 4 finish (satin).

2.2 HEALTHCARE ACCESSORIES

A. Specimen Pass-Through Cabinet

1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

    a. A&J Washroom Accessories, Inc.
    b. American Specialties, Inc.; ASI Group.
    c. Bobrick Washroom Equipment, Inc.
    d. Bradley Corporation.
    e. Global Industries.

2. Description: With self-closing doors on both sides, lock that prevents doors from both being opened at same time, and removable stainless-steel tray.
3. Nominal Wall Opening: Minimum 12 inches by 12 inches
4. Material and Finish: Stainless steel, No. 4 finish (satin).

2.3 CHILDCARE ACCESSORIES

A. Diaper-Changing Station:

1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

    a. American Specialties, Inc.; ASI Group.
    b. Bradley Corporation.
    c. Foundations Children's Products.
    d. GAMCO Specialty Accessories; a division of Bobrick.
    e. Koala Kare Products.

2. Description: Horizontal Vertical unit that opens by folding down from stored position and with child-protection strap.

    a. Engineered to support minimum of 250-lb static load when opened.

3. Mounting: Semirecessed, with unit projecting not more than 1 inch from wall when closed.
4. Operation: By pneumatic shock-absorbing mechanism.
5. Material and Finish: Stainless steel, No. 4 finish (satin), with replaceable insulated polystyrene tray liner and rounded plastic corners.
6. Liner Dispenser: Built in.

2.4 UNDERLAVATORY GUARDS

A. Underlavatory Guard:

1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

    a. Plumberex Specialty Products, Inc.
    b. TCI Products.
    c. Truebro by IPS Corporation.

2. Description: Insulating pipe covering for supply and drain piping assemblies that prevents direct contact with and burns from piping; allow service access without removing coverings.
3. Material and Finish: Antimicrobial, molded plastic, white.

2.5 CUSTODIAL ACCESSORIES

A. Mop and Broom Holder:

1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

    a. A&J Washroom Accessories, Inc.
    b. American Specialties, Inc.; ASI Group.
    c. Bobrick Washroom Equipment, Inc.
    d. Bradley Corporation.
    e. GAMCO Specialty Accessories; a division of Bobrick.

2. Description: Unit with shelf, hooks, holders, and rod suspended beneath shelf.
3. Length: 36 inches.
4. Hooks: Four.
5. Mop/Broom Holders: Three.
6. Material and Finish: Stainless steel, No. 4 finish (satin).

    a. Shelf: Not less than nominal 0.05-inch- thick stainless steel.
    b. Rod: Approximately 1/4-inch- diameter stainless steel.

2.6 FABRICATION

A. Keys: Provide universal keys for internal access to accessories for servicing and resupplying. Provide minimum of six keys to Owner's representative.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Install accessories according to manufacturers' written instructions, using fasteners appropriate to substrate indicated and recommended by unit manufacturer. Install units level, plumb, and firmly anchored in locations and at heights indicated.

B. Grab Bars: Install to withstand a downward load of at least 250 lbf, when tested according to ASTM F 446.

END OF SECTION 10 28 00

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SECTION 10 44 13 - FIRE PROTECTION CABINETS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section includes fire-protection cabinets for portable fire extinguishers.

B. Related Sections:

1. Section 10 44 16 “Fire Extinguishers” for fire extinguishers.

1.3 ACTION SUBMITTALS

A. Product Data: For each type of product.

1.4 COORDINATION

A. Coordinate size of fire-protection cabinets to ensure that type and capacity of fire extinguishers indicated are accommodated.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

A. Fire-Rated Fire-Protection Cabinets: Listed and labeled to comply with requirements in ASTM E 814 for fire-resistance rating of walls where they are installed.

2.2 FIRE-PROTECTION CABINET

A. Cabinet Type: Suitable for fire extinguisher.

1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:

a) Guardian Fire Equipment, Inc.
b) JL Industries, Inc.; a division of the Activar Construction Products Group.
c) Nystrom, Inc.

B. Cabinet Construction: Rated and Nonrated.

1. Rated Cabinet Construction: Cabinets located in fire-rated walls shall be fire rated type, fabricated in accordance with ASTM E 814, and shall be UL - Listed for 1-Hour combustible and non-combustible wall systems. A UL listing label shall be affixed to each rated cabinet.

C. Cabinet Material: Cold-rolled steel sheet.

D. Recessed Cabinet: One-piece combination trim and perimeter door frame overlapping surrounding wall surface with exposed trim face and wall return at outer edge (backbend).

E. Cabinet Trim Material: Steel sheet.

F. Door Material: Steel sheet.

G. Door Style: Fully glazed panel with frame.

H. Door Glazing: Tempered break glass.

I. Door Hardware: Manufacturer's standard door-operating hardware of proper type for cabinet type, trim style, and door material and style indicated.

J. Accessories:

1. Identification: Lettering complying with authorities having jurisdiction for letter style, size, spacing, and location. Locate as directed by Architect.

a) Identify fire extinguisher in fire-protection cabinet with the words "FIRE EXTINGUISHER."

1) Location: Applied to cabinet door.
2) Application Process: Decals or Pressure-sensitive vinyl letters.
3) Lettering Color: Red.
4) Orientation: Vertical.

K. Materials:

1. Cold-Rolled Steel: ASTM A 1008/A 1008M, Commercial Steel (CS), Type B.

a) Finish: Baked enamel or powder coat.
b) Color: Manufacturer’s standard.

2. Tempered Float Glass: ASTM C 1048, Kind FT, Condition A, Type I, Quality q3, 3 mm thick, Class 1 (clear).

2.3 FABRICATION

A. Fire-Protection Cabinets: Provide manufacturer's standard box (tub) with trim, frame, door, and hardware to suit cabinet type, trim style, and door style indicated.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Prepare recesses for fire-protection cabinets as required by type and size of cabinet and trim style.

B. Fire-Protection Cabinets: Comply with manufacturer's installation instructions, and NFPA requirements for fire protection cabinets installed in fire rated walls.

C. Install fire-protection cabinets in locations and at mounting heights indicated

D. Fasten cabinets to structure, square and plumb.

E. Identification: Apply decals or vinyl lettering at locations indicated.

F. Adjust fire-protection cabinet doors to operate easily without binding. Verify that integral locking devices operate properly.

END OF SECTION 10 44 13

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SECTION 10 44 16 - FIRE EXTINGUISHERS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section includes:

1. Portable, hand-carried fire extinguishers and mounting brackets for fire extinguishers.

B. Related Sections:

1. Section 10 44 13 “Fire Protection Cabinets” for fire protection cabinets.

1.3 ACTION SUBMITTALS

A. Product Data: For each type of product.

1.4 INFORMATIONAL SUBMITTALS

A. Warranty: Sample of special warranty.

1.5 CLOSEOUT SUBMITTALS

A. Operation and maintenance data.

1.6 COORDINATION

A. Coordinate type and capacity of fire extinguishers with fire-protection cabinets to ensure fit and function.

1.7 WARRANTY

A. Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace fire extinguishers that fail in materials or workmanship within specified warranty period.

1. Warranty Period: Six years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

A. NFPA Compliance: Fabricate and label fire extinguishers to comply with NFPA 10, "Portable Fire Extinguishers."

B. Fire Extinguishers: Listed and labeled for type, rating, and classification by an independent testing agency acceptable to authorities having jurisdiction.

2.2 PORTABLE, HAND-CARRIED FIRE EXTINGUISHERS

A. Fire Extinguishers: Type, size, and capacity for each fire-protection cabinet and mounting bracket indicated.

1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

a) Badger Fire Protection.
b) JL Industries, Inc.; a division of the Activar Construction Products Group.
c) Nystrom Building Products.

2. Instruction Labels: Include pictorial marking system complying with NFPA 10, Appendix B.

B. Multipurpose Dry Chemical Type A-B-C: 4A-60 B:C UL rated 10 lb. nominal capacity, with monoammonium phosphate based dry chemical in manufacturer’s standard enameled container.

2.3 MOUNTING BRACKETS

A. Mounting Brackets: Manufacturer's standard steel, designed to secure fire extinguisher to wall or structure, of sizes required for types and capacities of fire extinguishers indicated, with plated or red baked-enamel finish.

1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

a) Badger Fire Protection.
b) JL Industries, Inc.; a division of the Activar Construction Products Group.

B. Identification: Lettering complying with authorities having jurisdiction for letter style, size, spacing, and location. Locate as indicated by Architect.

1. Identify bracket-mounted fire extinguishers with the words "FIRE EXTINGUISHER" in red letter decals applied to mounting surface.

a) Orientation: Vertical.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Examine fire extinguishers for proper charging and tagging.

1. Remove and replace damaged, defective, or undercharged fire extinguishers.

B. Install fire extinguishers and mounting brackets in locations indicated and in compliance with requirements of authorities having jurisdiction.

1. Mounting Brackets: 48 inches above finished floor to top of fire extinguisher.

C. Mounting Brackets: Fasten mounting brackets to surfaces, square and plumb, at locations indicated.

END OF SECTION 10 44 16

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SECTION 12 36 61 - SOLID SURFACING COUNTERTOPS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

1. Solid surface material countertops.
2. Solid surface material backsplashes.

1.3 ACTION SUBMITTALS

A. Product Data: For countertop materials

B. Shop Drawings: For countertops. Show materials, finishes, edge and backsplash profiles, methods of joining, and cutouts for plumbing fixtures.

1. Show locations and details of joints.
2. Show direction of directional pattern, if any.

C. Samples for Initial Selection: For each type of material exposed to view.

D. Samples for Verification: For the following products:

1. Countertop material, 6 inches square.

1.4 INFORMATIONAL SUBMITTALS

A. Qualification Data: For fabricator.

1.5 CLOSEOUT SUBMITTALS

A. Maintenance Data: For solid surface material countertops to include in maintenance manuals. Include Product Data for care products used or recommended by Installer and names, addresses, and telephone numbers of local sources for products.

1.6 QUALITY ASSURANCE

A. Fabricator Qualifications: Shop that employs skilled workers who custom-fabricate countertops similar to that required for this Project, and whose products have a record of successful in-service performance.

B. Installer Qualifications: Fabricator of countertops.

C. Mockups: Build mockups to demonstrate aesthetic effects and to set quality standards for fabrication and execution.

1. Subject to compliance with requirements, approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

1.7 FIELD CONDITIONS

A. Field Measurements: Verify dimensions of countertops by field measurements after base cabinets are installed but before countertop fabrication is complete.

1.8 COORDINATION

A. Coordinate locations of utilities that will penetrate countertops or backsplashes.

PART 2 - PRODUCTS

2.1 SOLID SURFACE COUNTERTOP MATERIALS

A. Solid Surface Material: Homogeneous-filled plastic resin complying with ICPA SS-1.

1. Basis-of-Design Product: Subject to compliance with requirements, provide Dupont Corian products indicated on Drawings or comparable product by one of the following:

a. Avonite Surfaces.
b. Formica Corporation.
c. Wilsonart International Holdings, Inc.

2.2 COUNTERTOP FABRICATION

A. Fabricate countertops according to solid surface material manufacturer's written instructions and to the AWI/AWMAC/WI's "Architectural Woodwork Standards."

1. Grade: Premium.

B. Configuration:

1. Front: Radius edge with apron, 2 inches high with 3/8-inch radius .

2. Backsplash: Straight, slightly eased at corner.
3. End Splash: Matching backsplash.

C. Countertops: 1/2-inch thick, solid surface material.

D. Backsplashes: 1/2-inch thick, solid surface material.

E. Cutouts and Holes:

1. Counter-Mounted Plumbing Fixtures: Prepare countertops in shop for field cutting openings for counter-mounted fixtures. Mark tops for cutouts and drill holes at corners of cutout locations. Make corner holes of largest radius practical.

2.3 INSTALLATION MATERIALS

A. Sealant for Countertops: Comply with applicable requirements in Section 07 92 00 "Joint Sealants."

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates to receive solid surface material countertops and conditions under which countertops will be installed, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of countertops.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

A. Install countertops level to a tolerance of 1/8 inch in 8 feet, 1/4 inch maximum. Do not exceed 1/64-inch difference between planes of adjacent units.

B. Fasten countertops by screwing through corner blocks of base units into underside of countertop. Predrill holes for screws as recommended by manufacturer.

C. Align adjacent surfaces and, using adhesive in color to match countertop, form seams to comply with manufacturer's written instructions. Carefully dress joints smooth, remove surface scratches, and clean entire surface.

D. Fasten subtops to cabinets by screwing through subtops into cornerblocks of base cabinets. Shim as needed to align subtops in a level plane.

E. Secure countertops to subtops with adhesive according to solid surface material manufacturer's written instructions. Align adjacent surfaces and, using adhesive in color to match countertop, form seams to comply with manufacturer's written instructions. Carefully dress joints smooth, remove surface scratches, and clean entire surface.

F. Bond joints with adhesive and draw tight as countertops are set. Mask areas of countertops adjacent to joints to prevent adhesive smears.

1. Install metal splines in kerfs in countertop edges at joints. Fill kerfs with adhesive before inserting splines and remove excess immediately after adjoining units are drawn into position.
2. Clamp units to temporary bracing, supports, or each other to ensure that countertops are properly aligned and joints are of specified width.

G. Install backsplashes and end splashes by adhering to wall and countertops with adhesive. Mask areas of countertops and splashes adjacent to joints to prevent adhesive smears.

H. Install aprons to backing and countertops with adhesive. Mask areas of countertops and splashes adjacent to joints to prevent adhesive smears. Fasten by screwing through backing. Predrill holes for screws as recommended by manufacturer.

I. Complete cutouts not finished in shop. Mask areas of countertops adjacent to cutouts to prevent damage while cutting. Make cutouts to accurately fit items to be installed, and at right angles to finished surfaces unless beveling is required for clearance. Ease edges slightly to prevent snipping.

1. Seal edges of cutouts in particleboard subtops by saturating with varnish.

J. Apply sealant to gaps at walls; comply with Section 07 92 00 "Joint Sealants."

END OF SECTION 12 36 61

SECTION 22 00 00 - PLUMBING

PART 1 - GENERAL

1.1 The work covered by this division consists of providing all labor, equipment and materials and performing all operations necessary for the installation of the plumbing work as herein called for and shown on the drawings.

1.2 Related Documents:

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification sections, apply to work of this section.

B. Provisions of this section apply to work of all Division 22 sections.

C. Review all architectural and structural drawings to be aware of conditions affecting work herein.

D. Definitions:

1. Provide: Furnish and install, complete and ready for intended use.

2. Furnish: Supply and deliver to project site, ready for subsequent requirements.

3. Install: Operations at project site, including unloading, unpacking, assembly, erection, placing, anchoring, applying, working to dimension, finishing, curing, protecting, cleaning, and similar requirements.

1.3 Permits and Fees: Contractor shall obtain all necessary permits, meters, and inspections required for his work and pay all fees and charges incidental thereto.

1.4 Delivery and Storage of Materials: Materials delivered to site shall be inspected for damage, unloaded, and stored with a minimum of handling. All material shall be stored to provide protection from the weather and accidental damage.

1.5 Extent of work is indicated by the drawings, schedules, and the requirements of the specification. Singular references shall not be constructed as requiring only one device if multiple devices are shown on the drawings or are required for proper system operation.

1.6 Field Measurements and Coordination:

A. The intent of the drawings and specifications is to obtain a complete and satisfactory installation. Separate divisional drawings and specifications shall not relieve the Contractor or subcontractors from full compliance of work of his trade indicated on any of the drawings or in any section of the specifications.

B. Verify all field dimensions and locations of equipment to insure close, neat fit with other trades' work. Make use of all contract documents and approved shop drawings to verify exact dimension and locations.

C. Coordinate work in this division with all other trades in proper sequence to insure that the total work is completed within contract time schedule and with a minimum cutting and patching.

D. Locate all apparatus symmetrical with architectural elements. Install to exact height and locations when shown on architectural drawings. When locations are shown only on plumbing drawings, be guided by architectural details and conditions existing at job and correlate this work with that of others.

E. Install work as required to fit structure, avoid obstructions, and retain clearance, headroom, openings and passageways. Cut no structural members without written approval.

F. Carefully examine any existing conditions, piping, and premises. Compare drawings with existing conditions. Report any observed discrepancies. Written instructions will be issued to resolve discrepancies.

G. Because of the small scale of the drawings, it is not possible to indicate all offsets and fittings or to locate every accessory. Drawings are essentially diagrammatic. Study carefully the sizes and locations of structural members, wall and partition locations, trusses, and room dimensions and take actual measurements on the job. Locate piping, equipment and accessories with sufficient space for installing and servicing. Contractor is responsible for accuracy of his measurements and shall not order materials or perform work without verification. No extra compensation will be allowed because field measurements vary from the dimensions on the drawings. If field measurements show that equipment or piping cannot be fitted, the Architect/Engineer shall be consulted. Remove and relocate, without additional compensation, any item that is installed and is later found to encroach on space assigned to another use.

1.7 Guarantee and Service:

A. The contractor shall guarantee labor, materials and equipment for a period of one (1) year from Substantial Completion, or from Owner's occupancy, whichever is earlier. Contractor shall make good any defects and shall include all necessary adjustments to and replacement of defective items without expense to the Owner.

B. Owner reserves right to make emergency repairs as required to keep equipment in operation without voiding contractor's Guarantee Bond nor relieving Contractor of his responsibilities during guarantee period.

C. Provide service on all new equipment during the guarantee period.

1.8 Shop Drawings:

A. Before ordering any materials or equipment, and within 30 days after the award of contract the Contractor shall submit to the Architect/Engineer one complete schedule showing the make, type, manufacturer's name and trade designation of all equipment.

1. This schedule shall be accompanied by the required number of copies of the manufacturer's printed specifications and shop drawings for each piece of equipment or specialty and shall give dimensions, diagrams, descriptive literature, capacity or rating, kind of material, finish, guarantee, etc., and such other detailed information as the Architect/Engineer may require.

2. When approved, such schedule shall be an addition to the specifications herewith, and shall be of equal force in that no deviation will be permitted except with the approval of the Architect/Engineer.

B. If the shop drawings show variation from the requirements of contract because of standard shop practice or other reasons, the Contractor shall make specific mention of such variation in his letter of transmittal in order that, if acceptable, Contractor will not be relieved of the responsibility for executing the work in accordance with the contract.

C. Review of shop drawings, descriptive literature, catalog data, or schedules shall not relieve the Contractor from responsibility for deviations from contract drawings or specifications, unless he has in writing called to the attention of the Architect/Engineer such deviation at the time of submission, nor shall it relieve him from responsibility for errors of any sort in shop drawings, descriptive literature, catalog data, or schedules.

D. Submit product data after award of the contract and before any equipment or materials are purchased. Product data are defined as manufacturer's printed literature specifically marked to indicate size and model and accompanied by rating sheets listing values showing that equipment meets scheduled or specified values. Properly coded stamp on submittal is required before ordering equipment. Submit the following items:

22 05 23 Valves including comparison chart
22 05 19 Strainers, fire barrier sealants, plumbing seals
22 05 48 Vibration isolators, flexible connections and hoses
22 11 13 Thermometers, wells, gages, venturis, circuit setters, pitot tubes
22 07 16 Insulation for piping and equipment
22 11 00 Hose bibbs, wall hydrants, water hammer arrestors, backflow preventers, pressure regulating valves, relief valves
22 13 00 Pipe, cleanouts, manholes
22 05 76 Cleanouts, floor drains, trap primers, backwater valves
22 14 00 Pipe, cleanouts, manholes, catchbasins, trench drains
22 14 00 Cleanouts, roof drains, backwater valves
22 40 00 Plumbing fixtures, fittings, and trim

1.9 Other Required Submittals

22 00 00 Welding and brazing certificates
22 11 00 Backflow preventer test report

PART 2 - PRODUCTS

2.1 All materials shall be new or Owner-supplied reused as shown on the drawings, the best of their respective kinds, suitable for the conditions and duties imposed on them at the building and shall be of reputable manufacturers. The description, characteristics, and requirements of materials to be used shall be in accordance with qualifying conditions established in the following sections.

2.2 Equipment and Materials

A. Shall be new and the most suitable grade for the purpose intended. Equipment furnished under this division shall be the product of a manufacturer regularly engaged in the manufacture of such items for a period of three years. Where practicable, all of the components shall be products of a single manufacturer in order to provide proper coordination and responsibility. Where required, he shall furnish proof of installation of similar units or equipment.

B. Each item of equipment shall bear a name plate showing the manufacturer's name, trade name, model number, serial number, ratings and other information necessary to fully identify it. This plate shall be permanently mounted in a prominent location and shall not be concealed, insulated or painted.

C. The label of the approving agency, such as UL, IBR, ASME, ARI, AMCA, NFPA, CGA by which a standard has been established for the particular item shall be in full view.

D. The equipment shall be essentially the standard product of a manufacturer regularly engaged in the production of such equipment and shall be a product of the manufacturer's latest design.

E. A service organization with personnel and spare parts shall be available within a radius of 100 miles for each type of equipment furnished.

F. Install in accordance with manufacturer's recommendations. Place in service by a factory trained representative where required.

G. Materials and equipment are specified herein by a single or by multiple manufacturers to indicate quality, material and type of construction desired. Manufacturer's products shown on the drawings have been used as basis for design; it shall be the Contractor's responsibility to ascertain that alternate manufacturer's products meet detailed specifications and that size and arrangement of equipment are suitable for installation.

H. Model Numbers: Catalog numbers and model numbers indicated in the drawings and specifications are used as a guide in the selection of the equipment and are only listed for the contractor's convenience. The contractor shall determine the actual model numbers for ordering materials in accordance with the written description of each item and with the intent of the drawings and specifications.

2.3 Requests for Substitution:

A. Where a particular system, product or material is specified by name, consider it as standard basis for bidding, and base proposal on the particular system, product or material specified.

B. Requests by Contractor for substitution will be considered only when reasonable, timely, fully documented, and qualifying under one or more of the following circumstances.

1. Required product cannot be supplied in time for compliance with Contract time requirements.

2. Required product is not acceptable to governing authority, or determined to be non-compatible, or cannot be properly coordinated, warranted or insured, or has other recognized disability as certified by Contractor.

3. Substantial cost advantage is offered Owner after deducting offsetting disadvantages including delays, additional compensation for redesign, investigation, evaluation and other necessary services and similar considerations.

C. All requests for substitution shall contain a "Comparison Schedule" and clearly and specifically indicate any and all differences or omissions between the product specified as the basis of design and the product proposed for substitution. Differences shall include but shall not be limited to data as follows for both the specified and substituted products:

1. Principal of operation.

2. Materials of construction or finishes.

3. Thickness of gauge of materials.

4. Weight of item.

5. Deleted features or items.

6. Added features or items.

7. Changes in other work caused by the substitution.

8. Performance curves.

2.4 If the approved substitution contains differences or omissions not specifically called to the attention of the Architect/Engineer, the Owner reserves the right to require equal or similar features to be added to the substituted products at the Contractor's expense.

2.5 Prior Approval: Where the term "or approved equal" is used, submit all requests for approval of the alternate manufacturer's products two weeks prior to bid opening. Approval will be in the form of an addendum to the specifications and drawings. Clearly indicate all differences between the specified and proposed product following the guidelines for substitution herein.

PART 3 - EXECUTION

3.1 Workmanship: All materials and equipment shall be installed and completed in a first-class workmanlike manner and in accordance with the best modern methods and practice. Any materials installed which do not present an orderly and reasonably neat and/or workmanlike appearance, or do not allow adequate space for maintenance, shall be removed and replaced when so directed by the Architect/Engineer.

3.2 Coordination

A. The Contractor shall be responsible for full coordination of the plumbing systems with shop drawings of the building construction so the proper openings and sleeves or supports etc., are provided for piping or other equipment passing through slabs or walls.

B. Any additional steel supports required for the installation of any plumbing equipment, piping, etc., shall be furnished and installed under the section of the specifications requiring the additional supports.

C. It shall be the Contractor's responsibility to see that all equipment such as valves, filters and such other apparatus or equipment that may require maintenance and operation are made easily accessible, regardless of the diagrammatic location shown on the drawings.

D. All connections to fixtures and equipment shown on the drawings shall be considered diagrammatic unless otherwise indicated by detail. The actual connections shall be made to fully suit the requirements of each case and adequately provide for expansion and servicing.

E. The contractor shall protect equipment and fixtures at all times. He shall replace all equipment and fixtures which are damaged as a result of inadequate protection.

F. Prior to starting and during progress of work, examine work and materials installed by others as they apply to work in this division. Report conditions which will prevent satisfactory installation.

G. Start of work will be construed as acceptance of suitability of work of others.

3.3 Interruption of Service: Before any equipment is shut down for disconnecting or tie-ins, arrangements shall be made with the Architect/Engineer and this work shall be done at the time best suited to the Owner. This will typically be on weekends and/or holidays and/or after normal working hours. Services shall be restored the same day unless prior arrangements are made.

3.4 Cutting and Patching: Notify General Contractor to do all cutting and patching of all holes, chases, sleeves, and other openings required for installation of equipment furnished and installed under this section. Utilize experienced trades for cutting and patching. Obtain permission from Architect/Engineer before cutting any structural items.

3.5 Equipment Setting: Bolt equipment directly to concrete pads or vibration isolators as required, using hot-dipped galvanized anchor bolts, nuts and washers. Level equipment.

3.6 Painting: Touch-up factory finishes on equipment located inside and outside shall be done under Division 22. Obtain matched color coatings from the manufacturer and apply as directed. If corrosion is found during inspection on the surface of any equipment, clean, prime, and paint, as required.

3.7 Clean-up: Thoroughly clean all exposed parts of apparatus and equipment of cement, plaster, and other materials and remove all oil and grease spots. Repaint or touch up as required to look like new. During progress of work, contractor is to carefully clean up and leave premises and all portions of building free from debris and in a clean and safe condition.

3.8 Start-up and Operational Test: Start each item of equipment in strict accordance with the manufacturer's instructions; or where noted under equipment specification, start-up shall be done by a qualified representative of the manufacturer. Alignment, lubrication, safety, and operating control shall be included in start-up check.

3.9 Record Drawings:

A. During the progress of the work the Contractor shall record on their field set of drawings the exact location, as installed, of all piping, equipment, and other systems which are not installed exactly as shown on the contract drawings.

B. Upon completion of the work, record drawings shall be prepared as described in the General Conditions, Supplementary Conditions, and Division 01 sections.

3.10 Acceptance:

A. Punch List: Submit written confirmation that all punch lists have been checked and the required work completed.

B. Instructions: At completion of the work, provide a competent and experienced person who is thoroughly familiar with project, for one day to instruct permanent operating personnel in operation of equipment and control systems.

C. Operation and Maintenance Manuals: Furnish four complete manuals bound in ring binders and organized by system or section. Manuals shall contain:

1. Detailed operating instructions and instructions for making minor adjustments.

2. Complete wiring and control diagrams.

3. Routine maintenance operations.

4. Manufacturer's catalog data, service instructions, and parts lists for each piece of operating equipment.

D. Control Diagrams: Frame under glass and mount on equipment room wall.

E. Warranties: Submit copies of all manufacturer's warranties.

F. Record Drawings: Submit record drawings.

G. Permanently tag valves with coded brass discs or engraved plastic tags attached with brass chain. Coordinate code with operating instructions. Rivet engraved plastic identification nameplates to electric switches, controls, and equipment. Stencil insulated piping with function. Color code non-insulated piping.

H. Acceptance will be made on the basis of tests and inspections of job. A representative of firm that performed test and balance work shall be in attendance to assist. Contractor shall furnish necessary mechanics to operate system, make any necessary adjustments and assist with final inspection.

END OF SECTION 22 00 00

SECTION 22 00 01 – PLUMBING CODES AND STANDARDS

PART 1 - GENERAL

1.1 All work under Division 22 shall be constructed in accordance with the codes listed herein. The design has been based on the requirements of these codes; and while it is not the responsibility of the Contractor to verify that all work called for complies with these codes, he shall be responsible for calling to the Architect/Engineer's attention any details or specifications that are not in conformance with these or other codes.

1.2 Comply with regulations and codes of suppliers of utilities.

1.3 Where no specific method or form of construction is called for in the contract documents, the Contractor shall comply with code requirements when carrying out such work.

1.4 Where code conflict exists, generally the most restrictive requirement applies. Comply with current code edition, unless noted.

1.5 Codes or standards applying to a specific part of the work may be included in that section.

PART 2 - CODES

1. Florida Building Code.
2. Florida Plumbing Code.
3. Air Conditioning and Ventilating Systems (NFPA 90A).
4. Handicapped Accessibility, ANSI A117.1 and Florida Statute Chapter 553, Part V.
5. American's with Disabilities Act of 1990 (ADA).

PART 3 - FLORIDA ADMINISTRATIVE CODE

1. FAC 10D-9 State Plumbing Code
2. FAC 6A-2 Education Facilities

PART 4 - STANDARDS

All plumbing materials, installation and systems shall meet the requirements of the following standards, including the latest addenda and amendments, to the extent referenced:

1. Underwriters' Laboratories (UL)

2. American National Standards Institution (ANSI)

3. American Society of Testing Materials (ASTM)

4. Air Conditioning and Refrigeration Institute (ARI)

5. National Fire Protection Association (NFPA)

END OF SECTION 22 00 01

SECTION 22 00 02 - PLUMBING RELATED WORK

PART 1 - DIVISION 1 - GENERAL REQUIREMENTS

1.1 All Division 01 sections apply to all Division 22 sections.

1.2 Coordinate with the general contractor for all cutting and patching. Contractors performing Division 22 work shall inform the general contractor of all cutting and patching required prior to bidding and shall coordinate installation.

PART 2 - DIVISION 02 - SITEWORK

2.1 Specific requirements for excavation and backfill for underground piping are contained in Section 22 20 00.02.

2.2 Refer to Division 02, Sitework for:

1. All water, sewer, fire protection, and storm water piping greater than five feet from the building.

2.3 The following work is part of Division 22:

1. All site water piping.

2. All site sewer piping.

PART 3 - DIVISION 03 - CONCRETE

3.1 Refer to Division 03, Concrete for:

1. Pads for plumbing equipment.

2. Encasement of plumbing work.

3. Underground structural concrete to accommodate plumbing work.

4. Rough grouting in and around plumbing work.

5. Patching concrete cut to accommodate plumbing work.

PART 4 - DIVISION 05 - METALS

4.1 Refer to Division 05, Metals for:

1. Supports for plumbing work.

2. Framing openings for plumbing equipment

PART 5 - DIVISION 06 - WOOD

5.1 Refer to Division 06, Wood for:

1. Supports for plumbing work

2. Framing openings for plumbing equipment

PART 6 - DIVISION 07 - THERMAL & MOISTURE PROTECTION

6.1 Refer to Division 07, Thermal and Moisture Protection for:

1. Caulking and waterproofing of all wall and roof mounted plumbing work.

2. Fire barrier penetration seals.

3. Providing all roof curbs and all vent flashing for metal roofs.

6.2 The following is part of Division 22 work:

1. Fire barrier penetration seals in accordance with the requirements of Division 07.

PART 7 - DIVISION 8 - DOORS AND WINDOWS

7.1 Refer to Division 08, Openings for:

1. Installation of all access doors for plumbing work.

PART 8 - DIVISION 09 - FINISHES

8.1 Refer to Division 09, Finishes for:

1. Painting exposed piping and equipment.

2. Painting structural metal and concrete for plumbing work.

3. Painting and access panels.

4. Painting all hangers - black enamel.

5. Painting color-coded plumbing work indicated for continuous painting (not banding, stripping, or stenciling). See color schedule in Division 22 section, "Plumbing Identification".

8.2 Colors shall be selected by the Architect for all painting of exposed plumbing work in occupied spaces, unless specified herein. Do not paint insulated or jacketed surfaces.

8.3 Perform the following as part of Division 22 work:

1. Touch up painting of factory finishes.

2. Painting of all hangers.

3. Painting for color coding including banding, stripping, and stenciling (not continuous painting for color coding).

PART 9 - DIVISION 11 - EQUIPMENT

9.1 Provide the following as part of Division-22 work:

1. All trim including faucets, waste connections, drain traps, vents, valves, piping, flashing, fittings, strainers, and other materials necessary to complete connections between rough-in and the connections of equipment provided by Division 11.

9.2 Refer to Division 11 - Equipment for all laboratory equipment including cabinets, casework, student stations, demonstration desks, fume hoods, snorkel exhausts, canopy hoods, safety stations, eyewashes, and all related fixtures, fittings, and trim.

9.3 Provide the following as part of Division 22 work:

1. All trim not furnished by Division 11 including drains, wastes, continuous wastes, tailpieces, traps and similar devices necessary to make fixtures operational. Provide rough-in for all fixtures. Provide final connections for all fixtures.

2. Provide all fixtures specified in Section 22 40 00.

PART 10 - DIVISION 26 - ELECTRICAL

10.1 Plumbing contractor shall furnish to electrical contractor all necessary nameplate data, equipment power requirements, wiring diagrams, etc., pertaining to the electrical phase of plumbing installation, as well as all required motors, on/off switches, warning lights, relays, and control devices.

10.2 Electrical contractor shall furnish and install all power wiring, starters and contactors, and make final electrical connections to motors, on/off switches, warning lights, relays, and control devices.

10.3 Disconnect switches for plumbing equipment shall be furnished and installed by the electrical contractor, unless specifically noted as being furnished as part of plumbing equipment.

10.4 Wiring for controls (120 volt or greater) shall be furnished and installed by the electrical contractor.

10.5 All low voltage control wiring (typically 24 volt or less) including the Energy Management Control system sensors, alarms, and input/output signals shall be furnished and installed by the plumbing contractor, complying with the requirements of Division 26.

10.6 All electrical work to be in accordance with the National Electric Code.

END OF SECTION 22 00 02

SECTION 22 00 03 – PLUMBING PIPES AND PIPE FITTINGS

PART 1 – GENERAL

1.1 Drawings and general provisions of Contract, including General and Supplementary Conditions and Division-1 Specification sections, apply to work of this section.

1.2 This section is a Division-22 Basic Plumbing Materials and Methods section, and is part of each Division-22 section making reference to pipes and pipe fittings specified herein.

1.3 Extent of pipes and pipe fittings required by this section is indicated on drawings and/or specified in other Division-22 sections.

1.4 Codes and Standards:

A. Welding: Qualify welding procedures, welders and operators in accordance with ASME B31.1, or ASME B31.9, as applicable, for shop and project site welding of piping work.

B. Brazing: Certify brazing procedures, brazers, and operators in accordance with ASME Boiler and Pressure Vessel Code, Section IX, for shop and job-site brazing of piping work.

C. NSF Labels: Where plastic piping is indicated to transport potable water, provide pipes and pipe fittings bearing approval label by National Sanitation Foundations (NSF).

1.5 Submittals:

A. Welding Certifications: Submit reports as required for piping work.

B. Brazing Certifications: Submit reports as required for piping work.

PART 2 - PRODUCTS

2.1 Piping Materials: Provide pipe and tube of type, joint type, grade, size and weight (wall thickness or Class) indicated for each service. Where type, grade or class is not indicated, provide proper selection as determined by Installer for installation requirements, and comply with governing regulations and industry standards.

2.2 Pipe/Tube Fittings: Provide factory-fabricated fittings of type, materials, grade, class and pressure rating indicated for each service and pipe size. Provide sizes and types matching pipe, tube, valve or equipment connection in each case. Where not otherwise indicated, comply with governing regulations and industry standards for selections, and with pipe manufacturer's recommendations where applicable.

2.3 Steel Pipes and Pipe Fittings

A. Pipes:

1. Black Steel Pipe: ASTM A-53 or A-120, seamless.
2. Galvanized Steel Pipe: ASTM A-53 or A-120, seamless.

B. Pipe Fittings:

1. Threaded Cast Iron: ANSI B16.4.
2. Threaded Malleable Iron: ANSI B16.3; plain or galvanized as indicated.
3. Malleable Iron Threaded Unions: ANSI B16.39; selected by installer for proper piping fabrication and service requirements including style, end connections, and metal-to-metal seats (iron, bronze or brass); plain or galvanized as indicated.
4. Threaded Pipe Plugs: ANSI B16.14.
5. Flanged Cast Iron: ANSI B16.1, including bolting.
6. Steel Flanges/Fittings: ANSI B16.5, including bolting and gasketing.
7. Forged-Steel Socket-Welding and Threaded Fittings: ANSI B16.11, except MSS SP-79 for threaded reducer inserts; rated to match schedule of connected pipe.
8. Wrought-Steel Buttwelding Fittings: ANSI B16.9, except ANSI B16.28 for short radius elbows and returns, rated to match connected pipe.
9. Pipe Nipples: Fabricated from same pipe as used for connected pipe; except do not use less than schedule 80 pipe where length remaining unthreaded is less than 1 1/2 inches, and where pipe size is less than 1 1/2 inches, and do not thread nipples full length (no close-nipples).

2.3 Copper Tube and Fittings:

A. Copper Tube:

1. Copper Tube: ASTM B88; Type L as indicated for each service; hard-drawn temper unless specifically noted as annealed.
2. ACR Copper Tube: ASTM B280.
3. DWV Copper Tube: ASTM B306.

B. Fittings:

1. Wrought-Copper Solder-Joint Fittings: ANSI B16.22.
2. Wrought-Copper Solder-Joint Drainage Fittings: ANSI B16.29.
3. Cast-Copper Flared Tube Fittings: ANSI B16.26.
4. Copper Tube Unions: Provide standard products recommended by manufacturer for use in service indicated.

2.5 Cast Iron Soil Pipes and Fittings:

A. Pipe:

1. Hubless Cast Iron Soil Pipe: FS WW-P-401, coated.
2. Cast Iron Hub-and-Spigot Soil Pipe: ASTM A74, coated.

B. Fittings:

1. Hubless Cast Iron Soil Pipe Fittings: Two piece cast iron with stainless steel bolts and nuts, MG Coupling or equal.
2. Hubless Cast Iron Soil Pipe Fittings: Neoprene gasket complying with ASTM C564 and stainless steel holding band.
3. Cast Iron Hub-and-Spigot Soil Pipe Fittings: Match soil pipe units; complying with ASTM A74.
4. Compression Gasket: Neoprene ASTM C564.
5. Lead and Oakum Joint Materials: Products complying with governing regulations for use in service indicated.

2.6 Plastic Pipes and Fittings:

A. Pipes:

1. PVC Pressure Pipe: ASTM D-1785, Schedule 40 or 80.
2. PVC DWV Pipe: ASTM D-2665, Schedule 40.
3. PVC Sewer Pipe: ASTM D-3034.

B. Fittings:

1. PVC Schedule 40 Socket: ASTM D-2466.
2. PVC Schedule 80 Socket: ASTM D-2467.
3. PVC Schedule 80 Threaded: ASTM D-2464.
4. PVC DWV Socket: ASTM D-2665.
5. PVC Sewer Socket: ASTM D-3034.
6. PVC Solvent Cement: ASTM D-2564.

2.7 Miscellaneous Piping Materials/Products:

A. Soldering Materials:

1. Tin-Antimony (95-5) Solder: ASTM B-32, Grade 95TA.
2. Silver-Phosphorus Solder: ASTM B-32, Grade 96TS.

B. Brazing Materials: Silver content of not less than 15%. Materials shall be determined by installer to comply with installation requirements.

C. Welding Materials: Comply with Section II, Part C, ASME Boiler and Pressure Vessel Code for welding materials. Materials shall be determined by installer to comply with installation requirements.

D. Gaskets for Flanged Joints: ANSI B16.21; full-faced for cast iron flanges; raised-face for steel flanges, unless otherwise noted.

E. Pipe Thread Tape: Teflon tape.

F. Protective Coating: Koppers Bitumastic No. 505 or equal.

PART 3 - EXECUTION

3.1 Installation

A. General: Install pipes and pipe fittings in accordance with recognized industry practices which will achieve permanently-leak-proof piping systems, capable of performing each indicated service without piping failure. Install each run with minimum joints and couplings, but with adequate and accessible unions for disassembly and maintenance/replacement of valves and equipment. Reduce sizes (where indicated) by use of reducing fittings. Align piping accurately at connections, within 1/16" misalignment tolerance.

B. Comply with ANSI B31 Code for Pressure Piping.

C. Locate piping runs, except as otherwise indicated, vertically and horizontally (pitched to drain) and avoid diagonal runs wherever possible. Orient horizontal runs parallel with walls and column lines. Locate runs as shown or described by diagrams, details and notations or, if not otherwise indicated, run piping in shortest route which does not obstruct usable space or block access for servicing building and its equipment. Hold piping close to walls, overhead construction, columns and other structural and permanent-enclosure elements of building; limit clearance to 1/2" where furring is shown for enclosure or concealment of piping, but allow for insulation thickness, if any. Where possible, locate insulated piping for 1" clearance outside insulation. Wherever possible in finished and occupied spaces, conceal piping from view, by locating in column enclosures, in hollow wall construction or above suspended ceilings; do not encase horizontal runs in solid partitions, except as indicated.

D. Electrical Equipment Spaces: Do not run piping through transformer vaults and other electrical or electronic equipment spaces and enclosures unless shown. Install drip pan under piping that must run through electrical spaces.

E. Cut pipe from measurements taken at the site, not from drawings. Keep pipes free of contact with building construction and installed work.

3.2 Piping System Joints: Provide joints of the type indicated in each piping system.

A. Thread pipe in accordance with ANSI B2.1; cut threads full and clean using sharp dies. Ream threaded ends to remove burrs and restore full inside diameter. Apply pipe joint compound, or pipe joint tape (Teflon) where recommended by pipe/fitting manufacturer, on male threads at each joint and tighten joint to leave not more than 3 threads exposed. Paint exposed threads to retard rusting.

B. Solder copper tube-and-fitting joints where indicated, in accordance with recognized industry practice. Cut tube ends squarely, ream to full inside diameter, and clean outside of tube ends and inside of fittings. Apply non-acid type solder flux to joint areas of both tubes and fittings. Insert tube full depth into fitting, and solder in manner which will draw solder full depth and circumference of joint. Wipe excess solder from joint before it hardens.

C. Braze copper tube-and-fitting joints where indicated, in accordance with ANSI B.31.

D. Weld pipe joints in accordance with recognized industry practice and as follows. Be guided by ANSI B.31.

1. Weld pipe joints only when ambient temperature is above 0°F.

2. Bevel pipe ends at a 37.5° angle where possible, smooth rough cuts, and clean to remove slag, metal particles and dirt.

3. Use pipe clamps or tack-weld joints; 4 welds for pipe sizes to 10". All welds shall be open-butt.

4. Build up welds with root pass, followed by filler pass and then a cover pass. Eliminate valleys at center and edges of each weld. Weld by procedures which will ensure elimination of unsound or unfused metal, cracks, oxidation, blow-holes and non-metallic inclusions.

5. Do not weld-out piping system imperfections by tack-welding procedures; refabricate to comply with requirements.

6. At Installer's option, install forged branch-connection fittings wherever branch pipe is less than 3" and at least two pipe sizes smaller than main pipe indicated; or install regular "T" fitting. Weld-O-Let or equal.

E. Flanged Joints: Match flanges within piping system, and at connection with valves and equipment. Clean flange faces and install gaskets. Tighten bolts to provide uniform compression of gaskets. Bolts shall project 1/8" to 3/8" beyond nut face when tight.

F. Cast-Iron Joints: Tightly pack joint with joint packing material. Do not permit packing to enter bore of finished joint. Clean joint after packing. Fill remaining joint space with one pouring of lead to indicated minimum depth measured from face of bell. After lead has cooled, calk joint tightly by use of hammer and calking iron. If using compression joints, comply with manufacturer’s installation instruction using gaskets and lubricant furnished specifically for this duty.

G. Hubless Cast-Iron Joints: Comply with coupling manufacturer's installation instructions.

H. Plastic Pipe Joints: Comply with manufacturer's instructions and recommendations, and with applicable industry standards.

1. Solvent-cemented joints shall be made in accordance with ASTM D-2225 and ASTM F-402.

2. PVC sewer pipe bell/gasket joints shall be installed in accordance with ASTM D-2221.

3.3 Piping Installation

A. Install piping to allow for expansion and contraction.

B. Isolate all copper tubing from steel and concrete by wrapping the pipe at the contact point, and for one inch on each side, with at least two layers of plastic electrical tape.

C. Underground Piping:

1. Coat the following underground (uninsulated) pipes with a heavy coat of bitumastic: black steel pipe, galvanized steel pipe, copper tubing, cast iron pipe (if not already coated) ductile iron pipe (if not already coated).

2. Install underground glass pipes in a protective casing of expanded polystyrene. Underground glass fittings shall be wrapped with protective plastic sheets or bags. Use care to prevent scratching or chipping glass pipes and fittings.

3. Provide plastic tape markers over all underground utilities.

END OF SECTION 22 00 03

SECTION 22 00 04 - PLUMBING PIPING SPECIALTIES

PART 1 - GENERAL

1.1 Drawings and general provisions of contract, including General and Supplementary Conditions and Division-01 Specification sections, apply to work of this section.

1.2 This section is a Division-22 Basic Plumbing Materials and Methods section, and is part of each Division-22 section making reference to or requiring piping specialties specified herein.

1.3 Submittals: Product data sheets for strainers, fire barrier sealants, mechanical sleeve seals.

PART 2 - PRODUCTS

2.1 General: Provide factory-fabricated piping specialties recommended by manufacturer for use in service indicated. Provide piping specialties of types and pressure ratings indicated for each service, or if not indicated, provide proper selection as determined by Installer to comply with installation requirements. Provide sizes as indicated, and connections, which properly mate with pipe, tube, and equipment connections. Where more than one type is indicated, selection is Installer's option.

2.2 Escutcheons

A. General: Provide pipe escutcheons as specified herein with inside diameter closely fitting pipe outside diameter, or outside of pipe insulation where pipe is insulated. Select outside diameter of escutcheon to completely cover pipe penetration hole in floors, walls, or ceilings; and pipe sleeve extension, if any. Pipe escutcheons shall be stainless steel in all locations

B. Pipe Escutcheons for Moist Areas: For waterproof floors, and areas where water and condensation can be expected to accumulate, provide cast brass or sheet brass escutcheons, solid or split hinged.

C. Pipe Escutcheons for Dry Areas: Provide sheet steel escutcheons, solid or split hinged.

2.3 Low Pressure Y-Type Pipeline Strainers

A. General: Provide strainers full line size of connecting piping, with ends matching piping system materials. Select strainers for 125 psi working pressure, with Type 304 stainless steel screens, with 3/64" perforations @ 223 per sq. in.

B. Select from the following types:

1. Threaded Ends, 2" and Smaller: Cast-iron body, screwed screen retainer with centered blowdown fitted with pipe plug.

2. Threaded Ends, 2-1/2" and Larger: Cast-iron body, bolted screen retainer with off-center blowdown fitted with pipe plug.
3. Flanged Ends, 2-1/2" and Larger: Cast-iron body, bolted screen retainer with off-center blowdown fitted with pipe plug.
4. Butt Welded Ends, 2-1/2" and Larger: Schedule 40 cast carbon steel body, bolted screen retainer with off-center blowdown fitted with pipe plug.

2.4 Dielectric Unions

A. General: Provide standard products recommended by manufacturer for use in service indicated, which effectively isolate ferrous from non-ferrous piping (electrical conductance), prevent galvanic action, and stop corrosion.

B. Acceptable Producers: Epco Sales, Capitol Manufacturing Company, or approved equal.

2.5 Fire Barrier Penetration Seals

A. Provide seals for any opening through fire-rated walls, floors, or ceilings used as passage for plumbing components such as piping in accordance with the require-ments of Division 07.

B. Cracks, Voids, or Holes Up to 4" Diameter: Use putty or calking, one-piece intumescent elastomer, non-corrosive to metal, compatible with synthetic cable jackets, and capable of expanding 10 times when exposed to flame or heat, UL-listed.

C. Openings 4" or Greater: Use sealing system capable of passing 3-hour fire test in accordance with ASTM E-814, consisting of wall wrap or liner, partitions, and end caps capable of expanding when exposed to temperatures of 250 to 350□F, UL-listed.

2.6 Fabricated Piping Specialties

A. Drip Pans: Provide drip pans fabricated from corrosion-resistant sheet metal with watertight joints, and with edges turned up 2-1/2". Reinforce top, either by structural angles or by rolling top over 1/4" steel rod. Provide hole, gasket, and flange at low point for watertight joint and 1" drain line connection.

B. Pipe Sleeves: Provide pipe sleeves of one of the following:

1. Sheet-Metal: Fabricate from galvanized sheet metal; round tube closed with snaplock joint, welded spiral seams, or welded longitudinal joint. Fabricate from the following gages: 3" and smaller, 20 gage; 4" to 6" 16 gage; over 6", 14 gage.
2. Steel-Pipe: Fabricate from Schedule 40 galvanized steel pipe; remove burrs.
3. Iron-Pipe: Fabricate from cast-iron or ductile-iron pipe; remove burrs.
4. Plastic-Pipe: Fabricate from Schedule 80 PVC plastic pipe; remove burrs.

C. Sleeve Seals: Provide sleeve seals for sleeves located in foundation walls below grade, or in exterior walls, of one of the following:

1. Lead and Oakum: Calked between sleeve and pipe.

2. Plumbing Sleeve Seals: Installed between sleeve and pipe.

2.7 Mechanical Sleeve Seals

A. General: Modular plumbing type, consisting of interlocking synthetic rubber links shaped to continuously fill annular space between pipe and sleeve, connected with bolts and pressure plates which cause rubber sealing elements to expand when tightened, providing watertight seal and electrical insulation.

B. Acceptable Producers: Thunderline "Link Seal" or approved equal.

PART 3 - EXECUTION

3.1 Pipe Escutcheons: Install pipe escutcheons on each pipe penetration through floors, walls, partitions, and ceilings where penetration is exposed to view; and on exterior of building. Secure escutcheon to pipe or insulation so escutcheon covers penetration hole, and is flush with adjoining surface.

3.2 Y-Type Strainers: Install Y-type strainers full size of pipeline, in accordance with manufacturer's installation instructions. Install pipe nipple and shutoff valve in strainer blow down connection, full size of connection, except for strainers 2" and smaller installed ahead of control valves feeding individual terminals. Where indicated, provide drain line from shutoff valve to plumbing drain, full size of blow down connection.

3.3 Locate Y-type strainers in supply line ahead of the following equipment, and elsewhere as indicated, if integral strainer is not included in equipment:

1. Pumps
2. Pressure reducing valves.
3. Temperature or pressure regulating valves.

3.4 Dielectric Unions: Install at each piping joint between ferrous and non-ferrous piping. Comply with manufacturer's installation instructions.

3.5 Fire Barrier Penetration Seals: Fill entire opening with sealing compound. Adhere to manufacturer's installation instructions. Refer to Division 07.

3.6 Drip Pans: Locate drip pans under piping passing over or within 3' horizontally of electrical equipment, and elsewhere as indicated. Hang from structure with rods and building attachments, weld rods to sides of drip pan. Brace to prevent sagging or swaying. Connect 1" drain line to drain connection, and run to nearest plumbing drain or elsewhere as indicated.

3.7 Pipe Sleeves: Install pipe sleeves of types indicated where piping passes through walls, floors, ceilings, and roofs. Do not install sleeves through structural members of work, except as detailed on drawings, or as reviewed by Architect/Engineer. Install sleeves accurately centered on pipe runs. Size sleeves so that piping and insulation (if any) will have free movement in sleeve, including allowance for thermal expansion; but not less than 2 pipe sizes larger than piping run. Where insulation includes vapor-barrier jacket, provide sleeve with sufficient

clearance for installation. Install length of sleeve equal to thickness of construction penetrated, and finish flush to surface; except floor sleeves. Extend floor sleeves 1/4" above level floor finish, and 3/4" above floor finish sloped to drain. Provide temporary support of sleeves during placement of concrete and other work around sleeves, and provide temporary closure to prevent concrete and other materials from entering sleeves.

1. Install sheet-metal sleeves at interior partitions and ceilings other than suspended ceilings.
2. Install iron-pipe sleeves at all foundation wall penetrations and at exterior penetrations; both above and below grade.
3. Install steel-pipe or plastic-pipe sleeves except as otherwise indicated.

3.8 Sleeve Seals: Install in accordance with the following: Fill and pack annular space between sleeve and pipe with oakum, calk with lead on both sides.

3.9 Plumbing Sleeve Seals: Loosely assemble rubber links around pipe with bolts and pressure plates located under each bolt head and nut. Push into sleeve and center. Tighten bolts until links have expanded to form watertight seal.

END OF SECTION 22 00 04

SECTION 22 00 06 – PLUMBING EXPANSION AND BACKFILL

PART 1 - GENERAL

1.1 Drawings and general provisions of Contract, including General and Supplementary Conditions and Division-01 Specification sections, apply to work of this section.

1.2 This section is a Division-22 Basic Plumbing Materials and Methods section, and is part of each Division-22 section making reference to excavation and backfill specified herein.

1.3 Existing Utilities: Underground utilities shown were taken from old drawings. The exact location of these utilities and irrigation branches and abandoned services are not known. Use extreme caution when excavating. Contact Gulf Coast Community College for more information on utility location.

1.4 Dig Permit: A Dig Permit must be obtained from the School District of Santa Rosa County prior to any excavation. In case of conflicts between this specification and the Dig Permit requirements, the most stringent will govern.

1.5 Refer to other Division-22 sections and/or Drawings for specific requirements of the particular piping system being installed. Where another Division-22 section or the Drawings conflict with requirements of this section, the other Division-22 section or the Drawings shall take precedence over the general requirements herein.

1.6 OSHA: Contractor employee worker protection for all trenching and excavation operations shall comply with all current OSHA requirements.

PART 2 - PRODUCTS

2.1 Sand: Clean, hard, uncoated grains free from organic matter or other deleterious substances. Sand for backfill shall be of a grade equal to mortar sand.

2.2 Gravel: Clean, well graded hard stone or gravel, free from organic material. Size range to be from No. 4 screen retentions to 1".

2.3 Earth: Must be free of clay, muck, stones, wood, roots or rubbish.

2.4 Identification Tape: Polyethylene 6 inches wide, 0.004 inches thick, continuously printed with "CAUTION" in large letters and type of pipe below.

PART 3 - EXECUTION

3.1 Ditching and Excavation: Shall be performed by hand wherever there is a possibility of encountering obstacles or any existing utility lines of any nature whatsoever. Where clear and

unobstructed areas are to be excavated, appropriate machine excavation methods may be employed. Avoid use of machine excavators within the limits of the building lines.

3.2 Bedding: Excavate to bottom grade of pipe to be installed, and shape bed of undisturbed earth to contour of pipe for a width of at least 50% of pipe diameter. If earth conditions necessitate excavation below grade of the pipe, such as due to the presence of clay, muck, or roots, bring bed up to proper elevation with clean, new sand (as described in paragraph 2.1), deposited in 6" layers and tamped. If subcut exceeds 12", or if bed is of an unstable nature, a 6" minimum layer of gravel will be required before sand bedding begins. The Architect/Engineer will determine if the earth conditions require subcutting to achieve proper bedding.

3.3 Placing: Pipe shall be carefully handled into place. Avoid knocking loose soil from the banks of the trench into the pipe bed. Rig heavier sections with nylon slings in lieu of wire rope to avoid crushing or chipping. Pipe which is handled with insulation in place, coated pipe, and jacketed pipe shall have special handling slings as required to prevent damage to the material.

3.4 Backfilling: Deposit clean new sand (as described in paragraph 2.1) to 6" above the pipe and tamp. Then deposit sand or earth carefully in 6" layers, maintaining adequate side support, especially on nonferrous piping materials. Compact fill in 6" layers, using plumbing means, up to the top elevation of the pipe, and in 12" layers to rough or finish grade as required. Restore surface to original condition. Sod, sprig and fine grade as required.

3.5 Special: Excavations shall be installed and maintained in satisfactory condition during the progress of the work. Subsurface structures are to be constructed in adequately sized excavations. De-watering equipment shall be installed and properly maintained where required. Shoring shall be employed in the event of unstable soil condition, and in all cases where necessary to protect materials and personnel from injury.

3.6 Identification Tape: Install directly above all underground piping, one tape for each pipe where multiple pipes are installed. Depth of tape shall be approximately 12 inches below finished grade and 18" above buried pipe. Install copper wire above PVC pipes.

3.7 Depth of Cover: Minimum cover for underground piping is two feet unless indicated otherwise.

3.8 Existing Pavement: Where new piping passes below existing streets, driveways, parking lots, or other paved areas, the pavement shall be saw cut. Backfill shall be compacted to 95% density and the pavement shall be patched to match existing pavement. Provide compaction tests and reports as required.

3.9 Landscape Restoration:

A. Lawn or Unpaved Areas: The soil shall be replaced according to the original profile. Compact the top 6" of subgrade and each 6" layer of backfill or fill material at 85% maximum density for cohesive soils and 90% relative density for cohesionless soils.

If additional soil is required, the contractor shall supply weed free topsoil of a type to match existing topsoil.

B. Grass: Fine grade and solid sod with the type of grass to match the existing species and cultivar. If there are any questions regarding type of grass or landscape restoration in general, the contractor should contact one of the campus landscape architects.

C. Landscape Maintenance: The contractor shall be responsible for watering and other grounds maintenance in the area of his construction until the project is accepted.

END OF SECTION 22 00 06

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SECTION 22 05 23 - GENERAL DUTY VALVES FOR PLUMBING PIPING

PART 1 - GENERAL

1.1 Drawings and general provisions of Contract, including General and Supplementary Conditions and Division-01 Specification sections, apply to the work of this section.

1.2 This section is a Division-22 Basic Materials and Methods section, and is part of each Division-22 section making reference to or requiring valves specified herein.

1.3 Extent of valves required by this section is indicated on drawings and/or specified in other Division-22 sections.

1.4 Types of Valves specified in this section include the following:

1. Gate Valves.
2. Globe Valves.
3. Drain Valves.
4. Ball Valves.
5. Butterfly Valves.
6. Check Valves.
7. Swing Check.
8. Lift Check.
9. Balancing Cocks.
10. Safety Valves.

1.5 Quality Assurance:

A. Valve Dimensions: For face-to-face and end-to-end dimensions of flanged or welding-end valve bodies, comply with ANSI B16.10.

B. Valves Installed in Boiler Rooms: Comply with ASME Boiler and Pressure Vessel Code.

C. Valve Types: Provide valves of same type by same manufacturer.

D. Valve Listing: For valves on fire protection piping, provide listing by UL and Associated Factory Mutual Fire Insurance Companies.

1.6 Submittals:

A. Product Data: Submit catalog cuts, specifications, installation instructions, and dimensioned drawings for each type of valve. Include pressure drop curve or chart for each type and size of valve. Submit valve comparison chart with applicable valves clearly marked if valves other than basis-of-design are to be used.

B. Maintenance Data: Submit maintenance data and spare parts lists for each type of valve. Include this data in Maintenance Manual.

PART 2 - PRODUCTS

2.1 General: Provide factory-fabricated valves recommended by manufacturer for use in service indicated. Provide valves of types and pressure ratings indicated; provide proper selection as determined by Installer to comply with installation requirements. Provide sizes as indicated, and connections which properly mate with pipe, tube, and equipment connections. Where more than one type is indicated, selection is Installer's option.

2.2 Gate Valves:

A. Packing: Select valves designed for repacking under pressure when fully opened, equipped with packing suitable for intended service. Select valves designed so back seating protects packing and stem threads from fluid when valve is fully opened, and equipped with gland follower.

B. Comply with the following standards:

1. Cast Iron Valves: MSS SP-70.

2. Bronze Valves: MSS SP-80

3. Steel Valves: ANSI B16.34.

C. For Domestic Water Service:

1. Threaded Ends 2" and Smaller: Class 125, bronze body, screwed bonnet, rising stem, solid wedge. Stockham B107.

2. Flanged Ends 2-1/2" and Larger: Class 125, iron body bronze mounted, bolted bonnet, rising stem, OS&Y, solid wedge. Stockham G622.

3. Soldered Ends 2" and Smaller: Class 125, bronze body, screwed bonnet, nonrising stem, solid wedge. Stockham B109.

D. Manufacturer: Subject to compliance with requirements, provide gate valves of one of the following:

1. Crane Co., Valve Div.
2. Fairbanks, Co.
3. Hammond Valve Corp., Div. of Conval Corp.
4. Jenkins Bros., A Corp.
5. NIBCO, Inc.
6. Stockham Valves and Fittings, Inc.
7. Walworth Co.

2.3 Globe Valves:

A. Packing: Select valves designed for repacking under pressure when fully opened, equipped with packing suitable for intended service. Select valves designed so back seating protects packing and stem threads from fluid when valve is fully opened, and equipped with gland follower.

B. Composition Disc: Where required, provide suitable material for intended service. For metal seated globe valves, provide hardened stainless steel disc and seat ring.

C. Comply with the following standards:

1. Cast-Iron Valves: MSS SP-85.
2. Bronze Valves: MSS SP-80.
3. Steel Valves: ANSI B16.34.

D. For Domestic Water Service:

1. Threaded Ends 2" and Smaller: Class 150, bronze body, union bonnet, rising stem, composition disc. Stockham B22.

2. Soldered Ends 2" and Smaller: Class 125, bronze body, screwed bonnet, rising stem, composition disc. Stockham B14T.

3. Flanged Ends 2-1/2" and Larger: Class 125, iron body, bolted bonnet, rising stem, OS&Y, renewable seat and disc. Stockham G513.

E. Manufacturer: Subject to compliance with requirements, provide globe valves of one of the following:

1. Crane Co., Valve Div.
2. Fairbanks, Co.
3. Hammond Valve Corp., Div. of Conval Corp.
4. Jenkins Bros., A Corp.
5. NIBCO, Inc.
6. Stockham Valves and Fittings, Inc.
7. Walworth Co.

2.4 Drain Valves:

A. For Low Pressure Drainage Service:

1. Threaded Ends 2" and Smaller: Class 125, bronze body, screwed bonnet, rising stem, composition disc, 3/4" hose outlet connection.

2. Soldered Ends 2" and Smaller: Class 125, bronze body, screwed bonnet, rising stem, composition disc, 3/4" hose outlet connection.

B. Manufacturer: Subject to compliance with requirements, provide drain valves of one of the following:

1. Crane Co., Valve Div.
2. Fairbanks, Co.
3. Hammond Valve Corp., Div. of Conval Corp.
4. Jenkins Bros., A Corp.
5. NIBCO, Inc.
6. Stockham Valves and Fittings, Inc.
7. Walworth Co.

2.5 Swing Check Valves:

A. General: Construct pressure containing parts of valves as follows:

1. Bronze Valves, 125, or 150 psi: ANSI/ASTM B62.

2. Metallic Seated Bronze Valves, 200 or 300 psi: ANSI/ASTM B61.

3. Iron Body Valves: ANSI/ASTM A126, Grade B.

B. Comply with MSS SP-71 for design, workmanship, material and testing.

1. Construct valves of pressure castings free of any impregnating materials. Construct valves of bronze, regrinding, with seating angle 40° to 45°, unless composition disc is specified.

2. Provide stop plug as renewable stop for disc hanger, unless otherwise specified.

3. Construct disc and hanger as separate parts, with disc free to rotate.

4. Support hanger pins on both ends by removable side plugs.

C. For Domestic Water Service:

1. Threaded Ends 2" and Smaller: Class 125, bronze body, screwed cap, horizontal swing, bronze disc. Stockham B 319.

2. Soldered Ends 2" and Smaller: Class 125, bronze body, screwed cap, horizontal swing, bronze disc. Stockham B 309.

3. Flanged Ends 2-1/2" and Larger: Class 125, iron body bronze mounted, bolted cap, horizontal swing, cast-iron disc. Stockham G931.

D. Manufacturer: Subject to compliance with requirements, provide check valves of one of the following:

1. Crane Co., Valve Div.
2. Fairbanks, Co. (The)

3. Hammond Valve Corp., Div. of Conval Corp.
4. Jenkins Bros., A Corp.
5. NIBCO, Inc.
6. Stockham Valves and Fittings, Inc.
7. Walworth Co.

2.6 Ball Valves:

A. General: Select with port area equal to or greater than connecting pipe area, include seat ring designed to hold sealing material.

B. Comply with the following standards:

1. Cast-Iron Valves: MSS SP-72.
2. Steel Valves: ANSI B16.34.
3. Bronze Valves: MSS SP-80.

C. For Domestic Water Service:

1. Threaded Ends 2" and Smaller: Class 125, bronze 2 piece body, bronze ball, bronze stem. Stockham S 217.

2. Soldered Ends 2" and Smaller: Class 125, bronze 2 piece body, bronze ball, bronze stem. Stockham S 227

D. Manufacturer: Subject to compliance with requirements, provide ball valves of one of the following:

1. Crane Co., Valve Div.
2. Fairbanks Co.
3. Hammond Valve Corp., Div. of Conval Corp.
4. Jamesbury Corp.
5. NIBCO, Inc.
6. Stockham Valves and Fittings, Inc.
7. Walworth Co.

2.7 Butterfly Valves:

A. General: Comply with MSS SP-67. Where butterfly valves are used as shutoffs for terminal or equipment removal or repair, select lug type valves. Select wafer type valves for other applications. Provide gear operators on butterfly valves 8" and larger.

B. For Domestic Water Service:

1. Wafer Type 3" and Larger: Class 150, cast-iron body, lever operated, cadmium plated ductile iron disc, Type 410 stainless steel stem, nitrile rubber seat. Stockham LG111 or LG511.

2. Lug Type 3" and Larger: Class 150, ductile iron body, lever operated, cadmium plated ductile iron disc, Type 410 stainless steel stem, nitrile rubber seat. Stockham LD211 or LD611.

C. Manufacturer: Subject to compliance with requirements, provide butterfly valves of one of the following:

1. Crane Co., Valve Div.
2. Fairbanks Co.
3. Jenkins Bros., A Corp.
4. Mark Controls Corp., MCC Centerline.
5. NIBCO, Inc.
6. Stockham Valves and Fittings, Inc.

2.8 Lift Check Valves:

A. General: Provide lift check valves, 2" and smaller, constructed of bronze and forged steel to suit service. Construct bronze valves with basic saturated steam rating of 125 or 150 psi with pressure containing parts of materials having at least physical properties of ANSI/ASTM B62. Conform to ANSI/FCI 74-1 for design, rating, and testing. Construct pressure castings free of any impregnating materials.

1. Horizontal Lift Check Valves: to 2", straight pattern, threaded ends, pressure rated for 150 psi saturated steam, renewable composition disc, screw-over cap, bronze body.

2. Vertical Lift Check Valves: to 2", straight vertical pattern, threaded ends, pressure rated for 150 psi saturated steam, renewable composition disc, screw-in hub, bronze body.

3. Air Compressor Lift Check Valves: to 2", straight pattern, threaded ends, pressure rated for 300 psi air, flat stainless steel disc, renewable stainless steel seat ring, stainless steel spring, screw-in cap, bronze body.

4. Spring Loaded Horizontal Lift Check Valves: to 2", straight pattern, threaded ends, pressure rated for 150 psi saturated steam, renewable composition disc, phosphor bronze wire spring, screw-over cap, bronze body.

B. Manufacturer: Subject to compliance with requirements, provide lift check valves of one of the following:

1. Fairbanks Co. (The).
2. Hammond Valve Corp., A Condec Co.
3. Jenkins Bros., A Corp.
4. Lunkenheimer Co. (The), Div. Conval Corp.
5. Stockham Valves & Fittings, Inc.

2.9 Balancing Cocks:

A. Provide balancing cocks 2" and smaller, constructed of bronze, 125 psi class, square head with check pin.

B. Provide balancing cocks over 2", lubricated plug valves with semi-steel body, 175 psi class.

C. Manufacturer: Subject to compliance with requirements, provide balancing cocks by one of the following:

1. Hammond Valve Corp.
2. Crane Co.
3. Walworth Co.
4. Lunkenheimer Co.

2.10 Water Safety Relief Valves:

A. Provide ASME safety relief valves where shown on the drawings and/or required by codes for over-pressure protection. The setpoint shall be at or below the maximum allowable working pressure of the most limiting device in the system being protected. Valves shall have enclosed spindles with gland seals to minimize leakage and a manual lift lever for testing.

B. Manufacturer: Subject to compliance with requirements, provide safety relief valves of one of the following:

1. Bell and Gossett
2. Watts
3. McDonnell & Miller
4. Kunkle
5. Manning, Maxwell & Moore

2.11 Valve Features:

A. General: Provide valves with features indicated and, where not otherwise indicated, provide proper valve features as determined by Installer for installation requirements. Comply with ANSI B31.1

B. List of Features:

1. Bypass: Comply with MSS SP-45, and except as otherwise indicated, provide manufacturer's standard bypass piping and valving.

2. Drain: Comply with MSS SP-45, and provide threaded pipe plugs complying with applicable Division-22 pipe or tube section.

3. Flanged: Valve flanges complying with ANSI B16.1 (cast iron), ANSI B16.5, (steel), or ANSI B16.24 (bronze).

4. Threaded: Valve ends complying with ANSI B2.1.

5. Butt-Welding: Valve ends complying with ANSI B16.25.

6. Socket-Welding: Valve ends complying with ANSI B16.11.

7. Solder-Joint: Valve ends complying with ANSI B16.18.

8. Trim: Fabricate pressure-containing components of valve, including stems (shafts) and seats from brass or bronze materials, of standard alloy recognized in valve manufacturing industry.

9. Non-Metallic Disc: Non-metallic material selected for service indicated in accordance with manufacturer's published literature.

10. Renewable Seat: Design seat of valve with removable disc, and assemble valve so disc can be replaced when worn.

11. Extended Stem: Increase stem length by 2" minimum, to accommodate insulation applied over valve.

12. Plumbing Actuator: Factory-fabricated gears, gear enclosure, external chain attachment and chain designed to provide plumbing advantage in operating valve.

13. Bonnet: Part of gate or globe valve through which stem passes to valve body, and attached to valve body by screws, bolts, union, or welding.

14. Solid Wedge: One-piece tapered disc in gate valve, designed for contact on both sides.

15. Double Disc: Two-piece tapered disc in gate valve, designed for contact on one side of each disc.

16. Outside Screw and Yoke (OS&Y): Stem and handwheel designed to rise out of bonnet or yoke as valve is operated from closed to open position.

17. Inside Screw, Non-rising Stem: Stem and handwheel designed to rotate without rising when valve is operated from closed to open position.

18. Tight Shutoff: Butterfly valve designed for flow regulation with memory stop, and manufactured to be tight in closed position.

19. Low Leakage: Butterfly valve designed for flow regulation, and manufactured with minimum leakage tolerance in closed position.

20. Nominal Leakage: Butterfly valve designed for flow regulation.

PART 3 - EXECUTION

3.1 Installation:

A. General: Except as otherwise indicated, comply with the following requirements:

1. Install valves where required for proper operation of piping and equipment, including valves in branch lines where necessary to isolate sections of piping. Locate valves so as to be accessible and so that separate support can be provided when necessary.

2. Install valves with stems pointed up, in vertical position where possible, but in no case with stems pointed downward below horizontal plane.

B. Insulation: Where insulation is indicated, install extended-stem valves, arranged in proper manner to receive insulation.

C. Applications Subject to Shock: Install valves with bodies of metal other than cast iron where thermal or plumbing shock is indicated or can be expected to occur.

D. Applications Subject to Corrosion: Do not install bronze valves and valve components in direct contact with steel, unless bronze and steel are separated by dielectric insulator.

E. Plumbing Actuators: Install plumbing actuators with chain operators where indicated, and where valves 4" and larger are mounted more than 7'-0" above floor in plumbing rooms, boiler rooms, and where recommended by valve manufacturer because of valve size, pressure differential or other operating condition making manual operation difficult.

3.2 Selection of Valve Ends (Pipe Connections): Except as otherwise indicated, select and install valves with the following ends or types of pipe/tube connections:

A. Tube Size 2" and Smaller: Soldered-joint valves.

B. Pipe Size 2" and Smaller: One of the following, at Installer's option:

1. Threaded valves.
2. Butt-welding valves.
3. Socket-welding valves.

C. Pipe Size 2-1/2" and Larger: One of the following, at Installer's option:

1. Butt-welding valves.
2. Socket-welding valves.
3. Flanged valves.

3.3 Non-Metallic Disc: Limit selection and installation of valves with non-metallic disc to locations indicated and where foreign material in piping system can be expected to prevent tight shutoff of metal seated valves.

3.4 Renewable Seats: Select and install valves with renewable seats, except where otherwise indicated.

3.5 Fluid Control: Except as otherwise indicated, install gate, ball, globe, and butterfly valves to comply with ANSI B31.1. Where throttling is indicated or recognized as principal reason for valve, install globe or butterfly valves.

3.6 Installation of Check Valves:

A. Swing Check Valves: Install in horizontal position with hinge pin horizontally perpendicular to center line of pipe. Install for proper direction flow.

B. Horizontal Lift Check Valve: Install in horizontal piping line with stem vertically upward, position for proper direction flow.

C. Vertical Lift Check Valve: Install in vertical piping line with upward flow with stem vertically upward.

D. Air Compressor Lift Check Valve: Install in air compressor discharge line.

E. Spring Loaded Horizontal Lift Check Valve: Install in horizontal piping line with stem vertically upward, position for proper direction of flow.

3.7 Installation of Relief Valves:

A. Install water safety valves in accordance with the manufacturer's instructions.

B. Pipe discharge from relief valves full size, sloping downward to a floor drain or outside the building. Cut the end of the pipe at a 45° angle and terminate 6 inches above the floor or grade.

END OF SECTION 22 05 23

SECTION 22 05 29 - HANGERS AND SUPPORTS FOR PLUMBING PIPING AND EQUIPMENT

PART 1 - GENERAL

1.1 Drawings and general provisions of Contract, including General Supplementary Conditions and Division-01 Specification sections, apply to work of this section.

1.2 This section is a Division-22 Basic Materials and Methods section, and is a part of each Division-22 section making reference to supports, anchors, and seals specified herein.

1.3 Extent of supports, anchors, and seals required by this section is indicated on drawings and/or specified in other Division-22 sections.

1.4 Code Compliance: Comply with applicable plumbing codes pertaining to product materials and installation of supports, anchors, and seals.

1.5 MSS Standard Compliance:

A. Provide pipe hangers and supports of which materials, design, and manufacture comply with ANSI/MSS SP-58.

B. Select and apply pipe hangers and supports, complying with MSS SP-69.

C. Fabricate and install pipe hangers and supports, complying with MSS SP-89.

D. Terminology used in this section is defined in MSS SP-90.

1.6 Acceptable Producers: Grinnel, Michigan Hanger Company, B-Line Systems, or approved equal.

1.7 UL and FM Compliance: Provide products which are Underwriters Laboratories listed and Factory Mutual approved.

PART 2 - PRODUCTS

2.1 Horizontal-Piping Hangers and Supports: Except as otherwise indicated, provide factory-fabricated horizontal-piping hangers and supports complying with ANSI/MSS SP-58, of one of the following MSS types listed, selected by Installer to suit horizontal-piping systems, in accordance with MSS SP-69 and manufacturer's published product information. Use only one type by one manufacturer for each piping service. Select size of hangers and supports to exactly fit pipe size for bare piping, and to exactly fit around piping insulation with saddle or shield for insulated piping. Provide copper-plated hangers and supports for copper-piping systems.

1. Adjustable Steel Clevises: MSS Type 1.

2. Steel Double Bolt Pipe Clamps: MSS Type 3.

3. Steel Pipe Clamps: MSS Type 4.

4. Pipe Stanchion Saddles: MSS Type 37, including steel pipe base support and cast-iron floor flange.

5. Single Pipe Rolls: MSS Type 41.

6. Pipe Roll Stands: MSS Type 44.

2.2 Vertical-Piping Clamps: Except as otherwise indicated, provide factory-fabricated vertical-piping clamps complying with ANSI/MSS SP-58, of one of the following types listed, selected by Installer to suit vertical piping systems, in accordance with MSS SP-69 and manufacturer's published product information. Select size of vertical piping clamps to exactly fit pipe size of bare pipe. Provide copper-plated clamps for copper-piping systems.

1. Two-Bolt Riser Clamps: MSS Type 8.

2. Four-Bolt Riser Clamps: MSS Type 42.

2.3 Hanger-Rod Attachments: Except as otherwise indicated, provide factory-fabricated hanger-rod attachments complying with ANSI/MSS SP-58, of one of the following MSS types listed, selected by Installer to suit horizontal-piping hangers and building attachments, in accordance with MSS SP-69 and manufacturer's published product information. Use only one type by one manufacturer for each piping service. Select size of hanger-rod attachments to suit hanger rods. Provide copper-plated hanger-rod attachments for copper-piping systems.

1. Steel Turnbuckles: MSS Type 13.

2. Malleable Iron Sockets: MSS Type 16.

2.4 Building Attachments: Except as otherwise indicated, provide factory-fabricated building attachments complying with ANSI/MSS SP-58, of one of the following MSS types listed, selected by Installer to suit building substrate conditions, in accordance with MSS SP-69 and manufacturer's published product information. Select size of building attachments to suit hanger rods. Provide copper-plated building attachments for copper-piping systems.

1. Concrete Inserts: MSS Type 18.

2. Center Beam Clamps: MSS Type 21.

3. C-Clamps: MSS Type 22.

4. Malleable Beam Clamps: MSS Type 30.

5. Side Beam Brackets: MSS Type 34, for steel or wooden beams.

2.5 Saddles and Shields: Except as otherwise indicated, provide saddles or shields under piping hangers and supports, factory-fabricated, for all insulated piping. Size saddles and shields for exact fit to mate with pipe insulation.

1. Protection Shields: MSS Type 40; of length recommended by manufacturer to prevent crushing of insulation.

2. Protection Saddles: MSS Type 39; use with rollers, fill interior voids with segments of insulation matching adjoining insulation.

2.6 Miscellaneous Materials:

1. Metal Framing: Provide products complying with NEMA STD ML 1.

2. Steel Plates, Shapes and Bars: Provide products complying with ANSI/ASTM A 36.

3. Cement Grout: Portland cement (ANSI/ASTM C 150, Type I or Type III) and clean uniformly graded, natural sand (ANSI/ASTM C 404, Size No. 2). Mix at a ratio of 1.0 part cement to 3.0 parts sand, by volume, with minimum amount of water required for placement and hydration.

4. Heavy-Duty Steel Trapezes: Fabricate from steel shapes or continuous channel struts selected for loads required; weld steel in accordance with AWS standards.

PART 3 - EXECUTION

3.1 Preparation

A. Proceed with installation of hangers, supports and anchors only after required building structural work has been completed in areas where the work is to be installed. Correct inadequacies including (but not limited to) proper placement of inserts, anchors and other building structural attachments.

B. Prior to installation of hangers, supports, anchors and associated work, Installer shall meet at project site with Contractor, installer of each component of associated work, and installers of other work requiring coordination with work of this section for purpose of reviewing material selections and procedures to be followed in performing the work in compliance with requirements specified.

3.2 Installation of Building Attachments:

A. Install building attachments at required locations within concrete or on structural steel for proper piping support. Space attachments within maximum piping span length indicated in MSS SP-69. Install additional building attachments where support is required for additional concentrated loads, including valves, flanges, guides, strainers, expansion joints, and at changes in direction of piping. Install concrete inserts before concrete is placed; fasten insert

securely to forms. Where concrete with compressive strength less than 2500 psi is indicated, install reinforcing bars through openings at top of inserts.

B. In areas of work requiring attachments to existing concrete, use self drilling rod inserts, Phillips Drill Co., "Red-Head" or equal.

C. In areas of work requiring attachment to prestressed concrete, drill completely through the slab and bolt hanger rods to properly sized steel plates.

3.3 Installation of Hangers and Supports:

A. General: Install hangers, supports, clamps and attachments to support piping properly from building structure; comply with MSS SP-69. Arrange for grouping of parallel runs of horizontal piping to be supported together on trapeze type hangers where possible. Install supports with maximum spacings complying with MSS SP-69 or as listed herein, whichever is most limiting. Where piping of various sizes is to be supported together by trapeze hangers, space hangers for smallest pipe size or install intermediate supports for smaller diameter pipe. Do not use wire or perforated metal to support piping, and do not support piping from other piping.

1. Horizontal steel pipe and copper tube 1 1/2" diameter and smaller: support on 6 foot centers.

2. Horizontal steel pipe and copper tube over 1 1/2" diameter: support on 10 foot centers.

3. Vertical steel pipe and copper tube: support at alternate floors.

4. Plastic pipe: support in accordance with manufacturer's recommendations.

5. Horizontal cast iron pipe inside building: support each length of pipe (at the joint).

6. Vertical cast iron pipe: support at each floor and at the base.

B. Install hangers and supports complete with necessary inserts, bolts, rods, nuts, washers and other accessories. Except as otherwise indicated for exposed continuous pipe runs, install hangers and supports of same type and style as installed for adjacent similar piping. Paint all hangers with black enamel.

C. Prevent electrolysis in support of copper tubing by use of hangers and supports which are copper plated, or by other recognized industry methods.

D. Provision for Movement:

1. Install hangers and supports to allow controlled movement of piping systems and to permit freedom of movement between pipe anchors, and to facilitate action of expansion joints, expansion loops, expansion bends and similar units.

2. Load Distribution: Install hangers and supports so that piping live and dead loading and stresses from movement will not be transmitted to connected equipment.

3. Pipe Slopes: Install hangers and supports to provide indicated pipe slopes, and so that maximum pipe deflections allowed by ANSI B31 are not exceeded.

E. Insulated Piping: Comply with the following installation requirements.

1. Shields: Where low-compressive-strength insulation or vapor barriers are indicated on cold or chilled water piping, install coated protective shields. For pipe 8" and over, install wood insulation saddles.

2. Clamps: Attach clamps, including spacers (if any), to piping with clamps projecting through insulation; do not exceed pipe stresses allowed by ANSI B31.

3.3 Installation of Anchors:

A. Install anchors at proper locations to prevent stresses from exceeding those permitted by ANSI B31, and to prevent transfer of loading and stresses to connected equipment.

B. Fabricate and install anchor by welding steel shapes, plates and bars to piping and to structure. Comply with ANSI B31 and with AWS standards.

C. Anchor Spacings: Where not otherwise indicated, install anchors at ends of principal pipe-runs, at intermediate points in pipe-runs between expansion loops and bends. Make provisions for preset of anchors as required to accommodate both expansion and contraction of piping.

D. Where expansion compensators are indicated, install anchors in accordance with expansion unit manufacturer's written instructions, to limit movement of piping and forces to maximums recommended by manufacturer for each unit.

3.5 Equipment Bases:

A. Concrete housekeeping bases will be provided as work of Division 03. Furnish to Contractor scaled layouts of all required bases, with dimensions of base, and location to column center lines. Furnish templates, anchor bolts, and accessories necessary for base construction.

B. Provide concrete housekeeping bases for all floor mounted equipment furnished as part of the work of Division 22. Size bases to extend minimum of 4" beyond equipment base in any direction; and 4" above finished floor elevation. Construct of reinforced concrete, roughen floor slab beneath base for bond, and provide steel rod anchors between floor and base. Locate anchor bolts using equipment manufacturer's templates. Chamfer top and edge corners.

END OF SECTION 22 05 29

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SECTION 22 05 48 - VIBRATION AND SEISMIC CONTROLS FOR PLUMBING AND PIPING EQUIPMENT

PART 1 - GENERAL

1.1 Drawings and general provisions of Contract, including General and Supplementary Conditions and Division-01 Specification sections, apply to work of this section.

1.2 This section is a Division-22 Basic Plumbing Materials and Methods section, and is part of each Division-22 section making reference to vibration isolation equipment.

1.3 Acceptable Producers: Subject to compliance with requirements, provide vibration isolation equipment of: Mason Industries, Keflex, Consolidated Kinetics, Vibration Mountings & Controls, or approved equal. All vibration isolators shall be supplied by a single approved manufacturer.

1.4 Submittals:

A. Product data sheets, including configurations, and vibration isolation rating data.

B. Provide calculations showing supported weight, deflection, and isolator size and type for each item of supported equipment.

C. Installation instructions.

PART 2 - PRODUCTS

2.1 Neoprene Mountings: Double deflection neoprene-in-sheer mountings shall have a minimum static deflection of 0.35". All metal surfaces shall be neoprene covered. The top and bottom surfaces shall be neoprene ribbed and bolt holes shall be provided in the base. On equipment such as small vent sets and close coupled pumps, steel rails shall be used above the mountings to compensate for the overhang. Mason Industries, Type ND.

2.2 Spring Mountings: Spring isolators shall be free-standing and laterally stable without any housing. All mounts shall have leveling bolts. Spring diameter shall be not less than 0.8 of the compressed height of the spring at rated load. Springs shall have a minimum additional travel to solid equal to 50% of the rated deflection. Springs shall be so designed that the ratio of horizontal stiffness to vertical stiffness is approximately one. Each isolator shall be mounted on a double layer of 5/8 inch thick ribbed or waffle pattern neoprene separated by a 16-gauge stainless steel plate. A square bearing plate shall be provided as required to load the pad uniformly in the range of 40 to 50 psi. Mason Industries, Type SLF. Use for AHU's.

2.3 Spring Mountings with Housings: Spring isolators shall consist of open, stable steel springs and include vertical travel limit stops to control extension when weight is removed. The housing of the spring unit shall serve as blocking during erection of equipment. The unit isolator base plate shall be complete with two layers of 5/16 inch thick ribbed or waffle pattern neoprene pads separated by a 16 gauge stainless steel plate unless a separate isolation pad is provided

between the spring and top of base plate as standard. Entire pad components shall be secured to the base plate of the isolator. Mason Industries, Type SLR. Use for chillers.

2.4 Pads: Waffle or ribbed pattern neoprene pads shall be fabricated from 40-50 durometer neoprene. Mason Industries, Type W. Use for air compressor.

2.5 Hangers: Vibration hangers shall contain a steel spring set in a neoprene cup manufactured with a grommet to prevent short-circuiting of the hanger rod. The cup shall contain a steel washer designed to properly distribute the load on the neoprene and prevent its extrusion. Spring diameters and hanger box lower-hole sizes shall be large enough to permit the hanger rod to swing through a 30-degree arc before contacting the hole and short circuiting the spring. Springs shall have a minimum additional travel to solid equal to 50% of the rated deflection. Mason Industries, Type 30.

2.6 Hangers: Vibration hangers shall contain a laterally stable steel spring and 0.3" deflection neoprene or fiberglass element in series. A neoprene neck shall be provided where the hanger rod passes through the steel box supporting the isolator mount to prevent metal to metal contact. Spring diameters and hanger box lower hole sizes shall be large enough to permit the hanger rod to swing through a 30 degree arc before contacting the hole and short circuiting the spring. Springs shall have a minimum additional travel to solid equal to 50% of the rated deflection. Mason Industries, type 30N.

2.7 Hangers: Double deflection neoprene-in-sheer or fiberglass hangers. Units shall be complete with projected neoprene bushing to prevent steel-to-steel contact between hanger box and hanger rod. Average static deflection shall be not less than 0.4 inches. Mason Industries, Type HD.

2.8 Acoustical Pipe Seal: Metal sleeve pipe supports shall consist of formed and stiffened galvanized steel sleeves lined on the inside with moisture and vermin resistant felt or sponge rubber bonded to metal sleeve and nominally 1/2 to 3/4 inch thick. Sleeve inside diameter shall equal pipe outside diameter in each application. Sleeves shall be split longitudinally so they can be snapped over pipes and reclosed without damage. Sleeve lengths shall be as recommended by the manufacturer for the given diameters, but shall not be less than 2 inches. Where fire-rated assemblies are penetrated, substitute 10 lb. density fiberglass as packing. Mason Industries, Type SWS.

2.9 Vertical Resilient Pipe Supports: Provide all directional acoustical pipe anchors with a telescopic arrangement of steel tubes containing neoprene material. Units shall be the standard product of the vibration isolation equipment manufacturer which is specifically designed for resiliently supporting vertical pipe risers using riser clamps or similar supports. Mason Industries, Type ADA.

2.10 Flexible Connections: Provide neoprene and nylon flexible connectors rated at 150 psi and 220EF. Connectors shall have the number of spheres required and galvanized flanges. Provide control rods or cables as required for each application. Mason Industries.

A. Chiller connections: Type MFNC.

2.11 Flexible Hoses: Provide 300 psi working pressure flexible hoses with corrugated seamless hose body and braided cover. Mason Industries.

A. Stainless steel: Type BSS threaded or Type RF flanged, as required. Use in air and vacuum systems, and other ferrous systems as required.

B. Bronze: Type BBF with sweat ends. Use in refrigerant systems, and other copper systems as required.

2.12 Steel Base Frame for Floor-Mounted Equipment: Frames shall consist of structural steel sections sized, spaced and connected to form a rigid base which will not twist, rack, deform or deflect in any manner that will negatively affect the operation of the supported equipment or the performance of the vibration-isolation mounts. Frames shall be of adequate size and plan form to support basic equipment units and motors plus any associated pipe elbow or duct elbow supports and electrical control elements or other components closely related and requiring resilient support in order to prevent vibration transfer from equipment to the building structure. Frames shall include side mounting brackets for attachment to Type SLF floor mounts. The clearance between the underside of any frame or mounted equipment unit and the top of the building structure below shall be at least 2 inches. The vibration isolator supplier may furnish these frames. Mason Industries, Type WFSL.

2.13 Concrete Inertia Block for Floor-Mounted Equipment: Concrete inertia blocks shall be formed of stone-aggregate concrete (150 lbs./cu.ft.) cast between appropriate steel reinforcing perimeter structural steel channels. Inertia block thickness shall be not less than 1/12 the longest dimension of the mounted equipment or equipment assembly. Inertia blocks shall be built to form a rigid base which will not twist, rack, deform, deflect or crack in any manner that will negatively affect the operation of the supported equipment or the performance of the vibration-isolation mounts. Inertia blocks shall be of adequate size and plan form to support basic equipment units and motors plus any associated pipe or duct elbow supports, electrical control elements or other components closely related and requiring resilient support in order to prevent vibration transfer from equipment to the building structure. Inertia blocks shall include side mounting brackets for attachment to type SLF or SLR floor mounts. The clearance between the underside of any inertia block and the top of the building structure below shall be at least 2 inches. The vibration isolator supplier may furnish the structural steel perimeter frame, including side-mounting brackets and anchor bolts. Mason Industries, Type KSL.

2.14 Steel Rails: Steel rails of channels and Type ND isolators, or angles and Type SLR isolators as required. Mason Industries, Type RND or RC.

2.15 Vibration Isolation Base for Rooftop Equipment: Provide aluminum vibration isolation bases that fit over roof curb and under the equipment. Provide spring isolators having a 1" minimum static deflection, resilient snubbers for wind resistance, closed cell weather seal at top and bottom, and EDPM flexible connection around entire perimeter. The unit shall provide a water-tight system. Mason Industries, Type CMAB.

PART 3 - EXECUTION

3.1 Select and install vibration isolation devices for the duty indicated and for ease of inspection and adjustment and proper operation. Install in accordance with the manufacturer's written instructions.

3.2 Vibration isolation hangers shall be positioned so that hanger housing may rotate a full 360 degrees without contacting any object.

3.3 Under no conditions shall piping, ductwork or conduit be suspended from one another or physically contact one another. Vibrating systems shall be kept free from non-vibrating systems.

3.4 Connections of Piping:

A. Piping connected to vibration isolated equipment shall be installed so that it does not strain or force out of alignment vibration isolators supporting the basic equipment, nor shall pipes restrict such equipment from "floating" freely on its respective vibration isolation system. Flexible connections shall be used to eliminate transferring vibration along piping.

B. Drain piping connected to vibrating equipment shall not physically contact any building construction or non-isolated systems or components.

3.5 Connections of Ducts: Ducts shall be connected to fan intakes and discharges by means of flexible connectors fabricated from neoprene, loaded vinyl or other material as specified, in order to prevent short circuiting the vibration isolation. The clear length of flexible connector shall be approximately two inches. Flexible material should not be so slack as to take definite concave shape during fan operation. Refer to Division-22 section "Ductwork Accessories".

3.6 All connections to fixtures and equipment shown on the drawings shall be considered diagrammatic unless otherwise indicated by detail. The actual connections shall be made to fully suit the requirements of each case and adequately provide for expansion and servicing.

3.7 Exterior Metal Parts: All metal parts of vibration isolation units installed out-of-doors shall be hot dip galvanized after fabrication.

3.8 Acoustical Pipe Seals: Install acoustical pipe seals where shown on the drawings.

3.9 Resilient Support of Piping:

A. Ceiling Hung Piping: Install vibration hangers at the first three support points of pipe runs connected to vibrating equipment in plumbing rooms. Install vibration hangers for all horizontal piping where shown or noted on the drawings.

B. Floor Mounted Piping: Install vibration mountings at the first three support points of pipe runs connected to vibrating equipment in plumbing rooms.

C. Vertical Piping: Install resilient pipe supports with riser clamps at each point of vertical support.

3.10 Flexible Connections: Select and install flexible connections in pump suction and discharge, chiller inlet and outlet, and where shown on the drawings or required by equipment specifications.

3.11 Flexible Hoses: Select and install flexible hoses in refrigerant piping where shown, air compressor outlets, vacuum pump inlets and outlets, and where shown on the drawings or required by equipment specifications. Select end types to match equipment and piping connections. Install on the equipment side of shutoff valves horizontally and parallel to the equipment shafts wherever possible.

3.12 Equipment Mountings:

A. Unless otherwise shown or specified, all floor or roof mounted equipment shall be set on at least 4-inch high housekeeping type supports.

B. No equipment unit shall bear directly on vibration isolators unless its own frame is suitably rigid to span between isolators, and such direct support is approved by the equipment manufacturer. All support frames shall be sufficiently stiff and rigid so as to prevent distortion and misalignment of components installed thereon.

C. Unless otherwise indicated, all equipment mounted on vibration-isolated bases shall have a minimum operating clearance of 2 inches between the structural steel frame and the concrete housekeeping pad or floor beneath the equipment. The clearance space shall be checked to ensure that no construction debris has been left to short-circuit or restrict the proper operation of the vibration isolation system.

END OF SECTION 22 05 48

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SECTION 22 05 53 - IDENTIFICATION FOR PLUMBING AND PIPING EQUIPMENT

PART 1 - GENERAL

1.1 Drawings and general provisions of Contract, including General and Supplementary Conditions and Division-01 Specification sections, apply to work of this section.

1.2 This section is a Division-22 Basic Plumbing Materials and Methods section, and is part of each Division-22 section making reference to identification devices specified herein.

1.3 Extent of plumbing identification work required by this section is indicated on drawings and/or specified in other Division-22 sections.

1.4 Refer to Division-26 sections for identification requirements of electrical work; not work of this section. Refer to other Division-22 sections for identification requirements for controls; not work of this section.

1.5 Codes and Standards: Comply with ANSI A13.1 for lettering size, length of color field, colors, and viewing angles of identification devices.

PART 2 - PRODUCTS

2.1 General: Provide manufacturer's standard products of categories and types required for each application as referenced in other Division-22 sections. Where more than single type is specified for application, selection is Installer's option, but provide single selection for each product category.

2.2 Painted Identification Materials

A. Stencils: Standard fiberboard stencils, prepared for required applications with letter sizes generally complying with recommendations of ANSI A13.1 for piping and similar applications, but not less than 1-1/4" high letters for ductwork and not less than 3/4" high letters for access door signs and similar operational instructions.

B. Stencil Paint: Standard exterior type stenciling enamel; black, except as otherwise indicated; either brushing grade or pressurized spray-can form and grade.

C. Identification Paint: Standard identification enamel.

2.3 Plastic Pipe Markers

A. Pressure-Sensitive Type: Provide manufacturer's standard pre-printed, permanent adhesive, color-coded, pressure-sensitive vinyl pipe markers.

1. Lettering: Manufacturer's standard pre-printed nomenclature which best describes piping system in each instance, as selected by Architect/Engineer in cases of variance with name as shown or specified.

2. Arrows: Print each pipe marker with arrows indicating direction of flow, either integrally with piping system service lettering (to accommodate both directions), or as separate unit of plastic.

2.4 Plastic Tape:

A. General: Provide manufacturer's standard color-coded pressure-sensitive (self-adhesive) vinyl tape, not less than 3 mils thick.

B. Width: Provide 1-1/2" wide tape markers on pipes with outside diameters (including insulation, if any) of less than 6", 2-1/2" wide tape for larger pipes.

2.5 Valve Tags:

A. Brass Valve Tags: Provide 19-gage polished brass valve tags with stamp-engraved piping system abbreviation in 1/4" high letters and sequenced valve numbers 1/2" high, and with 5/32" hole for fastener. Provide 1-1/2" diameter tags, except as otherwise indicated.

B. Plastic Laminate Valve Tags: Provide manufacturer's standard 3/32" thick engraved plastic laminate valve tags, with piping system abbreviation in 1/4" high letters and sequenced valve numbers 1/2" high, and with 5/32" hole for fastener. Provide 1-1/2" square black tags with white lettering, except as otherwise indicated.

2.6 Engraved Plastic-Laminate Signs:

A. General: Provide engraving stock melamine plastic laminate, in the sizes and thicknesses indicated, engraved with engraver's standard letter style of the sizes and wording indicated, punched for plumbing fastening except where adhesive mounting is necessary because of substrate.

B. Thickness: 1/16" for units up to 20 sq. in. or 8" length; 1/8" for larger units.

C. Fasteners: Self-tapping stainless steel screws, except contact-type permanent adhesive where screws cannot or should not penetrate the substrate.

2.7 Stamped Nameplates: Provide equipment manufacturer's standard stamped nameplates for VAV pumps, air compressors, alarm panels, zone valve boxes, pumps, etc.

PART 3 - EXECUTION

3.1 Coordination: Where identification is to be applied to surfaces which require insulation, painting or other covering or finish,including valve tags in finished plumbing spaces, install

identification after completion of covering and painting. Install identification prior to installation of acoustical ceilings and similar removable concealment.

3.2 Stenciled Signs: Provide stenciled signs on each access door in ductwork and housings, indicating purpose of access (to what equipment) and other maintenance and operating instructions, and appropriate and procedural information.

3.3 Piping System Identification

A. General: Install pipe markers of one of the following types on each system indicated to receive identification, and include arrows to show normal direction of flow:

1. Plastic pipe markers, with application system as indicated under "Materials" in this section. Install on pipe insulation segment where required for hot non-insulated pipes.

2. Stenciled markers, black or white for best contrast, wherever continuous color-coded painting of piping is provided.

B. Locate pipe markers and color bands as follows wherever piping is exposed to view in occupied spaces, machine rooms, accessible maintenance spaces and exterior non-concealed locations.

1. Near each valve and control device.

2. Near each branch, excluding short take-offs for fixtures and terminal units; mark each pipe at branch, where there could be question of flow pattern.

3. Near locations where pipes pass through walls or floors/ ceilings, or enter non-accessible enclosures.

4. At points which permit view of concealed piping.

5. Near major equipment items and other points of origination and termination.

6. Spaced intermediately at maximum spacing of 50' along each piping run, except reduce spacing to 25' in congested areas of piping and equipment.

7. On piping above removable acoustical ceilings, except omit intermediately spaced markers.

3.4 Valve Identification: Provide valve tag on every valve, cock and control device in each piping system; exclude check valves, valves within factory-fabricated equipment units, plumbing fixture faucets, convenience and lawn-watering hose bibs, and shut-off valves at plumbing fixtures, and similar rough-in connections of end-use fixtures and units.

3.5 Plumbing Equipment Identification: Install engraved plastic laminate sign on or near each major item of plumbing equipment and each operational device. Label shall indicate type of system and area served. Provide signs for the following general categories of equipment and operational devices:

1. Main control and operating valves, including medical and dental safety devices.

2. Meters, gages, thermometers and similar units.

3. Tanks and pressure vessels.

3.6 Stamped Nameplates: Equipment manufacturers to provide standard stamped nameplates on all major equipment items such as motors, pumps, AHUs, etc. Where motors are hidden from view (within equipment casing, or otherwise not easily accessible, etc.), the equipment supplier shall furnish a duplicate motor data nameplate to be affixed to the equipment casing in an easily visible location, unless data is already included on the equipment nameplate.

3.7 Adjusting and Cleaning:

A. Adjusting: Relocate any plumbing identification device which has become visually blocked by work of this division or other divisions.

B. Cleaning: Clean face of identification devices, and glass frames of valve charts.

END OF SECTION 22 05 53

SECTION 22 07 19 - PLUMBING PIPING INSULATION

PART 1 - GENERAL

1.1 Drawings and general provisions of Contract, including General and Supplementary Conditions and Division-01 Specification sections, apply to work of this section.

1.2 Division-22 Basic Plumbing Materials and Methods Sections apply to work of this section.

1.3 Acceptable Producers: Armstrong, Manville, Gustin-Bacon, Owens Corning, Pittsburgh Corning, U.S. Rubber, or approved equal. All products shall be asbestos-free.

1.4 Submittals: Producer's data sheets and installation instructions on each product including insulation, coverings, adhesives, sealers, protective finishes, and other material recommended by the manufacturer for applications indicated.

1.5 Flame/Smoke Ratings: Provide composite plumbing insulation (insulation, jackets, coverings, sealers, mastics, and adhesive) with a flame-spread rating of 25 or less, and a smoke-developed rating of 50 or less, as tested by ANSI/ASTM E84.

PART 2 - PRODUCTS

2.1 Pipe Insulation Materials:

A. Fiberglass Pipe Insulation: ASTM C547, Class 1 unless otherwise indicated. (Preformed sleeving with white all-service jacket, suitable for temperatures up to 450°F)

B. Flexible Unicellular Pipe Insulation: ASTM C534, Type I. (Tubular, suitable for use to 200°F.)

C. Staples, Bands, Wires, and Cement: As recommended by the insulation manufacturer for applications indicated.

D. Adhesives, Sealers, Protective Finishes: Products recommended by the insulation manufacturer for the application indicated.

E. Jackets: ASTM C921, Type I (vapor barrier) for piping below ambient temperature, Type II (vapor permeable) for piping above ambient temperature. Type I may be used for all piping at Installer's option.

F. Encase pipe fitting insulation with one-piece premolded PVC fitting covers all exposed insulated pipes below ceiling level.

G. Encase exterior pipe insulation with 24 gage aluminum jacket.

2.2 Equipment Insulation Materials:

A. Rigid Fiberglass Equipment Insulation: ASTM C612, Class 1. (Boards, non-loading bearing, suitable for use to 400°F.)

B. Flexible Fiberglass Equipment Insulation: ASTM C553, Type I, Class B-3. (Flexible blankets suitable for use to 350°F, 1 pcf).

C. Jacketing Material for Equipment Insulation: Provide presized glass cloth jacketing material, not less than 7.8 ounces per square yard, except as otherwise indicated.

D. Equipment Insulation Compounds: Provide adhesives, cements, sealers, mastics and protective finishes as recommended by insulation manufacturer for applications indicated.

E. Equipment Insulation Accessories: Provide staples, bands, wire, wire netting, tape corner angles, anchors, stud pins and metal covers as recommended by insulation manufacturer for applications indicated.

PART 3 - EXECUTION

3.1 General

A. Install thermal insulation products in accordance with manufacturer's written instructions, and in compliance with recognized industry practices to ensure that insulation serves intended purpose.

B. Install insulation materials with smooth and even surfaces and on clean and dry surfaces. Redo poorly fitted joints. Do not use mastic or joint sealer as filler for gapping joints and excessive voids resulting from poor workmanship.

C. Maintain integrity of vapor-barrier on insulation and protect it to prevent puncture and other damage. Label all insulation "ASBESTOS FREE".

D. Do not apply insulation to surfaces while they are hot.

E. Do not install insulation until systems have been checked and found free of leaks. Surfaces shall be clean and dry before attempting to apply insulation. A professional insulator with adequate experience and ability shall install insulation.

F. Do not install insulation on pipe systems until acceptance tests have been completed except for flexible unicellular insulation. Do not install insulation until the building is "dried-in".

3.2 Fiberglass Pipe Insulation

A. Insulate the following piping systems:

1. Domestic hot water, 110°-140° F: up to 1-1/4" pipe - 1/2" thick, 1-1/2" to 2" pipe - 1" thick, over 2" pipe - 1-1/2" thick.

2. Storm water piping above finish floor including roof drain body - 1/2" thick.

3. All water pipe above slab shall be insulated: 1/2" thick.

B. Apply insulation to pipe with all side and end joints butted tightly. Seal longitudinal lap by pressurizing with plastic sealing tool. Apply 3 inch wide self sealing butt strips to joints between insulation sections. Insulate all fittings, flanges, valves and strainers with premolded insulation. Apply coat of insulating cement to fittings and wrap with glass cloth overlapping each wrap 1" and adjacent pipe 2". Finish with heavy coat of general purpose mastic. Premolded PVC covers may also be used.

C. Provide hanger or pipe support shields of 16 gauge (minimum) galvanized steel over the insulation which extends halfway up the pipe insulation cover and at least 6" on each side of the hanger.

D. Omit insulation on exposed plumbing fixture runouts from faces of wall or floor to fixture; on unions, flanges, strainer blowoffs, flexible connections and expansion joints.

3.3 Flexible Unicellular Pipe Insulation:

A. Insulate the following piping systems:

1. Exposed drains from handicapped lavatories - 1/2" thick.
2. Horizontal above-grade waste lines receiving condensate from air conditioning units to points of connection receiving waste from 4 or more fixtures - 1/2" thick.

B. Apply insulation in accordance with the manufacturer's recommendations and instructions. Mitre cut insulation to fit pipe fittings. Use approved cement to seal all joints and ends in the insulation.

C. Insulation outside the building shall be protected by a 0.016" thickness aluminum jacket with aluminum bands on 12" centers.

3.4 Fiberglass Equipment Insulation:

A. Insulate the following equipment:

1. Hot water storage heater - 2" thick.

B. Coat insulated surfaces with a layer of insulating cement, troweled in a workmanlike manner, leaving a smooth continuous surface. Fill in scored block, seams, chipped edges, and depressions, and cover over joints with cement of sufficient thickness to remove surface irregularities. Cover insulated surface with glass cloth jacketing neatly fitted and firmly secured. Lap seams at least 2 inches. Apply over vapor barrier where applicable.

END OF SECTION 22 07 19

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SECTION 22 11 00 - FACILITY WATER DISTRIBUTION

PART 1 - GENERAL

1.1 Drawings and general provisions of Contract, including General and Supplementary Conditions and Division-1 Specification sections, apply to work of this section.

1.2 Division-22 Basic Plumbing Requirements and Basic Plumbing Materials and Methods sections apply to work of this section.

1.3 Extent of potable water systems work, is indicated on drawings and schedules, and by requirements of this section.

1.4 Refer to other Division-22 sections for site water distribution system; not work of this section unless noted.

1.5 Refer to appropriate Division-02 sections for exterior potable water system; not work of this section unless noted.

1.6 Insulation for potable water piping is specified in other Division-22 sections, and is included as work of this section. Insulation requirements include:

1. Domestic hot water piping

2. Cold water pipe above finished floor.

1.7 Excavation and backfill required in conjunction with water piping is specified in other Division-22 sections, and is included as work of this section.

1.8 Code Compliance: Comply with applicable portions of Florida Building Code - Plumbing pertaining to selection and installation of plumbing materials and products. Comply with local utility requirements.

1.9 Submittals: Submit manufacturer's technical product data and installation instructions for potable water systems materials and products.

1.10 Maintenance Data: Submit maintenance data and parts lists for potable water systems materials and products. Include this data, product data, shop drawings, and record drawings in maintenance manual; in accordance with requirements of Division 01.

PART 2 - PRODUCTS

2.1 General: Provide piping materials and factory-fabricated piping products of sizes, types, pressure ratings, temperature ratings, and capacities as indicated. Where not indicated, provide proper selection as determined by Installer to comply with installation requirements. Provide materials and products complying with Florida Building Code - Plumbing where

applicable. Provide sizes and types matching pipe materials used in potable water systems. Where more than one type of materials or products are indicated, selection is Installer's option.

2.2 Identification: Provide identification complying with Division-22 Basic Plumbing Materials and Methods section "Plumbing Identification". Provide manufacturer's standard permanent, bright-colored, continuous-printed plastic tape, intended for direct burial service; not less than 6" wide x 4 mils thick. Provide blue tape with black printing reading "CAUTION WATER LINE BURIED BELOW".

2.3 Pipes and Fittings: Provide pipes and pipe fittings complying with Division-22 Basic Plumbing Materials and Methods section "Pipes and Pipe Fittings", in accordance with the following listing:

A. Interior Water Piping

1. Above grade: Copper tube; Type L, hard-drawn temper; wrought-copper fittings, solder-joints.

2. Below Grade: Copper tube; Type L, soft-annealed temper; no joints below floor.

B. Exterior Water Piping

1. Copper tube; Type L, hard-drawn temper; wrought-copper fittings, solder-joints.

2. Polyvinyl chloride pipe (PVC), Schedule 40; PVC socket fittings, solvent cement joints.

C. Solder joints shall be made with 95-5 solder.

D. Deionized Water: Schedule 40 PVC, NSF labeled.

2.4 Piping Specialties: Provide piping specialties complying with Division-22 Basic Plumbing Materials and Methods section "Piping Specialties", in accordance with the following listing:

1. Pipe escutcheons
2. Low-pressure Y-type pipeline strainers
3. Dielectric unions
4. Fire barrier penetration seals
5. Drip pans
6. Pipe sleeves
7. Sleeve seals
8. Mechanical sleeve seals

2.5 Supports and Anchors: Provide supports and anchors complying with Division-22 Basic Plumbing Materials and Methods section "Supports and Anchors".

2.6 Interior Valves: Provide valves complying with Division-22 Basic Plumbing Materials and Methods section "Valves", in accordance with the following listing:

1. Sectional and Shutoff Valves: Gate valves.

2. Drain Valves: Gate valves or ball valves.

3. Check Valves: Swing check valves.

4. Balance Cocks: Bronze.

2.7 Exterior Valves: Provide as indicated, gate valves, AWWA C500, 175 psi working pressure. Provide threaded, flanged, hub, or other end configurations to suit size of valve and piping connections. Provide inside screw type for use with curb valve box, iron body, bronze-mounted, double disc, parallel seat, non-rising stem. Clow Corp., Dresser Mfg., Fairbanks Co., Kennedy, Stockham.

2.8 Hose Bibbs: Provide rough nickel plated hose bibbs with lock shield compression stop and removable handle, solid flange, female connection with 3/4" male threaded hose end, and straight line type non-removable vacuum breaker with 3/4" male threaded hose end. Acorn 8121 RCP or equal model by Woodford.

2.9 Non-freeze Wall Hydrants: Provide 3/4" anti-syphon, non-freeze wall hydrant with bronze casing, satin bronze box, straight inlet connection, and integral vacuum breaker-backflow preventer, Wade W-8600-175 or approved equal.

2.10 Water Hammer Arrestors: Provide bellows or piston type water hammer arrestors, stainless steel casing and bellows, pressure rated for 250 psi, tested and certified in accordance with PDI Standard WH-201. Precision Plumbing Products, Josam, Zurn, Amtrol, Wade, Jay R. Smith, or approved equal.

2.11 Backflow Preventers: Provide reduced pressure principle backflow preventers consisting of assembly including shutoff valves on inlet and outlet, and strainer on inlet. Backflow preventers shall include test cocks, and pressure-differential relief valve located between 2 positive seating check valves. Construct in accordance with ASSE Standard 1013. Febco Sales, Hersey, Lawler, Watts, or approved equal. Comply with local utility requirements.

2.12 Pressure Regulating Valves: Provide pressure regulating valves, single seated, direct operated type, bronze body, integral strainer, complying with requirements of ASSE Standard 1003. Size for maximum flow rate and inlet and outlet pressures indicated on drawings. Cash, Claval, Watts, or approved equal.

2.13 Meters and Gages: Provide meters and gages complying with Division-22 Basic Plumbing Materials and Methods section "Meters and Gages", in accordance with the following listing:

1. Glass thermometers
2. Pressure gages.

2.14 Relief Valves: Provide relief valves as indicated, of size and capacity as selected by Installer for proper relieving capacity, in accordance with ASME Boiler and Pressure Vessel Code.

A. Combined Pressure-Temperature Relief Valves: Bronze body, test lever, thermostat, complying with ANSI Z21.22 listing requirements for temperature discharge capacity. Provide temperature relief at 210°F, and pressure relief at 150 psi.

B. Manufacturer: Subject to compliance with requirements, provide relief valves of one of the following: Watts, Cash, Zurn, or approved equal.

2.15 Trap Primers: Provide brass trap primers and distribution units to seal floor drains. Trap primer valves shall be automatic, self contained type with no springs or diaphrams and shall not require adjustment. Trap primer valves shall be the type that can be installed anywhere on cold water piping. Distribution units shall supply 1-4 floor drains. Trap primer valves shall comply with ASSE 1018. Precision Plumbing Products PR-500, or approved equal.

PART 3 - EXECUTION

3.1 General: Examine areas and conditions under which potable water systems are to be installed. Do not proceed with work until unsatisfactory conditions have been corrected in manner acceptable to Installer.

3.2 Install plumbing identification in accordance with Division-22 Basic Plumbing Materials and Methods section "Plumbing Identification". Install underground plastic pipe markers during backfill, 6"-8" below grade.

3.3 Install water distribution piping in accordance with Division-22 Basic Plumbing Materials and Methods section "Pipes and Pipe Fittings".

A. Install piping with 1/32" per foot (1/4%) downward slope towards drain point.

B. Locate groups of pipes parallel to each other, spaced to permit applying full insulation and servicing of valves.

3.4 Install exterior water service piping system in compliance with local governing regulations. Water mains shall be installed with a minimum of 30 inches of cover unless otherwise indicated.

3.5 Install piping specialties in accordance with Division-22 Basic Plumbing Materials and Methods section "Piping Specialties".

3.6 Install supports and anchors in accordance with Division-22 Basic Plumbing Materials and Methods section "Supports and Anchors".

3.7 Install valves in accordance with Division-22 Basic Plumbing Materials and Methods section "Valves".

A. Sectional Valves: Install on each branch and riser, close to main, where branch or riser serves 2 or more plumbing fixtures or equipment connections, and elsewhere as indicated.

B. Shutoff Valves: Install on inlet of each plumbing equipment item, and on inlet of each plumbing fixture, and elsewhere as indicated.

C. Drain Valves: Install on each plumbing equipment item located to completely drain equipment for service or repair. Install at base of each riser, at base of each rise or drop in piping system, and elsewhere where indicated or required to completely drain potable water system.

D. Check Valves: Install on discharge side of each pump, and elsewhere as indicated.

E. Balance Cocks: Install in each hot water recirculating loop, and elsewhere as indicated.

3.8 Hose Bibbs and Wall Hydrants: Install on concealed piping where indicated with vacuum breaker. Mount 18 inches above grade or finished floor.

3.9 Install backflow preventers where indicated, and where required by Florida Building Code - Plumbing. Locate in same room as equipment being protected. Pipe relief outlet to nearest floor drain. Provide test and report by State of Florida Certified Backflow Preventer Specialist.

3.10 Install pressure regulating valves where indicated. Provide inlet and outlet shutoff valves, and throttling valve bypass. Provide pressure gage on valve outlet.

3.11 Install meters and gages in accordance with Division-22 Basic Plumbing Materials and Methods section "Meters and Gages".

3.12 Install relief valves on each water heater, and where indicated in accordance with the manufacturer's instructions. Pipe full size outside or to floor drain. Cut the end of the pipe at a 45° angle and terminate 6 inches above the floor or grade.

3.13 Piping Runouts to Fixtures: Provide hot and cold water piping runouts to fixtures of sizes indicated, but in no case smaller than required by Florida Building Code - Plumbing.

3.14 Mechanical Equipment Connections: Connect hot and cold water piping system to mechanical equipment as indicated, and comply with equipment manufacturer's installation instructions. Provide shutoff valve and union for each connection, provide drain valve on drain connection.

3.15 Install water hammer arrestors in upright position, in locations and of sizes indicated in accordance with PDI Standard WH-201.

3.16 Install trap primers in accordance with manufacturer's installation instructions. Provide access panel to all trap primers unless accessible through a lay-in ceiling.

3.17 Piping Tests: Test, clean, and sterilize potable water piping in accordance with testing requirements of Division-22 Basic Plumbing Materials and Methods section "Testing, Cleaning, and Sterilization of Piping Systems".

END OF SECTION 22 11 00

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SECTION 22 13 00 - FACILITY SANITARY SEWERAGE

PART 1 - GENERAL

1.1 Drawings and general provisions of Contract, including General and Supplementary Conditions and Division-01 Specification sections, apply to work of this section.

1.2 Division-22 Basic Plumbing Requirements and Basic Plumbing Materials and Methods sections apply to work of this section.

1.3 Extent of soil waste and vent systems work is indicated on drawings and schedules, and by requirements of this section.

1.4 Refer to other Division-22 sections for site sanitary system; not work of this section.

1.5 Refer to appropriate Division-02 sections for exterior sanitary sewer system required in conjunction with soil and waste systems; not work of this section.

1.6 Insulation for soil and waste systems is specified in other Division-22 sections, and is included as work of this section. Insulation requirements include:

1. Exposed drains from handicapped lavatories.

2. Condensate drains from air conditioning units.

3. Horizontal above grade waste pipes receiving condensate from air conditioning units.

1.7 Excavation and backfilling required in conjunction with underground building drain piping is specified in other Division-22 sections and is included as work of this section.

1.8 Refer to Division-07 section "Flashing and Sheet Metal" for flashings required in conjunction with soil and waste systems; not work of this section.

1.9 Code Compliance: Comply with applicable portions of Florida Building Code - Plumbing pertaining to plumbing materials, construction and installation of products. Comply with local utility requirements.

1.10 Submittals: Submit manufacturer's technical product data for cleanouts, floor drains, trap primers.

1.11 Maintenance Data: Submit maintenance data and parts lists for soil and waste systems materials and products. Include this data, product data, shop drawings, and record drawings in maintenance manual; in accordance with requirements of Division 01.

PART 2 - PRODUCTS

2.1 General: Provide piping materials and factory-fabricated piping products of sizes, types, pressure ratings, and capacities as indicated. Where not indicated, provide proper selection as determined by Installer to comply with installation requirements. Provide sizes and types matching piping and equipment connections; provide fittings of materials which match pipe materials used in soil and waste systems. Where more than one type of materials or products are indicated, selection is Installer's option.

Underground-Type Plastic Line Marker: Manufacturer's standard permanent, bright-colored, continuous-printed plastic tape, intended for direct-burial service; not less than 6" wide x 4 mils thick. Provide green tape with black printing reading "CAUTION SEWER LINE BURIED BELOW".

2.2 Pipes and Fittings: Provide pipes and pipe fittings complying with Division-22 Basic Plumbing Materials and Methods section "Pipes and Pipe Fittings", in accordance with the following listing:

A. Above Ground Soil, Waste, and Vent Piping:

1. Copper tube; Type DWV; Cast-bronze fittings, drainage pattern, 50-50 solder-joint. Use for waste arms only. Connections to tapped cast iron fittings shall be made with C X MPT DWV soil pipe adapters. Connections to hub-cast iron fittings shall be made with C X SPIGOT DWV soil pipe adapters. Connections to no hub cast-iron fittings shall be made with C X NO HUB DWV soil pipe adapters.

2. Cast-iron hub-and-spigot soil pipe; service weight; cast-iron hub-and-spigot soil pipe fittings, lead and oakum joints.

3. Cast-iron hub-and-spigot soil pipe; cast-iron hub-and-spigot soil pipe fittings, compression gasket joints.

4. Hubless cast-iron soil pipe; service weight; hubless cast-iron soil pipe fittings, hubless joints.

5. Polyvinyl chloride plastic pipe (PVC); Type DWV; PVC plastic type DWV socket-type fitting, solvent cement joints. Do not use in fire-rated assemblies or return air plenums.

B. Underground Building Drain Piping (within 5 feet of the building):

1. Cast-iron hub-and-spigot soil pipe; service weight; cast-iron hub-and-spigot soil pipe fittings, lead and oakum joints.

2. Cast-iron hub-and-spigot soil pipe; cast-iron hub-and-spigot soil pipe fittings, compression gasket joints.

3. Pipe Size 6" and Smaller: Polyvinyl chloride sewer pipe (PVC); Type DWV; PVC plastic type DWV socket-type.

2.3 Pipe Specialties: Provide piping specialties complying with Division-22 Basic Materials and Methods section "Piping Specialties", in accordance with the following listing:

1. Pipe Escutcheons
2. Fire Barrier Penetration Seals
3. Drip Pans
4. Pipe Sleeves
5. Sleeve Seals
6. Mechanical Sleeve Seals

2.4 Supports and Anchors: Provide supports and anchors complying with Division-22 Basic Plumbing Materials and Methods section "Supports and Anchors".

2.5 Cleanouts: Provide factory-fabricated drainage piping products of size and type indicated. Where not indicated, provide proper selection as determined by Installer to comply with installation requirements and governing regulations. Acceptable producers: Josam, Jay R. Smith, Wade, Zurn, Mifab.

A. Cleanout Plugs: PVC or ABS, threads complying with ANSI standards, countersunk head.

B. Cleanouts for Cast-Iron Piping Systems:

1. Floor Cleanouts: Cast-iron body with adjustable head, PVC plug, and scoriated nickel-brass cover. Furnish with recessed cover for tile floors. Furnish with clamping ring for floors with waterproof membrane. Wade W-6000 spigot outlet for Ty-Seal hub, W-6010 inside caulk, or W-6030 hub outlet for push-on as required.

2. Floor Cleanouts in Carpet: Cast-iron body with adjustable head, PVC plug, and scoriated nickel-brass cover with carpet flange/frame cover for carpeted areas. Furnish with clamping ring for floors with waterproof membrane. Wade W-6000 spigot outlet for Ty-Seal hub, W-6010 inside caulk, or W-6030 hub outlet for push-on as required with suffix-CF or Jay R. Smith 4020, 4030 series with suffix-X, are the only approved cleanouts for carpeted areas.

3. Cleanouts in Piping: Cast-iron cleanout ferrule with threaded PVC countersunk plug for caulked piping, Wade W-8550-D. For no-hub piping, furnish no-hub ferrule.

4. Wall Cleanouts: Cast-iron ferrule with countersunk, threaded PVC plug and wall access cover with vandal resistant screws. Access cover shall be cast bronze with scoriated cover and frame mounted flush with wall. Josam 58640.

5. Grade Cleanouts: Adjustable cleanout with spigot connection for caulking into hub. Dura-coated cast iron body with gas and watertight ABS plug, and cast iron housing with round scoriated cast iron heavy duty adjustable top. Cleanout assembly shall not be directly connected to housing assembly with included adjusting setscrews. Spigot cleanout Zurn Z-1406-HD.

C. Cleanout for PVC Systems:

1. Floor Cleanouts: Cast-iron body with adjustable head, PVC plug, and scoriated nickel-brass cover. Furnish with recessed cover for tile floors. Furnish with clamping ring for floors with waterproof membrane. Wade W-6000 spigot outlet for Ty-Seal hub, W-6010 inside caulk, or W-6030 hub outlet for push-on as required.

2. Floor Cleanouts in Carpet: Cast-iron body with adjustable head, PVC plug, and scoriated nickel-brass cover with carpet flange/frame cover for carpeted areas. Furnish with clamping ring for floors with waterproof membrane. Wade W-6000 spigot outlet for Ty-Seal hub, W-6010 inside caulk, or W-6030 hub outlet for push-on as required with suffix-CF or Jay R. Smith 4020, 4030 series with suffix-X, are the only approved cleanouts for carpeted areas.

3. Cleanouts in Piping: PVC cleanout adapter with threaded PVC plug. Charlotte PVC-105 adapter. Charlotte PVC-106 plug.

4. Wall Cleanouts: PVC cleanout adapter with countersunk, threaded PVC plug and wall access cover with vandal resistant screws. Access cover shall be cast bronze with scoriated cover and frame mounted flush with wall. Charlotte PVC-105 adapter. Charlotte PVC-106 plug. Josam 58640 access cover.

5. Grade Cleanouts: PVC fitting cleanout adapter with cleanout plug. Dura-coated cast iron access housing with round frame and scoriated secured heavy duty cover complete with adjusting setscrews. Cleanout assembly shall not be directly connected to housing assembly with included adjusting setscrews. Access housing Zurn Z-1404-HD. Charlotte PVC-105 adapter. Charlotte PVC-106 plug.

2.6 Floor Drains: Provide floor drains of size as indicated on drawings; and type, including features, as specified herein. Acceptable producers: Josam, Jay R. Smith, Wade, Zurn, Mifab.

A. Floor Drains: Provide inside caulk bottom outlet or TY-Seal hub outlet with adaptor for cast iron trap installation. Provide clamping rings for floors with membrane.

B. Strainer: Provide 5" satin-nickel bronze strainer.

C. Trap Primer: Provide 1/2" trap primer tapping.

D. Basis of Design: Wade Series 1100.

2.7 Flushing Rim Type: Provide flushing rim floor drain with acid resistance enamel interior, flushing connection, and vandal-proof, satin-nickel bronze grate with perforated strainer. Basis of design: Wade W-9300.

PART 3 - EXECUTION

3.1 Examine substrates and conditions under which soil and waste systems are to be installed. Do not proceed with work until unsatisfactory conditions have been corrected.

3.2 Piping Installation:

A. Install above grade soil and waste piping in accordance with Division-22 Basic Plumbing Materials and Methods section "Pipes and Pipe Fittings", and with Florida Building Code - Plumbing.

B. Install underground soil and waste pipes as indicated and in accordance with Florida Building Code - Plumbing. Lay underground piping beginning at low point of systems, true to grades and alignment indicated with unbroken continuity of invert. Place bell ends of piping facing upstream. Install required gaskets in accordance with manufacturer's recommendations for use of lubricants, cements, and other special installation requirements. Clean interior of piping and dirt and other superfluous material as work progresses. Maintain swab or drag in line and pull past each joint as it is completed. Place plugs in ends of uncompleted piping at end of day or whenever work stops.

C. Install building soil and vent piping pitched to drain at minimum slope of 1/4" per foot (2%) for piping 3" and smaller, and 1/8" per foot (1%) for piping 4" and larger.

3.3 Install piping specialties in accordance with Division-22 Basic Plumbing Materials and Methods section "Piping Specialties".

3.4 Install supports and anchors in accordance with Division-22 Basic Plumbing Materials and Methods section "Supports and Anchors".

3.5 Installation of Cleanouts: Install in above ground piping and building drain piping as indicated, as required by Florida Building Code - Plumbing; and at each change in direction of piping greater than 45°; at minimum intervals of 50' for piping 4" and smaller and 100' for larger piping; and at base of each vertical soil or waste stack. Install floor and wall cleanout covers for concealed piping, select type to match adjacent building finish.

A. Size: Cleanouts shall be full size up to 4". Piping over 4" shall have a reducing fitting to accommodate a 4" cleanout unless indicated otherwise on drawings.

B. Install cleanouts to allow adequate clearance for rodding.

C. Protect all finished surfaces of cleanouts with a suitable adhesive covering until construction is completed.

D. Cleanouts to Grade: Provide an with 24” preformed protective concrete ring. Set the cleanout ferrule, adapter, or access cover frame in the concrete as required. The cleanout shall be extended to the finished grade. Cover pad with fill to finished grade. Cleanout shall be installed so as to not interfere with regular mowing operations.

3.6 Flashing Flanges: Install flashing flange and clamping device with each stack and cleanout passing through waterproof membranes.

3.7 Vent Flashing Sleeves: Install on stack passing through roof, secure to stack flashing in accordance with manufacturer's instructions. For metal roofs, sleeves and flashing are by Division-07.

3.8 Installation of Floor Drains: Install floor drains in accordance with manufacturer's written instructions and in locations indicated.

A. Coordinate flashing work with work of waterproofing and adjoining substrate work.

B. Install floor drains at low points of surface areas to be drained, or as indicated. Set tops of drains flush with finished floor.

C. Install drain flashing collar or flange so that no leakage occurs between drain and adjoining flooring. Maintain integrity of waterproof membranes, where penetrated.

D. Position drains so that they are accessible and easy to maintain.

3.9 Installation of Trap Primers: Install trap primers in accordance with manufacturer's installation instructions. Pitch piping towards drain trap, minimum of 1/8" per foot (1%). Adjust trap primer for proper flow.

3.10 Piping Runouts to Fixtures: Provide soil and waste piping runouts to plumbing fixtures and drains, with approved trap, of sizes indicated, but in no case smaller than required by Florida Building Code - Plumbing.

3.11 Test, clean, flush, and inspect soil and waste piping in accordance with requirements of Division-22 Basic Plumbing Materials and Methods section "Testing, Cleaning and Sterilization of Piping Systems".

END OF SECTION 22 13 00

SECTION 22 40 00 - PLUMBING FIXTURES, EQUIPMENT, TRIM & SCHEDULE

PART 1 - GENERAL

1.1 Drawings and general provisions of Contract, including General and Supplementary Conditions and Division-1 Specification sections, apply to work of this section.

1.2 Division-23 Basic Mechanical Requirements and Basic Mechanical Materials and Methods sections apply to work of this section.

1.3 Extent of plumbing fixtures work required by this section is indicated on drawings and schedules, and by requirements of this section.

1.4 Refer to Division-26 sections for field-installed electrical wiring required for water coolers and other plumbing fixtures; not work of this section.

1.5 Codes and Standards

A. Plumbing Fixture Standards: Comply with applicable portions of Florida Building Code - Plumbing pertaining to materials and installation of plumbing fixtures.

B. ANSI Standards: Comply with applicable ANSI standards pertaining to plumbing fixtures and systems, and bath tub units.

C. PDI Compliance: Comply with standards established by PDI pertaining to plumbing fixture supports.

D. UL Compliance: Construct water coolers in accordance with UL Standard 399 "Drinking-Water Coolers", and provide UL-listing and label.

E. ARI Compliance: Construct and install water coolers in accordance with ARI Standard 1010 "Drinking-Fountains and Self-Contained Mechanically-Refrigerated Drinking-Water Coolers", and provide Certification Symbol.

F. ANSI Compliance: Construct and install barrier-free plumbing fixtures in accordance with ANSI Standard A117.1 "Specifications for Making Buildings and Facilities Accessible To and Usable By Physically Handicapped People".

G. NAHB Label: Provide fiberglass bath tub units and shower stalls which have been tested and labeled by NAHB Research Foundation Inc.

1.6 Submittals: Submit manufacturer's technical product data, including rated capacities of selected model clearly indicated, furnished specialties and accessories; and installation instructions. Submit manufacturer's assembly-type shop drawings indicating dimensions, roughing-in requirements, required clearances, and methods of assembly of components and anchorages.

1.7 Maintenance Data: Submit maintenance data and parts lists for each type of plumbing fixture and accessory; including "trouble-shooting" maintenance guide. Include this data, product data, and shop drawings in maintenance manual; in accordance with requirements of Division 1.

1.8 Handle plumbing fixtures carefully to prevent breakage, chipping and scoring fixture finish. Do not install damaged plumbing fixtures; replace and return damaged units to equipment manufacturer.

PART 2 - PRODUCTS

2.1 General: Provide factory-fabricated fixtures of type, style and material indicated. For each type fixture, provide fixture manufacturer's standard trim, carrier, seats, and valves as indicated by their published product information; either as designed and constructed, or as recommended by manufacturer, and as required for complete installation. Where more than one type is indicated, selection is Installer's option; but, all fixtures of same type must be furnished by single manufacturer. Where type is not otherwise indicated, provide fixtures complying with governing regulations.

2.2 Materials

A. Provide materials which have been selected for their surface flatness and smoothness. Exposed surfaces which exhibit pitting seam marks, roller marks, foundry sand holes, stains, discoloration, or other surface imperfections on finished units are not acceptable.

B. All fixtures shall be white vitreous china unless otherwise specifically noted. Where enameled iron fixtures are specified, they shall be furnished with acid resisting enamel.

C. Where fittings, trim and accessories are exposed or semi-exposed provide bright chrome-plated or polished stainless steel units. Provide copper or brass where not exposed.

D. Stainless Steel Sheets: ASTM A 167, Type 302/304, hardest workable temper. Finish shall be No. 4, bright, directional polish on exposed surfaces.

E. Vitreous China: High quality, free from fire cracks, spots, blisters, pinholes and specks; glaze exposed surfaces, and test for crazing resistance in accordance with ASTM C 554.

F. Fiberglass: ANSI Z124, smooth surfaced, with color selected by Architect/Engineer.

G. Synthetic Stone: High quality, free from defects, glaze on exposed surfaces, stain resistant.

2.3 Plumbing Fittings, Trim and Accessories:

A. Water Outlets: At locations where water is supplied (by manual, automatic or remote control), provide commercial quality faucets, valves, or dispensing devices, of type and size indicated, and as required to operate as indicated. Include manual shutoff valves and connecting stem pipes to permit outlet servicing without shut-down of water supply piping systems.

B. P-Traps: Include removable P-traps where drains are indicated for direct connection to drainage system.

C. Carriers: Provide cast-iron supports for fixtures of either graphitic gray iron, ductile iron, or malleable iron or steel as indicated.

D. Fixture Bolt Caps: Provide manufacturer's standard exposed fixture bolt caps finished to match fixture finish.

E. Escutcheons: Where fixture supplies and drains penetrate walls in exposed locations, provide chrome-plated sheet steel escutcheons with friction clips.

F. Aerators: Provide aerators of types approved by Health Departments having jurisdiction.

G. Comply with additional fixture requirements contained in fixture schedule attached to this section.

2.4 Acceptable Manufacturers: Subject to compliance with requirements, provide plumbing fixtures of one of the following:

1. Plumbing Fixtures: American Standard; Crane Co., Eljer Co., Kohler Co.

2. Plumbing Trim: American Standard, Chicago Faucet Co., Symmons, Eljer Co., Kohler Co., Speakman Co., T & S Brass and Bronze Works, Water Saver Faucet Co.

3. Stops, Supplies, Drains, P-traps: McGuire, or approved equal.

4. Fixture Seats: Bemis Mfg. Co., Beneke Corp., Church, Sperzel.

5. Water Coolers: Elkay Mfg. Co., Halsey Taylor Div., Haws Drinking Faucet Co., Sunroc, Oasis.

6. Service Sinks: American Standard, Crane Co., Eljer Co., Fiat Products, Kohler Co., Stern-Williams Co.

7. Mop Receptors: Stern-Williams Co., Fiat.

8. Stainless Steel Sinks: Elkay, Just.

9. Fixture Carriers: Josam, Kohler Co., Wade, Zurn, Mifab.

10. Water Heaters: Ruud, Rheem, Mor-Flo, State, A.O. Smith.

PART 3 - EXECUTION

3.1 Examine roughing-in work of potable water and waste piping systems to verify actual locations of piping connections prior to installing fixtures. Also examine floors and substrates, and

conditions under which fixture work is to be accomplished. Correct any incorrect locations of piping, and other unsatisfactory conditions for installation of plumbing fixtures. Do not proceed with work until unsatisfactory conditions have been corrected in manner acceptable to Installer.

3.2 Install plumbing fixtures of types indicated where shown and at indicated heights; in accordance with fixture manufacturer's written instructions, roughing-in drawings, and with recognized industry practices. Ensure that plumbing fixtures comply with requirements and serve intended purposes. Comply with applicable requirements of Florida Building Code - Plumbing pertaining to installation of plumbing fixtures. Furnish templates for cut-outs in countertops. Coordinate exact fixture locations with countertop shop drawings.

3.3 Fasten plumbing fixtures securely to indicated supports or building structure; and ensure that fixtures are level and plumb. Secure plumbing supplies behind or within wall construction so as to be rigid, and not subject to pull or push movement. Mount at heights shown in schedule. Fixture heights are floor-to-rim distance. Fitting heights are to centerline.

3.4 Install stop valve in water supply to each fixture.

3.5 After fixtures are set, the crack between the fixture and wall shall be caulked with DAP silicone-based caulking, or approved equal.

3.6 Protect installed fixtures from damage during remainder of construction period.

3.7 Upon completion of installation of plumbing fixtures and after units are water pressurized, test fixtures to demonstrate capability and compliance with requirements. When possible, correct malfunctioning units at site, then retest to demonstrate compliance; otherwise, remove and replace with new units and proceed with retesting.

3.8 Inspect each installed unit for damage to finish. If feasible, restore and match finish to original at site; otherwise, remove fixture and replace with new unit. Feasibility and match to be judged by Architect/Engineer. Remove cracked or dented units and replace with new units.

3.9 Clean plumbing fixtures, trim, aerators, and strainers of dirt and debris upon completion of installation.

3.10 Adjust water pressure at drinking fountains, faucets, shower valves, and flush valves to provide proper flow stream and specified gpm.

3.11 Adjust or replace washers to prevent leaks at faucets and stops.

4.0 Schedule

Refer to plumbing fixture schedule for fixture and equipment specification.

END OF SECTION 22 40 00

SECTION 22 60 70 - GAS AND VACUUM SYSTEMS FOR HEALTHCARE FACILITIES

PART 1 GENERAL

1.1 SECTION INCLUDES (SUBMITTALS REQUIRED FOR EACH ITEM)

A. Compressed air.

1.2 REFERENCES

A. The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by the basic designation only.

1. AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)

ANSI B16.18, Cast Copper Alloy Solder Joint Pressure Fittings

ANSI Z88.2, Practices for Respiratory Protection

2. AMERICAN SOCIETY OF MECHANICAL ENGINEERS (ASME)

ASME/ANSI B16.22, Wrought Copper and Copper Alloy Solder Joint Pressure Fittings

ASME BPVC SEC VIII D1, Boiler and Pressure Vessel Code: Section VIII Pressure Vessels, Division 1

3. AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

ASTM B 43, Seamless Red Brass Pipe, Standard Sizes

ASTM B 88, Seamless Copper Water Tube

ASTM B 280, Seamless Copper Tube for Air Conditioning and Refrigeration Field Service

4. AMERICAN WELDING SOCIETY, INC. (AWS)

AWS A5.8, Filler Metals for Brazing

AWS B2.1, Welding Procedure and Performance Qualification

AWS B2.2, Brazing Procedure and Performance Qualification

ANSI/AWS Z49.1, Safety in Welding and Cutting

5. COPPER DEVELOPMENT ASSOCIATION (CDA)

CDA 404/0, Copper Tube Handbook

6. COMPRESSED GAS ASSOCIATION, INC. (CGA)

CGA G-7, Compressed Air for Human Respiration

CGA G-7.1, Commodity Specification for Air

CGA G-10.1, Commodity Specification for Nitrogen

CGA P-2.1, Medical-Surgical Vacuum Systems in Health Care Facilities

7. COMMERCIAL ITEM DESCRIPTIONS (CID)

CID A-A-1689, Tape, Pressure-Sensitive Adhesive, (Plastic Film)

8. MILITARY STANDARDS (MIL-STD)

MIL-STD-101, Color Code for Pipelines and for Compressed Gas Cylinders

9. MANUFACTURERS STANDARDIZATION SOCIETY OF THE VALVE AND FITTINGS INDUSTRY, INC. (MSS)

MSS SP-58, Pipe Hangers and Supports - Materials, Design and Manufacture

MSS SP-69, Pipe Hangers and Supports - Selection and Application

MSS SP-89, Pipe Hangers and Supports - Fabrication and Installation Practices

10. NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)

NFPA 50, Bulk Oxygen Systems at Consumer Sites

NFPA 70, National Electrical Code

NFPA 99, Health Care Facilities

11. NATIONAL INSTITUTE FOR OCCUPATIONAL SAFETY AND HEALTH (OSHA)

EPA-560-OPTS86-01, A Guide to Respiratory Protection for the Asbestos Abatement Industry

12. OCCUPATIONAL SAFETY AND HEALTH ASSOCIATION (OSHA)

CFSR 1910.134, Respiratory Protection, Air Quality

1.3 RELATED REQUIREMENTS

A. Section 23 00 00, "Mechanical General Requirements," applies to this section with the additions

and modifications specified herein.

1.4 SUBMITTALS

A. Submit the following in accordance with Section 23 00 00, "Mechanical General Requirements."

1. Manufacturer's Catalog Data For

a. Pipe and fittings
b. Filters

2. Statements of Tests and Qualifications

a. Detail field testing procedures
b. Breathing air systems testing agency qualifications

3. Brazer procedures and qualifications

a. Procedures and Qualifications: Submit detail field testing procedures, breathing systems testing agency qualifications, and welder and brazer procedures and qualifications. Include data on test methods, testing instruments and equipment, and instrument calibration sources and method references.

4. Field Test Reports For
a. Component tests
b. Final purging and testing
c. System contaminant level tests

The testing agency shall prepare test reports for systems, equipment, and station outlets and terminals. The testing agency may either mobilize on the project site or test gas samples from sample bottles submitted by the Contractor. Upon completion of field tests, the Contractor shall provide documentation of the name of individuals performing tests and actual testing procedures. The Contractor shall provide a certification that test results were within limits permitted by these specifications.

5. Operation and Maintenance Manuals For

a. Filter system

1.5 DEFINITIONS

A. See NFPA 99, Chapter 2, Definitions, paragraph entitled " Definitions of Terms Used in the Standard."

1.6 QUALITY ASSURANCE

A. Materials, performance, installation, and testing shall comply with NFPA 99 with modifications and additions specified herein. The NFPA 99 recommendations shall be considered by the

Government as mandatory requirements. Substitute the word "shall" for the word "should" in these manuals.

B. Qualifications of Testing Agency: Provide a testing agency for the approval of the Contracting Officer. The testing agency shall be independent of the breathing air equipment manufacturer and supplier. Provide names and locations of three projects where testing of gas systems has been performed by the testing agency. Include names and phones of owners and project supervisors for these projects. Provide a written statement that these projects are of similar scope of that stipulated in this specification.

C. Brazer Procedures and Performance Qualifications: Comply with AWS B2.1 and AWS B2.2.

D. Regulatory Requirements: ANSI/AWS Z49.1 for brazing.

PART 2 PRODUCTS

2.1 PIPE AND FITTINGS

A. Design for 150 psi.

B. Metal Pipe and Fittings:

1. Breathing air after filters. ASTM B 88 or ASTM B 280 ACR (air conditioning and refrigeration), seamless Type K or L hard-drawn copper tubing for above ground and inside buildings, and soft drawn (annealed) for underground. In lieu of copper tubing, standard weight (Schedule 40) brass pipe per ASTM B 43 may be used. Provide ANSI B16.18 cast copper, ASME/ANSI B16.22 wrought copper, or brass fittings.

2. Pressure Reducing Regulators: Hospital breathing air quality.

2.2 SPECIALTIES

A. Hangers and Supports: Steel adjustable type per MSS SP-58 and MSS SP-69. Provide hangers, supports, nuts, bolts, and washers with hot-dip galvanized finish after fabrication.

B. Piping Isolators: Commercial metal clad hair felt type for isolating pipe from hangers.

C. Sleeves: Provide plastic waterproof cement seal or mechanically adjustable segmented elastomeric seal. In Concrete and Masonry, use galvanized steel pipe, ductile-iron, or cast-iron. For partitions, floors and roofs, other than concrete or masonry, use 26-gauge galvanized sheet steel.

D. Brazing Alloy: AWS A5.8, BCuP (Brazing-Copper-Phosphorus) series, greater than 1,000 degrees F melting temperature. Use only cadmium free brazing filler. Do not use flux for copper-to-copper connections.

E. Threaded Joint Tape: TFE.

F. Piping Identification: CID A-A-1689, pressure sensitive adhesive tape and decals. Colors and labels must conform to MIL-STD-101.

G. Nitrogen: For cleaning, purging, and testing, use oil-free dry nitrogen as specified in paragraph entitled, "Test Gases."

2.3 CONNECTORS

A. Permanently label and color code female connectors and include the warning "DO NOT USE OIL." Permanently label and color code male connectors. Provide labels with cast-in or engraved letters.

B. Commercial Connectors: Quick coupler with non-interchangeable code key on fitting with yellow color, automatic valve, and secondary check valve. The connections shall not match any others in building.

2.4 FILTERS

A. The compressed breathing air filter system shall cool, clean, filter and purify ordinary compressed air in compliance with breathing air standards. OSHA Regulations: CFSR 1910.134 (d) "Respiratory Protection, Air Quality." Compressed Gas Association Pamphlet CGA G-7, "Compressed Air For Human Respiration," and Pamphlet G7.1 " Commodity Specification for Air." NIOSH/EPA Document EPA-560-OPTS86-01: "A Guide to Respiratory Protection for the Asbestos Abatement Industry" Part IV and Appendix F. American National Standard ANSI Z88.2 "Practices for Respiratory Protection." The breathing air systems shall utilize absorption, adsorption, coalescence and catalytic chemical reaction. The breathing air systems shall have large deep beds of each purification media and desiccant. The unit shall have the ability to automatically and continuously recharge the dryer's adsorbent desiccants by purging captured contaminants from the breathing air system. System components shall include the following:

B. A color-change pre-filter to remove oil mist and dirt particles. Pre-filter shall be equipped with automatic drain valve to drain separated liquid contaminants. Media of prefilter cartridge shall provide a visual indication when cartridge service is required. The color-change filter media shall change from white to red from bottom to top to indicate filtration performance and to prevent premature cartridge changeout.

C. Twin-tower absorber dryer with adsorbent desiccant to remove water vapor and gaseous hydrocarbon impurities. Dryer shall use purge air to flush captured contaminates out of the air system. In no event should the purifier be a non-regenerative system, which would allow contaminant buildup in purging adsorbents and eventual seepage back into air-stream. In the event of power failure, absorber dryer will provide up to 4 hours of continuing drying performance protecting CO catalyst from water vapor spoilage. Operator shall able to manually switch on-line tower with off-line tower to provide an additional 4 hours of purifier performance if required.

D. Moisture-guard indicator shall monitor absorber dryer performance. A visible blue to gray color change shall occur to alert operator should water vapor pass through the Absorber dryer.

E. Catalytic converter shall first absorb carbon monoxide and then catalytically convert the CO

molecules to carbon dioxide.

F. Odor and particulate removing filter shall be located downstream of catalytic converter. To prevent airstream bypass, this unit shall not use carbon impregnated pleated paper. Filter shall contain a deep bed of granulated activated carbon. Bed depth shall be a minimum of 6 inches. The design of the purification system shall maximize dwell time between airstream and purifying materials. All interconnecting piping shall be threaded with 250 lb. forged steel unions installed before and after each purification component which requires service and cartridge change.

G. The unit shall have the capacity of 120 CFM out at 100 psig inlet.

2.5 COMPRESSED AIR

A. Provide compressed air with minimum air quality of CGA G-7.1, Grade D.

2.6 VALVES AND SAFETY DEVICES

A. NFPA 50 and ASME BPVC SEC VIII D1.

PART 3 EXECUTION

3.1 INSTALLATION

A. Comply with NFPA 50, NFPA 99, and CGA P-2.1.

B. Piping:

1. Pre-Installation Cleaning: Disassemble positive pressure pipe, fittings, valves, and other components. Provide only pipe and fittings which have been thoroughly washed. Use the following cleaning procedures:

   a. Mix the solution of sodium carbonate or trisodium phosphate in the proportion of one pound dry chemical in three gallons of water.

   b. Maintain the resulting solution at minimum 180 degrees F (82 degrees C).

   c. Wash thoroughly, scrubbing as required. Rinse with clean water and blow dry with oil-free dry nitrogen.

   Effectively cap ends of the pipe, fittings or valves, and label "CAUTION! CLEANED FOR BREATHING AIR SERVICE." In lieu of cleaning by the installer at the job site, each pipe, fitting and valve may be supplied "CLEAN FOR OXYGEN SERVICE" by the manufacturer. Do not use carbon tetrachloride, hydrocarbon, or halogenated hydrocarbon solvents.

2. Piping Installation: Exercise care with cutting, brushing, and reaming tools and equipment to prevent oil, grease, and dirt from entering pipe and components. Rewash contaminated pipe and components. Cut pipe square and accurately to measurements and work into place without springing or forcing. Follow the general arrangement

indicated. At the end of each work shift shut off valves, and cap or plug open ends. As work progresses, valve off each section to prevent moisture or dirt from entering piping.

3. Hangers and Supports Installation: Install hangers and supports in accordance with MSS SP-69 and MSS SP-89 except that spacing of the hangers and supports shall be in accordance with Table 2.

TABLE 2

MAXIMUM SPAN FOR PIPE HANGERS (feet)

Copper tube, Type K (Cu-K) and Type L (Cu-L)

Pipe Size (inches)	Cu-K and Brass	Cu-L
1/2	3'-9"	3'-6"
3/4	4'-3"	4'-3"
1	5'-0"	4'-9"
1 1/2	5'-9"	5'-6"
2	6'-6"	6'-6"
2 1/2	7'-3"	7'-0"
3	7'-9"	7'-6"
3 1/2	8'-3"	8'-3"
4	9'-0"	8'-9"
5	10'-0"	9'-6"
6	10'-9"	10'-6"

4. Threaded Joints: Coat male threads of fittings used in shut off valves with TFE tape before assembly.

5. Brazing: Personnel qualification procedures shall conform with AWS B2.2. Metal preparation and joining procedures shall conform with CDA 404/0 and NFPA 99. Use BCuP Series brazing alloys for joints. Completely clean off excess after brazing.

6. Cleaning of All Piping: During brazing operations, continuously purge with oil-free dry nitrogen. As each section is completed, blow clear of dirt and contamination with oil-free dry nitrogen in accordance with NFPA 99. Cap or plug open ends, when left unattended.

7. Changes in Size: Effect changes in size with reducing fittings. Do not use bushings.

8. Pipe Sleeves: Provide where pipes and tubing pass through walls, floors, roofs, and partitions. Leave 1/4-inch clearance around pipes. Secure sleeves in proper position and location before and during construction. Ensure sleeves of sufficient length to pass through entire thickness of walls, partitions, or slabs. Firmly pack space between pipe or tubing and sleeve with mineral wool insulation. Seal space at both ends of sleeve or core-drilled hole with plastic waterproof cement which will dry to a firm but pliable mass. In lieu of plastic cement seal, a mechanically adjustable segmented elastomeric seal may be used.

9. Identification of Piping: Identify piping in accordance with MIL-STD-101, except provide tape and decals conforming with CID A-A-1689 in lieu of stencils and paint.

B. Equipment:

1. Equipment Installation: Install equipment in accordance with manufacturer's written instructions and as indicated.

C. Electrical Work: Comply with NFPA 70.

3.2 FIELD QUALITY CONTROL

A. The Contracting Officer will witness field tests. For field testing by testing agency, the Contractor shall provide a qualified testing agency as specified in paragraph entitled "QUALITY ASSURANCE." The Contractor shall give the Contracting Officer 14 days prior notice for dates and times for acceptance tests.

B. Agency Testing: Tests for contaminants are required for new breathing air systems.

C. Sample Bottles: When gas sample bottles are to be used, the bottles are to be supplied by the testing agency, sealed and ready for use, and filled and labeled in accordance with the agency's written instructions.

D. Test Instruments: Provide vacuum gauges with one-inch Hg increments, readable to 1/2-inch Hg. Provide pressure gauges with one psig increments, readable to 1/2-psig. Use only correct adapters for gauges. Do not use universal adapters.

E. Pressure Test Gases: During initial purging, blowing out, and pressure testing, use only oil-free dry nitrogen conforming with CGA G-10.1, Grade F. Use no other gas, material, or liquid during purging and tests.

F. Positive Pressure Tests: Test each joint with soap solution, repair leaks found, and retest.

1. Leak Tests: Test system at 100 psig with oil-free dry nitrogen.

2. Final Pressure Tests, Low Pressure Systems: Pressure test with nitrogen at 120 percent of

design pressure for 24 hours. No pressure drop, except due to temperature change, will be accepted. Allow for ambient temperature change in accordance with the relationship PF + 14.7 = (P1 + 14.7) (T2 + 460)/(T1 + 460), in which T and P represent Fahrenheit temperature and gauge pressure respectively, numbers 1 and 2 denote initial and final readings respectively, and PF is the calculated final pressure. When PF exceeds the measured final pressure, retest each section individually, and apply soap solution to all joints of each section for which a reduction in pressure occurs after allowing for ambient temperature change. Repair leaking joints and repeat test until no reduction in pressure occurs. Use a test gauge calibrated in one psi increments and readable to 1/2 psig.

G. Component Tests by Testing Agency: Test system controls and equipment operations.

H. Final Purging and Testing by Testing Agency: Use 60 to 65 psig, oil-free dry nitrogen to purge and clean breathing air system 24 hours continuously for a minimum of 24 hours. Allow purge nitrogen to impinge upon a white cloth at a minimum flow rate of 100 liters per minute, until no evidence of discoloration is present and test gas used during the previous test gas has been removed from the piping systems.

I. System Contaminant Level Tests by Testing Agency: The following list limits of contaminants or concentration maximum in the breathing air system.

CONTAMINATE LEVELS AND TEST METHODS

1. Hydrocarbon Compounds: 100 parts per million, concentration volume per volume, maximum expressed as methane equivalents; gas chromatography or equivalent.

2. Halogenated Hydrocarbon Compounds: 1000 parts per million, concentration volume per volume, maximum; mass spectrometry, infrared spectrometry, or gas chromatography.

3. Carbon Monoxide: 20 parts per million, concentration volume per volume, maximum; gas chromatography, electrochemical carbon monoxide analyzer, or equivalent.

J. Contaminated Systems: Clean and retest if it does not pass.

K. Holding Charges by Testing Agency: After successful completion of contamination and gas concentration tests, pressurize system to the operating pressure to keep systems free of contamination.

L. Final Alarm Tests by Testing Agency: Test and operate switches, alarms, and controls in each system.

END OF SECTION 22 60 70

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SECTION 23 00 00 - MECHANICAL GENERAL REQUIREMENTS

PART 1 GENERAL

1.1 APPLICATION:

A. This section applies to all sections of Division 23, "Mechanical" of this project.

1.2 REFERENCES:

A. The publications listed throughout the specifications form a part of this specification to the extent referenced. The publications are referred to in the text by the basic designation only.

CODE OF FEDERAL REGULATIONS (CFR)

29 CFR 1910.147, Control of Hazardous Energy
(Lock Out/Tag Out)

1.3 GENERAL:

A. The contract drawings indicate the extent and general arrangement of the work. The contractor shall be responsible for installing the proposed systems as indicated, without violation of applicable codes, standards, or specification requirements. The contractor is also responsible for coordinating the installation and operation of these systems with the other sections of this specification to provide a complete and operable system. Items shall be arranged such that they fit the space as indicated and shall allow adequate and approved clearance for entry, servicing and maintenance. Detailed drawings of any proposed departures due to actual field conditions shall be submitted to the Engineer for approval. All work shall conform to the requirements of the referenced publications and as specified herein.

1.4 CONFORMANCE WITH AGENCY REQUIREMENTS:

A. Where materials or equipment are specified to conform to requirements of the Underwriters' Laboratories, Inc., or other agency, institute, codes, councils or regulatory bodies, the contractor shall submit proof of such conformance. The label or listing of the specified agency will be acceptable evidence. In lieu of the label or listing, the contractor may submit a written certificate from any approved, nationally recognized testing organization adequately equipped and competent to perform such services, stating that the items have been tested and that the units conform to the requirements, including methods of testing, of the specified agency. Where equipment is specified to conform to requirements of the ASME Boiler and Pressure Vessel Code, the design, fabrication, and installation shall conform to the code in every respect and bear the ASME stamp.

1.5 CAPACITIES:

A. Capacities of all equipment and material shall be as indicated in the specifications or shown on the drawings. The Engineer can accept equipment which may be less than the indicated values in a certain area if its clear the intent of the requirements is fulfilled.

1.6 EQUIPMENT INSTALLATION:

A. Necessary supports shall be provided for equipment and systems components as required. Isolation vibration and systems components units shall be provided to minimize the intensity of

vibration transmission to the building structure where required. Concrete pads shall be provided for all outside equipment installed. The pads shall extend 6" pass the unit on all sides.

1.7 ELECTRICAL WORK:

A. Electric motor driven equipment specified herein shall be provided complete with motors and controls. Electric equipment and wiring shall be in accordance with Division 16, "Electrical". Electrical characteristics shall be as indicated. Each motor shall be of sufficient capacity to drive the equipment at the specified capacity without exceeding the nameplate rating of motor when operating at proper electrical system voltage. Manual or automatic control and protective or signal devices required for the operation herein specified and any control wiring required for controls and devices, but not shown on the electrical plans, shall be provided under this section as required, this includes 120 volt power wiring to power the controls.

1.8 SUBMITTAL OF MATERIALS AND EQUIPMENT FOR APPROVAL:

A. Before purchasing any materials or equipment, the contractor shall submit for approval, in five bound copies, data of the materials he proposes for the work. Items to be submitted include, but are not limited to, the items listed in each individual section. Partial submittals will not be acceptable and will be returned without review. Submittals shall include the manufacturer's names, trade name, catalog model or number, nameplate data, size, layout dimensions, capacity, project specification and paragraph reference, applicable Federal, Military, industry, and technical society publication references, and other information necessary to establish contract compliance of each item the contractor proposes to furnish.

1. Shop Drawings. Drawings shall be a minimum of 8.5 inches by 11 inches in size, except as specified otherwise.

2. Manufacturer's Data. Submittals for each manufactured item shall be manufacturer's descriptive literature of cataloged products, equipment drawings, diagrams, performance and characteristic curves, catalog cuts, and manufacturer's installation recommendations.

3. Cataloged Products. Materials and equipment shall be cataloged products of manufacturers regularly engaged in production of such materials or equipment and shall be manufacturer's latest design that complies with the specification requirements. Materials and equipment shall duplicate items that have been in satisfactory commercial or industrial use at least 2 years prior to bid opening. Where two or more items of the same class of equipment are required, these items shall be products of a single manufacturer; however, the component parts of the items need not be the products of the same manufacturer.

4. Submittal Organization. The submittal shall be organized in the same order as the specification sections. The cut sheets shall be marked with equipment number which is shown on the drawings or name for something general such as piping. The submittal sheets shall document the piece of equipment meets the performance requirements of the contract documents. Note: Unmarked submittals will be rejected without review.

5. Samples. The samples shall be such as to illustrate the functional and aesthetic characteristics of the product.

6. Equipment Application. The contractor shall note on the submittal or in writing of any equipment provided which may not operate satisfactory when installed as indicated on the plans.

1.9 NAMEPLATES:

A. Each major item of equipment shall have the manufacturer's name, address, date of manufacture, serial and model numbers on a plate securely attached to the item.

1.10 VERIFICATION OF DIMENSIONS:

A. The contractor shall visit the premises to thoroughly familiarize himself with all details of the work and working conditions and verify all dimensions in the field, and shall advise the Engineer of any discrepancy before performing any work. The contractor shall be specifically responsible for the coordination and proper relation of his work to other structures and to the work of all other trades.

1.11 DRAWINGS:

A. Because of the scale of the drawings, it is not possible to indicate all offsets, fittings, and accessories that are required. The contractor shall carefully investigate the structural and finish conditions affecting his work and he shall furnish fittings, offsets, transitions, unions, etc., as may be required to meet such conditions at no additional cost to the Owner.

1.12 CUTTING AND REPAIRING:

A. The work shall be carefully laid out in advance and no excessive cutting of construction will be permitted. Damage to building, piping, wiring, or equipment as a result of cutting for installation shall be repaired by mechanics skilled in the trade involved at no additional expense to the Owner.

1.13 SAFETY REQUIREMENTS:

A. Belts, pulleys, chains, gears, couplings, projecting setscrews, keys, and other rotating parts located so that any person can come in close proximity thereto shall be fully enclosed or properly guarded. High temperature equipment and piping so located as to endanger personnel or create a fire hazard shall be properly guarded or covered with insulation of a type as specified herein. Items such as catwalks, ladders, and guardrails shall be provided where required for safe operation and maintenance of equipment.

1.14 MANUFACTURER'S RECOMMENDATIONS:

A. Where installation procedures or any part thereof are required to be in accordance with the recommendations of the manufacturer of the material being installed, printed copies of these recommendations shall be furnished to the Owner prior to installation. Installation of the item will not be allowed to proceed until the recommendations are received. Failure to furnish these recommendations can be cause for rejection of the material.

1.15 PAINTING:

A. At the completion of all work, all equipment on this project shall be checked for damage, and any factory finished paint that has been damaged shall be repaired to match the adjacent areas. Any metal item that has been provided which has not been painted or otherwise protected shall be painted with primer and final coating as recommended by the paint manufacture for the particular application.

1.16 FINAL CLEANUP:

A. At the completion of all work, all equipment on the project shall be checked and thoroughly cleaned, including coils, plenums, under equipment, and any and all other areas around or in equipment. Any filters used during construction shall be replaced with new filters during final cleanup.

1.17 OPERATING AND MAINTENANCE INSTRUCTIONS:

A. Bound instructions. Three complete sets of instructions containing the manufacturer's operating and maintenance instructions for each piece of equipment shall be furnished to the Owner before the contract is completed. Each set shall be permanently bound and shall have a hard cover. The following identification shall be inscribed on the covers: The words "Operating and Maintenance Instructions", the name and location of the building, the name of the contractor and the contract number. Flysheet shall be placed before instructions covering each subject. The instruction sheet shall be approximately 8_1/2 by 11 inches, with large sheets of drawings folded in. The instructions shall include, but shall not be limited to, the following:

1. Approved wiring and control diagrams, with data to explain the detailed operation and control of each component.
2. A control sequence describing startup, operation and shutdown.
3. Operating and maintenance instructions for each piece of equipment, including lubrication instructions.
4. Manufacturer's bulletins, cuts and descriptive data.
5. Parts lists and recommended spare parts.

B. Framed Instructions. Approved wiring and control diagrams showing the complete layout of the entire system, including equipment, piping, valves and control sequence, framed under glass or in approved laminated plastic, shall be posted, where directed. In addition, condensed operating instructions explaining preventive maintenance procedures, methods of checking the system for normal safe operation, and procedures for safely starting and stopping the system shall be prepared in typed form framed as specified above for the wiring and control diagrams and posted beside the diagram. Proposed diagrams, instructions, and other sheets shall be submitted prior to posting. The framed instructions shall be posted before acceptance testing of the system.

1.18 DELIVERY AND STORAGE:

A. Equipment and materials shall be carefully handled, properly stored, and adequately protected to prevent damage before and during installation, in accordance with the manufacturer's recommendations. Damaged or defective items shall be replaced.

1.19 LOCKOUT OF ENERGY SOURCES:

A. Provide appropriate lockout devices for energy isolating valves and for machines or other equipment to prevent unexpected start-up or release of stored electrical, mechanical, hydraulic, pneumatic, thermal, chemical, or other energy in accordance with 29 CFR 1910.147. Lockout devices for valves shall provide a means of attachment to which, or through which, a lock can be affixed or shall have a locking mechanism built into it so that the valve cannot be moved from the lockout position until the lock is removed. Electrical isolation of machines or other equipment shall be in accordance with requirements of Division 16 "Electrical."

1.20 PROJECT RECORD DOCUMENTS

A. Maintain on site one set of the following record documents; record actual revisions to the work:

1. Drawings.
2. Specifications.
3. Addenda.
4. Change orders and other modifications to the contract,
reviewed shop drawings, product data, and samples,
manufacturer's instruction for assembly, installation, and adjusting.

B. Ensure entries are complete and accurate, enabling future reference by Owner.

C. Store record documents separate from documents used for construction.

D. Record information concurrent with construction progress.

E. Specifications: Legibly mark and record at each product section description of actual products installed, including the following:

1. Manufacturer's name and product model and number.
2. Product substitutions or alternates utilized.
3. Changes made by addenda and modifications.

F. Record Drawings and Shop Drawings: Legibly mark each item to record actual construction including:

1. Measured depths of foundations in relation to finish floor datum.
2. Measured horizontal and vertical locations of underground utilities and appurtenances, referenced to permanent surface improvements.
3. Measured locations of internal utilities and appurtenances concealed in construction, referenced to visible and accessible features of the work.
4. Field changes of dimensions and details.
5. Details not on original contract drawings.

G. Submit documents to Owner upon completion of project.

1.21 EQUIPMENT DRAINS

A. The contractor shall mount air handling units on rails or bases as required to provide enough clearance for the condensate traps.

1.22 ENERGY CODE

A. The equipment installation and ductwork shall meet the requirements of the Florida Energy Code or as required by the specifications whichever is more stringent. All appliances shall be Energy Star qualified in accordance with U.S. Environmental Protection Agency program.

1.23 TRAINING/START UP

A. The contractor shall meet on the site after the job is complete and review the systems operation with the building manager and maintenance personnel. During the review the contractor shall verify that all system settings and timetables are satisfactory with the building manager.

END OF SECTION 23 00 00

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SECTION 23 05 29 – HANGERS AND SUPPORTS FOR HVAC PIPING AND EQUIPMENT

PART 1 GENERAL

1.1 SECTION INCLUDES (SUBMITTAL REQUIRED FOR EACH ITEM)

A. Pipe and equipment hangers and supports.

B. Equipment bases and supports.

C. Sleeves and seals.

D. Flashing and sealing equipment and pipe stacks.

1.2 RELATED SECTION

A. Section 230000 - General Mechanical Requirements.

1.3 REFERENCES

A. ASME B31.1 - Power Piping

B. ASME B31.2 - Fuel Gas Piping

C. ASME B31.5 - Refrigeration Piping

D. ASME B31.9 - Building Services Piping

E. ASTM F708 - Design and Installation of Rigid Pipe Hangers.

F. MSS SP58 - Pipe Hangers and Supports - Materials, Design and Manufacture.

G. MSS SP69 - Pipe Hangers and Supports - Selection and Application.

H. MSS SP89 - Pipe Hangers and Supports - Fabrication and Installation Practices.

I. NFPA 13 - Installation of Sprinkler Systems.

J. NFPA 14 - Installation of Standpipe and Hose Systems

K. UL 203 - Pipe Hanger Equipment for Fire Protection Service

1.4 SUBMITTALS

A. Submit under provisions of Section 230000.

B. Shop Drawings: Indicate system layout with location and detail of trapeze hangers.

C. Product Data: Provide manufacturers catalog data including load capacity and all features required by the specifications.

D. Design Data: Indicate load carrying capacity of trapeze, multiple pipe, and riser support hangers.

E. Manufacturer's Installation Instructions: Indicate special procedures and assembly of components.

1.5 REGULATORY REQUIREMENTS

A. Conform to the latest Florida Mechanical Code, Florida Plumbing Code, and Florida Fuel/Gas Code for support of piping.

PART 2 PRODUCTS

2.1 PIPE HANGERS AND SUPPORTS

A. Plumbing Piping - DWV:

1. Conform to ASME B31.9 ASTM F708 MSS SP58 MSS SP69 MSS SP89.
2. Hangers for Pipe Sizes 1/2 to 1-1/2 Inch: Malleable iron or Carbon steel, adjustable swivel, split ring.
3. Hangers for Pipe Sizes 2 Inches and Over: Carbon steel, adjustable, clevis.
4. Multiple or Trapeze Hangers: Steel channels with welded spacers and hanger rods.
5. Wall Support for Pipe Sizes to 3 Inches: Cast iron hook.
6. Wall Support for Pipe Sizes 4 Inches and Over: Welded steel bracket and wrought steel clamp.
7. Vertical Support: Steel riser clamp.
8. Floor Support: Cast iron adjustable pipe saddle, lock nut, nipple, floor flange, and concrete pier or steel support.
9.Copper Pipe Support: Carbon steel ring, adjustable, copper plated.

B. Plumbing Piping - Water:
1. Conform to ASME B31.9 ASTM F708 MSS SP58 MSS SP69 MSS SP89.
2. Hangers for Pipe Sizes 1/2 to 1-1/2 Inch: Malleable iron or Carbon steel, adjustable swivel, split ring.
3. Hangers for Cold Pipe Sizes 2 Inches and Over: Carbon steel, adjustable, clevis.
4. Hangers for Hot Pipe Sizes 2 to 4 Inches: Carbon steel, adjustable, clevis.
5. Hangers for Hot Pipe Sizes 6 Inches and Over: Adjustable steel yoke, cast iron roll, double hanger.
6. Multiple or Trapeze Hangers: Steel channels with welded spacers and hanger rods.
7. Multiple or Trapeze Hangers for Hot Pipe Sizes 6 Inches and Over: Steel channels with welded spacers and hanger rods, cast iron roll.
8. Wall Support for Pipe Sizes to 3 Inches: Cast iron hook.
9. Wall Support for Pipe Sizes 4 Inches and Over: Welded steel bracket and wrought steel clamp.

10. Wall Support for Hot Pipe Sizes 6 Inches and Over: Welded steel bracket and wrought steel clamp with adjustable steel yoke and cast iron roll.
11. Vertical Support: Steel riser clamp.
12. Floor Support for Cold Pipe: Cast iron adjustable pipe saddle, lock nut, nipple, floor flange, and concrete pier or steel support.
13. Floor Support for Hot Pipe Sizes to 4 Inches: Cast iron adjustable pipe saddle, lock nut, nipple, floor flange, and concrete pier or steel support.
14. Floor Support for Hot Pipe Sizes 6 Inches and Over: Adjustable cast iron roll and stand, steel screws, and concrete pier or steel support.
15. Copper Pipe Support: Carbon steel ring, adjustable, copper plated.

C. Hydronic Piping:
1. Conform to ASME B31.9 ASTM F708 MSS SP58 MSS SP69 MSS SP89.
2. Hangers for Pipe Sizes 1/2 to 1-1/2 Inch: Malleable iron or Carbon steel, adjustable swivel, split ring.
3. Hangers for Cold Pipe Sizes 2 Inches and Over: Carbon steel, adjustable, clevis.
4. Hangers for Hot Pipe Sizes 2 to 4 Inches: Carbon steel, adjustable, clevis.
5. Hangers for Hot Pipe Sizes 6 Inches and Over: Adjustable steel yoke, cast iron roll, double hanger.
6. Multiple or Trapeze Hangers: Steel channels with welded spacers and hanger rods.
7. Multiple or Trapeze Hangers for Hot Pipe Sizes 6 Inches and Over: Steel channels with welded spacers and hanger rods, cast iron roll.
8. Wall Support for Pipe Sizes to 3 Inches: Cast iron hook.
9. Wall Support for Pipe Sizes 4 Inches and Over: Welded steel bracket and wrought steel clamp.
10. Wall Support for Hot Pipe Sizes 6 Inches and Over: Welded steel bracket and wrought steel clamp with adjustable steel yoke and cast iron roll.
11. Vertical Support: Steel riser clamp.
12. Floor Support for Cold Pipe: Cast iron adjustable pipe saddle, lock nut, nipple, floor flange, and concrete pier or steel support.
13. Floor Support for Hot Pipe Sizes to 4 Inches: Cast iron adjustable pipe saddle, lock nut, nipple, floor flange, and concrete pier or steel support.
14. Floor Support for Hot Pipe Sizes 6 Inches and Over: Adjustable cast iron roll and stand, steel screws, and concrete pier or steel support.
15. Copper Pipe Support: Carbon steel ring, adjustable, copper plated.

D. Refrigerant Piping:
1. Conform to ASME B31.5 MSS SP58 MSS SP69 MSS SP89.
2. Hangers for Pipe Sizes 1/2 to 1-1/2 Inch (13 to 38 mm): Malleable iron or Carbon steel, adjustable swivel, split ring.
3. Hangers for Pipe Sizes 2 Inches and Over: Carbon steel, adjustable, clevis.
4. Multiple or Trapeze Hangers: Steel channels with welded spacers and hanger rods.
5. Wall Support for Pipe Sizes to 3 Inches: Cast iron hook.
6. Wall Support for Pipe Sizes 4 Inches and Over: Welded steel bracket and wrought steel clamp.
7. Vertical Support: Steel riser clamp.
8. Floor Support: Cast iron adjustable pipe saddle, lock nut, nipple, floor flange, and

concrete pier or steel support.
9. Copper Pipe Support: Carbon steel ring, adjustable, copper plated.

2.2 ACCESSORIES

A. Hanger Rods: Mild steel threaded both ends, threaded one end, or continuous threaded.

2.3 INSERTS

A. Inserts: Malleable iron case of galvanized steel shell and expander plug for threaded connection with lateral adjustment, top slot for reinforcing rods, lugs for attaching to forms; size inserts to suit threaded hanger rods.

2.4 FLASHING

A. Metal Flashing: 26 gage galvanized steel.

B. Metal Counterflashing: 22 gage galvanized steel.

C. Lead Flashing:
1. Waterproofing: 5 lb/sq ft sheet lead
2. Soundproofing: 1 lb/sq ft sheet lead.

D. Flexible Flashing: 47 mil thick sheet butyl; compatible with roofing.

E. Caps: Steel, 22 gage minimum; 16 gage at fire resistant elements.

2.5 EQUIPMENT CURBS

A. Fabrication: Welded 18 gage galvanized steel shell and base, mitered 3 inch cant, variable step as required to match roof insulation, 1-1/2 inch thick insulation, factory installed wood nailer.

2.6 SLEEVES

A. Sleeves for Pipes Through Non-fire Rated Floors: 18 gage galvanized steel.

B. Sleeves for Pipes Through Non-fire Rated Beams, Walls, Footings, and Potentially Wet Floors: Schedule 40 galvanized steel pipe.

C. Sleeves for Pipes Through Fire Rated and Fire Resistive Floors and Walls, and Fire Proofing: Prefabricated fire rated sleeves including seals, UL listed.

D. Sleeves for Round Ductwork: Galvanized steel.

E. Sleeves for Rectangular Ductwork: Galvanized steel or wood.

F. Stuffing Insulation: Glass fiber type, non-combustible.

G. Sealant: Acrylic.

PART 3 EXECUTION

3.1 INSTALLATION

A. Install in accordance with manufacturer's instructions.

3.2 INSERTS

A. Provide inserts for placement in concrete formwork.

B. Provide inserts for suspending hangers from reinforced concrete slabs and sides of reinforced concrete beams.

C. Provide hooked rod to concrete reinforcement section for inserts carrying pipe over 4 inches.

D. Where concrete slabs form finished ceiling, locate inserts flush with slab surface.

E. Where inserts are omitted, drill through concrete slab from below and provide through-bolt with recessed square steel plate and nut recessed into and grouted flush with slab.

3.3 PIPE HANGERS AND SUPPORTS

A. Support horizontal piping as scheduled or required by Code whichever is more strigent.

B. Install hangers to provide minimum 1/2 inch space between finished covering and adjacent work.

C. Place hangers within 12 inches of each horizontal elbow.

D. Use hangers with 1-1/2 inch minimum vertical adjustment.

E. Support horizontal cast iron pipe adjacent to each hub, with 5 feet maximum spacing between hangers.

F. Support vertical piping at every floor. Support vertical cast iron pipe at each floor at hub.

G. Where several pipes can be installed in parallel and at same elevation, provide multiple or trapeze hangers.

H. Support riser piping independently of connected horizontal piping.

I. Provide copper plated hangers and supports for copper piping.

J. Design hangers for pipe movement without disengagement of supported pipe.

K. Coat exposed steel hangers and supports. Hangers and supports located in crawl spaces, pipe shafts, and suspended ceiling spaces are not considered exposed.

3.4 EQUIPMENT BASES AND SUPPORTS

A. Provide housekeeping pads of concrete, minimum 6 inches thick with reinforcement bars and extending 6 inches beyond supported equipment.

B. Provide templates, anchor bolts, and accessories for mounting and anchoring equipment.

C. Construct supports of steel members. Brace and fasten with flanges bolted to structure.

B. Provide rigid anchors for pipes after vibration isolation components are installed.

3.5 FLASHING

A. Provide flexible flashing and metal counterflashing where piping and ductwork penetrate weather or waterproofed walls, floors, and roofs.

B. Flash vent and soil pipes projecting 3 inches minimum above finished roof surface with lead worked one inch minimum into hub, 8 inches minimum clear on sides with 24 x 24 inches sheet size. For pipes through outside walls, turn flanges back into wall and calk, metal counterflash, and seal.

C. Seal floor drains watertight to adjacent materials.

D. Provide acoustical lead flashing around ducts and pipes penetrating equipment rooms, installed in accordance with manufacturer's instructions for sound control.

E. Provide curbs for mechanical roof installations 14 inches minimum high above roofing surface. Flash and counterflash with sheet metal; seal watertight. Attach counterflashing mechanical equipment and lap base flashing on roof curbs. Flatten and solder joints.

F. Adjust storm collars tight to pipe with bolts; calk around top edge. Use storm collars above roof jacks. Screw vertical flange section to face of curb.

3.6 SLEEVES

A. Set sleeves in position in formwork. Provide reinforcing around sleeves.

Size sleeves large enough to allow for movement due to expansion and contraction minimum 1/4". Provide for continuous insulation wrapping.

B. Extend sleeves through floors one inch above finished floor level. Calk sleeves.

C. Where piping or ductwork penetrates floor, ceiling, or wall, close off space between pipe

or duct and adjacent work with stuffing insulation and calk. Provide close fitting metal collar or escutcheon covers at both sides of penetration.

D. Install chrome plated steel escutcheons at finished surfaces.

3.7 SCHEDULES

PIPE SIZE Inches	MAX. HANGER SPACING Feet	HANGER ROD DIAMETER Inches
1/2 to 1-1/4	6.5	3/8
1-1/2 to 2	10	3/8
2-1/2 to 3	10	1/2
4 to 6	10	5/8
8 to 12	14	7/8
14 and Over	20	1
PVC (All Sizes)	6	3/8

END OF SECTION 23 05 29

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SECTION 23 05 48 - VIBRATION ISOLATION AND SEISMIC CONTROLS FOR HVAC EQUIPMENT

PART 1 GENERAL

1.1 SECTION INCLUDES (SUBMITTAL REQUIRED FOR EACH ITEM)

A. Spring Isolators.

B. Neoprene Mountings.

C. Equipment Bases.

D. Curb Mounts.

1.2 RELATED SECTION

A. Section 230000 - General Mechanical Requirements

1.3 PERFORMANCE REQUIREMENTS

A. Provide vibration isolation on motor driven equipment over 0.5 HP, plus connected piping and ductwork.

B. Provide minimum static deflection of isolators for equipment as indicated.

1. Basement, provide double deflection neoprene mounting for pumps.

2. Upper Floors, provide spring isolators with 1-1/2" deflection.

C. Piping, provide spring pipe isolation as specified.

D. Ductwork, provide spring duct isolators as specified.

1.4 SUBMITTALS

A. Submit under provisions of Section 230000.

B. Product Data: Provide schedule of vibration isolator type with location and load on each.

C. Manufacturer's Installation Instructions: Indicate special procedures and setting dimensions.

PART 2 PRODUCTS

1.1 DOUBLE DEFLECTION NEOPRENE MOUNTINGS

A. Double deflection neoprene mountings shall have a minimum static deflection of 0.35".

All metal surfaces shall be neoprene covered to avoid corrosion and have friction pads both top and bottom so they need not be bolted to the floor. Bolt holes shall be provided for these areas where bolting is required. Basis of design as manufactured by Mason Industries, Inc.

1.2 SPRING ISOLATORS

A. Spring type isolators shall be free standing and laterally stable without any housing and complete with 1/4" neoprene acoustical friction pads between the baseplate and the support. All mountings shall have leveling bolts that must be rigidly bolted to the equipment. Spring diameters shall be no less than 0.8 of the compressed height of the spring at rated load. Springs shall have a minimum additional travel to solid equal to 50% of the rated deflection. Submittals shall include spring diameters, deflections, compressed spring height and solid spring height. Basis of design type SLF as manufactured by Mason Industries, Inc.

1.3 PIPE HANGERS

A. Vibration hangers shall contain a steel spring and 0.3" deflection neoprene element in series. The neoprene element shall be molded with a rod isolation bushing that passes through the hanger box. Spring diameters and hanger box lower hole sizes shall be large enough to permit the hanger rod to swing thru a 30° arc before contacting the hole and short circuiting the spring. Springs shall have a minimum additional travel to solid equal to 50% of the rated deflection. Submittals shall include a scale drawing of the hanger showing the 30° capability. Basis of design type 30N as manufactured by Mason Industries, Inc.

2.4 DUCT HANGERS

A. Vibration hangers shall contain a steel spring located in a neoprene cup manufactured with a grommet to prevent short circuiting of the hanger rod. The cup shall contain a steel washer designed to properly distribute the load on the neoprene and prevent its extrusion. Spring diameters and hanger box lower hole sizes shall be large enough to permit the hanger rod to swing thru a 30° arc before contacting the hole and short circuiting the spring. Springs shall have a minimum additional travel to solid equal to 50% of the rated deflection. Hangers shall be provided with an eye bolt on the spring end and provision to attach the housing to the flat iron duct straps. Submittals shall include a scale drawing of the hanger showing the 30° capability. Basis of design type W30 as manufactured by Mason Industries, Inc.

2.5 EQUIPMENT BASES

A. Vibration isolator manufacturer shall provide steel members welded to height saving brackets to cradle machines having legs or bases that do not require a complete supplementary base. Members shall be sufficiently rigid to prevent strains in the equipment. Basis of design type ICS as manufactured by Mason Industries, Inc. The equipment supplier shall coordinate what is required.

2.6 CURB MOUNTS

A. Curb mounted rooftop equipment shall be mounted on vibration isolation bases that fit

over the roof curb and under the isolated equipment. The extruded aluminum top member shall overlap the bottom member to provide water runoff independent of the seal. The aluminum members shall house cadmium plated springs having a 1" minimum deflection with 50% additional travel to solid. Spring diameters shall be not less than 0.8 of the spring height at rated load. Wind resistance shall be provided by means of resilient snubbers in the corners with a minimum clearance of 1/4" so as not to interfere with the spring action except in high winds. The weather seal shall consist of continuous closed cell sponge materials both above and below the base and a waterproof flexible ductlike EPDM connection joining the outside perimeter of the aluminum members. Foam or other contact seals are unacceptable at the spring cavity closure. Caulking shall be kept to a minimum. Submittals shall include spring deflections, spring diameters, compressed spring height and solid spring height as well as seal and wind resistance details. Basis of design type CMAB as manufactured by Mason Industries, Inc.

2.7 EQUIPMENT ROOM WALL SEAL

A. Where piping passes through equipment walls, floors or ceilings, the vibration isolator manufacturer shall provide a split seal consisting of two bolted pipe halves with 3/4" or thicker neoprene sponge bonded to the inner faces. The seal shall be tightened around the pipe to eliminate clearance between the inner sponge face and the piping. Concrete may be packed around the seal to make it integral with the floor, wall or ceiling if the seal is not already in place around the pipe prior to the construction of the building member. Seals shall project a minimum of 1" past either face of the wall. Where temperatures exceed 240°F, 10# density fiberglass may be used in lieu of the sponge. Basis of design type SWS as manufactured by Mason Industries, Inc.

2.8 RESTRAINED SPRING ISOLATORS

A. Restrained spring isolators shall be the same as spring isolators except the housing shall be used that includes vertical limit stops to prevent spring extension when weight is removed. The installed and operating heights shall be the same. A minimum clearance of 1/2" shall be maintained around restraining bolts and between the housing and the spring so as not to interfere with the spring action. Limit stops shall be out of contact during normal operations. Mountings used out of doors shall be hot dipped galvanized. Basis of design SLR as manufactured by Mason Industries, Inc.

PART 3 EXECUTION

1.1 INSTALLATION

A. Install in accordance with manufacturer's instructions.

B. Piping: All piping shall be installed with hangers with 1" spring deflection.

C. Equipment Room Seals: All piping passing through the equipment room walls, floors or ceilings, shall be protected against sound leakage by means of an acoustical wall seal.

D. Ductwork: All runs for a distance of 50' from the connected equipment shall be isolated

from the building structure by means of spring duct hangers. Spring deflections shall be a minimum of 1".

E. Provide spring isolation for all air handling units, fans and condensing units.

END OF SECTION 23 05 48

SECTION 25 05 53 – IDENTIFICATION FOR HVAC PIPING AND EQUIPMENT

PART 1 GENERAL

1.1 SECTION INCLUDES (SUBMITTAL REQUIRED FOR EACH ITEM)

A. Nameplates.

B. Tags.

C. Stencils.

D. Pipe Markers.

1.2 RELATED SECTION

A. Section 230000 - General Mechanical Requirements.

1.3 REFERENCES

A. ASME A13.1 - Scheme for the Identification of Piping Systems.

1.4 SUBMITTALS

A. Submit under provisions of Section 230000.

B. Submit list of wording, symbols, letter size, and color coding for mechanical identification.

C. Submit valve chart and schedule, including valve tag number, location, function, and valve manufacturer's name and model number.

D. Product Data: Provide manufacturers catalog literature for each product required.

E. Samples: Submit two labels and tags.

F. Manufacturer's Installation Instructions: Indicate special procedures, and installation.

1.5 PROJECT RECORD DOCUMENTS

A. Submit under provisions of Section 230000.

B. Record actual locations of tagged valves.

PART 2 PRODUCTS

1.1 NAMEPLATES

A. Description: Laminated three-layer plastic with engraved white letters on dark contrasting background color.

1.2 TAGS

A. Plastic Tags: Laminated three-layer plastic with engraved white letters on dark contrasting background color. Tag size minimum 1-1/2 inch square.

********** OR **********

B. Metal Tags: Stainless Steel with stamped letters; tag size minimum 1-1/2 inch square with smooth edges.

C. Chart: Typewritten letter size list in anodized aluminum frame.

1.3 STENCILS

A. Stencils: With clean cut symbols and letters of following size:
1. 3/4 to 3 inch Outside Diameter of Pipe: 8 inch long color field, ½ inch high letters.
2. 3-1/2 to 8 inch Outside Diameter of Pipe: 12 inch long color field, 1-1/4 inch high letters.
3. Over 8 inch Outside Diameter of Insulation or Pipe: 32 inch long color field, 3-1/2 inch high letters.
4. Ductwork and Equipment: 2-1/2 inch high letters.

B. Stencil Paint: Semi- gloss enamel, colors conforming to ASME A13.1.

1.4 PIPE MARKERS

A. Color: Conform to ASME A13.1.

B. Plastic Pipe Markers: Factory fabricated, flexible, semi- rigid plastic, preformed to fit around pipe or pipe covering; minimum information indicating flow direction arrow and identification of fluid being conveyed.

C. Plastic Tape Pipe Markers: Flexible, vinyl film tape with pressure sensitive adhesive backing and printed markings.

D. Underground Plastic Pipe Markers: Bright colored continuously printed plastic ribbon tape, minimum 6 inches wide by 4 mil thick, manufactured for direct burial service.

1.5 CEILING TACKS

A. Description: Steel with 3/4 inch diameter color coded head.

B. Color code as follows:
1. Yellow - HVAC equipment

2. Red - Fire dampers/smoke dampers
3. Green - Plumbing valves
4. Blue - Heating/cooling valves

PART 3 EXECUTION

1.1 PREPARATION

A. Degrease and clean surfaces to receive adhesive for identification materials.

B. Prepare surfaces in accordance with manufacturer's recommendations for stencil painting.

1.2 INSTALLATION

A. Install plastic nameplates with corrosive-resistant mechanical fasteners, or adhesive. Apply with sufficient adhesive to ensure permanent adhesion and seal with clear lacquer.

B. Install tags with corrosion resistant chain.

C. Apply stencil painting in accordance with manufacturer's recommendations.

D. Install plastic pipe markers in accordance with manufacturer's instructions.

E. Install plastic tape pipe markers complete around pipe in accordance with manufacturer's instructions.

F. Install underground plastic pipe markers 6 to 8 inches below finished grade, directly above buried pipe.

G. Identify air handling units, pumps, heat transfer equipment, tanks, and water treatment devices with stencil painting. Small devices, such as in-line pumps, may be identified with tags.

H. Identify control panels and major control components outside panels with plastic nameplates.

I. Identify thermostats relating to zones with nameplates.

J. Identify valves in main and branch piping with tags.

K. Identify air terminal unit valves with numbered tags.

L. Tag automatic controls, instruments, and relays. Key to control schematic.

M. Identify piping, concealed or exposed, with plastic pipe markers. Use tags on piping 3/4

inch diameter and smaller. Identify service, flow direction, and also pressure for steam piping. Install in clear view and align with axis of piping. Locate identification not to exceed 20 feet on straight runs including risers and drops, adjacent to each valve and Tee, at each side of penetration of structure, enclosure, or obstruction.

N. Identify ductwork with stenciled painting. Identify air handling units with identification number and area served. Locate identification of ductwork at each side of penetration of structure, enclosure, or obstruction.

O. Provide ceiling tacks to locate valves or dampers above T-bar type panel ceilings. Locate in corner of panel closest to equipment.

END OF SECTION 23 05 53

SECTION 23 05 93 - TESTING, ADJUSTING, AND BALANCING FOR HVAC

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Testing, adjustment, and balancing of air systems.

B. Testing, adjustment, and balancing of hydronic systems.

1.2 RELATED SECTIONS

A. Section 230000 - General Mechanical Requirements.

1.3 REFERENCES

A. AABC - National Standards for Total System Balance.

B. ADC - Test Code for Grilles, Registers, and Diffusers.

C. ASHRAE 111 - Practices for Measurement, Testing, Adjusting, and Balancing of Building Heating, Ventilation, Air-conditioning, and Refrigeration Systems.

D. NEBB - Procedural Standards for Testing, Adjusting, and Balancing of Environmental Systems.

E. SMACNA - HVAC Systems Testing, Adjusting, and Balancing.

1.4 SUBMITTALS

A. Submit under provisions of Section 230000.

B. Submit name of adjusting and balancing agency for approval within 30 days after award of Contract.

C. Field Reports: Indicate deficiencies in systems that would prevent proper testing, adjusting, and balancing of systems and equipment to achieve specified performance to be submitted 21 days before any installation work.

D. Prior to commencing work, submit report forms or outlines indicating adjusting, balancing, and equipment data required. Include detailed procedures, agenda, and sample report forms.

E. Submit draft copies of report for review prior to final acceptance of Project. Provide final copies for Architect/Engineer and for inclusion in operating and maintenance manuals.

F. Provide reports in letter size, 3-ring binder manuals, complete with index page and indexing tabs, with cover identification at front and side. Include set of reduced drawings with air outlets and equipment identified to correspond with data sheets, and indicating thermostat locations.

G. Test Reports: Indicate data on AABC National Standards for Total System Balance forms or NEBB.

1.5 PROJECT RECORD DOCUMENTS

A. Submit under provisions of Section 230000.

B. Record actual locations of flow measuring stations balancing valves and rough setting.

1.6 QUALITY ASSURANCE

A. Perform total system balance in accordance with AABC National Standards for Field Measurement and Instrumentation, Total System Balance or NEBB Procedural Standards for Testing, Balancing and Adjusting of Environmental Systems.

B. The test and balance contractor shall schedule a meeting at the site with the design engineer and spot check 10 to 15% of the readings. If the readings are off by more than the specified tolerances, the complete building test and balance shall be redone and a new report submitted.

1.7 QUALIFICATIONS

A. Agency: Company specializing in the testing, adjusting, and balancing of systems specified in this section with minimum three years documented experience and certified by AABC, NEBB or Register Professional Engineer with a minimum of 5 year experience in Test and Balance.

B. Perform Work under supervision of AABC Certified Test and Balance Engineer or NEBB Certified Testing, Balancing and Adjusting Supervisor or Register Professional Engineer with a minimum of 5 year experience in Test and Balance.

1.8 SEQUENCING

A. Sequence work to commence after completion of systems and schedule completion of work before Substantial Completion of Project.

B. The Test and Balance Contractor shall work with Controls Contractor as required to adjust the dampers to provide the air flows as required.

1.9 SCHEDULING

A. Schedule work as required to perform the work required.

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

3.1 EXAMINATION

A. Verify that systems are complete and operable before commencing work. Ensure the following conditions:

1. Systems are started and operating in a safe and normal condition.
2. Temperature control systems are installed complete and operable.
3. Proper thermal overload protection is in place for electrical equipment.

4. Final filters are clean and in place. If required, install temporary media in addition to final filters.
5. Duct systems are clean of debris.
6. Fans are rotating correctly.
7. Fire and volume dampers are in place and open.
8. Air coil fins are cleaned and combed.
9. Access doors are closed and duct end caps are in place.
10. Air outlets are installed and connected.
11. Duct system leakage is minimized.
12. Hydronic systems are flushed, filled, and vented.
13. Pumps are rotating correctly.
14. Proper strainer baskets are clean and in place.
15. Service and balance valves are open.

B. Submit field reports. Report defects and deficiencies noted during performance of services which prevent system balance.

B. Beginning of work means acceptance of existing conditions.

3.2 PREPARATION

A. Provide instruments required for testing, adjusting, and balancing operations. Make instruments available to Architect/Engineer to facilitate spot checks during testing.

B. Provide additional balancing devices as required.

3.3 INSTALLATION TOLERANCES

A. Air Handling Systems: Adjust to within plus or minus 5 percent of design for supply systems and plus or minus 10 percent of design for return and exhaust systems.

B. Air Outlets and Inlets: Adjust total to within plus 10 percent and minus 10 percent of design to space. Adjust outlets and inlets in space to within plus or minus 5 percent of design.

C. Hydronic Systems: Adjust to within plus 5 percent or minus 0 percent of design.

3.4 ADJUSTING

A. Ensure recorded data represents actual measured or observed conditions.

B. Permanently mark settings of valves, dampers, and other adjustment devices allowing settings to be restored. Set and lock memory stops.

C. After adjustment, take measurements to verify balance has not been disrupted or that such disruption has been rectified.

D. Leave systems in proper working order, replacing belt guards, closing access doors, closing doors to electrical switch boxes, and restoring thermostats to specified settings.

E. At final inspection, recheck random selections of data recorded in report. Recheck points or areas as selected and witnessed by the Owner.

3.5 AIR SYSTEM PROCEDURE

A. Adjust air handling and distribution systems to provide design supply, return, and exhaust air quantities.

B. Make air quantity measurements in ducts by Pitot tube traverse of entire cross sectional area of duct.

C. Measure air quantities at air inlets and outlets.

D. Adjust distribution system to obtain uniform space temperatures free from objectionable drafts and noise.

E. Use volume control devices to regulate air quantities only to extend that adjustments do not create objectionable air motion or sound levels. Effect volume control by duct internal devices such as dampers and splitters.

F. Vary total system air quantities by adjustment of fan speeds. Provide drive changes required. Vary branch air quantities by damper regulation.

G. Provide system schematic with required and actual air quantities recorded at each outlet or inlet.

H. Measure static air pressure conditions on air supply units, including filter and coil pressure drops, and total pressure across the fan. Make allowances for 50 percent loading of filters.

I. Adjust outside air, return air, and exhaust dampers for design conditions.

J. Measure temperature conditions across outside air, return air, and exhaust dampers to check leakage.

K. Where modulating dampers are provided, take measurements and balance at extreme conditions.

L. Measure building static pressure and adjust supply, return, and exhaust air systems to provide required relationship between each to maintain approximately 0.05 inches positive static pressure.

3.6 WATER SYSTEM PROCEDURE

A. Adjust water systems to provide required or design quantities.

B. Use calibrated fittings and pressure gages to determine flow rates for system balance. Where flow metering devices are not installed, base flow balance on temperature difference across various heat transfer elements in the system.

C. Adjust systems to provide specified pressure drops and flows through heat transfer elements prior to thermal testing. Perform balancing by measurement of temperature differential in conjunction with air balancing.

D. Effect system balance with automatic control valves fully open to heat transfer elements.

E. Effect adjustment of water distribution systems by means of balancing cocks, valves, and fittings. Do not use service or shut-off valves for balancing unless indexed for balance point.

F. Where available pump capacity is less than total flow requirements or individual system parts, full flow in one part may be simulated by temporary restriction of flow to other parts.

3.7 SCHEDULES

A. Equipment Requiring Testing, Adjusting, and Balancing

HVAC Pumps (if applicable)
Force Air Furnace Units
Unit Air Conditioners
Air Handling Units, Include Sound Testing
Fans
Air Inlets and Outlets
Water Source Heat Pump (if applicable)

END OF SECTION 23 05 93

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SECTION 23 07 13 - DUCTWORK INSULATION

PART 1 GENERAL

1.1 SECTION INCLUDES (SUBMITTAL REQUIRED FOR EACH ITEM)

A. Ductwork insulation.

B. Duct Liner.

C. Insulation jackets.

1.2 RELATED SECTIONS

A. Section 23 00 00 - General Mechanical Requirements.

1.3 REFERENCES

A. ASTM B209 - Aluminum and Aluminum-Alloy Sheet and Plate.

B. ASTM C518 - Steady-State Heat Flux Measurements and Thermal Transmission Properties by Means of the Heat Flow Meter Apparatus.

C. ASTM C553 - Mineral Fiber Blanket and Felt Insulation.

D. ASTM C612 - Mineral Fiber Block and Board Thermal Insulation.

E. ASTM E84 - Surface Burning Characteristics of Building Materials.

F. ASTM E96 - Water Vapor Transmission of Materials.

G. MICA-01 - National Commercial and Industrial Insulation Standards.

H. NFPA 255 - Surface Burning Characteristics of Building Materials.

I. SMACNA - HVAC Duct Construction Standards - Metal and Flexible.

J. UL 723 - Surface Burning Characteristics of Building Materials.

1.4 SUBMITTALS

A. Submit under provisions of Section 23 00 00.

B. Product Data: Provide product description, list of materials and thickness for each service, and locations.

C. Samples: Submit two samples of any representative size illustrating each insulation type.

D. Manufacturer's Installation Instructions: Indicate procedures which ensure acceptable workmanship and installation standards will be achieved.

1.5 QUALITY ASSURANCE

A. Materials: Flame spread/smoke developed rating shall not exceed 25/50 in accordance with ASTM E84.

1.6 QUALIFICATIONS

A. Applicator: Company specializing in performing the work of this section with minimum three years experience.

1.7 DELIVERY, STORAGE, AND HANDLING

A. Deliver, store, protect and handle products to site according to the manufacturer's recommendations.

B. Deliver materials to site in original factory packaging, labeled with manufacturer's density and thickness.

C. Store insulation in original wrapping and protect from weather and construction traffic.

D. Protect insulation against dirt, water, chemical, and mechanical damage.

1.8 ENVIRONMENTAL REQUIREMENTS

A. Maintain ambient temperatures and conditions required by manufacturers of adhesives, mastics, and insulation cements.

B. Maintain temperature during and after installation for minimum period of 24 hours.

PART 2 PRODUCTS

1.1 GLASS FIBER, FLEXIBLE

A. Insulation: ASTM C553; flexible, noncombustible blanket.

1. Maximum Thermal Conductivity: ASTM C518, 0.29 at 75 degrees F.
2. Maximum service temperature: 250 degrees F.
3. Maximum moisture absorption: 5 percent by weight.

B. Vapor Barrier Jacket

1. Kraft paper reinforced with glass fiber yarn and bonded to aluminized film.
2. Moisture vapor transmission: ASTM E96; 0.04 perm.
3. Secure with pressure sensitive tape.

C. Vapor Barrier Tape

1. Kraft paper reinforced with glass fiber yarn and bonded to aluminized film, with pressure sensitive rubber based adhesive.

D. Tie Wire: Annealed steel, 16 gage.

1.2 GLASS FIBER, RIGID

A. Insulation: ASTM C612; rigid, noncombustible board.

1. Maximum Thermal Conductivity: ASTM C518, 0.31 at 75 degrees F.
2. Maximum service temperature: 250 degrees F.
3. Maximum moisture absorption: 5 percent by weight.

B. Vapor Barrier Jacket

1. Kraft paper reinforced with glass fiber yarn and bonded to aluminized film.
2. Moisture vapor transmission: ASTM E96; 0.04 perm.
3. Secure with pressure sensitive tape.

C. Vapor Barrier Tape

1. Kraft paper reinforced with glass fiber yarn and bonded to aluminized film, with pressure sensitive rubber based adhesive.

1.3 JACKETS

A. Outdoor Jacket: Asphalt impregnated and coated mineral fiber sheet, 50 lb/square with aluminum jacket on outside.

B. Aluminum Jacket: ASTM B209
1. Thickness: 0.024 inch sheet.
2. Finish: Smooth.
3. Joining: Longitudinal slip joints and 2 inch laps.
4. Fittings: 0.016 inch thick die shaped fitting covers with factory attached protective liner.
5. Metal Jacket Bands: 3/8 inch wide; 0.015 inch thick aluminum.

1.4 GLASS FIBER DUCT LINER, RIGID

A. Heavy density fiberglass board made from inorganic glass fibers bonded by a thermo setting resin.

B. Fire Resistance: Meets NFPA 90A and NFPA 90B.
C. Temperature Range: ASTM C 411 up to 250°F.

D. Air Velocity: ASTM C 1071 maximum 4000 FPM.

E. Surface Burning: ASTM E 84, NFPA 244, maximum flame spread 25 smoke developed 50.

F. Sound Absorption: ASTM C 423 Type A mounting 3.0 PCF 1".

125	cyc/sec	17
250	cyc/sec	.35
4000	cyc/sec	.94

G. Thermal Conductance: ASTM C 177 maximum of .25 to 75°F.

H. Density: 3.0 PCF minimum.

I. Adhesive

1. Waterproof fire-retardant type.

J. Liner Fasteners: Galvanized steel mechanical fasteners spaced according to SMACNA.

K. Duct Liner shall only be allowable where indicated on drawings.

PART 3 EXECUTION

1.1 EXAMINATION

A. Verify that ductwork has been tested before applying insulation materials.

B. Verify that surfaces are clean, foreign material removed, and dry.

1.2 INSTALLATION

A. Install materials in accordance with manufacturer's instructions if not directly indicated. All insulation shall be installed in accordance with MICA-01 standard plates unless otherwise specified. All insulation shall be installed on outside of ducts.

B. Insulated ductwork conveying air below ambient temperature:

1. Provide insulation with vapor barrier jackets.
2. Finish with tape and vapor barrier jacket.
3. Continue insulation through walls, sleeves, hangers, and other duct penetrations.
4. Insulate entire system including fittings, joints, flanges, fire dampers, flexible connections, and expansion joints.

C. Insulated ductwork conveying air above ambient temperature:

1. Provide with or without standard vapor barrier jacket.
2. Insulate fittings and joints. Where service access is required, bevel and seal ends of insulation.

D. For ductwork exposed in mechanical equipment rooms or in finished spaces, finish with foil jacket prepared for finish painting.

E. For exterior applications, provide rigid insulation with outside jacket. Cover outside jacket with caulked aluminum jacket with seams located on bottom side of horizontal duct section.

F. Corner angles shall be installed on external corners of insulation on ductwork in exposed finished spaces before covering with jacket.

H. Duct insulation terminating at fire dampers, shall be continuous over the damper collar

and retaining angle of fire dampers, which are exposed to unconditioned air and which may be prone to condensate formation. Duct insulation and vapor barrier shall cover the collar and retaining angles of dampers, diffusers, registers and grills. Vapor barrier materials shall be applied to form a complete unbroken vapor seal over the insulation.

I. Installation on Concealed Duct:

1. For rectangular, oval or round ducts, insulation shall be attached by applying Class 2 adhesive around the entire perimeter of the duct in 6-inch wide strips on 12-inch centers.

2. For rectangular and oval ducts, 24 inches and larger insulation shall be additionally secured to bottom of ducts by the use of mechanical fasteners. Fasteners shall be spaced on 18-inch centers and not more than 18 inches from duct corners.

3. For rectangular, oval and round ducts, mechanical fasteners shall be provided on sides of duct risers for all duct sizes. Fasteners shall be spaced on 18-inch centers and not more than 18 inches from duct corners.

4. Insulation shall be impaled on the mechanical fasteners where used and shall be pressed thoroughly into the adhesive. Care shall be taken to ensure vapor barrier jacket joints overlap 2 inches. The insulation shall not be compressed to a thickness less than that specified. Insulation shall be carried over standing seams and trapeze-type duct hanger.

5. Self-locking washers shall be installed where mechanical fasteners are used. The pin shall be trimmed back and bent over.

6. Jacket overlaps shall be secured under the overlap with adhesive and stapled on 4-inch centers. Staples and seams shall be coated with a brush coat of vapor barrier coating.

7. Breaks in the jacket material shall be covered with patches of the same material as the vapor barrier. The patches shall extend not less than 2 inches beyond the break or penetration in all directions and shall be secured with Class 2 adhesive and staples. Staples and joints shall be sealed with a brush coat of vapor barrier coating.

8. At jacket penetrations such as hangers thermometers and damper operating rods, voids in the insulation shall be filled and the penetration sealed with a brush coat of vapor barrier coating.

9. Insulation terminations and pin punctures shall be sealed and flashed with a reinforced vapor barrier coating finish. The coating shall overlap the adjoining insulation and uninsulated surface 2 inches. Pin puncture coatings shall extend 2 inches from the puncture in all directions.

10. Where insulation standoff brackets occur, insulation shall be extended under the bracket and the jacket terminated at the bracket.

J. Installation on Exposed Duct Work:

1. For rectangular ducts, rigid insulation shall be secured to the duct by mechanical fasteners on all four sides of the duct, spaced not more than 12 inches apart and not more than 3 inches from the edges of the insulation joints. A minimum of two rows of

fasteners shall be provided for each side of duct 12 inches and larger. One row shall be provided for each side of duct less than 12 inches.

2. Duct insulation shall be formed with minimum jacket seams. Each piece of rigid insulation shall be fastened to the duct using mechanical fasteners. Insulation shall be brought up to standing seams, reinforcing, and other vertical projections and shall not be carried over. Vapor barrier jacket shall be continuous across seams, reinforcing, and projections. When height of projections is greater than the insulation thickness, insulation and jacket shall be carried over.

3. Insulation shall be impaled on the fasteners; self-locking washers shall be installed and the pin trimmed and bent over.

4. Joints in the insulation jacket shall be sealed with a 4-inch wide strip of the same material as the vapor barrier jacket. The strip shall be secured with adhesive and stapled. Staples and seams shall be sealed with a brush coat of vapor barrier coating.

5. Breaks and ribs or standing seam penetrations in the jacket material shall be covered with a patch of the same material as the jacket. Patches shall extend not less than 2 inches beyond the break or penetration and shall be secured with adhesive and stapled. Staples and joints shall be sealed with a brush coat of vapor barrier coating.

6. At jacket penetrations such as hangers, thermometers, and damper operating rods, the voids in the insulation shall be filled and the penetrations sealed with a brush coat of vapor barrier coating.

7. Insulation terminations and pin punctures shall be sealed and flashed with a reinforced vapor barrier coating finish. The coating shall overlap the adjoining insulation and uninsulated surface 2 inches. Pin puncture coatings shall extend 2 inches from the puncture in all directions.

K. Ducts Handling Air for Dual Purpose (Below and Above 60 degrees F). Ducts shall be insulated as specified for cold air duct.

L. Duct Test Holes: After all duct systems have been tested, adjusted, and balanced, all breaks in the insulation and jacket shall be repaired in accordance with the applicable section of this specification for the type of duct insulation to be repaired.

M. Duct and Plenum Liner Application:
1. Adhere insulation with adhesive for 100 percent coverage.
2. Secure insulation with mechanical liner fasteners. Refer to SMACNA Standards for spacing.
3. Seal and smooth joints.
4. Seal liner surface penetrations with adhesive.
5. Duct dimensions indicated are net inside dimensions required for air flow. Increase duct size to allow for insulation thickness.

1.3 TOLERANCE

A. Substituted insulation materials shall provide thermal resistance within 5 percent at normal conditions, as materials indicated.

1.4 GLASS FIBER DUCTWORK INSULATION SCHEDULE

A. The insulation valve shall meet the energy code requirements or the following which ever is most stringent.

	THICKNESS	DENSITY InchLbs/Ft3	TYPE
Supply and Return Ducts (Unconditioned Space)	2"	1.5	Flex
	1 1/2"	3.0	Rigid
Outside Air Intake Ducts			
	2"	1.5	Flex
	1"	3.0	Rigid

END OF SECTION 23 07 13

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SECTION 23 07 16 – HVAC EQUIPMENT INSULATION

PART 1 GENERAL

1.1 SECTION INCLUDES (SUBMITTAL REQUIRED FOR EACH ITEM)

A. Equipment insulation.

B. Covering.

1.2 RELATED SECTION

A. Section 230000 - General Mechanical Requirements.

1.3 REFERENCES

A. ASTM B209 - Aluminum and Aluminum-Alloy Sheet and Plate.

B. ASTM C177 - Steady-State Heat Flux Measurements and Thermal Transmission Properties by Means of the Guarded-Hot-Plate Apparatus.

C. ASTM C195 - Mineral Fiber Thermal Insulation Cement.

D. ASTM C335 - Steady-State Heat Transfer Properties of Horizontal Pipe Insulation.

E. ASTM C518 - Steady-State Heat Flux Measurements and Thermal Transmission Properties by Means of the Heat Flow Meter Apparatus.

F. ASTM C534 - Preformed Flexible Elastomeric Cellular Thermal Insulation in Sheet and Tubular Form.

G. ASTM C552 - Cellular Glass Block and Pipe Thermal Insulation.

H. ASTM C612 - Mineral Fiber Block and Board Thermal Insulation.

I. ASTM C921 - Properties of Jacketing Materials for Thermal Insulation.

J. ASTM D1056 - Flexible Cellular Materials - Sponge or Expanded Rubber.

K. ASTM E84 - Surface Burning Characteristics of Building Materials.

L. ASTM E96 - Water Vapor Transmission of Materials.

1.4 SUBMITTALS

A. Submit under provisions of Section 230000.

B. Product Data: Provide product description, list of materials and thickness for equipment scheduled.

C. Manufacturer's Installation Instructions: Indicate procedures which ensure acceptable workmanship and installation standards will be achieved.

1.5 QUALITY ASSURANCE

A. Materials: Flame spread/smoke developed rating of 25/50 in accordance with ASTM E84.

1.6 QUALIFICATIONS

A. Applicator: Company specializing in performing the work of this section with minimum three years experience.

1.7 DELIVERY, STORAGE, AND HANDLING

A. Deliver, store, protect and handle products to site as recommended by the manufacturer.

B. Deliver materials to site in original factory packaging, labeled with manufacturer's density and thickness.

C. Store insulation in original wrapping and protect from weather and construction traffic.

D. Protect insulation against dirt, water, chemical, and mechanical damage.

1.8 ENVIRONMENTAL REQUIREMENTS

A. Maintain ambient temperatures and conditions required by manufacturers of adhesives, mastics, and insulation cements.

B. Maintain temperature during and after installation for minimum period of 24 hours.

PART 2 PRODUCTS

2.1 GLASS FIBER, RIGID

A. Insulation: ASTM C612; rigid, noncombustible.
   1. Maximum Thermal Conductivity: ASTM C335, 0.24 per inch at 75 degrees F.
   2. Maximum service temperature: 450 degrees F.
   3. Maximum moisture absorption: 5.0 percent by weight.
   4. Density: 3.0 lb/cu ft.

B. Vapor Barrier Jacket
   1. Kraft paper reinforced with glass fiber yarn and bonded to aluminized film.
   2. Moisture vapor transmission: ASTM E96; 0.04 perm.
   3. Secure with self sealing longitudinal laps and butt strips.

4. Secure with outward clinch expanding staples and vapor barrier mastic.

C. Facing: 1 inch galvanized steel hexagonal wire mesh stitched on one face of insulation.

D. Vapor Barrier Lap Adhesive
1. Compatible with insulation.

E. Insulating Cement/Mastic
1. ASTM C195; hydraulic setting on mineral wool.

2.2 CELLULAR GLASS

A. Insulation: ASTM C552.
1. Maximum Thermal Conductivity: 0.35 per inch at 75 degrees F.
2. Density: 8.0 lb/cu ft.

2.3 CELLULAR FOAM

A. Insulation: ASTM C534; flexible, cellular elastomeric, molded or sheet.
1. Maximum Thermal Conductivity: ASTM C177 or C518; 0.28 per inch at 75 degrees F.
2. Minimum service temperature: -40 degrees F.
3. Maximum service temperature: 220 degrees F.
4. Maximum moisture absorption: ASTM D1056; 1.0 percent (pipe) by volume, 1.0 percent (sheet) by volume.
5. Moisture vapor transmission: ASTM E96; 0.20 perm inches.
6. Maximum flame spread: ASTM E84; 25.
7. Maximum smoke developed: ASTM E84; 50.
8. Connection: Waterproof vapor barrier adhesive.

B. Elastomeric Foam Adhesive
1. Air dried, contact adhesive, compatible with insulation.

2.4 JACKETS

A. PVC Plastic
1. Jacket: ASTM C921, Sheet material, off white color.
a) Minimum service temperature: -40 degrees F.
b) Maximum service temperature: 150 degrees
c) Moisture vapor transmission: ASTM E96; 0.2 perm inches.
d) Maximum flame spread: ASTM E84; 25.
e) Maximum smoke developed: ASTM E84; 50.
f) Thickness: 20 mil.
g) Connections: Brush on welding adhesive.

2. Covering Adhesive Mastic
a) Compatible with insulation.

B. All Service Jacket: UL listed
    1. Fabric: Foil type with reinforcement.
    2. Lagging Adhesive
        a) Compatible with insulation.

C. Aluminum Jacket: ASTM B209.
    1. Thickness: 0.024 inch sheet.
    2. Finish: Smooth.
    3. Joining: Longitudinal slip joints and 2 inch laps.
    4. Metal Jacket Bands: 3/8 inch wide; 0.015 inch thick aluminum.

D. Stainless Steel Jacket: Type 316 stainless steel.
    1. Thickness: 0.016 inch.
    2. Finish: Smooth. Corrugated.
    3. Metal Jacket Bands: 3/8 inch wide; 0.010 inch thick stainless steel.

PART 3 EXECUTION

3.1 EXAMINATION

A. Verify that equipment has been tested before applying insulation materials.

B. Verify that surfaces are clean, foreign material removed, and dry.

3.2 INSTALLATION

A. Install materials in accordance with manufacturer's instructions.

B. Do not insulate factory insulated equipment.

C. On exposed equipment, locate insulation and cover seams in least visible locations.

D. Finish insulation at supports, protrusions, and interruptions.

E. For exterior applications, cover with aluminum jacket with seams located on bottom side of horizontal equipment.

F. Do not insulate over nameplate or ASME stamps. Bevel and seal insulation around such.

G. Install insulation for equipment requiring access for maintenance, repair, or cleaning, in such a manner that it can be easily removed and replaced without damage.

H. Insulate pumps with 1-inch thick preformed rigid glass mineral fiber insulation. Insulate pumps by forming a box around pump housing, drive shaft, and piping. Apply insulation to inside surfaces of 20-gage galvanized sheet-metal boxes having openings for drive shaft and pipes. Construct box by forming bottom and sides using joints which do not

leave raw ends of insulation exposed. Band bottom and sides to form a rigid housing that does not rest on pump. Between top cover and sides, fit joints tightly forming a female shiplap joint on side pieces and a male joint on top cover to make top cover removable. Secure insulation to box with adhesive. Allow clearance for draining and adjustment of pump shaft seal.

I. On equipment operating at less than ambient temperature provide vapor barrier.

J. Provide canvas jackets on all inside equipment sized for painting for all cellular glass and rigid glass fiber insulation.

3.3 CELLULAR FOAM

EQUIPMENT	THICKNESS Inch
A. Condenses Water Systems	
Air Separators	1"
Expansion Tanks	1"

3.4 GLASS FIBER, RIGID

EQUIPMENT	THICKNESS Inch
A. Air Handlers (Not Factory Insulated)	1"

END OF SECTION 23 07 16

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SECTION 23 07 19 – HVAC PIPING INSULATION

1. GENERAL

1.1 SECTION INCLUDES (SUBMITTAL REQUIRED FOR EACH ITEM)

A. Piping insulation.

B. Jackets and accessories.

1.2 RELATED SECTION

A. Section 230000 - General Mechanical Requirements

1.3 REFERENCES

A. ASTM B209 - Aluminum and Aluminum-Alloy Sheet and Plate.

B. ASTM C177 - Steady-State Heat Flux Measurements and Thermal Transmission Properties by Means of the Guarded-Hot-Plate Apparatus.

C. ASTM C518 - Steady-State Heat Flux Measurements and Thermal Transmission Properties by Means of the Heat Flow Meter Apparatus.

D. ASTM C195 - Mineral Fiber Thermal Insulation Cement.

E. ASTM C335 - Steady-State Heat Transfer Properties of Horizontal Pipe Insulation.

F. ASTM C449 - Mineral Fiber Hydraulic-setting Thermal Insulating and Finishing Cement.

G. ASTM C533 - Calcium Silicate Block and Pipe Thermal Insulation.

H. ASTM C534 - Preformed Flexible Elastomeric Cellular Thermal Insulation in Sheet and Tubular Form.

I. ASTM C547 - Mineral Fiber Preformed Pipe Insulation.

J. ASTM C552 - Cellular Glass Block and Pipe Thermal Insulation.

K. ASTM C640 - Corkboard and Cork Pipe Thermal Insulation.

L. ASTM C921 - Properties of Jacketing Materials for Thermal Insulation.

M. ASTM D1056 - Flexible Cellular Materials - Sponge or Expanded Rubber.

N. ASTM E84 - Surface Burning Characteristics of Building Materials.

O. ASTM E96 - Water Vapor Transmission of Materials.

1.4 SUBMITTALS

A. Submit under provisions of Section 230000.

B. Product Data: Provide product description, list of materials and thickness for each service, and locations.

C. Manufacturer's Installation Instructions: Indicate procedures which ensure acceptable workmanship and installation standards will be achieved.

1.5 QUALITY ASSURANCE

A. Materials: Flame spread/smoke developed rating of 25/50 or less in accordance with ASTM E84.

1.6 QUALIFICATIONS

A. Applicator: Company specializing in performing the work of this section with minimum three years experience.

1.7 DELIVERY, STORAGE, AND HANDLING

A. Deliver, store, protect, and handle products to site according to manufacturer's recommendations.

B. Deliver materials to site in original factory packaging, labeled with manufacturer's identification, including product density and thickness.

C. Store insulation in original wrapping and protect from weather and construction traffic.

D. Protect insulation against dirt, water, chemical, and mechanical damage.

1.8 ENVIRONMENTAL REQUIREMENTS

A. Maintain ambient temperatures and conditions required by manufacturers of adhesives, mastics, and insulation cements.

B. Maintain temperature during and after installation for minimum period of 24 hours.

PART 2 PRODUCTS

2.1 GLASS FIBER

A. Insulation: ASTM C547; rigid molded, noncombustible.
   1. Maximum Thermal Conductivity: ASTM C335, 0.24 at 75 degrees F.
   2. Minimum Service Temperature: -20 degrees F.
   3. Maximum Service Temperature: 850 degrees F.
   4. Maximum Moisture Absorption: 0.2 percent by volume.

B. Vapor Barrier Jacket
   1. ASTM C921, White kraft paper reinforced with glass fiber yarn and bonded to aluminized film.
   2. Moisture Vapor Transmission: ASTM E96; 0.02 perm inches.
   3. Secure with self sealing longitudinal laps and butt strips.
   4. Secure with outward clinch expanding staples and vapor barrier mastic.

C. Tie Wire: 18 gage stainless steel with twisted ends on maximum 12 inch centers.

D. Vapor Barrier Lap Adhesive
   1. Compatible with insulation.

E. Insulating Cement/Mastic
   1. ASTM C195; hydraulic setting on mineral wool.

F. Fibrous Glass Fabric
   1. Cloth: Untreated; 9 oz/sq yd weight.
   2. Blanket: 1.0 lb/cu ft density.

G. Outdoor Vapor Barrier Mastic
   1. Vinyl emulsion type acrylic, compatible with insulation, white color.

H. Insulating Cement
   1. ASTM C449.

2.2 CELLULAR GLASS

A. Insulation: ASTM C552.
   1. Maximum Thermal Conductivity 0.40 at 75 degrees F.
   2. Maximum Water Vapor Transmission: 0.1 perm.

2.3 CELLULAR FOAM

A. Insulation: ASTM C534; flexible, cellular elastomeric, molded or sheet.
   1. Maximum Thermal Conductivity ASTM C177 or C518; 0.28 at 75 degrees F.
   2. Minimum Service Temperature: -20 degrees F.
   3. Maximum Service Temperature: 220 degrees F.
   4. Maximum Moisture Absorption: ASTM D1056; 1.0 percent (pipe) by volume, 1.0 percent (sheet) by volume.
   5. Moisture Vapor Transmission: ASTM E96; 0.20 perm inches.
   6. Maximum Flame Spread: ASTM E84; 25.
   7. Maximum Smoke Developed: ASTM E84; 50.
   8. Connection: Waterproof vapor barrier adhesive.

B. Elastomeric Foam Adhesive
   1. Air dried, contact adhesive, compatible with insulation.

2.4 JACKETS

A. PVC Plastic

1. Jacket: ASTM C921, One piece molded type fitting covers and sheet material, off white color.

    a) Minimum Service Temperature: -20 degrees F.
    b) Maximum Service Temperature: 150 degrees F.
    c) Moisture Vapor Transmission: ASTM E96; 0.5 perm inches.
    d) Maximum Flame Spread: ASTM E84; 25.
    e) Maximum Smoke Developed: ASTM E84; 50.
    f) Thickness: 20 mil.
    g) Connections: Brush on welding adhesive.

2. Covering Adhesive Mastic
    a) Compatible with insulation.

B. All Service Jacket: UL listed

1. Fabric: Foil type with reinforcement.
2. Lagging Adhesive
    a) Compatible with insulation.

C. Aluminum Jacket: ASTM B209.

1. Thickness: 0.020 inch sheet.
2. Finish: Smooth.
3. Joining: Longitudinal slip joints and 2 inch laps.
4. Fittings: 0.016 inch thick die shaped fitting covers with factory attached protective liner.
5. Metal Jacket Bands: 3/8 inch wide; 0.015 inch thick aluminum.

PART 3 EXECUTION

3.1 EXAMINATION

A. Verify that piping has been tested before applying insulation materials.

B. Verify that surfaces are clean, foreign material removed, and dry.

3.2 INSTALLATION

A. Install materials in accordance with manufacturer's instructions.

B. On exposed piping, locate insulation and cover seams in least visible locations.

C. Insulated dual temperature pipes or cold pipes conveying fluids below ambient temperature:

1. Provide vapor barrier jackets, factory applied or field applied.
2. Insulate fittings, joints, and valves with molded insulation of like material and thickness as adjacent pipe.
3. PVC fitting covers may be used.
4. Continue insulation through walls, sleeves, pipe hangers, and other pipe penetrations.

5. Insulate entire system including fittings, valves, unions, flanges, strainers, flexible connections, pump bodies, and expansion joints.

D. For insulated pipes conveying fluids above ambient temperature:

1. Provide standard jackets, with or without vapor barrier, factory applied or field applied.
2. Insulate fittings, joints, and valves with insulation of like material and thickness as adjoining pipe.
3. PVC fitting covers may be used.
4. For hot piping conveying fluids 140 degrees F or less, do not insulate flanges and unions at equipment, but bevel and seal ends of insulation.
5. For hot piping conveying fluids over 140 degrees F, insulate flanges and unions at equipment.

E. Inserts and Shields:

1. Application: Piping 2 inches diameter or larger.
2. Shields: Galvanized steel between pipe hangers or pipe hanger rolls and inserts.
3. Insert Location: Between support shield and piping and under the finish jacket.
4. Insert Configuration: Minimum 6 inches long, of same thickness and contour as adjoining insulation; may be factory fabricated.
5. Insert Material: ASTM C640 cork, hydrous calcium silicate insulation or other heavy density insulating material suitable for the planned temperature range.

F. Finish insulation at supports, protrusions, and interruptions.

G. For pipe exposed in mechanical equipment rooms or in finished spaces below 10 feet above finished floor, finish with all service jacket prepared for finish painting.

H. For exterior applications, provide vapor barrier jacket. Insulate fittings, joints, and valves with insulation of like material and thickness as adjoining pipe, and finish with glass mesh reinforced vapor barrier cement. Cover with aluminum jacket with seams located on bottom side of horizontal piping.

I. For heat traced piping, insulate fittings, joints, and valves with insulation of like material, thickness, and finish as adjoining pipe. Size large enough to enclose pipe and heat tracer. Cover with aluminum jacket with seams located on bottom side of horizontal piping.

3.3 PIPING INSULATION THICKNESS

		Tube And Pipe Size (Inches)					
Service	Material	1/4-1	1 1/4	1 ½-3	3 ½-5	6-10	11-36
Chilled Water Supply Return Piping (40°F Nominal)	Cellular Glass	1.5	2.0	2.0	2.0	3.0	
Hot Domestic Water Supply and Recirculating	Glass Fiber	1	1	1.5	1.5	1.5	
	Cellular Glass	1.5	1.5	1.5	1.5	1.5	

Piping (Maximum 200°F)						
Cold Domestic Water Piping Above & below Ceilings	Glass Fiber	0.75	1	1	1	1
	Cellular Glass	1.5	1.5	1.5	1.5	1.5
	Flexible cellular	0.5	0.5	0.5	N/A	N/A
Heating Hot Water (Supply & Return , Maximum 250°F)	Glass Fibe	1.5	1.5	2	2.5	3
	Cellular Glass	1.5	1.5	1.5	1.5	1.5
Refrigerant Piping (35°F nominal)	Flexible cellular	0.5	N/A	N/A	N/A	N/A
	Cellular Glass	1.5	1.5	1.5	1.5	1.5
A/C condensate Drain Located Inside Bldg.	Cellular Glass	1.5	1.5	1.5	1.5	1.5
	Flexible cellular	0.5	0.5	0.5	N/A	N/A

END OF SECTION 23 07 19

23 23 00 - REFRIGERANT PIPING

PART 1 - GENERAL

1.1 SUBMITTALS:

A. Product Data: Include pressure drop, based on manufacturer's test data, for thermostatic expansion valves, solenoid valves, and pressure-regulating valves.

B. Shop Drawings: Show layout of refrigerant piping and specialties, including pipe, tube, and fitting sizes, flow capacities, valve arrangements and locations, slopes of horizontal runs, oil traps, double risers, wall and floor penetrations, and equipment connection details. Show interface and spatial relationship between piping and equipment.

1. Size piping and design the actual piping layout, including oil traps, double risers, specialties, and pipe and tube sizes, to ensure proper operation and compliance with warranties of connected equipment.

1.2 QUALITY ASSURANCE:

A. ASHRAE Standard: Comply with ASHRAE 15, "Safety Code for Mechanical Refrigeration."

B. ASME Standard: Comply with ASME B31.5, "Refrigeration Piping."

C. UL Standard: Provide products complying with UL 207, "Refrigerant-Containing Components and Accessories, Nonelectrical"; or UL 429, "Electrically Operated Valves."

PART 2 - PRODUCTS

2.1 COPPER TUBE AND FITTINGS:

A. Drawn-Temper Copper Tube: ASTM B 280, Type ACR.

B. Wrought-Copper Fittings: ASME B16.22.

C. Wrought-Copper Unions: ASME B16.22.

D. Bronze Filler Metals: AWS A5.8, Classification BAg-1 (silver)

E. Parker ZoomLock shall be an acceptable alternative to brazing.

2.2 REFRIGERANT PIPING SPECIALITIES:

A. Replaceable-Core Filter-Dryers: 500-psig maximum working pressure; heavy gage protected with corrosion-resistant-painted steel shell, flanged ring and spring, ductile-iron cover plate

with steel cap screws; wrought-copper fittings for solder-end connections; with replaceable-core kit, including gaskets and the following:

1. Filter-Dryer Cartridge: Pleated media with solid-core sieve with activated alumina, ARI 730 rated for capacity.
2. Service Valves: 500-psig (3450-kPa) pressure rating; forged-brass body with copper stubs, brass caps, removable valve core, integral ball check valve, and with solder-end connections.
3. Pressure-Regulating Valves: Comply with ARI 770; direct acting, brass; with pilot operator, stainless-steel diaphragm, standard coil, and solder-end connection; suitable for refrigerant specified.
4. Pressure Relief Valves: Straight-through or angle pattern, brass body and disc, neoprene seat, and factory sealed and ASME labeled for standard pressure setting.
5. Thermostatic Expansion Valves: Comply with ARI 750; brass body with stainless-steel parts; thermostatic-adjustable, modulating type; size and operating characteristics as recommended by manufacturer of evaporator, and factory set for superheat requirements; solder-end connections; with sensing bulb, distributor having side connection for hot-gas bypass line, and external equalizer line.
6. Hot-Gas Bypass Valve: Pulsating-dampening design, stainless-steel bellows and polytetrafluoroethylene valve seat; adjustable; sized for capacity equal to last step of compressor unloading; with solder-end connections.
7. Moisture/Liquid Indicators: 500-psig (3450-kPa) maximum working pressure and 200 deg F (93 deg C) operating temperature; all-brass body with replaceable, polished, optical viewing window with color-coded moisture indicator; with solder-end connections.

PART 3 - EXECUTION

3.1 PIPING APPLICATIONS:

A. Aboveground, within Building: Type ACR drawn-copper tubing or Type L (Type B) drawn-copper tubing.

B. Belowground for NPS 2 (DN 50) and Smaller: Type K (Type A) annealed-copper tubing.

3.2 PIPING INSTALLATION:

A. Install refrigerant piping according to ASHRAE 15. Equipment manufacturer shall size refrigerant lines for Contractor.

B. Basic piping installation requirements are specified in Division 23 Section "Supports and Anchors", “Mechanical General Requirements”, and “Piping Insulation”.

C. Install piping as short and direct as possible, with a minimum number of joints, elbows, and fittings.

D. Arrange piping to allow inspection and service of compressor and other equipment. Install valves and specialties in accessible locations to allow for service and inspection.

E. Install piping with adequate clearance between pipe and adjacent walls and hangers or between pipes for insulation installation. Use sleeves through floors, walls, or ceilings, sized to permit installation of full-thickness insulation.

F. Install copper tubing in rigid or flexible conduit in locations where copper tubing will be exposed to mechanical injury.

G. Slope refrigerant piping as follows:

1. Install horizontal suction lines with a uniform slope downward to compressor.
2. Install traps and double risers to entrain oil in vertical runs.
3. Liquid lines may be installed level.

H. Hanger, support, and anchor products are specified in Division 23 Section "Hangers and Supports."

I. Install the following pipe attachments:

1. Adjustable steel clevis hangers for individual horizontal runs less than 20 feet long.

J. Install hangers for copper tubing with the following maximum spacing and minimum rod sizes:

1. NPS 1/2: Maximum span, 60 inches; minimum rod size, 1/4 inch.
2. NPS 5/8: Maximum span, 60 inches; minimum rod size, 1/4 inch.
3. NPS 1: Maximum span, 72 inches; minimum rod size, 1/4 inch.
4. NPS 1-1/4: Maximum span, 96 inches; minimum rod size, 3/8 inch.
5. NPS 1-1/2: Maximum span, 96 inches; minimum rod size, 3/8 inch.

K. Support vertical runs at each floor.

L. Pipe Joint Construction:

1. Braze joints according to Division 23 Section "Common Work for HVAC."
2. Fill pipe and fittings with an inert gas (nitrogen or carbon dioxide) during brazing to prevent scale formation.

M. Refrigerant Pipe Insulation:

1. Insulate refrigerant piping according to Division 23 Section "Pipe Insulation."

N. Test and inspect refrigerant piping according to ASME B31.5, Chapter VI.

1. Test refrigerant piping, specialties, and receivers. Isolate compressor, condenser, evaporator, and safety devices from test pressure.
2. Test high- and low-pressure side piping of each system at not less than the lower of the design pressure or the setting of pressure relief device protecting high and low side of system.

a. System shall maintain test pressure at the manifold gage throughout duration of test.

b. Test joints and fittings by brushing a small amount of soap and glycerine solution over joint.
c. Fill system with nitrogen to raise a test pressure of 150 psig or higher as required by authorities having jurisdiction.
d. Remake leaking joints using new materials, and retest until satisfactory results are achieved.

O. Adjust set-point temperature of the conditioned air controllers to the system design temperature.

P. Before installing copper tubing other than Type ACR, clean tubing and fittings with trichloroethylene.

Q. Replace core of filter-dryer after system has been adjusted and design flow rates and pressures are established.

R. Charge system using the following procedures:

1. Install core in filter-dryer after leak test but before evacuation.
2. Evacuate entire refrigerant system with a vacuum pump to a vacuum of 500 micrometers. If vacuum holds for 12 hours, system is ready for charging.
3. Break vacuum with refrigerant gas, allowing pressure to build up to 2 psig.
4. Charge system with a new filter-dryer core in charging line. Provide full-operating charge.

END OF SECTION 23 23 00

SECTION 23 31 13 – METAL DUCTS

1. GENERAL

1.1 SECTION INCLUDES (SUBMITTAL REQUIRED FOR EACH ITEM)

A. Insulated flexible ducts.

B. Galvanized steel duct material.

C. Dual wall spiral.

D. Dual wall acoustical performance.

E. Single wall spiral.

F. Duct sealer.

1.2 RELATED SECTIONS

A. Section 230000 - General Mechanical Requirements

1.3 REFERENCES

A. ASTM A 36 - Structural Steel.

B. ASTM A 90 - Weight of Coating on Zinc-Coated (Galvanized) Iron or Steel Articles.

C. ASTM A 167 - Stainless and Heat-Resisting Chromium-Nickel Steel Plate, Sheet, and Strip.

D. ASTM A 525 - General Requirements for Steel Sheet, Zinc- Coated (Galvanized) by the Hot-Dip Process.

E. ASTM A 527 - Steel Sheet, Zinc-Coated (Galvanized) by Hot-Dip Process, Lock Forming Quality.

F. NFPA 90A - Installation of Air Conditioning and Ventilating Systems.

G. NFPA 90B - Installation of Warm Air Heating and Air Conditioning Systems.

H. NFPA 96 - Installation of Equipment for the Removal of Smoke and Grease-Laden Vapors from Commercial Cooking Equipment.

I. SMACNA - HVAC Duct Construction Standards - Metal and Flexible.

1.4 SUBMITTALS

A. Submit under provisions of Section 23 00 00 Mechanical General Requirements.

B. Manufacturer's Installation Instructions: Indicate procedures for duct installation.

1.5 PERFORMANCE REQUIREMENTS

A. No variation of duct configuration or sizes permitted except by written permission. Size

round ducts installed in place of rectangular ducts in accordance with ASHRAE table of equivalent rectangular and round ducts.

1.6 PROJECT RECORD DOCUMENTS

A. Submit under provisions of Section 23 00 00 Mechanical General Requirements.

B. Record actual locations of ducts and duct fittings. Record changes in fitting location and type. Show additional fittings used.

1.7 QUALITY ASSURANCE

A. Perform Work in accordance with SMACNA - HVAC Duct Construction Standards - Metal and Flexible and the latest edition of Florida Mechanical Code.

B. Maintain one copy of document on site.

1.8 QUALIFICATIONS

A. Manufacturer: Company specializing in manufacturing the Products specified in this section with minimum three years documented experience.

B. Installer: Company specializing in performing the work of this section with minimum five years documented experience.

1.9 REGULATORY REQUIREMENTS

A. Construct ductwork to NFPA 90A, NFPA 90B, NFPA 96 standards and the latest edition of Florida Mechanical Code and Florida Building Code.

1.10 ENVIRONMENTAL REQUIREMENTS

A. Do not install duct sealants when temperatures are less than those recommended by sealant manufacturers.

B. Maintain temperatures during and after installation of duct sealants.

PART 2 PRODUCTS

2.1 MATERIALS

A. Galvanized Steel Ducts: ASTM A525 and ASTM A527 galvanized steel sheet, lock-forming quality, having G90 zinc coating of in conformance with ASTM A90.

B. Insulated Flexible Ducts:

1. The insulated flexible duct shall meet UL 181 Class 1.

2. Multiple layers of aluminized duct fabric supported by helically wound spring steel wire; fiberglass insulation; aluminized vapor barrier film and thermal conductive shall not be more than .23.

3. Pressure Rating: 6 inches WG positive and 1.0 inches negative.

4. Maximum Velocity: 4000 fpm.

5. Temperature Range: -20 degrees F to 210 degrees F.

C. Fasteners: Rivets, bolts, or sheet metal screws.

D. Sealant:

1. Non-hardening, water resistant, fire resistive, compatible with mating materials; liquid used alone or with tape, or heavy mastic.

E. Hanger Rod: ASTM A36; steel; threaded both ends, threaded one end, or continuously threaded.

2.2 DUCTWORK - LOW PRESSURE

A. This part of the specification shall apply to all low pressure rectangular shop fabricated ductwork for all supply air distribution systems, return air systems, outside air systems and exhaust systems. Ductwork shall be constructed of galvanized steel sheets, furnished and installed in sizes as indicated and located where shown on the drawings. This part of the work shall include all ductwork, manual dampers, access panels, louvers, etc., with all accessories to make a complete air distribution system. Noise, vibration or drumming of air in ductwork, noises at air outlets or returns, excessive air leaks, malfunctioning of dampers, etc., will be cause for rejecting affected parts of the ductwork. Duct sizes shown on plans are net.

The Mechanical Contractor shall coordinate with the General Contractor all ductwork penetrations of walls which require lintels or sleeves.

B. The following weights of materials, types of joints and bracing shall be followed for sheetmetal ductwork.

Steel US Std. Gauge	Maximum Inches	Type of Transverse Joint Conn.	Bracing
24	Up to 12	S-Drive, pocket or bar clips, on 7" - 10" centers	None
24	13 to 24	S-Drive, pocket or bar clips, on 7" - 10" centers	None
24	25 to 30	A-Drive, pocket or bar clips, on 7"-10" centers	1x1x1/8" angle
20	30 and Greater	S-Drive, pocket or clips, on 7"-10" centers	1x1x1/8" angle

C. The following details of duct construction shall be adhered to without deviation:

1. Longitudinal seams for metal shall be Pittsburgh lock.

2. Sweep elbows shall be made with inside radius equal to width of ducts, except as

shown on the drawings. Square elbows must be provided with approved turning vanes to assure good air flow to outlets.

3. Provide vanes at all elbows. Provide splitter dampers and turning vanes at duct tees.

4. Horizontal ducts shall be hung at intervals not exceeding 8'-0" with 18-gauge galvanized iron hangers extending the full height of the duct.

5. Shop drawings of all ductwork shall be submitted when for any reason there are differences from contract drawings for approval.

6. All ductwork shall be fabricated in strict accordance with SMACNA Construction Standards for Low Velocity Ductwork unless more stringent requirements are called for in the specifications. All seams shall be caulked or taped to prevent air leakage for all pressure duct classifications.

D. 45° shoe fittings shall be provided at all rectangular or square branch connections to main headers in accordance with SMACNA Standards. Provide manual volume damper if branch duct serves two or more air devices.

2.3 DUCTWORK FABRICATION

A. Fabricate and support in accordance with SMACNA HVAC Duct Construction Standards - Metal and Flexible, and as indicated or specified whichever is the most stringent. Provide duct material, gages, reinforcing, and sealing for operating pressures indicated.

B. Construct T's, bends, and elbows with radius of not less than 1-1/2 times width of duct on centerline. Where rectangular elbows are used, provide air foil turning vanes.

C. Increase duct sizes gradually, not exceeding 15 degrees divergence wherever possible; maximum 30 degrees divergence upstream of equipment and 45 degrees convergence downstream.

D. Fabricate continuously welded round fittings two gages heavier than duct gages indicated in SMACNA Standard. Joints shall be minimum 4 inch cemented slip joint, brazed or electric welded. Prime coat welded joints.

E. Provide standard 45 degree lateral wye takeoffs unless otherwise indicated where 90 degree conical tee connections may be used.

PART 3 EXECUTION

3.1 INSTALLATION

A. Install in accordance with manufacturer's instructions.

B. Install and seal ducts in accordance with SMACNA HVAC Duct Construction Standards - Metal and Flexible and Florida Mechanical Code unless more stringent items are required by specifications.

C. Duct Sizes are inside clear dimensions. All duct joints shall be sealed with tape or mastic for all pressure classes.

D. Provide openings in ductwork where required to accommodate thermometers and controllers. Provide pilot tube openings where required for testing of systems, complete with metal can with spring device or screw to ensure against air leakage. Where

openings are provided in insulated ductwork, install insulation material inside a metal ring.

E. Locate ducts with sufficient space around equipment to allow normal operating and maintenance activities.

F. Use crimp joints with or without bead for joining round duct sizes 8 inch and smaller with crimp in direction of air flow.

G. Use double nuts and lock washers on threaded rod supports. The supports shall have vibration isolation as specified.

H. Hanger straps shall be used to support the flexible ductwork. These straps shall be of galvanized sheet metal or aluminum, shall be 4" wide, and have smooth edges to prevent puncturing exterior wrap insulation. Hanger straps may be suspended with wire from building structure. Install flexible ductwork supports at center of flex duct.

I. During construction provide temporary closures of metal or taped polyethylene on open ductwork to prevent construction dust from entering ductwork system.

3.2 CLEANING

A. Clean duct system and force air at high velocity through duct to remove accumulated dust. To obtain sufficient air, clean half the system at a time. Protect equipment which may be harmed by excessive dirt with temporary filters, or bypass during cleaning. The duct systems may be cleaned with high power vacuum machines.

3.3 SCHEDULES

A. DUCTWORK MATERIAL SCHEDULE

AIR SYSTEM	MATERIAL
Supply	Steel
Return	Steel
General Exhaust	Steel
Outside Air	Steel

B. DUCTWORK PRESSURE CLASS SCHEDULE

AIR SYSTEM	PRESSURE CLASS
Supply	3 inch
Return	1 inch
General Exhaust	1 inch
Outside Air Intake	1 inch

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END OF SECTION 23 31 13

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SECTION 23 33 00 – AIR DUCT ACCESSORIES

PART 1 GENERAL

1.1 SECTION INCLUDES (SUBMITTAL REQUIRED FOR EACH ITEM)

A. Air turning devices.

B. Backdraft dampers.

C. Duct access doors.

D. Duct test holes.

E. Flexible duct connections.

F. Volume control dampers.

G. Louvers.

1.2 RELATED SECTIONS

A. Section 230000 - General Mechanical Requirements

1.3 REFERENCES

A. NFPA 90A - Installation of Air Conditioning and Ventilating Systems.

B. SMACNA - HVAC Duct Construction Standards - Metal and Flexible.

C. UL 33 - Heat Responsive Links for Fire-Protection Service.

D. UL 555 - Fire Dampers and Ceiling Dampers.

1.4 SUBMITTALS

A. Submit under provisions of Section 230000.

B. Shop Drawings: Indicate for shop fabricated assemblies including volume control dampers duct access doors and duct test holes.

C. Product Data: Provide for shop fabricated assemblies including volume control dampers duct access doors duct test holes and hardware used.

D. Manufacturer's Installation Instructions: Provide for fire dampers and louvers.

1.5 PROJECT RECORD DOCUMENTS

A. Submit under provisions of Section 230000.

B. Record actual locations of access doors and test holes.

1.6 QUALIFICATIONS

A. Manufacturer: Company specializing in manufacturing the Products specified in this section with minimum three years documented experience.

1.7 DELIVERY, STORAGE, AND HANDLING

A. Deliver, store, protect and handle products according to good construction practices.

B. Protect dampers from damage to operating linkages and blades.

1.8 EXTRA MATERIALS

A. Furnish under provisions of Section 230000.

B. Provide two of each size and type of fusible link.

PART 2 PRODUCTS

2.1 AIR TURNING DEVICES

A. The turning vanes shall be per SMANCA single thickness.

2.2 DUCT ACCESS DOORS

A. Fabricate in accordance with SMACNA HVAC Duct Construction Standards - Metal and Flexible, and as indicated.

B. Fabrication: Rigid and close-fitting of galvanized steel with sealing gaskets and quick fastening locking devices. For insulated ductwork, install minimum one inch thick insulation with sheet metal cover. Door to have continuous piano hinge.

1. Less Than 12 Inches Square: Secure with cam locks.

2. Up to 18 Inches Square: Provide two cam locks.

3. Up to 24 x 48 Inches: Three latches.

C. Access doors with sheet metal screw fasteners are not acceptable.

D. In locations where space is limited the hinge may be deleted and cam locks provided on each side of door. Provide two cam locks on each side for doors with sides over 18" long.

2.3 DUCT TEST HOLES

A. Temporary Test Holes: Cut or drill in ducts as required. Cap with neat patches, neoprene plugs, threaded plugs, or threaded or twist-on metal caps.

B. Permanent Test Holes: Factory fabricated, air tight flanged fittings with screw cap. Provide extended neck fittings to clear insulation.

2.4 FLEXIBLE DUCT CONNECTIONS

A. Fabricate in accordance with SMACNA HVAC Duct Construction Standards - Metal and Flexible, and as indicated.
B. Connector: Fabric crimped into metal edging strip.

1. Fabric: UL listed fire-retardant neoprene coated woven glass fiber fabric to NFPA 90A, minimum density 30 oz per sq yd.

2. Net Fabric Width: Approximately 2 inches wide.

3. Metal: 3 inch wide, 24 gage thick galvanized steel.

2.5 VOLUME CONTROL DAMPERS.

A. Fabricate in accordance with SMACNA HVAC Duct Construction Standards - Metal and Flexible, and as indicated.

B. Guillotine style dampers shall not be acceptable.

C. Splitter Dampers:

1. Material: Same gage as duct to 24 inches size in either direction, and two gages heavier for sizes over 24 inches.

2. Blade: Fabricate of double thickness sheet metal to streamline shape, secured with continuous hinge or rod.

3. Operator: Minimum 1/4 inch diameter rod in self aligning, universal joint action, flanged bushing with set screw.

D. Single Blade Dampers: Fabricate for duct sizes up to 6 x 30 inch.

E. Multi-Blade Damper: Fabricate of opposed blade pattern with maximum blade sizes 8 x 72 inch. Assemble, center and edge crimp blades in prime coated or galvanized channel frame with suitable hardware.

F End Bearings: Except in round ductwork 12 inches and smaller, provide end bearings. On multiple blade dampers, provide oil-impregnated nylon or bronze bearings.

G Quadrants:

1. Provide locking, indicating quadrant regulators on single and multi-blade dampers. Jam nut type damper handles will not be allowed.

2. On insulated ducts mount quadrant regulators on stand-off mounting brackets, bases, or adapters so the dampers can be adjusted without disturbing the insulation.

3. Where rod lengths exceed 30 inches provide regulator at both ends.

G. Spin-Ins: The spin-ins shall have scoop with adjustable manual volume damper. The damper shall have lockable quadrant with stand off to clear insulation.

2.6 LOUVERS.

A. Louver shall be tested in accordance with AMCA 500-L.

B. Louver shall be extruded aluminum, wind driven rain resistant, stationary louver mounted horizontally with sight proof blades.

C. Louver shall maintain a minimum free area of 44 percent, nominal.

D. Louver shall be provided with birdscreen.

E. Louver shall be provided with Kynar 500 Fluoropolymer coating. Color shall be coordinated with architect prior to ordering.

PART 3 EXECUTION

3.1 INSTALLATION

A. Install accessories in accordance with manufacturer's instructions, NFPA 90A, and follow SMACNA HVAC Duct Construction Standards - Metal and Flexible. Refer to "Ductwork"

Section for duct construction and pressure class.

B. Provide backdraft dampers on exhaust fans or exhaust ducts nearest to outside and where indicated.

C. Provide duct access doors for inspection and cleaning before and after automatic dampers, at fire dampers, and elsewhere as indicated. Review locations prior to fabrication. The access doors shall be the following minimum sizes.

Duct Diameter	Access Opening
8" thru 10"	7" dia.
11" thru 13"	10" dia.
14" thru 19"	13" dia.
20" and over	14" dia.

D. For rectangular ducts, the nominal size of the access opening shall be:

Duct Size	Access Opening
8" thru 16"	8" X 12"
17" thru 24"	12" X 12"
25" and over	18" X 18"

E. Provide duct test holes where as required for testing and balancing purposes.

F. Provide balancing dampers at all points on supply, return, and exhaust systems where branches are taken from larger ducts as required for air balancing. Install minimum 2 duct widths from duct take-off.

G. Provide balancing dampers on all duct take-off to diffusers, grilles, and registers, regardless of whether dampers are specified as part of the diffuser, grille, or register assembly.

H. Install louvers at locations indicated on the drawings and in accordance with manufacturer's instructions. Louvers shall be installed plumb, level, in plane of wall, and in alignment with adjacent work.

END OF SECTION 23 33 00

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SECTION 23 37 13 – DIFFUSERS, REGISTERS AND GRILLES

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Louver face diffusers.
2. Adjustable bar registers and grilles.
3. Fixed face registers and grilles.

B. Related Sections:

1. Section 23 33 00 "Duct Accessories" for fire and smoke dampers and volume-control dampers not integral to diffusers, registers, and grilles.

1.2 ACTION SUBMITTALS

A. Product Data: For each type of product indicated, include the following:

1. Data Sheet: Indicate materials of construction, finish, and mounting details; and performance data including throw and drop, static-pressure drop, and noise ratings.
2. Diffuser, Register, and Grille Schedule: Indicate drawing designation, room location, quantity, model number, size, and accessories furnished.

PART 2 - PRODUCTS

2.1 CEILING DIFFUSERS

A. Louver Face Diffuser:

1. Basis-of-Design Product: Subject to compliance with requirements, provide product indicated on Drawings or comparable product by one of the following:

a. Price Industries.
b. Titus.
c. Metal-Aire.

2. Material: Aluminum.
3. Finish: Baked enamel, white.
4. Face Size: As indicated on the Drawings.
5. Mounting: Match architectural ceiling.
6. Pattern: Four-way core style.
7. Accessories:

a. Square to round neck adaptor.

2.2 REGISTERS AND GRILLES

A. Adjustable Bar Register:

1. Basis-of-Design Product: Subject to compliance with requirements, provide product indicated on Drawings or comparable product by one of the following:

   a. Price Industries.
   b. Titus.

2. Material: Aluminum.
3. Finish: Baked enamel, white.
4. Face Blade Arrangement: Vertical spaced 1/2 inch apart, or as otherwise indicated.
5. Rear-Blade Arrangement: Horizontal spaced 1/2 inch apart, or as otherwise indicated.
6. Frame: 1-1/4 inches wide.
7. Mounting: Countersunk screw.
8. Accessories:

   a. Rear-blade gang operator.

B. Fixed Face Grille:

1. Basis-of-Design Product: Subject to compliance with requirements, provide product indicated on Drawings or comparable product by one of the following:

   a. Price Industries.
   b. Titus.

2. Material: Aluminum.
3. Finish: Baked enamel, white.
4. Face Blade Arrangement: Vertical spaced 1/2 inch apart, or as otherwise indicated.
5. Rear-Blade Arrangement: Horizontal spaced 1/2 inch apart, or as otherwise indicated.
6. Frame: 1-1/4 inches wide.
7. Mounting: Countersunk screw.

2.3 SOURCE QUALITY CONTROL

A. Verification of Performance: Rate diffusers, registers, and grilles according to ASHRAE 70, "Method of Testing for Rating the Performance of Air Outlets and Inlets."

PART 3 - EXECUTION

3.1 INSTALLATION

A. Install diffusers, registers, and grilles level and plumb.

B. Ceiling-Mounted Outlets and Inlets: Drawings indicate general arrangement of ducts, fittings, and accessories. Air outlet and inlet locations have been indicated to achieve design requirements for air volume, noise criteria, airflow pattern, throw, and pressure drop. Make final locations where indicated, as much as practical. For units installed in lay-in ceiling panels, locate units in the center of panel. Where architectural features or other items conflict with installation, notify Architect for a determination of final location.

C. Install diffusers, registers, and grilles with airtight connections to ducts and to allow service and maintenance of dampers, air extractors, and fire dampers.

3.2 ADJUSTING

A. After installation, adjust diffusers, registers, and grilles to air patterns indicated, or as directed, before starting air balancing.

END OF SECTION 23 37 13

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SECTION 23 81 25 - OUTSIDE AIR UNITS (SPLIT SYSTEM)

PART 1 GENERAL

1.01 SECTION INCLUDES

A. 100% outside air units.

B. Controls.

C. Refrigerant piping.

1.02 REFERENCES

A. ASHRAE 15 - Safety Code for Mechanical Refrigeration

B. ASHRAE 52 - Air-Cleaning Devices Used in General Ventilation for Removing Particulate Matter

C. ASHRAE 90.1 – Energy Standard for Buildings Except Low-Rise Residential Buildings.

D. ARI 210/240 – Unitary Air-Conditioning and Air-Source Heat Pump Equipment.

E. ARI 270 – Sound Rating of Outdoor Unitary Equipment.

F. ARI 340/360 – Performance Rating of Commercial and Industrial Unitary Air-Conditioning and Air-Source Heat Pump Equipment.

G. ARI 365 – Commercial and Industrial Unitary Air-Conditioning Condensing Units

H. ASME/ANSI B31.5 - Refrigeration Piping

I. ASTM A 123 - Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products

J. ASTM B 88 - Seamless Copper Water Tube

K. ASTM B 117 - Salt Spray (Fog) Testing

L. ASTM B 280 - Seamless Copper Tube for Air Conditioning and Refrigeration Field Service

M. ASTM D 1654 - Evaluation of Painted or Coated Specimens Subjected to Corrosive Environments

N. AWS A5.8 - Filler Metals for Brazing and Braze Welding

P. MSS SP-58 - Pipe Hangers and Supports - Materials, Design and Manufacture

Q. MSS SP-69 - Pipe Hangers and Supports - Selection and Application

R. NEMA ICS 1 - Industrial Control and Systems

S. NEMA ICS 2 - Industrial Control Devices, Controllers and Assemblies

T. NEMA ICS 6 – Industrial Control and Systems Enclosures

U. NEMA MG 1 - Motors and Generators

V. UL 109 - Tube Fittings for Flammable and Combustible Fluids, Refrigeration Service, Marine Use.

1.03 SUBMITTALS

A. Product Data: Provide manufacturer’s catalog data on air conditioners, filters, and refrigerant piping and accessories.

B. Submit shop drawings indicating refrigerant piping, including pipe sizes, and control system wiring diagrams.

C. Manufacturer’s installation instructions on air conditioners, filters, and refrigerant piping and accessories.

D. Factory salt-spray test reports.

E. P-413 Baked Phenolic Coating (Heresite Coating) reports.

F. Field test reports on start-up and initial operation.

G. Submit posted operating instructions for each packaged air conditioning unit.

H. Submittals shall be made under provisions of Section 01 33 00.

1.04 OPERATION AND MAINTENANCE MANUALS

A. Submit operation and maintenance data.

B. Include manufacturer's descriptive literature, operating instructions, installation instructions, maintenance and repair data, and parts listing.

1.05 QUALITY ASSURANCE

A. Accomplish work in accordance with the referenced publications, except as modified by this section. Consider the advisory or recommended provisions to be mandatory, as though the word

"shall" had been substituted for the words "should" or "could" or "may," wherever they appear. Interpret reference to "the Authority having jurisdiction," "the Administrative Authority," "the Owner," or "the Design Engineer" to mean the Contracting Officer.

B. Design, manufacture, and installation of unitary air conditioning equipment shall conform to ASHRAE 15.

C. Performance Requirements: Seasonal Energy Efficiency Ratio (SEER) or Energy Efficiency Rating (EER) not less than prescribed by ASHRAE 90.1 when used in combination with compressors and evaporator coils when tested in accordance with ARI 210/240 or ARI 340/360.

D. Cooling Capacity: Rate in accordance with ARI 210/240, ARI 340/360 or ARI 365.

E. Sound Rating: Measure in accordance with ARI 270.

PART 2 PRODUCTS

2.01 FILTERS

A. Provide filters to filter outside air. Provide MERV 8 or as indicated on construction drawings, whichever is more stringent, cleanable, metal mesh filters installed at the air inlet.

2.02 100% OUTSIDE AIR UNIT

A. Split system air conditioners shall be specifically designed to cool and dehumidify 100% outside air for makeup air cooling.

B. The air cooled condensing unit shall be installed on a slab or curb if roof mounted. The condensing unit shall be field piped to the indoor air handler. The air handler shall be field ducted to circulate 100% outside air.

C. Condensing Unit

1. Heavy Duty Cabinet: Shall be constructed of G-90 Galvanized steel. Bases shall be minimum 16 gauge, corner posts minimum 18 gauge. Access panels shall be minimum 20 gauge and top pans shall be 18 gage minimum. The cabinet shall be mounted on two steel rails to facilitate rigging and installation. The design of the cabinet shall allow access to the compressor and electrical panel without impairing unit operation.
2. Durable Tar Base: Shall be one quarter inch hot asphalt coating preventing rain from reaching steel on the interior of the base bottom.
3. Electro Deposition Acrylic Paint Finish: All exterior cabinet parts shall be cleaned and zinc-phosphate coated in a seven storage pretreatment system, then painted in a cationic electro-deposition paint system, the parts are then baked for a minimum of twenty minutes at 400 degrees F. to give them the most durable paint finish with a minimum of 1 mil film thickness.

4. Stainless Steel Hardware: Exterior hardware (nuts, bolts, screws, washers) shall be stainless steel to stop rust and corrosion.
5. Compressor: A welded hermetic or semi-hermetic compressor shall be used. All compressors have crankcase heaters and the motors are equipped with internal overheat-overload protection. The serviceable semi-hermetic compressors shall be equipped with isolation valves and oil pressure failure protection. Hot gas bypass capacity reduction shall be provided on all systems. Cylinder unloading shall also be included on semi-hermetic compressors.
6. Coils: The condenser coils shall be aluminum plate-finned formed on multiple rows of seamless copper tubing arranged in a staggered tube configuration. The tubes shall be mechanically expanded, firmly bonding the tube to the shoulder of each fin. Provide P-413 Baked phenolic coating or equivalent on condenser coil.
7. Condenser Air Fan and Motor: The condenser air fan shall be the propeller type, electronically balanced and direct -driven by a 1075 rpm PSC fan motor. The inherent protected motor shall have sealed ball bearings that do not require lubrication. The outdoor air shall be discharged through a vinyl coated fan guard. This directs all sounds upward eliminating the effects of wind direction and minimizing condenser airflow sound projection. Heated air shall not recirculate.
8. Refrigerant Circuit: Included in the refrigerant circuit is condenser fan cycling head pressure control, accumulator, filter-drier, high pressure safety control (manual-reset), low pressure safety control/loss of charge protector (auto-reset), and dual gauge connections for high and low pressure readings. A 24 volt pump down solenoid valve is shipped loose with the condensing unit and shall be field installed as close to the evaporator in the air handler as possible. The refrigerant circuit shall be charged with dry nitrogen that can be vented to the atmosphere.
9. Electric Controls. Internally wired controls include the compressor anti-short cycle timer, fan and compressor motor contactors or starters and 24v transformer mounted in the sheet metal control panel. The 24 volt control circuit includes a low voltage terminal board.
10. Adjustable Ambient Thermostat. A remote field supplied and installed system switch start-stop the air handler blower motor. The compressor adjustable ambient lock-out thermostat controls the cooling operation at a setting between 65 degrees and 70 degrees F. Operation of the compressor is thus limited to outside air temperatures above the setpoint. Blower operation is continuous and the leaving air temperature will be maintained by hot gas by-pass and/or unloading the compressor. This is accomplished through suction-pressure sensing, thus tracking the outside air temperature variations.

D. Air Handling Unit

1. Heavy Duty Cabinet: Shall be constructed of G-90 Galvanized steel. Bases, top pans and squaring posts shall be a minimum of 18 gauge and access panels shall be a minimum 20 gauge. The interior of the cabinet shall be thermally insulated with 1-inch thick fiberglass with an R value of 4.2. The cabinet shall have the same electro-deposition acrylic-paint finish as the condensing unit.
2. Coils: The evaporator coil shall be aluminum plate-finned formed on multiple rows of seamless copper tubing arranged in a staggered tube configuration. The tubes shall be mechanically expanded, firmly bonding the tube to shoulder of each fin. The unit shall be provided with hot gas reheat.

3. Insulated Condensate Drain Pan: The condensate drain pan shall be fabricated form G-90 steel, painted in the electro-deposition paint system, and over coated with an asphalt based mastic. The bottom shall be insulated with 1" thick, 3 lb. density fiberglass insulation. The drain pan shall be furnished with single or dual 3/4" F.P.T. (threaded) drain fittings exposed to the exterior of the cabinet. Provide auxiliary drain pan integral to the unit and separate from the coil drain pan. Provide a separate drain outlet and coat the auxiliary drain pan with asphalt based mastic.
4. Refrigerant Circuit: The factory installed refrigerant piping includes the thermo-expansion valve and hot gas bypass tee. The expansion valve shall have an adjustable superheat and distributors to meter the refrigerant evenly to the evaporator refrigerant circuits. The pump down solenoid valve shipped with the condensing unit shall be field installed in the liquid line. The refrigerant coil is charged dry nitrogen that can be vented to the atmosphere.
5. Blower and Motor: A forward curved, statically and dynamically balanced DWDI centrifugal blower shall be used for the indoor air. The blower and housing shall be galvanized steel. The blower wheel shall be mounted on a solid steel shaft supported by sealed ball bearings. The shaft shall be driven by adjustable belt drive sheaves connected to a 1725 rpm motor with sealed ball bearings. The sealed bearings on both the blower shaft and motor shall not require lubrication. Motors through 3 horsepower shall be internally protected (auto reset.
6. Filters: Provide as specified in Paragraph 2.01 above or as indicated on drawings whichever is more stringent.
7. Control Kit: Shipped loose for field mounting next to the air handler. The control kit includes terminal board with electric heat lockout terminal and terminals for electric heat, gas reheat and pump-down circuit, and blower motor contactor or starter.

E. Other Features

1. Non-Fused Disconnect: Factory mounted and wired on the condensing unit.
2. Hot Gas Reheat Coil: For closer humidity control, a one row copper tube, aluminum fin (12 fins per inch) hot gas reheat system shall be factory installed. The system includes the heat reclaim coil, located downstream from the evaporator coil in the air handler, condenser feedback head pressure control, liquid receiver, check valves and inlet and outlet regulator valves in the condensing unit. A field installed thermostat shall control the hot gas solenoid valve.

2.03 SEQUENCE OF OPERATION

A. A remote field supplied and installed system switch shall start and stop the air handler blower motor. The compressor adjustable ambient lock-out thermostat controls the cooling operation at a setting between 65 degrees F and 70 degrees F. Operation of the compressor is thus limited to outside air temperatures above this setpoint. Upon a call for cooling the pump down solenoid valve opens. A rise in evaporator pressure, as sensed by the low pressure control, activates the compressor. Blower operation is continuous and leaving air temperature will be maintained by hot gas by-pass and/or unloading the compressor. This is accomplished through suction-pressure sensing, thus tracking the outside air temperature variation. Activation of the hot gas reheat solenoid is from a duct mounted thermostat set as necessary to control discharge air temperature.

2.04 MOTORS AND STARTERS

A. NEMA MG 1, NEMA ICS 1, and NEMA ICS 2. Determine specific motor characteristics to ensure provision of correctly sized starters and overload heaters. Provide motors to operate at full capacity with a voltage variation of plus or minus 10 percent of the motor voltage rating. Motor size shall be sufficient for the duty to be performed and shall not exceed its full load nameplate current rating when driven equipment is operated at specified capacity under the most severe conditions likely to be encountered. When motor size provided differs from size indicated or specified, the Contractor shall make the necessary adjustments to the wiring, disconnect devices, and branch circuit protection to accommodate equipment actually provided. Provide phase loss protection on all 3 phase motors. Provide general-purpose type starter enclosures in accordance with NEMA ICS 6.

2.05 REFRIGERANT PIPING AND ACCESSORIES

A. Provide accessories as specified in FS OO-A-374 and this section. Provide suction line accumulators as recommended by equipment manufacturer's installation instructions. Provide a filter-drier in the liquid line.

B. Field-Assembled Refrigerant Piping: Material and dimensional requirements for field-assembled refrigerant piping, valves, fittings, and accessories shall conform to ASHRAE 15 and ASME/ANSI B31.5, except as herein specified. Factory clean, dehydrate, and seal piping before delivery to the project location. Provide seamless copper tubing, hard drawn, Type K or L, conforming to ASTM B 88, except that tubing with outside diameters of 1/4 inch and 3/8 inch shall have nominal wall thickness of not less than 0.030-inch and 0.032-inch, respectively. Soft annealed copper tubing conforming to ASTM B 280 may be used where flare connections to equipment are required only in nominal sizes less than one inch outside diameter.

C. Fittings: ASME/ANSI B16.22 for solder-joint fittings. UL 109 for flared tube fittings.

D. Brazing Filler Material: AWS A5.8.

E. Pipe Hangers and Supports: MSS SP-69 and MSS SP-58.

F. Pipe Sleeves: Provide sleeves where piping passes through walls, floors, roofs, and partitions. Secure sleeves in proper position and location during construction. Provide sleeves of sufficient length to pass through entire thickness of walls, floors, roofs, and partitions. Provide not less than 0.25-inch space between exterior of piping or pipe insulation and interior of sleeve. Firmly pack space with insulation and caulk at both ends of the sleeve with plastic waterproof cement which will dry to a firm but pliable mass, or provide a segmented elastomeric seal.

    1. Sleeves in Masonry and Concrete Walls, Floors, and Roofs: Provide Schedule 40 or Standard Weight zinc-coated steel pipe sleeves. Extend sleeves in floor slabs 3 inches above finished floor.

2. Sleeves in Partitions and Non-Masonry Structures: Provide zinc-coated steel sheet sleeves having a nominal weight of not less than 0.90 pound per square foot, in partitions and other than masonry and concrete walls, floors, and roofs.

2.06 FINISHES

A. Provide steel surfaces of equipment including packaged terminal units, heat pumps, and air conditioners, that do not have a zinc coating conforming to ASTM A 123, or a duplex coating of zinc and paint, with a factory applied coating or paint system. Provide a coating or paint system on actual equipment identical to that on salt-spray test specimens with respect to materials, conditions of application, and dry-film thickness.

2.07 SOURCE QUALITY CONTROL

A. Salt-Spray Tests: Salt-spray test the factory-applied coating or paint system of equipment including packaged terminal units, heat pumps, and air conditioners in accordance with ASTM B 117. Conduct test for 500 hours for equipment installed outdoors, or 125 hours for equipment installed indoors. Test specimens shall have a standard scribe mark as defined in ASTM D 1654. Upon completion of exposure, evaluate and rate the coating or paint system in accordance with procedures A and B of ASTM D 1654. Rating of failure at the scribe mark shall not be less than six, average creepage not greater than 1/8 inch. Rating of the unscribed area shall not be less than 10, no failure.

2.08 APPROVED MANUFACTURERS:

A. Approved Manufacturers (subject to compliance with the specifications herein) shall be one of the following:

1. AboveAir Technologies, LLC
2. Dectron
3. DesertAire
4. Dehumidifier Corporation of America
5. Addison

PART 3 EXECUTION

3.01 EQUIPMENT INSTALLATION

A. Install equipment and components in a manner to ensure proper and sequential operation of equipment and equipment controls. Install equipment not covered in this section, or in manufacturer's instructions, as recommended by manufacturer's representative. Provide proper foundations for mounting of equipment, accessories, appurtenances, piping and controls including, but not limited to, supports, vibration isolators, stands, guides, anchors, clamps and brackets. Foundations for equipment shall conform to equipment manufacturer's

recommendation, unless otherwise indicated. Set anchor bolts and sleeves using templates. Provide anchor bolts of adequate length, and provide with welded-on plates on the head end embedded in the concrete. Level equipment bases, using jacks or steel wedges, and neatly grout-in with a non-shrinking type of grouting mortar. Locate equipment to allow working space for servicing including shaft removal, disassembling compressor cylinders and pistons, replacing or adjusting drives, motors, or shaft seals, access to water heads and valves of shell and tube equipment, tube cleaning or replacement, access to automatic controls, refrigerant charging, lubrication, oil draining and working clearance under overhead lines. Provide electric isolation between dissimilar metals for the purpose of minimizing galvanic corrosion.

3.02 PIPING

A. Brazing, bending, forming and assembly of refrigerant piping shall conform to ASME/ANSI B31.5.

B. Pipe Hangers and Supports: Design and fabrication of pipe hangers, supports, and welding attachments shall conform to MSS SP-58. Installation of hanger types and supports for bare and covered pipes shall conform to MSS SP-69 for the system temperature range. Unless otherwise indicated, horizontal and vertical piping attachments shall conform to MSS SP-58.

C. Refrigerant Piping: Cut pipe to measurements established at the site and work into place without springing or forcing. Install piping with sufficient flexibility to provide for expansion and contraction due to temperature fluctuation. Where pipe passes through building structure pipe joints shall not be concealed, but shall be located where they may be readily inspected. Install piping to be insulated with sufficient clearance to permit application of insulation. Install piping as indicated and detailed, to avoid interference with other piping, conduit, or equipment. Except where specifically indicated otherwise, run piping plumb and straight and parallel to walls and ceilings. Trapping of lines will not be permitted except where indicated. Provide sleeves of suitable size for lines passing through building structure. Braze refrigerant piping with silver solder complying with AWS A5.8. Inside of tubing and fittings shall be free of flux. Clean parts to be jointed with emery cloth and keep hot until solder has penetrated full depth of fitting and extra flux has been expelled. Cool joints in air and remove flame marks and traces of flux. During brazing operation, prevent oxide film from forming on inside of tubing by slowly flowing dry nitrogen through tubing to expel air. Make provisions to automatically return oil on halocarbon systems. Installation of piping shall comply with ASME/ANSI B31.5.

D. Returning Oil From Refrigerant System: Install refrigerant lines so that gas velocity in the evaporator suction line is sufficient to move oil along with gas to the compressor. Where equipment location requires vertical risers, line shall be sized to maintain sufficient velocity to lift oil at minimum system loading and corresponding reduction of gas volume. Install a double riser when excess velocity and pressure drop would result from full system loading. Larger riser shall have a trap, of minimum volume, obtained by use of 90- and 45-degree ells. Arrange small riser with inlet close to bottom of horizontal line, and connect to top of upper horizontal line. Do not install valves in risers.

E. Refrigerant Driers, Sight Glass Indicators, and Strainers: Provide refrigerant driers, sight glass liquid indicators, and strainers in refrigerant piping when not furnished by the manufacturer as

part of the equipment. Install driers in liquid line with service valves and valved bypass line the same size as liquid line in which dryer is installed. Size of driers shall be determined by piping and installation of the unit on location. Install dryers of 50 cubic inches and larger vertically with the cover for removing cartridge at the bottom. Install moisture indicators in the liquid line downstream of the drier. Indicator connections shall be the same size as the liquid line in which it is installed.

F. Strainer Locations and Installation: Locate strainers close to equipment they are to protect. Provide a strainer in common refrigerant liquid supply to two or more thermal valves in parallel when each thermal valve has a built-in strainer. Install strainers with screen down and in direction of flow as indicated on strainer's body.

G. Solenoid Valve Installation: Install solenoid valves in horizontal lines with stem vertical and with flow in direction indicated on valve. If not incorporated as integral part of the valve, provide a strainer upstream of the solenoid valve. Provide service valves upstream of the solenoid valve, upstream of the strainer, and downstream of the solenoid valve. Remove the internal parts of the solenoid valve when brazing the valve.

3.03 ACCESS PANELS

A. Provide access panels for concealed valves, controls, dampers, and other fittings requiring inspection and maintenance.

3.04 AIR FILTERS

A. Allow access space for servicing filters. Install filters with suitable sealing to prevent bypassing of air.

3.05 FLASHING AND PITCH POCKETS

A. Provide flashing and pitch pockets for equipment supports and roof penetrations and flashing where piping or ductwork passes through exterior walls in accordance with Section 07 62 00, "Sheet Metal Flashing and Trim."

3.06 IDENTIFICATION TAGS AND PLATES

A. Provide equipment, gages, thermometers, valves, and controllers with tags numbered and stamped for their use. Provide plates and tags of brass or suitable nonferrous material, securely mounted or attached. Provide minimum letter and numeral size of 1/8 inch high.

3.07 FIELD QUALITY CONTROL

A. Leak Testing: Upon completion of installation of air conditioning equipment, test factory- and field-installed refrigerant piping with an electronic-type leak detector. Use same type of refrigerant to be provided in the system for leak testing. When nitrogen is used to boost system pressure for testing, ensure that it is eliminated from the system before charging. Minimum refrigerant leak field test pressure shall be as specified in ASHRAE 15, except that test pressure

shall not exceed 150 psig on hermetic compressors unless otherwise specified as a low side test pressure on the equipment nameplate. If leaks are detected at time of installation or during warranty period, remove the entire refrigerant charge from the system, correct leaks, and retest system.

B. Evacuation, Dehydration, and Charging: After field charged refrigerant system is found to be without leaks or after leaks have been repaired on field-charged and factory-charged systems, evacuate the system using a reliable gage and a vacuum pump capable of pulling a vacuum of at least one mm Hg absolute. Evacuate system in accordance with the triple-evacuation and blotter method or in accordance with equipment manufacturer's printed instructions and recharge system.

C. Start-Up and Initial Operational Tests: Test the air conditioning systems and systems components as recommend by manufacture for proper operation. Adjust safety and automatic control instruments as necessary to ensure proper operation and sequence.

D. Performance Tests: Upon completion of evacuation, charging, startup, final leak testing, and proper adjustment of controls, test the systems to demonstrate compliance with performance and capacity requirements.

END OF SECTION 23 81 25

SECTION 23 81 29 - VARIABLE REFRIGERANT FLOW SYSTEMS

PART 1 GENERAL

1.1 SECTION INCLUDES (SUBMITTAL REQUIRED FOR EACH ITEM)

A. Air Conditioning/Heat Pump Outdoor Units.

B. Indoor/Evaporator Units.

C. Controls.

1.2 RELATED SECTIONS

A. Section 23 00 00 - General Mechanical Requirements.

1.3 REFERENCES

A. NFPA 70 - National Electrical Code.

1.4 SUBMITTALS

A. Section 23 00 00: Procedures for submittals.

B. Product Data: Provide manufacturers literature and data indicating water, drain, and electrical characteristics and connection requirements.

D. Operation and Maintenance Data: Include manufacturer's descriptive literature, operating instructions, installation instructions, maintenance and repair data.

1.5 QUALITY ASSURANCE

A. Manufacturer's Qualifications: Company specializing in manufacturing the Products specified in this section with minimum three years documented experience.

1.6 REGULATORY REQUIREMENTS

A. Products Requiring Electrical Connection: Listed and classified by Underwriters' Laboratories, Inc., as suitable for the purpose specified and indicated.

1.7 WARRANTY

A. Provide five year warranty on compressor.

B. Provide one year complete parts, labor and refrigerant warranty.

PART 2 PRODUCTS

2.1 APPROVAL

A. The unit shall be UL and/or ETL listed. All Wiring shall be in accordance with National Electrical

B. The units shall be manufactured in a facility registered to ISO 9001 and ISO14001.

C. All units must meet or exceed the 2010 Federal minimum efficiency requirements and the proposed ASHRAE 90.1 efficiency requirements for VRF systems. Efficiency shall be published in accordance with the DOE alternative test procedure based on the AHRI 340/360 standards, AHRI 1230 standard, and ISO Standard 13256-1.

D. Approved Manufacturers shall be one of the following:

1. Mitsubishi Electric Cooling & Heating Inc.
2. Daikin Applied
3. LG
4. Trane Corporation
5. Carrier Corporation

2.1.1 HEAT PUMP CONDENSING UNIT

A. Description: Variable Capacity Split system air cooled heat pump, factory assembled, pre-wired and consisting of cabinet, fan, compressor, controls. Each unit shall be run tested at the factory. The outdoor unit shall be able to operate down to 0 degrees F. Heat Recovery style units shall be the only acceptable systems. Each indoor unit shall be able to heat or cool independently of any other unit connected to the same system.

B. Cabinet: The casing shall be fabricated of galvanized steel, bonderized and finished with powder coated baked enamel.

C. Condenser Fan: Forward curved centrifugal, directly driven, variable speed. The fan motor shall have inherent protection, permanently lubricated bearings, and be completely variable speed.

D. Condenser Coil: Condenser coil shall be comprised of aluminum fins mechanically bonded to copper tubing with inner surfaces having rifling treatment to expand the total surface of the tube interior. The coils shall be tested per ASTM B-117 standard. The test shall be performed for a minimum of 1,000 hours. The condensing unit shall be provided with a factory installed heavy gauge steel wire guard with baked enamel finish.

E. Compressor: Inverter driven hermetic with resilient suspension system, oil strainer, internal motor overload protection, low pressure switch, manual reset high pressure switch. The modulating compressor shall be able to modulate the capacity down to 33% of rated capacity.

F. Refrigerant: The system shall utilize R-410A refrigerant.

2.2 INDOOR/EVAPORATOR UNIT

A. Description: The indoor unit shall be a four-way cassette style indoor unit that recesses into the ceiling with a ceiling grille OR concealed ducted unit with mill finish. The indoor unit shall be factory assembled, wired, and run tested. The indoor unit shall be charged with dehydrated air before shipment from the factory. Each Unit shall be able to independently heat or cool regardless of whether other units are in heating or cooling.

B. Assembly: For ceiling mounting of indoor unit.

C. Cabinet: The cabinet shall have provisions for a field installed filtered outside air intake.

D. Evaporator Fan: Forward curved centrifugal, directly driven both statically and dynamically balanced. The motor shall have permanently lubricated bearings. The indoor fan shall have a minimum of three speed settings and an "Auto" setting that shall adjust the fan speed based on the difference between controller setpoint and the space temperature.

E. Outlet: The indoor unit shall have an adjustable outlet system offering 4-way, 3-way, and 2-way airflow unless indicated to be a concealed ducted unit.

F. Evaporator Coil: Direct expansion coil constructed of seamless copper tubes expanded into smooth plate aluminum fins, with thermal expansion valve with external equalizer, liquid line filter-drier, service shut-off valves and charging valves.

G. Filter: One inch thick disposable glass fiber media.

2.3 CONTROL SYSTEM

A. Unit Mounted: Main fan contactor, compressor and condenser fan contactor, compressor start capacitor, controls transformer with circuit breaker, temperature control module, time delay relay, heat contactor, and high temperature thermostat.

PART 3 EXECUTION

3.1 INSTALLATION

A. Install in accordance with manufacturer's instructions.

B. Provide all supports as required for mounting unit.

C. Provide adequate drainage connections for unit condensate including condensate pump if needed.

D. Refrigerant systems and circuits shall be pressure tested with nitrogen gas to 550 psi for minimum of 24 hours then evacuate and pull a vacuum down to 500 microns for another 24 hours.

E. All connections on piping and equipment shall be brazed OR utilize the Parker Zoomlock braze-free fittings. If the contractor chooses to utilize the Parker Zoomlock fittings, the contractor shall also utilize the Klauke crimping tool provided by Parker and install as per Parker recommendations.

3.2 MANUFACTURER'S FIELD SERVICES

A. Prepare and start system and set initial temperature set points by a manufacturer's representative fully trained to start-up the system. The Manufacturer's representative shall monitor all pressures and temperatures on each indoor and outdoor unit and provide report including logs of pressures and temperatures to the engineer of record prior to substantial completion.

C. The Manufacturer's representative shall provide training to Instruct operating personnel and building maintenance personnel for a minimum of 8 hours.

D. The Manufacturer shall have a certified manufacturer's representative trained to startup and service the system within a 100 mile radius of the job site.

END OF SECTION 23 81 29

SECTION 260000 – ELECTRICAL GENERAL REQUIREMENTS

PART 1 GENERAL

1.01 SECTION INCLUDES:

A. Electrical General Requirements specifically applicable to Division 26 Sections, in addition to Division 01 - General Requirements.

1.02 PROJECT/SITE CONDITIONS:

A. Install work in locations shown on Drawings, unless prevented by project conditions.

B. Prepare drawings showing proposed rearrangement of work to meet project conditions, including changes to work specified in other Sections. Obtain permission of Architect before proceeding.

C. Before submitting a proposal for the work contemplated in these specifications and accompanying Drawings, each bidder shall examine the site and familiarize himself with all the existing conditions and limitations. No additional compensation will be allowed due to the Contractor's misunderstandings as to the amount of work involved or his lack of knowledge of any condition in connection with the work.

1.03 REGULATORY REQUIREMENTS:

A. Permits and Inspections: This Contractor shall secure and pay for all permits, and inspections required on work performed under this section of the Specifications. He shall assume full responsibility for all assessments and taxes necessary for the completion and acceptance of the work.

B. Applicable Standards and Codes: All materials and workmanship shall comply with all applicable codes, specifications, local ordinances, industry standards and utility company regulations. In case of difference between building codes, specifications, federal and state laws, local ordinances, industry standards and utility company regulations and the Contract Documents, the most stringent requirements shall govern. The Contractor shall promptly notify the Architect in writing of such differences. Should the Contractor perform any work that does not comply with the requirements of the applicable building codes, federal and state laws, local ordinances, industry standards and utility company regulations, he shall bear all costs arising in correcting the deficiencies. Applicable codes and standards shall include all State laws, State Board of Health and State Rating Bureau, local ordinances, utility company regulations and the applicable requirements of the following:

1. Florida Building Code - FBC
2. National Fire Protection Association - NFPA
3. National Electrical Manufacturers Association - NEMA
4. National Bureau of Standards
5. American National Standards Institute - ANSI
6. Underwriters' Laboratories - UL

1.04 COOPERATION:

A. Cooperate with others in laying out the electrical work so that this phase of the work will properly fit the building and other contractor's requirements.

1.05 PRODUCTS FURNISHED BY OTHERS:

A. Products are furnished by the Owner or under other Divisions of these Specifications that require electrical connection. This Contractor shall provide all necessary materials and labor to connect to the electrical system all equipment and fixtures having electrical power connection requirements. Refer to other Divisions of these Specifications for additional or specific requirements. Actual rough-in dimensions shall be obtained from Shop Drawings or measurements of the equipment or fixture.

B. The unpacking, assembling and setting of equipment furnished by the Owner or under other Divisions of these Specifications will be performed by others, unless stated otherwise.

C. Because the manufacturer of the equipment actually purchased or supplied may vary slightly from that specified, as hereinbefore stated, some rearranging of the requirements may be necessary. This Contractor shall make connections as required by the actual equipment furnished.

1.06 SEQUENCING AND SCHEDULING:

A. Construct work in sequence under provisions of applicable sections of these specifications.

B. Power outages shall be scheduled with the Owner and other Contractors. Outages shall be at the convenience of the Owner.

1.07 APPROVAL OF MATERIALS AND EQUIPMENT:

A. Whenever a material, article, or piece of equipment is identified on the Drawings or in these Specifications by reference to manufacturer's or vendor's name, trade name, catalog number or the like, it is so identified for the purpose of establishing a standard of quality and shall not be construed as limiting competition. Any material, article, or piece of equipment of other manufacturers or vendors, which will perform adequately the intent of the design, will be considered equally acceptable provided written approval has been granted by the Architect. Materials submitted for approval shall comply with all applicable Sections of these Specifications prior to acceptance. Submit proposed substitutions to the Architect for approval at least ten (10) days prior to the bid so that an addendum can be issued to all contractors. Architect's opinion shall be final on the equality of substituted items.

B. After the Contract has been awarded, catalog cuts on the following items shall be submitted to the Architect for final approval before purchase of the equipment whether substitutions are being made or not:

1. Light Fixtures

2. Panelboards and Switchboards
3. Distribution Equipment
4. Wiring Devices
5. Fabricated Equipment
6. Automatic Transfer Switches

1.08 OBSERVATION, TESTING AND BALANCING:

A. Observation: The complete job will be, during and/or after construction, subject to the administration of the Architect. Site visit(s) shall be conducted by the Architect, architect's consulting engineer or his designated representative as necessary to maintain compliance with the Contract requirements.

B. Balancing: All branch circuits and feeders shall be tested under typical load conditions (under maximum load conditions if so desired/requested by general contractor or Architect's consulting engioneer), and loads shall be balanced on the phases of the electrical system.

1.09 WORKMANSHIP:

A. All work shall be executed in a neat and substantial manner by skilled workman, well qualified, and regularly engaged in the type of work required. Substandard work shall be removed and replaced by the Contractor at no cost to the Owner.

1.10 OPERATING AND MAINTENANCE INSTRUCTIONS/AS BUILT DRAWINGS:

A. Four (4) complete sets of instructions containing the manufacturer's operating and maintenance instructions for each piece of equipment shall be furnished to the Owner. Each set shall be permanently bound and shall have a hard cover. One complete set shall be furnished at the time that the test procedure is submitted, and remaining sets shall be furnished before the Contract is completed. Flysheets shall be placed before instructions covering each subject. The instruction sheets shall be approximately 8-1/2" by 11" with large sheets of Drawings folded in. The instructions shall include information for major pieces of equipment and systems.

B. Upon completion of the work and at the time designated, the services of one project manager shall be provided by the Contractor to instruct the representative of the Owner in the operation and maintenance of the systems.

C. This Contractor shall provide as-built Drawings at the completion of the job. Drawings shall show all significant changes in equipment, wiring, routing, location, etc.

1.11 GUARANTEE:

A. This Contractor shall guarantee to the Owner, all work performed under this contract to be free from defects in workmanship and material for a period of one year from date of final acceptance by

Owner and Architect. Any defects arising during this period will be promptly remedied by the Contractor without cost to the Owner.

B. Lamps and fuses burned out during normal operation after acceptance are exempt from guarantee. This Contractor shall furnish the Owner with an estimated time, from notification of a problem to presence on the site, for all service calls on warranty items.

1.12 COMPLIANCE:

A. In the event of a conflict between Specifications, Drawings, Codes, Requirements, etc., the most stringent requirements shall govern.

B. The interpretation of conflicts and resolution thereof shall remain the right of the Architect or his designated representative.

PART 2 - PRODUCTS: Not Used

PART 3 - EXECUTION: Not Used

END OF SECTION 26 00 00

SECTION 26 05 19 – LOW VOLTAGE ELECTRICAL POWER CONDUCTORS, CABLES, AND DEVICES

PART 1 GENERAL

1.01 RELATED DOCUMENTS:

A. Section 260000 - Electrical General Requirements, apply to the work specified in this Section, with additions and modifications specified herein.

1.02 SECTION INCLUDES:

A. Wire and Cable

B. Wiring Devices

PART 2 PRODUCTS

2.01 WIRE AND CABLE

A. Building Wire:

1. Feeder and Branch Circuits 10 AWG and Smaller: Copper, solid conductor, 600 volt insulation, rated 75 degrees C, THHN/THWN.
2. Feeder and Branch Circuits 8 AWG and 6 AWG: Copper, stranded conductor, 600 volt insulation, rated 75 degrees C, THHN/THWN.
3. Feeder and Branch Circuits Larger Than 6 AWG: Copper, stranded conductor, 600 volt insulation, rated 75 degrees C, THW.
4. Control Circuits: Copper, stranded conductor, 600 volt insulation, THHN/THWN.

B. The use of Romex cable is not allowed on this project. MC (metal clad) cable may be used where applicable and approved by local AHJ. Aluminum wire may be used for feeder conductors provided the local AHJ approves and the minimal allowable ampacity (as specified) is met.

C. Remote Control Signal Cable (where applicable):

1. Control Cable for Class 1 Remote Control and Signal Circuits: Copper conductor, 600 volt insulation, rated 60 degree C, individual conductors twisted together, shielded, and covered with PVC jacket.
2. Control Cable for Class 2 or Class 3 Remote Control and Signal Circuits: Copper conductor, 300 volt insulation, rated 60 degree C, individual conductors twisted together, shielded, and covered with PVC jacket; UL listed.

D. Cords: Oil-resistant thermoset-insulated multi-conductor flexible cord with identified equipment grounding conductor, suitable for extra hard usage in damp locations, type SO.

2.02 WIRING DEVICES AND WALL PLATES:

A. Manufacturers:
   1. Hubbell
   2. Leviton
   3. Arrow Hart

B. Wall Switches: AC general use, quiet-operating snap switch rated 20 amperes and 120/277 volts AC, with plastic toggle handle, ivory color unless noted otherwise on architectural drawings. Confirm COLOR with Architect.

   1. Single Pole Switch: Hubbell 1221-I (or equal)
   2. Three Way Switch: Hubbell 1223-I (or equal)

C. Receptacle:

   1. Convenience Receptacle Configuration: Type 5-20R, plastic face, Model 5262-I manufactured by Hubbell (or equal). Confirm COLOR with Architect.
   2. Specific Purpose Receptacle: Configuration indicated on Drawings with black plastic face.
   3. Provide straight-blade receptacles to NEMA WD 1.
   4. Provide straight-blade receptacles to NEMA WD 5.
   5. GFCI Receptacles: Duplex convenience receptacle with integral ground fault current interrupter. Model GFR-5352IA manufactured by Hubbell (or equal). Device shall be compliant to the requirements of UL 943.

D. Wall Dimmer: Rotary dial or slide type, ivory color. Model C-2000 manufactured by Lutron (or equal). Rating of 2000 watts at 120 volts, AC. Confirm COLOR with Architect.

E. Decorative Cover Plate: Smooth Stainless steel, ivory color, ANSI 302. Confirm COLOR with Architect.

F. Weatherproof Cover Plate: Gasketed cast metal with hinged gasketed device covers rated raintight while in use in accordance with Article 410-57 of the National Electrical Code.

G. Attachment Plug Cap: Match receptacle configuration provided for equipment connection.

H. Cord Reels: Provide cord reels as indicated on the drawings. Cords shall be sized per loads served and shall be 50’ in length.

PART 3 EXECUTION

3.01 EXAMINATION AND PREPARATION:

A. Verify that interior of building has been physically protected from weather.

B. Verify that mechanical work which is likely to injure conductors has been completed.

C. Completely and thoroughly swab raceway system before installing conductors.

3.02 INSTALLATION:

A. Wiring Methods:

1. Concealed Interior Locations: Building wire in raceway.
2. Exposed Interior Locations: Building wire in raceway.
3. Above Accessible Ceilings: Building wire in raceway.
4. Wet or Damp Interior Locations: Building wire in raceway.
5. Exterior Locations: Building wire in raceway.
6. Underground Locations: Building wire in raceway.
7. Hazardous Locations: Building wire in raceway conforming to applicable NEC Articles as identified on the Drawings.

B. Use no wire smaller than 12 AWG for power and lighting circuits, and no smaller than 14 AWG for control wiring. Conductors shall be sized to compensate for voltage drop.

C. Neatly train and secure wiring inside boxes, equipment and panelboards.

D. Use UL listed wire pulling lubricant for pulling conductors in raceways.

E. Make splices, taps, and terminations to carry full ampacity of conductors without perceptible temperature rise.

F. Devices shall mount flush or as indicated on the Drawings.

G. Install wiring devices in accordance with manufacturer's instructions.

1. Install wall switches 48 inches above floor, "OFF" position down.
2. Install wall dimmers 48 inches above floor. De-rate ganged dimmers as instructed by manufacturer. Do not use a common neutral, provide a separate neutral for each dimmed circuit.
3. Unless noted otherwise, install convenience receptacles 18 inches above floor, 6 inches above counters or splashbacks, with grounding pole on bottom.
4. Install GFCI receptacles at all outdoor locations and all indoor locations as required by NFPA70, and as indicated.
5. Install specific purpose receptacles at heights shown on Drawings.
6. Install cord and attachment plug caps on equipment where acceptable and approved by all local AHJ's… and deemed necessary. Size cord for connected load and rating of branch circuit over-current protection.

K. Install wall plates flush and level.

1. Install decorative plates on switch, receptacle, and blank outlets in finished areas.
2. Install galvanized steel plates on outlet boxes and junction boxes in unfinished areas, above accessible ceilings, and on surface mounted outlets.
2. Install weatherproof coverplates on all devices/boxes in wet or outdoor locations.

3.03 FIELD QUALITY CONTROL:

A. Perform field inspection and testing of circuits under provisions of Section 16000.

1. Inspect wire and cables for physical damage and proper connection.
2. Torque test conductor connections and terminations to manufacturer's recommended values.
3. Perform continuity test on all power and equipment branch circuit conductors. Verify proper phasing connections.

END OF SECTION 26 05 19

SECTION 26 05 30 – RACEWAYS AND BOXES FOR ELECTRICAL SYSTEMS

PART 1 GENERAL

1.01 RELATED DOCUMENTS:

A. Section 26 00 00 - Electrical General Requirements, apply to the work specified in this section, with additions and modifications specified herein.

1.02 SECTION INCLUDES:

A. Conduit and Conduit Fittings

B. Electrical Boxes and Fittings

C. Cable Tray

PART 2 PRODUCTS

2.01 CONDUIT AND FITTINGS:

A. Conduit:

1. Metal Rigid Conduit: Galvanized steel.
2. Metal Tubing: Galvanized steel.
3. Flexible Conduit: Steel.
4. Liquid-Tight Flexible Conduit: Flexible conduit with PVC Jacket.
5. Plastic Conduit and Tubing: NEMA TC 2; PVC. Use Schedule 40 conduit.

B. Conduit and Fittings:

1. Conduit Fittings and Conduit Bodies: NEMA FB 1. Conduit fittings to be steel, threaded type. Split couplings are not acceptable.
2. Tubing Fittings: NEMA FB 1. Tubing fittings to be steel compression type for conduit up to 2" in diameter and set screw type for conduit 2-1/2" and larger.
3. Flexible Conduit Fittings: NEMA FB 1. Flexible conduit fittings to be steel set screw or screw in type.
4. Liquid-Type Flexible Conduit Fittings: NEMA FB 1. Liquid-tight flexible conduit fittings to be steel compression type.
5. Plastic Fittings and Conduit Bodies: NEMA TC 3.

2.02 ELECTRICAL BOXES:

A. Boxes:

1. Sheet Metal: NEMA OS 1; galvanized steel, 4" or 4-11/16" square. Provide galvanized plaster/tile ring for recessed outlet boxes.
2. Cast Metal: Aluminum or cast feralloy, deep type, gasketed cover, threaded hubs.
3. Nonmetallic: NEMA OS 2.

B. Large Enclosures: NEMA 250; Type 4, steel enclosures with manufacturer's standard enamel finish and cover, held closed screws.

2.03 CABLE TRAY (where applicable):

A. Manufacturers:

1. B-line
2. Mono-Systems

B. Ladder type, constructed of aluminum with 9” rung spacing, 6” siderails and 18” wide

C. Fittings: Horizontal 90° elbows, horizontal tees, and horizontal crosses with all metal accessories to connect to straight sections.

D. Support: Supports shall be fabricated channel, and threaded rods.

E. Grounding: Provide grounding straps as each junction, splice, fitting, etc.

PART 3 EXECUTION

3.01 EXAMINATION AND PREPARATION:

A. Examine supporting surfaces to determine that surfaces are ready to receive work.

B. Electrical boxes shown on Contract Drawings are approximate locations unless dimensioned.

3.02 INSTALLATION:

A. Use conduit and tubing for raceways in the following locations:

1. Underground Installations: Rigid steel conduit, painted with two coats of epoxy asphaltum paint, or PVC conduit.
2. Installations In Concrete: Rigid steel conduit, or PVC conduit.
3. In Slab Above Grade: Rigid steel conduit, or PVC conduit.
4. Exposed Outdoor Locations: Rigid steel conduit where damage from an external source is likely. Otherwise, schedule 80 PVC may be used.
5. Wet Interior Locations: Rigid steel conduit or electrical metallic tubing. Use threaded or raintight fittings for conduit.

6. Concealed Dry Interior Locations: Rigid steel conduit or electrical metallic tubing.
7. Exposed Dry Interior Locations: Rigid steel conduit or electrical metallic tubing.
8. Feeders: Galvanized rigid steel conduit on all feeders.

B. Size raceways for conductor type installed.

1. Minimum Size Conduit: 1/2 inch.

C. Arrange conduit and tubing to maintain headroom and to present a neat mechanical appearance.

1. Route exposed raceway parallel and perpendicular to walls and adjacent piping.
2. Maintain minimum 6 inch clearance to piping and 12 inch clearance to heat surfaces such as flues, piping, and heating appliances.
3. Maintain required fire, acoustic, and vapor barrier rating when penetrating walls, floors, and ceilings.
4. Route conduit through roof openings for piping and ductwork where possible; otherwise, route through roof jack with pitch pocket.
5. Group in parallel runs where practical. Use rack constructed of steel channel. Maintain spacing between raceways or de-rate circuit ampacities to NFPA 70 requirements.
6. Use approved manufactured conduit hangers and clamps; do not fasten with wire or perforated pipe straps. Utilize conduit hangers for conduits located below floor slabs.
7. Use conduit bodies to make sharp changes in direction.
8. Terminate all conduits with insulated bushings.
9. Use suitable caps to protect installed raceway against entrance of moisture and dirt.
10. Provide a pull string in all empty raceways.
11. Install expansion joints fittings where raceway crosses building expansion joints.
12. Install plastic conduit and tubing in strict accordance with the manufacturer's recommendations. When plastic conduit is installed, use galvanized rigid elbows for 90E bends.

D. Install electrical boxes as shown on the Drawings, and as required for splices, taps, wire pulling, equipment connections and regulatory requirements.

1. Use cast outlet box in exterior locations, wet locations, and exposed interior locations.
2. Use large enclosure for interior pull and junction boxes larger than 12 inches in any dimension.
3. Locate and install electrical boxes to allow access. Provide access panels if required.
4. Locate and install electrical boxes to maintain headroom and to present a neat mechanical appearance.
5. Install pull boxes and junction boxes above accessible ceilings or in unfinished areas.
6. Provide knockout closure for unused openings.
7. Align wall-mounted outlet boxes plumb and level for switches, and similar devices.
8. Coordinate mounting heights and locations of outlets above counters and backsplashes.
9. Install lighting outlets to locate luminaires as shown on the Drawings.

E. Use recessed outlet boxes in finished areas where indicated.

1. Secure boxes to interior wall and partition studs, accurately positioning to allow for surface finish thickness, and plaster/tile ring installation.

2. Use stamped steel stud bridges for flush outlets in hollow stud wall, and adjustable steel channel fasteners for flush ceiling outlet boxes.
3. Locate boxes in masonry walls to require cutting corner only. Coordinate masonry cutting to achieve neat openings for boxes.
4. Do not install boxes back-to-back in walls; provide 6 inch separation, minimum. In acoustic-rated walls provide 24 inch separation minimum.
5. Do not damage insulation.

END OF SECTION 26 05 30

SECTION 26 27 13 – SERVICE AND DISTRIBUTION

PART 1 GENERAL

1.01 RELATED DOCUMENTS:

A. Section 26 00 00 - Electrical General Requirements, apply to the work specified in this Section, with additions and modifications specified herein.

1.02 SECTION INCLUDES:

A. System Description

B. Utility Requirements

C. Grounding

D. Switchboards

E. Panelboards

F. Enclosed Switches

G. Fuses

H. Transformers

I. Enclosed Circuit Breakers

J. Plug-in Duct

1.03 SYSTEM DESCRIPTION:

A. The electric service shall be 120/208 volts, three phase, four wire, 60 Hz fed from a new underground secondary service from a utility-owned padmount transformer.

1.04 PROJECT CONDITIONS:

A. Verify field measurements for the equipment to ensure proper fit with in the space proposed.

1.05 UTILITY REQUIREMENTS:

A. The serving utility is Gulf Power Co.

B. If required, metering shall be provided by the utility company and installed by electrical contractor.

1. Coordinate with the utility for exact metering requirements.
2. Install metering devices provided by the utility company.

C. Prior to submitting bid, coordinate with utility for all service requirements. Electrical contractor shall inform Contractor of charges at bid submission if possible. If charges are not attainable from the local utility at the desired time, inform Contractor of the potential future charges along with the expected time of receipt.

PART 2 PRODUCTS

2.01 SWITCHBOARD:

A. Manufacturers:

1. Square D Company
2. ITE-Siemens
3. General Electric Company
4. Cutler Hammer

B. Switchboard: NEMA PB2.

1. Line and Load Terminations: Accessible from front only of switchboard, suitable for conductor materials used.
2. Main Sections Devices: Individually mounted.

C. Ratings: As shown on Drawings.

D. Bussing:

1. Bus Material: Copper or Aluminum with tin plating sized in accordance with NEMA PB2.
2. Bus Connections: Accessible from front for maintenance.
3. Ground Bus: Copper

E. Enclosure: Type 1General purpose as shown on the Drawings.

1. Align sections at front and rear.
2. Height: 90 inches
3. Finish: Manufacturer's standard light gray enamel over external surfaces.

F. Future Provisions:

1. Fully equip spaces for future devices with bussing and bus connection provisions; continuous current rating as indicated on the Drawings.
2. Do not taper main bus rating.

G. Switching and Over-Current Protection Devices:

1. Molded Case Circuit Breakers: NEMA AB 1.
2. Solid State Molded Case Circuit Breakers: NEMA AB 1; with electronic sensing, timing and tripping circuits for adjustable current settings; ground fault trip; instantaneous trip and adjustable short time trip.

H. Switchboard Instruments:

1. Ground Fault Sensors: Zero sequence type.
2. Ground Fault Relay: Adjustable ground fault sensitivity from 200 to 1200 amperes, time delay adjustable from 0 to 1 second.
3. Square D Power Logic metering.

2.02 PANELBOARDS:

A. Manufacturers:

1. Square D Company
2. ITE-Siemens
3. General Electric Company
4. Cutler Hammer

B. Distribution Panelboards: NEMA PB 1; circuit breaker type.

1. Enclosures: Type 1 or 3R as shown on Drawings.
2. Mounting: Surface or flush mount as shown on Drawings.
3. Bus: Copper.
4. Ground Bus: Copper
5. Voltage and phase: As shown on Drawings.
6. Minimum Integrated Equipment: As shown on Drawings.
7. Hinged door with lock.
8. Circuit Breakers: Bolt-on, ratings as shown on Drawings.

C. Light and Power Panelboards: NEMA PB 1; circuit breaker type.

1. Enclosures: Type 1 or 3R as shown on Drawings.
2. Surface or flush mount as shown on Drawings.

3. Bus: Copper.
4. Ground Bus: Copper.
5. Voltage and phase as shown on Drawings.
6. Minimum Integrated Equipment: As shown on Drawings.
7. Hinged door with lock.
8. Circuit Breakers: Bolt-on, ratings as shown on Drawings.

D. Accessories: Provide panel and branch device accessories as shown on Drawings.

E. Future Provisions: Where space provisions are indicated on the Drawings provide bussing, bus extensions, etc. require to mount future circuit breakers. Where spare provisions are indicated on the Drawings provide circuit breakers complete and ready for connection.

2.03 ENCLOSED SWITCHES:

A. Manufacturers:

1. Square D Company
2. ITE-Siemens
3. General Electric Company
4. Cutler Hammer

B. Enclosed Switch Assemblies: NEMA KS 1; Type HD.

1. Fuse Clips: Designed to accommodate Class `R' or `J' fuses as shown on Drawings.

C. Enclosures: NEMA KS 1; Type 1 or 3R as required.

D. Ground: Provide grounding lug.

E. Ratings: 600 or 250 volts to match system service requirements, poles and ampere ratings as indicated on the Drawings.

2.04 FUSES:

A. Manufacturers:

1. Bussman
2. Shawmut
3. Little Fuse

B. Service Entrance/Feeder Circuits-601 Amp and Larger

1. Current Limiting
2. UL Class L
3. 200,000 Ampere RMS Interrupting Rating
4. Voltage Rating: As required for system compatibility.

C. Service Entrance/Feeder Circuits-600 Amp and Smaller

1. Current Limiting
2. UL Class RK1
3. 200,000 Ampere RMS Interrupting Rating
4. Voltage Rating: As required for system compatibility

D. Motor, Motor Controller, Transformer and Inductive Circuits

1. Current Limiting
2. UL Class RK1, Time Delay
3. 200,000 Ampere RMS Interrupting Rating
4. Voltage Rating: As required for system compatibility.

2.05 TRANSFORMERS:

A. Manufacturers:

1. Square D Company
2. ITE-Siemens
3. General Electric Company
4. Cutler Hammer

B. Description: Enclosed air-cooled dry type transformer.

C. Ratings:

1. Primary Voltage: As shown on Drawings.
2. Secondary Voltage: As shown on Drawings.
3. Capacity: KVA ratings as shown on Drawings.
4. Basic Impulse Level: 10 BIL.
5. Insulation Class/Temperature Rise: Class 220/115 degrees C.

D. Configuration: Two winding, delta-wye.

E. Winding Taps: Four full capacity primary taps, each at 2.5 percent below rated voltage; and two full capacity primary taps, each at 2.5 percent above rated voltage.

F. Mounting: Wall, floor, or trapeze as shown on Drawings.

G. Enclosures: Code gauge steel, NEMA 1 or 3R as required.

2.06 ENCLOSED CIRCUIT BREAKERS:

A. Manufacturers:

1. Square D Company
2. ITE-Siemens
3. General Electric Company
4. Cutler Hammer

B. Circuit Breaker: NEMA AB 1.

1. Voltage: As shown on Drawings.
2. Enclosure: NEMA AB 1; Type 1 or 3R as required.
3. Accessories: As indicated on Drawings.

2,07 PLUG-IN DUCT

A. Manufacturers:

1. Square D Company
2. ITE-Siemens
3. General Electric
4. Cutler Hammer

B. Plug-in Duct

1. Bus Material: Copper
2. Enclosure: NEMA 1
3. Mounting: Suspended from structure
4. Rating: 225 amperes, 600 volt, 3 phase, 4 wire

C. Plug-in Units

1. Fusible switches

PART 3 EXECUTION

3.01 EXAMINATION AND PREPARATION:

A. Make arrangements with utility company to obtain permanent electrical service to the facility.

B. Provide concrete pad for utility transformer. Pad details on the Drawings are for estimating purposes. Coordinate exact pad requirements with the utility prior to installation.

3.02 INSTALLATION:

A. Install utility services in accordance with utility company standards and requirements.

1. Underground Service: Install service entrance conduits and conductors from the utility padmounted transformer to the service equipment as shown on the Drawings. (Verify with utility prior to bid/construction.) In addition, coordinate with utility company for required provisions for utility-owned underground primary cabling.
2. If applicable…provide lugs on utility transformer spaces sized to accommodate service entrance conductors.

B. Install equipment in accordance with manufacturer's instructions.

C. Install switchboard to NEMA PB 2.1.

D. Install panelboards to NEMA PB 1.1.

E. Ground the electrical service in accordance with NFPA 70, National Electrical Code, Article 250.

F. Provide labels for all switchboards, panelboards, and distribution equipment.

G. Provide typewritten directory inside panel door for all panelboards.

END OF SECTION 26 27 13

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SECTION 26 32 13 – GENERATOR SYSTEMS

PART 1 GENERAL

1.1 SUMMARY

A. This section includes the following items from a single supplier:

1. Engine Generator Set.
2. Enclosure
3. Related Accessories as specified

B. Related Requirements

1. It is the intent of this specification to secure an engine-driven generator set that has been prototype tested, factory built, production-tested, and site-tested together with all accessories necessary for a complete installation as shown on the plans and drawings and specified herein.
2. Any exceptions to the published specifications shall be subject to the approval of the Architect and submitted minimum 10 days prior to the closing of the bid with a line by line summary description of all the items of compliance, any items that have been are omitted or have been taken exception to, and a complete description of all deviations.
3. It is the intent of this specification to secure a generator set system that has been tested during design verification, in production, and at the final job site. The generator set will be a commercial design and will be complete with all of the necessary accessories for complete installation as shown on the plans, drawings, and specifications herein. The equipment supplied shall meet the requirements of the National Electrical Code and applicable local codes and regulations.
4. All equipment shall be new and of current production by an international, power system manufacturer of generators, transfer switches, and paralleling switchgear. The manufacturer shall be a supplier of a complete and coordinated system. There will be single-source responsibility for warranty, parts, and service through a factory-authorized representative with factory-trained technicians.

1.2 SUBMITTALS

A. Action Submittals

1. Product Data

a. The submittal shall include prototype test certification and specification sheets showing all standard and optional accessories to be supplied; schematic wiring diagrams, dimension drawings, and interconnection diagrams identifying by terminal number each required interconnection between the generator set, the transfer switch, and the remote annunciator panel if it is included elsewhere in these specifications.

2. Shop Drawings

B. Informational Submittal

1. Certificates

a. The generator set shall be listed to UL 2200 or submitted to an independent third party certification process to verify compliance as installed.

2. Test and Evaluation Reports
3. Manufacturer's Instruction
4. Source Quality Control Submittals
5. Field or Site Quality Control
6. Manufacturer's Report
7. Qualification Statement

C. Closeout Submittal

1. Maintenance Contracts
2. Operation And Maintenance Data
3. Bonds
4. Warranty Documentation
5. Record Documentation
6. Software

D. Maintenance Material Submittals

1. Provide one (1) copy of the following documents and manuals for the engine, the alternator, and the generator set:

a. Operation Manuals
b. Parts Catalogs
c. Wiring Diagrams.

1.3 QUALITY ASSURANCE

A. Regulatory Agency

1. The generator set shall conform to the requirements of the following codes and standards:

a. CSA C22.2, No. 14-M91 Industrial Control Equipment.
b. EN50082-2, Electromagnetic Compatibility-Generic Immunity Requirements, Part 2: Industrial.
c. EN55011, Limits and Methods of Measurement of Radio Interference Characteristics of Industrial, Scientific and Medical Equipment.
d. IEC8528 part 4, Control Systems for Generator Sets.

e. IEC Std 61000-2 and 61000-3 for susceptibility, 61000-6 radiated and conducted electromagnetic emissions.
f. IEEE446 Recommended Practice for Emergency and Standby Power Systems for Commercial and Industrial Applications.
g. NFPA 70, National Electrical Code, Equipment shall be suitable for use in systems in compliance to Article 700, 701, and 702.
h. NFPA 99, Essential Electrical Systems for Health Care Facilities.
i. NFPA 110, Emergency and Standby Power Systems. The generator set shall meet all requirements for Level 1 systems. Level 1 prototype tests required by this standard shall have been performed on a complete and functional unit. Component level type tests will not substitute for this requirement.

2. Qualifications

a. The equipment shall be produced by a manufacturer who is ISO 9001 certified for the design, development, production and service of its complete product line.
b. The power system shall be produced by a manufacturer who has produced this type of equipment for a period of at least 10 years and who maintains a service organization available twenty-four hours a day throughout the year.

3. Manufacturers

a. The power system shall be furnished by a single manufacturer who shall be responsible for the design, coordination, and testing of the complete system. The entire system shall be installed as shown on the plans, drawings, and specifications herein.

1.4 DELIVERY, STORAGE, AND HANDLING

A. Delivery and Acceptance Requirements
B. Storage and Handling Requirements

1.5 FIELD OR SITE CONDITIONS

A. Ambient Conditions

1. Engine- generator set shall operate in the following conditions without any damage to the unit or its loads.

a. Ambient Temperature: 122 °F
b. Altitude : 100 ft
c. Relative Humidity: 95%

1.6 WARRANTY

A. Manufacturer’s Warranty:

1. The generator set shall include a standard warranty covering one (1) year or 2000 hours, whichever occurs first, to guarantee against defective material and workmanship in accordance with the manufacturer's published warranty from the date of initial startup.
2. The generator set manufacturer and its distributor shall maintain a 24-hour parts and service organization. This organization shall regularly engage in maintenance contract programs to perform preventive maintenance and service on equipment similar to that specified. A service agreement shall be available and shall include system operation under simulated operating conditions; adjustment to the generator set, transfer switch, and switchgear controls as required, and certification in the owner's maintenance log of repairs made and functional tests performed on all systems.

PART 2 PRODUCTS

2.1 EQUIPMENT

A. Equipment

1. The generator set shall be a Kohler model 150REZGC with a 4S12X alternator. It shall provide 187.50 kVA and 150.00 kW when operating at 120/208 volts, 60 Hz, 0.80 power factor. The generator set shall be capable of a 130°C Standby rating while operating in an ambient condition of less than or equal to 122 °F and a maximum elevation of 250 ft above sea level. The standby rating shall be available for the duration of the outage.

B. Engine

1. The minimum 8.8 liter displacement engine shall deliver a minimum of 227 HP at a governed engine speed of 1800 rpm, and shall be equipped with the following:
    a. Electronic isochronous governor capable of 0.5% steady-state frequency regulation
    b. 12-volt positive-engagement solenoid shift-starting motor
    c. 70-ampere automatic battery charging alternator with a solid-state voltage regulation
    d. Positive displacement, full-pressure lubrication oil pump, cartridge oil filters, dipstick, and oil drain
    e. Dry-type replaceable air cleaner elements for normal applications
    f. The engine shall be turbo charged and fueled by Natural Gas
    g. The engine shall have a minimum of 8 cylinders and be liquid-cooled
2. The engine shall be EPA certified from the factory
3. The generator must accept rated load in one-step.

C. Cooling System

1. The engine shall be liquid-cooled by a closed loop, unit mounted radiator rated to operate the generator set at full load at an ambient temperature of 50 degrees C (122 degrees F). The radiator fan and other rotating engine parts shall be guarded against accidental contact.

D. Standard Air Cleaner

1. The air cleaner shall provide engine air filtration which meets the engine manufacturer's specifications under typical operating conditions.

E. Battery

1. Each genset requires a BCI group 31 batteries which must meet the engine manufactures' specifications for the ambient conditions specified in Part 1 Project Conditions and shall comply with the NFPA requirements for engine cranking cycles. Each battery shall be rated according to SAE Standards J-537 with a minimum cold cranking amp of 950 amps and a minimum reserve capacity of 185 Minutes at 80F. The battery plates shall be constructed of a Calcium-Lead alloy to provide long waterless operation and extended battery life. The battery elements must be anchor-locked with full-frame grids and tight-packed commercial plates to resist the effects of vibration. The battery must contain a handle to aid in lifting and the case must be constructed of polypropylene to resist breakage and extend service life. Removable cell covers shall be provided to allow for checking of electrolyte specific gravity.
2. Battery rack and battery cables capable of holding the manufacturer's recommended batteries shall be supplied.

F. Housing

1. Sound Attenuated Enclosure

a The generator set shall be supplied with a Sound Attenuated Enclosure, providing a sound pressure of 74 dB(A) while the generator is operating at 100% load at 7 meters (23 feet) – free field – using acoustic insulation and acoustic-lined inlet plenum, constructed from a minimum of 0.125 inch thick formed heavy duty aluminum panels. The acoustic insulation used shall meet UL 94 HF1 flammability classification. The enclosure shall be manufactured from bolted panels to facilitate service, future modifications, or field replacement. The enclosure shall use external vertical air inlet and outlet to reduce noise. The enclosure shall have an integral rodent guard and skid end caps and shall have bracing to meet 291 kph (181 mph) wind loading.

b The enclosure components and skid shall be cleaned with a two-stage alkaline cleaning process to remove grease, grit, and grime from parts. Components shall then be subjected to a Zirconium-based conversion coating process to prepare the metal for electro-coat (e-coat) adhesion. All enclosure parts shall receive a 100% epoxy primer electro-coat (e-coat) with high-edge protection. Following the e-coat process, the parts shall be finish coated with powder baked paint for superior finish, durability, and appearance with a Power Armor ^{TM} industrial finish that provides heavy duty durability in harsh conditions, and is fade-, scratch- and corrosion-resistant.

c The enclosure must surpass a 3,000 hour salt spray corrosion test per ASTM B-1117.
d Enclosures will be finished in the manufacturer's standard color.
e The enclosures shall allow the generator set to operate at full load in an ambient temperature of 45°C with no additional derating of the electrical output of the generator set. The enclosure will account for no more than a 5°C derating of the electrical output of the generator set.
f Enclosures shall be equipped with sufficient side and end doors to allow access for operation, inspection, and service of the unit and all options. Minimum requirements are two doors per side. When the generator set controller faces the rear of the generator set, an additional rear facing door is required. Access to the controller and main line circuit breaker shall meet the requirements of the National Electric Code.
g Doors shall be fitted with hinges, hardware, and the doors shall be removable.
h Doors shall be equipped with lockable latches. Locks shall be keyed alike. Door locks shall be recessed to minimize potential of damage to door/enclosure.
i A duct between the radiator and air outlet shall be provided to prevent re-circulation of hot air.
j The complete exhaust system shall be internal to the enclosure.
k The critical silencer shall be fitted with a tailpipe and rain cap.

G. Controller

1. Decision-Maker® 3000 Generator Set Controller

    a. The generator set controller shall be a microprocessor based control system that will provide automatic starting, system monitoring, and protection. The controller system shall also provide local monitoring and remote monitoring. The control system shall be capable of PC based updating of all necessary parameters, firmware, and software.
    b. The controller shall be mounted on the generator set and shall have integral vibration isolation. The controller shall be prototype and reliability tested to ensure operation in the conditions encountered.

2. Codes and Standards

    a. The generator set controller shall meet NFPA 110 Level 1 requirements and shall include an integral alarm horn as required by NFPA.
    b. The controller shall meet NFPA 99 and NEC requirements.
    c. The controller shall be UL 508 listed.

3. Applicability

    a. The controller shall be a standard offering in the manufacturer's controller product line.
    b. The controller shall support 12-volt and 24volt starting systems.
    c. The controller's environmental specification shall be: -40°C to 70°C operating temperature range and 5-95% humidity, non-condensing.
    d. The controller shall mount on the generator or remotely within 40 feet with viewable access.

4. Controller Buttons, Display and Components

    a. The generator set controller shall include the following features and functions:

        1. Push button Master Control buttons. The buttons shall be tactile-feel membrane with an indicator light to initiate the following functions:

            a. Run Mode: When in the run mode the generator set shall start as directed by the operator.
            b. Off/Reset Mode: When in the Off/Reset mode the generator set shall stop, the reset shall reset all faults, allowing for the restarting of the generator set after a shutdown.
            c. Auto Mode: When in Auto the mode the generator set shall be ready to accept a signal from a remote device.

        2. Emergency Stop Switch. The remote stop switch shall be red in color with a "mushroom" type head. Depressing the stop button will immediately stop the generator set and lockout the generator set for any automatic remote starting.
        3. Push Button/Rotary Selector dial. This dial shall be used for selection of all Menus and sub-menus. Rotating the dial moves you through the menus, pushing the dial selects the menu and function/features in that menu. Pushing the button selects the feature/function and sub-menus.
        4. Digital Display. The digital display shall be alphanumeric, with 2 lines of data and approximately 24 charters. The display shall have back lighting for ease of operator use in high and low light conditions. The display shall display status of all faults and warnings. The display shall also display any engine faults. While the generator set is running, the display shall scroll all-important information across the screen for ease of operator use. The scroll can be stopped by pushing the rotary dial. The display shall fall asleep when the generator set is not running and will wake-up when the generator set starts or the rotary dial is depressed.
        5. Fault Light. The controller shall have an annunciator fault light that glows red for faults and yellow for warnings. These faults and warnings shall be displayed in the digital display. The fault light will also glow yellow when not in AUTO.
        6. Alarm Horn. The controller shall provide an alarm horn that sounds when any faults or warnings are present. The horn shall also sound when the controller is not in the AUTO mode.
        7. Alarm Silence/Lamp Test Button. When this button is depressed, it shall test all controller lamps. This button will also silence the alarm horn when the unit is not AUTO.
        8. USB Connection. The controller shall have a USB connection on the

face of the controller. This connection shall allow for updating of all software and firmware. This port shall also allow for all servicing of generator set parameters, fault diagnostics and viewing of all controller information via use a laptop computer.

9. Dedicated user inputs. The controller shall have dedicated inputs for remote emergency stop switch, remote 2-wire star for transfer switch and auxiliary shutdown.
10. The controller shall have auto resettable circuit protection integral on the circuit board.

5. System Controller Monitoring and Status Features and Functions

    a. The generator controller shall display and monitor the following engine and alternator functions and allow adjustments of certain parameters at the controller:

        1. Overview menu

            a. Active shutdowns and warnings shall be displayed if present and without the need of operator interface
            b. Engine runtime with total hours
            c. Average line to line voltage
            d. Coolant temperature
            e. Fuel level or pressure
            f. Oil pressure
            g. Battery voltage
            h. Software version
            i. Frequency
            j. Average current

        2. Engine metering menu.

            a. Engine speed
            b. Oil pressure
            c. Coolant temperature
            d. Battery voltage

        3. Generator metering menu.

            a. Total power in VA
            b. Total power in W
            c. Rated power % used
            d. Voltage L-L and L-N for all phases
            e. Current L1, L2, L3
            f. Frequency

        4. Generator set information.

            a. Generator set model number

b. Generator set serial number
c. Controller set number

5. Generator set run time.

a. Engine run time total hours
b. Engine loaded total hours
c. Number of engine starts
d. Total energy in Kw

6. Generator set system

a. System voltage
b. System frequency 50/60Hz
c. System phase, single/three phase
d. Power rating kW
e. Amperage rating
f. Power type standby/prime
g. Measurement units, metric/English units adjustable
h. Alarm silence, always or auto only

7. Generator set calibration, the following are adjustable at the controller.

a. Voltage L-L and L-N all phases
b. Current L1, L2, L3
c. Reset all calibrations

8. Voltage regulation, +/-0.5% regulation, the following is adjustable at the controller.

a. Voltage Adjustable +/- 10%

9. Digital and Analog Inputs and outputs

a. Displays settings and status

10. Event Log

a. Stores event history, up to 1000 events

6. Controller Engine control features and functions

a. Automatic restart - the controller has automatic restart feature that initiates the start routine and re-crank after a failed start attempt.
b. Cyclic cranking - the controller shall have programmable cyclic cranking
c. Engine starting aid - the controller shall have the capability of providing control for an optional engine starting aid.

d. The control system shall include time delays for engine start and cool down.
e. The control system shall interface with the engine ECM and display engine fault codes and warnings. The ECM shall also include sender failure monitoring to help distinguish between failed senders and actual failure conditions.
f. The controller shall monitor and display engine governor functions with include steady state and transient frequency monitoring

7. Controller Alternator control features and functions

    a. Integrated hybrid voltage regulator. The system shall have integral microprocessor based voltage regulator system that provides +/- 5% voltage regulation, no-load to full load with three phase sensing. The system is prototype tested and control variation of voltage to frequency. The voltage regulator shall be adjustable at the controller with maximum +/- 10% adjustable of nominal voltage.
    b. AC output voltage regulator adjustment. The system shall allow for adjustment of the integral voltage regulator with maximum of +/- 10% adjustment of the system voltage.
    c. Alternator thermal overload protection. The system shall have integral alternator overload and short circuit protection matched to each alternator for the particular voltage and phase configuration.
    d. Power metering. The controller digitally displays power metering of kW and kVA.

8. Other control features and functions

    a. Event logging. The controller keeps a record of up to 1000 events, for warning and shutdown faults. This fault information becomes a stored record of systems events and can be reset.
    b. Historical data logging. The controller total number of generator set successful start shall be recorded and displayed.
    c. Programmable access. The control system shall include a USB port that gives service technicians the ability to provide software and firmware upgrades. The system shall also be capable of allowing setting of all critical parameters using the service software and a laptop computer. All parameters and setting should be capable to being stored on a laptop for future upgrades of printing for analysis.

9. Generator Set Warning, Shutdown Alarm and Status

    a. The generator set shall have alarms and status indication lamps that show non-automatic status and warning and shutdown conditions. The controller shall indicate with a warning lamp and or alarm and on the digital display screen any shutdown, warning or engine fault condition that exists in the generator set system. The following alarms and shutdowns shall exist as a minimum:

1. Engine functions

    a. Critical high fuel level (alarm)
    b. ECM communication loss (shutdown)
    c. ECM diagnostics (alarm & shutdown)
    d. Engine overspeed (shutdown)
    e. Engine start aid active
    f. Engine under speed (shutdown)
    g. Fuel tank leak (alarm & shutdown)
    h. High DC battery voltage (alarm)
    i. High coolant temperature (alarm & shutdown)
    j. High fuel level (alarm)
    k. Low DC battery voltage (alarm)
    l. Low coolant level (shutdown)
    m. Low coolant temperature (alarm)
    n. Low cranking voltage (alarm)
    o. Low engine oil level (alarm & shutdown)
    p. Low fuel level (alarm & shutdown)
    q. Low fuel pressure (alarm)
    r. Low oil pressure (alarm & shutdown)
    s. No coolant temperature signal (shutdown)
    t. No oil pressure signal (shutdown)
    u. Overcrank (shutdown)
    v. Speed sensor fault (alarm)

2. Generator functions

    a. AC sensing loss over & under current (alarm & shutdown)
    b. Alternator protection (shutdown)
    c. Ground fault input (alarm)
    d. kW overload (shutdown)
    e. Locked rotor (shutdown)
    f. Over-frequency (shutdown)
    g. Over AC voltage (shutdown)
    h. Under-frequency (shutdown)
    i. Under AC voltage (shutdown)
    j. Emergency stop (shutdown)

3. Other General functions

    a. Battery charger fault (alarm)
    b. Common fault (shutdown)
    c. Common warning (alarm)
    d. Master switch not in auto (alarm)
    e. Generator running
    f. Input/Output fault (alarm)

4. The generator set controller shall also be capable of meeting all necessary NFPA 110 level 1 requirements that include several of the above along with; EPS supplying load, Master switch “not in auto”, and contacts for local and remote common alarm.

10. Communications

a. If the generator set engine is equipped with an ECM (engine control module), the controller shall communicate with the ECM for control, monitoring, diagnosis, and meet SAE J1939 standards
b. Kohler proprietary RBUS communication shall be available.
c. A RBUS shall be able to monitor and alter parameters, and start or stop a generator.
d. The controller shall have the capability to communicate to a personal computer (IBM or compatible) and appropriate application software
e. A variety of connections shall be available based on requirements:

1. A single control connection to a PC via USB
2. Internet connection via Ethernet

f. Generator and transfer switch controls shall be equipped with communications modules capable of connecting to the same communication network.

H. Generator Overcurrent and Fault Protection

1. The generator shall be provided with a factory installed, 100% rated line circuit breaker rated at 400.00 amperes that is UL489 listed. Line circuit breakers shall be sized for the rated ampacity of the loads served by the breaker per the NEC.
2. The circuit breaker(s) shall incorporate an electronic trip device with the following characteristics:

3. Adjustable long time delay
4. Adjustable short time delay
5. Instantaneous
6. Load side lugs shall be provided from the factory. The line circuit breaker shall include auxiliary contacts, shunt trip, undervoltage trip, alarm switch, and overcurrent switch functionality. Load side breaker connections made at the factory shall be separated from field connections.
7. The shunt trip device shall be connected to trip the generator breaker when the generator-set is shut down by other protective devices.
8. Barriers to provide segregation of wiring from an emergency source to emergency loads from all other wiring and equipment, if required by the NEC, shall be provided.

I. Alternator

1. The alternator shall be salient-pole, brushless, 2/3-pitch, with 4 bus bar provision for external connections, self-ventilated, with drip-proof construction and amortisseur

rotor windings, and skewed for smooth voltage waveform. The ratings shall meet the NEMA standard (MG1-32.40) temperature rise limits. The insulation shall be class H per UL1446 and the varnish shall be a vacuum pressure impregnated, fungus resistant epoxy. Temperature rise of the rotor and stator shall be limited to 130°C Standby. The PMG based excitation system shall be of brushless construction controlled by a digital, three phase sensing, solid- state, voltage regulator. The AVR shall be capable of proper operation under severe nonlinear loads and provide individual adjustments for voltage range, stability and volts-per-hertz operations. The AVR shall be protected from the environment by conformal coating. The waveform harmonic distortion shall not exceed 5% total RMS measured line-to-line at full rated load. The TIF factor shall not exceed 50.

2. The alternator shall have a maintenance-free bearing, designed for 40000 hour B10 life. The alternator shall be directly connected to the flywheel housing with a semi-flexible coupling between the rotor and the flywheel.
3. The generator shall be inherently capable of sustaining at least 300% of rated current for at least 10 seconds under a 3-phase symmetrical short circuit without the addition of separate current-support devices.
4. Motor starting performance and voltage dip determinations shall be based on the complete generator set. The generator set shall be capable of supplying 361.00 LRKVA for starting motor loads with a maximum instantaneous voltage dip of 35%, as measured by a digital RMS transient recorder in accordance with IEEE Standard 115. Motor starting performance and voltage dip determination that does not account for all components affecting total voltage dip, i.e., engine, alternator, voltage regulator, and governor will not be acceptable. As such, the generator set shall be prototype tested to optimize and determine performance as a generator set system.

J. Vibration Isolation

1. Vibration isolators shall be provided between the engine-alternator and heavy-duty steel base.

1.7 ACCESSORIES

A. The generator shall be furnished with an externally mounted, recessed, emergency stop switch (break glass, pushbutton style) protected from accidental operation.

B. The generator shall be supplied with a thermostatically controlled strip heater to prevent the accumulation of moisture and dampness and to maintain the stator windings above the dew point. The heater shall be wired to be “on” at all times that the generator set is not operating.

C. The generator set shall be furnished with rodent guards to prevent rodent intrusion and protect internal components.

D. The air cleaner restriction indicator shall indicate the need for maintenance of the air cleaners.

E. The generator set shall be supplied with a 10-ampere automatic float/equalize battery charger capable of charging both lead-acid and ni-cad type batteries, with the following features:

    a. Automatic 3-stage float to equalization charge
    b. Voltage regulation of 1% from no to full load over 10% AC input line voltage variations
    c. Battery charging current Ammeter and battery voltage voltmeter with 5% full-scale accuracy
    d. LED lamp for power ON indication
    e. Current limited during engine cranking, short circuit, and reverse polarity conditions
    f. Temperature compensated for ambient temperatures for -40°C to 60°C
    g. Alarm circuit board featuring alarm contacts for low battery voltage, high battery voltage, and battery charger malfunction.
    h. UL 1012 Listed
    i. CSA Certified

F. Remote annunciator panel – The remote annunciator shall meet NFPA 110, Level 1 requirements and enable remote viewing of the generator status. The panel shall be connected to the generator controller via either network communication wires or via hard wired connections. Options shall be available to provide ATS source availability, contactor position, and loaded or unloaded test for up to four transfer switches. The panel shall have the capability to be either flush- mounted or surface-mounted. The annunciator shall meet UL508 requirements.

G. Block Heater - The block heater shall be thermostatically controlled, 1,800 watt, 110-120 VAC - single phase, with isolating valves, to maintain manufacturers recommended engine coolant temperature to meet the start-up requirements of NFPA 99 and NFPA 110, Level 1.

H. Battery rack and battery cables capable of holding the manufacturer's recommended batteries shall be supplied.

I. The generator set shall be provided with a run relay which shall provide a three-pole, double-throw relay with 10-amp/ 250 VAC contacts to indicate that the generator is running. The run relay dry contacts can be used for energizing or de-energizing customer devices while the generator is running (e.g. louvers, indicator lamps, etc.)

1.8 SOURCE QUALITY CONTROL

A. Non-Conforming Work

    1. To ensure that the equipment has been designed and built to the highest reliability and quality standards, the manufacturer and/or local representative shall be responsible for three separate tests: design prototype tests, final production tests, and site tests.

a. Design Prototype Tests. Components of the emergency system, such as the engine/generator set, transfer switch, and accessories, shall not be subjected to prototype tests because the tests are potentially damaging. Rather, similar design prototypes and preproduction models shall be subject to the following tests:

    i. Maximum power (kW)
    ii. Maximum motor starting (kVA) at 35% instantaneous voltage dip.
    iii. Alternator temperature rise by embedded thermocouple and/or by resistance method per NEMA MG1-32.6.
    iv. Governor speed regulation under steady-state and transient conditions.
    v. Voltage regulation and generator transient response.
    vi. Harmonic analysis, voltage waveform deviation, and telephone influence factor.
    vii. Three-phase short circuit tests.
    viii. Alternator cooling air flow.
    ix. Torsional analysis to verify that the generator set is free of harmful torsional stresses.
    x. Endurance testing.

b. Final Production Tests. Each generator set shall be tested under varying loads with guards and exhaust system in place. Tests shall include:

    i. Single-step load pickup
    ii. Safety shutdown device testing
    iii. Rated Power @ 0.8 PF
    iv. Maximum power
    v. Upon request, a witness test, or a certified test record sent prior to shipment.

c. Site Tests. The manufacturer's distribution representative shall perform an installation check, startup, and building load test. The Architect, regular operators, and the maintenance staff shall be notified of the time and date of the site test. The tests shall include:

    i. Fuel, lubricating oil, and antifreeze shall be checked for conformity to the manufacturer's recommendations, under the environmental conditions present and expected.
    ii. Accessories that normally function while the set is standing by shall be checked prior to cranking the engine. These shall include: block heaters, battery chargers, alternator strip heaters, remote annunciators, etc.
    iii. Generator set startup under load utilizing load bank for 4 hours to check for exhaust leaks, path of exhaust gases outside the building, cooling air flow, movement during starting and stopping, vibration during operation, normal and emergency line-to-line voltage and frequency, and phase rotation. Engine

coolant temperature, oil pressure, and battery charge level along with generator set voltage, amperes, and frequency shall be monitored and recorded every 15 minutes throughout the test.

iv. Automatic start by means of a simulated power outage to test remote-automatic starting, transfer of the load, and automatic shutdown. Prior to this test, all transfer switch timers shall be adjusted for proper system coordination. Engine coolant temperature, oil pressure, and battery charge level along with generator set voltage, amperes, and frequency shall be monitored throughout the test.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Provide the services of a qualified factory representative to check the installation of the generator and automatic transfer switch to ensure a proper installation, perform check-out and start-up services, conduct the field test specified herein, and instruct the Owner's personnel in the operation and maintenance of the equipment.

B. Installation shall include furnishing all required coolants and lubricants.

3.2 EQUIPMENT STARTUP SERVICES

A. After installation and manufacturer's representative check of the installed equipment, operate each unit to demonstrate its ability to operate continuously without vibration, jamming, leakage or overheating and to perform specified functions.

B. Comply with the manufacturer's operating and maintenance instructions during start-up and operation.

C. Promptly correct improper installation or operation of the equipment.

D. Cooperate with the supplier of the equipment, at the time of start-up, in making any final adjustments necessary to place the equipment in satisfactory working order. Start-up shall not commence without the presence of the manufacturer's representative.

E. Perform the site testing as specified in Paragraph 1.8.

END OF SECTION 26 32 13

SECTION 26 32 23 - AUTOMATIC TRANSFER SWITCH

PART 1 GENERAL

1.1 SUMMARY

A. This section includes the following items from a single supplier:

1. Automatic transfer switch
2. Related Accessories as specified

B. Related Requirements

1. It is the intent of this specification to secure an automatic transfer switch that has been prototype tested, factory built, production-tested, and site-tested together with all accessories necessary for a complete installation as shown on the plans and drawings and specified herein.
2. Any exceptions to the published specifications shall be subject to the approval of the Architect and submitted minimum 10 days prior to the closing of the bid with a line by line summary description of all the items of compliance, any items that have been are omitted or have been taken exception to, and a complete description of all deviations.
3. It is the intent of this specification to secure an automatic transfer switch that has been tested during design verification, in production, and at the final job site. The automatic transfer switch will be a commercial design and will be complete with all of the necessary accessories for complete installation as shown on the plans, drawings, and specifications herein. The equipment supplied shall meet the requirements of the National Electrical Code and applicable local codes and regulations.
4. All equipment shall be new and of current production by an international, power system manufacturer of generators, transfer switches, and paralleling switchgear. The manufacturer shall be a supplier of a complete and coordinated system. There will be single-source responsibility for warranty, parts, and service through a factory-authorized representative with factory-trained technicians.

1.2 SUBMITTALS

A. Action Submittals

1. Product Data

a. The submittal shall include specification sheets showing all standard and optional accessories to be supplied; schematic wiring diagrams, dimension drawings, and interconnection diagrams identifying by terminal number each required interconnection between the generator set, the transfer switch, and the remote annunciator panel if it is included elsewhere in these specifications.

2. Shop Drawings
3. Samples

B. Informational Submittal

1. Certificates
2. Test and Evaluation Reports
3. Manufacturer's Instruction
4. Source Quality Control Submittals
5. Field or Site Quality Control
6. Manufacturer's Report
7. Special Procedure Submittal
8. Qualification Statement

C. Closeout Submittals

1. Maintenance Contracts
2. Operation And Maintenance Data
3. Warranty Documentation
4. Record Documentation
5. Software

D. Maintenance Material Submittals

1. Literature

1.3 QUALITY ASSURANCE

A. Regulatory Agency

1. The automatic transfer switch shall conform to the requirements of the following codes and standards:

    a. UL 1008 - Standard for Transfer Switch Equipment
    b. IEC 947-6-1 Low-voltage Switchgear and Control gear; Multifunction equipment; Automatic Transfer Switching EquipmentEN55011, Limits and Methods of Measurement of Radio Interference Characteristics of Industrial, Scientific and Medical Equipment.
    c. NFPA 70 - National Electrical Code
    d. NFPA 99 - Essential Electrical Systems for Health Care Facilities
    e. NFPA 110 - Emergency and Standby Power Systems
    f. IEEE Standard 446 - IEEE Recommended Practice for Emergency and Standby Power Systems for Commercial and Industrial Applications
    g. NEMA Standard ICS 10-2005, Electromechanical AC Transfer Switch Equipment.
    h. EN61000-4-4 Fast Transient Immunity Severity Level 4

i. EN61000-4-5 Surge Immunity Class 4 (voltage sensing and programmable inputs only)
j. IEEE 472 (ANSI C37.90A) Ring Wave Test
k. IEC Specifications for EMI/EMC Immunity (CISPR 11, IEC 1000-4-2, IEC 1000-4-3, IEC 1000-4-4, IEC 1000-4-5, IEC 1000-4-6, IEC 1000-4-8, IEC 1000-4-11)
l. CSA C22.2 No. 178 certification

2. Qualifications

a. The automatic transfer switch shall be produced by a manufacturer who is ISO 9001 certified for the design, development, production and service of its complete product line.
b. A manufacturer who has produced this type of equipment for a period of at least 10 years and who maintains a service organization available twenty-four hours a day throughout the year shall produce the automatic transfer switch.

3. Manufacturers

a. The automatic transfer switch shall be furnished by a single manufacturer who shall be responsible for the design, coordination, and testing of the complete system. The entire system shall be installed as shown on the plans, drawings, and specifications herein.
b. The manufacturer shall maintain a national service organization of employing personnel located throughout the contiguous United States. The Service center's personnel must be factory trained and must be on call 24 hours a day, 365 days a year.
c. The manufacturer shall maintain records of each switch, by serial number, for a minimum of 20 years.

1.4 DELIVERY, STORAGE, AND HANDLING

A. Delivery and Acceptance Requirements
B. Storage and Handling Requirements

1.5 FIELD OR SITE CONDITIONS

A. Ambient Conditions

1. Automatic transfer switch shall operate in the following conditions without any damage to the unit or its loads.

a. Ambient Temperature: -4 to 158 Degrees F
b. Relative Humidity: 5% to 95% noncondensing

B. Existing Conditions

1.6 WARRANTY

A. Manufacturer’s Warranty

1. The ATS shall include a standard warranty covering one (1) year to guarantee against defective material and workmanship in accordance with the manufacturer's published warranty from the date of initial startup.
2. The ATS manufacturer and its distributor shall maintain a 24-hour parts and service organization. This organization shall regularly engage in maintenance contract programs to perform preventive maintenance and service on equipment similar to that specified. A service agreement shall be available and shall include system operation under simulated operating conditions; adjustment to the generator set, transfer switch, and switchgear controls as required, and certification in the owner's maintenance log of repairs made and functional tests performed on all systems.

PART 2 PRODUCTS

2.1 EQUIPMENT

A Equipment

1. Furnish and install an automatic transfer switches system(s) with 3-Pole / 4-Wire, Solid Neutral, 400 Amps, 208V/60Hz. Each automatic transfer shall consist of an inherently double throw power transfer switch mechanism and a microprocessor controller to provide automatic operation. All transfer switches and controllers shall be the products of the same manufacturer.

B Manufacturer

1. Automatic transfer switches shall be Kohler Service Entrance Rated - Programmed Transition (KEP)/KEP-DCTC-0400#NK. Any alternate shall be submitted to the Architect for approval by the consulting engineer at least 10 days prior to bid date. Alternate bids shall include a line-by-line clarification of the specification marked with "D" for deviation; "E" for exception, and "C" for comply.

C Enclosure

1. The ATS shall be furnished in a NEMA 3R enclosure.
2. All standard door mounted switches and indicating LEDs shall be integrated into a flush-mounted, interface membrane or equivalent in the enclosure door for easy viewing & replacement. The panel shall be capable of having a manual locking feature to allow the user to lockout all membrane mounted control switches to prevent unauthorized tampering. This cover shall be mounted with hinges and have a latch that may be padlocked. The membrane panel shall be suitable for mounting by others when furnished on open type units.

2.2 OPERATION

A. Controls

1. A four line, 20 character LCD display and dynamic 4 button keypad shall be an integral part of the controller for viewing all available data and setting desired operational parameters. Operational parameters shall also be available for viewing and control through the communications interface port or USB. The following parameters shall only be adjustable via a password protected programming on the controller:

   a. Nominal line voltage and frequency
   b. Single or three phase sensing
   c. Operating parameter protection
   d. Transfer operating mode configuration (Standard transition, Programmed transition, or Closed transition)

B. Voltage and Frequency

1. Voltage (all phases) and frequency on both the normal and emergency sources shall be continuously monitored, with the following pickup, dropout, and trip setting capabilities (values shown as % of nominal unless otherwise specified):

	Parameter	Dropout/Trip	Pickup/Reset
a.	Under voltage	75 to 98%	85 to 100%
b.	Over voltage	106 to 135%	95 to 100% of trip
c.	Under frequency	95 to 99%	80 to 95%
d.	Over frequency	01 to 115%	105 to 120%
e.	Voltage unbalance	5 to 20%	3 to 18%

2. Repetitive accuracy of all settings shall be within ± 0.5% over an operating temperature range of -20°C to 70°C.
3. An adjustable dropout time for transient voltage and frequency excursions shall be provided. The time delays shall be 0.1 to 9.9 seconds for voltage and .1 to 15 seconds for frequency.
4. Voltage and frequency settings shall be field adjustable in 1% increments either locally with the display and keypad, remotely via the communications interface port or USB.
5. The controller shall be capable of sensing the phase rotation of both the normal and emergency sources. The source shall be considered unacceptable if the phase rotation is not the preferred rotation selected (ABC or BAC). Unacceptable phase rotation shall be indicated on the LCD; the service required LED and the annunciation through the communication protocol and dry contacts. In addition, the phase rotation sensing shall be capable of being disabled, if required.
6. The controller shall be capable of detecting a single phasing condition of a source, even though a voltage may be regenerated by the load. This condition is a loss of phase and shall be considered a failed source.

7. Source status screens shall be provided for both normal & emergency to provide digital readout of voltage on all 3 phases (phase to phase and phase to neutral), frequency, and phase rotation.

C. Time Delays

D. Additional Features

E. Operation Sequence

2.3 ACCESSORIES

A. Pad lockable User Interface Cover. The user interface cover shall protect the controller user interface from the environment.

B. Standard I/O Module. The standard I/O Module shall have two programmable inputs and six programmable outputs.

i. Inputs Available 2

1. Contact Closure
2. Current 5mA Max.
3. Connection Type Terminal Strip
4. Wire Size #14-24 AWG
5. Max Distance 700 feet

ii. Outputs Available 6

1. Contact Type Form C (SPDT)
2. Contact Rating 2A @ 30VDC, 500mA @ 125VAC
3. Connection Type Terminal Strip
4. Wire Size #14-24

2.4 SOURCE QUALITY CONTROL

A Test and Inspection

1. Upon request, the manufacturer shall provide a notarized letter certifying compliance with all of the requirements of this specification including compliance with the above codes and standards. The certification shall identify, by serial number(s), the equipment involved. No exceptions to the specifications, other than those stipulated at the time of the submittal, shall be included in the certification.
2. The ATS manufacturer shall be certified to ISO 9001 International Quality Standard and the manufacturer shall have third party certification verifying quality assurance in design/development, production, installation and servicing in accordance with ISO 9001.

END OF SECTION 26 32 23

SECTION 264313 - SURGE PROTECTION FOR LOW-VOLTAGE ELECTRICAL POWER CIRCUITS

PART 1 GENERAL

1.01 RELATED SECTIONS

A. The Contractor shall furnish and install the Transient Voltage Surge Suppression (TVSS) equipment having the electrical characteristics, ratings and modifications as specified herein and as shown on the contract drawings. Refer to related sections for surge requirements in:

1.02 RELATED SECTIONS

A. Section 262713 -- Panelboards

1.03 REFERENCES.

The TVSS units and all components shall be designed, manufactured and tested in accordance with the latest applicable UL Listed standards (UL 1449, 2nd Edition), UL 1283 and CSA certified per CSA 22.2

1.04 SUBMITTALS

A. Five (5) copies of the following information shall be submitted:

1. Provide verification that the TVSS device complies with the required UL 1449 2nd Edition and CSA approvals.
2. Provide actual let through voltage test data in the form of oscillograph results for the ANSI/IEEE C62.41 Category C3 & C1 (combination wave) and B3 (ringwave) tested in accordance with ANSI/IEEE C62.45.
3. Provide spectrum analysis of each unit based on MIL-STD-220A test procedures between 50 kHz and 200 kHz verifying the device's noise attenuation exceeds 41 dB at 100 kHz.
4. Provide test report from a recognized independent testing laboratory verifying the suppressor components can survive published surge current rating on both a per mode and per phase basis using the IEEE C62.41, 8 x 20 microsecond current wave. Note that test data on individual module is not accepted.

1.05 INFORMATIONAL SUBMITTALS

A. When requested by the Architect’s consulting engineer, the following product information shall be submitted:

a) UL 1449 Listing classifications, and clamping voltage rating for each mode of protection.
b) ANSI/IEEE C62.41 AND C62.45 Category C3 clamping voltage.
c) Sequential surge survivability per ANSI/IEEE C62.45.
d) Dimensions and weight
e) Recommended connection wiring diagram

1.06 QUALIFICATIONS

A. Manufacturer must have a minimum of five years (in U.S.) experience in producing TVSS systems.

B. TVSS devices and accessories shall be obtained through one manufacturer.

C. Other manufacturers not listed in this document may be considered by the Architect at least (10) days prior to bid. The specifications of the product listed in 1.05 "INFORMATIONAL SUBMITTALS" shall be highlighted.

1.07 DELIVERY, STORAGE AND HANDLING

A. Equipment shall be handled and stored in accordance with manufacturer's instructions. One (1) copy of these Shall be included with the equipment at time of shipment.

1.08 OPERATION AND MAINTENANCE MANUALS

A. Five (5) copies of the equipment operation and maintenance manuals shall be provided.

B. Operation and maintenance manuals shall include the following information:

1. Instruction books and/or leaflets
2. Recommended renewal parts list

1.10 EXTRA MATERIALS:

A. Furnish replaceable protection modules for service entrance unit with labeled protective covering for storage.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. Cutler-Hammer, Square D, Advanced Protection Technologies (APT), Surge Suppression Inc.

2.02 VOLTAGE SURGE SUPPRESSION – GENERAL

A. Electrical Requirements

1. Unit Operating Voltage -- Refer to drawings for operating voltage and unit configuration.
2. Maximum Continuous Operating Voltage (MCOV) -- The MCOV shall be greater than 115% of the nominal system operating voltage.
3. Protection Modes -- For a wye configured system, the device must have directly connected suppression elements between line-neutral (L-N), line-ground (L-G), and neutral-ground (N-G). For a delta configured system, the device must have suppression elements between line to line (L-L) and line to ground (L-G).
4. UL 1449 2nd Edition SVR -- The maximum UL 1449 2nd Edition SVR for the device must not exceed the following:

Modes	208Y/120	480Y/277	600Y/347
L-N; L-G; N-G	500 V	900 V	1000 V
L-L	900 V	1500 V	1800 V

5. ANSI/IEEE Cat C3 Let Through Voltage -- The let through voltage based on IEEE C62.41 and C62.45 recommended procedures for Category C3 surges (20 kV, 10 kA) shall be less than:

Modes	208Y/120	480Y/277	600Y/347
L-N	910 V	1070 V	1300 V

6. ANSI/IEEE Cat. B3 Let Through Voltage -- Let through voltage based on IEEE C62.41 and C62.45 recommended procedures for the ANSI/IEEE Cat. B3 ringwave (6 kV, 5000 amps) shall be less than:

Modes	208Y/120	480Y/277	600Y/347
L-N	375 V	510 V	300 V

B. TVSS Design

1. Balanced Suppression Platform -- The surge current shall be equally distributed to all MOV components to ensure equal stressing and maximum performance. The surge suppression platform must provide equal impedance paths to each matched MOV. Designs incorporating TVSS modules shall not be acceptable.
2. Electrical Noise Filter -- Each unit shall include a high-performance EMI/RFI noise rejection filter. Noise attenuation for electric line noise shall be 41 dB at 100 kHz using the MIL-STD-220A insertion loss test method. The unit shall be complimentary listed to UL 1283. Products not able to demonstrate noise attenuation of 41 dB @ 100 kHz shall be rejected.
3. Internal Connections -- No plug-in component modules shall be used as surge current conductors. All internal components shall be hardwired with connections utilizing low impedance conductors and compression fittings.
4. Safety and Diagnostic Monitoring -- Each unit shall be equipped with 200 kAIC internal fuses. Each unit shall provide the following three levels of monitoring:

   a) Continuous monitoring of fusing system
   b) Thermal detection circuit shall monitor for overheating in all modes due to thermal runaway.
   c) A green/red solid state indicator light shall be provided on each phase. The absence of a green light and the presence of a red light, shall indicate which phase(s) have been damaged. Fault detection will activate a flashing trouble light. Units which can not detect open-circuit damage, thermal conditions and over current will not be accepted.

5. Warranty -- The manufacturer shall provide a full ten (10) year warranty from the date of shipment against any TVSS part failure when installed in compliance with manufacturer's written instructions and any applicable national or local electric code.

2.03 SYSTEM APPLICATION

A. The TVSS applications covered under this section include distribution and branch panel locations, bus plugs, motor control centers (MCC), switchgear, and switchboard assemblies.

B. Surge Current Capacity -- The minimum total surge current 8 x 20 microsecond waveform that the device is capable of withstanding shall be as shown in the following table:

Application	Min. Surge Current (per mode)
Service Entrance (Switchboards Switchgear, MCC Main Entrance)	120 kA
Distribution Panelboards	80 kA
High Exposure Roof Top Locations	80 kA

Branch Locations (Panelboards, MCC's, Busway)	40 kA

2.04 Accessories

A. Push to test feature to verify operational integrity.

B. Form C dry contacts one NO, one NC for remote status monitoring.

2.05 Enclosures

A. All enclosed equipment shall have NEMA 1 general purpose enclosures, unless otherwise noted. Provide enclosures suitable for locations as indicated on the drawings and as described below:

1. NEMA 1 surface or flush-mounted general purpose enclosures primarily intended for indoor use
2. NEMA 12 dust-tight enclosures intended for indoor use primarily to provide protection against circulating dust, falling dirt and dripping non-corrosive liquids (Panelboards Only)
3. NEMA 3R rainproof enclosures intended for outdoor use primarily to provide protection against rain, sleet and damage from external ice formation
4. NEMA 4 watertight stainless steel intended for indoor or outdoor use primarily to provide protection against windblown dust and rain, splashing rain, hose-directed water, and damage from external ice formation. (Side Mounted Units Only)

PART 3 EXECUTION

3.01 Examination

3.02 Factory testing

A. Standard factory tests shall be performed on the equipment under this section. All tests shall be in accordance with the latest version of NEMA and UL standards.

3.03 Installation

A. The Contractors shall install all equipment per the manufacturer's recommendations and the contract drawings.

B. Surge protection devices shall be installed and connected before the service entrance is connected or energized.

C. Existing utilities shall not be interrupted without written permission from project's architect.

END OF SECTION 26 43 13

SECTION 26 50 00 - BASIC ELECTRICAL MATERIALS AND METHODS

PART 1 GENERAL

1.01 RELATED DOCUMENTS:

A. Section 26 00 00 - Electrical General Requirements, apply to the work specified in this Section, with additions and modifications specified herein.

1.02 SECTION INCLUDES:

A. Grounding and Bonding

B. Supports

C. Identification

D. Connection of Equipment

E. Excavation, Trenching, and Backfilling

F. Cleaning and Painting

G. Cutting and Patching

1.03 PROJECT CONDITIONS:

A. Existing project conditions indicated on Drawings are based on casual field observation and existing record documents.

B. Verify field measurements and circuiting arrangements as shown on the Drawings.

C. Report discrepancies before disturbing existing installation.

PART 2 PRODUCTS

2.01 GROUNDING MATERIALS:

A. Ground Rod: Copper clad steel, 3/4 inch in diameter x 10 feet in length.

B. Mechanical Connectors: Cast bronze construction with matching bolt, nuts, and washers.

C. Exothermic Welds: Materials shall be from the same source. Materials shall be Cadweld or approved equal.

D. Conductors: Insulated type complying with applicable Sections of these Specifications or bare soft drawn copper as indicated.

2.02 SUPPORTS:

A. Fabrication Steel: Galvanized or painted steel of standard shapes and sizes.

B. Manufactured Channel: Hot dipped galvanized with all hardware required for mounting as manufactured by Unistrut, Kindorf, or Powerstrut.

C. Miscellaneous Hardware: Standard sizes treated for corrosion resistance.

2.03 IDENTIFICATION:

A. Nameplates: Engraved three-layer laminated plastic, black letters on white background.

B. Wire and Cable Markers: Cloth type, split sleeve type, or tubing type.

C. Panel Directories: Typewritten under plastic cover.

PART 3 EXECUTION

3.01 INSTALLATION:

A. Install Products in accordance with manufacturer's instructions.

B. Except where specifically indicated otherwise, all exposed non-current-carrying metallic parts of electrical equipment, metallic raceway systems, and service neutral of the electrical system shall be grounded.

1. Equipment grounding shall be accomplished by installing a separate grounding conductor in each raceway of the system. The Conductor shall be provided with a distinctive green insulation or marker and shall be sized in accordance with Table 250-122 of the National Electrical Code for circuit ampacity ratings.

2. The electrical system grounding electrode shall be made at the main service equipment and shall be extended to the point of entrance of the metallic cold water service. Ground to be sized in accordance with Table 250-66 of the National Electrical Code. Connection to the water pipe shall be made by a suitable ground clamp. If flanged pipes are encountered, connection shall be made on the street side of the flange connection. If the metallic water service is coated with an insulating material or there is no metallic water service to the building, ground connection shall be made to ground rods at the exterior of the building driven full length into the earth. The maximum resistance of the driven ground shall not exceed 25 ohms under normally dry conditions. If this resistance cannot be obtained with a

single rod, additional rods shall be installed not less than 6 feet on centers, or if sectional type rods are used, additional sections may be coupled together and driven with the first rod. The resultant resistance shall not exceed 25 ohms measured not less than 48 hours after rainfall.

3. Ground all building steel including reinforcing bars in concrete and all piping entering the building from outside. Where applicable, see Section 16900 for additional requirements.

C. Make electrical connections to equipment in accordance with equipment manufacturer's instructions.

1. Verify that wiring and outlet rough-in work is complete and that equipment is ready for electrical connection, wiring, and energization.
2. Make wiring connections in control panel or in wiring compartment of pre-wired equipment. Provide interconnecting wiring as required by equipment manufacturer.
3. Install and connect disconnect switches, controllers, control stations, and control devices as required by equipment manufacturer.
4. Make conduit connections to equipment using flexible conduit. Use liquid-tight flexible conduit in damp or wet locations.
5. Install pre-fabricated cord set where connections with attachment plug is indicated or specified, or use attachment plug with suitable strain-relief clamps.
6. Provide suitable strain-relief clamps for cord connections to outlet boxes and equipment connection boxes.

D. Install support systems sized and fastened to accommodate weight of equipment and conduit, including wiring, which they carry.

1. Fasten hanger rods, conduit clamps, and outlet and junction boxes to building structure using precast insert system, expansion anchors, preset inserts, beam clamps, or spring steel clips.
2. Use toggle bolts or hollow wall fasteners in hollow masonry, plaster, or gypsum board partitions and walls; expansion anchors or preset inserts in solid masonry walls; self-drilling anchors or expansion and anchors on concrete surfaces; sheet metal screws in sheet metal studs; and wood screws in wood construction.
3. Do not fasten supports to piping, ceiling support systems, ductwork, mechanical equipment, conduit, etc.
4. Do not use powder-actuated anchors.
5. Do not drill structural steel members.
6. Fabricate supports from structural steel or steel channel.
7. Install surface mounted cabinets and panelboards with minimum of four anchors.
8. Provide steel channel supports to stand cabinets one inch off wall in wet locations.
9. Bridge studs top and bottom with channels to support flush mounted cabinets and panelboards in stud walls.
10. Install free-standing electrical equipment on 4 inch high concrete pads.

E. Identify electrical distribution and control equipment, and loads served, to meet regulatory requirements and as specified herein.

1. Degrease and clean surface to receive nameplates.
2. Secure nameplates to equipment fronts using screws or rivets with edges parallel to equipment lines.

3. Use nameplates with 1/4 inch lettering to identify Switchboard, Panelboards, Safety Switches, Motor Starters and Branch Devices of Switchboards.
4. Panel directories shall accurately indicate load served and location of load.
5. Engrave plates as indicated by Schedules on the Drawings.

F. Install wire markers on each conductor in panelboard gutters, boxes, and at load connections.

1. Use distribution panel and branch circuit or feeder number to identify power and lighting circuits.
2. Use control wire number as indicated on schematic and interconnection diagrams or equipment manufacturer's shop drawings to identify control wiring.

G. Excavating, trenching, and backfilling shall be accomplished as indicated on the Drawings or where required to install systems and/or equipment.

1. Trenches for all underground conduits or equipment shall be excavated to the required depths. Where soft, wet, or unstable soil is encountered, the bottom of the trench shall be filled with 6 inches of compacted gravel and sand fill. All trench bottoms shall be tamped hard. Trenches shall be shored as required to meet OSHA requirements and general safe working conditions.
2. After conduits or equipment have been inspected and approved by the Architect and prior to backfilling, all forms shall be removed and the excavation shall be cleaned of all trash and debris. Material for backfilling shall consist of the excavation, or borrow of sand, gravel, or other materials approved by the Architect and shall be free of trash, lumber, or other debris. Backfill shall be placed in horizontal layers, not exceeding 9 inches in depth and properly moistened to approximate optimum requirements. Each layer shall be compacted by hand or machine tamped to a density equivalent to surrounding soil.

H. Cleaning and Painting: Clear away all debris, surplus materials, etc., resulting from work or operations. The jobsite and all equipment furnished and installed shall be left in clean, first class condition.

1. All fixtures and equipment shall be thoroughly cleaned of plaster, stickers, rust, stains and other foreign matter or discoloration, leaving every part in an acceptable condition ready for use.
2. The Contractor shall refinish and restore to the original condition and appearance, all electrical equipment which has sustained damage to manufacturer's prime and finish coats or enamel or paint. Materials and workmanship shall be equal to the requirements described for other painting.

I. Cutting and Patching: This Contractor shall provide all cutting, digging, etc., incident to his work and shall make all required repairs thereafter to the satisfaction to the Architect, but in no case shall the Contractor cut into any major structural element, without written approval of the Architect.

1. Pavements, sidewalks, roads, curbs, walls, ceilings, floors, and roofs shall be cut, patched, repaired and/or replaced as required to permit the installation of the electrical work.
2. The Contractor shall bear the expense of all cutting, patching, painting, repairing, or replacing of the work of other trades required because of his fault, error, or tardiness or because of any damage done by him.

END OF SECTION 26 50 00

SECTION 26 51 00 – LIGHTING FIXTURES

PART 1 GENERAL

1.01 RELATED DOCUMENTS:

A. Section 26 00 00 - Electrical General Requirements, apply to the work specified in this Section, with additions and modifications specified herein.

1.02 SECTION INCLUDES:

A. Luminaires

B. Shielding Media

C. Lamps

D. Ballasts

E. Exit Signs

F. Emergency Lighting Units

G. Poles and Brackets

H. Photocells

I. Lighting Contactors

PART 2 PRODUCTS

2.01 LUMINAIRES:

A. Luminaire Schedule: Product requirements for each luminaire are specified in luminaire schedule on Drawings. Equals shall be submitted a minimum of 10 days prior to bid for approval.

B. Accessories: Provide required accessories for mounting and operation of each luminaire as indicated.

1. Recessed Luminaires: Provide trim type suitable for ceiling system in which luminaire is installed.
2. Thermal Protection: Provide thermal protection devices to meet NFPA 70 requirements.
3. Surface Luminaires: Provide spacers and brackets required for mounting.
4. Pendant Luminaires: Provide swivel hangers, pendant rods, tubes, and chains as indicated to install luminaire at appropriate height.

C. Lay-in Troffers:

1. Door Frame: Aluminum, .050", extruded with mitered corners. Latches to be fully enclosed, spring loaded, cam type. Door frame shall be fully gasketed.
2. Housing: Cold rolled steel, 22 gauge minimum with smooth effect mitered cormers.
3. Finish: Painted after fabrication with 90% reflective glossy white thermosetting powder coat.

2.02 SHIELDING MEDIA:

A. Prismatic Lens for Fluorescent Troffers:

1. Material: Clear virgin acrylic.
2. Type: Prismatic cones, pattern 12 straight flat prisms.
3. Thickness: .125" minimum.

B. Prismatic Lens for Fluorescent Wraparound Fixtures:

1. Material: Clear virgin acrylic.
2. Type: Sides-Linear prisms, bottom-pyraidal prisms.
3. Hinging: Either side.

2.03 LAMPS:

A. Description:

1. Incandescent Lamps: 130 volts, inside frosted, shape as scheduled. Halogen lamps frosted or clear as scheduled.
2. Fluorescent Lamps: Type and color temperature as scheduled, energy saving type, with a CRI of 85. Compact fluorescent lamps of type scheduled.
3. Metal Halide HID Lamps: Phosphor coated or clear per luminaire manufacturer's recommendation. Suitable for ballast furnished in luminaire for all burning positions.
4. Reflector Lamp Beam Patterns: Conform to ANSI C78.379.
5. Lamps shall be manufactured by General Electric, Phillips or Sylvania.

2.04 BALLASTS:

A. Fluorescent Ballasts: Provide electronic fluorescent ballasts suitable for use under installation conditions listed for each luminaire.

1. Ballasts shall meet the requirements of the General Communications Commission Rule and Regulations, Part 18, Class A.
2. Ballasts shall not contain Polychlorinated Biphenyls(PCB's).
3. Ballasts shall have a power factor of 95% minimum.
4. Ballasts shall be UL listed, Class P, and sound rated "A".
5. Ballasts shall have a frequency of operation of 20 kHz or greater, and operate without visible

flicker.

6. Where applicable, ballasts shall meet minimum efficiency standards of Public Law No. 100-357, National Appliance Energy Conservation Amendments of 1988.
7. Ballasts case temperature shall not exceed 25E C temperature rise over 40E C ambient. Ballasts cast temperature must not exceed 85E C.
8. Ballasts shall withstand line transient as defined in ANSI/IEEE C 62.41, Category A.
9. Input third harmonic current content shall not exceed 15%.
10. Ballasts shall be as manufactured by Advance, Magnetek, Motorolla, and Howard Industries.

B. Compact Fluorescent Ballasts: Provide solid state electronic ballasts suitable for use under installation conditions listed for each luminaire.

1. Ballasts shall be high power factor.

C. HID Ballasts: Provide HID ballast suitable for use under installation conditions and type of each luminaire.

1. Voltage: As scheduled.
2. Power Factor: High Power factor.
3. Description: ANSI C82.4.
4. Integral Equipment: Ballast to be mounted internally of the luminaire.

2.05 EXIT SIGNS:

A. Description: Exit sign fixture.

1. Lamps: Manufacturer's standard, LED.
2. Voltage: 120/277 volt as scheduled.

B. Construction:

1. Face: Stencil face with red letters.
2. Directional Arrows: Universal for field adjustment.
3. Mounting: Universal for field selection.

C. Emergency Power Supply: Integral, listed for emergency lighting use.

1. Battery: Lead calcium or Nickel Cadmium.
2. Battery Charger: Dual-rate type.
3. Indicators and Controls: AC ON; test switch.

2.06 INCANDESCENT EMERGENCY LIGHTING UNITS:

A. Description: Self-contained emergency lighting unit.
1. Input Voltage: 120/277 volts as scheduled.
2. Battery: Lead calcium type.

3. Battery Charger: Dual-rate type.
4. Lamps: Sealed beam PAR, DC type.

B. Indicators and Controls: AC ON; recharging, test switch.

C. Electrical Connection: Conduit connection.

2.07 FLUORESCENT EMERGENCY LAMP POWER SUPPLY

A. Description: Self contained battery operated power supply installed in ballast compartment, rated for operating two lamps to a minimum output of 900 lumens each.

B. Controls and Indicators: AC ON, test switch.

2.08 LIGHTING STANDARDS:

A. Lighting Poles:

1. Material: Aluminum.
2. Shape: Square Straight.
3. Finish: Painted.
4. Base Type: Anchor, provide concrete foundation for mounting of base and pole as detailed on Drawings.

2.09 PHOTOCELL SWITCH:

A. Manufacturers:

1. Precision
2. Tork
3. Paragon

B. Description: Photocell switch manufactured to NEMA ICS 2.

C. Ratings:

1. Contact Ratings: 1800 VA at 120/277 volts.
2. Sensitivity: Field adjustable from 3 to 10 foot-candles.

D. Enclosure: Gasketed, cast aluminum or feralloy box with conduit hub.

2.10 CONTACTORS:

A. Manufacturers:

1. Hubbell
2. Leviton
3. Square “D” Company
4. ITE-Siemens
5. General Electric Company
6. Cutler Hammer

B. Mechanical Lighting Contactors: NEMA ICS 2; mechanically held, electrically operated, provided with two coils.

1. Coil Operating Voltage: 120 volts, 60 Hz.
2. Enclosures: NEMA ICS 6; Type 1, general purpose.
3. Multi-pole, 30 amp rating, number of poles as indicated on the Drawings.

C. Electrical Lighting Contractors: NEMA ICS 2; electrically held, electrically operated, provided with one coil.

1. Coil Operating Voltage: 120 volts, 60 Hz.
2. Enclosures: NEMA ICS 6; Type 1, general purpose.
3. Multi-pole, 30 amp rating, number of poles as indicated on the Drawings.

PART 3 EXECUTION

3.01 EXAMINATION AND PREPARATION:

A. Examine adjacent surfaces to determine that surfaces are ready to receive work.

3.02 INSTALLATION:

A. Install luminaires and accessories in accordance with manufacturer's instructions.

1. Provide pendant accessory to mount suspended luminaires at height indicated. Use swivel hangers on sloped ceilings.
2. Support surface mounted luminaires from ceiling structure; provide auxiliary support across ceiling structure support. Fasten to prohibit movement.
3. Install recessed luminaires to permit removal from below. Install luminaires so that there is no light leakage around fixture trim. Support fixtures in accordance with Article 410-16 C of the National Electrical Code.
4. Install lamps in luminaires and lampholders.
5. Luminaire Pole Bases: Construct as indicated on Drawings. Install poles plumb; provide for adjustment.

3.03 ADJUSTING AND CLEANING:

A. Align luminaires and clean lenses and diffusers at completion of work.

B. Aim adjustable luminaires and lampholders as indicated or as directed.

C. Adjust directional arrows on exit signs to meet approval of authority having jurisdiction.

D. Clean paint splatters, dirt and debris from installed luminaires.

E. Relamp luminaires which have failed lamps at completion of work.

F. Touch up luminaire and pole finish at completion of work.

G. Adjust photo controls, etc. to achieve specified or directed operation.

END OF SECTION 26 51 00

SECTION 26 51 19 - LED INTERIOR LIGHTING

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes the following types of LED luminaires:

1. Cylinder.
2. Downlight.
3. Lowbay.
4. Recessed linear.
5. Strip light.
6. Surface mount, linear.
7. Surface mount, nonlinear.
8. Suspended, linear.
9. Suspended, nonlinear.
10. Materials.
11. Finishes.
12. Luminaire support.

1.2 DEFINITIONS

A. CCT: Correlated color temperature.

B. CRI: Color Rendering Index.

C. Fixture: See "Luminaire."

D. IP: International Protection or Ingress Protection Rating.

E. LED: Light-emitting diode.

F. Lumen: Measured output of lamp and luminaire, or both.

G. Luminaire: Complete lighting unit, including lamp, reflector, and housing.

1.3 ACTION SUBMITTALS

A. Product Data: For each type of product, arranged by designation.

B. Shop Drawings: For nonstandard or custom luminaires.

1. Include plans, elevations, sections, and mounting and attachment details.
2. Include details of luminaire assemblies. Indicate dimensions, weights, loads, required clearances, method of field assembly, components, and location and size of each field connection.

3. Include diagrams for power, signal, and control wiring.

C. Product Schedule: For luminaires and lamps, Use same designations indicated on Drawings.

1.4 INFORMATIONAL SUBMITTALS

A. Coordination Drawings: Reflected ceiling plan(s) and other details, drawn to scale and coordinated with each other, using input from installers of the items involved:

B. Seismic Qualification Certificates: For luminaires, accessories, and components, from manufacturer.

C. Product Certificates: For each type of luminaire.

D. Sample warranty.

1.5 CLOSEOUT SUBMITTALS

A. Operation and maintenance data.

1.6 WARRANTY

A. Warranty: Manufacturer and Installer agree to repair or replace components of luminaires that fail in materials or workmanship within specified warranty period.

B. Warranty Period: Five year(s) from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

A. Seismic Performance: Luminaires shall withstand the effects of earthquake motions determined according to ASCE 7.

B. Seismic Performance: Luminaires and lamps shall be labeled vibration and shock resistant.

1. The term "withstand" means "the luminaire will remain in place without separation of any parts when subjected to the seismic forces specified."

2.2 LUMINAIRE REQUIREMENTS

A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.

B. Standards:

1. ENERGY STAR certified.
2. California Title 24 compliant.
3. NRTL Compliance: Luminaires for hazardous locations shall be listed and labeled for indicated class and division of hazard by an NRTL.
4. FM Global Compliance: Luminaires for hazardous locations shall be listed and labeled for indicated class and division of hazard by FM Global.
5. UL Listing: Listed for damp location.
6. Recessed luminaires shall comply with NEMA LE 4.

C. CRI of minimum 80. CCT of minimum 2700 K (interior fixtures) and minimum 4000 K (exterior fixtures).

D. Rated lamp life of 50,000 hours to L70.

E. Lamps dimmable from 100 percent to 0 percent of maximum light output.

F. Internal driver.

G. Nominal Operating Voltage: 120-277 V ac..

1. Lens Thickness: At least 0.125 inch minimum unless otherwise indicated.

H. Housings:

1. Extruded-aluminum housing and heat sink.
2. Fixture dependent; refer to 'LIGHTING FIXTURE SCHEDULE' on drawings.

2.3 CYLINDER

A. If 'Other Than Specified' fixtures are to be considered as equal for bidding, equal fixture shall be submitted to Architect a minimum of 10 days prior to submitting bid.

B. Minimum 1000 lumens. Minimum allowable efficacy of 80 lumens per watt.

C. With integral mounting provisions.

2.4 DOWNLIGHT

A. Minimum 1,000 lumens. Minimum allowable efficacy of 80 lumens per watt.

B. Universal mounting bracket.

C. Integral junction box with conduit fittings.

D. Optics:

1. Refer to drawings to determine if fixtures are to have Fixed or Adjustable lens.
2. Refer to drawings to determine Spot/[Medium/[Wide light distribution.

2.5 LOWBAY

A. Minimum 5,000 lumens. Minimum allowable efficacy of 80 lumens per watt.

B. Universal mounting bracket.

2.6 RECESSED LINEAR

A. Minimum 1,500 lumens. Minimum allowable efficacy of 85 lumens per watt.

B. Integral junction box with conduit fittings.

2.7 STRIP LIGHT

A. Minimum 750 lumens. Minimum allowable efficacy of 80 lumens per watt.

B. Integral junction box with conduit fittings.

2.8 SURFACE MOUNT, LINEAR

A. Minimum 750 lumens. Minimum allowable efficacy of 80 lumens per watt.

B. Integral junction box with conduit fittings.

2.9 SURFACE MOUNT, NONLINEAR

A. Minimum 750 lumens. Minimum allowable efficacy of 80 lumens per watt.

B. Integral junction box with conduit fittings.

2.10 SUSPENDED, LINEAR

A. Minimum 1,500 lumens. Minimum allowable efficacy of 85 lumens per watt.

2.11 SUSPENDED, NONLINEAR

A. Minimum 1,500 lumens. Minimum allowable efficacy of 85 lumens per watt.

B. Integral junction box with conduit fittings.

2.12 MATERIALS

A. Metal Parts:

1. Free of burrs and sharp corners and edges.
2. Sheet metal components shall be steel unless otherwise indicated.
3. Form and support to prevent warping and sagging

B. Doors, Frames, and Other Internal Access: Smooth operating, free of light leakage under operating conditions, and designed to permit relamping without use of tools. Designed to prevent doors, frames, lenses, diffusers, and other components from falling accidentally during relamping and when secured in operating position.

C. Diffusers, and Globes:

1. Acrylic: One hundred percent virgin acrylic plastic, with high resistance to yellowing and other changes due to aging, exposure to heat, and UV radiation.
2. Glass: Annealed crystal glass unless otherwise indicated.
3. Lens Thickness: At least 0.125 inch minimum unless otherwise indicated.

D. Housings:

1. Extruded-aluminum housing and heat sink.
2. Refer to drawings for type of finish.

2.13 METAL FINISHES

A. Variations in finishes are unacceptable in the same piece. Variations in finishes of adjoining components are acceptable if they are within the range of approved Samples and if they can be and are assembled or installed to minimize contrast.

2.14 LUMINAIRE SUPPORT

A. Comply with requirements in Section 26 50 00 "Basic Electrical Materials & Methods" for channel and angle iron supports and nonmetallic channel and angle supports.

B. Single-Stem Hangers: 1/2-inch steel tubing with swivel ball fittings and ceiling canopy. Finish same as luminaire.

C. Wires: ASTM A 641/A 641 M, Class 3, soft temper, zinc-coated steel, 12 gage.

D. Rod Hangers: 3/16-inch minimum diameter, cadmium-plated, threaded steel rod.

E. Hook Hangers: Integrated assembly matched to luminaire, line voltage, and equipment with threaded attachment, cord, and locking-type plug.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Comply with NECA 1.

B. Install luminaires level, plumb, and square with ceilings and walls unless otherwise indicated.

C. Install lamps in each luminaire.

D. Supports: Sized and rated for luminaire weight.

E. Flush-Mounted Luminaire Support: Secured to outlet box.

F. Wall-Mounted Luminaire Support:

1. Attached to structural members in walls, to a minimum 20 gauge backing plate attached to wall structural members, or using through bolts and backing plates on either side of wall.
2. Do not attach luminaires directly to gypsum board.

G. Ceiling-Mounted Luminaire Support:

1. Ceiling mount with minimum one (1) 5/32-inch diameter aircraft cable supports 120 inches in length.
2. Ceiling mount with pendant mount with 5/32-inch diameter aircraft cable supports adjustable to [120 inches in length.
3. Ceiling mount with hook mount.

H. Suspended Luminaire Support:

1. Pendants and Rods: Where longer than 48 inches, brace to limit swinging.
2. Stem-Mounted, Single-Unit Luminaires: Suspend with twin-stem hangers. Support with approved outlet box and accessories that hold stem and provide damping of luminaire oscillations. Support outlet box vertically to building structure using approved devices.
3. Continuous Rows of Luminaires: Use tubing or stem for wiring at one point and tubing or rod for suspension for each unit length of luminaire chassis, including one at each end.
4. Do not use ceiling grid as support for pendant luminaires. Connect support wires or rods to building structure.

I. Ceiling-Grid-Mounted Luminaires:

1. Secure to any required outlet box.
2. Secure luminaire using approved fasteners in a minimum of four locations, spaced near corners of luminaire.

J. Comply with requirements in Section 260519 "Low-Voltage Electrical Power Conductors and Cables" for wiring connections.

K. Identify system components, wiring, cabling, and terminals. Comply with requirements for identification specified in Section 260553 "Identification for Electrical Systems."

3.2 FIELD QUALITY CONTROL

A. Perform the following tests and inspections:

1. Operational Test: After installing luminaires, switches, and accessories, and after electrical circuitry has been energized, test units to confirm proper operation.
2. Test for Emergency Lighting: Interrupt power supply to demonstrate proper operation. Verify transfer from normal power to battery power and retransfer to normal.

B. Luminaire will be considered defective if it does not pass operation tests and inspections.

C. Prepare test and inspection reports.

END OF SECTION 26 51 19

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SECTION 28 31 00 - FIRE DETECTION AND ALARM

PART 1 GENERAL

1.01 SECTION INCLUDES:

A. Fire alarm and smoke detection system.

1.02 REFERENCES:

A. NFPA 13: Standard for the Installation of Sprinkler Systems.

B. NFPA 13A: Recommended Practice for the Inspection, Testing and Maintenance of Sprinkler Systems.

C. NFPA 70: National Electrical Code

D. NFPA 72: Installation, Maintenance, and Use of Local Protective Signaling System.

E. NFPA 72E: Automatic Fire Detectors.

F. NFPA 72G: Notification Appliances for Protective Signaling Systems.

G. NFPA 72H: Guide for Testing Procedure for Local, Auxiliary, Remote Station and Proprietary Protective Signaling Systems.

H. NFPA 90: Standard for the Installation of Air Conditioning and Ventilating Systems.

I. NFPA 101: Life Safety Code.

1.03 REGULATORY REQUIREMENTS:

A. Systems: UL and FM listed.

B. Conform to requirements of NFPA.

C. Conform to requirements of Standard Building Code.

D. Conform to requirements of American's with Disabilities Act - ADA.

1.04 SYSTEM REQUIREMENTS:

A. The system shall include, but not be limited to the following elements.

1. Master system CPU including all fire detection.

2. Circuit interface panels including all modules.
3. Power supplies, batteries and battery chargers.
4. Equipment enclosures.
5. Intelligent addressable manual pull stations, heat detectors, analog smoke detectors, alarm monitoring modules, and supervised control modules.
6. Annunciator panels, printers and video display terminals.
7. Audible and visual evacuation signals.
8. Color graphic displays and historical archiving.
9. Software and firmware as required to provide a complete functioning system.
10. Wiring and raceway.
11. Installation, testing and certification and education labor.
12. Multipliex, system driven remote annunciator.

1.05 SYSTEM FUNCTION:

A. The system shall be a complete, electrically supervised multiplex style fire detection and audio/visual evacuation system with intelligent analog alarm initiation, to be device addressable and annunciated as described and shown on the Drawings.

B. The system shall support intelligent analog smoke detection, conventional smoke detection, manual station, water flow, supervisory, security, and status monitoring devices. The system shall also support audio/visual circuits.

C. The panel shall be UL listed as a test instrument for the measurement of the sensitivity of connected intelligent analog ionization and photoelectric smoke detectors to comply with the testing requirements of NFPA 72E.

D. The system shall annunciate a trouble condition when any smoke detector approaches 80% of its alarm threshold due to gradual contamination, signaling the need for service and eliminating unwanted alarms.

E. Any intelligent analog smoke detector or conventional smoke detector zone shall include a selectable alarm verification capability. This feature shall provide automatic verification capability. This feature shall provide automatic verification of smoke detector alarms as described by NFPA 72E.

F. The system shall recognize initiating of an alarm and indicate the alarm condition in a degrade mode of operation, in the event of processor failure or the loss of system communications to the circuit interface panels.

G. The system shall provide a one person field test of either the complete system or a specified area, maintaining full function of areas not under test.

H. The system shall be provided with eight levels of password protection with up to forty passwords.

I. The system shall be programmed in the field via a laptop computer. All programmed information shall be stored in nonvolatile memory after downloading into the control panel. No special programming terminal or prom burning shall be required and the system shall continue in service during

reprogramming. Systems requiring on line programming or not capable of mass uploading of software for offsite documentation or editing will not be considered acceptable.

J. The system shall consist of central architecture using a single centrally located control unit. The system also shall be operable in a distributed multiplex architecture using a centrally located control unit with interconnection to remote circuit interface panels containing any combination of plug in intelligent analog signalling circuits, plug in conventional initiating device circuits and plug in relays.

K. The system shall support a UL listed supervised printer.

L. The system as installed shall be expandable to its predetermined maximum capacity of 3,000 initiation devices and/or 2,000 combined zones of audio/visual devices.

1.06 SYSTEM OPERATION:

A. Activation of any fire alarm initiating device shall cause the following actions and indications:

1. Display a custom message describing the device originating the alarm condition, at the fire alarm control panel LCD alpha numeric display. Remote LCD annunciators shall display the alarm condition via unique messages as required by the system Owner. LED type annunciator displays conventional and graphic style shall indicate alarm zoning as specified.
2. Sound the audio/voice circuits, and activate the visual signals.
3. Shut down all air handling units within the smoke zone of alarm origin.
4. Furnish an alarm system closure for connection to an off site reporting device as contracted for by the system user, via a dialer provided under this Section.
5. Close all smoke doors and smoke dampers (if any present in facility) shown on the Drawings to prevent the spread of smoke.
6. Record within the non-volatile system historical memory the occurrence of the event, the time and date of occurrence and the device initiating the event.

B. Activation of any smoke detector or two cross zoned smoke detectors in a single elevator lobby or an elevator equipment room shall, besides the actions described above, cause the recall of that bank of elevators to the erminal floor and the lockout of controls. In the event of recall initiation by a detector in the first floor lobby, the recall shall be to the alternate floor.

C. Activation of any detector in an elevator hoistway or machine room shall cause the capture of that bank of elevators per local requirements, upon completion of these actions, activate the sprinkler system pre-action release panel.

D. Activation of any supervisory circuit, shall cause the following actions and indications:

1. Display the origin of the supervisory condition report at the alarm control panel alphanumeric LCD display.
2. Activate supervisory audible and visual signals as indicated on the Drawings.
3. Furnish an alarm system closure for connection to an off site reporting device as contracted for by the system user.
4. Record the occurrence of the event, the time of occurrence and the device initiating the event.

E. Receipt of a trouble report (primary power loss, open or grounded initiating or signalling circuit wiring, open, grounded or shorted indication system wiring, device communication failure, battery disconnect) at the fire alarm control panel shall cause the following actions and indications:

1. Display at the alarm control panel alphanumeric LCD display, the origin of the trouble condition report.
2. Activate trouble audible and visual signals at the control panel and as indicated on the Drawings.
3. Furnish an alarm system closure for connection to an off site reporting device as contracted for by the system user, via a Dialer furnished under this Section.
4. Record the occurrence of the event, the time of occurrence and the device initiating the event.

1.07 SYSTEM ZONING:

A. Each intelligent addressable device or conventional zone on the system shall be displayed at the fire alarm control panel by a unique alpha numeric label identifying its location.

1.08 QUALIFICATIONS:

A. Manufacturer: Company specializing in smoke detection and fire alarm systems with five years experience and an office within 125 miles of job site.

B. Installer: Company specializing in smoke detection and fire alarm system with three years experience.

1.09 SUBMITTALS:

A. Submit shop Drawings and products data.

B. Provide wiring diagrams, data sheets, and equipment ratings, layout, dimensions, and finishes. Include location of end-of-line devices.

C. Submit manufacturer's installation instructions.

1.10 OPERATION AND MAINTENANCE DATA:

A. Submit as-built Drawings indicating location of all devices, wiring, and end-of-line devices.

B. Include operating instructions, and maintenance and repair procedures.

C. Include manufacturer representative's letter stating that system is operational, and install in accordance with NFPA 72A, 72B, 72E, 72G and 101 and tested in accordance with NFPA 72H.

PART 2 PRODUCTS

2.01 MANUFACTURERS:

A. Pyrotronics, Simplex, EST, Gamewell, and Notifier

2.02 FIRE ALARM CONTROL PANEL:

A. The control panel shall be modular in construction and shall include, but not limited to; the hardware, software and firmware required to perform system functions. Refer to drawings to verify if existing fire alarm control panel exists and is to remain.

B. The control panel shall be housed within a code gage steel enclosure flush wall mounted.

C. System power supplies shall be housed within the enclosure. Primary power supply shall be from the building distribution system. Secondary power shall be provided by internal sealed gelled electrolyte batteries with capability to operate the system for eight (8) hours.

D. The panel shall provide a system for maintaining a historical event record.

2.03 FIRE ALARM INITIATING DEVICES:

A. Smoke Detector, Intelligent Ionization: The detector shall be addressable, dual chamber, self compensating for ambient temperature and humidity. Detectors shall be suitable for two wire operation.

B. Smoke Detector, Intelligent Photoelectric: The detector shall be addressable, self compensating for ambient temperature and humidity with integral self, restoring 135 degree heat detector. Detectors shall be suitable for two wire operation.

C. Smoke Detector, Intelligent Duct Type: The detector shall be addressable, self compensating for ambient temperature and humidity, ionization or photoelectric type as application requires.

D. Smoke Detector, Projected Beam: The detector shall consist of an infrared light beam transmitter and a light receiver. The detector shall be self compensating for ambient and temperature changes.

E. Thermal Detector, Intelligent: The detectors shall be addressable, rate compensated rated at 135 degrees or 200 degrees Fahrenheit. Detectors shall be suitable for two wire operation.

F. Manual Pull Station, Intelligent: The pull station shall be addressable single station type. Pull stations shall be flush wall mounted.

2.04 ZONE AND INTERFACE MODULES:

A. Remote Conventional Zone Module: Provide, for integration of compatible 2 wire and shorting style contact devices into the analog signaling circuit.

B. Intelligent System Interface Module: Furnish and install, for the monitoring of contact type initiation devices and for the control of electrical devices where required.

C. Intelligent Supervised Control Module: Furnish and install for the control of supervised relays, contractors, audible signal circuits, visual signal circuits, distributed speaker circuits and two way fire fighters communication circuits.

2.05 EVACUATION/SIGNALLING DEVICES:

A. Evacuation Horn(Speaker)/Strobe. Provide audible horns with strobe as indicated on the Drawings. Integral strobe shall be flashing, polarized type with polycarbonate lens producing 8000 peak candlepower at one flash per second.

B. Evacuation Strobe: Provide visual evacuation strobes at locations indicated on the Drawings. Strobes shall be flush wall mounted, flashing, polarized type with polycarbonate lens producing 8000 peak candlepower at one flash per second.

2.06 FIRE ALARM WIRE AND CABLE:

A. Fire Alarm Power Circuits: Building wire as specified in Section 16300. Minimum size conductors shall be 12 AWG.

B. Fire Alarm Loop Circuits: Analog loop circuits shall be 18 AWG twisted pair.

C. Fire Alarm Speaker Circuits: Speaker circuits shall be 18 AWG twisted pair.

D. Fire Alarm Initiating and Strobe Circuits: Circuits shall be minimum 14 AWG building wire.

2.07 DIALER: Provide dialer for offsite notification. (Field-verify if existing off-site dialer is present prior to submitting bid.)

PART 3 EXECUTION

3.01 INSTALLATION:

A. Install system in accordance with manufacturer's instructions.

B. Install manual station with operating handle 48 inches above floor. Install audible and visual devices 80 inches above floor or as indicated.

C. Install cables and wiring in conduit.

D. Mount end-of-line device in control panel or in box with last device or separate box adjacent to last device in circuit.

E. Make conduit and wiring connections to sprinkler flow switches, sprinkler valve tamper switches, duct smoke detectors, HVAC shutdown equipment, and elevator control equipment.

F. Automatic Detector Installation: NFPA 72E.

G. Provide surge suppression for all wiring of the fire alarm system.

3.02 FIELD QUALITY CONTROL:

A. Field inspection and testing will be performed.

B. Test in accordance with NFPA 72H and local fire department requirements.

3.03 MANUFACTURER'S FIELD SERVICES:

A. Provide manufacturer's field services as required for installation.

B. Include services of certified technician to supervise installation, adjustments, final connections, and system testing.

C. Instruct Owner in operation and function of the system.

END OF SECTION 28 31 00

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SECTION 31 00 00 - EARTHWORK

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Specification Sections, apply to this Section.

B. Florida Department of Transportation*, Standard Specifications for Road and Bridge Construction, Latest Edition*.

1.2 SUMMARY

A. This Section includes preparing and grading for pavement, curb, subgrades, drainage features, and general site work.

B. Related Sections: The following Sections contain requirements that relate to this Section.

1. Section 31 10 00 "Clearing & Grubbing" for clearing, grubbing, and tree protection.

2. Section 33 60 00 “Stormwater System” for installation of stormwater systems.

1.3 DEFINITIONS

A. Excavation consists of the removal of material encountered to subgrade elevations and the reuse or disposal of materials removed.

B. Subgrade: The uppermost surface of an excavation or the top surface of a fill or backfill immediately below subbase, base, drainage fill, or topsoil materials.

C. Borrow: Soil material obtained off-site when sufficient approved soil material is not available from on-site excavations.

D. Subbase Course: The layer placed between the subgrade and base course in a paving system.

E. Base Course: The layer placed immediately beneath the surface pavement in a paving system.

F. Unauthorized excavation consists of removing materials beyond indicated subgrade elevations or dimensions without direction by the Architect/Engineer. Unauthorized excavation, as well as remedial work directed by the Architect/Engineer, shall be at the Contractor's expense.

G. Structures: Buildings, footings, foundations, retaining walls, slabs, tanks, curbs, mechanical and electrical appurtenances, or other man-made stationary features constructed above or below ground surface.

H. Utilities include on-site above ground utilities, overhead utilities and underground utilities including: pipes, conduits, ducts, and cables, as well as related appurtenances and underground services within building lines.

I. Unsuitable Material: Any material such as muck, wood, rock, peat, garbage, non-compactable soils in dry condition, and any other material that is considered by the Architect/Engineer to be unsuitable.

J. Topsoil: Topsoil is defined as the surface layer of soil found normally to a depth of at least 4 to 8 inches that typically contains organic materials. Satisfactory topsoil is reasonably free of roots, clay lumps, stones, other objects over 2 inches in diameter, and any other objectionable or deleterious material.

1.4 SUBMITTALS

A. General: Submit the following in accordance with Section 01 33 00, "Submittal Procedures."

B. Product Data and Samples of the following:

1. 1-lb representative samples of each proposed fill and backfill soil material from borrow sources as selected by the Contractor.
2. 12-by-12-inch sample of filter fabric.
3. Representative samples of the proposed base and sub-base materials.

C. Test Reports: In addition to test reports required under field quality control, submit the original directly to the Architect/Engineer from the testing services.

1. Laboratory analysis as specified in 1.1 (Related Documents) of each soil material proposed for fill and backfill from borrow sources.
2. One optimum moisture-maximum density curve for each soil material.
3. Report of actual unconfined compressive strength and/or results of bearing tests of each stratum tested.

1.5 QUALITY CONTROL / QUALITY ASSURANCE

A. Codes and Standards: Perform earthwork complying with all requirements of authorities having jurisdiction.

B. Testing and Inspection Service: A qualified independent geotechnical engineering testing agency, under the direction of a Professional Engineer, licensed in the State of Florida to classify, perform soil tests, and provide inspection services for quality control. All proposed borrow soils will require the testing agency to verify that soils comply with specified requirements and to perform required field and laboratory testing. Contractor shall replace materials removed for testing purposes.

C. Should any work or materials fail to meet the requirements set forth in the plans and specifications, Contractor shall reimburse for additional and re- testing.

1.6 PROJECT CONDITIONS

A. Site Information: Data in the subsurface investigation Report, if available, is used for the basis of the design and is available to the contractor for information only. Conditions are not intended as representations or warranties of accuracy or continuity between soil borings. The Architect/Engineer will not be responsible for interpretations or conclusions drawn from this data by the Contractor.

B. Existing Utilities: After location of utilities by the appropriate utility company, it is the Contractor's responsibility to protect all such utility lines, including service lines and appurtenances, and to replace at his own expense any that may be damaged by the Contractor's equipment or forces during construction of the Project.

1. Provide a minimum of 48-hours notice to the Architect/Engineer and receive written notice to proceed before interrupting any utility.

2. The contractor is responsible for contacting all utility companies to verify locations of all existing utilities, utility-related obstructions, or utility relocations that he may encounter during construction.

3. Adequate provision shall be made for the flow of existing sewers, drains, and water courses encountered during construction, and structures which may be disturbed shall be satisfactorily restored by the Contractor at his expense.

C. Should uncharted, or incorrectly charted, piping or other utilities be encountered during the course of the work, consult the Architect/Engineer immediately for directions. Cooperate with the Architect/Engineer and utility companies in keeping respective services and facilities in operation.

PART 2 - PRODUCTS

2.1 SOIL MATERIALS

A. General: Soils used as fill shall be clean sands with less than 10% passing the number 200 sieve. Soils as described above with less than 15% passing the number 200 sieve and meeting the requirements of Section 902-6 of the FDOT Specifications may be used when existing subgrade conditions are considered dry as per the Architect/Engineer. The sand shall have a maximum dry density of at least 100 pounds per cubic foot, according to the Standard Proctor compaction test, AASHTO T-99, ASTM D698. Provide approved borrow soil materials from off-site when sufficient satisfactory soil materials are not available from on-site excavations.

B. If the Contractor elects to import any materials, then he will do so only with t he approval of the Architect/Engineer and at his own expense, unless separate payments for such items are called for in these specifications. Provide laboratory certification that soils meet requirements of specifications.

C. Sub-Base Material: Naturally or artificially graded mixture of natural or crushed gravel, crushed stone, or sand. The material shall be stabilized in accordance with FDOT Standard Specification Section 160-5.4. ASTM D 2940, with at least 95 percent passing a 1-1/2-inch sieve, and not more than 8 percent passing a No. 200 sieve.

PART 3 - EXECUTION

3.1 DEWATERING

A. Prevent surface water and subsurface or groundwater from entering excavations, from ponding on sub-grades in work areas, and from flooding project site and surrounding area.

B. Protect subgrades and foundation soils from softening and damage by rain or water accumulation.

C. The Contractor shall prevent the accumulation of water in excavated areas, and shall remove, by pumping or other means, any water that accumulates in the excavation. The Contractor shall prevent the accumulation of water in both structural and trench excavations and shall remove, by well point system or by other means, water which accumulates. The Contractor shall provide, install and operate a suitable and satisfactory dewatering system, when needed to dry sub-grades or other work areas. The Contractor shall comply with the latest testing requirements as set forth by the applicable regulatory agency. At a minimum, the contractor shall test once prior to dewatering, once within the first week of dewatering, and once every thirty (30) days while dewatering.

D. Establish and maintain temporary drainage ditches and other diversions outside excavation limits to convey rainwater and water removed from excavations to collection or runoff areas. Do not use trench excavations as temporary drainage ditches. Discharged water shall be clean, not silt or sediment laden, prior to discharge to untreated system and/or waters of the State.

3.2 EXCAVATION

A. Explosives: Not permitted.

B. Strip topsoil and significant root systems to whatever depths encountered in a manner to prevent intermingling with underlying subsoil or other objectionable material. Remove heavy growths of grass from areas before stripping. Where existing trees are indicated to remain, leave existing topsoil in place within drip lines to prevent damage to root systems.

3.3 STABILITY OF EXCAVATIONS

A. Comply with local codes, ordinances, and requirements of authorities having jurisdiction to maintain stable excavations.

B. All excavation work shall conform to all applicable OSHA Publications, Latest Editions. The Contractor's method of providing protective support to prevent cave-ins shall conform to OSHA requirements. Slope excavations, shoring, and trench box usage in the field must be based on tabulated data and designed by the Contractor. The contractor is solely responsible for job site safety and shall not be compensated for required safety equipment/devices.

3.4 EXCAVATION FOR STRUCTURES

A. Excavate to indicated elevations and dimensions within a tolerance of plus or minus 0.10 foot. Extend excavations a sufficient distance from structures for placing and removing concrete formwork, maintaining a safe slope, installing services and other construction, and for inspections.

B. Footings and Foundations: Excavate by hand to final grade just before placing concrete reinforcement. Trim bottoms to required lines and grades to leave solid base to receive other work.

C. Pile Foundations: After piles have been installed, remove loose and displaced material. Excavate to final grade, leaving solid base to receive concrete pile caps.

D. Excavation for Underground Tanks, Basins, and Mechanical or Electrical Appurtenances: Excavate to elevations and dimensions indicated within a tolerance of plus or minus 0.10 foot.

3.5 EXCAVATION FOR WALKS AND PAVEMENTS

A. Excavate surfaces under walks and pavements to indicated cross sections, elevations, and grades. Consider Dewatering and other sections as applicable.

3.6 EXCAVATION FOR STORMWATER SYSTEMS

A. Excavate and compact the backfill of trenches to the densities specified for embankment or subgrade, as applicable, and in accordance with the requirements of 3.10. Consider Dewatering and other sections as applicable.

3.7 STORAGE OF SOIL MATERIALS

A. Stockpile excavated materials acceptable for backfill, fill soil, and topsoil materials, including acceptable borrow materials.

B. Stockpile soil materials without intermixing. Stockpiles shall be placed, graded, and shaped to drain surface water and prevent erosion. Cover to prevent wind-blown dust and/or erosion. Stockpile soil materials away from edge of excavations. Do not store within drip line of remaining trees.

3.8 BACKFILL

A. Backfill excavations promptly, but not before completing the following:

1. Acceptance of construction below finish grade including, where applicable, filter fabric installation and gravel bedding.
2. Surveying locations of underground utilities for record documents.
3. Testing, inspecting, and approval of underground utilities.
4. Removal of trash and debris from excavation.
5. Removal of temporary shoring, bracing, and sheeting unless specified to remain.

B. No backfill material shall be placed, spread or rolled during unfavorable weather conditions. When the work is interrupted by heavy rain, backfill operations shall not be resumed until the moisture content of the fill is as previously specified to achieve proper compaction.

C. Fill Preparation: Remove vegetation, topsoil, debris, wet and unsatisfactory soil materials, obstructions, and deleterious materials from ground surface prior to placing fills. Plow strip, or break up sloped surfaces steeper than 1 vertical to 4 horizontal so fill material will bond with existing surface. In order to insure proper bond and prevent slipping between the original ground and fill, the surface of the original ground shall be scarified to a depth of at least three inches. Each layer of fill material shall be compacted until the required density is achieved, and the density achieved should be verified in accordance with specifications using in-place density testing.

D. When subgrade or existing ground surface is to receive fill and has a density less than that required for fill, break up ground surface to depth required, pulverize, moisture condition or aerate soil and re-compact to required density.

E. Place fill material in layers to required elevations for each location listed below.

1. Under grass, subbase or base material, use satisfactory excavated or borrow soil material.
2. Under walks and pavements, curbs, steps, ramps, building slabs, footings and foundations use subbase and/or base material.

3.9 MOISTURE CONTROL

A. Uniformly moisten or aerate subgrade and each subsequent fill or backfill layer before compaction to within 2 percent of optimum moisture content.

B. Do not place backfill or fill material on surfaces that contain excessive moisture.

C. Remove and replace, or scarify and air-dry satisfactory soil material that is too wet to compact to specified density. Stockpile or spread and dry removed wet satisfactory soil material.

3.10 COMPACTION

A. Place backfill and fill materials in layers or lifts not more than 12 inches in loose depth for material compacted by heavy compaction equipment, and not more than 8 inches in loose depth for material compacted by
hand-operated tampers.

B. Place backfill and fill materials evenly on all sides of structures to required elevations. Place backfill and fill uniformly along the full length of each structure. Percentage of Maximum Dry Density Requirements: Compact soil to not less than the following percentages of maximum dry density according to ASTM Modified Proctor):

1. Under structures, building slabs, steps, and pavements, compact each layer of backfill or fill material at a minimum of 98% Modified Proctor of the material's maximum dry density.
2. Under lawn or unpaved areas, compact each layer of backfill or fill material at 95% Modified Proctor maximum dry density.

3.11 GRADING

A. General: Uniformly grade areas to a smooth surface, free from irregular surface changes. Comply with compaction requirements and grade to cross sections, lines, and elevations indicated.

1. Provide a smooth transition between existing adjacent grades and new grades.
2. Cut out soft spots, fill low spots, and trim high spots to conform to required surface tolerances.

B. Site Grading: Slope grades to direct water away from buildings and to prevent ponding. Finish subgrades to required elevations within the following tolerances:

1. Lawn or Unpaved Areas: Plus or minus 0.10 foot.
2. Walks: Plus or minus 0.10 foot.
3. Pavements: Plus or minus ½ inch.

3.12 STABILIZED SUBGRADE

A. For stabilized subgrade the type of materials is at the Contractor's option and no separate payment for stabilizing materials will be made (other than as may be paid for as borrow).

B. When stabilizing is required, compliance with the bearing value requirements will be determined by the Limerock Bearing Ratio Method. Minimum LBR shall be 40.

C. It is the Contractor's responsibility that the finished subgrade section meets the bearing value requirements, regardless of the quantity of stabilizing materials necessary to be added. Also, full payment will be made for any areas where the existing subgrade materials meet the design bearing value requirements without the addition of stabilizing additives, as well as areas where the Contractor may elect to place select high-bearing materials from other sources, within the limits of the stabilizing.

D. After the subgrade grading operations have been substantially completed, the Contractor shall make his own determination as to the quantity (if any) of stabilizing material, of the type selected by him, necessary for compliance with the bearing value requirements. The contractor shall notify the Architect/Engineer of the approximate quantity to be added, and the spreading and mixing-in of such quantity of materials shall meet the approval of the Architect/Engineer as to uniformity and effectiveness.

3.13 FIELD QUALITY CONTROL

A. Testing Agency Services: Allow testing agency to inspect and test each subgrade and each fill or backfill layer. Do not proceed until test results for previously completed work verify compliance with requirements.

1. Perform field in-place density tests according to ASTM D 1556 (sand cone method), ASTM D 2167 (rubber balloon method), ASTM D 293 (drive cylinder method), or ASTM D 2922 (nuclear method), as applicable.

    a. Field in-place density tests may also be performed by the nuclear method according to ASTM D 2922, provided that calibration curves are periodically checked and adjusted to correlate to tests performed using ASTM D 1556. With each density calibration check, check the calibration curves furnished with the speedy moisture meter according to ASTM D 3017.
    b. When field in-place density tests are performed using nuclear methods, make calibration checks of both density and speedy moisture meter at beginning of work, on each different type of material encountered, and at intervals as directed by the Engineer.

2. Paved Areas: Make at least one field density test of subgrade, base, and each compacted fill layer for every 500 square yards, but in no case less than two tests. Tests shall be staggered to ensure representative sampling.
3. Unpaved Areas: Make at least one field density test of each compacted fill layer or subgrade for every 2000 square yards of area, but in no case less than two tests.
4. Other tests may be required at Architect/Engineer discretion.

B. If, in the opinion of the Architect/Engineer, based on testing service reports and inspection or the Architect/Engineer’s observations, subgrades, fills, or backfills are below specified density, scarify and moisten or aerate as needed, or remove and replace soil to the depth required, re-compact, and re-test until required density is obtained at no additional expense.

3.14 REPAIR & CORRECTIONS

A. Protecting Graded Areas: Protect newly graded areas from traffic and erosion. Keep free of trash and debris. Repair and re-establish grades to specified tolerances where completed or partially completed surfaces become eroded, rutted, settled, or lose compaction due to subsequent construction operations or weather conditions. Scarify or remove and replace material to depth directed by the Architect/Engineer; reshape and re- compact at optimum moisture content to the required density.

B. Settling: Where settling occurs, remove finished surfacing, backfill with additional approved material, compact, and reconstruct surfacing.
Restore appearance, quality, and condition of finished surfacing to match adjacent work, and eliminate evidence of restoration to the greatest extent possible.

C. When traffic must cross open trenches, the contractor shall provide suitable bridge of graded aggregate base or temporary asphalt paving as directed by Architect/Engineer at no additional expense.

D. Erosion Control: The Contractor shall be responsible for the prevention of erosion from the site and for maintaining filled and graded surfaces for the duration of the project. This includes, but is not limited to, the erection of a silt fence and hay bale barricade as per Florida Stormwater Erosion and Sedimentation Control Inspector's Manual and/or as shown in the construction plans. The Contractor shall take whatever steps necessary to prevent erosion and sedimentation, and will be responsible for any damages which might occur to down-land properties as a result of run-off from the site during sitework construction at no additional cost. Provide erosion control measures to prevent erosion or displacement of soils and discharge of soil-bearing water runoff or airborne dust to adjacent properties and walkways.

3.15 DISPOSAL OF SURPLUS AND WASTE MATERIALS

A. Surplus excavated material becomes the property of the Contractor unless otherwise noted. Waste materials, including unsatisfactory soils, trash and debris shall be removed and legally disposed of, off the Owner's property.

3.16 CLEAN-UP AND FINAL INSPECTION

A. Before final inspection and acceptance the Contractor shall clean ditches, shape shoulders and restore all disturbed areas, including street crossings, grass plots, re-grassing if necessary, to as good a condition as existed before work started.

END OF SECTION 31 00 00

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SECTION 31 10 00 - CLEARING AND GRUBBING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and General Provisions of the Contract, including General and Supplementary Conditions, shall apply to this Section.

B. Florida Department of Transportation*, Standard Specifications for Road and Bridge Construction, Section 110, Latest Edition.*

1.2 SUMMARY

A. This Section includes, but is not limited to, the following:

1. Protection of existing trees indicated to remain.
2. Removal of trees and other vegetation.
3. Clearing and grubbing.
4. Removing above-grade improvements.
5. Removing below-grade improvements.

B. Extent of clearing & grubbing shall remain within Project Limits, or approved written work agreement areas, unless otherwise noted or instructed.

1.3 PROJECT CONDITIONS

Provide protection for all public land corners and monuments within the limits of construction. Any Monuments disturbed while performing the work will be replaced at the contractor's expense.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION

3.1 SITE CLEARING

A. General: Remove trees, shrubs, grass, and other vegetation, improvements, or obstructions, as required, to permit installation of new construction. Remove similar items elsewhere on site or premises as specifically indicated. Removal includes digging out and off-site disposal of stumps and roots.

B. Carefully and cleanly cut minor roots and branches of trees indicated to remain in a manner where such roots and branches obstruct installation of new construction.

C. Clearing and Grubbing: Clear site of trees, shrubs, and other vegetation, except for those indicated to remain.

1. Completely remove all stumps within the roadway. Remove roots and other debris to a depth of 12” below the ground surface or finished grade, whichever is lower.
2. Use only hand methods for grubbing inside drip line of trees Indicated to remain.
3. Fill depressions caused by clearing and grubbing operations with satisfactory soil material, unless further excavation or earthwork is indicated in accordance with Section 31 00 00 “Earthwork”.

D. Removal of Improvements: Remove existing above grade and below grade improvements as indicated and as necessary to facilitate new construction, and other work as indicated.

3.2 DISPOSAL OF WASTE MATERIALS

A. Burning: Burning is not permitted.

B. Removal from Project Site: Remove waste materials and unsuitable or excess topsoil from Project Site and dispose of off-site in a legal manner.

END OF SECTION 31 10 00

SECTION 31 31 16 - TERMITE CONTROL

PART 1 - GENERAL

1.1 WORK INCLUDED

A. This work includes providing termite protection by means of chemical barriers at all under slab areas and at external perimeter foundations of building structures.

1.2 SUBMITTALS

A. Submit information or products from manufacturer indicating EPA approval and application recommendations.

1.3 GUARANTEE

A. Upon completion of the soil treatment and as a condition for its final acceptance, the Subcontractor shall furnish to the Owner, a written guarantee that the Subcontractor guarantees the effectiveness of the soil treatment against termite infestation for a period of not less than 5 years from date of substantial completion. Any evidence of infestation within the guarantee period will require treatment without cost to the Owner.

B. The guarantee shall be perpetually renewable at the Owner's option for the life of the buildings at a premium charge consistent with those charged by competitive firms.

C. The Warranty must cover retreat and complete repair and/or replacement of any damaged items.

PART 2 - PRODUCTS

2.1 CHEMICAL CONCENTRATION

A. Chemical and concentration shall be EPA approved products in strength per manufacturer's recommendations. The same chemical shall be used throughout the entire site.

PART 3 - EXECUTION

3.1 INSPECTION OF SURFACES

A. Subcontractor shall inspect all installation conditions and request the Contractor to correct any conditions, which may affect this work adversely. Commencement of work under this Section will be considered as approval of surfaces.

3.2 SURFACE CONDITIONS

A. At the time soil treatment is applied, the soil shall be in a friable condition with a low moisture content to allow uniform distribution of the chemical throughout the soil adjacent to the wall and other structures.

B. Application of chemicals shall not be made until all preparation for placing of slabs and other pertinent structures have been completed.

C. Treatments shall not be applied during or immediately after heavy rains.

D. Where concrete slabs and other structures are to be placed over vapor barrier, the chemical shall be applied immediately prior to placement of vapor barrier.

E. Treatment of the soil on the exterior sides of foundation walls, grade beams and similar structures shall be coordinated with final grading operations so as to avoid disturbance of the chemical barriers by such operations.

3.3 APPLICATION

A. Application shall be a coarse spray and so as to provide uniform distribution of the chemical on the soil surfaces. All soil surfaces which are disturbed after treatment and before placement of slabs and other covering structures shall be retreated. All application shall be in accordance with manufacturer's recommendations.

B. Agitate solution thoroughly and periodically to maintain uniform strength and apply as follows:

1. Apply an over-all treatment under entire surfaces of floor slab including porch floors and entrance platforms.
2. Apply to critical areas along both sides of foundation wall, along interior foundation walls, and around plumbing.

C. If after the soil treatment and prior to the placement of the concrete slabs bearing on the soil, measurable rain, in excess of 2" falls on the treated soil the process shall be repeated as outlined above. The Subcontractor is advised to consult the local weather bureau prior to application.

END OF SECTION 31 31 16

SECTION 32 11 23 - GRADED AGGREGATE BASE

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of contract, including General and Supplementary Conditions and other Specification Sections, apply to the work of this section.

1.2 DESCRIPTION OF WORK

A. This item shall consist of a base course of graded aggregate constructed on a subgrade prepared in accordance with the specifications and in conformity with the line, grades and typical details as shown on the drawings.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Use graded aggregate material which yields a satisfactory mixture meeting all the requirements of these Specifications after it has been crushed and processed as a part of the mining operations.

B. The Contractor may furnish the material in two sizes of such gradation that, when combined in a central mix plant pugmill, the resultant mixture meets the required specifications.

C. Use graded aggregate base material of uniform quality throughout, substantially free from organic matter, shale, lumps and clay balls, and having a Limerock Bearing Ratio value of not less than 100. Use material retained on the No. 10 sieve composed of aggregate meeting the following requirements:

Soundness Loss, Sodium, Sulfate: AASHTO T 104.....15% Percent
Wear: AASHTO T 96 (Grading A)
Group 1 Aggregates..... 45%
Group 2 Aggregates..... 65%
Group 1: This group of aggregates is composed of limestone, marble, or dolomite.
Group 2: This group of aggregates is composed of granite, gneiss, or quartzite. Use graded aggregate base material meeting the following gradation:

Sieve Size	Percent by Weight Passing
2 inch	100
1 1/2 inch	95 to 100
3/4 inch	65 to 90

3/8 inch	45 to 75
No. 4	35 to 60
No. 10	25 to 45
No. 50	5 to 25
No. 200	0 to 10

D. For Group 1 aggregates, ensure that the fraction passing the No. 40 sieve has a Plasticity Index (AASHTOT 90) of not more than 4.0 and a Li quid Limit (AASHTO T 89) of not more than 25, and contains not more than 67% of the weight passing the No. 200 sieve.

E. For Group 2 aggregates, ensure that the material passing the No. 10 sieve has a sand equivalent (AASHTO T 176) value of not less than 28.

F. The Contractor may use graded aggregate of either Group 1 or Group 2, but only use one group on any Contract. (Graded aggregate may be referred to hereinafter as "aggregate".)

2.2 EQUIPMENT

A. The aggregate shall be spread by mechanical rock spreaders, equipped with a device which strikes off the aggregate uniformly to laying thickness, and capable of producing an even distribution of the aggregate. All equipment for proper construction of this project shall be in first-class working condition.

PART 3 - EXECUTION

3.1 TRANSPORTING GRADED AGGREGATE

A. The graded aggregate shall be transported to the point where it is to be used, over aggregate previously placed if practical, and dumped on the end of the preceding spread. Hauling over the subgrade and dumping on the subgrade will be permitted when, in the Architect/Engineer's opinion, these operations will not be detrimental to the subgrade.

3.2 SPREADING GRADED AGGREGATE

A. Method of Spreading: The graded aggregate shall be spread uniformly. All segregated areas of fine or coarse aggregate shall be removed and replaced with properly graded aggregate.

B. Number of Courses: When the specified compacted thickness of the base is greater than six inches, the base shall be constructed in two courses. The thickness of the first course shall be approximately one-half the total thickness of the finished base, or enough additional material added to bear the weight of the

construction equipment without disturbing the subgrade. When compacted thickness is six inches or less, graded aggregate shall be placed in one lift.

3.3 COMPACTING AND FINISHING BASE

A. Single-Course Base: After the spreading is completed, the entire surface shall be scarified and then shaped so as to produce the required grade and cross-section, free of scabs and laminations, after compaction.

B. Moisture Content: When the material does not have the proper moisture content to ensure the required density, wetting or drying will be required. When water is added, is shall be uniformly mixed-in by disking to the full depth of the course which is being compacted. Water shall be added before beginning compaction operations. Wetting or drying operations shall involve manipulation, as a unit, of the entire width and depth of the course which is being compacted. This shall be per formed utilizing the speedy moisture meter.

3.4 DENSITY REQUIREMENTS

A. As soon as proper conditions of moisture are attained, the material shall be compacted to a density of not less than 98% of the modified proctor maximum density as determined by AASHTO T-180 (Modified Proctor.)

3.5.2 TESTING SURFACE, PROTECTION, AND MAINTENANCE

A. Density Tests: A minimum of at least one field density test on each course of compacted base shall be performed for every 500 square yards. Additional tests may be made if deemed necessary by the Architect/Engineer.

B. During final compacting operations, if blading of any areas is necessary to obtain the true grade and cross-section, the compacting operations for such areas shall be completed prior to making the density tests on the finished base.

C. Correction of Defects: Contamination of Base Material: If, at any time, the subgrade material should become mixed with the base course materials, the Contractor shall, without additional compensation, dig out and remove the mixture, reshape and compact the subgrade and replace the materials removed with clean base material, which shall be shaped and compacted as specified above.

D. Cracks and Checks: If cracks or checks appear in the base which in the opinion of the Architect/Engineer, would impair the structural efficiency of the base, the Contractor shall remove the cracks or checks by re-scarifying, reshaping, adding base material where necessary, and re-compacting, without additional compensation.

1. Testing Surface: The finished surface of the base course shall be checked to ensure a longitudinally smooth, consistent surface for the placement of the asphalt course(s). All irregularities, greater than 1/4 inch per 15' straight edge test, shall be corrected, after which the entire area shall be re-compacted and tested as specified herein before. In the testing of the surface, the measurements will not be taken in small holes caused by individual pieces of rock having been pulled out by the grader.

E. Thickness Requirements:

1. Measurements: Thickness of the base shall be measured at intervals in such a manner that each test represents 500 square yards of pavement, or as otherwise directed by the Architect/Engineer. Measurements shall be taken at various points on the cross-section, through holes not less than three inches in diameter.
2. Areas Requiring Correction: Where the compacted base is deficient by more than ½ inch from the thickness called for in the plans, the Contractor shall correct such areas. The affected areas shall then be brought to the required state of compaction and to the required thickness and cross-section.

END OF SECTION 32 11 23

SECTION 32 12 13 – CONCRETE SIDEWALKS AND CURBS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and General Provisions of the Contract, including General and Supplementary Conditions and other Specification Sections, apply to this Section.

B. Florida Department of Transportation (FDOT), *FDOT Material's Manual, Chapter 9.2, Volume II, FDOT Standard Specifications for Road and Bridge Construction, Section 346, 347, 350, 400, 522, & 925, Latest Edition.*

1.2 SUMMARY

This Section includes concrete work for the following:

1. Roadways
2. Parking lots
3. Curbs and gutters
4. Walkways
5. Pads
6. Flumes
7. Curb Ramps
8. Cast in Place Structures

1.3 SUBMITTALS

A. Product data for proprietary materials and items, including reinforcement and forming accessories, admixtures, joint systems, curing compounds, and others.

B. Design mixes for each class of concrete. Include revised mix proportions when characteristics of materials, project conditions, weather, test results, or other circumstances warrant adjustments.

C. Material certificates in lieu of material laboratory test reports when permitted by the Architect/Engineer. Material certificates shall be signed by manufacturer and Contractor certifying that each material item complies with or exceeds requirements. Provide certification from admixture manufacturers that chloride content complies with requirements.

1.4 PROJECT CONDITIONS

A. Utilize flagmen, barricades, warning signs and warning lights as required or as directed by the Architect/Engineer to provide safe passage for pedestrians and motor vehicles.

PART 2 - PRODUCTS

2.1 GENERAL REQUIREMENTS

A. Concrete shall conform to requirements of FDOT Standard Specification, Sections 346, 347, & 522 for curbs, gutters, sidewalks, structures and miscellaneous concrete.

B. Concrete for pavement shall conform to requirements of FDOT Standard Specification, Section 350.

C. Curb Ramps shall conform to FDOT Standard Index 304.

2.2 REINFORCING MATERIALS

A. Reinforcing Bars and Tie Bars: ASTMA 615, Grade 60, deformed.

B. Welded Steel Wire Fabric: ASTM A 185.

1. Furnish in flat sheets, not rolls.

C. Deformed-Steel Welded Wire Fabric: ASTMA 497.

D. Fabricated Bar Mats: Welded or clip-assembled steel bar mats, A STM A 184. Use ASTMA 615, Grade 60 steel bars, unless otherwise indicated.

E. Joint Dowel Bars: Plain steel bars, ASTMA 615, Grade 60. Cut bars true to length with ends square and free of burrs.

F. Hook Bolts: ASTM A 307, Grade A bolts, internally and externally threaded. Design hook bolt joint assembly to hold coupling against pavement form and in position during concreting operations, and to permit removal without damage to concrete or hook bolt.

G. Supports for Reinforcement: Chairs, spacers, dowel bar supports and other devices for spacing, supporting, and fastening reinforcing bars, welded wire fabric, and dowels in place. Use wire bar-type supports complying with CRSI specifications. Use supports with sand plates or horizontal runners where base material will not support chair legs.

2.3 CONCRETE MATERIALS

A. Portland Cement: Type I, Type IP, Type IS, Type IP (MS), Type II, or Type III.

1. Use one brand of cement throughout Project.
2. All concrete shall develop a 28-day compressive strength of 3000 psi for non - structural (NS). If any concrete should fail to meet the strength requirement the structure shall be removed as necessary to remove the defective concrete and shall then be rebuilt at the Contractor's expense.

B. Fly Ash: ASTM C 618, Class C or Class F.

C. Normal-Weight Aggregates: ASTM C 33, Class 4, and as follows. Provide aggregates from a single source.

1. Maximum Aggregate Size: 1-1/2 inches.
2. Do not use fine or coarse aggregates that contain substances that cause spalling.
3. Local aggregates not complying with A STM C 33 that have been shown to produce concrete of adequate strength and durability by special tests or actual service may be used when acceptable to Engineer.

D. Water: Potable.

E. Fiber Reinforcement: Synthetic fibers engineered and designed for secondary reinforcement of concrete slabs, complying with ASTM C 1116, Type III.

2.4 ADMIXTURES

A. Provide concrete admixtures that contain not more than 0. 01 per cent chloride ions.

B. Air-Entraining Admixture: A STM C 260, certified by manufacturer to be compatible with other required admixtures.

C. Water-Reducing Admixture: ASTM C 494, Type A.

D. High-Range Water-Reducing Admixture: ASTM C 494, Type F or Type G.

E. Water-Reducing and Accelerating Admixture: ASTM C 494, Type E.

F. Water-Reducing and Retarding Admixture: ASTM C 494, Type D.

2.5 CONCRETE MIX

A. Prepare design mixes for each type and strength of normal-weight concrete per FDOT Standard Specification, Section 346-6.2 and FDOT Material's Manual, Chapter 9. 2, Volume II. Use a qualified independent testing laboratory for preparing and reporting proposed mix designs.

B. Fiber Reinforcement: Add to mix at rate of 1. 5lb per cu. yd., unless manufacturer recommends otherwise.

C. Adjustment to Concrete Mixes: Mix design adjustments may be requested by Contractor when characteristics of materials, project conditions, weather, test results, or other circumstances warrant.

2.6 CONCRETE MIXING

A. Ready-Mixed Concrete: Comply with requirements of FDOT Standard Specification, Section 346-7 and FDOT Material's Manual, Chapter 9.2, Volume II.

PART 3 - EXECUTION

3.1 SURFACE PREPARATION FOR CONCRETE PAVEMENT

A. Proof-roll prepared base or subgrade surface to check for unstable areas and verify need for additional compaction. Do not begin concrete work until such conditions have been corrected and are ready to receive paving.

B. Remove loose material from compacted subbase surface immediately before placing concrete.

3.2 EDGE FORMS AND SCREED CONSTRUCTION

A. Set, brace, and secure edge forms, bulkheads, and intermediate screed guides to required lines, grades, and elevations. Install sufficient forms to allow continuous progress of work and so that forms can remain in place at least 24 hours after concrete placement.

B. Check completed formwork and screeds for grade and alignment to following tolerances:

1. Top of Forms: Not more than 1/8 inch in 10 feet.
2. Vertical Face on Longitudinal Axis: Not more than 1/4 inch in 10 feet.

C. Clean forms after each use and coat with form release agent as required ensuring separation from concrete without damage.

3.3 PLACING REINFORCEMENT

A. General: Comply with Concrete Reinforcing Steel Institute's recommended practice for "Placing Reinforcing Bars" for placing and supporting reinforcement. Comply with FDOT Standard Specification, Section 350-7.

B. Clean reinforcement of loose rust and mill scale, earth, ice, or other bond-reducing materials.

C. Arrange, space, and securely tie bars and bar supports to hold reinforcement in position during concrete placement. Secure reinforcement against displacement by formwork, construction, or concrete placement operations. Locate and support reinforcing by metal chairs, runners, bolsters, spacers and hangers, as required. Set wire ties so ends are directed into concrete, not toward exposed concrete surfaces. Maintain minimum cover to reinforcement.

D. Install welded wire fabric in lengths as long as practicable. Lap adjoining pieces at least one full mesh and lace splices with wire. Offset laps of adjoining widths to prevent continuous laps in either direction. Use of chairs is required. Welded wire fabric shall not be "pulled" to center of slab.

E. Install fabricated bar mats in lengths as long as practicable. Handle units to keep them flat and free of distortions. Straighten bends, kinks, and other irregularities or replace units as required before placement. Set mats for a minimum 2-inch overlap to adjacent mats.

3.4 JOINTS

A. General: Construct control (contraction) joints, construction, and isolation joints true to line with faces perpendicular to surface plane of concrete. Construct transverse joints at right angles to the centerline, unless indicated otherwise. When joining existing paving, place transverse joints to align with previously placed joints, unless indicated otherwise.

B. Control (Contraction) Joints: Control joints are grooved, formed, or sawed into sidewalks, driveways and concrete pavements so that cracking will occur in these joints randomly. If not specified on drawings, intervals shall be not greater than 10 feet or less than 5 feet. Construct control joints for a depth equal to at least 1/4 of the concrete thickness, as follows:

1. Tooled Joints: Form contraction joints in fresh concrete by grooving and finishing each edge of joint with a radiused jointer tool.
2. Sawed Joints: Form contraction joints with power saws equipped with shatterproof abrasive or diamond-rimmed blades. Cut 1/8-inch-wide joints into hardened concrete when cutting action will not tear, abrade, spawl or otherwise dam age surface and before development of random contraction cracks.
3. Inserts: Form contraction joints by inserting pre-molded plastic, hardboard, or fiberboard strips into fresh concrete until top surface of strip is flush with paving surface. Radius each joint edge with a jointer tool. Carefully remove strips or caps of two-piece assemblies after concrete has hardened. Clean groove of loose debris.

C. Construction Joints: Set construction joints at side and end terminations of paving and at locations where paving operations are stopped for more than
½ hour, unless paving terminates at isolation joints.

1. Provide preformed galvanized steel or plastic keyway-section forms or bulkhead forms with keys, unless indicated otherwise. Embed keys at least 1-1/2 inches into concrete.

2. Continue reinforcement across construction joints unless indicated otherwise.

D. Expansion Joints: Form expansion joints of preformed joint filler strips abutting concrete curbs, catch basins, manholes, inlets, structures, walks, other fixed objects, and where indicated.

1. Locate expansion joints at intervals of 30 feet, unless indicated otherwise or directed by Architect/Engineer.
2. Extend joint fillers full width and depth of joint, not less than ½ inch or more than 1 inch below finished surface where joint sealant is indicated. Place top of joint filler flush with finished concrete surface when no joint sealant is required.
3. Furnish joint fillers in one-piece lengths for full width being placed wherever possible. Where more than one length is required, lace or clip joint filler sections together.
4. Protect top edge of joint filler during concrete placement with a metal, plastic, or other temporary preformed cap. Remove protective cap after concrete has been placed on both sides of joint.

E. Filler and Sealants: Submit specifications to Architect/Engineer for approval.

F. Install dowel bars and support assemblies at joints where indicated. Lubricate or asphalt-coat one half of dowel length to prevent concrete bonding to one side of joint.

3.5 CONCRETE PLACEMENT

A. Comply with requirements of FDOT Standard Specification, Sections 350-8 and 400-7 for placing concrete.

B. Deposit and spread concrete in a continuous operation between transverse joints. Do not push or drag concrete into place or use vibrators to move concrete into place. No concrete will be placed on concrete which has hardened sufficiently to cause the formation of seams or planes of weakness. Deposit concrete as nearly as practical to its final location to avoid segregation. When concrete placing is interrupted for more than ½ hour, place a construction joint.

C. Use a bonding agent at locations where fresh concrete is placed against hardened or partially hardened concrete surfaces.

D. Consolidate concrete by mechanical vibrating equipment supplemented by hand-spading, rodding, floating, or tamping. Use equipment and procedures to consolidate concrete complying with F DOT Standard Specification, Section 350-9.

E. Screed paved surfaces with a straightedge and strike off. Use bull floats to form a smooth surface plane before excess moisture or bleed water appears on the surface. Do not further disturb concrete surfaces prior to beginning finishing operations.

F. Place concrete in two operations; strike off initial pour for entire width of placement and to the required depth below finish surface. Lay welded wire fabric or fabricated bar mats immediately in final position. Place top layer of concrete, strike off, and screed. Remove and replace portions of bottom layer of concrete that have been placed more than 15 minutes without being covered by top layer or use bonding agent if acceptable to Architect/Engineer.

G. Curbs and Gutters: Shall be constructed in accordance with FDOT Specs. When automatic machine placement is used for curb and gutter placement, submit revised mix design and laboratory test results that meet or exceed requirements. Produce curbs and gutters to required cross section, lines, grades, finish, and jointing as specified for formed concrete. If results are not acceptable, remove and replace with formed concrete.

H. Slip-Form Pavers: When automatic machine placement is used for paving, submit revised mix design and laboratory test results that meet or exceed requirements. Produce paving to required thickness, lines, grades, finish, and jointing as required for formed paving. Compact subgrade of sufficient width to prevent displacement of paver machine during operations.

I. When adjoining pavement lanes are placed in separate pours, do not operate equipment on concrete until pavement has attained 85 percent of its 28-day compressive strength, or sufficient strength to carry loads without damage or injury. Maturity Method Testing, as outlined in FDOT Standard Specification, Section 353-10.2, should be used to determine concrete strength.

J. Cold-Weather Placement: Comply with provisions of FDOT Standard Specification, Sections 346-7.4 and 400-7.1.1. Protect concrete work from physical damage or reduced strength that could be caused by frost, freezing actions, or low temperatures.

K. Hot-Weather Placement: P lace concrete complying with FDOT Standard Specification, Sections 346-7.5 and 400-7.1.2, and as specified when hot weather conditions exist.

3.6 CONCRETE FINISHING

A. Float Finish: Begin floating when bleed-water sheen has disappeared and the concrete surface has stiffened sufficiently to permit operations. Float surface with power-driven floats or by hand -floating i f ar ea i s s mall or inaccessible to power units. Finish surfaces to true planes within a tolerance of 1/8 inch in 10 feet as determined by a 10-foot-long straightedge placed anywhere on the surface in any direction. Cut down high spots and fill low spots. Refloat surface immediately to a uniform granular texture.

1. Medium-to-Fine-Textured Broom Finish: Draw a soft bristle broom across concrete surface perpendicular to line of traffic to provide a uniform fine line texture finish.

2. Tine Finishes: Apply to curb cut ramps and other areas as noted on the drawings. Finish shall be applied by an approved hand method and shall consist of transverse grooves which are 0.03 to 0.12 inch in width and 0.10 to 0.15 inch in depth, spaced at approximately ½ inch center to center.

B. Final Tooling: Tool edges of paving, gutters, curbs, and joints formed in fresh concrete with a jointing tool to the following radius. Repeat tooling of edges and joints after applying surface finishes. Eliminate tool marks on concrete surfaces. Radius: ½ inch.

3.7 CONCRETE PROTECTION AND CURING

General: Protect freshly placed concrete from premature drying and excessive cold or hot temperatures. Comply with the recommendations of FDOT Standard Specification, Sections 350-11 and 925.

3.8 QUALITY CONTROL TESTING

A. A qualified, accredited testing and inspection laboratory, under the direction of a Professional Engineer, licensed in the State of Florida, shall sample materials, perform tests, and submit test reports during concrete placement as follows:

1. Sampling Fresh Concrete: ASTM C 172, except modified for slump to comply with A STM C 94. All concrete should be sampled by ACI certified technicians.

    a. Slump: ASTM C 143; one test at point of placement for each compressive-strength test but no less than one test for each day's pour of each type of concrete. Additional tests will be required when concrete consistency changes.

    b. Air Content: ASTM C 231, pressure method; one test for each compressive-strength test but no less than one test for each day's pour of each type of air-entrained concrete.

    c. Concrete Temperature: ASTM C 1064; one test hourly when air temperature is 40 deg F (4 deg C) and below and when 80 deg F (27 deg C) and above, and one test for each set of compressive-strength specimens.

    d. Compression Test Specimens: ASTM C 31; one set of four standard cylinders for each compressive- strength test, unless directed otherwise. Mold and store cylinders for laboratory-cured test specimens except when field-cured test specimens are required.

    e. Compressive-Strength Tests: ASTM C 39; one set for each day's pour of each concrete class, plus one set for each additional 50 cu. y d. Test one specimen at 7 day s, two specimens at 28 days, and retain one specimen in reserve for earlier or later testing if required. Class I Concrete NS compression test specimens cylinders are not required.

    f. Contractor shall repair the area to the satisfaction of the Engineer where material was removed for testing purposes. Should any work or materials fail to meet the requirements set forth in the plans and specifications, contractor shall pay for retesting of same.

2. Basis for acceptance of concrete will be per FDOT Standard Specification, Sections 346-8 through 346-11.

B. Test results will be reported in writing to the Architect/Engineer, within 24 hours of testing. Reports of compressive strength tests shall contain the Project identification name and number, date and location of concrete placement, name of concrete testing laboratory, concrete type and class, design compressive strength at 28 days, concrete mix proportions and materials, compressive breaking strength, and type of break for both 7-day and 28-day tests.

C. Nondestructive Testing: Non-destructive test methods may be used with approval of the Engineer, but shall not be used as the sole basis for acceptance or rejection.

D. Additional Tests: The testing laboratory will make additional tests of the concrete when test results indicate slump, air entrainment, concrete strengths, or other requirements have not been met, as directed by Engineer. Testing laboratory may conduct tests to determine adequacy of concrete by cored cylinders complying with ASTM C 42, or by other methods as directed.

3.9 REPAIRS AND PROTECTION

A. Remove and replace concrete work that is broken, damaged, or defective, or does not meet the requirements of this Section.

B. Drill test cores where directed by the Architect/Engineer when necessary to determine magnitude of cracks or defective areas. Fill drilled core holes in satisfactory concrete areas with Portland cement concrete bonded to paving with epoxy adhesive.

C. Protect concrete from damage. Exclude traffic from concrete pavement for at least 14 days after placement. When construction traffic is permitted, maintain concrete as clean as possible by removing surface stains and spillage of materials as they occur.

D. Maintain concrete work free of stains, discoloration, dirt, and other foreign material. Sweep concrete paving not more than 2 days prior to date scheduled for Substantial Completion inspections.

E. The Contractor shall include the cost for Cleaning and Sealing Joints in the cost of the newly constructed pavement for: (1) transverse and longitudinal joint construction for new pavement; and (2) abutting joints between existing pavement and new pavement.

END OF SECTION 32 12 13

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SECTION 32 17 23 – PAVEMENT MARKINGS

PART 1 – GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and General Provisions of the Contract, including General and Supplementary Conditions and other Specifications Sections, apply to work of this Section.

B. Unless otherwise specified on the plan sheets or in other sections of this contract, all materials and work shall conform to the applicable requirements in the following documents:

1. Florida Department of Transportation *Roadway and Traffic Design Standards*, Indices 17344 through 17359, *Latest Edition*.
2. Florida Department of Transportation *Standard Specifications for Road and Bridge Construction*, Sections 701, 705, 706, 710, 711, 970, 971, and 993, *Latest Edition*.
3. USDOT, Federal Highway Administration *Manual on Uniform Traffic Control Devices for Streets and Highways*, *Latest Edition*.

1.2 DESCRIPTION OF WORK

A. The work under this section includes the installation and removal of temporary and permanent pavement markings, textured pavement, reflective markers, galvanized posts, flex posts, delineators, wheel stops, and audible and vibratory pavement markings. The Contractor shall furnish all labor, materials, tools, supplies, equipment, and machinery necessary to fully complete the work shown in the plans and in these specifications. Pavement marking notes on plan sheets shall take precedence over and modify conflicting Technical Specifications.

PART 2 – PRODUCTS

2.1 MATERIALS

A. All materials shall be new and of good quality unless otherwise specified. The Contractor, at his own expense and if requested by the Architect/Engineer, shall furnish samples of material and/ or shall certify that the material meets all FDOT requirements. All material or work that has been rejected shall be remedied by the Contractor at his own expense and without delay. If the Contractor fails to promptly remove and/or dispose of rejected material and replace the same, the Architect/Engineer may remove and replace the same and deduct the cost of the work from the contract amount.

2.2 TEMPORARY PAVEMENT MARKINGS

A. Materials for temporary pavement marking shall meet all requirements of FDOT Specs, Section 710, *Latest Edition.*

2.3 PERMANENT PAVEMENT MARKINGS

A. Materials for permanent pavement markings shall meet all requirements of FDOT Specs, Section 711, *Latest Edition*.

2.4 REFLECTIVE PAVEMENT MARKERS

A. Materials for reflective pavement markers shall meet all requirements of FDOT Specifications, Sections 706, *Latest Edition*.

2.5 OBJECT MARKERS AND DELINEATORS

A. Materials for object markers shall meet all requirements of FDOT Specifications, Sections 705, *Latest Edition*.

PART 3 – EXECUTION

3.1 GENERAL

A. All pavement markings shall be applied in accordance with FDOT requirements.

3.2 TEMPORARY PAVEMENT MARKINGS

A. Temporary pavement markings shall be installed at the end of each day on new pavement surfaces and shall be maintained until permanent markings are installed.

3.3 PERMANENT PAVEMENT MARKINGS

A. Permanent pavement markings, including painted stripes and thermoplastic stripes installed as shown in the plans. Materials and installation shall conform to applicable standards in the documents referenced in Section 1.1.

B. Installation of permanent markings on all final asphaltic concrete surfaces shall not be accomplished prior to 14 calendar days, nor later than 30 calendar days, after placement of the final surfaces.

END OF SECTION 32 17 23

SECTION 32 34 00 - RIPRAP

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of Contract, including General and Supplementary Conditions and other Specification Sections, apply to work of this Section.

B. Florida Department of Transportation, *Standard Specifications for Road and Bridge Construction*, *Section 530*, and *Design Standard Index 281*, *Latest Edition*.

1.2 DESCRIPTION OF WORK

A. This section shall cover the work of furnishing and constructing the Riprap which shall consist of a protective course of stone or other approved materials on embankment slopes, in channels, or other work as shown on the plans or directed, with or without a Filter Blanket, all in accordance with these Specifications and in conformity with the lines and grades noted in the plan details.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Rubble\Stone Riprap shall comply with Florida Department of Transportation *Standard Specification 530-2.2*

B. Banks and shore protection shall comply with Florida Department of Transportation *Standard Specification 530-2.2.1*.

C. Ditch lining shall comply with Florida Department of Transportation *Standard Specification 530-2.2.2*.

D. Broken stone and broken concrete shall comply with Florida Department of Transportation *Standard Specification 530-2.2.3*.

E. Geotextile fabric shall comply with Florida Department of Transportation *Standard Specification 514* and Florida Department of Transportation *Design Standards, Index No. 199* according to its application.

F. Bedding stone shall comply with Florida Department of Transportation *Standard Specification 530-2.3*.

PART 3 - EXECUTION

3.1 EXECUTION

A. Construction Requirements:

1. General: All slopes to be treated with riprap shall be trimmed to the lines and grades indicated by the plans or directed, such that the plan grades are the top of the placed riprap, unless otherwise noted. Loose material shall be compacted by methods approved by the Architect/Engineer or removed.
2. Slopes which require a filter blanket under the riprap shall, in addition to the above, be prepared as noted below.

    a. Placement of any riprap on a filter blanket shall be by such means that will not damage or destroy the blanket. Any damage to the blanket shall be repaired without additional compensation.
    b. Unless directed otherwise by the Architect/Engineer or shown by plan details, all outer edges and the top of riprap where the riprap terminates shall be formed so that the surface of the riprap will be embedded and even with the surface of the ground and/or slope.
    c. All riprap construction shall begin at the bottom of the slope and progress upward.
    d. Filter Blanket: Unless otherwise specified by the plans or ordered in writing, a fabric blanket will not be allowed for soils with 85% by weight passing the No. 200 sieve (U.S. Std.)
    e. The bedding stone shall be constructed in accordance with Florida Department of Transportation Specification 530-3.3.
    f. Foundation Preparation: Areas on which filter fabrics are to be placed shall be uniformly trimmed and dressed to conform to cross- sections shown by the plans.

B. Plastic Filter Fabric (Geotextile):

1. Plastic filter fabric shall be placed in the manner and at the locations shown in the plans or as directed by the Architect/Engineer. At the time of installation, fabric shall be rejected if it has defects, rips, holes, flaws, deterioration or damage incurred during manufacturer, transportation or storage. The fabric shall be placed with the long dimension parallel to the centerline of the channel or shoreline unless otherwise directed by the Architect/Engineer, and shall be laid smooth and free of tension, stress, folds, wrinkles or creases. The strips shall be placed to provide a minimum width of 24 inches of overlap for each joint with the upstream strip of fabric overlapping the downstream strip. Overlap joints and seams shall be measured as a single layer of cloth. Securing pins with washers shall be inserted through both strips of overlapped cloth as recommended by the manufacturer, but no greater than the following intervals along a line through the midpoint of the overlap.

Pin Spacing	Slope
2 ft.	Steeper than 3:1
3 ft.	3:1 to 4:1
5 ft.	Flatter than 4:1

2. The fabric shall be turned down and buried two feet at all exterior limits except where a stone-filled key is provided below natural ground.
3. Additional pins regardless of location shall be installed as necessary to prevent any slippage of the filter fabric. Overlaps in the fabric shall be placed so that any upstream strip of fabric will overlap the downstream strip. Should the Architect/Engineer direct that the fabric be placed with the long dimension perpendicular to the centerline of the channel or shoreline, the lower strip of fabric shall underlap the next higher strip.
4. Each securing pin shall be pushed through the fabric until the washer bears against the fabric and secures it firmly to the foundation. The fabric shall be protected at all times during construction from contamination by surface runoff and any fabric so contaminated shall be removed and replaced with uncontaminated fabric. Any damage to the fabric during its installation or during placement of riprap shall be replaced by the Contractor. The work shall be scheduled so that the manufacturer's recommendation for UV exposure is not exceeded or 5 days does not expire between placement of the fabric and the covering of the fabric with riprap, whichever is less.

3.2 STONE AND CONCRETE RUBBLE RIPRAP

A. General: Unless otherwise shown by plan details or directed, stone or concrete shall not be placed on slopes steeper than the natural angle of repose of the riprap material.

B. Placement of stone or concrete may, unless otherwise noted hereinafter, be placed by methods and equipment suitable for the purpose of placing the riprap in accordance with the requirements for the class riprap involved without damaging any existing facility or construction material.

C. The stone or concrete shall be placed in such a manner as to produce a reasonably well graded mass of rock with the minimum practical percentage of voids. Stone or concrete shall be laid with close broken joints and resting on the embankment slope. The top of the riprap shall be constructed to the lines, grades and thickness shown by the plans or as directed.

D. Riprap shall be placed to its full course thickness in one operation and in such a manner as to avoid displacing or damaging the filter blanket material. The larger stone or concrete shall be well distributed and the entire mass of stone or concrete, in their final position, shall conform to a reasonable uniform gradation. The finished riprap shall be free from objectionable pockets of small stone or concrete and clusters of larger stone or concrete.

E. Open joints shall be filled with spalls, or small stone or concrete in such manner that all stone or concrete are tightly wedged or keyed. Placing riprap by dumping into chutes or by other methods likely to cause segregation of sizes will not be permitted. The desired distribution of the various sizes of stone or concrete throughout the mass shall be obtained by selective loading of the material at the source, by controlled dumping of successive loads during final placing, or by other methods of placement which will produce the specified results. The individual pieces of stone or concrete in each horizontal course shall be laid so that they will not break away from embankment.

F. Rearranging of individual stone or concrete by mechanical equipment, or by hand, will be required to the extent necessary to obtain a reasonably well graded distribution of stone or concrete as specified above.

3.3 CLEAN UP

A. Before final inspection and acceptance, the Contractor shall remove all excess material from site and restore all disturbed areas to as good a condition as existed before work started.

3.4 MAINTENANCE

A. The Contractor shall maintain all riprap until the contract work is accepted, and shall replace, without additional compensation, any damaged or missing riprap.

END OF SECTION 32 34 00

SECTION 32 50 00 – SUPERPAVE ASPHALT CONCRETE

PART 1 - GENERAL

1.1 GENERAL

A. Construct a Type SP Asphalt pavement as specified on the plans.

1.2 LAYER THICKNESSES

A. Use only fine graded Type SP asphalt mixes. Fine graded mixes are defined as having a gradation that passes above the restricted zone when plotted on an FHWA 0.45 Power Gradation Chart.

B. FINE MIXES: The allowable structural layer thicknesses for fine Type SP Asphalt Concrete mixtures are as follows:

Type SP 9.5	1-1 ½ inches
Type SP 12.5	1 ½ - 2 ½ inches
Type SP 19.0	2-3 inches

C. In addition to the minimum and maximum thickness requirements, the following restrictions are placed on fine mixes when used as a structural course:

D. Type SP 9.5 - Limited to the final (top) structural layer, one layer only

E. Type SP 12.5 - May not be used in the first layer of courses over 3 1/ 2 inches thick, nor in the first layer of courses over 2 3/4 inches thick on limited access facilities.

F. The thickness of the new pavement may be checked by core samples, as determined by the Architect's Engineer of Record. The Contractor shall be required to correct any deficiency either by replacing the full thickness; or overlaying the area as directed by the Engineer of Record. All base failures shall be corrected prior to asphalt installation.

G. Type SP 19.0 - May not be used in the final (top) structural layer.

PART 2 - PRODUCTS

2.1 GENERAL REQUIREMENTS

A. Meet the material requirements specified in FDOT Standard Specifications Division III. Specific references are as follows:

1. Superpave PG Asphalt Binder or Recycling Agent – Sections 916-1, 916-2
2. Coarse Aggregate, Stone, Slag or Crushed Gravel – Section 901
3. Fine Aggregate – Section 902

B. Aggregates utilized must be in accordance with FDOT Qualified Products List

2.2 GRADATION REQUIREMENTS

A. Combine the coarse and fine aggregate in proportions that will produce an asphalt mixture meeting all of the requirements defined in this Specification and conform to the graduation requirements at design as defined in Table 1 below. Aggregates from various sources may be combined.

Table 1
Aggregate Gradation Control Points
(Gradation Design Ranges)

	Type SP Asphalt Mixture (Percent Passing)					
	SP 9.5		SP 12.5		SP 19.0	
Sieve Size	Min.	Max.	Min.	Max.	Min.	Max
1 inch	-	-	-	-	100	-
3/4 inch	-	-	100	-	90	100
1/2 inch	100	-	90	100	-	90
3/8 inch	90	100	-	90	-	-
No. 4	-	90	-	-	-	-
No. 8	32	67	28	58	23	49
No. 200	2	10	2	10	2	8
For additional information, refer to AASHTO M-323-04, Table 3						

2.3 RESTRICTED ZONE

A. The gradation identified in 2.2 shall pass above the restricted zone specified in Table 2 below.

Table 2
Aggregate Gradation Restricted Zone (Design Only)

Sieve Size within Restricted Zone	Boundaries of Restricted Zone Type SP Asphalt Mixture (Percent Passing)					
	SP 9.5		SP 12.5		SP 19.0	
	Min.	Max.	Min.	Max.	Min.	Max
No. 4	-	-	-	-	-	-
No. 8	47.2	47.2	39.1	39.1	34.6	34.6
No. 16	31.6	37.6	25.6	31.6	22.3	28.3
No. 30	23.5	27.5	19.1	23.1	16.7	20.7
For additional information, refer to AASHTO M-323-04, Table 4						

2.4 AGGREGATE CONSENSUS PROPERTIES

A. Meet the following consensus properties at design for the aggregate blend:

1. Coarse Aggregate Angularity: When tested in accordance with ASTM D 5821, meet the coarse aggregate angularity requirement defined in Table 3 below.

Table 3 Coarse Aggregate Angularity Criteria (Minimum Percent Fractured Faces)			
Depth of Top of Pavement Layer From Surface			
≤4 inches		>4 inches	es
1 or More Fractured Faces (%)	2 or More Fractured Faces (%)	1 or More Fractured Faces (%)	2 or More Fractured Faces
85	80	60	65
For additional information, refer to AASHTO M-323-04, Table 5			

2. Fine Aggregate Angularity: When tested in accordance with AASHTO T -304, meet the fine aggregate angularity requirement defined in Table 4 below.

Table 4 Fine Aggregate Angularity Criteria	
Depth of Top of Pavement Layer From Surface	
≤4 inches	>4 inches
Minimum Uncompacted Void Content (%)	Minimum Uncompacted Void Content (%)
45	40
For additional information, refer to AASHTO M-323-04, Table 5	

3. Flat and Elongated Particles: When tested in accordance with ASTM D 4791, use a ratio of maximum to minimum dimensions of 5:1 and do not exceed 10% as the maximum amount of flat and elongated particles.

2.5 USE OF RECLAIMED (MILLED) ASPHALT PAVEMENT

A. General Requirements: Reclaimed Asphalt Pavement (RAP) may be used as a component material of the asphalt mixture subject to the following:

1. The Contractor assumes responsibility for the design of asphalt mixes which incorporate RAP as a component material.
2. For design purposes, the Contractor assumes responsibility for establishing accurate specific gravity values for the RAP material. This may be accomplished by one of the following methods:

a. Calculation of the bulk specific gravity value based upon the effective specific gravity of the RAP, determined on the basis of the asphalt binder content and maximum specific gravity. The Architect's Engineer of Record will approve the estimated asphalt binder absorption value used in the calculation.
b. Testing of the extracted aggregate obtained through a vacuum extraction or ignition oven extraction.

3. The amount of RAP material used in the mix is not to exceed 50% by weight of total aggregate.
4. Use a grizzly or grid over the RAP cold bin, in-line roller crusher, screen, or other suitable means to prevent oversized RAP material from showing up in the completed recycled mixture. If oversized RAP material appears in the completed recycled mix, take the appropriate corrective action immediately. If the appropriate corrective actions are not taken immediately, plant operations should be stopped.
5. Provide stockpiled RAP material that is reasonably consistent in characteristics and contains no aggregate particles that are soft or conglomerates of fines.
6. Provide RAP, having minimum average asphalt content of 4.0% by weight of total mix. The Architect's Engineer of Record may sample the stockpile to verify that this requirement is met.

B. Binder for Mixes with RAP: Select the appropriate binder based on the table below. The Architect's Engineer of Record reserves the right to change binder type and grade at design based on the characteristics of the RAP binder, and reserves the right to make changes during production. Maintain the viscosity of the recycled mixture within the range of 4,000 to 12,000 poises. Obtain a sample of the mixture for the Engineer of Record within the first 1,000 tons and at a frequency of approximately one per 4,000 tons of mix.

Binder Grade for Mixes Containing RAP	
% RAP	Asphalt Binder Grade
<20	PG 67-22
20-29	PG 64-22
▯▯30	Recycling Agent
Note: When a PG 76-22 Asphalt Binder is called for in the Contract, limit the amount of RAP material used in the mix to a maximum of 15%.	

PART 3 - GENERAL COMPOSITION OF MIXTURE

3.1 GENERAL

A. Compose the asphalt mixture using a combination of aggregate (coarse, fine or mixtures thereof), mineral filler, if required, and asphalt binder material. Size, grade and combine the aggregate fractions to meet the grading and physical properties of the approved mix design. Aggregates from various sources may be combined.

3.2 MIX DESIGN

A. Design the Type SP asphalt mixture in accordance with AASHTO PP-28, except as noted herein, to meet the requirements of this Specification. Use only previously approved designs. Prior to the production of any Type SP asphalt mixture, submit the proposed mix design with supporting test data indicating compliance with all Type SP asphalt mix design criteria.

B. The Architect's Engineer of Record will consider any marked variations from original test data for a mix design or any evidence of inadequate field performance of a mix design as sufficient evidence that the properties of the mix design have changed, and the Engineer of Record will no longer allow the use of the mix design.

1. Grading Requirements: Meet Gradation Design Ranges in PART 2.
2. Gyratory Compaction: Compact the design mixture in accordance with AASHTO TP-4. Use the number of gyrations as defined in the table below.

Type SP Design Gyratory Compactive Effort			
	$N_{initial}$	N_{design}	$N_{maximum}$
SP Mixes	7	75	115

3. Volumetric Criteria: Use an air void content of the mixture at design of 4.0% at the design number of gyrations (N_{design}). Meet the requirements of the table below.

Mixture Densification Criteria

VFA Criteria	
	Design VFA (%)

	% G_{mm}		
	$N_{initial}$	N_{design}	$N_{maximum}$
SP Mixes	$\geq$ 89.0	96.0	$\leq$ 98.0

4. VMA Criteria: Meet the requirements of the table below for Voids in the Mineral Aggregate (VMA) of the mixture at the design number of gyrations.

VMA Criteria	
Type Mix	Minimum VMA (%)
SP 9.5	15.0
SP 12.5	14.0
SP 19.0	13.0

5. VFA Criteria: Meet the requirements of the table below for voids filled with asphalt (VFA) of the mixture at the design number of gyrations.

SP Mixes	65 - 75

6. Dust Proportion: Use an effective dust-to-binder ratio as defined in FDOT Section 334-3.2.5.
7. Moisture Susceptibility: Provide a mixture (4 inch specimens) having a retained tensile strength ratio of at least 0. 80 and a minimum tensile strength (dry and unconditioned) of 100 psi.
8. Additional Information: In addition to the requirements listed above, provide the following information with each proposed mix design submitted for use:

    a. The design number of gyrations (N_{design}).
    b. The source and description of the materials to be used.
    c. The FDOT source number product code of the aggregate components furnished from an FDOT approved source.
    d. The gradation and proportions of the raw materials as intended to be combined in the paving mixture. The gradation of the component materials shall be representative of the material at the time of use. Compensate for any change in aggregate gradation in handling and processing as necessary.
    e. A single percentage of the combined mineral aggregate passing each specified sieve. Degradation of the aggregate due to processing (particularly -No. 200 [-75 µm]) should be accounted for and identified for the applicable sieves.
    f. The bulk specific gravity value for each individual aggregate (and RAP) component as identified in the FDOT aggregate control program.
    g. A single percentage of asphalt binder by weight of total mix intended to be incorporated in the completed mixture, shown to the nearest 0.1%.
    h. A target temperature at which the mixture is to be discharged from the plant and a target roadway temperature (per 30-6.3). Do not exceed a target temperature of 340°F for modified asphalts and 315°F for unmodified asphalts.
    i. Evidence that the completed mixture conforms to all specified physical requirements.
    j. The name, seal, and/or certification of the Mix Designer.

3.3 REVISION OF MIX DESIGN

A. During production, the Contractor may request a target value revision to a mix design, subject to: (1) the target change falls within the limits defined in the table below, (2) appropriate data exists demonstrating that the mix complies with production air voids specification criteria, and (3) the mixture gradation meets the basic graduation requirements defined in 2.2 and 2.3.

Limits for Potential Adjustments to Mix Design Target Values	
Characteristic	Limit from Original Mix Design
No. 8 sieve and Coarser	± 5.0%

No. 16 sieve	± 4.0%
No. 30 sieve	± 4.0%
No. 50 sieve	± 3.0%
No. 100 sieve	▯▯3.0%
No. 200 sieve	▯▯1.0%
Asphalt Binder Content (1)	▯▯0.3%
(1) Reductions to the asphalt binder content will not be permitted if the VMA during production is lower than 1.0% below the design criteria.	

B. Submit all requests for revisions to mix designs, along with supporting documentation, to the Architect's Engineer of Record. In order to expedite the revision process, the request for revision or discussions on the possibility of a revision may be made verbally, but must be followed up by a written request. The initial mix design will remain in effect until a change is authorized by the Engineer of Record. In no case may the effective date of the revision be established earlier than the date of the first communication between the Contractor and the Engineer of Record regarding the revision.

C. A new design mix will be required for any substitution of an aggregate product with a different aggregate code, unless approved by the Architect's Engineer of Record.

3.4 PAVING EQUIPMENT

A. Mechanical Spreading and Screeding Equipment:

1. General: Provide mechanical spreading and screening equipment of an approved type that is self-propelled and can be steered. Equip it with a receiving and distribution hopper and a mechanical screed. Use a mechanical screed capable of adjustment to regulate the depth of material spread and to produce the desired cross-section.
2. Automatic Screed Control: For all asphalt courses, placed with mechanical spreading and finishing equipment, equip the paving machine with automatic longitudinal screed controls of either the skid type, traveling string line type, or non-contact averaging ski type. Ensure that the length of the skid, traveling string line, or non- contact averaging ski is at least 25 feet. On the final layer of base, overbuild, structural, and friction courses, use the joint matcher in lieu of the skid, traveling string line, or non-contact averaging ski on all passes after the initial pass. Furnish a paving machine equipped with electronic transverse screed controls when required by the Contract Documents.
3. Inflation of Tires: When using paving machines equipped with pneumatic tires, the Architect's Engineer of Record may require that the tires be ballasted.
4. Screed Width: Provide paving machines on full width lanes that have a screed width greater than 8 feet. Does not use extendable screed strike-off devices that do not provide preliminary compaction of the mat in place of fixed screed extensions. The Contractor may use a strike-off device on irregular areas that would normally be done by hand and on shoulders 4 feet or less in width. When using the strike-off device on shoulders in lieu of an adjustable screed extension, the Contractor must demonstrate the ability to obtain an acceptable

texture, density, and thickness. When using an extendable screed device to extend the screed's width on the full width lane or shoulder by 24 inches or greater, an auger extension, paddle, or kicker device is required unless the Contractor provides written documentation from the manufacturer that these are not necessary.

5. Motor Graders: Provide two motor graders for spreading widening courses with prior approval from the Architect's Engineer of Record only. Use motor graders that are rated at not less than 6 tons and are self-propelled and power-controlled. Mount them on smooth tread or rib-type tires (no lug types allowed) with a wheel base of at least 15 feet. Equip the front motor grader with a spreader box capable of spreading the mix at the required rate.
6. Steel Rollers:

    a. Steel-Wheeled Rollers: Provide compaction equipment capable of meeting the density requirements described in these Specifications. Provide a tandem steel-wheeled roller weighing a minimum of 8 tons for seal rolling, and for the final rolling, use a separate roller with a minimum weight of 8 tons. Variations from these requirements shall be approved by the Architect's Engineer of Record.
    b. Traffic Rollers: Provide compaction equipment capable of meeting the density requirements described in these specifications. Provide as elf-propelled, pneumatic-tired traffic roller equipped with at least seven smooth-tread, low pressure tires, equipped with pads or scrapers on each tire. Maintain the tire pressure between 50 and 5 5 psi or as specified by the manufacturer. Use rollers with a minimum weight of 6 tons. Do not use wobble-wheeled rollers. Variations from these requirements shall be approved by the Architect's Engineer of Record.
    c. Prevention of Adhesion: Do not allow the mixture to adhere to the wheels of any rollers. Do not use fuel oil or other petroleum distillates to prevent adhesion. Do not use any method which results in water being sprinkled directly on to the mixture.

7. Trucks: Transport the mix in trucks of tight construction, which prevents the loss of material and the excessive loss of heat. Provide each truck with a tarp or other waterproof cover mounted in such a manner that it can cover the entire load when required. When in place, overlap the waterproof cover on all sides so that it can be tied down.

8. Coring Equipment: Furnish a suitable saw or drill for obtaining the required density cores.

9. Hand Tools: Provide the necessary hand tools such as rakes, shovels, etc., and a suitable means for keeping them clean.

PART 4 - CONTRACTOR'S PROCESS CONTROL

4.1 GENERAL

A. Personnel: Provide qualified personnel (certified technician) for sampling, testing (by

certified lab), and/or sign-off by P.E., and inspection of materials and construction activities. Ensure that qualifications are maintained during the course of sampling, testing and inspection.

Construction operations that require a qualified technician must not begin until the Department verifies that the technician is on the CTQP (Construction Training Qualification Program) list of qualified technicians. The CTQP lists are subject to satisfactory results from periodic Independent Assurance evaluations.

B. Calibration of the Gyratory Compactor: Calibrate the Gyratory Compactor in accordance with the manufacturer's recommendations prior to producing the mixture for any project. Check the height calibration, the speed of rotation; ram pressure and angle of gyration.

C. Plant Testing Requirements: During the initial production of a mix design, test mix to ensure proper performance and provide results to the department.

D. Roadway Testing Requirements: Areas that demonstrate concerns of the mix design quality or poor/improper compaction efforts may be subject to additional coring and testing as seen fit by the Architect's Engineer of Record.

E. Extraction Gradation Analysis: Sample the asphalt mixture at the plant and perform extraction test prior to asphalt being delivered to project. The percent asphalt binder content of the mixture will be determined in accordance with FM 5-563 (ignition oven). The gradation of the extracted mixture will be determined in accordance with FM 1-T 030. All test results will be shown to the nearest 0.01. All calculations will be carried to the nearest 0.001 and rounded to the nearest 0.01. All results shall be provided to the department prior to placement of asphalt on any project.

F. Run an extraction gradation analysis on the mixture at a minimum frequency of once per 1,000 tons or a maximum of four consecutive days of paving, whichever comes first.

G. The target gradation and asphalt content will be as shown on the mix design. Any changes in target will require a change in the mix design.

H. If the percentage of asphalt binder deviates from the optimum asphalt binder content by more than 0.55%, or the percentage passing any sieve falls outside the limits in the table below, immediately resample the mix and test to validate the previous test result, and if needed, make the necessary correction. If the results for two consecutive tests deviate from the optimum asphalt binder content by more than 0.55%, or exceed the limits in the table for any sieve, notify the Architect and Engineer of Record and take immediate steps to identify and correct the problem, then resample the mix. If the results from this test deviate from the optimum asphalt binder content by more than 0.55%, or exceed the limits in the table for any sieve, stop plant operations until the problem has been corrected.

Tolerances for Quality Control Tests (Extraction Gradation Analysis)	
Size	Percent Passing
1 inch	7.0
3/4 inch	7.0
1/2 inch	7.0
3/8 inch	7.0
No. 4	7.0
No. 8	5.5
No. 16	5.0
No. 30	4.5
No. 50	4.5
No. 100	3.0
No. 200	2.0

I. Volumetric Control: During production of the mix, monitor the volumetric properties of the Type SP asphalt mix with a Type SP Gyratory Compactor to determine the air voids, VMA, VFA, and dust-to-effective asphalt binder ratio (dust proportion) at N_{design}.

J. Take appropriate corrective actions in order to maintain an air void content at N_{design} between 3.0 and 5.0% during production. When the air void content at N_{design} drops below 2.5 or exceeds 5.5%, stop plant operations until the appropriate corrective actions are made and the problem is resolved to the satisfaction of the Architect's Engineer of Record. Evaluate any failing material in accordance with Part 6.

K. Determine the volumetric properties of the mixture at a minimum frequency of once per production day when the daily production is less than 1,000 tons. If the daily production exceeds 1,000 tons, monitor the volumetric properties two times per production day.

L. During normal production, volumetric properties of the mixture will not be required on days when mix production is less than 100 tons. However, when mix production is less than 100 tons per day on successive days, run the test when the accumulative tonnage on such days exceeds 100 tons.

M. Testing required for volumetric property determination includes AASHTO TP-4, FM 1-T 209, FM 5-563 and FM 1-T 030. Prior to testing samples in accordance with AASHTO TP-4 and FM 1-T 209, condition the test-sized sample for one hour at the compaction temperature in a covered container.

N. Plant Calibration: At or before the start of mix production, perform an extraction gradation analysis of the mix to verify calibration of the plant. The sample tested at the start of any project may be utilized for this requirement.

O. Process Control of In-Place Compaction: Develop and implement a method to control the compaction of the pavement and ensure its compliance with the minimum specified density requirements. The department may require the use of a nuclear gauge to test areas suspected of not having proper compaction.

P. Other density measuring devices may be used in lieu of the nuclear density gauge, provided that it is demonstrated to the satisfaction of the Architect's Engineer of Record that the device can accurately measure the relative level of density in the pavement on a consistent basis.

PART 5 - ACCEPTANCE OF THE MIXTURE

5.1 GENERAL

A. The asphalt mixture will be accepted based on one of the following methods as determined by the Architect's Engineer of Record and/or Contract Documents:

1. Certification by the Contractor
2. Certification and Process Control Testing by the Contractor
3. Acceptance testing by the Engineer of Record
4. Other method(s) as determined by the Contract

5.2 CERTIFICATION BY THE CONTRACTOR

A. Submit a Notarized Certification of Specification Compliance letter on company letterhead that all material produced and placed on the project was in substantial compliance with these specifications.

5.3 CERTIFICATION AND PROCESS CONTROL TESTING BY THE CONTRACTOR

B. Submit a Notarized Certification of Specification Compliance letter on company letterhead that all material produced and placed on the project was in substantial compliance with these specifications, along with supporting test data documenting all process control testing. Utilize an Independent Laboratory as approved by the Engineer of Record for the Process Control testing.

5.4 ACCEPTANCE TESTING BY THE ENGINEER

A. Acceptance at the Plant:

1. The asphalt mixture will be accepted, with respect to gradation and asphalt binder content, based on the results from the start up test. However, any load or loads of mixture which, in the opinion of the Engineer of, are unacceptable for reasons of excessive segregation, aggregates improperly coated, or of excessively high or low temperature will be rejected for use in the work.
2. Acceptance Procedures: Control all operations in the handling, preparation, and production of the asphalt mix so that the percent asphalt binder content and the percent's passing the No. 8 and No. 200 sieves will meet the targets from the mix design within the tolerances shown in the table below.

Tolerances for Acceptance Tests	
Characteristic	Tolerance*
Asphalt Binder Content	±0.55%
Passing No. 8 Sieve	±5.50%
Passing No. 200 Sieve	±2.00%
*Tolerances for sample size of n=1.	

3. Calculations for the acceptance test results for asphalt binder content and gradation (percentages passing the No. 8 and No. 200 sieves) will be shown to the nearest 0.01. Calculations for arithmetic averages will be carried to the 0.001 and rounded to the nearest 0.01.

B. Acceptance:

1. Density Control: The in-place density of any questionable section of a course of asphalt mix will be evaluated by the use of a nuclear gauge and/or by the testing of 6 inch diameter pavement cores. The Engineer will not perform density testing on leveling courses, open-graded friction courses, or any course which does not show signs of poor /improper compaction efforts. In addition, density testing will not be performed on the following areas when they are less than 1,000 feet in length: crossovers, intersections, turning lanes, acceleration lanes or deceleration lanes. Compact these courses (with the exception of open-graded friction courses) in accordance with the appropriate rolling procedure as specified in these specifications or as approved by the Engineer.
2. Acceptance: The completed pavement will be accepted with respect to overall ride, overall appearance, and overall yield as determined by the Engineer or Engineer of Record. Areas of question may be tested with a nuclear gauge or by the testing of the density of the cores, as determined by the engineer.
3. Surface Tolerance: The asphalt mixture will be accepted on the pavement with respect to surface tolerance by the use of a 15 ft rolling straight edge. The Architect's Engineer of Record will determine if the use of a straight edge test is warranted. Unevenness of the course shall not vary more than plus or minus 3/16 inch in 15 feet.

5.5 ADDITIONAL TESTS

A. The Architect's Engineer of Record reserves the right to run any test at any time for informational purposes and for determining the effectiveness of the Contractor's quality control.

PART 6 - DISPOSITION OF FAILING MATERIAL

A. Any material that is represented by failing test results will be evaluated to determine if removal and replacement is necessary. Remove and replace any material, if required, at no cost to the Owner. The evaluation will be conducted by the Architect's Engineer of Record.

B. If so directed, obtain an engineering analysis, as directed by the Engineer, by the independent laboratory (as approved by the Engineer) to determine if the material can (a) remain in place, for this case the appropriate pay factor will be applied, or (b) be removed and replaced at no cost to the Owner. The analysis will be a signed and sealed report by a Professional Engineer licensed in the State of Florida.

END OF SECTION 32 50 00

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SECTION 32 84 00 - PLANTING IRRIGATION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

1. Piping.
2. Manual valves.
3. Automatic control valves.
4. Miscellaneous piping specialties.
5. Sprinklers.
6. Drip irrigation specialties.
7. Boxes for automatic control valves.

1.3 PERFORMANCE REQUIREMENTS

A. Irrigation zone control shall be automatic operation with controller and automatic control valves.

B. Location of Sprinklers and Specialties: Design location is approximate. Make minor adjustments necessary to avoid plantings and obstructions such as signs and light standards. Maintain 100 percent irrigation coverage of areas indicated.

C. Minimum Working Pressures: The following are minimum pressure requirements for piping, valves, and specialties unless otherwise indicated:

1. Irrigation Main Piping: 200 psig.
2. Circuit Piping: 150 psig.

1.4 SUBMITTALS

A. Product Data: For each type of product indicated. Include rated capacities, operating characteristics, and furnished specialties and accessories.

B. Qualification Data: For qualified Installer.

C. Controller Timing Schedule: Indicate timing settings for each automatic controller zone.

1.5 QUALITY ASSURANCE

A. Installer Qualifications: An employer of workers that include irrigation installers with a minimum of three (3) years experience in the installation of irrigation systems.

B. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Deliver piping with factory-applied end caps. Maintain end caps through shipping, storage, and handling to prevent pipe-end damage and to prevent entrance of dirt, debris, and moisture.

B. Store plastic piping protected from direct sunlight. Support to prevent sagging and bending.

PART 2 - PRODUCTS

2.1 PIPES, TUBES, AND FITTINGS

A. Comply with requirements in the piping schedule for applications of pipe, tube, and fitting materials, and for joining methods for specific services, service locations, and pipe sizes.

B. PVC Pipe: ASTM D 1785, PVC 1120 compound, Schedule 40

1. PVC Socket Fittings: ASTM D 2466, Schedules 40 and 80.
2. PVC Threaded Fittings: ASTM D 2464, Schedule 80.
3. PVC Socket Unions: Construction similar to MSS SP-107, except both headpiece and tailpiece shall be PVC with socket ends.

C. PVC Pipe, Pressure Rated: ASTM D 2241, PVC 1120 compound, SDR 21.

1. PVC Socket Fittings: ASTM D 2467, Schedule 80.
2. PVC Socket Unions: Construction similar to MSS SP-107, except both headpiece and tailpiece shall be PVC with socket or threaded ends.

2.2 PIPING JOINING MATERIALS

A. Solvent Cements for PVC Piping: ASTM D 2564. Include primer according to ASTM F 656.

B. Plastic, Pipe-Flange Gasket, Bolts, and Nuts: Type and material recommended by piping system manufacturer unless otherwise indicated.

2.3 AUTOMATIC CONTROL VALVES

A. Plastic, Automatic Control Valves: Molded-plastic body, normally closed, diaphragm type with manual-flow adjustment, and operated by 24-V ac solenoid.

2.4 SPRINKLERS

A. General Requirements: Designed for uniform coverage over entire spray area indicated at available water pressure.

B. Plastic, Pop-up Spray Sprinklers:

1. Basis-of-Design Product: Subject to compliance with requirements, provide Rain Bird sprinklers or equal.

2.5 DRIP IRRIGATION SPECIALTIES

A. Freestanding Emitters: Device to deliver water at approximately 20 psig (138 kPa).

1. Body Material: PE or vinyl, with flow control.
2. Riser to Emitter: PE or PVC flexible tubing.
3. Capacities and Characteristics:

a. Flow: 1gph to 20 gph at approximately 20 psig (138 kPa).
b. Tubing: PE or PVC; 1/8-inch (3-mm) minimum ID.
c. Mounting Height: 2 inches above ground to nozzle.
d. Operation: Automatic pressure compensating.

4. Tubing: PE or PVC; 1/8-inch (3-mm) minimum ID.
5. Emitter: Device to deliver water at approximately 20 psig (138 kPa).

a. Body Material: PE or vinyl, with flow control.

B. Off-Ground Supports: Plastic stakes.

C. Filter Units: Brass or plastic housing, with corrosion-resistant internal parts; of size and capacity required for devices downstream from unit.

2.6 CONTROLLERS

a. Connect new irrigation system to existing controller.

2.7 BOXES FOR AUTOMATIC CONTROL VALVES

A. Plastic Boxes:

1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

a. Armorcast Products Company.
b. Carson Industries LLC.

c. Nationwide Plastics, Inc.
d. NewBasis.
e. Oldcastle, Inc.
f. Orbit Irrigation Products, Inc.
g. USFilter/Plymouth Products, Inc.

2. Description: Box and cover, with open bottom and openings for piping; designed for installing flush with grade.

a. Size: As required for valves and service.
b. Shape: Rectangular.
c. Sidewall Material: PE
d. Cover Material: PE

1) Lettering: "IRRIGATION CONTROL VALVE“

PART 3 - EXECUTION

3.1 EARTHWORK

A. Excavating, trenching, and backfilling are specified in Division 31 Section "Earth Moving."

B. Install warning tape directly above pressure piping, 12 inches below finished grades, except 6 inches (150 mm) below subgrade under pavement and slabs.

C. Provide minimum cover over top of underground piping according to the following:

1. Irrigation Main Piping: Minimum depth of 18 inches below finished grade.
2. Circuit Piping: 12 inches.
3. Sleeves: 18 inches.

3.2 PREPARATION

A. Set stakes to identify locations of proposed irrigation system. Obtain Architect's approval before excavation.

3.3 PIPING INSTALLATION

A. Location and Arrangement: Drawings indicate location and arrangement of piping systems. Install piping as indicated unless deviations are approved on Coordination Drawings.

B. Install piping free of sags and bends.

C. Install groups of pipes parallel to each other, spaced to permit valve servicing.

D. Install fittings for changes in direction and branch connections.

E. Install unions adjacent to valves and to final connections to other components with NPS 2 (DN 50) or smaller pipe connection.

F. Install flanges adjacent to valves and to final connections to other components with NPS 2-1/2 (DN 65) or larger pipe connection.

G. Install underground thermoplastic piping according to ASTM D 2774.

H. Install expansion loops in control-valve boxes for plastic piping.

I. Lay piping on solid sub-base, uniformly sloped without humps or depressions.

J. Install PVC piping in dry weather when temperature is above 40 deg F (5 deg C). Allow joints to cure at least 24 hours at temperatures above 40 deg F (5 deg C) before testing.

K. Install piping in sleeves under parking lots, roadways, and sidewalks.

L. Install sleeves made of Schedule 40 PVC pipe and socket fittings, and solvent-cemented joints.

3.4 JOINT CONSTRUCTION

A. Ream ends of pipes and tubes and remove burrs. .

B. Remove scale, slag, dirt, and debris from inside and outside of pipe and fittings before assembly.

C. Threaded Joints: Thread pipe with tapered pipe threads according to ASME B1.20.1. Cut threads full and clean using sharp dies. Ream threaded pipe ends to remove burrs and restore full ID. Join pipe fittings and valves as follows:

1. Apply appropriate tape or thread compound to external pipe threads unless dry seal threading is specified.
2. Damaged Threads: Do not use pipe or pipe fittings with threads that are corroded or damaged. Do not use pipe sections that have cracked or open welds.

D. PE Piping Fastener Joints: Join with insert fittings and bands or fasteners according to piping manufacturer's written instructions.

E. PVC Piping Solvent-Cemented Joints: Clean and dry joining surfaces. Join pipe and fittings according to the following:

1. Comply with ASTM F 402 for safe-handling practice of cleaners, primers, and solvent cements.
2. PVC Pressure Piping: Join schedule number, ASTM D 1785, PVC pipe and PVC socket fittings according to ASTM D 2672. Join other-than-schedule-number PVC pipe and socket fittings according to ASTM D 2855.
3. PVC Nonpressure Piping: Join according to ASTM D 2855.

3.5 VALVE INSTALLATION

A. Underground Curb Valves: Install in curb-valve casings with tops flush with grade.

B. Underground Iron Gate Valves, Resilient Seat: Comply with AWWA C600 and AWWA M44. Install in valve casing with top flush with grade.

1. Install valves and PVC pipe with restrained, gasketed joints.

3.6 SPRINKLER INSTALLATION

A. Install sprinklers after hydrostatic test is completed.

B. Install sprinklers at manufacturer's recommended heights.

C. Locate part-circle sprinklers to maintain a minimum distance of 4 inches (100 mm) from walls and 2 inches (50 mm) from other boundaries unless otherwise indicated.

3.7 DRIP IRRIGATION SPECIALTY INSTALLATION

A. Install drip tubes with direct-attached emitters on ground.

B. Install off-ground supports of length required for indicated mounted height of device.

C. Install application pressure regulators and filter units in piping near device being protected, and in control-valve boxes.

3.8 AUTOMATIC IRRIGATION-CONTROL SYSTEM INSTALLATION

A. Equipment Mounting: Install interior controllers on wall.

1. Place and secure anchorage devices. Use setting drawings, templates, diagrams, instructions, and directions furnished with items to be embedded.
2. Install anchor bolts to elevations required for proper attachment to supported equipment.

B. Equipment Mounting: Install exterior freestanding controllers on precast concrete bases.

1. Place and secure anchorage devices. Use setting drawings, templates, diagrams, instructions, and directions furnished with items to be embedded.
2. Install anchor bolts to elevations required for proper attachment to supported equipment.

C. Install control cable in same trench as irrigation piping and at least 2 inches (51 mm) below or beside piping. Provide conductors of size not smaller than recommended by controller manufacturer. Install cable in separate sleeve under paved areas.

3.9 CONNECTIONS

A. Comply with requirements for piping specified in Division 22 Section "Facility Water Distribution Piping" for water supply from exterior water service piping, water meters, protective enclosures, and backflow preventers. Drawings indicate general arrangement of piping, fittings, and specialties.

B. Install piping adjacent to equipment, valves, and devices to allow service and maintenance.

C. Connect wiring between controllers and automatic control valves.

3.10 IDENTIFICATION

A. Identify system components. Comply with requirements for identification specified in Division 22 Section "Identification for Plumbing Piping and Equipment."

B. Warning Tapes: Arrange for installation of continuous, underground, detectable warning tapes over underground piping during backfilling of trenches. See Division 31 Section "Earth Moving" for warning tapes.

3.11 FIELD QUALITY CONTROL

A. Manufacturer's Field Service: Engage a factory-authorized service representative to inspect, test, and adjust components, assemblies, and equipment installations, including connections.

B. Perform tests and inspections.

1. Manufacturer's Field Service: Engage a factory-authorized service representative to inspect components, assemblies, and equipment installations, including connections, and to assist in testing.

C. Tests and Inspections:

1. Leak Test: After installation, charge system and test for leaks. Repair leaks and retest until no leaks exist.
2. Operational Test: After electrical circuitry has been energized, operate controllers and automatic control valves to confirm proper system operation.
3. Test and adjust controls and safeties. Replace damaged and malfunctioning controls and equipment.

D. Any irrigation product will be considered defective if it does not pass tests and inspections.

E. Prepare test and inspection reports.

3.12 STARTUP SERVICE

A. Perform startup service.

1. Complete installation and startup checks according to manufacturer's written instructions.
2. Verify that controllers are installed and connected according to the Contract Documents.
3. Verify that electrical wiring installation complies with manufacturer's submittal.

3.13 ADJUSTING

A. Adjust settings of controllers.

B. Adjust automatic control valves to provide flow rate at rated operating pressure required for each sprinkler circuit.

C. Adjust sprinklers and devices, except those intended to be mounted aboveground, so they will be flush with finish grade.

3.14 CLEANING

A. Flush dirt and debris from piping before installing sprinklers and other devices.

3.15 PIPING SCHEDULE

A. Install components having pressure rating equal to or greater than system operating pressure.

B. Piping in control-valve boxes and aboveground may be joined with flanges or unions instead of joints indicated.

C. Circuit piping, NPS 2 (DN 50) and smaller, shall be the following:

1. SDR 26, PVC, pressure-rated pipe; Schedule 40, PVC socket fittings; and solvent-cemented joints.

3.16 VALVE SCHEDULE

A. Underground, Shutoff-Duty Valves: Use the following:

1. NPS 3 (DN 80) and Larger: Iron gate valve, resilient seated; iron gate valve casing; and operating wrench(es).

END OF SECTION 32 84 00

SECTION 32 92 19 - GRASSING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of Contract, including General and Supplementary Conditions and other Specifications Sections apply to this Section.

B. Florida Department of Transportation*, Standard Specifications for Road and Bridge Construction,* Section 570 and Section 981, *Latest Edition*

1.2 SUMMARY

A. Extent of grassing work is as specified or shown on the construction plans. Sodded areas disturbed during construction shall be re-sodded to match existing. Areas disturbed beyond specified construction area shall be sodded, at no additional expense, to match existing.

1.3 SUBMITTALS

A. For each product provided.

1.4 DELIVERY AND STORAGE

A. General: Seed, fertilizer, sod and other grassing materials shall be stored under cover and protected from damaged which would make them unacceptable for use.

B. Seed: All seed shall be labeled in accordance with U.S. Department of Agriculture Rules and Regulations under the Federal Seed Act in effect on the date of invitation for bids. All seed shall be furnished in sealed standard containers, unless exception is granted in writing. Seed, which has become wet, moldy, or otherwise damaged in transit or in storage, shall not be used.

C. Fertilizer: Fertilizer shall be delivered to the site in the original, unopened containers, each bearing the manufacturer's guaranteed analysis. Any fertilizer, which becomes caked or otherwise damaged, making it unsuitable for use, shall not be used.

D. Sod: Do not use sod which has been cut (stripped) for more than 48 hours. Stack all sod that is not planted 24 hours after cutting and maintain proper moist condition.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Lime: Lime shall be ground limestone (Dolomite) containing not less than 85 percent of total carbonates, and shall be ground to such a fineness that 50-percent will pass a 100 -mesh sieve an d 90 -percent will pass a 20 - mesh sieve.

B. Fertilizer: Apply fertilizer at the following rates:

1. 10-10-10 1000 lbs/acre=0.2 lbs/sq yd
2. 13-13-13 770 lbs/acre=0.16 lbs/sq yd

C. Seed: Apply seed at the rate as specified:

GRASS SEEDING RATES (Lbs/Ac)								
TYPE OF SEED	ZONE I				ZONE II			
	COASTAL*		INLAND		COASTAL*		INLAND	
	Mar.-Nov.	Nov.-Mar.	Mar.-Nov.	Nov.-Mar.	Mar.-Nov.	Nov.-Mar	Mar.-Nov.	Nov.-Mar.
PERMANENT GRASSES								
Unhulled Bermuda**		90		20		90		20
Hulled Bermuda**	60		15		60		15	
Bahia (Argentine or Pensacola)			180	180			180	180
QUICK GROWING GRASS								
Annual Rye Grass		90		90		90		90
TOTAL POUNDS PER ACRE	60	180	195	290	60	180	195	290
* Locations where salt sensitive plants may be adversely affected by high concentrations of salt in soils, water, or air. This may include seaside locations, low-lying areas subjected to per iodic saltwater inundation from storms or high tides, or where salt intrusion into groundwater supply has occurred.								
** Bermuda shall not be used in areas adjacent to existing or proposed landscaping.								
NOTE: All seeding shall be per formed meeting the requirements of Section 570 of the Standard Specifications								

D. Activities such as clearing, grading, and excavating that will disturb one or more acres of land require coverage under the Generic Permit for Stormwater D ischarge from Large and Small Construction A ctivities from the Florida Department of Environmental Protection, and implementation of appropriate pollution prevention measures to minimize erosion and sedimentation. Please refer to the National Pollutant Discharge Elimination System (NPDES) Permit.

E. Mulch: The mulch material shall be dry straw or hay, consisting of oat, rye, or wheat straw, coastal Bermuda or Bahia grass, hay or compost; and shall be free from noxious weeds and plants. Any plant officially listed, as being noxious or undesirable by any Federal Agency, any agency of the State of Florida or any local jurisdiction in which the project is being constructed shall not be used. Prior to incorporation onto the project, furnish a certification from the Florida Department of Agriculture and Consumer Services, Division of Plant Industry, stating that the Mulch materials are free of noxious weeds. Any such noxious plant or plant part found to be delivered shall be removed by the Contractor at his expense. Only undeteriorated mulch, which can readily be cut into the soil, shall be used. The "air-dry" weight (as defined by the Technical Association of the Pulp and Paper Industry, for wood cellulose) shall be marked on each package by the producer. Apply mulch at a rate of 2 ton/acre or 1 lb/sq yd.

F. Sod: All sod shall be healthy Centipede Sod unless otherwise required. Sod shall be strongly rooted, free of weeds and undesirable grasses and capable of providing vigorous growth and development when planted. Sod shall match existing species where restoration is required as a result of the Contractor's work.

PART 3 - EXECUTION

3.1 REQUIREMENTS

A. All areas disturbed by the Contractor's operations, shall be grassed, unless otherwise noted.

3.2 PLANTING SEED

A. Grading: Areas to be grassed shall be graded to remove depressions, undulations, and irregularities in the surface before grassing. Adhere to grades as shown on plans.

B. Tillage: The area to be grassed shall be thoroughly tilled to a depth of four inches using a plow and disc harrow or rotary tilling machinery until a suitable bed has been prepared and no clods or clumps remain larger than 1½ inches in diameter. Remove sticks, roots, and rubbish.

C. Applying Lime: The pH of the soil shall be determined. If the pH is below 5.0, sufficient lime shall be added to provide a pH between 5.5 and 6.5. The lime shall be thoroughly incorporated into the top three to four inches of the soil. Lime and fertilizer may be applied in one operation.

D. Applying Fertilizer: Fertilizer shall be applied in accordance with the rates specified in Part 2, and shall be thoroughly incorporated into the top three to four inches of soil before sod is installed. FDOT Section 982.

E. Seed and Mulch: Apply in accordance with the rates specified in Part 2.

F. Maintenance: Maintenance shall begin immediately following the last operation of

grassing and continue until final acceptance. Maintenance shall include watering, mowing, replanting, and all other work necessary to produce a uniform stand of grass, all at the contractor's expense.

3.3 PLACING SOD

A. Use Centipede sod (Eremochloa ophiuroides) unless otherwise required. Sod shall have a thick mat of roots (minimum 2") with enough adhering soil to assure growth. Apply sod within 48 hours of stripping. Protect sod against drying and breaking of rolled strips.

B. Placement: Prepare the ground by loosening the soil. Place sod perpendicular to the slope. Place sod on the prepared soil to form a solid mass with tightly fitted joints. Ensure the butt ends and sides of sod strips do not overlap. The seam should have a flush tight transition from new to existing sod with no overlap. Stagger strips to avoid a continuous downhill seam. Tamp or roll lightly to ensure contact with subgrade. Tamp the outer edges of the sodded area to produce a smooth contour. Work sifted soil into minor cracks between pieces of sod; remove excess to avoid smothering of adjacent grass. Water sod thoroughly with a fine spray immediately after planting.

C. Pinning: All sod placed on a slope steeper than 3:1 shall be pinned, at the top of the sod, at a rate listed in the table below:

Sod Size	Pins Required
Square Sod	2 pins per sod square
Mini Roll	3 pins per roll
Standard Rolls	1 pin per linear foot

C. Watering: Keep sod continuously moist to a depth below the root zone for three weeks after placement. If there is no water available to the site, the Contractor shall provide the water. Do not water in excess of 1" (one inch) per square yard per week for establishment.

D. Clean-Up: All excess soil, excess grass materials, stones, pallets and other waste shall be removed from the site daily and not allowed to accumulate. All paved areas shall be kept clean at all times.

E. Maintenance: Maintain sod by watering, fertilizing, weeding, mowing, trimming and other operations such as rolling, re-grading, and re-planting as required to establish a lawn free of eroded or bare areas and acceptable to the Architect/Engineer. Where inspected work and materials do not comply with requirements, replace rejected work and continue maintenance until re-inspected by the Architect/Engineer and found to be acceptable. Remove rejected materials promptly from the project site. FDOT Section 570-4.

END OF SECTION 32 92 19

SECTION 32 93 00 - PLANTING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

1. Trees and plants.
2. Planting soils.
3. Tree stabilization.

B. Related Sections:

1. Section 31 00 00 "Earthwork" for excavation, filling, and rough grading and for subsurface aggregate drainage and drainage backfill materials.
2. Section 32 92 19 " Grassing" for planting and seeding.

1.3 SUBMITTALS

A. Product Data: For each type of product indicated, including soils.

1. Tree and Plant Materials: Include quantities, sizes, quality, and sources.
2. Pesticides and Herbicides: Include product label and manufacturer's application instructions specific to the Project.

B. Qualification Data: For qualified landscape Installer. Include list of similar projects completed by Installer demonstrating Installer's capabilities and experience. Include project names, addresses, and year completed, and include names and addresses of owners' contact persons.

C. Product Certificates: For each type of manufactured product, from manufacturer.

D. Material Test Reports: For existing native surface topsoil.

E. Maintenance Instructions: Recommended procedures to be established by Owner for maintenance of plants during a calendar year. Submit before start of required maintenance periods.

F. Warranty: Sample of special warranty.

1.4 QUALITY ASSURANCE

A. Installer Qualifications: A qualified landscape Installer whose work has resulted in successful establishment of plants.

1. Experience: Three years' experience in landscape installation in addition to requirements in Division 01 Section "Quality Requirements."
2. Installer's Field Supervision: Require Installer to maintain an experienced full-time supervisor on Project site when work is in progress.
3. Pesticide Applicator: State licensed, commercial.

B. Soil-Testing Laboratory Qualifications: An independent or university laboratory, recognized by the State Department of Agriculture, with the experience and capability to conduct the testing indicated and that specializes in types of tests to be performed.

C. Soil Analysis: For each unamended soil type, furnish soil analysis and a written report by a qualified soil-testing laboratory stating percentages of organic matter; gradation of sand, silt, and clay content; cation exchange capacity; deleterious material; pH; and mineral and plant-nutrient content of the soil.

1. Testing methods and written recommendations shall comply with USDA's Handbook No. 60.
2. A minimum of three (3) representative samples shall be taken from varied locations for each soil to be used or amended for planting purposes.
3. Report suitability of tested soil for plant growth.

    a. Based upon the test results, state recommendations for soil treatments and soil amendments to be incorporated. State recommendations in weight per 1000 sq. ft. (92.9 sq. m) or volume per cu. yd. (0.76 cu. m) for nitrogen, phosphorus, and potash nutrients and soil amendments to be added to produce satisfactory planting soil suitable for healthy, viable plants.
    b. Report presence of problem salts, minerals, or heavy metals, including aluminum, arsenic, barium, cadmium, chromium, cobalt, lead, lithium, and vanadium. If such problem materials are present, provide additional recommendations for corrective action.

D. Provide quality, size, genus, species, and variety of plants indicated, complying with applicable requirements in ANSI Z60.1.

E. Measurements: Measure according to ANSI Z60.1. Do not prune to obtain required sizes.

1. Trees and Shrubs: Measure with branches and trunks or canes in their normal position. Take height measurements from or near the top of the root flare for field-grown stock and container grown stock. Measure main body of tree or shrub for height and spread; do not measure branches or roots tip to tip. Take caliper measurements 6 inches (150 mm) above the root flare for trees up to 4-inch (100-mm) caliper size, and 12 inches (300 mm) above the root flare for larger sizes.
2. Other Plants: Measure with stems, petioles, and foliage in their normal position.

F. Plant Material Observation: Landscape Architect may observe plant material either at place of growth or at site before planting for compliance with requirements for genus, species, variety, cultivar, size, and quality. Landscape Architect retains right to observe trees and shrubs further for size and condition of balls and root systems, pests, disease symptoms, injuries, and latent defects and to reject unsatisfactory or defective material at any time during progress of work. Remove rejected trees or shrubs immediately from Project site.

G. Preinstallation Conference: Conduct conference at project site.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Packaged Materials: Deliver packaged materials in original, unopened containers showing weight, certified analysis, name and address of manufacturer, and indication of conformance with state and federal laws if applicable.

B. Bulk Materials:

1. Do not dump or store bulk materials near structures, utilities, walkways and pavements, or on existing turf areas or plants.
2. Provide erosion-control measures to prevent erosion or displacement of bulk materials, discharge of soil-bearing water runoff, and airborne dust reaching adjacent properties, water conveyance systems, or walkways.
3. Accompany each delivery of bulk fertilizers, lime, and soil amendments with appropriate certificates.

C. Do not prune trees and shrubs before delivery. Protect bark, branches, and root systems from sun scald, drying, wind burn, sweating, whipping, and other handling and tying damage. Do not bend or bind-tie trees or shrubs in such a manner as to destroy their natural shape. Provide protective covering of plants during shipping and delivery. Do not drop plants during delivery and handling.

D. Handle planting stock by root ball.

E. Deliver plants after preparations for planting have been completed, and install immediately. If planting is delayed more than six hours after delivery, set plants and trees in their appropriate aspect (sun, filtered sun, or shade), protect from weather and mechanical damage, and keep roots moist.

1. Set balled stock on ground and cover ball with soil, peat moss, sawdust, or other acceptable material.
2. Do not remove container-grown stock from containers before time of planting.
3. Water root systems of plants stored on-site deeply and thoroughly with a fine-mist spray. Water as often as necessary to maintain root systems in a moist, but not overly-wet condition.

1.6 PROJECT CONDITIONS

A. Field Measurements: Verify actual grade elevations, service and utility locations, irrigation system components, and dimensions of plantings and construction contiguous with new plantings by field measurements before proceeding with planting work.

B. Interruption of Existing Services or Utilities: Do not interrupt services or utilities to facilities occupied by Owner or others unless permitted under the following conditions and then only after arranging to provide temporary services or utilities according to requirements indicated:

1. Notify Owner no fewer than two days in advance of proposed interruption of each service or utility.
2. Do not proceed with interruption of services or utilities without Owner's written permission.

C. Weather Limitations: Proceed with planting only when existing and forecasted weather conditions permit planting to be performed when beneficial and optimum results may be obtained. Apply products during favorable weather conditions according to manufacturer's written instructions and warranty requirements.

D. Coordination with Turf Areas (Lawns): Plant trees, shrubs, and other plants after finish grades are established and before planting turf areas unless otherwise indicated.

1. When planting trees, shrubs, and other plants after planting turf areas, protect turf areas, and promptly repair damage caused by planting operations.

1.7 WARRANTY

A. Special Warranty: Installer agrees to repair or replace plantings and accessories that fail in materials, workmanship, or growth within specified warranty period.

1. Failures include, but are not limited to, the following:

a. Death and unsatisfactory growth, except for defects resulting from abuse, lack of adequate maintenance, or neglect by Owner, or incidents that are beyond Contractor's control.
b. Structural failures including plantings falling or blowing over.

2. Warranty Periods from Date of Substantial Completion:

a. Trees, Shrubs, Vines, and Ornamental Grasses: Twelve (12) months.
b. Ground Covers, Biennials, Perennials, and Other Plants: Twelve (12) months.

3. Include the following remedial actions as a minimum:

a. Immediately remove dead plants and replace unless required to plant in the succeeding planting season.

b. Replace plants that are more than 25 percent dead or in an unhealthy condition at end of warranty period.
c. A limit of one replacement of each plant will be required except for losses or replacements due to failure to comply with requirements.
d. Provide extended warranty for period equal to original warranty period, for replaced plant material.

1.8 MAINTENANCE SERVICE

A. Initial Maintenance Service for Trees and Shrubs: Provide maintenance by skilled employees of landscape Installer. Maintain as required in Part 3. Begin maintenance immediately after plants are installed and continue until plantings are acceptably healthy and well established but for not less than maintenance period below.

1. Maintenance Period: Twelve (12) months from date of Substantial Completion.

B. Initial Maintenance Service for Ground Cover and Other Plants: Provide maintenance by skilled employees of landscape Installer. Maintain as required in Part 3. Begin maintenance immediately after plants are installed and continue until plantings are acceptably healthy and well established but for not less than maintenance period below.

1. Maintenance Period: Twelve (12) months from date of Substantial Completion.

C. Continuing Maintenance Proposal: From Installer to Owner, in the form of a standard yearly (or other period) maintenance agreement, starting on date initial maintenance service is concluded. State services, obligations, conditions, and terms for agreement period and for future renewal options.

PART 2 - PRODUCTS

2.1 PLANT MATERIAL

A. General: Furnish nursery-grown plants true to genus, species, variety, cultivar, stem form, shearing, and other features indicated in Plant Schedule or Plant Legend shown on Drawings and complying with ANSI Z60.1; and with healthy root systems developed by transplanting or root pruning. Provide well-shaped, fully branched, healthy, vigorous stock, densely foliated when in leaf and free of disease, pests, eggs, larvae, and defects such as knots, sun scald, injuries, abrasions, and disfigurement.

1. Trees with damaged, crooked, or multiple leaders; tight vertical branches where bark is squeezed between two branches or between branch and trunk ("included bark"); crossing trunks; cut-off limbs more than 3/4 inch (19 mm) in diameter; or with stem girdling roots will be rejected.
2. Collected Stock: Do not use plants harvested from the wild, from native stands, from an established landscape planting, or not grown in a nursery unless otherwise indicated.

B. Provide plants of sizes, grades, and ball or container sizes complying with ANSI Z60.1 for types and form of plants required. Plants of a larger size may be used if acceptable to Landscape Architect, with a proportionate increase in size of roots or balls.

C. Root-Ball Depth: Furnish trees and shrubs with root balls measured from top of root ball, which shall begin at root flare according to ANSI Z60.1. Root flare shall be visible before planting.

D. Labeling: Label at least one plant of each variety, size, and caliper with a securely attached, waterproof tag bearing legible designation of common name and full scientific name, including genus and species. Include nomenclature for hybrid, variety, or cultivar, if applicable for the plant as shown on Drawings.

E. If formal arrangements or consecutive order of plants is shown on Drawings, select stock for uniform height and spread, and number the labels to assure symmetry in planting.

2.2 INORGANIC SOIL AMENDMENTS

A. Lime: ASTM C 602, agricultural liming material containing a minimum of 80 percent calcium carbonate equivalent and as follows:

1. Class: T, with a minimum of 99 percent passing through No. 8 (2.36-mm) sieve and a minimum of 75 percent passing through No. 60 (0.25-mm) sieve.

2.3 ORGANIC SOIL AMENDMENTS

A. Compost: Well-composted, stable, and weed-free organic matter, pH range of 5.5 to 8; moisture content 35 to 55 percent by weight; 100 percent passing through 3/4-inch sieve; soluble salt content of 5 to 10 decisiemens/m; not exceeding 0.5 percent inert contaminants and free of substances toxic to plantings; and as follows:

1. Organic Matter Content: 50 to 60 percent of dry weight.
2. Feedstock: Agricultural, food, or industrial residuals; biosolids; yard trimmings; or source-separated or compostable mixed solid waste.

B. Manure: Well-rotted, unleached, stable or cattle manure containing not more than 25 percent by volume of straw, sawdust, or other bedding materials; free of toxic substances, stones, sticks, soil, weed seed, debris, and material harmful to plant growth.

2.4 FERTILIZERS

A. Bonemeal: Commercial, raw or steamed, finely ground; a minimum of 1 percent nitrogen and 10 percent phosphoric acid.

B. Superphosphate: Commercial, phosphate mixture, soluble; a minimum of 20 percent available phosphoric acid.

C. Commercial Fertilizer: Commercial-grade complete fertilizer of neutral character, consisting of fast- and slow-release nitrogen, 50 percent derived from natural organic sources of urea formaldehyde, phosphorous, and potassium in the following composition:

1. Composition: 1 lb/1000 sq. ft. (0.45 kg/92.9 sq. m) of actual nitrogen, 4 percent phosphorous, and 2 percent potassium, by weight.
2. Composition: Nitrogen, phosphorous, and potassium in amounts recommended in soil reports from a qualified soil-testing laboratory.

D. Slow-Release Fertilizer: Granular or pelleted fertilizer consisting of 50 percent water-insoluble nitrogen, phosphorus, and potassium in the following composition:

1. Composition: 20 percent nitrogen, 10 percent phosphorous, and 10 percent potassium, by weight.
2. Composition: Nitrogen, phosphorous, and potassium in amounts recommended in soil reports from a qualified soil-testing laboratory.

2.5 PLANTING SOILS

A. Planting Soil: Existing, native surface topsoil formed under natural conditions with the duff layer retained during excavation process. Verify suitability of native surface topsoil to produce viable planting soil. Clean soil of roots, plants, sod, stones, clay lumps, and other extraneous materials harmful to plant growth.
1. Mix existing, native surface topsoil with the following soil amendments and fertilizers in the following quantities to produce planting soil:
a. Per drawings and soil test recommendations.

2.6 MULCHES

A. Organic Mulch: Free from deleterious materials and suitable as a top dressing of trees and shrubs, consisting of one of the following:

1. Type: Native long-needle Pine straw.
2. Size Range: 3 inches (76 mm) maximum, 1/2 inch (13 mm) minimum.
3. Color: Natural.

B. Mineral Mulch: Hard, durable stone, washed free of loam, sand, clay, and other foreign substances, of following type, size range, and color:

1. Type: Rounded riverbed gravel or smooth-faced stone.
2. Size Range: 1-1/2 inches (38 mm) maximum, 3/4 inch (19 mm) minimum.
3. Color: Readily available natural gravel color range.

2.7 WEED-CONTROL BARRIERS

A. Nonwoven Geotextile Filter Fabric: Polypropylene or polyester fabric, 3 oz./sq. yd. (101g/sq. m) minimum, composed of fibers formed into a stable network so that fibers retain their relative position. Fabric shall be inert to biological degradation and resist naturally-encountered chemicals, alkalis, and acids.

B. Composite Fabric: Woven, needle-punched polypropylene substrate bonded to a nonwoven polypropylene fabric, 4.8 oz./sq. yd. (162 g/sq. m).

2.8 PESTICIDES

A. General: Pesticide registered and approved by EPA, acceptable to authorities having jurisdiction, and of type recommended by manufacturer for each specific problem and as required for Project conditions and application. Do not use restricted pesticides unless authorized in writing by authorities having jurisdiction.

B. Pre-Emergent Herbicide (Selective and Non-Selective): Effective for controlling the germination or growth of weeds within planted areas at the soil level directly below the mulch layer.

C. Post-Emergent Herbicide (Selective and Non-Selective): Effective for controlling weed growth that has already germinated.

2.9 MISCELLANEOUS PRODUCTS

A. Antidesiccant: Water-insoluble emulsion, permeable moisture retarder, film forming, for trees and shrubs. Deliver in original, sealed, and fully labeled containers and mix according to manufacturer's written instructions.

B. Burlap: Non-synthetic, biodegradable.

C. Mycorrhizal Fungi: Dry, granular inoculant containing at least 5300 spores per lb (0.45 kg) of vesicular-arbuscular mycorrhizal fungi and 95 million spores per lb (0.45 kg) of ectomycorrhizal fungi, 33 percent hydrogel, and a maximum of 5.5 percent inert material.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine areas to receive plants for compliance with requirements and conditions affecting installation and performance.

1. Verify that no foreign or deleterious material or liquid such as paint, paint washout, concrete slurry, concrete layers or chunks, cement, plaster, oils, gasoline, diesel fuel, paint thinner, turpentine, tar, roofing compound, or acid has been deposited in soil within a planting area.
2. Do not mix or place soils and soil amendments in frozen, wet, or muddy conditions.

3. Suspend soil spreading, grading, and tilling operations during periods of excessive soil moisture until the moisture content reaches acceptable levels to attain the required results.
4. Uniformly moisten excessively dry soil that is not workable and which is too dusty.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

C. If contamination by foreign or deleterious material or liquid is present in soil within a planting area, remove the soil and contamination as directed by Landscape Architect and replace with new planting soil.

3.2 PREPARATION

A. Protect structures, utilities, sidewalks, pavements, and other facilities and turf areas and existing plants from damage caused by planting operations.

B. Install erosion-control measures to prevent erosion or displacement of soils and discharge of soil-bearing water runoff or airborne dust to adjacent properties and walkways.

C. Lay out individual tree and shrub locations and areas for multiple plantings. Stake locations, outline areas, adjust locations when requested, and obtain Landscape Architect's acceptance of layout before excavating or planting. Make minor adjustments as required.

D. Lay out plants at locations directed by Landscape Architect. Stake locations of individual trees and shrubs and outline areas for multiple plantings.

E. Apply antidesiccant to trees and shrubs using power spray to provide an adequate film over trunks (before wrapping), branches, stems, twigs, and foliage to protect during digging, handling, and transportation.

1. If deciduous trees or shrubs are moved in full leaf, spray with antidesiccant at nursery before moving and again two weeks after planting.

F. Wrap trees and shrubs with burlap fabric over trunks, branches, stems, twigs, and foliage to protect from wind and other damage during digging, handling, and transportation.

3.3 PLANTING AREA ESTABLISHMENT

A. Loosen subgrade of planting areas to a minimum depth of 6 inches. Remove stones larger than 1 inch in any dimension and sticks, roots, rubbish, and other extraneous matter and legally dispose of them off Owner's property.

1. Apply fertilizer and compost directly to subgrade before loosening.
2. Apply soil amendments and fertilizer on surface, and thoroughly blend planting soil.

a. Delay mixing fertilizer with planting soil if planting will not proceed within a few days.

b. Mix lime with dry soil before mixing fertilizer.

B. Finish Grading: Grade planting areas to a smooth, uniform surface plane with loose, uniformly fine texture. Roll and rake, remove ridges, and fill depressions to meet finish grades.

C. Before planting, obtain Landscape Architect's acceptance of finish grading; restore planting areas if eroded or otherwise disturbed after finish grading.

D. Application of Mycorrhizal Fungi: At time directed by Landscape Architect, broadcast dry product uniformly over prepared soil at Manufacturer's recommended application rate.

3.4 EXCAVATION FOR TREES AND SHRUBS

A. Planting Pits and Trenches: Excavate circular planting pits with sides sloping inward at a 45-degree angle. Excavations with vertical sides are not acceptable. Trim perimeter of bottom leaving center area of bottom raised slightly to support root ball and assist in drainage away from center. Do not further disturb base. Ensure that root ball will sit on undisturbed base soil to prevent settling. Scarify sides of planting pit smeared or smoothed during excavation.

1. Excavate approximately two times as wide as ball diameter for balled and burlapped, container-grown, and fabric bag-grown stock.
2. Do not excavate deeper than depth of the root ball, measured from the root flare to the bottom of the root ball.
3. If area under the plant was initially dug too deep, add soil to raise it to the correct level and thoroughly tamp the added soil to prevent settling.
4. Maintain required angles of repose of adjacent materials as shown on the Drawings. Do not excavate subgrades of adjacent paving, structures, hardscapes, or other new or existing improvements.
5. Maintain supervision of excavations during working hours.
6. Keep excavations covered or otherwise protected when unattended by Installer's personnel.

B. Subsoil and topsoil removed from excavations may be used as planting soil.

C. Obstructions: Notify Landscape Architect if unexpected rock or obstructions detrimental to trees or shrubs are encountered in excavations.

1. Hardpan Layer: Drill 6-inch- (150-mm-) diameter holes, 24 inches (600 mm) apart, into free-draining strata or to a depth of 10 feet (3 m), whichever is less, and backfill with free-draining material.

D. Drainage: Notify Landscape Architect if subsoil conditions evidence unexpected water seepage or retention in tree or shrub planting pits.

E. Fill excavations with water and allow to percolate away before positioning trees and shrubs.

3.5 TREE, SHRUB, AND VINE PLANTING

A. Before planting, verify that root flare is visible at top of root ball according to ANSI Z60.1. If root flare is not visible, remove soil in a level manner from the root ball to where the top-most root emerges from the trunk. After soil removal to expose the root flare, verify that root ball still meets size requirements.

B. Remove stem girdling roots and kinked roots. Remove injured roots by cutting cleanly; do not break.

C. Set balled and burlapped stock plumb and in center of planting pit or trench with root flare 2 inches (50 mm) above adjacent finish grades.

1. Use planting soil for backfill.
2. After placing some backfill around root ball to stabilize plant, carefully cut and remove burlap, rope, and wire baskets from tops of root balls and from sides, but do not remove from under root balls. Remove pallets, if any, before setting. Do not use planting stock if root ball is cracked or broken before or during planting operation.
3. Backfill around root ball in layers, tamping to settle soil and eliminate voids and air pockets. When planting pit is approximately one-half filled, water thoroughly before placing remainder of backfill. Repeat watering until no more water is absorbed.
4. Continue backfilling process. Water again after placing and tamping final layer of soil.

D. Set container grown stock plumb and in center of planting pit or trench with root flare 2 inches above adjacent finish grades.

1. Use planting soil for backfill.
2. Carefully remove root ball from container without damaging root ball or plant.
3. Backfill around root ball in layers, tamping to settle soil and eliminate voids and air pockets. When planting pit is approximately one-half filled, water thoroughly before placing remainder of backfill. Repeat watering until no more water is absorbed.
4. Continue backfilling process. Water again after placing and tamping final layer of soil.

E. Set fabric bag-grown stock plumb and in center of planting pit or trench with root flare 2 inches above adjacent finish grades.

1. Use planting soil for backfill.
2. Carefully remove root ball from fabric bag without damaging root ball or plant. Do not use planting stock if root ball is cracked or broken before or during planting operation.
3. Backfill around root ball in layers, tamping to settle soil and eliminate voids and air pockets. When planting pit is approximately one-half filled, water thoroughly before placing remainder of backfill. Repeat watering until no more water is absorbed.
4. Continue backfilling process. Water again after placing and tamping final layer of soil.

F. When planting on slopes, set the plant so the root flare on the uphill side is flush with the surrounding soil on the slope; the edge of the root ball on the downhill side will be above the surrounding soil. Apply enough soil to cover the downhill side of the root ball.

3.6 TREE, SHRUB, AND VINE PRUNING

A. Remove only dead, dying, or broken branches. Do not prune for shape.

B. Prune, thin, and shape trees, shrubs, and vines as directed by Landscape Architect.

C. Prune, thin, and shape trees, shrubs, and vines according to standard professional horticultural and arboricultural practices. Unless otherwise indicated by Landscape Architect, do not cut tree leaders; remove only injured, dying, or dead branches from trees and shrubs; and prune to retain natural character.

D. Do not apply pruning paint to wounds.

3.7 GROUND COVER AND PLANT PLANTING

A. Set out and space ground cover and plants other than trees, shrubs, and vines as indicated on plans in even rows with triangular spacing.

B. Use planting soil for backfill.

C. Dig holes large enough to allow spreading of roots.

D. For rooted cutting plants supplied in flats, plant each in a manner that will minimally disturb the root system but to a depth not less than two nodes.

E. Work soil around roots to eliminate air pockets and leave a slight saucer indentation around plants to hold water.

F. Water thoroughly after planting, taking care not to cover plant crowns with wet soil.

G. Protect plants from hot sun and wind; remove protection if plants show evidence of recovery from transplanting shock.

3.8 PLANTING AREA MULCHING

A. Install weed-control barriers only under Mineral Mulch before mulching according to manufacturer's written instructions. Completely cover area to be mulched, overlapping edges a minimum of 6 inches (150 mm) and secure seams with galvanized pins.

B. Mulch backfilled surfaces of planting areas and other areas indicated.

1. Trees in Turf Areas: Apply organic mulch ring of 3-inch average thickness, with 36-inch radius around trunks or stems. Do not place mulch within 3 inches of trunks or stems.
2. Organic Mulch in Planting Areas: Apply 3-inch average thickness of organic mulch over whole surface of planting area, and finish level with adjacent finish grades. Do not place mulch within 3 inches of trunks or stems.

3. Mineral Mulch in Planting Areas: Apply 3-inch average thickness of mineral mulch over whole surface of planting area, and finish level with adjacent finish grades. Do not place mulch within 3 inches of trunks or stems.

3.9 PLANT MAINTENANCE

A. Maintain plantings by pruning, cultivating, watering, weeding, fertilizing, mulching, restoring planting saucers, adjusting and repairing tree-stabilization devices, resetting to proper grades or vertical position, and performing other operations as required to establish healthy, viable plantings. Spray or treat as required to keep trees and shrubs free of insects and disease.

B. Fill in as necessary soil subsidence that may occur because of settling or other processes. Replace mulch materials damaged or lost in areas of subsidence.

C. Apply treatments as required to keep plant materials, planted areas, and soils free of pests and pathogens or disease. Use integrated past management practices whenever possible to minimize the use of pesticides and reduce hazards. Treatments include physical controls such as hosing off foliage, mechanical controls such as traps, and biological control agents.

3.10 PESTICIDE APPLICATION

A. Apply pesticides and other chemical products and biological control agents in accordance with authorities having jurisdiction and manufacturer's written recommendations. Coordinate applications with Owner's operations and others in proximity to the Work. Notify Owner before each application is performed.

B. Pre-Emergent Herbicides (Selective and Non-Selective): Apply to tree, shrub, and ground-cover areas in accordance with manufacturer's written recommendations. Do not apply to seeded areas.

C. Post-Emergent Herbicides (Selective and Non-Selective): Apply only as necessary to treat already-germinated weeds and in accordance with manufacturer's written recommendations.

3.11 CLEANUP AND PROTECTION

A. During planting, keep adjacent paving and construction clean and work area in an orderly condition.

B. Protect plants from damage due to landscape operations and operations of other contractors and trades. Maintain protection during installation and maintenance periods. Treat, repair, or replace damaged plantings.

C. After installation and before Substantial Completion remove nursery tags, nursery stakes, tie tape, labels, wire, burlap, and other debris from plant material, planting areas, and Project site.

3.12 DISPOSAL

A. Remove surplus soil and waste material including excess subsoil, unsuitable soil, trash, and debris and legally dispose of them off Owner's property.

END OF SECTION 32 93 00

SECTION 33 60 00 - STORMWATER SYSTEM

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of Contract, including General and Supplementary Conditions and other Specification Sections, shall apply to this Section.

B. Florida Department of Transportation, *Standard Specifications for Road and Bridge Construction, Sections 425, 430 and 530*, *Latest Edition*.

1.2 SUMMARY

This Section includes stormwater system piping and appurtenances. All labor, material, equipment, appurtenances, services, and other work or costs necessary to construct the facilities and place them into operation shall be furnished by the Contractor.

1.3 SUBMITTALS

A. General: Submit the following in accordance with Conditions of Contract.

B. Shop drawings for drainage pipe, pre-cast concrete storm drainage manholes and catch basins, including frames, covers, and grates.

C. Shop drawings for cast-in-place concrete or field-erected masonry storm drainage manholes and catch basins, including frames and covers.

1.4 QUALITY ASSURANCE

A. Environmental Compliance: Comply with applicable portions of local, state, and federal environmental agency regulations pertaining to stormwater systems impacts.

B. Utility Compliance: Comply with local utility regulations and standards pertaining to relocation, clearances, etc related to installation of stormwater systems.

C. Quality control to adhere to QA/QL Plan.

1.5 PROJECT CONDITIONS

Site Information: Perform site inspection, research public utility records, and verify existing utility locations. Verify that stormwater system piping may be installed in compliance with design plans and referenced standards. Locate existing stormwater system piping and structures that are out of service and closed as per Paragraph 3.8 of this Section.

1.6 SEQUENCING AND SCHEDULING

A. Notify the Architect prior to placing backfilling or form work.

B. Coordinate connection to existing public drainage system with Town of Century.

C. Coordinate with adjacent utilities work.

PART 2 - PRODUCTS

2.1 MATERIALS

2.1.1 Pipe

Meet the following requirements of *FDOT Specifications*, *Latest Edition*: Reinforced

Concrete Pipe	Section	449
Round Rubber Gaskets	Section	942
Corrugated Steel Pipe & Pipe Arch	Section	943
Corrugated Aluminum Pipe & Pipe Arch	Section	945
Corrugated Polyethylene Pipe	Section	948
Polyvinyl Chloride (PVC)	Section	948

2.1.2 Manholes

A. Precast Concrete Manholes: Per FDOT Standard Specification 425-5 and ASTM C 478, precast reinforced concrete, of depth indicated with provision for rubber gasket joints.

B. Cast-in-Place Manholes: Per FDOT Standard Specification 42 5 Cast reinforced concrete of dimensions and with appurtenances indicated.

C. Manhole Frames and Covers: Construct Per FDOT Standard Specification 42 5-3.2 and Standard Indexes. All units shall bear the lettering "STORM SEWER" cast into cover. All proposed substitutes must have equal or greater opening sizes and weights.

2.1.3 Inlets

A. Precast Concrete Catch Basins Inlets: Construct per FDOT Standard Specification 425-5.

B. Cast-in-Place Inlets: Construct per FDOT Standard Specification 425 to dimensions and with appurtenances indicated.

1. Bottom, Walls, and Top: Reinforced concrete.
2. Channel and Bench: Concrete.

C. Inlet Frames and G rates: Per F DOT Standard Specification 42 5-3.2 & Standard Indexes. All units shall bear the lettering "STORM SEWER" cast into cover.

2.1.4 End Treatment

A. General: Head wall, apron, and mitered ends, per FDOT Standard Specification 430-4.6.

2.2 CONCRETE AND REINFORCEMENT

A. Concrete: Portland cement mix, 3,000 psi; shall be in accordance with Section 03300.

1. Cement: ASTM C 150, Type II.
2. Fine Aggregate: ASTM C 33, sand.
3. Coarse Aggregate: ASTM C 33, crushed gravel.
4. Water: Potable.

B. Reinforcement: Steel conforming to the following:

1. Fabric: ASTM A 185, welded wire fabric, plain.
2. Reinforcement Bars: ASTM A 615, Grade 60, deformed.

C. Forms:

1. Form Materials: Plywood, metal, metal-framed plywood, or other acceptable panel-type materials to provide full-depth, continuous, straight, smooth exposed surfaces without distortion or defects. Material shall be of size and strength to resist movement during concrete placement and to retain horizontal and vertical alignment until removal.
2. Form Release Agent: Provide commercial formulation form-release agent with a maximum of 350 mg/l volatile organic compounds (VOCs) that will not bond with, stain, or adversely affect concrete surfaces and will not impair subsequent treatments of concrete surfaces. Release agent to be within allowable volatile limits according to applicable local, state and federal codes.

2.3 MASONRY

A. Materials for accessories shall be per FDOT Standard Specification 949. Mortar shall be one part Portland cement and three parts masonry sand to which shall be added lime putty in the amount of 50% of the volume of cement. Special commercial mortar mixes may be used if approved by the Architect's Engineer of Record. All masonry materials shall conform to the latest applicable ASTM specifications. Set all masonry units in full beds of mortar, with full joints and strike all joints flush. Masonry reinforcements shall be galvanized Dur-O-Wal, or approved equal, and shall be installed at every other bed joint. Hollow block shall be poured solid with re-bar as designed.

2.4 CURING MATERIALS

A. Conform to FDOT Standard Specification 520-8.

2.5 BEDDING STONE

A. Subbase or base materials meeting requirements of FDOT Standard Specification 530-2.3.

PART 3 - EXECUTION

3.1 EXCAVATIONS FOR MANHOLES, INLETS, AND PIPE

A. Excavation shall be sufficient enough to leave at least 12 inches in the clear between their outer surfaces and the embankment. Excavation for all structures shall be made to the dimensions and elevations indicated on the drawings. Where the excavation is made below the indicated elevations, the excavation shall be restored to the proper elevation with compacted suitable material without extra compensation.

3.2 PREPARATION OF FOUNDATION FOR BURIED STORMWATER SYSTEMS

A. Grade trench bottom to provide a smooth, firm, stable, and rock-free foundation, throughout the length of the pipe.

B. Remove unstable, soft, and unsuitable materials at the surface upon which pipes are to be laid, and backfill with bedding stone per FDOT Standard Specification 530-2.3 to indicated level.

C. Shape bottom of trench to fit bottom of pipe. Fill unevenness with tamped sand backfill. Dig bell holes at each pipe joint to relieve the bells of all loads and to ensure continuous bearing of the pipe barrel on the foundation.

3.3 PIPE INSTALLATION

A. Drawings (plans and details) indicate the general location and arrangement of the underground stormwater system piping. Location and arrangement of piping layout takes into account many design considerations. Install the piping as indicated, to the extent practical. Deviations shall be approved by the Architect’s Engineer of Record.

B. Install piping beginning at low point of systems, true to grades and alignment indicated with unbroken continuity of invert. Place bell ends of piping facing upstream. When installing gaskets, seals, sleeves, and couplings, follow manufacturer's recommendations for use of lubricants, cements, and other installation requirements. Maintain swab or drag in line and pull past each joint as it is completed.

The pipe shall be carefully examined for defects and the inside cleaned. After placing pipe in the ditch, the ends shall be wiped free from all dirt, sand and foreign material. All pipe and joints shall be made, handled, and installed in strict accordance with the manufacturer's recommendations and instructions. Install pipe in accordance with FDOT Standard Specification 430.

C. Install piping pitched down in direction of flow, at minimum slope per plans and in accordance with manufacturer’s recommendations, specifications, and design plans.

D. Boring: Install pipe under streets or other obstructions that cannot be disturbed, by boring, jacking, or a combination of both. These methods of installation are not allowed for newly paved roadways. Utility conduit should be installed prior to paving.

E. All RCP joints shall be sock/filter wrapped prior to backfilling unless a manufacturer recommended coupling is used.

F. Field repairs of pipeline shall be in strict accordance with manufacturer's recommendations and specifications.

G. Pipe Cover: Cover shall be a minimum of 12" unless approved by the Architect's Engineer of Record.

H. Pipe Size: Minimum Pipe size shall be 6" diameter or equivalent, unless approved by the Architect's Engineer of Record.

3.4 MANHOLES

A. General: Install manholes complete with accessories as indicated. Form continuous concrete or split pipe section channel and benches between inlets and outlet. Set tops of frames and covers flush with finish surface where manholes occur in pavements. Elsewhere, set tops 3 inches above finished grade, unless otherwise indicated. Place precast concrete manhole sections as indicated, and install in accordance with ASTM C 891.

B. Provide rubber joint gasket complying with ASTM C443 at joints of sections; or apply bituminous mastic coating at joints of sections.

3.5 INLETS

A. Construct inlets to sizes and shapes indicated per FDOT Standard Specification 425-6, or as modified in the plans.

B. Set frames and grates to elevations indicated.

3.6 END TREATMENT

Construct End Treatment per FDOT Standard Specification 430-4.6.

3.7 STORMWATER SYSTEM BACKFILL

Place and compact backfill material in accordance with Section 02300 and FDOT specification 125-8.

3.8 CLOSING OUT-OF-SERVICE STORMWATER SYSTEMS

A. Out-of-Service Piping: Close open ends of out of service underground piping that is indicated to remain in place. Provide sufficiently strong closures to withstand hydrostatic or earth pressure that may result after pipe ends have been closed and grout filled with non-shrink grout.

1. Close open ends of concrete pipe or structures with not less than 8-inch-thick brick masonry bulkheads and grout fill.
2. Close open ends of other piping with plastic plugs, or other acceptable methods suitable for size and type of material being closed. Wood plugs are not acceptable.

B. Out-of-Service Structures: Remove structure and close open ends of the remaining piping or remove top of structure down to not less than 3 feet below final grade; fill structure with stone, rubble, gravel, compacted dirt, or flowable fill to within 1 foot of top of structure remaining, and fill with concrete.

3.9 FIELD QUALITY CONTROL

A. Refer to Section 32 12 13 for Concrete Testing and 31 00 00 for Earthwork Testing.

B. Cleaning: Interior of piping and structures shall be cleared of dirt and other superfluous material as work progresses. Maintain swab or drag in piping and pull past each joint as it is completed.

1. In large, accessible piping, brushes and brooms may be used for cleaning.
2. Place plugs in ends of uncompleted pipe at end of day or whenever work stops.
3. Flush piping between manholes, to remove collected debris.

C. Interior Inspection: Inspect piping to determine whether line displacement or other damage has occurred.

1. Make inspections after pipe between manholes has been installed, cleaned and approximately 2 feet of backfill is in place, and again at completion of project. Each section of pipe between structures is to show from either end on examination, a full circle of light. Each appurtenance to the system shall be of the specified size and form, to be neatly and substantially constructed, with the top set permanently to exact position and grade.
2. If inspection indicates poor alignment, debris, displaced pipe, infiltration, or other defects, correct such defects and re-inspect. All repairs shown necessary by the inspections are to be made, broken, cracked, or punctured pipe replaced, all deposits removed and the pipe left true to line and grade as herein specified, or shown on the plans, entirely clean and free from abnormalities and ready for use at no additional expense to the Owner.

D. Trench Backfill Around and Above Pipe:

1. In each compacted backfill layer, perform density test as specified in Section 31 00 00.
2. Other tests may be required at the discretion of the Architect's Engineer of Record.

E. Clean Up: Before final inspection and acceptance, the Contractor shall clean ditches, shape shoulders and restore all disturbed areas, including street crossings, grass plots, to as good as condition as existed before work started. All trenches shall be leveled and loose material removed from pavement gutters, sidewalks, pipelines, and inlet sediment traps, employing hand labor, if necessary.

END OF SECTION 33 60 00

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APPENDIX A

Geotechnical Exploration Report

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GEOTECHNICAL ENGINEERING REPORT



LAKEVIEW ECC RENOVATION AND ADDITION

PREPARED FOR:
Caldwell Associates Architects, Inc.
116 North Tarragona Street
Pensacola, Florida 32501

NOVA Project Number: 8218038

April 6, 2018

NOVA
PROFESSIONAL | PRACTICAL | PROVEN

April 6, 2018

Caldwell Associates Architects, Inc.
116 North Tarragona Street
Pensacola, Florida 32501

Attention: Mr. Dieter A. Borrell, AIA, NCARB

Subject: Geotechnical Engineering Report
LAKEVIEW ECC RENOVATION AND ADDITION
Century, Escambia County, Florida
NOVA Project Number 8218038

Dear Mr. Borrell:

NOVA Engineering and Environmental LLC (NOVA) has completed the authorized Geotechnical Engineering Report for the planned renovations/additions to the existing Lakeview ECC facility located in Century, Escambia County, Florida. The work was performed in general accordance with NOVA Proposal Number 016-20184153, dated March 20, 2018. This report briefly discusses our understanding of the project at the time of the subsurface exploration, describes the geotechnical consulting services provided by NOVA, and presents our findings, conclusions, and recommendations.

We appreciate your selection of NOVA and the opportunity to be of service on this project. If you have any questions, or if we may be of further assistance, please do not hesitate to contact us.

Sincerely,
NOVA Engineering and Environmental LLC

Jesse A. James E.I.
Assistant Branch Manager
Florida Certificate No. 1100019359

William L. Lawrence, P.E.
Senior Regional Engineer
Florida Registration No. 60147

WILLIAM LEE LAWRENCE, JR. ★ LICENSE No. 60147 ★ STATE OF FLORIDA ★ PROFESSIONAL ENGINEER

Copies Submitted: via electronic mail service

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APPENDICES

Appendix A – Figures and Maps
Appendix B – Subsurface Data
Appendix C – Laboratory Data
Appendix D – Qualifications of Recommendations

1.0 SUMMARY

A brief summary of pertinent findings, conclusions, and recommendations are presented below. This information should not be utilized in design or construction without reading the report in its entirety and paying particular attention to the recommendations presented in the text and Appendix.

1.1 GENERAL

The existing facility is located at 6021 Industrial Boulevard in Century, Escambia County, Florida. NOVA understands the project will consist of constructing a 4,485 square foot, single-story, slab-on-grade addition to the existing building, with associated paved entrance drives and parking areas.

Our field exploration at the subject site included performing two (2) Standard Penetration Test (SPT) borings within the planned structure addition footprint and four (4) auger borings within the planned pavement areas. Drilling, testing and sampling operations were performed in general accordance with ASTM designations and other industry standards.

Beneath approximately 2 to 12 inches of topsoil, the test borings generally encountered loose to medium dense fine-grained silty sands (USCS classification of SM) to depths of about 4 feet to 5 feet below existing grade (BEG) underlain by medium dense fine-grained clayey sands (SC) to depths varying between 6 feet to 11 feet BEG. From about 8 feet to 16 feet BEG, the test borings then encountered a stratum of very stiff fine-grained low-plasticity sandy clay (CL) underlain by medium dense fine-grained sands and sands with silt (SP, SP-SM) to the maximum depth explored of about 20 feet BEG.

1.2 SITE PREPARATION

We recommend stripping and grubbing the planned construction areas to remove all topsoil and surficial vegetation, trees and associated root systems, and any other deleterious non-soil materials that are found to be present. Existing subsurface utilities servicing the facility that are found to be present within the footprint of the planned structure addition should be relocated or abandoned as appropriate.

The exposed soils at the stripped grade elevation should be compacted utilizing non-vibratory compaction equipment to a minimum soil density of at least 95 percent of the Modified Proctor maximum dry density (ASTM D-1557). Vibratory compaction is not recommended for this project due to the presence of the existing structure.

A geotechnical engineer should carefully evaluate all subgrades prior to foundation and slab-on-grade construction to confirm compliance with this report; evaluate geotechnical sections of the plans and specifications for the overall project; and provide additional recommendations that may be required.

1.3 GROUNDWATER CONTROL

A stabilized groundwater table was encountered in the test borings at depths of about 12 feet to 15 feet BEG at the time of our field exploration, which occurred during a period of relatively normal seasonal rainfall. Apparent groundwater is not expected to adversely impact the proposed project.

1.4 FOUNDATIONS

After the recommended site/subgrade preparation and fill placement, we recommend that the planned structure addition be supported on a conventional shallow foundation system bearing upon naturally occurring soils and/or compacted structural fill. The building addition foundation may be designed for a maximum bearing pressure of **1,500 pounds per square foot** (**psf**) and should be structurally isolated from the adjacent building.

1.5 PAVEMENTS

We understand that a flexible (asphalt) pavement section will be employed for the planned entrance drive and parking area improvements. Based on the results of our test borings, the subsurface conditions encountered appear to be adaptable for providing adequate support of this pavement section.

2.0 INTRODUCTION

2.1 PROJECT INFORMATION

Our understanding of this project is based on discussions with the Client, review of the provided site plan, a site reconnaissance performed during the boring layout, review of aerial photography of the site via internet-based GIS software, and our experience with similar geotechnical conditions in the near vicinity to this project site.

2.1.1 Site Plans and Documents

We were furnished with the following plans and documents:

- Document: Lakeview/ECC Renovation and Addition
  Prepared by: Caldwell Associates Architects, Inc.
  Dated: March 1, 2018

2.1.2 Proposed Construction

NOVA understands the project will consist of constructing a 4,485 square foot, single-story, slab-on-grade addition to the existing building, as well as expanded parking areas and entrance drives. Foundation support for the planned structure addition is anticipated to be accomplished via conventional shallow footings and a slab-on-grade system.

2.1.3 Maximum Loads

Structural loadings were provided by the design team, including maximum loadings for the planned addition of 1.5 kips per lineal foot for continuous load bearing walls and 40 kips per column for interior isolated column footings.

2.1.4 Floor Elevations / Site Grading

We understand that less than 2 feet of fill, and no cut, will be required to achieve the desired finish subgrade elevations within the planned structure addition footprint and pavement areas.

2.2 SCOPE OF WORK

Caldwell Associates Architects, Inc., engaged NOVA to provide geotechnical engineering consulting services for the planned **Lakeview ECC Renovation and Addition** project. This report briefly discusses our understanding of the project, describes our exploratory procedures, and presents our findings, conclusions, and recommendations.

The primary objective of this study was to perform a geotechnical exploration within the areas of the planned construction and to assess these findings as they relate to geotechnical aspects of the planned site development. The authorized geotechnical engineering services included a site reconnaissance, a soil test boring and sampling program, laboratory testing, engineering evaluation of the field and laboratory data, and the preparation of this report. The services were performed substantially as outlined in our proposal number 016-20184153, dated March 20, 2018, and in general accordance with industry standards. As authorized by the client, the completed geotechnical report was to include:

- A description of the site, fieldwork, laboratory testing and general soil conditions encountered, as well as a Boring Location Plan, and individual Test Boring Records.
- Site preparation considerations that include geotechnical discussions regarding site stripping and subgrade preparation and engineered fill/backfill placement.
- Recommendations for controlling groundwater and/or run-off during construction and, the need for permanent dewatering systems based on the anticipated post construction groundwater levels.
- Foundation system recommendations for the planned structure addition, including an allowable foundation capacity, a recommended bearing depth, and installation considerations.
- Slab-on-grade construction considerations based on the geotechnical findings, including the need for a sub-slab vapor barrier or a capillary barrier.
- Flexible (asphalt) pavement section recommendations.
- Suitability of on-site soils for re-use as structural fill and backfill. Additionally, the criteria for suitable fill materials will be provided.
- Recommended quality control measures (i.e. sampling, testing, and inspection requirements) for site grading and foundation construction.

The assessment of site environmental conditions, including the presence of wetlands or detection of pollutants in the soil, rock or groundwater, laboratory testing of samples, or a site-specific seismic study was beyond the scope of this geotechnical study. If requested, NOVA can provide these services.

3.0 SITE DESCRIPTION

3.1 LOCATION AND LEGAL DESCRIPTION

The existing facility is located at 6021 Industrial Boulevard in Century, Escambia County, Florida. According to the Escambia County Property Appraiser's online database, the subject 2.18-acre property is referenced as Parcel ID 065N303200001020. A Site Location Map is included in Appendix A.

3.2 SUBJECT PROPERTY AND VICINITY GENERAL CHARACTERISTICS

The vicinity of the Subject Property is generally developed with mixed residential and commercial uses, and is bordered by the following:

DIRECTION	LAND USE DESCRIPTION/OBSERVATIONS
NORTH	Vacant
EAST	Industrial Boulevard, then a medical care facility
SOUTH	Vacant
WEST	12th Avenue, then light commercial properties

3.3 CURRENT USE OF THE PROPERTY

At the time of our field exploration, the subject property was developed with a single-story structure and associated paved driveways and parking areas, landscaped areas within the center of the property, and perimeter greenspace consisting of short grasses.

4.0 FIELD EXPLORATION

Boring locations were established in the field by NOVA personnel using the provided site plan and handheld GPS equipment. The approximate locations are shown in Appendix A. Consequently, referenced boring locations and elevations should be considered approximate. If increased accuracy is desired by the client, NOVA recommends that the boring locations and elevations be surveyed.

Our field exploration was conducted on March 29, 2018 and included:

- Two (2), 20-foot deep SPT borings performed within the planned structure addition footprint,
- Four (4), 5-foot deep auger borings performed within the planned pavement areas.

Test Borings: The structural test borings were performed using the guidelines of ASTM Designation D-1586, "Penetration Test and Split-Barrel Sampling of Soils". A mud rotary drilling process was used to advance the borings. At regular intervals, soil samples were obtained with a standard 1.4-inch I.D., 2.0-inch O.D., split-tube sampler. The sampler was first seated six inches and then driven an additional foot with blows of a 140-pound hammer falling 30 inches. The number of hammer blows required to drive the sampler the final foot is designated the "Penetration Resistance". The penetration resistance, when properly interpreted, is an index to the soil strength and density. Representative portions of the soil samples, obtained from the sampler, were placed in sealed containers and transported to our laboratory for further evaluation and laboratory testing.

Test Boring Records in Appendix B show the standard penetration test (SPT) resistances, or “N-values”, and present the soil conditions encountered in the borings. These records represent our interpretation of the subsurface conditions based on the field exploration data, visual examination of the split-barrel samples, laboratory test data, and generally accepted geotechnical engineering practices. The stratification lines and depth designations represent approximate boundaries between various subsurface strata. Actual transitions between materials may be gradual.

4.1 LABORATORY TESTING

A laboratory testing program was conducted to characterize materials which exist at the site using the recovered split-barrel samples. Selected test data are presented on the Test Boring Records attached in the Appendix. The specific tests are briefly described on the following page.

It should be noted that all soil samples will be properly disposed of 30 days following the submittal of this NOVA subsurface exploration report unless you request otherwise.

4.1.1 Soil Classification

Soil classification provides a general guide to the engineering properties of various soil types and enable the engineer to apply past experience to current problems. In our explorations, samples obtained during drilling operations are observed in our laboratory and visually classified by an engineer. The soils are classified according to consistency (based on number of blows from standard penetration tests), color and texture. These classification descriptions are included on our Test Boring Records. The classification system discussed above is primarily qualitative; laboratory testing is generally performed for detailed soil classification. Using the test results, the soils were classified using the Unified Soil Classification System. This classification system and the in-place physical soil properties provide an index for estimating the soil's behavior. The soil classification and physical properties obtained are presented in this report.

4.1.2 Moisture Content

The moisture content is the ratio expressed as a percentage of the weight of water in a given mass of soil to the weight of the solid particles. This test was conducted in general accordance with ASTM D-2216.

4.1.3 Sieve Analysis

The sieve analysis consists of passing a soil sample through a series of standard sieve openings. The percentage of fines passing through the No. 200 sieve is generally considered to represent the amount of silt and clay of the tested soil sample. The sieve analysis test was conducted in general accordance with ASTM Designation D-1140.

5.0 SUBSURFACE CONDITIONS

5.1 GEOLOGY

The site is located in the Escambia County, Florida area and according to the United States Geological Survey (USGS), is situated within the greater Gulf Coastal Plain region. The site is generally covered with Alluvium sediments of the Pleistocene/Holocene periods underlain by the Citronelle formation of the Pliocene/Pleistocene periods. The alluvial sediments typically consist of siliciclastics that are fine to coarse quartz sand containing clay lenses and gravel in places. Sands consists primarily of very fine to very coarse poorly sorted quartz grains; gravel is composed of quartz, quartzite, and chert pebbles. In areas of the Valley and Ridge province gravels are generally composed of angular to sub-rounded chert, quartz, and quartzite pebbles. Coastal deposits in the Escambia County area include fine to medium quartz sand with shell fragments and accessory heavy minerals along Gulf beaches and fine to medium quartz sand, silt, clay, peat, mud and ooze in the Mississippi Sound, Little Lagoon, bays, lakes, streams, and estuaries. The Citronelle formation consists primarily of varicolored/mottled lenticular beds of poorly sorted sand, clayey sand, clay, and clayey gravel. Limonite pebbles and lenses of limonite cemented sand occur locally in weathered Miocene exposures.

Surficial soils in the region are primarily siliciclastic sediments deposited in response to the renewed uplift and erosion in the Appalachian highlands to the north and sea-level fluctuations. The extent and type of deposit is influenced by numerous factors, including mineral composition of the parent rock and meteorological events.

5.2 SOIL CONDITIONS

The following paragraph provides a generalized description of the subsurface profiles and soil conditions encountered in the borings conducted during this study. The Test Boring Records in the Appendix should be reviewed to provide detailed descriptions of the conditions encountered at each boring location. Conditions may vary at other locations and times.

Beneath approximately 2 to 12 inches of topsoil, the test borings generally encountered loose to medium dense fine-grained silty sands (USCS classification of SM) to depths of about 4 feet to 5 feet below existing grade (BEG) underlain by medium dense fine-grained clayey sands (SC) to depths varying between 6 feet to 11 feet BEG. From about 8 feet to 16 feet BEG, the test borings then encountered a stratum of very stiff fine-grained low-plasticity sandy clay (CL) underlain by medium dense fine-grained sands and sands with silt (SP, SP-SM) to the maximum depth explored of about 20 feet BEG.

5.3 GROUNDWATER CONDITIONS

5.3.1 General

Groundwater in the Gulf Coastal Plain typically occurs as an unconfined aquifer condition. Recharge is provided by the infiltration of rainfall and surface water through the soil overburden. More permeable zones in the soil matrix can affect groundwater conditions. The groundwater table is expected to be a subdued replica of the original surface topography. Based on a review of topographic maps and our visual site observations, we anticipate the groundwater flow at the site to be towards the south.

Groundwater levels vary with changes in season and rainfall, construction activity, surface water runoff and other site-specific factors. Groundwater levels in the Century, Florida area are typically lowest in the late fall to winter and highest in the early spring to mid-summer with annual groundwater fluctuations by seasonal rainfall; consequently, the water table may vary at times.

5.3.2 Soil Test Boring Groundwater Conditions

A stabilized groundwater table was encountered in the test borings at depths of about 12 feet to 15 feet BEG at the time of our field exploration, which occurred during a period of relatively normal seasonal rainfall.

Based on comparisons of current annual monthly rainfall data to historical rainfall data extending back 50+ years in time, we estimate that the normal permanent seasonal high groundwater (SHGW) table for this site will occur within 1 foot above the depths to groundwater measured at each boring location at the time of drilling, during the wet season.

6.0 CONCLUSIONS AND RECOMMENDATIONS

The following conclusions and recommendations are based on our understanding of the planned construction, our site observations, our evaluation and interpretation of the field and laboratory data obtained during this exploration, our experience with similar subsurface conditions, and generally accepted geotechnical engineering principles and practices.

Subsurface conditions in unexplored locations or at other times may vary from those encountered at specific boring locations. If such variations are noted during construction, or if project development plans are changed, we request the opportunity to review the changes and amend our recommendations, if necessary.

As previously noted, boring locations were established in the field using handheld GPS equipment and the provided site plan. If increased accuracy is desired by the client, we recommend that the boring locations and elevations be surveyed.

6.1 SITE PREPARATION

We anticipate that finish site grades will not change greater than +/- 2 feet from existing grades within the planned structure addition footprint and pavement areas.

We recommend stripping and grubbing the planned construction areas to remove all topsoil and surficial vegetation, trees and associated root systems, and any other deleterious non-soil materials that are found to be present. Existing subsurface utilities that are found to be present within the footprint of the structure addition should be relocated or abandoned as appropriate.

The soils exposed at the stripped grade elevation, as well as subsequent lifts of fill soils, should be compacted to a minimum soil density of at least 95 percent of the maximum dry density as determined by the Modified Proctor test (ASTM D-1557) **via non-vibratory methods** (due to the close proximity of the existing structure). Resulting or additional excavations should be backfilled with structural fill also compacted to a minimum soil density of at least 95 percent of the maximum dry density as determined by the Modified Proctor test (ASTM D-1557).

We note that vibratory compaction operations should not be performed within a clear distance of 50 feet from any adjacent structures.

NOVA should observe the compaction of the subgrade to locate soft, weak, or excessively wet fill or existing soils present at the time of construction. Any unstable materials observed during the evaluation and compaction operations should be undercut and replaced with structural fill or stabilized in-place by scarifying and re-densifying.

6.1.1 Soil Suitability

The majority of the on-site near surface soils can be categorized as SM, or fine-grained silty sands based on the Unified Soil Classification System (USCS). This relatively sandy soil type is considered unsuitable for use as structural fill in the building and pavement areas given the relatively high fines content that this stratum has been found to contain (our laboratory testing indicated that this material has a fines content between 32 and 38 percent).

All materials to be used for backfill or compacted fill construction should be evaluated and, if necessary, tested by NOVA prior to placement to determine if they are suitable for their intended use.

In general, fill materials should be relatively clean sands with less than 12 percent soil fines (i.e., materials with USCS classifications of SP and SP-SM) and free of non-soil materials and rock fragments larger than 3 inches in diameter, and should be placed within +/- 2% of their optimum moisture content at the time of placement. Fill materials may also contain fines contents between 12 and 25 percent, but strict moisture control will be required.

Organic and/or debris-laden material is not suitable for re-use as structural fill. Topsoil, mulch, and similar organic materials can be wasted in architectural areas. Debris-laden materials should be excavated, transported, and disposed of off-site in accordance with appropriate solid waste rules and regulations.

6.1.2 Soil Compaction

Fill should be placed in thin, horizontal loose lifts (maximum 12-inch) and compacted via non-vibratory methods to a minimum soil density of at least 95 percent of the Modified Proctor maximum dry density (ASTM D-1557). The upper 12 inches of soil beneath the bottoms of all foundation footings should be compacted to at least 98 percent. In confined areas, such as utility trenches, portable compaction equipment and thinner fill lifts (3 to 4 inches) may be necessary.

Fill materials used in structural areas should have a target maximum dry density of at least 95 pounds per cubic foot (pcf). If lighter weight fill materials are used, the NOVA geotechnical engineer should be consulted to assess the impact on design recommendations.

Soil moisture content should be maintained within 2 percent of the optimum moisture content. We recommend that the grading contractor have equipment on site during earthwork for both drying and wetting fill soils. Moisture control may be difficult during rainy weather.

Filling operations should be observed by a NOVA soils technician, who can confirm suitability of material used and uniformity and appropriateness of compaction efforts. He/she can also document compliance with the specifications by performing field density tests using thin-walled tube, nuclear, or sand cone testing methods (ASTM D-2937, D-6938, or D-1556, respectively). One test per 400 cubic yards and every 2 feet of placed fill is recommended, with test locations well distributed throughout the fill mass. When filling in small areas, at least one test per day per area should be performed.

6.2 GROUNDWATER CONTROL

As was noted previously, a stabilized groundwater table was encountered in the test borings at depths of about 12 feet to 15 feet BEG at the time of our field exploration. Depending on the areas of the site under consideration, groundwater levels have differing implications for design and construction. The extent and nature of any dewatering required during construction will be dependent on the actual groundwater conditions prevalent at the time of construction and the effectiveness of construction drainage to prevent run-off into open excavations.

Based on our understanding of the planned construction, groundwater is not expected to adversely impact the planned development of this property. Perched groundwater conditions could potentially be present at the time of construction, however, and good site preparation practices should be employed by the site contractor to minimize the impact of perched groundwater on the project.

As previously noted, groundwater levels are subject to seasonal, climatic and other variations and may be different at other times and locations.

6.3 FOUNDATIONS

NOVA understands the project will consist of constructing a 4,485 square foot single-story, slab-on-grade addition to the existing building. Foundation support for the planned structure addition is anticipated to be accomplished via conventional shallow footings and a slab-on-grade system.

Structural loadings were provided by the design team, including maximum loadings for the planned addition of 1.5 kips per lineal foot for continuous load bearing walls and 40 kips per column for interior isolated column footings.

6.3.1 Shallow Foundations

Design: After the recommended site and subgrade preparation and fill placement, we recommend that a conventional shallow foundation system consisting of isolated spread footings and/or turn-down slab-on-grade construction be used to support the planned structure addition.

Foundations bearing on densified existing soils and/or compacted structural fill, as recommended in this report, may be designed for a maximum allowable bearing pressure of **1,500 pounds per square foot (psf),** which reflects the relatively loose soil conditions encountered in the upper 2 feet to 6 feet of the soil horizon in the SPT borings and the fact that soil improvement utilizing a heavy weight vibratory roller will not be an option due to the very close proximity of the existing building.

We recommend that the proposed building addition be structurally isolated from the existing structure, to minimize the potential for damage to both structures that would be caused by excessive differential settlements between the two structures. Flexible subsurface utility connections are also recommended between structures for the same reason.

We recommend minimum footing widths of 24 inches for ease of construction and to reduce the possibility of localized shear failures. Exterior and interior footing bottoms should be established at least 18 inches below finished surrounding exterior grades.

Settlement: Settlements for spread foundations bearing on the higher consistency residual materials were assessed using SPT values to estimate elastic modulus, based on published correlations and previous NOVA experience. We note that the settlements presented are based on the results of the SPT borings. Conditions may be better or worse in other areas, however, we believe the estimated settlements are reasonably conservative.

Based on assumed column loadings, the soil bearing capacity and the presumed foundation elevations discussed above, we expect primary total settlement beneath individual foundations to be on the order of 1 inch.

The amount of differential settlement is difficult to predict because the subsurface and foundation loading conditions can vary considerably across the site. However, we anticipate differential settlement between adjacent foundations will be less than ½ inch. The final deflected shape of the structure will be dependent on actual foundation locations and loading. Foundation support conditions are highly erratic and may vary dramatically in short horizontal distances.

It is anticipated that the geotechnical engineer may recommend a different bearing capacity upon examination of the actual foundation subgrade at numerous locations. To reduce the differential settlement if lower consistency materials are encountered, a lower bearing capacity should be used, or the foundations should be extended to more competent materials.

We anticipate that timely communication between the geotechnical engineer and the structural engineer, as well as other design and construction team members, will be required.

Construction: Foundation excavations should be evaluated by the NOVA geotechnical engineer prior to reinforcing steel placement to observe foundation subgrade preparation and confirm bearing pressure capacity. Foundation excavations should be level and free of debris, ponded water, mud, and loose, frozen, or water-softened soils. Concrete should be placed as soon as is practical after the foundation is excavated and the subgrade evaluated. Foundation concrete should not be placed on frozen or saturated soil. If a foundation excavation remains open overnight, or if rain or snow is imminent, a 3 to 4-inch thick "mud mat" of lean concrete should be placed in the bottom of the excavation to protect the bearing soils until reinforcing steel and concrete can be placed.

6.3.2 SLAB-ON-GRADE

General: The conditions exposed at subgrade levels will vary across the site and may include structural fill. The slab-on-grade may be adequately supported on these subgrade conditions subject to the recommendations in this report.

The slab-on-grade should be jointed around columns and along walls to reduce cracking due to differential movement. An underdrain system is not necessary beneath the slab, provided that the slab is established at least 2 feet above the SHGW level. An impermeable vapor barrier is recommended beneath finished spaces to reduce dampness.

Once grading is completed, the subgrade is usually exposed to adverse construction activities and weather conditions during the period of sub-slab utility installation. The subgrade should be well-drained to prevent the accumulation of water. If the exposed subgrade becomes saturated or frozen, the geotechnical engineer should be consulted.

After utilities have been installed and backfilled, a final subgrade evaluation should be performed by the geotechnical engineer immediately prior to slab-on-grade placements. If practical, proofrolling may be used to redensify the surface and to detect any soil that has become excessively wet or otherwise loosened.

6.4 PAVEMENT SECTIONS

We understand that a flexible (asphalt) pavement section will be employed for the planned entrance drive and parking area improvements. Recommended heavy duty and light duty pavement sections have been developed for this project based on our understanding of the existing subsurface conditions, review of applicable FDOT specifications, and the assumed pavement design parameters of a 20-year pavement design life with moderate traffic loadings appropriate to a facility of this size.

Based on the results of our test borings, the subsurface conditions encountered appear to be adaptable for the following pavement sections, provided a minimum separation of at least 24 inches between the bottom of an FDOT Crushed Limerock or Crushed Concrete base course and the apparent groundwater table or a perched water table can be maintained. Based on the results of the test borings, maintaining this separation is not anticipated to be an issue for this project. If this separation cannot be established and maintained by grading and surface drainage improvements, permanent groundwater control measures (underdrains) should also be incorporated into the design and construction of the project, or GAB should be used in lieu of crushed limerock or crushed concrete base.

STANDARD-DUTY PAVEMENT SECTION (PARKING STALLS)	
Structural Course (FDOT SuperPave – SP fine)	1½ inches
Crushed Limerock or Crushed Concrete Base Course (from an FDOT approved source, min. LBR of 100)	6 inches
Stabilized Subgrade (minimum LBR of 40)	12 inches
HEAVY-DUTY PAVEMENT SECTION (MAIN ENTRANCES, DRIVEWAYS)	
Structural Course (FDOT SuperPave – SP fine)	2½ inches
Crushed Limerock or Crushed Concrete Base Course (from an FDOT approved source, min. LBR of 100)	8 inches
Stabilized Subgrade (minimum LBR of 40)	12 inches

We recommend specifying a minimum compaction requirement of at least 98 percent of the maximum dry density for the base course and stabilized subgrade course materials as determined by the Modified Proctor test method (ASTM D-1557). All asphalt material and paving operations should meet applicable specifications of the Asphalt Institute and FDOT requirements. A NOVA technician should observe placement and perform density testing of the stabilized subgrade, base course material and asphalt.

7.0 CONSTRUCTION OBSERVATIONS

7.1 SUBGRADE

Once site grading is completed, the subgrade may be exposed to adverse construction activities and weather conditions. The subgrade should be well-drained to prevent the accumulation of water. If the exposed subgrade becomes saturated or frozen, the NOVA geotechnical engineer should be consulted.

A final subgrade evaluation should be performed by the NOVA geotechnical engineer immediately prior to slab-on-grade placement. If practical, proofrolling may be used to re-densify the surface and to detect any soil, which has become excessively wet or otherwise loosened.

7.2 SHALLOW FOUNDATIONS

Foundation excavations should be level and free of debris, ponded water, mud, and loose, frozen or water-softened soils. All foundation excavations should be evaluated by the NOVA geotechnical engineer prior to reinforcing steel placement to observe foundation subgrade preparation and confirm bearing pressure capacity. Due to variable site subsurface and construction conditions, some adjustments in isolated foundation bearing pressures, depth of foundations or undercutting and replacement with controlled structural fill may be necessary.

7.3 PAVEMENTS

The recommended pavement sections should utilize materials and be constructed in accordance with applicable FDOT specifications. Also, NOVA should be retained during construction to confirm subgrade conditions are as anticipated and that the construction process is as required by the contract documents

APPENDIX A
Figures and Maps



Scale: Not To Scale **Date Drawn:** April 5, 2018 **Drawn By:** J. James **Checked By:** W. Lawrence	NOVA 140-A Lurton Street Pensacola, Florida 32505 850.607.7782 ♦ 850.249.6683	**PROJECT LOCATION MAP** Lakeview ECC Renovation and Addition Century, Escambia County, Florida *NOVA Project Number 8218038*

Soil Map—Escambia County, Florida
(8218038 Lakeview ECC Renovation and Addition)



Map Scale: 1:807 if printed on A landscape (11" x 8.5") sheet.

N

Meters
0 10 20 40 60

Feet
0 35 70 140 210

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 16N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Escambia County, Florida
Survey Area Data: Version 16, Nov 21, 2017

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

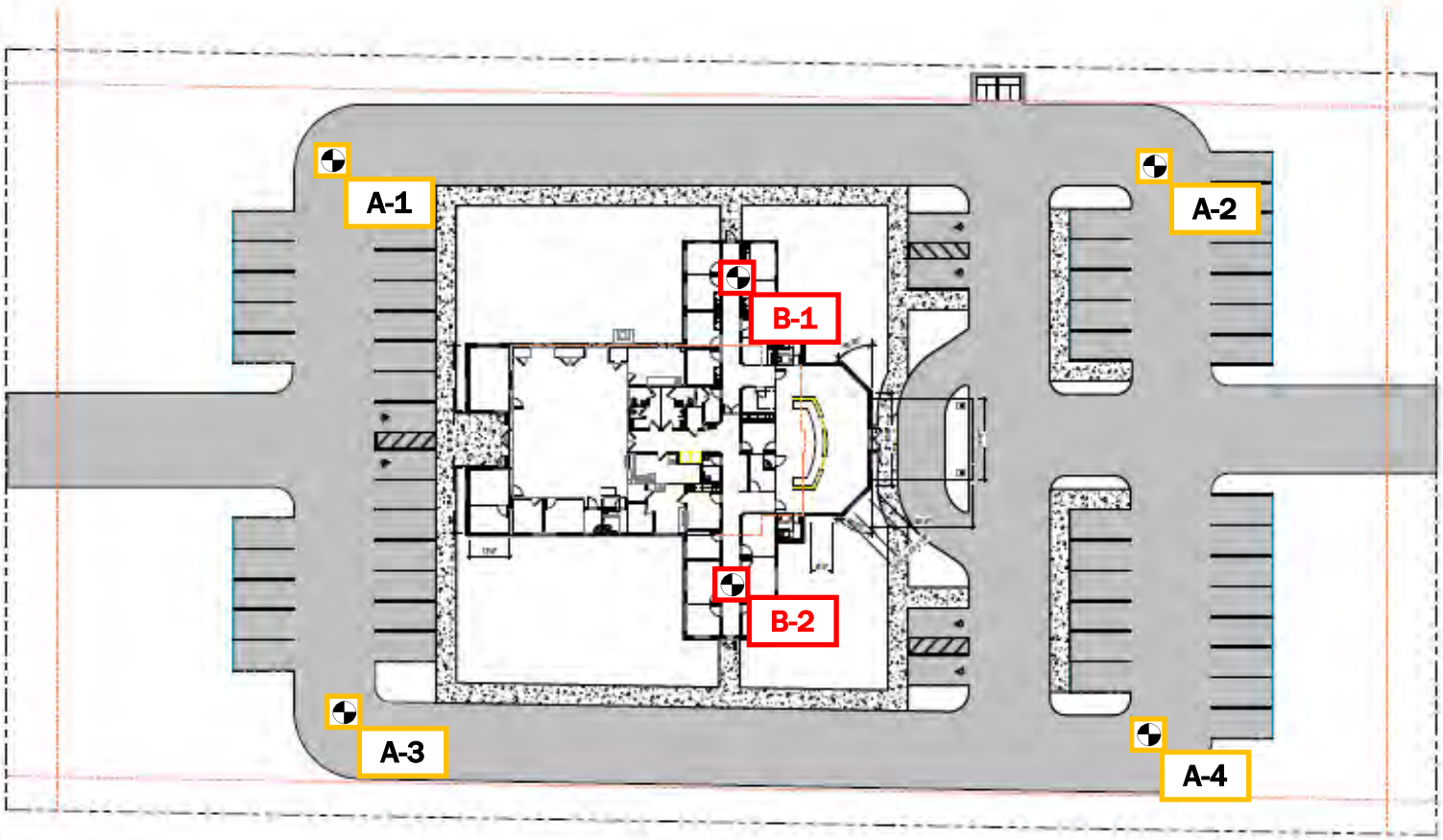
Date(s) aerial images were photographed: Sep 6, 2013—Mar 7, 2017

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
25	Poarch sandy loam, 2 to 5 percent slopes	1.8	71.0%
38	Bonifay loamy sand, 0 to 5 percent slopes	0.7	27.7%
51	Pelham loamy sand, 0 to 2 percent slopes	0.0	1.4%
Totals for Area of Interest		**2.6**	**100.0%**

APPENDIX B
Subsurface Data



LEGEND

B-x – 20-foot Standard Penetration Test Boring

A-x – 5-foot Auger Boring

Scale: Not To Scale **Date Drawn:** March 21, 2018 **Drawn By:** J. James **Checked By:** W. Lawrence	NOVA 140-A Lurton Street Pensacola, Florida 32505 850.607.7782 ♦ 850.249.6683	**BORING LOCATION PLAN** **Lakeview ECC Renovation and Addition** Century, Escambia County, Florida *NOVA Project Number 8218038*

KEY TO BORING LOGS

SYMBOLS AND ABBREVIATIONS

SYMBOL	DESCRIPTION
N-Value	No. of Blows of a 140-lb. Weight Falling 30 Inches Required to Drive a Standard Spoon 1 Foot
WOR	Weight of Drill Rods
WOH	Weight of Drill Rods and Hammer
	Sample from Auger Cuttings
	Standard Penetration Test Sample
	Thin-wall Shelby Tube Sample (Undisturbed Sampler Used)
% REC	Percent Core Recovery from Rock Core Drilling
RQD	Rock Quality Designation
	Stabilized Groundwater Level
	Seasonal High Groundwater Level (also referred to as the W.S.W.T.)
NE	Not Encountered
GNE	Groundwater Not Encountered
BT	Boring Terminated
-200 (%)	Fines Content or % Passing No. 200 Sieve
MC (%)	Moisture Content
LL	Liquid Limit (Atterberg Limits Test)
PI	Plasticity Index (Atterberg Limits Test)
K	Coefficient of Permeability
Org. Cont.	Organic Content
G.S. Elevation	Ground Surface Elevation

UNIFIED SOIL CLASSIFICATION SYSTEM

MAJOR DIVISIONS			GROUP SYMBOLS	TYPICAL NAMES
COARSE-GRAINED SOILS More than 50% retained on the No. 200 sieve*	GRAVELS 50% or more of coarse fraction retained on No. 4 sieve	CLEAN GRAVELS	GW	Well-graded gravels and gravel-sand mixtures, little or no fines
			GP	Poorly graded gravels and gravel-sand mixtures, little or no fines
		GRAVELS WITH FINES	GM	Silty gravels and gravel-sand-silt mixtures
			GC	Clayey gravels and gravel-sand-clay mixtures
	SANDS More than 50% of coarse fraction passes No. 4 sieve	CLEAN SANDS 5% or less passing No. 200 sieve	SW**	Well-graded sands and gravelly sands, little or no fines
			SP**	Poorly graded sands and gravelly sands, little or no fines
		SANDS with 12% or more passing No. 200 sieve	SM**	Silty sands, sand-silt mixtures
			SC**	Clayey sands, sand-clay mixtures
FINE-GRAINED SOILS 50% or more passes the No. 200 sieve*	SILTS AND CLAYS Liquid limit 50% or less		ML	Inorganic silts, very fine sands, rock flour, silty or clayey fine sands
			CL	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, lean clays
			OL	Organic silts and organic silty clays of low plasticity
	SILTS AND CLAYS Liquid limit greater than 50%		MH	Inorganic silts, micaceous or diamicaceous fine sands or silts, elastic silts
			CH	Inorganic clays or clays of high plasticity, fat clays
			OH	Organic clays of medium to high plasticity
			PT	Peat, muck and other highly organic soils

*Based on the material passing the 3-inch (75 mm) sieve
** Use dual symbol (such as SP-SM and SP-SC) for soils with more than 5% but less than 12% passing the No. 200 sieve

RELATIVE DENSITY
(Sands and Gravels)
Very loose – Less than 4 Blow/Foot
Loose – 4 to 10 Blows/Foot
Medium Dense – 11 to 30 Blows/Foot
Dense – 31 to 50 Blows/Foot
Very Dense – More than 50 Blows/Foot

CONSISTENCY
(Silts and Clays)
Very Soft – Less than 2 Blows/Foot
Soft – 2 to 4 Blows/Foot
Medium Stiff – 5 to 8 Blows/Foot
Stiff – 9 to 15 Blows/Foot
Very Stiff – 16 to 30 Blows/Foot
Hard – More than 30 Blows/Foot

RELATIVE HARDNESS
(Limestone)
Soft – 100 Blows for more than 2 Inches
Hard – 100 Blows for less than 2 Inches

MODIFIERS

These modifiers Provide Our Estimate of the Amount of Minor Constituents (Silt or Clay Size Particles) in the Soil Sample
Trace – 5% or less
With Silt or With Clay – 6% to 11%
Silty or Clayey – 12% to 30%
Very Silty or Very Clayey – 31% to 50%

These Modifiers Provide Our Estimate of the Amount of Organic Components in the Soil Sample
Trace – Less than 3%
Few – 3% to 4%
Some – 5% to 8%
Many – Greater than 8%

These Modifiers Provide Our Estimate of the Amount of Other Components (Shell, Gravel, Etc.) in the Soil Sample
Trace – 5% or less
Few – 6% to 12%
Some – 13% to 30%
Many – 31% to 50%

NOVA

TEST BORING RECORD B-1

PROJECT: Lakeview ECC | PROJECT NO.: 8218038
CLIENT: Caldwell Associates Architects, Inc.
PROJECT LOCATION: Century, Escambia County, Florida
LOCATION: Per Boring Location Plan | ELEVATION: Existing Grade
DRILLER: S. Ryan | LOGGED BY: J. James
DRILLING METHOD: SPT Boring | DATE: March 29, 2018
DEPTH TO - WATER> INITIAL: ▽ 12 feet AFTER 24 HOURS: ▼ _____ CAVING> ℄ _____

Depth (feet)	Description	Graphic	Groundwater	Sample Type	N-Value
0					
	TOPSOIL (Approx. 6-inches)				6
	Loose brown/gray fine-grained Silty SAND (SM)				
3	Medium dense light brown fine-grained Silty SAND (SM)				16
	Medium dense dark orange fine-grained Clayey SAND (SC)				11
6	Very stiff orange/grey low-plasticity sandy CLAY (CL)				24
	Medium dense light orange fine-grained SAND with Silt (SP-SM)				31
9					
12	Medium dense light orange fine-grained SAND (SP)		▽		23
15					
18					22
	Boring Terminated at 20 ft.				
21					

%<#200
BLOW COUNT
NATURAL MOISTURE
PLASTIC LIMIT ⊢——⊣ LIQUID LIMIT
10 20 30 40 50 70 90

This information pertains only to this boring and should not be interpreted as being indicative of the site.

NOVA

TEST BORING RECORD B-2

PROJECT: Lakeview ECC | PROJECT NO.: 8218038
CLIENT: Caldwell Associates Architects, Inc.
PROJECT LOCATION: Century, Escambia County, Florida
LOCATION: Per Boring Location Plan | ELEVATION: Existing Grade
DRILLER: S. Ryan | LOGGED BY: J. James
DRILLING METHOD: SPT Boring | DATE: March 29, 2018
DEPTH TO - WATER> INITIAL: ▽ 15 feet AFTER 24 HOURS: ▼ _____ CAVING> _____

Depth (feet)	Description	N-Value
0	TOPSOIL (Approx. 2-inches)	5
	Loose brown/gray fine-grained Silty SAND (SM)	
3	Loose light brown fine-grained Silty SAND (SM)	5
6		7
		16
9	Medium dense dark orange fine-grained Clayey SAND (SC)	27
12	Very stiff orange/grey low-plasticity sandy CLAY (CL)	
15		22
18	Medium dense light orange fine-grained SAND (SP)	28
21	Boring Terminated at 20 ft.	

Graphic | Groundwater | Sample Type

%<#200
BLOW COUNT
NATURAL MOISTURE
PLASTIC LIMIT — LIQUID LIMIT
10 20 30 40 50 70 90

This information pertains only to this boring and should not be interpreted as being indicative of the site.

NOVA

TEST BORING RECORD A-1

PROJECT: Lakeview ECC | PROJECT NO.: 8218038
CLIENT: Caldwell Associates Architects, Inc.
PROJECT LOCATION: Century, Escambia County, Florida
LOCATION: Per Boring Location Plan | ELEVATION: Existing Grade
DRILLER: S. Ryan | LOGGED BY: J. James
DRILLING METHOD: Auger Boring | DATE: March 29, 2018
DEPTH TO - WATER> INITIAL: GNE | AFTER 24 HOURS: | CAVING>

Depth (feet)	Elevation (ft-MSL)	Description	Graphic	Groundwater	Sample Type	N-Value
0						
		TOPSOIL (Approx. 12-inches)				
		Light brown fine-grained Silty SAND (SM)				
3						
6		Boring Terminated at 5 ft.				
9						
12						
15						
18						
21						

■ %<#200
● BLOW COUNT
▲ NATURAL MOISTURE
PLASTIC LIMIT ⊢——⊣ LIQUID LIMIT
10 20 30 40 50 70 90

This information pertains only to this boring and should not be interpreted as being indicative of the site.

NOVA

TEST BORING RECORD A-2

PROJECT: Lakeview ECC | PROJECT NO.: 8218038
CLIENT: Caldwell Associates Architects, Inc.
PROJECT LOCATION: Century, Escambia County, Florida
LOCATION: Per Boring Location Plan | ELEVATION: Existing Grade
DRILLER: S. Ryan | LOGGED BY: J. James
DRILLING METHOD: Auger Boring | DATE: March 29, 2018
DEPTH TO - WATER> INITIAL: GNE | AFTER 24 HOURS: | CAVING>

Depth (feet)	Elevation (ft-MSL)	Description	Graphic	Groundwater	Sample Type	N-Value
0						
		TOPSOIL (Approx. 12-inches)				
		Brown/gray fine-grained Silty SAND (SM)				
3		Light brown fine-grained Silty SAND (SM)				
6		Boring Terminated at 5 ft.				
9						
12						
15						
18						
21						

%<#200
BLOW COUNT
NATURAL MOISTURE
PLASTIC LIMIT — LIQUID LIMIT
10 20 30 40 50 70 90

This information pertains only to this boring and should not be interpreted as being indicative of the site.

NOVA

TEST BORING RECORD A-3

PROJECT: Lakeview ECC PROJECT NO.: 8218038
CLIENT: Caldwell Associates Architects, Inc.
PROJECT LOCATION: Century, Escambia County, Florida
LOCATION: Per Boring Location Plan ELEVATION: Existing Grade
DRILLER: S. Ryan LOGGED BY: J. James
DRILLING METHOD: Auger Boring DATE: March 29, 2018
DEPTH TO - WATER> INITIAL: GNE AFTER 24 HOURS: CAVING>

Depth (feet)	Elevation (ft-MSL)	Description	Graphic	Groundwater	Sample Type	N-Value
0						
		TOPSOIL (Approx. 12-inches)				
		Light brown fine-grained Silty SAND (SM)				
3						
6		Boring Terminated at 5 ft.				
9						
12						
15						
18						
21						

■ %<#200
● BLOW COUNT
▲ NATURAL MOISTURE
PLASTIC LIMIT ⊢——⊣ LIQUID LIMIT
10 20 30 40 50 70 90

This information pertains only to this boring and should not be interpreted as being indicative of the site.

NOVA

TEST BORING RECORD A-4

PROJECT: Lakeview ECC PROJECT NO.: 8218038
CLIENT: Caldwell Associates Architects, Inc.
PROJECT LOCATION: Century, Escambia County, Florida
LOCATION: Per Boring Location Plan ELEVATION: Existing Grade
DRILLER: S. Ryan LOGGED BY: J. James
DRILLING METHOD: Auger Boring DATE: March 29, 2018
DEPTH TO - WATER> INITIAL: GNE AFTER 24 HOURS: CAVING>

Depth (feet)	Elevation (ft-MSL)	Description	Graphic	Groundwater	Sample Type	N-Value
0		TOPSOIL (Approx. 18-inches)				
3		Brown/gray fine-grained Silty SAND (SM)				
6		Light brown fine-grained Silty SAND (SM)				
9		Boring Terminated at 5 ft.				
12						
15						
18						
21						

%<#200
BLOW COUNT
NATURAL MOISTURE
PLASTIC LIMIT — LIQUID LIMIT
10 20 30 40 50 70 90

This information pertains only to this boring and should not be interpreted as being indicative of the site.

APPENDIX C
Laboratory Data

SUMMARY OF CLASSIFICATION & INDEX TESTING

Lakeview ECC Renovation and Addition
Century, Escambia County, Florida
NOVA Project No. 8218038

SUMMARY OF CLASSIFICATION AND INDEX TESTING				
Boring No.	Sample Depth (BEG)	Natural Moisture (%)	Percent Fines (%- #200)	USCS Soil Classification
B-1	6'-8'	22	62	CL
B-1	13'-15'	25	1	SP
B-2	4'-6'	16	32	SM
A-3	4'-5'	11	35	SM
A-4	1.5'-2.5'	14	38	SM

APPENDIX D
Qualifications of Recommendations

QUALIFICATIONS OF RECOMMENDATIONS

The findings, conclusions and recommendations presented in this report represent our professional opinions concerning subsurface conditions at the site. The opinions presented are relative to the dates of our site work and should not be relied on to represent conditions at later dates or at locations not explored. The opinions included herein are based on information provided to us, the data obtained at specific locations during the study, and our previous experience. If additional information becomes available which might impact our geotechnical opinions, it will be necessary for NOVA to review the information, re-assess the potential concerns, and re-evaluate our conclusions and recommendations.

Regardless of the thoroughness of a geotechnical exploration, there is the possibility that conditions between borings may differ from those encountered at specific boring locations, that conditions are not as anticipated by the designers and/or the contractors, or that either natural events or the construction process has altered the subsurface conditions. These variations are an inherent risk associated with subsurface conditions in this region and the approximate methods used to obtain the data. These variations may not be apparent until construction.

The professional opinions presented in this report are not final. Field observations and foundation installation monitoring by the geotechnical engineer, as well as soil density testing and other quality assurance functions associated with site earthwork and foundation construction, are an extension of this report. Therefore, NOVA should be retained by the owner to observe all earthwork and foundation construction to confirm that the conditions anticipated in this study actually exist, and to finalize or amend our conclusions and recommendations. NOVA is not responsible or liable for the conclusions and recommendations presented in this report if NOVA does not perform these observations and testing services.

This report is intended for the sole use of **Caldwell Associates Architects, Inc** only. The scope of work performed during this study was developed for purposes specifically intended by **Caldwell Associates Architects, Inc** only, and may not satisfy other users' requirements. Use of this report or the findings, conclusions or recommendations by others will be at the sole risk of the user. NOVA is not responsible or liable for the interpretation by others of the data in this report, nor their conclusions, recommendations or opinions.

Our professional services have been performed, our findings obtained, our conclusions derived and our recommendations prepared in accordance with generally accepted geotechnical engineering principles and practices in the State of Florida. This warranty is in lieu of all other statements or warranties, either expressed or implied.

Important Information about This

Geotechnical-Engineering Report

Subsurface problems are a principal cause of construction delays, cost overruns, claims, and disputes.

While you cannot eliminate all such risks, you can manage them. The following information is provided to help.

Geotechnical Services Are Performed for Specific Purposes, Persons, and Projects

Geotechnical engineers structure their services to meet the specific needs of their clients. A geotechnical-engineering study conducted for a civil engineer may not fulfill the needs of a constructor — a construction contractor — or even another civil engineer. Because each geotechnical- engineering study is unique, each geotechnical-engineering report is unique, prepared *solely* for the client. No one except you should rely on this geotechnical-engineering report without first conferring with the geotechnical engineer who prepared it. *And no one — not even you* — should apply this report for any purpose or project except the one originally contemplated.

Read the Full Report

Serious problems have occurred because those relying on a geotechnical-engineering report did not read it all. Do not rely on an executive summary. Do not read selected elements only.

Geotechnical Engineers Base Each Report on a Unique Set of Project-Specific Factors

Geotechnical engineers consider many unique, project-specific factors when establishing the scope of a study. Typical factors include: the client's goals, objectives, and risk-management preferences; the general nature of the structure involved, its size, and configuration; the location of the structure on the site; and other planned or existing site improvements, such as access roads, parking lots, and underground utilities. Unless the geotechnical engineer who conducted the study specifically indicates otherwise, do not rely on a geotechnical-engineering report that was:

- not prepared for you;
- not prepared for your project;
- not prepared for the specific site explored; or
- completed before important project changes were made.

Typical changes that can erode the reliability of an existing geotechnical-engineering report include those that affect:

- the function of the proposed structure, as when it's changed from a parking garage to an office building, or from a light-industrial plant to a refrigerated warehouse;
- the elevation, configuration, location, orientation, or weight of the proposed structure;
- the composition of the design team; or
- project ownership.

As a general rule, *always* inform your geotechnical engineer of project changes—even minor ones—and request an assessment of their impact. *Geotechnical engineers cannot accept responsibility or liability for problems that occur because their reports do not consider developments of which they were not informed.*

Subsurface Conditions Can Change

A geotechnical-engineering report is based on conditions that existed at the time the geotechnical engineer performed the study. *Do not rely on a geotechnical-engineering report whose adequacy may have been affected by*: the passage of time; man-made events, such as construction on or adjacent to the site; or natural events, such as floods, droughts, earthquakes, or groundwater fluctuations. *Contact the geotechnical engineer before applying this report to determine if it is still reliable.* A minor amount of additional testing or analysis could prevent major problems.

Most Geotechnical Findings Are Professional Opinions

Site exploration identifies subsurface conditions only at those points where subsurface tests are conducted or samples are taken. Geotechnical engineers review field and laboratory data and then apply their professional judgment to render an opinion about subsurface conditions throughout the site. Actual subsurface conditions may differ — sometimes significantly — from those indicated in your report. Retaining the geotechnical engineer who developed your report to provide geotechnical-construction observation is the most effective method of managing the risks associated with unanticipated conditions.

A Report's Recommendations Are Not Final

Do not overrely on the confirmation-dependent recommendations included in your report. *Confirmation-dependent recommendations are not final,* because geotechnical engineers develop them principally from judgment and opinion. Geotechnical engineers can finalize their recommendations *only* by observing actual subsurface conditions revealed during construction. *The geotechnical engineer who developed your report cannot assume responsibility or liability for the report's confirmation-dependent recommendations if that engineer does not perform the geotechnical-construction observation required to confirm the recommendations' applicability.*

A Geotechnical-Engineering Report Is Subject to Misinterpretation

Other design-team members' misinterpretation of geotechnical-engineering reports has resulted in costly

problems. Confront that risk by having your geotechnical engineer confer with appropriate members of the design team after submitting the report. Also retain your geotechnical engineer to review pertinent elements of the design team's plans and specifications. Constructors can also misinterpret a geotechnical-engineering report. Confront that risk by having your geotechnical engineer participate in prebid and preconstruction conferences, and by providing geotechnical construction observation.

Do Not Redraw the Engineer's Logs

Geotechnical engineers prepare final boring and testing logs based upon their interpretation of field logs and laboratory data. To prevent errors or omissions, the logs included in a geotechnical-engineering report should *never* be redrawn for inclusion in architectural or other design drawings. Only photographic or electronic reproduction is acceptable, *but recognize that separating logs from the report can elevate risk.*

Give Constructors a Complete Report and Guidance

Some owners and design professionals mistakenly believe they can make constructors liable for unanticipated subsurface conditions by limiting what they provide for bid preparation. To help prevent costly problems, give constructors the complete geotechnical-engineering report, *but* preface it with a clearly written letter of transmittal. In that letter, advise constructors that the report was not prepared for purposes of bid development and that the report's accuracy is limited; encourage them to confer with the geotechnical engineer who prepared the report (a modest fee may be required) and/or to conduct additional study to obtain the specific types of information they need or prefer. A prebid conference can also be valuable. *Be sure constructors have sufficient time* to perform additional study. Only then might you be in a position to give constructors the best information available to you, while requiring them to at least share some of the financial responsibilities stemming from unanticipated conditions.

Read Responsibility Provisions Closely

Some clients, design professionals, and constructors fail to recognize that geotechnical engineering is far less exact than other engineering disciplines. This lack of understanding has created unrealistic expectations that have led to disappointments, claims, and disputes. To help reduce the risk of such outcomes, geotechnical engineers commonly include a variety of explanatory provisions in their reports. Sometimes labeled "limitations," many of these provisions indicate where geotechnical engineers' responsibilities begin and end, to help others recognize their own responsibilities and risks. *Read these provisions closely.* Ask questions. Your geotechnical engineer should respond fully and frankly.

Environmental Concerns Are Not Covered

The equipment, techniques, and personnel used to perform an *environmental* study differ significantly from those used to perform a *geotechnical* study. For that reason, a geotechnical-engineering report does not usually relate any environmental findings, conclusions, or recommendations; e.g., about the likelihood of encountering underground storage tanks or regulated contaminants. *Unanticipated environmental problems have led to numerous project failures.* If you have not yet obtained your own environmental information, ask your geotechnical consultant for risk-management guidance. *Do not rely on an environmental report prepared for someone else.*

Obtain Professional Assistance To Deal with Mold

Diverse strategies can be applied during building design, construction, operation, and maintenance to prevent significant amounts of mold from growing on indoor surfaces. To be effective, all such strategies should be devised for the *express purpose* of mold prevention, integrated into a comprehensive plan, and executed with diligent oversight by a professional mold-prevention consultant. Because just a small amount of water or moisture can lead to the development of severe mold infestations, many mold- prevention strategies focus on keeping building surfaces dry. While groundwater, water infiltration, and similar issues may have been addressed as part of the geotechnical- engineering study whose findings are conveyed in this report, the geotechnical engineer in charge of this project is not a mold prevention consultant; *none of the services performed in connection with the geotechnical engineer's study were designed or conducted for the purpose of mold prevention. Proper implementation of the recommendations conveyed in this report will not of itself be sufficient to prevent mold from growing in or on the structure involved.*

Rely, on Your GBC-Member Geotechnical Engineer for Additional Assistance

Membership in the Geotechnical Business Council of the Geoprofessional Business Association exposes geotechnical engineers to a wide array of risk-confrontation techniques that can be of genuine benefit for everyone involved with a construction project. Confer with you GBC-Member geotechnical engineer for more information.

GEOTECHNICAL BUSINESS COUNCIL
of the Geoprofessional Business Association

8811 Colesville Road/Suite G106, Silver Spring, MD 20910
Telephone: 301/565-2733 Facsimile: 301/589-2017
e-mail: info@geoprofessional.org www.geoprofessional.org

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Floor Plan / Site Diagram Documents

Building Permit Drawings

LAKEVIEW CENTER / COMMUNITY HEALTH NORTHWEST FLORIDA RENOVATION & ADDITION

CENTURY, FLORIDA



community health northwest florida

Lakeview Center BAPTIST HEALTH CARE

APPLICABLE CODES

THE FOLLOWING CODES AND REVISIONS ARE APPLICABLE TO THIS PROJECT:

FLORIDA BUILDING CODE; 2017 EXISTING BUILDINGS (EFC)
FLORIDA BUILDING CODE; 2017 (FBC)
FLORIDA BUILDING CODE; 2017 ACCESSIBILITY (FBC-A)
FLORIDA BUILDING CODE; 2017 EXISTING BUILDING (FBC-EB)
FLORIDA BUILDING CODE; 2017 PLUMBING (FBC-P)
FLORIDA BUILDING CODE; 2017 MECHANICAL (FBC-M)
FLORIDA BUILDING CODE; 2017 ELECTRICAL (FBC-E)
FLORIDA FIRE PROTECTION CODE; 2017 (FFPC)
GUIDELINES FOR DESIGN AND CONSTRUCTION OF HOSPITALS AND OUTPATIENT FACILITIES

SCOPE OF WORK

THE PURPOSE OF THIS PROJECT IS TO RENOVATE AND CONSTRUCT ADDITIONAL SPACE AT THE EXISTING LAKEVIEW MEDICAL FACILITY TO ACCOMODATE ADDITIONAL MEDICAL EXAM ROOMS, A NEW DENTAL SUITE, AN EXPANDED LOBBY AND APPROPRIATE SUPPORT SPACES.
ALL WORK SHALL BE COMPLETED IN COMPLIANCE WITH ALL APPLICABLE CODES AS REQUIRED.

GENERAL NOTES

1. DO NOT SCALE DRAWINGS; REFERENCE DIMENSIONS ON DRAWINGS AND FIELD VERIFY ALL MEASUREMENTS.
2. ALL DISCREPANCIES OR CONFLICTING INFORMATION BETWEEN EXISTING CONDITIONS, CONSTRUCTION DRAWINGS, AND SPECIFICATIONS ARE TO BE BROUGHT TO THE ATTENTION OF THE ARCHITECT FOR RESOLUTION BEFORE COMMITTING TO WORK OUTLINED.
3. KEYNOTE NUMBERING SEQUENCE FOUND ON ONE SHEET IS INDEPENDENT FROM OTHER SHEETS IN THE SET.
4. DO NOT SEPARATE SET. CONTRACTOR IS RESPONSIBLE FOR CAPTURING ALL OF THE INFORMATION IN THIS SET OF DRAWINGS AND SPECIFICATIONS. ARCHITECT IS NOT RESPONSIBLE FOR SUBCONTRACTOR BIDS BASED ON ONE DISCIPLINES DRAWING SUBJECT

PROJECT TEAM

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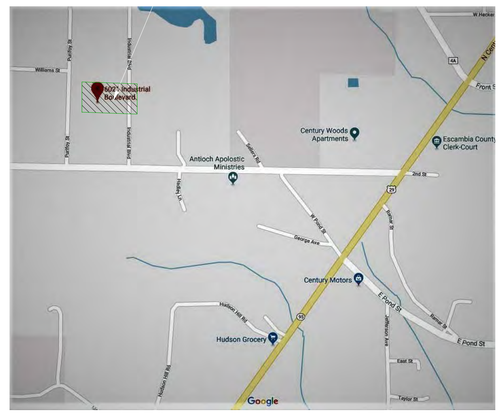
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MECHANICAL/PLUMBING
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phone: 850.629.8270

PERMITTING AUTHORITY USE ONLY

PROJECT INFORMATION

PROJECT LOCATION



LOCATION:
6021 INDUSTRIAL BLVD #A
CENTURY, FLORIDA 32536

OWNER::
LAKEVIEW CENTER, INC.
BAPTIST HEALTHCARE

TENANT:
ESCAMBIA COMMUNITY CLINIC

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(850) 432 9500 | CALDWELL-ASSOC.COM
License No: AA26000721 | License No: IB0000995

PROJECT ISSUES:

SD - 1	09.29.2017
SD - 2	12.28.2017
ASD	03.16.2018
DD	04.06.2018
BLDG PERMIT SET	04.25.2018

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REBOL BATTLE & ASSOCIATES

STRUCTURAL:
JOE DEREUIL ASSOCIATES

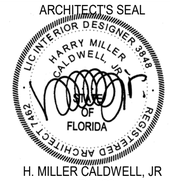
ARCHITECT:
CALDWELL ASSOCIATES ARCHITECTS

MEP / TELECOM:
W3 ENGINEERING

PROJECT:
LAKEVIEW CENTER/ COMMUNITY HEALTH NORTHWEST FLORIDA RENOVATION & ADDITION

6021 INDUSTRIAL BLVD #A
CENTURY, FLORIDA 32535

ARCHITECT'S SEAL



H. MILLER CALDWELL, JR
AR 7462

PROJECT NO. : 6617
SHEET TITLE:
COVER SHEET

SHEET NUMBER:
G001

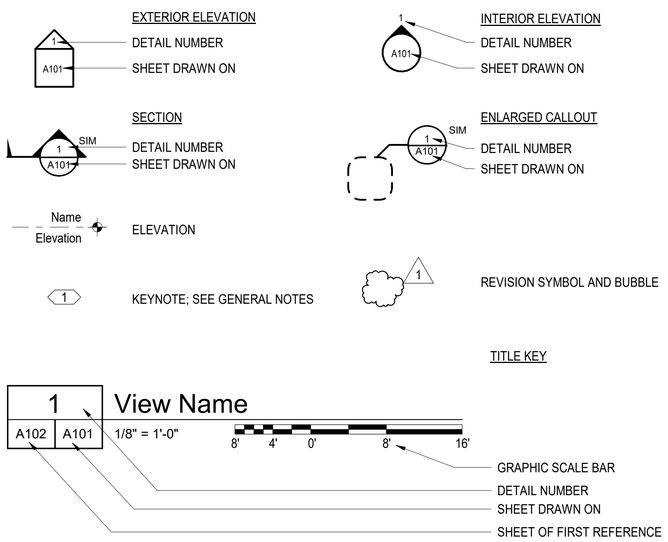
BUILDING PERMIT SET

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DO NOT SCALE DRAWINGS

SYMBOLS LEGEND



ABBREVIATIONS

AFF	ABOVE FINISHED FLOOR	EXIST	EXISTING	OFOI	OWNER FURNISHED, OWNER INSTALLED
AFG	ABOVE FINISHED GRADE	EXP	EXPANSION		
ACOUS	ACOUSTICAL	EXT	EXTERIOR	OPNG	OPENING
ADJ	ADJUSTABLE	FND	FOUNDATION	OVH	OVERHANG
AL	ALUMINUM	FFE	FINISH FLOOR ELEVATION	PT	PLATE
AB	ANCHOR BOLT			PLYWD	PLYWOOD
APPROX	APPROXIMATELY	FIN	FINISH	R	RADIUS
BD	BOARD	FLR	FLOOR	RO	ROUGH OPENING
BLDG	BUILDING	FLUOR	FLUORESCENT	REINF	REINFORCED
BLK	BLOCK	FRT	FIRE RETARDANT TREATED	REQD	REQUIRED
BM	BEAM	FT	FOOT	RET	RETAINING
BOD	BOTTOM OF DECK	FTG	FOOTING	RM	ROOM
CB	CATCH BASIN	FP	FILLER PANEL	SC	SCUPPER
CDS	CONCEALED DOWNSPOUT	FV	FIELD VERIFY	SCHED	SCHEDULE
		GA	GAUGE	SECT	SECTION
CG	CORNER GUARD	GALV	GALVANIZED	SHT	SHEET
CJ	CONTROL JOINT	GEN	GENERAL	SIM	SIMILAR
CMU	CONCRETE MASONRY UNIT	GYP	GYPSUM	SPEC	SPECIFICATION
		GYP BD	GYPSUM BOARD	SQ	SQUARE
CEM	CEMENT	HM	HOLLOW METAL	SQ FT	SQUARE FOOT
CLG	CEILING	HORIZ	HORIZONTAL	ST	STANDARD
COL	COLUMN	HT	HEIGHT	STL	STEEL
CONC	CONCRETE	INSUL	INSULATION	STRUCT	STRUCTURAL
CONST	CONSTRUCTION	INT	INTERIOR	SUSP	SUSPENDED
CONT	CONTINUOUS	JT	JOINT	T&G	TONGUE AND GROOVE
DBL	DOUBLE	LAM	LAMINATE	TO	TOP OF
DTL	DETAIL	LAV	LAVATORY	TOD	TOP OF DECK
DIA	DIAMETER	LT WT	LIGHT WEIGHT	TOG	TOP OF GRADE
DIAG	DIAGONAL	MO	MASONRY OPENING	TOS	TOP OF SLAB
DIM	DIMENSION	MANUF	MANUFACTURER	TOW	TOP OF WALL
DS	DOWNSPOUT	MAX	MAXIMUM	TEL	TELEPHONE
DWGS	DRAWINGS	MECH	MECHANICAL	TYP	TYPICAL
EA	EACH	MTL	METAL	VIF	VERIFY IN FIELD
EF	EXHAUST FAN	MIN	MINIMUM	VTR	VENT THROUGH ROOF
EL	ELEVATION	OC	ON CENTER	WWF	WELDED WIRE FABRIC
ELECT	ELECTRICAL	OH	OPPOSITE HAND	WD	WOOD
EQ	EQUAL	OFCI	OWNER FURNISHED, CONTRACTOR INSTALLED	XPT	EPOXY PAINT
EQUIP	EQUIPMENT				

INDEX OF DRAWINGS

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G002	INDEX OF DRAWINGS	■
G003	LIFE SAFETY	■
CIVIL		
C100	EXISTING SITE, DEMOLITION & EROSION CONTROL PLAN	■
C101	NPDES-STORMWATER POLLUTION PREVENTION PLAN	■
C200	SITE LAYOUT & DIMENSION PLAN	■
C300	GRADING AND DRAINAGE PLAN	■
C400	UTILITY AND LANDSCAPING PLAN	■
C500	CIVIL DETAILS	■
C501	CIVIL DETAILS	■
DEMOLITION		
D101	FLOOR PLAN - DEMOLITION	■
D111	RECLECTIVE CEILING PLAN - DEMOLITION	■
STRUCTURAL		
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S002	GENERAL NOTES & WIND LOAD DIAGRAM	■
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S100	SLAB-ON-GRADE & FOUNDATION PLAN	■
S110	ROOF FRAMING PLAN	■
S300	SECTIONS & DETAILS	■
S301	SECTIONS AND DETAILS	■
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A104	ROOF PLAN	■
A200	EXTERIOR ELEVATIONS	■
A201	OUTDOOR STORAGE BUILDING	■
A202	DUMPSTER TRASH ENCLOSURE	■
A300	BUILDING SECTIONS	■
A310	WALL SECTIONS & DETAILS	■
A400	ENLARGED PLANS	■
A401	ENLARGED PLANS	■
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A411	INTERIOR ELEVATIONS	■
A501	WALL DETAILS	■
A502	MISCELLANOUS DETAILS	■
A505	WINDOW AND DOOR DETAILS	■
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P102	SANITARY PIPING DEMOLITION	■
P111	DOMESTIC PIPING NEW WORK PLAN - NORTH	■
P112	DOMESTIC PIPING NEW WORK PLAN - SOUTH	■
P113	DOMESTIC PIPING NEW WORK PLAN - WEST	■
P114	SANITARY PIPING NEW WORK - NORTH	■
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P116	COMPRESSED AIR & VACUUM PIPING NEW WORK PLAN	■
P301	PLUMBING RISER DIAGRAMS	■
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M101	HVAC DEMOLITION PLAN	■
M111	HVAC NEW WORK PLAN - NORTH	■
M112	HVAC NEW WORK PLAN - SOUTH	■
M113	HVAC NEW WORK PLAN - WEST	■
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M211	HVAC PIPING NEW WORK PLAN	■
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M502	HVAC DETAILS CONT.	■
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E104	HVAC SYSTEM POWER PLAN	■
E105	FIRE ALARM SYSTEM PLAN	■
E201	ELECTRICAL SITE PLAN	■
ED101	ELECTRICAL DEMOLITION PLAN	■

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REBOL BATTLE & ASSOCIATES

STRUCTURAL:
JOE DEREUIL ASSOCIATES

ARCHITECT:
CALDWELL ASSOCIATES ARCHITECTS

MEP / TELECOM:
W3 ENGINEERING

PROJECT:
LAKEVIEW CENTER/ COMMUNITY HEALTH NORTHWEST FLORIDA RENOVATION & ADDITION

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LIC. INTERIOR DESIGNER 3848 HARRY MILLER CALDWELL JR STATE OF FLORIDA REGISTERED ARCHITECT 7462
H. MILLER CALDWELL, JR
AR 7462

PROJECT NO. : 6617
SHEET TITLE:
INDEX OF DRAWINGS

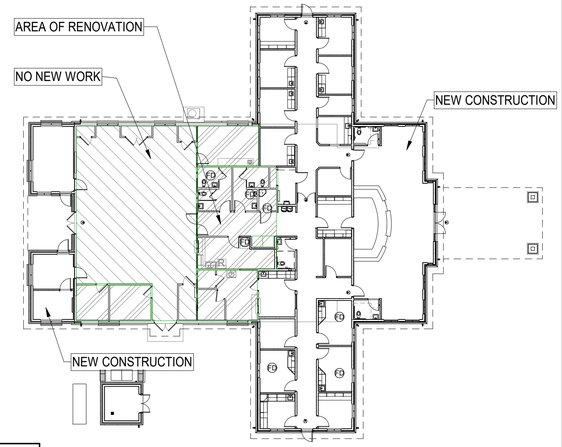
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BUILDING PERMIT SET

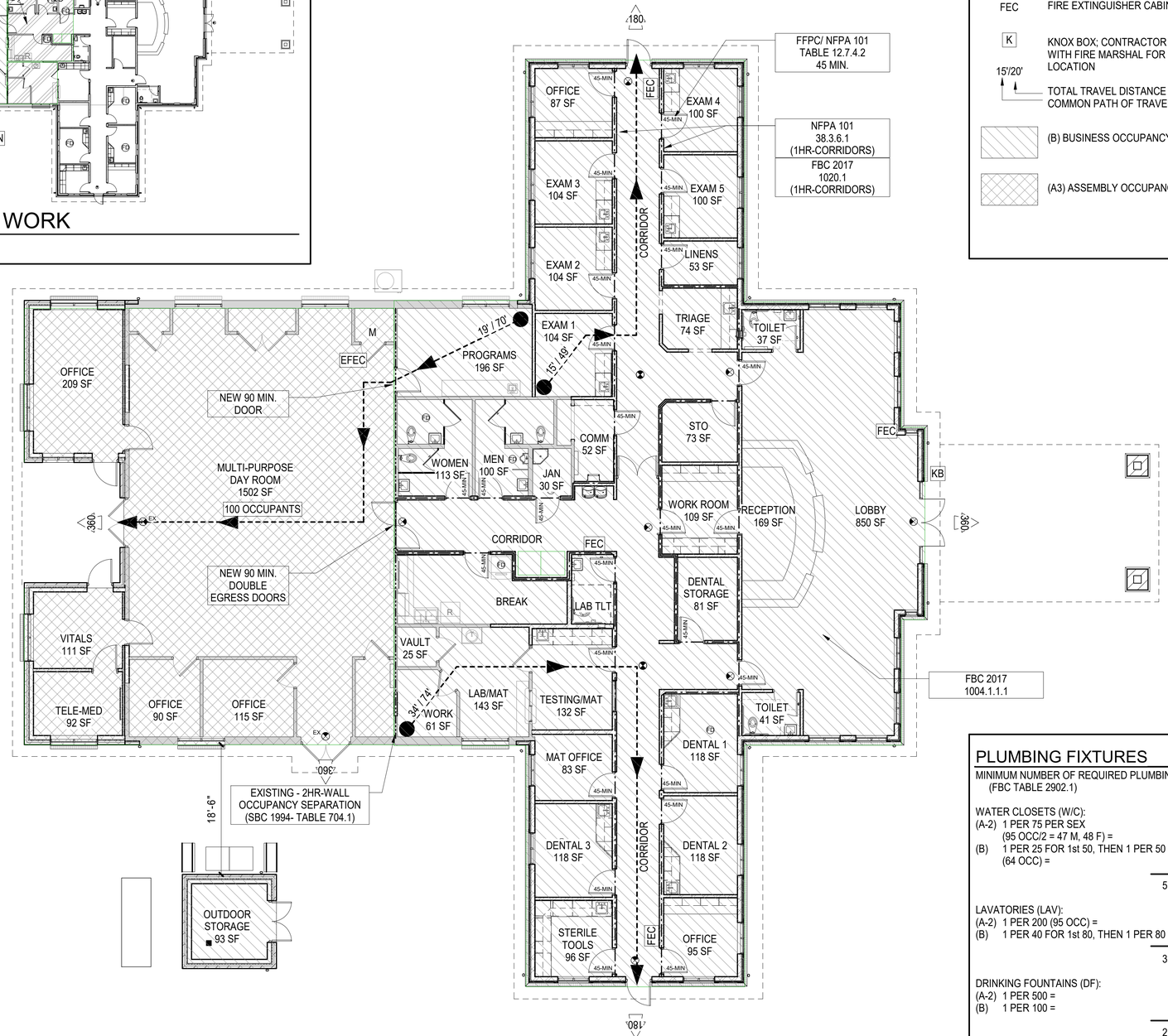
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2 AREAS OF WORK
G003 3/64" = 1'-0"



1 LIFE SAFETY FLOOR PLAN
G003 1/8" = 1'-0"

TRUE NORTH PROJECT NORTH

8' 4' 0' 8' 16'

LEGEND

- 2-HR RATED CONSTRUCTION
- 1-HR RATED CONSTRUCTION
- TRAVEL DISTANCE
- COMMON PATH OF TRAVEL
- EXIT SIGN
- FEC — FIRE EXTINGUISHER CABINET; SEE DETAILS
- K — KNOX BOX; CONTRACTOR TO COORDINATE WITH FIRE MARSHAL FOR EQUIPMENT AND LOCATION
- 15'/20' — TOTAL TRAVEL DISTANCE TO EXIT COMMON PATH OF TRAVEL
- (B) BUSINESS OCCUPANCY (100 GSF)
- (A3) ASSEMBLY OCCUPANCY (15 NSF)

PLUMBING FIXTURES

MINIMUM NUMBER OF REQUIRED PLUMBING FIXTURES (FBC TABLE 2902.1)

WATER CLOSETS (W/C):
(A-2) 1 PER 75 PER SEX (95 OCC/2 = 47 M, 48 F) = 1 PER SEX (2 TOTAL)
(B) 1 PER 25 FOR 1st 50, THEN 1 PER 50 FOR REMAINING (64 OCC) = 3 TOTAL
5 REQ (7 PROVIDED)

LAVATORIES (LAV):
(A-2) 1 PER 200 (95 OCC) = 1 REQ
(B) 1 PER 40 FOR 1st 80, THEN 1 PER 80 (64 OCC) = 2 REQ
3 REQ (8 PROVIDED)

DRINKING FOUNTAINS (DF):
(A-2) 1 PER 500 = 1 REQ
(B) 1 PER 100 = 1 REQ
2 REQ (2 PROVIDED)

CODE ANALYSIS

ALTERATION LEVEL 3 / ADDITION

1101.1 AN ADDITION TO A BUILDING OR STRUCTURE SHALL COMPLY WITH THE FBC AS ADOPTED FOR NEW CONSTRUCTION WITHOUT REQUIRING THE EXISTING BUILDING STRUCTURE TO COMPLY WITH ANY REQUIREMENTS OF THOSE CODES OR OF THESE PROVISIONS, EXCEPT AS REQUIRED BY THIS CHAPTER. WHERE AN ADDITION IMPACTS THE EXISTING BUILDING OR STRUCTURE, THAT PORTION SHALL COMPLY WITH THIS CODE.

OCCUPANCY CLASSIFICATION

FBC 304: MIXED USE SEPARATED
GROUP B (BUSINESS)
GROUP A3 (ASSEMBLY)

CONSTRUCTION TYPE

FBC 602: TYPE VB (5B), NON-SPRINKLERED

BUILDING AREA AND HEIGHT

EXISTING BUILDING AREAS:	
BUSINESS:	2,982 SF
ASSEMBLY:	1,994 SF
TOTAL EXISTING SQ.FT.:	4,976 SF
AREA OF NO WORK:	1,994 SF
RENOVATED AREA:	3,054 SF
NEW ADDITION:	3,176 SF
NEW TOTAL BUILDING AREA:	8,224 SF
ALLOWABLE AREA (FBC 506.2):	
ASSEMBLIES:	6,000 SF
BUSINESS:	9,000 SF
ALLOWABLE BUILDING HEIGHTS (TABLE 504.4)	
ASSEMBLY:	40'/1 STORIES
BUSINESS:	40'/2 STORIES
EXISTING BUILDING HEIGHT:	1 STORY
NEW BUILDING AFTER ADDITION:	1 STORY

FIRE RESISTANCE

FIRE-RESISTANCE RATING REQUIREMENTS FOR TYPE VB CONSTRUCTION (FBC TABLE 601):

PRIMARY STRUCTURAL FRAME:	0 hr
BEARING WALLS:	
EXTERIOR BEARING:	0 hr
INTERIOR BEARING:	0 hr
NONBEARING WALLS:	
EXTERIOR BEARING:	0 hr
INTERIOR BEARING	0 hr
FLOOR CONSTRUCTION:	0 hr
ROOF CONSTRUCTION:	0 hr
CORRIDOR FIRE-RESISTANCE RATING (FBC 1020.1):	
OCCUPANCY B - W/O SPRINKLER	1 hr
EXTERIOR WALL RATING BASED ON FIRE SEPARATION DISTANCE (FBC TABLE 602)	
X < 5' SEPARATION	1 hr
5' < X < 10' SEPARATION	1 hr
10' < X < 30' SEPARATION	0 hr
X > 30' SEPARATION	0 hr

LIFE SAFETY INFORMATION

MAXIMUM FLOOR AREA ALLOWANCES PER OCCUPANT (FBC TABLE 1004.1.2)

ASSEMBLY AREA: (UNCONCENTRATED)	15 SF NET
1,426 SF / 15 =	95 OCCUPANTS
BUSINESS AREAS:	100 SF GROSS
6,492 SF / 100 =	64 OCCUPANTS
TOTAL BUILDING OCCUPANTS	159 OCCUPANTS
TOTAL WIDTH MEANS OF EGRESS:	
DOORS (FBC 1010.1.1):	32"
CORRIDORS (FBC 1020.2):	44"
SEE PLAN FOR MEANS OF EGRESS WIDTH	
MIN NUMBER OF EXITS OR ACCESS TO EXITS PER STORY (FBC 1006.3.1):	2
EXITS OR ACESS TO EXITS PROVIDED:	4
EXIT ACCESS TRAVEL DISTANCE W/O SPRINKLER (FBC 1017.2):	200 FT
MAX COMMON PATH OF EGRESS TRAVEL DISTANCE FBC 1006.2.1):	75 FT
MAXIMUM DEAD END CORRIDOR (FBC 1020.4):	20 FT
SEE PLAN FOR TRAVEL DISTANCES PROVIDED	

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AR 7462

PROJECT NO. : 6617
SHEET TITLE:
LIFE SAFETY

SHEET NUMBER:
G003

BUILDING PERMIT SET

PRINT DATE: 4/25/2018 9:16:00 AM

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GENERAL NOTES:

1. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THESE PLANS AND SPECIFICATIONS AND THE REQUIREMENTS AND STANDARDS OF ALL GOVERNING AUTHORITIES.

2. PRIOR TO STARTING CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONFIRMING THAT ALL REQUIRED PERMITS AND APPROVALS HAVE BEEN OBTAINED. NO CONSTRUCTION OR FABRICATION SHALL BEGIN UNTIL THE CONTRACTOR HAS RECEIVED AND THOROUGHLY REVIEWED ALL PLANS AND OTHER DOCUMENTS APPROVED BY ALL OF THE PERMITTING AGENCIES.

3. THE LOCATION OF UNDERGROUND FACILITIES SHOWN ON THESE PLANS IS BASED ON INFORMATION PROVIDED BY THE UTILITIES AND SHALL BE CONSIDERED APPROXIMATE. IT SHALL BE THE CONTRACTOR'S FULL RESPONSIBILITY TO CONTACT THE VARIOUS UTILITY COMPANIES TO LOCATE THEIR FACILITIES PRIOR TO STARTING CONSTRUCTION. NO ADDITIONAL COMPENSATION SHALL BE PAID TO THE CONTRACTOR FOR DAMAGE AND REPAIR TO THESE FACILITIES CAUSED BY HIS WORK FORCE.

4. THE CONTRACTOR SHALL NOTIFY THE SUPERINTENDENTS OF THE WATER, SANITARY SEWER, GAS, TELEPHONE, CABLE TELEVISION, AND POWER COMPANIES 10 DAYS IN ADVANCE THAT HE INTENDS TO START WORK IN A SPECIFIED AREA. THE OWNER DISCLAIMS ANY RESPONSIBILITY FOR THE SUPPORT AND PROTECTION OF SEWERS, DRAINS, WATER PIPES, GAS PIPES, CONDUITS OF ANY KIND, UTILITIES OR OTHER STRUCTURES OWNED BY THE CITY, COUNTY, STATE OR BY PRIVATE OR PUBLIC UTILITIES LEGALLY OCCUPYING ANY STREET, ALLEY, PUBLIC PLACE OR RIGHT-OF-WAY.

5. ALL SITE CLEARING SHALL INCLUDE THE LOCATION AND REMOVAL OF ALL UNDERGROUND STRUCTURES, WHICH ARE NOT IN SERVICE AS NECESSARY FOR THE INSTALLATION OF PROPOSED IMPROVEMENTS. THESE INCLUDE PIPES, VALVES, DRAINAGE STRUCTURES, ETC., AS INDICATED ON THE CONTRACT PLANS. CONTRACTOR SHALL NOTIFY THE PROJECT OWNER AND ENGINEER OF ALL DISCOVERED UNDERGROUND STRUCTURES WHICH ARE IN CONFLICT WITH THE INSTALLATION OF THE PROPOSED IMPROVEMENTS AND ARE NOT INDICATED ON THE CONTRACT PLANS OR LOCATED IN THE FIELD BY UTILITIES IN ACCORDANCE WITH GENERAL NOTES.

6. THE RELOCATION OF OBSTRUCTIONS OWNED BY PRIVATE PROPERTY OWNERS, SUCH AS MAIL BOXES, SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR WHO MUST COORDINATE WITH THE PROPERTY OWNER.

7. THE CONTRACTOR SHALL PLACE AND MAINTAIN ADEQUATE BARRICADES, CONSTRUCTION SIGNS, FLASHING LIGHTS, TORCHES, RED LANTERNS AND GUARDS DURING ALL PHASES OF CONSTRUCTION, IN ACCORDANCE WITH APPLICABLE FDOT INDEX.

8. ALL AREAS NOT PAVED OR DISTURBED DURING CONSTRUCTION SHALL BE STABILIZED BY SEEDING AND MULCHING OR SODDING. SEED AND MULCH OR SOD SHALL BE PLACED, WATERED, FERTILIZED WITH APPROPRIATE SOIL AMENDMENTS IN ACCORDANCE WITH THE FDOT STANDARD SPECIFICATIONS AND THESE CONSTRUCTION DOCUMENTS.

9. ALL EXCESS MATERIAL SHALL BE HAULED AWAY AND DISPOSED OF APPROPRIATELY AT THE CONTRACTOR'S EXPENSE.

10. ALL CONSTRUCTION AROUND TREES SHALL BE DONE IN A MANNER TO MINIMIZE DAMAGE TO THE TREE AND ITS ROOT SYSTEM.

11. THE CONTRACTOR SHALL VISIT THE SITE TO FAMILIARIZE HIMSELF WITH EXISTING CONDITIONS AND THE EXTENT OF CLEARING AND GRUBBING REQUIRED.

12. ALL DIMENSIONS AND GRADES SHOWN ON THE PLANS SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IF ANY DISCREPANCIES EXIST PRIOR TO PROCEEDING WITH CONSTRUCTION FOR NECESSARY PLAN OR GRADE CHANGES. NO EXTRA COMPENSATION SHALL BE PAID TO THE CONTRACTOR FOR WORK HAVING TO BE REDONE DUE TO DIMENSIONS OR GRADES SHOWN INCORRECTLY ON THESE PLANS IF SUCH NOTIFICATION HAS NOT BEEN GIVEN.

13. THE CONTRACTOR IS TO COORDINATE WITH THE RESPONSIBLE UTILITY PROVIDER FOR PROTECTION/HOLDING OF UTILITY POLES, GUY WIRES, AND GUY ANCHORS IN AREAS OF CONSTRUCTION. THE CONTRACTOR SHALL INCLUDE THE COST OF PROTECTING UTILITY POLES IN THEIR OVERALL PRICE TO THE OWNER.

14. ANY DAMAGE TO EXISTING ROADS DURING CONSTRUCTION SHALL BE REPAIRED BY THE CONTRACTOR PRIOR TO FINAL "AS-BUILT" SIGN-OFF FROM THE CITY OF CENTURY.

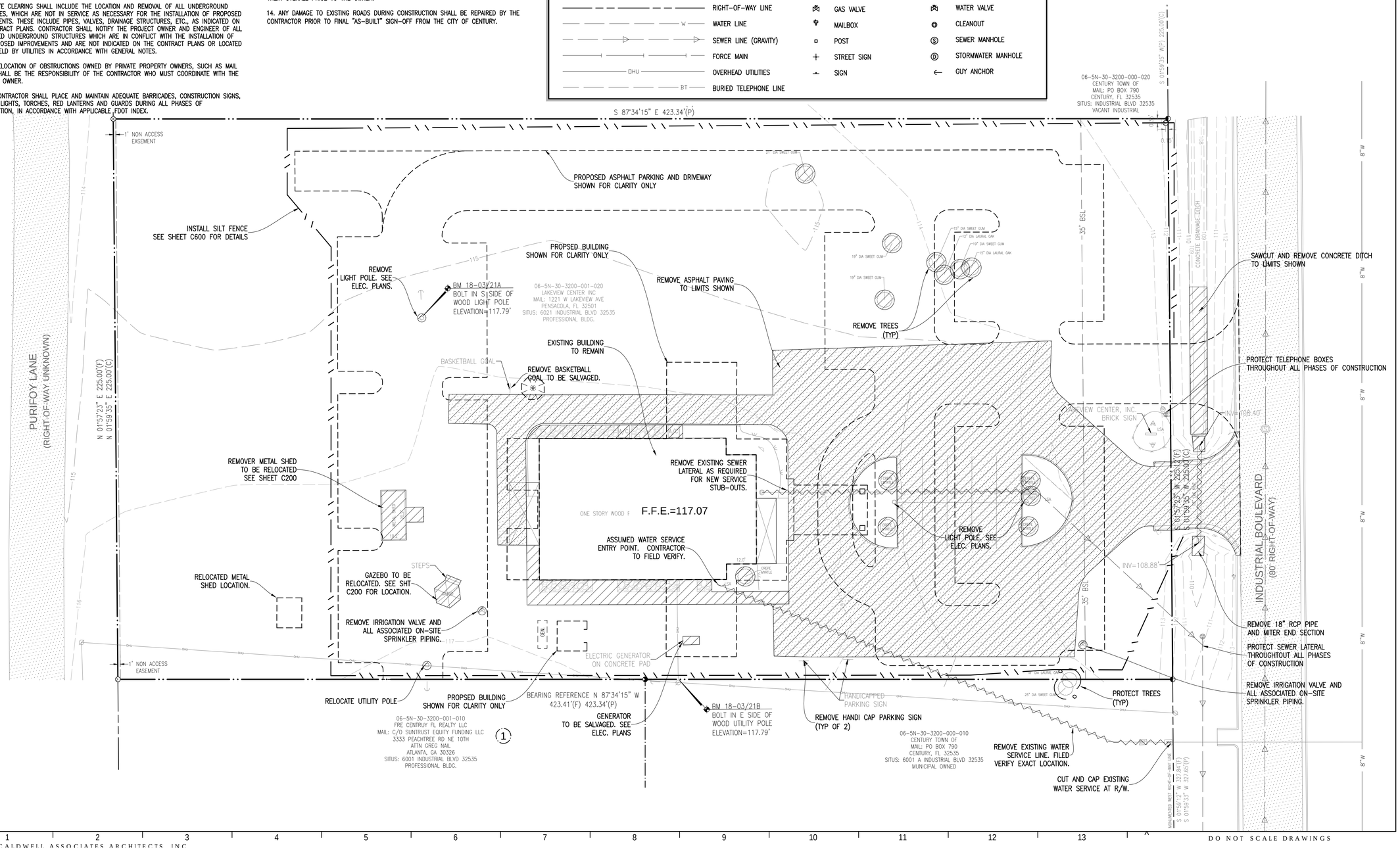
LEGEND

EXISTING ASPHALT		G	GAS LINE
EXISTING CONCRETE		BE	BURIED ELECTRIC LINE
EXISTING GRAVEL		FOC	BURIED FIBER OPTIC CABLE
DEMOLITION		BTV	BURIED TV LINE
DEMOLITION LINE		100	EXISTING CONTOUR
EXISTING CHAIN LINK FENCE			STRAW BALE
EXISTING WOODEN FENCE			SILT FENCE
BOUNDARY LINE	UTILITY POLE		BENCHMARK
EASEMENT LINE	LIGHT POLE		FIRE HYDRANT
LOT LINE	TELEPHONE BOX		WATER METER
RIGHT-OF-WAY LINE	GAS VALVE		WATER VALVE
WATER LINE	MAILBOX		CLEANOUT
SEWER LINE (GRAVITY)	POST		SEWER MANHOLE
FORCE MAIN	STREET SIGN		STORMWATER MANHOLE
OVERHEAD UTILITIES	SIGN		GUY ANCHOR
BURIED TELEPHONE LINE			

FLOOD ZONE NOTE:
THE SUBJECT PROPERTY AS SHOWN HEREON IS LOCATED IN FLOOD ZONE 'X', (MINIMAL RISK AREAS OUTSIDE THE 1-PERCENT AND .2-PERCENT-ANNUAL-CHANGE FLOOD PLAINS. NO BFEs OR BASE FLOOD DEPTHS ARE SHOWN WITHIN THESE ZONES), AS DETERMINED FROM THE FEDERAL EMERGENCY 120080, FIRM MAP PANEL NUMBER 12033C0508G, MAP REVISION DATED SEPTEMBER 29, 2006.

N / W / E / S

HORIZONTAL SCALE
20 0 10 20 40 80
(IN FEET)
1 INCH = 20 FT. (22"x34")
1 INCH = 40 FT. (11"x17")



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PROJECT ISSUES:

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PROJECT TEAM:

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REBOL BATTLE & ASSOCIATES

STRUCTURAL:
JOE DEREUIL ASSOCIATES

ARCHITECT:
CALDWELL ASSOCIATES ARCHITECTS

MEP / TELECOM:
W3 ENGINEERING

PROJECT:
LAKEVIEW CENTER/COMMUNITY HEALTH NORTHWEST FLORIDA - RENOVATION AND ADDITION

6021 INDUSTRIAL BLVD #A
CENTURY, FLORIDA 32535

PROJECT NO. : 6617
SHEET TITLE:

EXISTING SITE, DEMOLITION & EROSION CONTROL PLAN

SHEET NUMBER:

C100

BUILDING PERMIT SET

PRINT DATE: 4/2/2018 4:09:11 PM

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STORM WATER POLLUTION PREVENTION PLAN

1.0 BACKGROUND & REQUIREMENTS:

1.1 INTRODUCTION:

THE REFERENCED SUPPORT DOCUMENTATION FOR THIS STORM WATER POLLUTION PREVENTION PLAN (SWPPP) IS THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY'S (EPA) STORM WATER MANAGEMENT FOR CONSTRUCTION ACTIVITIES, DEVELOPING POLLUTION PREVENTION PLANS AND BEST MANAGEMENT PRACTICES SUMMARY GUIDANCE (EPA 833-R-92-001) AND STORM WATER MANAGEMENT FOR CONSTRUCTION ACTIVITIES, DEVELOPING POLLUTION PREVENTION PLANS AND BEST MANAGEMENT PRACTICES (EPA 832-R-92-005). THIS SWPPP IS DESIGNED TO PROTECT ONSITE AND ADJACENT NATURAL RESOURCES, INCLUDING BUT NOT LIMITED TO, WETLANDS, MARSHES, BAYOUS AND BAYS, WHILE PRESERVING WILDLIFE AND ARCHEOLOGICAL RESOURCES.

AN ENVIRONMENTAL RESOURCE PERMIT APPLICATION HAS BEEN SUBMITTED TO THE
NWFWMD NOT APPLICABLE

1.2 NOTICE OF INTENT (NOI):

RULE 62-621.300(4), FAC REQUIRES THE CONSTRUCTION OPERATOR OF A SITE THAT DISTURBS ONE OR MORE ACRES TO OBTAIN COVERAGE FROM THE GENERIC PERMIT FOR STORMWATER DISCHARGE FROM LARGE AND SMALL CONSTRUCTION ACTIVITIES. THE CONTRACTOR IS REQUIRED TO SUBMIT A NOTICE OF INTENT TO USE GENERIC PERMIT FOR STORMWATER DISCHARGE FROM LARGE AND SMALL CONSTRUCTION ACTIVITIES (FDEP FORM 62-621.300(4)(B)) ALONG WITH THE APPROPRIATE APPLICATION FEE TO THE FOLLOWING ADDRESS 48 HOURS PRIOR TO COMMENCING CONSTRUCTION:

NPDES STORMWATER NOTICES CENTER, MS # 2510
FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
2600 BLAIR STONE ROAD
TALLAHASSEE, FLORIDA 32399-2400

THIS FORM CAN BE OBTAINED FROM FDEP'S WEBSITE (WWW.DEP.STATE.FL.US) OR BY CONTACTING FDEP. PLEASE NOTE THAT THE CURRENT APPLICATION FEE IS $300; HOWEVER, THIS FEE IS SUBJECT TO CHANGE WITHOUT NOTICE. ALWAYS REFER TO THE MOST CURRENT VERSION OF RULE 62-4.050(4)(D), FAC TO CONFIRM THE AMOUNT BEFORE SUBMITTING PAYMENT. IF CONSTRUCTION ACTIVITY EXCEEDS FIVE YEARS, THE CONTRACTOR MUST RE-APPLY FOR COVERAGE.

1.3 STORMWATER POLLUTION PREVENTION PLAN (SWPPP):

THE CONTRACTOR IS REQUIRED TO CERTIFY THIS STORMWATER POLLUTION PREVENTION PLAN (SWPPP) BELOW PRIOR TO SUBMITTING THE NOI. THIS SWPPP IS NOT REQUIRED TO BE SUBMITTED WITH THE NOI, BUT IS REQUIRED TO BE KEPT ON SITE DURING ALL PHASES OF CONSTRUCTION. BECAUSE EROSION AND SEDIMENT CONTROLS AND CONSTRUCTION METHODS VARY SIGNIFICANTLY FROM CONTRACTOR TO CONTRACTOR, THE CONTRACTOR CAN PROPOSE ALTERNATIVE METHODS TO THIS SWPPP THAT ARE EQUAL OR BETTER AT CONTROLLING EROSION AND SEDIMENTATION. AT A MINIMUM, THE CONTRACTOR MUST FOLLOW THE EROSION CONTROL PLAN SPECIFIED IN THE CONSTRUCTION PLANS AND DOCUMENTS. ANY MODIFICATIONS TO THIS SWPPP MUST BE DOCUMENTED AND KEPT WITH THE PLAN AS PART OF THE RECORDS KEEPING PROCESS TO BE IN FULL COMPLIANCE WITH THE CGP.

1.4 CONTRACTOR'S / SUBCONTRACTOR CERTIFICATION:

I CERTIFY UNDER PENALTY OF LAW THAT I UNDERSTAND, AND SHALL COMPLY WITH, THE TERMS AND CONDITIONS OF THE STATE OF FLORIDA GENERIC PERMIT FOR STORMWATER DISCHARGE FROM LARGE AND SMALL CONSTRUCTION ACTIVITIES AND THIS STROMWATER POLLUTION PREVENTION PLAN PREPARED THEREUNDER.

PRINT & SIGN NAME _____ COMPANY & ADDRESS _____

_____ _____

_____ _____

NAME & TITLE (PRINT)

_____

SIGNATURE DATE

1.5 RESPONSIBLE AUTHORITY CERTIFICATION:

I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL GATHERED AND EVALUATED THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM, OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS.

PRINT & SIGN NAME _____ COMPANY & ADDRESS _____

_____ _____

NAME & TITLE (PRINT) _____

_____

SIGNATURE DATE

1.6 NOTICE OF TERMINATION (NOT):

THE CONTRACTOR IS REQUIRED TO SUBMIT A NOTICE OF TERMINATION OF GENERIC PERMIT COVERAGE (FDEP FORM 62-621.300(6)) UPON CONSTRUCTION COMPLETION TO DISCONTINUE PERMIT COVERAGE. THE NOT IS TO BE SUBMITTED TO THE FOLLOWING ADDRESS:

NPDES STORMWATER NOTICES CENTER, MS # 2510
FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
2600 BLAIR STONE ROAD
TALLAHASSEE, FLORIDA 32399-2400

THIS FORM CAN BE OBTAINED FROM FDEP'S WEBSITE (WWW.DEP.STATE.FL.US) OR BY CONTACTING FDEP. THE NOT CAN NOT BE SUBMITTED UNTIL ALL DISTURBED SOILS AT THE CONSTRUCTION SITE HAVE BEEN FINALLY STABILIZED AND TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES HAVE BEEN REMOVED OR WILL BE REMOVED AT AN APPROPRIATE TIME. FINAL STABILIZATION MEANS THAT ALL SOIL DISTURBING ACTIVITIES AT THE SITE HAVE BEEN COMPLETED AND THAT A UNIFORM PERENNIAL VEGETATIVE COVER WITH A DENSITY OF 70 PERCENT OF THE COVER FOR UNPAVED AREAS AND AREAS NOT COVERED BY PERMANENT STRUCTURES HAS BEEN ESTABLISHED, OR EQUIVALENT STABILIZATION MEASURES HAVE BEEN EMPLOYED. IF CONSTRUCTION ACTIVITY EXCEEDS FIVE YEARS, THE CONTRACTOR MUST RE-APPLY FOR COVERAGE.

1.7 APPLICATION INFORMATION:

PROJECT ADDRESS:	6021 INDUSTRIAL BOULEVARD CENTURY, FL 32535
LATITUDE: LONGITUDE:	N 30°58'17.05" W 87°16'28.36"
WATER MANAGEMENT DISTRICT:	NORTHWEST FLORIDA (NWFWMD)
MS4 OPERATOR NAME:	TOWN OF CENTURY
RECEIVING WATER NAME:	EVENTUAL OUTFALL TO PENSACOLA BAY

2.0 SITE DESCRIPTION:

2.1 NATURE OF CONSTRUCTION ACTIVITIES:

THIS PROJECT INVOLVES THE CONSTRUCTION OF A 8,000 SF. COMMERCIAL BUILDING. CONSTRUCTION INCLUDES PARKING, UTILITIES AND STORMWATER COLLECTION SYSTEM.

2.2 SEQUENCE OF MAJOR SOIL DISTURBING ACTIVITIES:

THE FOLLOWING SEQUENCE OF MAJOR ACTIVITIES SHALL BE FOLLOWED UNLESS THE CONTRACTOR CAN PROPOSE AN ALTERNATIVE THAT IS EQUAL TO OR BETTER AT CONTROLLING EROSION AND SEDIMENTATION. THE DETAILED SEQUENCE FOR THE ENTIRE PROJECT CAN VARY SIGNIFICANTLY FROM CONTRACTOR TO CONTRACTOR. THE CONTRACTOR IS RESPONSIBLE FOR DOCUMENTING ANY CHANGES.

1. CLEAR, GRUB AND PERFORM ALL DEMOLITION WORK.
2. CONSTRUCT ALL UNDERGROUND UTILITIES AND STORM DRAIN SYSTEM.
3. CONSTRUCT PARKING (SUBGRADE, CURB & GUTTER, BASE, PAVEMENT, SIDEWALKS, AND LANDSCAPING).
4. STABILIZE SITE WITH VEGETATION.

2.3 AREA ESTIMATES:

ONSITE AREA:	2.19 ACRES
OFFSITE AREA:	0.00 ACRES
TOTAL AREA:	2.19 ACRES
AREA TO BE DISTURBED:	1.71 ACRES

2.4 RUNOFF DATA:

RUNOFF COEFFICIENTS (C):

BEFORE:	TOTAL COMPOSITE C =	0.20 AND 0.95
DURING:	VARIES BETWEEN =	0.20 AND 0.95
AFTER:	VARIES BETWEEN =	0.20 AND 0.95
	TOTAL COMPOSITE C =	0.70

SOILS DATA:
THE SOILS LOCATED AT THE SITE ARE PREDOMINATELY VERY LOOSE TO LOOSE SLIGHTLY SILTY SANDS. GROUNDWATER WAS NOT ENCOUNTERED IN THE 15 FT TO 20 FT DEEP TEST BORING. FOR MORE DETAILED SOILS INFORMATION, REFER TO THE GEOTECHNICAL SERVICES REPORT PREPARED BY UNIVERSAL ENGINEERING SERVICES.

DRAINAGE AREAS FOR EACH OUTFALL:

OUTFALL LOCATION	TOTAL AREA FLOWING TO POND	'C' COEFFICIENT
EXISTING CONVEYANCE		
DITCH ALONG INDUSTRIAL BOULEVARD	2.00	0.70

2.5 SITE MAP:

THE CONSTRUCTION PLANS ARE TO BE USED AS THE SITE MAPS. THE LOCATION OF THE REQUIRED INFORMATION IS DESCRIBED BELOW. THE SHEET NUMBERS FOR ALL THE ITEMS DISCUSSED BELOW ARE IDENTIFIED ON THE KEY SHEET OF THE CONSTRUCTION PLANS.

- DRAINAGE PATTERNS: ALL DRAINAGE PATTERNS ARE SHOWN ON THE GRADING & DRAINAGE PLANS.
- APPROXIMATE SLOPES: APPROXIMATE SLOPES ARE SHOWN ON THE GRADING & DRAINAGE POND SIDE SLOPES ARE SHOWN ON THE POND CROSS-SECTIONS.
- AREAS OF SOIL DISTURBANCE: ALL DEMOLITION IS SHOWN ON THE EXISTING SITE CONDITIONS AND DEMOLITION AND EROSION CONTROL PLAN SHEET. ALL PROPOSED CONSTRUCTION IS SHOWN ON THE REMAINING PLANS. ANY AREAS WHERE DEMOLITION WORK OR PERMANENT FEATURES ARE SHOWN ABOVE OR BELOW GROUND WILL BE DISTURBED.
- AREAS NOT TO BE DISTURBED: ANY AREAS NOT SHOWING DEMOLITION WORK OR PERMANENT FEATURES ARE ASSUMED NOT TO BE DISTURBED. IT WILL BE THE CONTRACTOR'S RESPONSIBILITY TO INDICATE ON THE PLANS ANY OF THESE AREAS THAT DO GET DISTURBED AS WELL AS ANY AREAS USED FOR STAGING AND MATERIALS STORAGE.
- LOCATIONS OF CONTROLS: ALL PROPOSED TEMPORARY CONTROLS AND EXISTING PERMANENT CONTROLS ARE SHOWN ON THE EXISTING SITE, DEMOLITION AND EROSION CONTROL PLAN. ALL PROPOSED PERMANENT CONTROLS ARE SHOWN ON THE REMAINING PLANS. IT WILL BE THE CONTRACTOR'S RESPONSIBILITY TO INDICATE THE LOCATION OF ANY OTHER CONTROLS ON THE PLANS THAT ARE USED DURING CONSTRUCTION.
- PERMANENT STABILIZATION IS SHOWN ON THE PLANS. IT WILL BE THE CONTRACTOR'S RESPONSIBILITY TO INDICATE THE LOCATION ON THE PLANS OF ALL TEMPORARY STABILIZATION PRACTICES USED DURING CONSTRUCTION.
- SURFACE WATERS: N/A
- DISCHARGE POINTS: TOWN OF CENTURY STORMWATER FACILITY

2.6 RECEIVING WATERS:

EVENTUAL OUTFALL TO PENSACOLA BAY

3.0 CONTROLS:

3.1 EROSION AND SEDIMENT CONTROLS:

ALL EROSION AND SEDIMENT CONTROLS SPECIFIED ON THE DEMOLITION AND EROSION CONTROL PLAN SHEETS, AND THE EROSION CONTROL DETAILS SHALL BE INSTALLED PRIOR TO ANY CONSTRUCTION OR DEMOLITION. SILT FENCING AND STAKED HAY BALES SHALL BE INSTALLED ALONG DOWN-GRADIENT LIMITS.

TEMPORARY SEEDING AND MULCHING SHALL BE APPLIED AFTER 14-DAY INTERVALS OF CEASED DISTURBANCE ACTIVITIES THAT WILL EXCEED 20-DAY PERIODS. GRADED AREAS SHALL BE STABILIZED WITH PERMANENT SEEDING, MULCHING, AND FERTILIZING, OR SODDING WITHIN FIVE DAYS OF FINAL GRADING. LANDSCAPING, INCLUDING SODDING, SHALL BE INSTALLED BY AN EXPERIENCED LANDSCAPE CONTRACTOR. PROPOSED DISTURBED AREAS WILL NOT EXCEED 8 ACRES IN ANY DRAINAGE AREA.

3.2 STORMWATER MANAGEMENT:

PROPOSED STORMWATER MANAGEMENT FACILITIES FOR THIS SITE INCLUDE: ALL RUNOFF WILL BE DIRECTED TO THE TOWNS SYSTEM PREVIOUSLY PERMITTED FOR THIS SITE.

THE PROPOSED STORMWATER MANAGEMENT FACILITIES MEET ALL STORMWATER TREATMENT REQUIREMENTS AND ALL RATE CONTROL REQUIREMENTS SET FORTH BY THE LOCAL AND STATE REGULATORY AGENCIES.

3.3 OTHER CONTROLS:

WASTE DISPOSAL: THE CONTRACTOR IS RESPONSIBLE FOR ALL WASTE DISPOSAL FROM THE SITE. THE CONTRACTOR SHALL EMPLOY WASTE DISPOSAL PRACTICES THAT MEET ALL LOCAL, STATE, AND FEDERAL GUIDELINES AND PREVENT DISCHARGE OF SOLID MATERIALS TO WATERS OF THE UNITED STATES. THE CONTRACTOR IS RESPONSIBLE FOR DOCUMENTING THIS PORTION OF THE SWPPP.

OFFSITE VEHICLE TRACKING: IF OFF SITE TRACKING OF SEDIMENTS BY CONSTRUCTION VEHICLES OCCURS, THE CONTRACTOR IS REQUIRED TO INSTALL A SOIL TRACKING PREVENTION DEVICE (STPD) AS PER FDOT STANDARD INDEX 106 AT ALL EXITS TO THE SITE WHERE SEDIMENT TRACKING IS OCCURRING. THE CONTRACTOR IS ALSO RESPONSIBLE FOR DOCUMENTING THIS PORTION OF THE SWPPP.

HAZARDOUS MATERIALS: ALL POLLUTANTS AND HAZARDOUS MATERIALS INCLUDING BUT NOT LIMITED TO FERTILIZERS, HERBICIDES, PESTICIDES, SOLVENTS, OILS AND OIL FILTERS, PETROLEUM PRODUCTS, PAINT, AND EQUIPMENT MAINTENANCE FLUIDS, SHALL BE STORED INDOORS OR UNDER COVER IN AREAS WITH SECONDARY CONTAINMENT. SECONDARY CONTAINMENT PREVENTS A SPILL FROM SPREADING ACROSS THE SITE AND INCLUDES DIKES, BERMS, CURBING, OR OTHER CONTAINMENT METHODS. HAZARDOUS MATERIAL STORAGE AREAS SHALL BE INSPECTED WEEKLY AND AFTER STORM EVENTS. STORAGE AREAS SHALL BE KEPT CLEAN, WELL ORGANIZED, AND EQUIPPED WITH AMPLE CLEANUP SUPPLIES/SPILL KITS AS APPROPRIATE FOR THE MATERIALS BEING STORED. MATERIAL SAFETY DATA SHEETS, MATERIAL INVENTORY, AND EMERGENCY CONTACT INFORMATION SHALL BE MAINTAINED ON-SITE. ALL PERSONNEL SHALL RECEIVE INSTRUCTION REGARDING PROPER PROCEDURES FOR HAZARDOUS MATERIAL HANDLING AND DISPOSAL. HAZARDOUS MATERIALS SHALL NOT BE DISPOSED OF INTO ON-SITE DUMPSTERS; HAZARDOUS MATERIALS SHALL BE DISPOSED OF IN ACCORDANCE WITH FEDERAL, STATE, AND MUNICIPAL REGULATIONS. VEHICLES AND EQUIPMENT WILL BE MAINTAINED OFF-SITE. ALL VEHICLES AND EQUIPMENT INCLUDING SUBCONTRACTOR VEHICLES WILL BE CHECKED FOR LEAKING OIL AND FLUIDS. VEHICLES LEAKING FLUIDS WILL NOT BE ALLOWED ON-SITE. DRIP PANS SHALL BE PLACED UNDER ALL VEHICLES AND EQUIPMENT THAT ARE PARKED OVERNIGHT.

APPLICATION OF FERTILIZERS, HERBICIDES, AND PESTICIDES: FERTILIZERS, HERBICIDES, AND PESTICIDES SHALL BE DELIVERED TO THE SITE IN ORIGINAL, UNOPENED CONTAINERS BEARING MANUFACTURER'S CHEMICAL ANALYSIS, NAME, TRADE NAME, TRADEMARK, AND INDICATION OF CONFORMANCE TO STATE AND FEDERAL LAWS. FERTILIZERS, HERBICIDES, AND PESTICIDES SHALL BE IN APPLIED IN ACCORDANCE WITH THE MANUFACTURER'S SUGGESTED RATE.

5.0 INSPECTIONS:

QUALIFIED PERSONNEL SHALL INSPECT THE FOLLOWING ITEMS, BUT NOT LIMITED TO, AT LEAST ONCE EVERY SEVEN CALENDAR DAYS AND WITHIN 24 HOURS OF THE END OF A STORM THAT IS 0.25 INCHES OR GREATER. WHERE SITES HAVE BEEN FINALLY STABILIZED, INSPECTIONS SHALL BE CONDUCTED AT LEAST ONCE EVERY MONTH.

- POINTS OF DISCHARGE TO WATERS OF THE UNITED STATES.
- POINTS OF DISCHARGE TO MUNICIPAL SEPARATE STORM SEWER SYSTEMS.
- DISTURBED AREAS OF THE SITE THAT HAVE NOT BEEN FINALLY STABILIZED.
- AREAS USED FOR STORAGE OF MATERIALS THAT ARE EXPOSED TO PRECIPITATION.
- STRUCTURAL CONTROLS.
- STORMWATER MANAGEMENT SYSTEMS.
- LOCATIONS WHERE VEHICLES ENTER OR EXIT THE SITE.

6.0 NON-STORMWATER DISCHARGES:

THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPORTING ANY HAZARDOUS SUBSTANCE SPILLS THAT MAY EQUAL OR EXCEED A REPORTABLE QUANTITY (RQ). REFER TO EPA'S LIST OF HAZARDOUS SUBSTANCES AND REPORTABLE QUANTITIES (EPA 40 CFR 302.4 & 117). V THIS LIST CAN BE OBTAINED FROM EPA'S WEBSITE (WWW.EPA.GO) OR BY CONTACTING EPA. IF AN RQ RELEASE DOES OCCUR THE CONTRACTOR SHALL PERFORM THE FOLLOWING PROCEDURES:

- NOTIFY THE NATIONAL RESPONSE CENTER IMMEDIATELY AT 800-424-8802.
- PROVIDE WRITTEN DESCRIPTION OF THE RELEASE WITHIN 14 DAYS PROVIDING DATES, CAUSE AND PREVENTION METHODS TO THE REGIONAL EPA OFFICE.
- MODIFY THE SWPPP AS NECESSARY TO ADDRESS ADDED PREVENTION METHODS.

7.0 IMPLEMENTATION CHECKLIST:

7.1 RECORDS:

THE CONTRACTOR SHALL MAINTAIN RECORDS OF CONSTRUCTION ACTIVITIES INCLUDING, BUT NOT LIMITED TO:

- DATES WHEN MAJOR GRADING ACTIVITIES OCCUR.
- DATES WHEN CONSTRUCTION ACTIVITIES TEMPORARILY CEASE ON A PORTION OF THE SITE.
- DATES WHEN CONSTRUCTION ACTIVITIES PERMANENTLY CEASE ON A PORTION OF THE SITE.
- DATES WHEN STABILIZATION MEASURES ARE INITIATED ON THE SITE.

7.2 INSPECTION REPORTS:

THE CONTRACTOR SHALL PREPARE INSPECTION REPORTS SUMMARIZING THE FOLLOWING, BUT NOT LIMITED TO:

- NAME OF INSPECTOR.
- QUALIFICATIONS OF INSPECTOR.
- MEASURES/AREAS INSPECTED.
- OBSERVED CONDITIONS.
- CHANGES NECESSARY TO THE SWPPP.

7.3 RELEASES OF REPORTABLE QUANTITIES OF OIL OR HAZARDOUS MATERIALS:

THE CONTRACTOR SHALL REPORT ANY RELEASES OF REPORTABLE QUANTITIES OF OIL OR HAZARDOUS MATERIALS IF THEY OCCUR AS PER THE MEASURES OUTLINED IN SECTION 6.0 OF THE SWPPP.

7.4 SWPPP MODIFICATION:

THE CONTRACTOR SHALL MODIFY THE SWPPP AS NECESSARY TO:

- COMPLY WITH MINIMUM PERMIT REQUIREMENTS WHEN NOTIFIED BY FDEP THAT THE PLAN DOES NOT COMPLY.
- ADDRESS ANY CHANGES IN DESIGN, CONSTRUCTION OPERATIONS OR MAINTENANCE, WHICH HAS AN EFFECT ON THE POTENTIAL FOR DISCHARGE OF POLLUTANTS.
- PREVENT REOCCURRENCE OF REPORTABLE QUANTITY RELEASES OF HAZARDOUS MATERIAL OR OIL.

8.0 TERMINATION CHECKLIST:

THE FOLLOWING ITEMS SHALL BE COMPLETE BEFORE SUBMITTING THE NOT:

- ALL SOIL DISTURBING ACTIVITIES ARE COMPLETE.
- TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES HAVE BEEN REMOVED OR WILL BE REMOVED AT AN APPROPRIATE TIME.
- ALL AREAS OF THE CONSTRUCTION SITE NOT OTHERWISE COVERED BY PERMANENT PAVEMENT OR STRUCTURE HAVE BEEN STABILIZED WITH UNIFORM PERENNIAL VEGETATIVE COVER WITH A DENSITY OF 70% OR EQUIVALENT MEASURES HAVE BEEN EMPLOYED.

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HORIZONTAL SCALE

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1 INCH = 40 FT. (11"x17")

LEGEND

- EXISTING ASPHALT
- EXISTING CONCRETE
- PROPOSED ASPHALT
- PROPOSED CONCRETE
- BOUNDARY LINE
- EASEMENT LINE
- LOT LINE
- RIGHT-OF-WAY LINE

GENERAL NOTES:

1. THE CITY WILL REVIEW ALL LANE, DETOUR AND LAND SHIFT REQUESTS SEPARATELY FROM THE PERMIT PROCESS. APPROVAL IS REQUIRED BEFORE COMMENCEMENT OF WORK INVOLVING THE CLOSURE, DETOUR, OR LANE SHIFT FOR WORK ALONG THE ROAD. IF A LANE CLOSURE IS NEEDED, SUBMIT A WRITTEN REQUEST WITH PROPOSED DATES/TIMES/MOT INDICES OR PLAN. ALLOW AT LEAST 2 WEEKS IN YOUR SCHEDULING FOR THIS SPECIAL REVIEW.

2. ALL PAVEMENT MARKINGS AND STRIPING LOCATED WITHIN THE RIGHT-OF-WAY SHALL BE THERMOPLASTIC AND INSTALLED ACCORDING TO FDOT STANDARD INDEX 17346 (LATEST EDITION).

3. ALL CONSTRUCTION IN RIGHTS-OF-WAY SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE FDOT SPECIFICATIONS.

4. ALL DISTURBED AREAS IN THE RIGHT-OF-WAY SHALL BE REGRADED AND SODDED AND/OR SEED AND MULCHED PER FDOT STANDARD INDEX 105 (LATEST EDITION).

5. ALL NEEDED STRIPING DESTROYED DURING CONSTRUCTION SHALL BE RE-STRIPED ACCORDING TO FDOT STANDARD INDEX 17346 (LATEST EDITION).

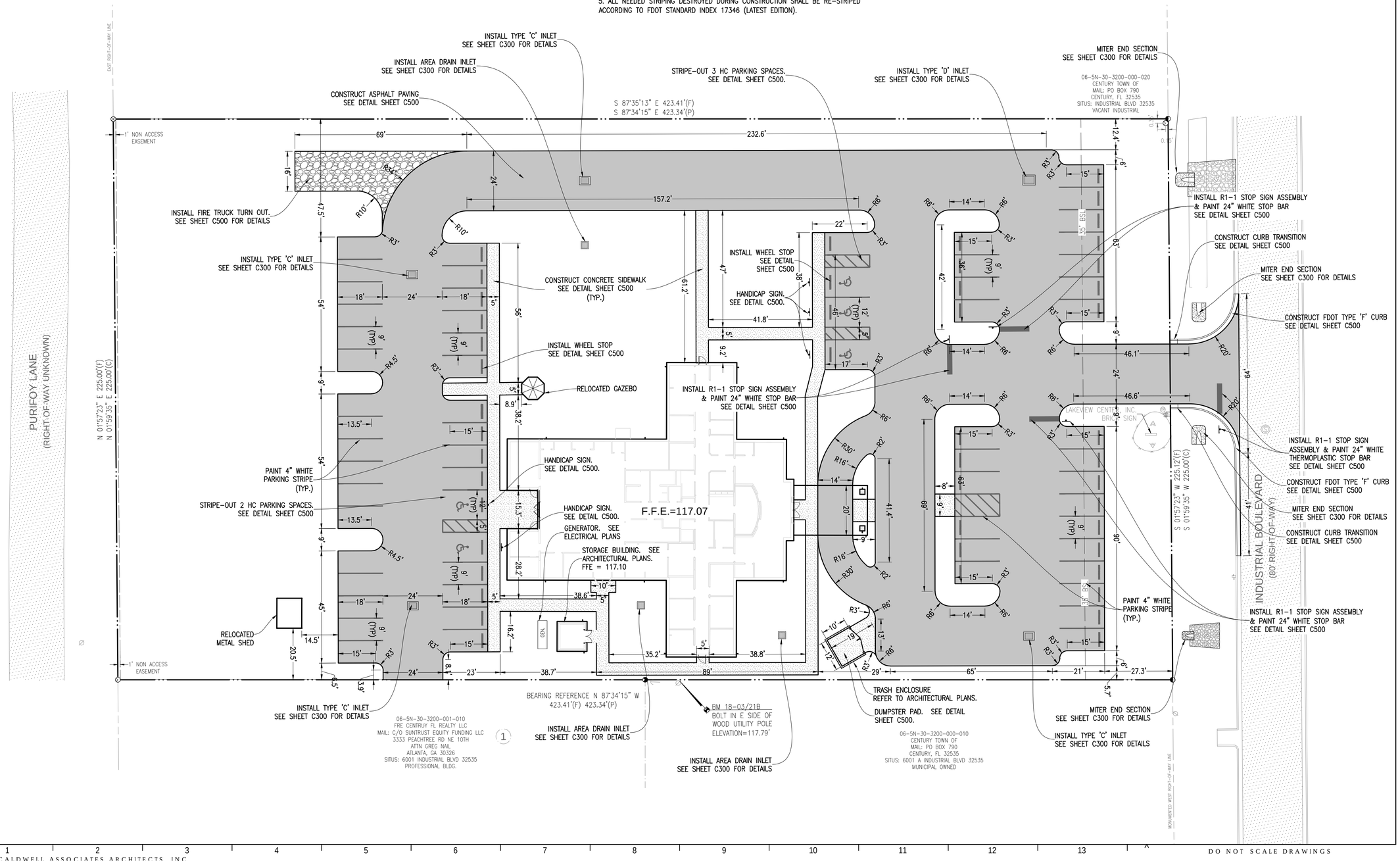
6. ALL LANES MUST BE OPEN FOR TRAFFIC DURING AN EVACUATION NOTICE OF A HURRICANE OR OTHER CATASTROPHIC EVENT AND SHALL REMAIN OPEN FOR THE DURATION OF THE EVACUATION OR EVENT AS DIRECTED BY THE LOCAL MAINTENANCE ENGINEER OR HIS DESIGNEE.

7. ALL SIGNS SHALL BE INSTALLED PER FDOT STANDARD INDEX 11865 (LATEST EDITION), WIND ZONE No.:1.

8. ANY DAMAGE TO EXISTING ROADS DURING CONSTRUCTION SHALL BE REPAIRED BY THE CONTRACTOR PRIOR TO FINAL "AS-BUILT" SIGN-OFF FROM THE CITY.

DIMENSION NOTES:

1. ALL DIMENSIONS ARE TO EDGE OF PAVING UNLESS OTHERWISE NOTED.



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PROJECT ISSUES:

SD - 1	09.29.2017
SD - 2	12.28.2017
ASD	03.16.2018
DD	04.06.2018
BLDG PERMIT SET	04.25.2018

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STRUCTURAL:
JOE DEREUIL ASSOCIATES

ARCHITECT:
CALDWELL ASSOCIATES ARCHITECTS

MEP / TELECOM:
W3 ENGINEERING

PROJECT:
LAKEVIEW CENTER/COMMUNITY HEALTH NORTHWEST FLORIDA - RENOVATION AND ADDITION

6021 INDUSTRIAL BLVD #A
CENTURY, FLORIDA 32535

PROJECT NO. : 6617
SHEET TITLE:

SITE LAYOUT & DIMENSION PLAN

SHEET NUMBER:

C200

BUILDING PERMIT SET

PRINT DATE: 4/2/2018 4:09:11 PM

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DO NOT SCALE DRAWINGS

HORIZONTAL SCALE

20 0 10 20 40 80

(IN FEET)
1 INCH = 20 FT. (22"x34")
1 INCH = 40 FT. (11"x17")

LEGEND

- EXISTING ASPHALT
- EXISTING CONCRETE
- PROPOSED ASPHALT
- PROPOSED CONCRETE
- PROPOSED GRAVEL
- BOUNDARY LINE
- EASEMENT LINE
- LOT LINE
- RIGHT-OF-WAY LINE
- EXISTING CONTOUR
- PROPOSED CONTOUR
- UTILITY POLE
- LIGHT POLE
- TELEPHONE BOX
- 100.00 (BACK OF CURB) 99.50 (EDGE OF PAVEMENT)
- BENCHMARK
- GUY ANCHOR
- FLOW ARROW
- ×100.00 EXISTING SPOT ELEVATION
- •100.00 PROPOSED SPOT ELEVATION
- •100.00 M.E. PROPOSED SPOT ELEVATION MEET EXISTING

GENERAL NOTES:

1. THE CONTRACTOR SHALL CONTROL STORMWATER DURING ALL PHASES OF CONSTRUCTION.

2. THE CONTRACTOR SHALL MAINTAIN RECORD DRAWINGS DURING CONSTRUCTION WHICH SHOW "AS-BUILT" CONDITIONS OF ALL WORK INCLUDING PIPING, DRAINAGE STRUCTURES, OUTLET STRUCTURES, DIMENSIONS, ELEVATIONS, GRADING, ETC. RECORD DRAWINGS SHALL BE PROVIDED TO THE ENGINEER OF RECORD PRIOR TO REQUESTING FINAL INSPECTION.

3. ALL ASPECTS OF THE STORMWATER/DRAINAGE COMPONENTS AND/OR TRANSPORTATION COMPONENTS SHALL BE COMPLETED PRIOR TO ISSUANCE OF A FINAL CERTIFICATE OF OCCUPANCY.

4. DISTURBED AREAS NOT SHOWN TO BE SODDED OR PAVED SHALL BE SEEDED, MULCHED & FERTILIZED.

5. ALL NEW BUILDING ROOF DRAINS, DOWN SPOUTS, OR GUTTERS SHALL BE ROUTED TO CARRY ALL STORMWATER TO STORMWATER COLLECTION SYSTEM.

6. ALL RIP-RAP FLUMES SHALL BE INSTALLED WITH A FILTER FABRIC INSTALLED UNDERNEATH FOR THE ENTIRE AREA OF THE RIP-RAP.

7. THE PROJECT ENGINEER SHALL PROVIDE TO TOWN OF CENTURY AS-BUILT CERTIFICATION AND/OR DRAWINGS FOR VERIFICATION AND APPROVAL ONE WEEK PRIOR TO REQUESTING A FINAL INSPECTION AND CERTIFICATE OF OCCUPANCY.

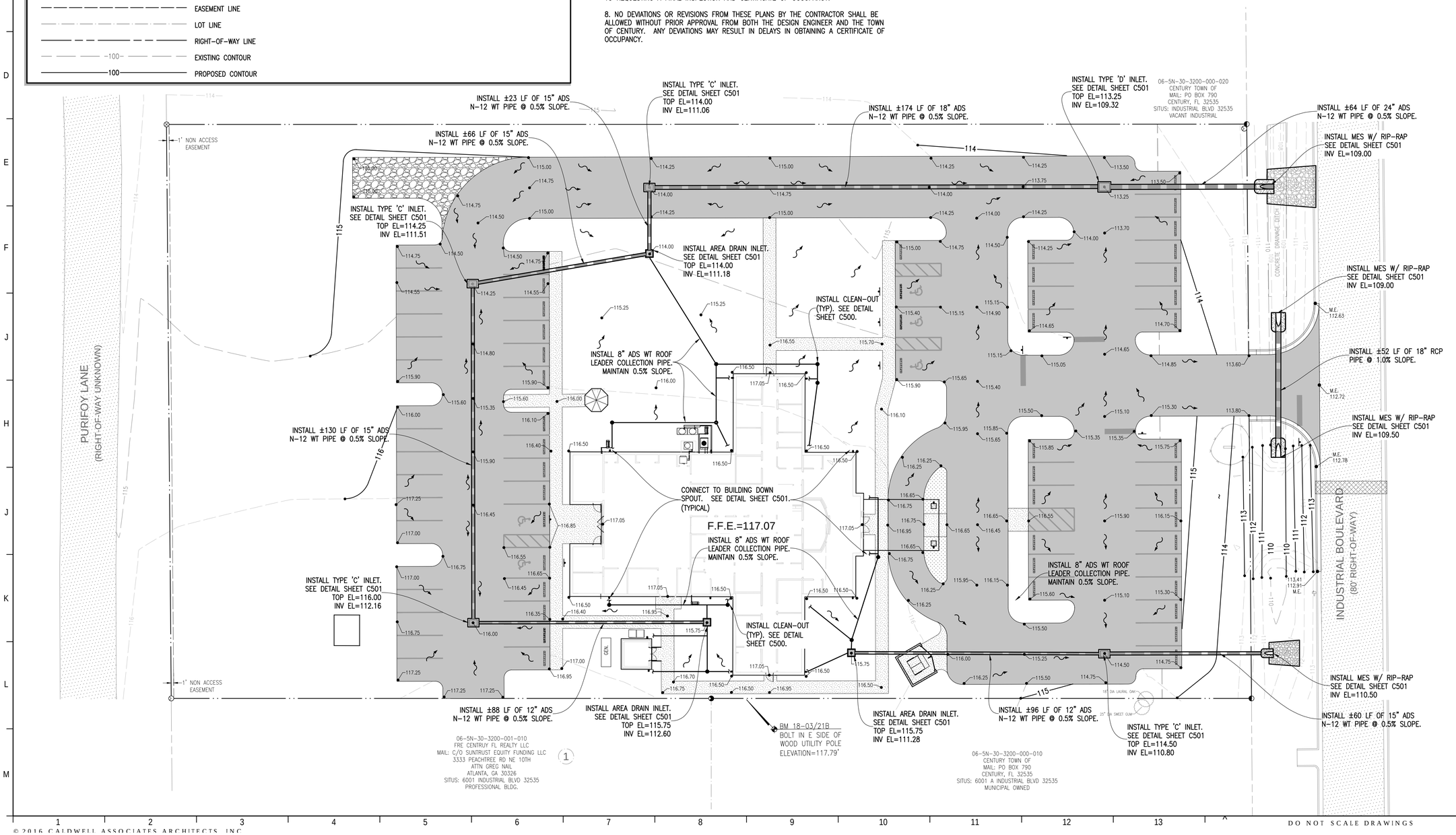
8. NO DEVIATIONS OR REVISIONS FROM THESE PLANS BY THE CONTRACTOR SHALL BE ALLOWED WITHOUT PRIOR APPROVAL FROM BOTH THE DESIGN ENGINEER AND THE TOWN OF CENTURY. ANY DEVIATIONS MAY RESULT IN DELAYS IN OBTAINING A CERTIFICATE OF OCCUPANCY.

9. THE CONTRACTOR SHALL INSTALL PRIOR TO THE START OF CONSTRUCTION AND MAINTAIN DURING CONSTRUCTION ALL SEDIMENT CONTROL MEASURES AS REQUIRED TO RETAIN ALL SEDIMENTS ON THE SITE. IMPROPER SEDIMENT MEASURES MAY RESULT IN CODE ENFORCEMENT VIOLATION(S).

10. NOTIFY SUNSHINE UTILITIES 48 HOURS IN ADVANCE PRIOR TO DIGGING WITHIN RIGHT-OF-WAY. (1-800-432-4770)

11. THE OWNER OR HIS AGENT SHALL ARRANGE/SCHEDULE WITH THE TOWN OF CENTURY A FINAL INSPECTION OF THE DEVELOPMENT UPON COMPLETION AND ANY INTERMEDIATE INSPECTIONS. AS-BUILT CERTIFICATION IS REQUIRED PRIOR TO REQUEST FOR FINAL INSPECTION/APPROVAL.

12. THE OPERATION AND MAINTENANCE OF THE STORMWATER FACILITY WILL BE THE RESPONSIBILITY OF THE TOWN OF CENTURY, AS IN ACCORDANCE WITH THE APPROVED PERMIT.



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PROJECT:
LAKEVIEW CENTER/COMMUNITY HEALTH NORTHWEST FLORIDA - RENOVATION AND ADDITION

6021 INDUSTRIAL BLVD #A
CENTURY, FLORIDA 32535

PROJECT NO. : 6617
SHEET TITLE:

GRADING & DRAINAGE PLAN

SHEET NUMBER:

C300

BUILDING PERMIT SET

PRINT DATE: 4/2/2018 4:09:11 PM

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HORIZONTAL SCALE

N / W / E / S

20 0 10 20 40 80

(IN FEET)
1 INCH = 20 FT. (22"x34")
1 INCH = 40 FT. (11"x17")

LEGEND

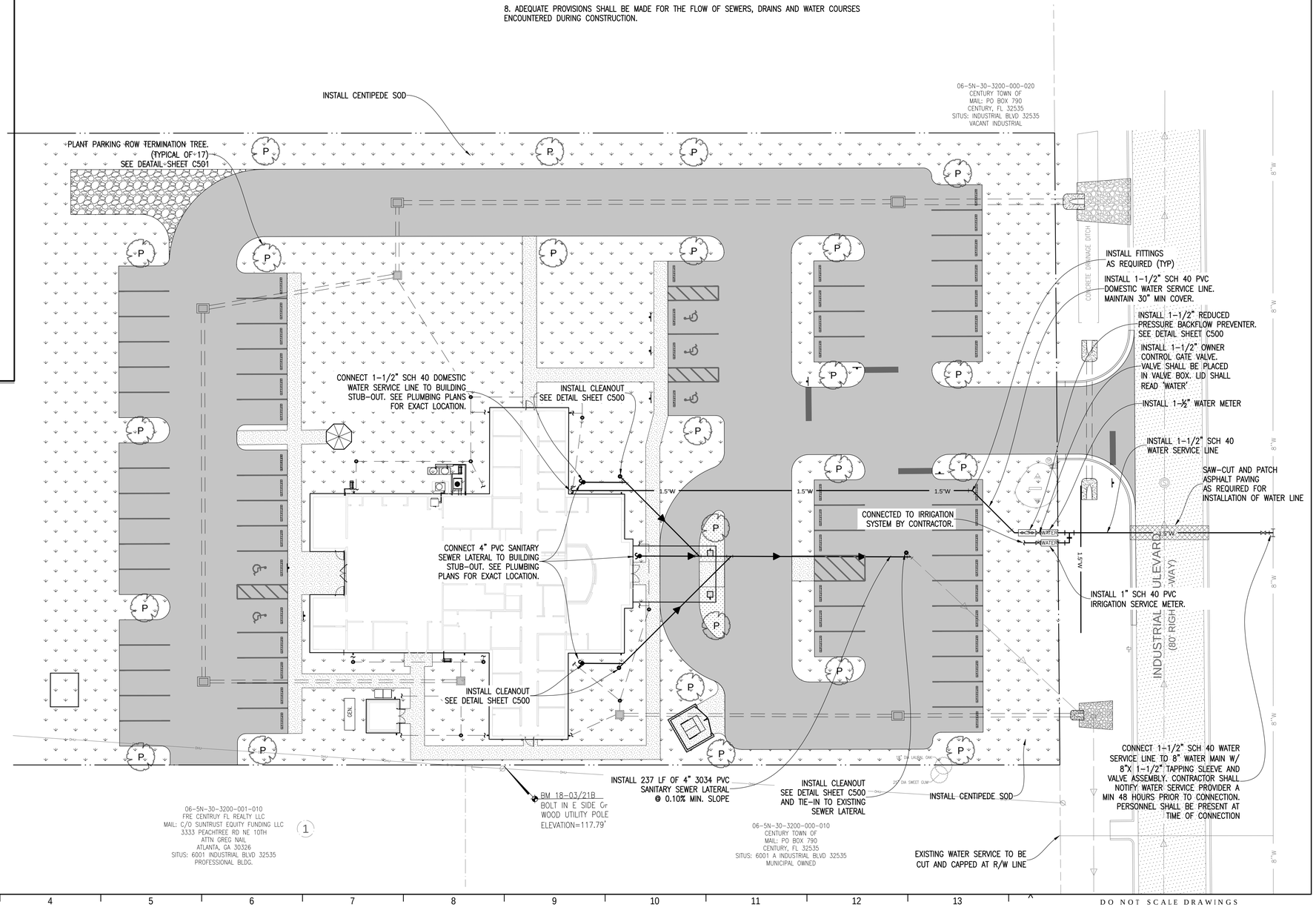
- EXISTING ASPHALT
- EXISTING CONCRETE
- PROPOSED ASPHALT
- PROPOSED CONCRETE
- EXISTING CHAIN LINK FENCE
- EXISTING WOODEN FENCE
- BOUNDARY LINE
- EASEMENT LINE
- LOT LINE
- RIGHT-OF-WAY LINE
- WATER LINE
- SEWER LINE (GRAVITY)
- FORCE MAIN
- OVERHEAD UTILITIES
- BURIED TELEPHONE LINE
- GAS LINE
- BURIED ELECTRIC LINE
- BURIED FIBER OPTIC CABLE
- BURIED TV LINE
- BENCHMARK
- UTILITY POLE
- GUY ANCHOR
- LIGHT POLE
- TELEPHONE BOX
- GAS VALVE
- FIRE HYDRANT
- WATER METER
- WATER VALVE
- CLEANOUT
- SEWER MANHOLE
- STORMWATER MANHOLE

LEGEND

- EXISTING TREE
- P — DENOTES PROPOSED PARKING ROW TERMINUS TREE SOUTHERN MAGNOLIA OR APPROVED EQUAL (MIN. 9' HEIGHT AT TIME OF PLANTING, 2" CALIPER DBH) (MATURE HEIGHT >30 FEET) TOTAL REQUIRED = 17
- CENTIPEDE SOD

UTILITY NOTES:

1. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE EXACT LOCATION AND DEPTH OF EXISTING UTILITIES AND TO DETERMINE IF OTHER UTILITIES WILL BE ENCOUNTERED DURING THE COURSE OF THE WORK AND TAKE WHATEVER STEPS NECESSARY TO PROVIDE FOR THEIR PROTECTION.
2. THE CONTRACTOR SHALL COORDINATE WITH CITY OF CENTURY, GULF POWER, OR ANY OTHER UTILITY COMPANIES HAVING JURISDICTION FOR REMOVAL/RELOCATION AND/OR PROTECTION OF EXISTING UTILITY POLES, AERIAL LINES, FIRE HYDRANTS, AND OTHER UTILITIES AS NECESSARY TO COMPLETE CONSTRUCTION.
3. ALL NEW WATER LINES SHALL BE CLEANED, DISINFECTED, PRESSURE TESTED, AND BACTERIOLOGICALLY CLEANED FOR SERVICE IN ACCORDANCE WITH THE LATEST AWWA STANDARDS AND THE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION RULES AND REGULATIONS.
4. ALL WATER MAINS SHALL BE NSF APPROVED FOR POTABLE WATER USE.
5. MAINTAIN 18 INCH MINIMUM VERTICAL SEPARATION BETWEEN ALL POTABLE WATER MAINS AND SANITARY SEWER GRAVITY LINES. (WATER ABOVE SEWER).
6. THE TOP OF ALL CLEANOUTS SHALL BE FLUSH WITH THE PAVEMENT OR, WHEN NOT IN THE PAVEMENT, FLUSH WITH THE FINISH GRADE. CONNECTION POINTS FOR UTILITIES SHALL BE CLEARLY MARKED FOR FUTURE BUILDING CONNECTION. COORDINATE WITH THE PLUMBING CONTRACTOR.
7. ALL WATER AND SEWER WORK SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE CITY OF CENTURY ENGINEERING MANUAL.
8. ADEQUATE PROVISIONS SHALL BE MADE FOR THE FLOW OF SEWERS, DRAINS AND WATER COURSES ENCOUNTERED DURING CONSTRUCTION.
9. THE CONTRACTOR SHALL NOTIFY THE APPROPRIATE UTILITY COMPANIES 72 HOURS (3 BUSINESS DAYS) PRIOR TO BEGINNING CONSTRUCTION.
10. ALL NEW WATER AND SEWER SERVICE LINES SHALL HAVE A MINIMUM COVER OF 30 INCHES (MAXIMUM 36"), UNLESS OTHERWISE NOTED.
11. THE CONTRACTOR IS TO RESTORE ALL DISTURBED RIGHTS-OF-WAY IN ACCORDANCE WITH ESCAMBIA COUNTY AND THE CITY OF CENTURY GUIDELINES.
12. THE CONTRACTOR SHALL COORDINATE WITH THE PLUMBING CONTRACTOR FOR BUILDING UTILITY CONNECTIONS.
13. ALL CONNECTIONS TO THE CITY OF CENTURY WATER AND SEWER SYSTEM SHALL BE MADE WITH CITY OF CENTURY PERSONNEL PRESENT.
14. ANY REMOVAL OR RELOCATION OF CITY OF CENTURY WATER/SEWER UTILITIES MUST BE APPROVED IN WRITING PRIOR TO THE WORK BEING DONE.
15. THE LIFT STATION AND FORCE MAIN SHALL BE PRIVATELY OWNED, OPERATED, AND MAINTAINED.



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PROJECT:
LAKEVIEW CENTER/COMMUNITY HEALTH NORTHWEST FLORIDA - RENOVATION AND ADDITION

6021 INDUSTRIAL BLVD #A
CENTURY, FLORIDA 32535

PROJECT NO. : 6617
SHEET TITLE:

UTILITY AND LANDSCAPEING PLAN

SHEET NUMBER:

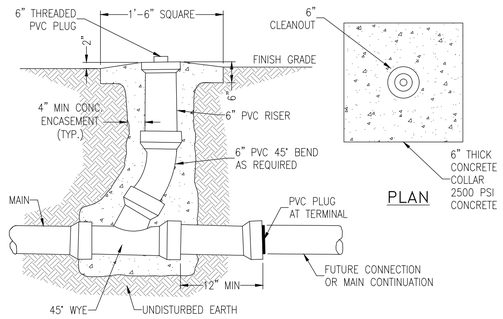
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BUILDING PERMIT SET

PRINT DATE: 4/2/2018 4:09:11 PM

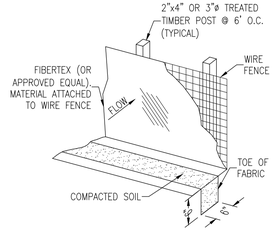
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CLEANOUT DETAIL

N.T.S.



SILT FENCE DETAIL

N.T.S.



NOTES:
1. TOP PORTION OF FTP 25 SHALL HAVE A REFLECTIVE BLUE BACKGROUND WITH WHITE REFLECTIVE SYMBOL AND BORDER.

2. BOTTOM PORTION SHALL HAVE A REFLECTIVE WHITE BACKGROUND WITH BLACK OPAQUE LEGEND AND BORDER.

3. FTP 25 MAY BE FABRICATED ON ONE PANEL OR TWO.

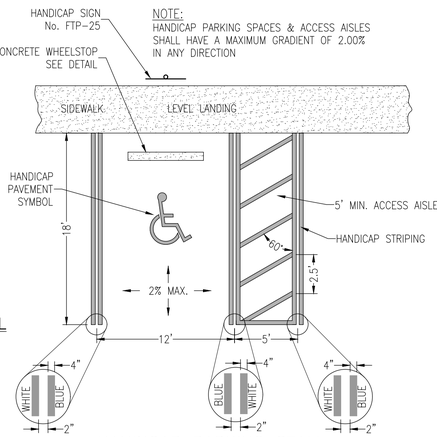
4. SIGNS ARE TO BE MOUNTED AT STANDARD HEIGHT. (7' FROM PAVEMENT TO BOTTOM OF SIGN).

5. SIGN COLUMN TO BE AS PER F.D.O.T. STANDARDS, INDEX NO'S 11860 AND 11865.

SIGN USED AS PER FLORIDA STATUTES
FTP 25 Per FS 316.1955, FS 316.1956



HANDICAP PAVEMENT SYMBOL

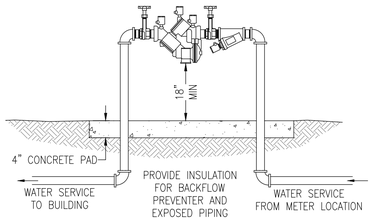


NOTE:
HANDICAP PARKING SPACES & ACCESS AISLES SHALL HAVE A MAXIMUM GRADIENT OF 2.00% IN ANY DIRECTION

HANDICAP PARKING STALL DETAILS

N.T.S.

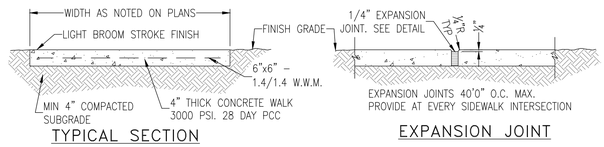
HANDICAP PARKING STALL



REDUCED PRESSURE PRINCIPLE BACKFLOW PREVENTION ASSEMBLY

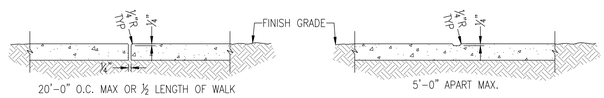
N.T.S.

NOTE:
WALK SLOPE VARIES, SEE PLAN



TYPICAL SECTION

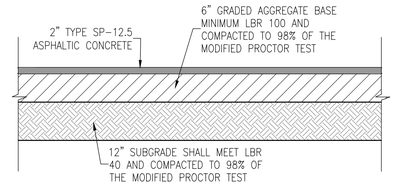
EXPANSION JOINT



DUMMY GROVE

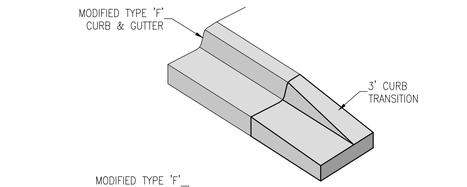
SIDEWALK DETAILS

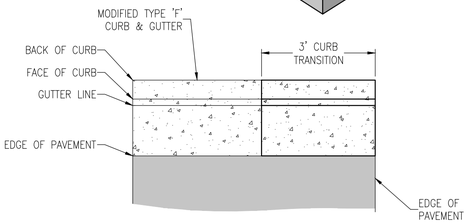
N.T.S.



ASPHALT PAVEMENT DETAIL

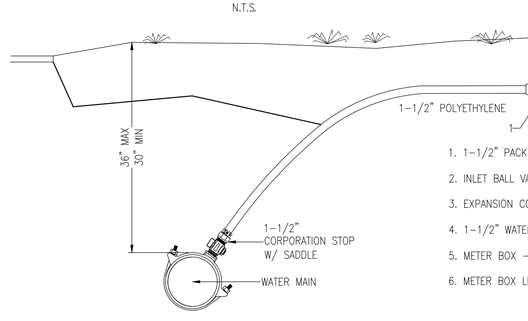
N.T.S.





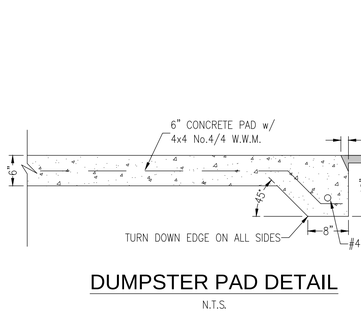
CURB TRANSITION MODIFIED TYPE 'F' TO ASPHALT/CONCRETE

N.T.S.



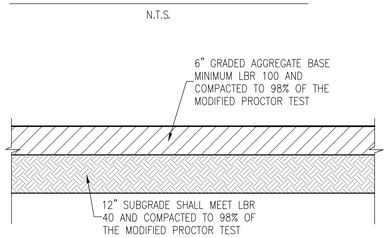
TYPICAL WATER SERVICE

N.T.S.



DUMPSTER PAD DETAIL

N.T.S.



FIRE TRUCK TURNOUT DETAIL

N.T.S.

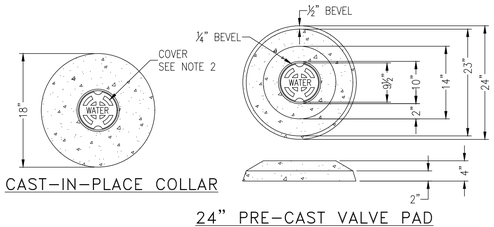
NOTES:
1. VALVE BOX AND BOOT SHALL BE CAST IRON.

2. VALVE COVER SHALL BE MARKED "WATER" OR "SEWER" AS APPLICABLE.

3. VALVE BOX TOP SHALL BE FLUSH WITH FINISHED GRADE OR ½" ABOVE NATURAL GROUND LEVEL.

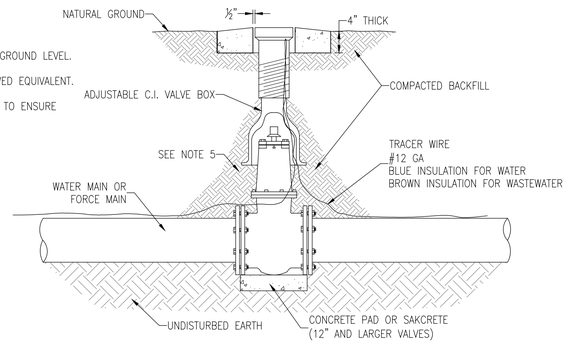
4. GATE VALVE SHALL BE RESILIENT SEAT WITH MECHANICAL JOINT ENDS OR APPROVED EQUIVALENT.

5. EARTH UNDER FLANGE OF VALVE BOX & COLLAR TO BE FIRM AND WELL TAMPED TO ENSURE AGAINST VALVE BOX SETTLING.



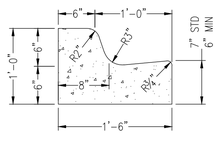
CAST-IN-PLACE COLLAR

24" PRE-CAST VALVE PAD



TYPICAL VALVE & BOX INSTALLATION

N.T.S.



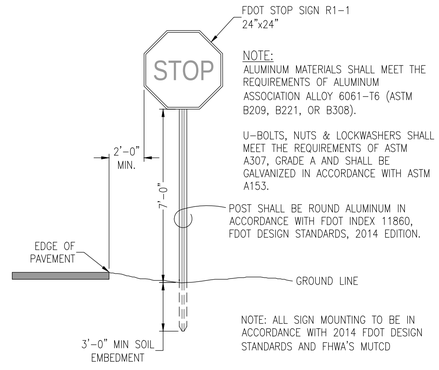
NOTES:
1. WHEN USED ON HIGH SIDE OF ROADWAYS, THE CROSS SLOPE OF THE GUTTER SHALL MATCH THE CROSS SLOPE OF THE ADJACENT PAVEMENT AND THE THICKNESS OF THE LIP SHALL BE 6", UNLESS OTHERWISE SHOWN ON PLANS.

2. ALL CURB TO HAVE DUMMY JOINT AT 10' ON CENTER. MIN. DEPTH OF JOINT TO BE 2".

3. EXPANSION JOINTS ARE TO BE 30' ON CENTER. TYPICAL FOR ALL CURB.

MODIFIED TYPE 'F' CURB & GUTTER

N.T.S.



NOTE:
ALUMINUM MATERIALS SHALL MEET THE REQUIREMENTS OF ALUMINUM ASSOCIATION ALLOY 6061-T6 (ASTM B209, B221, OR B308).

U-BOLTS, NUTS & LOCKWASHERS SHALL MEET THE REQUIREMENTS OF ASTM A307, GRADE A AND SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153.

POST SHALL BE ROUND ALUMINUM IN ACCORDANCE WITH FDOT INDEX 11860, FDOT DESIGN STANDARDS, 2014 EDITION.

NOTE: ALL SIGN MOUNTING TO BE IN ACCORDANCE WITH 2014 FDOT DESIGN STANDARDS AND FHWA'S MUTCD

SIGN MOUNTING DETAIL

N.T.S.

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6021 INDUSTRIAL BLVD #A
CENTURY, FLORIDA 32535

PROJECT NO. : 6617
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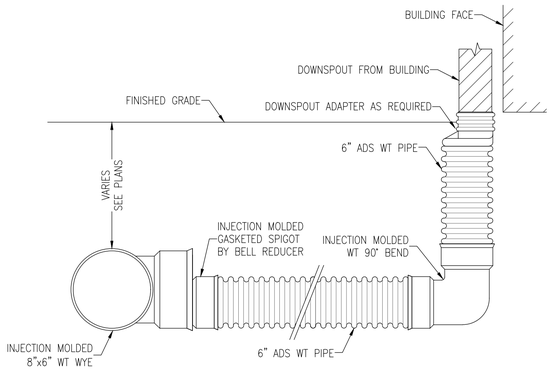
CIVIL DETAILS

SHEET NUMBER:

C500

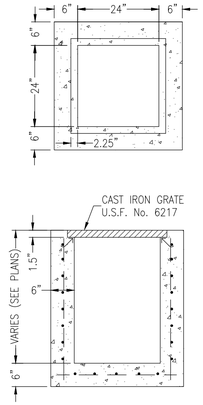
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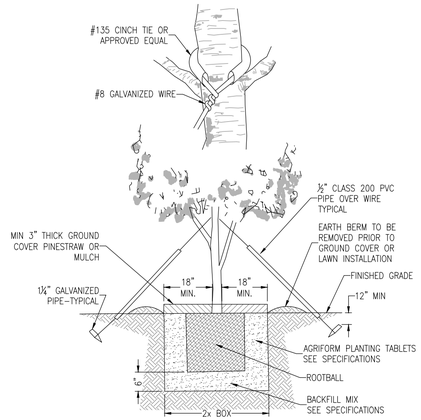
DOWNSPOUT CONNECTION DETAIL

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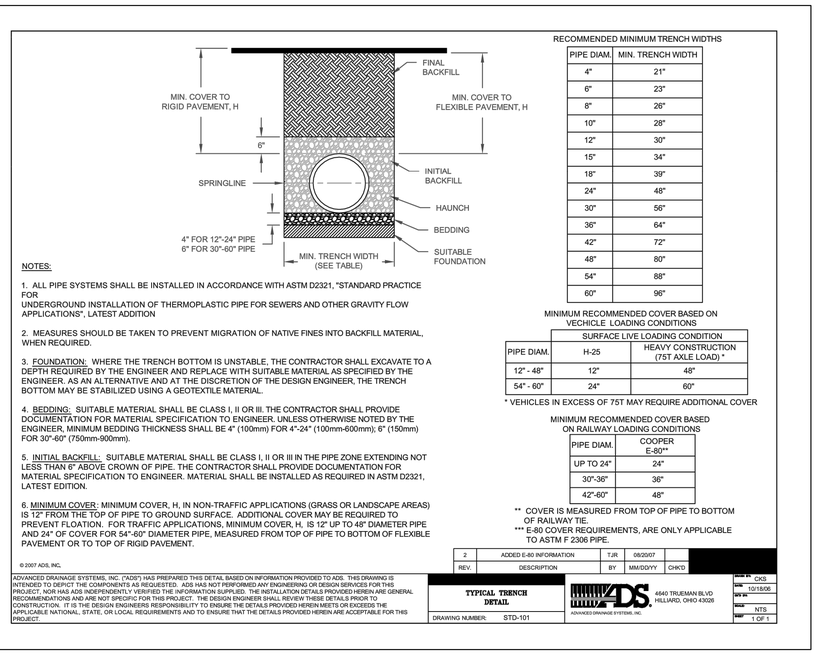
2'-0" x 2'-0" AREA DRAIN

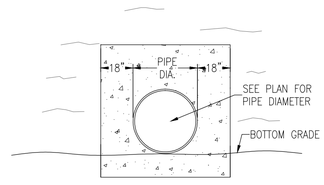
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TREE PLANTING DETAIL

N.T.S.

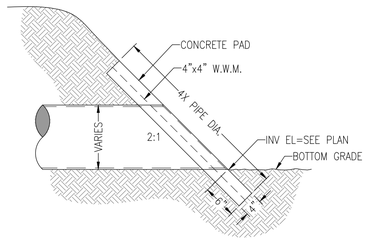




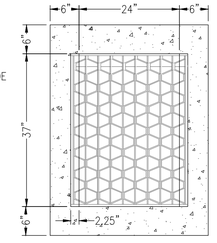
NOTE:
CUT DRAIN PIPE ENDS TO MITERED SECTIONS. COMPACT SOIL ADJACENT TO ENDS AND SOD ACCORDINGLY. ALSO, COMPACT SOIL LIFT COVERING DRAIN PIPES AND SOD ACCORDINGLY.

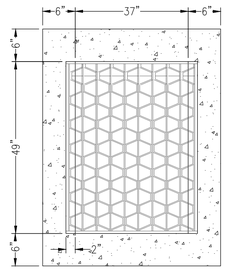
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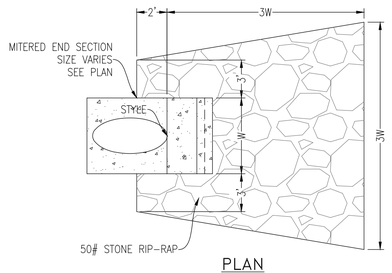
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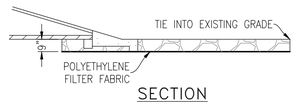
TYPICAL SECTION







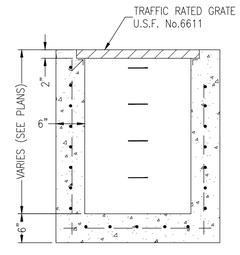
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SECTION

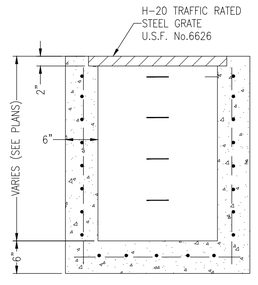
RIP-RAP DETAIL

N.T.S.



FDOT TYPE 'C' INLET

N.T.S.



FDOT TYPE 'D' INLET

N.T.S.

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PROJECT ISSUES:

SD - 1	09.29.2017
SD - 2	12.28.2017
ASD	03.16.2018
DD	04.06.2018
BLDG PERMIT SET	04.25.2018

PROJECT TEAM:

CIVIL:
REBOL BATTLE & ASSOCIATES

STRUCTURAL:
JOE DEREUIL ASSOCIATES

ARCHITECT:
CALDWELL ASSOCIATES ARCHITECTS

MEP / TELECOM:
W3 ENGINEERING

PROJECT:
LAKEVIEW CENTER/COMMUNITY HEALTH NORTHWEST FLORIDA - RENOVATION AND ADDITION

6021 INDUSTRIAL BLVD #A
CENTURY, FLORIDA 32535

PROJECT NO. : 6617
SHEET TITLE:

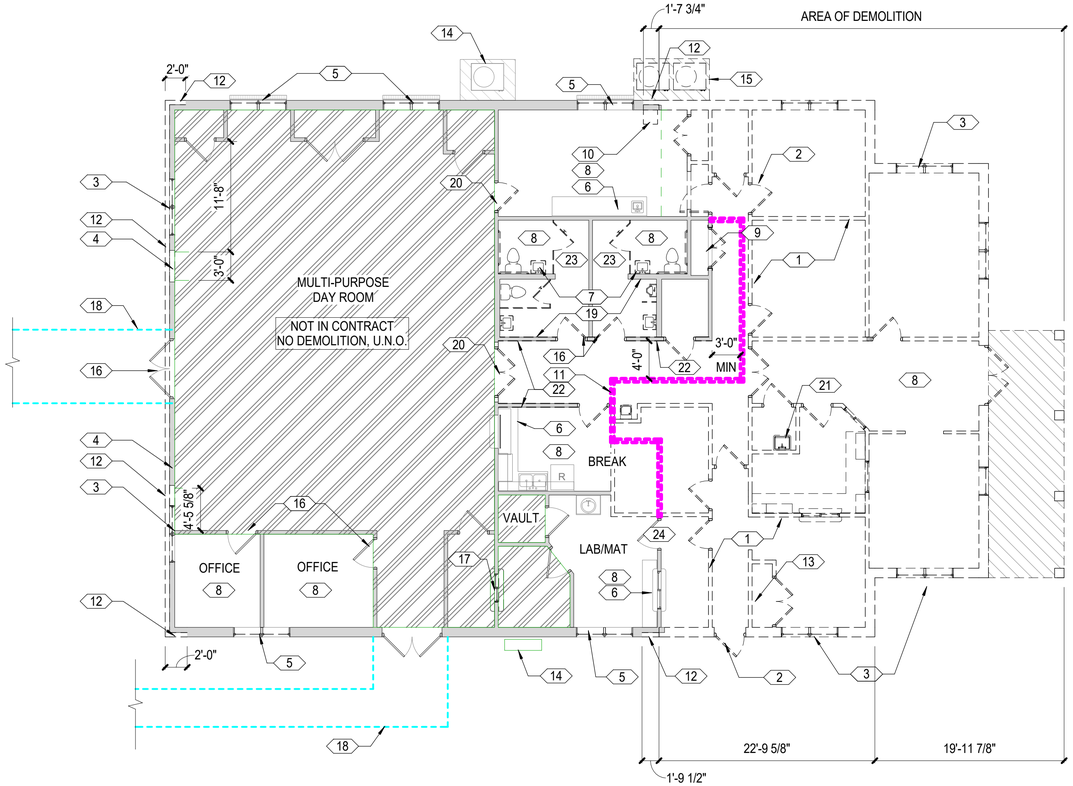
CIVIL DETAILS

SHEET NUMBER:

C501

BUILDING PERMIT SET

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LEGEND

NO WORK TO BE PERFORMED UNDER THIS CONTRACT UNLESS NOTED OTHERWISE

CONSTRUCTION TO REMAIN, PROTECT DURING DEMOLITION AND CONSTRUCTION.

CONSTRUCTION TO BE DEMOLISHED OR REMOVED AS NOTED

TEMPORARY PARTITIONS

GENERAL NOTES

1. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO COMMENCING ANY WORK. ANY CONDITIONS THAT MAY CAUSE ISSUES, DISCREPENCIES, OR OMISSIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT AND OWNER IN WRITING.
2. CONTRACTOR SHALL REFER TO CIVIL, MECHANICAL, ELECTRICAL, PLUMBING, & STRUCTURAL DRAWINGS FOR ADDITIONAL DEMOLITION REQUIREMENTS.
3. PORTIONS OF THE FACILITY TO REMAIN OPERATIONAL DURING DEMOLITION AND CONSTRUCTION. COORDINATE WITH ALL TRADES PRIOR TO COMMENCEMENT OF WORK TO ENSURE MINIMAL DISRUPTIONS OF FACILITY OPERATIONS IS REQUIRED. PROVIDE A PHASING PLAN TO ARCHITECT FOR FINAL APPROVAL.
4. CONTRACTOR TO SUBMIT A SAFETY AND DUST PREVENTATON PLAN FOR APPROVAL FROM THE ARCHITECT PRIOR TO COMMENCEMENT OF DEMOLITION.
5. CONTRACTOR TO REFER TO CONSTRUCTION DOCUMENTS, INCLUDING SPECIFICATIONS, PRIOR TO COMMENCEMENT OF ANY WORK.
6. REFER TO DEMOLITION FLOOR PLAN TO PROVIDE TEMPORARY WALL PARTITIONS TO ALLOW USERS THE USE OF THE COMMUNICATION ROOM, JANITOR'S CLOSET, RESTROOMS, BREAK ROOM AND PROVIDE ACCESS INTO THE METHADONE DOSING AREA.
7. COORDINATE ALL ACCESS POINTS AND PROTECT ACCESS POINTS DURING DEMOLITION AND CONSTRUCTION.
8. REMOVE DOORS INTO THE EXISTING TELECOMMUNICATIONS ROOM ONLY AFTER THE NEW CONSTRUCTION HAS BEEN COMPLETED. PROTECT DURING DEMOLITION AND CONSTRUCTION TO AVOID DUST AND DEBRIS FROM ENTERING THE COMMUNICATION CLOSET.
9. REMOVE EXISTING FLOOR FINISHES AND BASE IN AREAS WHERE NEW CONSTRUCTION TO OCCUR, PREPARE SUBSTRATE FOR NEW FINISHES. REFER TO NEW WORK FLOOR PLAN AND FINISH SCHEDULE.
10. DURING DEMOLITION, PROVIDE TEMPORARY ENCLOSURE TO THE EXPOSED BUILDING COMPONENTS, INCLUDING BUT NOT LIMITED TO ROOF TRUSSES, TO PROTECT FACILITY AGAINST WIND & WEATHER.
11. DEVELOP PHASING PLAN, FOR REVIEW AND APPROVAL BY ARCHITECT, THAT ALLOWS FOR THE NECESSARY PORTIONS OF THE FACILITY TO REMAIN OPERATIONAL DURING DEMOLITION AND CONSTRUCTION.
12. CONTRACTOR TO COORDINATE DEMOLITION WORK AND TEMPORARY PROTECTION WITH ALL OTHER TRADES, SEE STRUCTURAL, MECHANICAL AND ELECTRICAL DRAWINGS FOR ADDITIONAL REQUIREMENTS & INFORMATION.

KEYNOTES

1. REMOVE EXISTING WALL IN IT'S ENTIRETY AS INDICATED
2. REMOVE EXISTING DOOR, FRAME AND ALL RELATED COMPONENTS.
3. REMOVE EXISTING WINDOW, FRAME, AND ALL RELATED COMPONENTS.
4. PORTION OF EXISTING WALL TO BE REMOVED FOR NEW OPENING.
5. REMOVE EXISTING WINDOW, FRAME, AND ALL RELATED COMPONENTS; PREPARE OPENING FOR NEW STOREFRONT SYSTEM.
6. EXISTING CASEWORK TO REMAIN; PROTECT DURING DEMOLITION & CONSTRUCTION.
7. REMOVE PLUMBING FIXTURES AND TOILET PARTITIONS; SEE PLUMBING
8. REMOVE EXISTING FLOORING AND BASE AND PREPARE SUBSTRATE FOR NEW FINISHES.
9. EXISTING TELECOMMUNICATION ROOM TO REMAIN FULLY OPERATION DURING CONSTRUCTION AND DEMOLITION, SEE ELECTRICAL DRAWINGS.
10. EXISTING SERVER TO BE RELOCATED BY OWNER, SEE ELECTRICAL
11. PROVIDE TEMPORARY GYPSUM BOARD FINISHED STUD WALLS; SEAL TIGHT TO ADJACENT SURFACES
12. REMOVE PORTIONS OF EXISTING BRICK, SAWCUT TO MAINTAIN CLEAN JOINT BETWEEN NEW AND OLD BRICK.
13. REMOVE EXISTING ELECTRICAL EQUIPMENT, SEE ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION
14. EXISTING MECHANICAL UNITS TO REMAIN; PROTECT DURING DEMOLITION & CONSTRUCTION, SEE MECHANICAL DRAWINGS
15. EXISTING MECHANICAL UNITS TO BE REMOVED, SEE MECHANICAL DRAWINGS FOR ADDITIONAL INFORMATION
16. EXISTING DOORS AND FRAMES TO REMAIN; PROTECT DURING DEMOLITION & CONSTRUCTION.
17. PROVIDE TEMPORARY SLIDING TRANSACTION LOCKABLE WINDOW WITH PAINTED SOLID WOOD COUNTER TOP. REMOVE AFTER SUBSTANTIAL COMPLETION AND RESTORE CONSTRUCTION OF WALL ASSEMBLY. USE 5/8" FIRE RATED GYPSUM BOARD.
18. PROVIDE TEMPORARY PROTECTION TO ENTRANCES DURING DEMOLITION AND CONSTRUCTION
19. REMOVE EXISTING TILE WAINSCOT AND WALL SUBSTRATE, SEE FINISH SCHEDULE
20. EXISTING DOORS & FRAMES TO BE DEMOLISHED; REPLACE WITH CODE-COMPLIANT FIRE-RATED DOORS & FRAMES, SEE DOOR SCHEDULE FOR ADDITIONAL INFORMATION
21. REMOVE EXISTING PLUMBING; SEE PLUMBING FOR ADDITIONAL INFORMATION
22. REMOVE EXISTING GYPSUM BOARD BOTH SIDES OF WALLS, SEE FLOOOR PLANS
23. REMOVE AND SALVAGE ALL EXISTING TOILET ACCESSORIES FOR REINSTALLATION BY CONTRACTOR
24. TEMPORARILY SEAL OFF DOOR & PROTECT OPENING DURING DEMOLITION

TRUE NORTH

PROJECT NORTH

1 D101 — 1 DEMOLITION PLAN

1/8" = 1'-0"

8' 4' 0' 8' 16'

PRINT DATE: 4/25/2018 9:42:59 AM

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PROJECT ISSUES:

SD - 1	09.29.2017
SD - 2	12.28.2017
ASD	03.16.2018
DD	04.06.2018
BLDG PERMIT SET	04.25.2018

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REBOL BATTLE & ASSOCIATES

STRUCTURAL:
JOE DEREUIL ASSOCIATES

ARCHITECT:
CALDWELL ASSOCIATES ARCHITECTS

MEP / TELECOM:
W3 ENGINEERING

PROJECT:
LAKEVIEW CENTER/ COMMUNITY HEALTH NORTHWEST FLORIDA RENOVATION & ADDITION

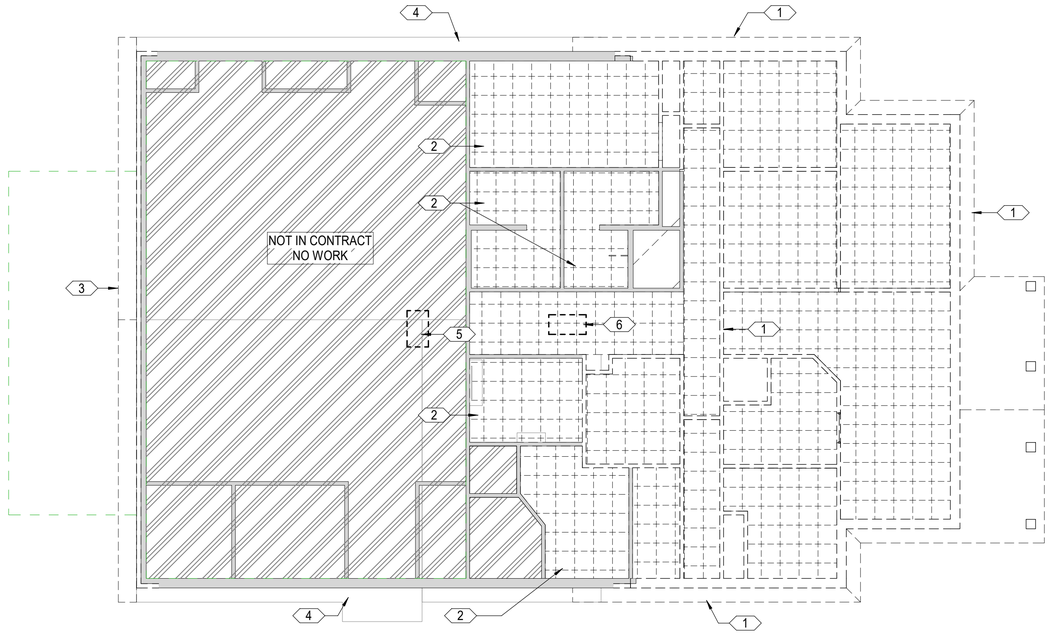
6021 INDUSTRIAL BLVD #A
CENTURY, FLORIDA 32535

ARCHITECT'S SEAL
H. MILLER CALDWELL, JR
AR 7462

PROJECT NO. : 6617
SHEET TITLE:
FLOOR PLAN - DEMOLITION

SHEET NUMBER:
D101

BUILDING PERMIT SET



KEYNOTES

1. ALL DASHED ITEMS SHOWN TO BE DEMOLISHED
2. REMOVE EXISTING CEILING FINISH, SEE ELECTRICAL AND MECHANICAL DRAWINGS
3. REMOVE PORTION OF THE EXISTING ROOF GABLE END, SEE ROOF PLAN FOR EXTENT OF NEW WORK; SEE STRUCTURAL FOR ADDITIONAL INFORMATION
4. REMOVE EXISTING METAL SOFFIT SYSTEM
5. EXISTING ATTIC ACCESS TO REMAIN
6. EXISTING ATTIC ACCESS OPENING TO BE CLOSED OFF WITH 5/8" FIRE RATED GYPSUM BOARD, PROVIDE BLOWN IN INSULATION.

LEGEND

EXISTING ACT TO BE DEMOLISHED

NO WORK TO BE PERFORMED UNDER THIS CONTRACT UNLESS NOTED OTHERWISE

CONSTRUCTION TO REMAIN, PROTECT DURING DEMOLITION AND CONSTRUCTION.

CONSTRUCTION TO BE DEMOLISHED OR REMOVED AS NOTED

GENERAL NOTES

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11. DEVELOP PHASING PLAN, FOR REVIEW AND APPROVAL BY ARCHITECT, THAT ALLOWS FOR THE NECESSARY PORTIONS OF THE FACILITY TO REMAIN OPERATIONAL DURING DEMOLITION AND CONSTRUCTION.
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STRUCTURAL:
JOE DEREUIL ASSOCIATES

ARCHITECT:
CALDWELL ASSOCIATES ARCHITECTS

MEP / TELECOM:
W3 ENGINEERING

PROJECT:
LAKEVIEW CENTER/ COMMUNITY HEALTH NORTHWEST FLORIDA RENOVATION & ADDITION

6021 INDUSTRIAL BLVD #A CENTURY, FLORIDA 32535

ARCHITECT'S SEAL
HARRY MILLER CALDWELL JR. LIC INTERIOR DESIGNER 3348 REGISTERED ARCHITECT 7462 STATE OF FLORIDA
H. MILLER CALDWELL, JR
AR 7462

PROJECT NO. : 6617
SHEET TITLE:
RECLECTIVE CEILING PLAN - DEMOLITION

SHEET NUMBER:
D111

BUILDING PERMIT SET

1 REFLECTED CEILING PLAN - DEMOLITION
A200 | D111 1/8" = 1'-0"

TRUE NORTH PROJECT NORTH

8' 4' 0' 8' 16'

PRINT DATE: 4/25/2018 9:43:01 AM

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DO NOT SCALE DRAWINGS

1.00 GENERAL NOTES

1.01 THESE STRUCTURAL NOTES SHALL BE APPLIED WITH THE TECHNICAL SPECIFICATIONS IN THE SPECIFICATIONS MANUAL. ANY CONFLICTING REQUIREMENTS SHALL BE BROUGHT TO THE ATTENTION OF THE STRUCTURAL ENGINEER-OF-RECORD FOR RESOLUTION BEFORE PROCEEDING WITH FABRICATION OR CONSTRUCTION.

1.02 DRAWINGS SHOW TYPICAL AND CERTAIN SPECIFIC CONDITIONS ONLY. FOR DETAILS NOT SPECIFICALLY SHOWN, PROVIDE DETAILS SIMILAR TO THOSE SHOWN.

1.03 VERIFY ALL EXISTING CONDITIONS, DIMENSIONS AND ELEVATIONS BEFORE STARTING WORK. NOTIFY STRUCTURAL ENGINEER OF ANY DISCREPANCY. WORK OUT DIMENSIONS TO ALIGN NEW TO EXISTING BRICK AND FIELD VERIFY AND WORK OUT TRUSS PROFILES AND OVERHANGS TO MATCH EXISTING.

1.04 THE DESIGN, ADEQUACY, AND SAFETY OF ERECTION BRACING, SHORING, TEMPORARY SUPPORTS, ETC., ARE THE SOLE RESPONSIBILITY OF THE CONTRACTOR. TAKE NECESSARY PRECAUTIONS TO PROTECT THE EXISTING STRUCTURE AND ITS FOUNDATION AND TO LIMIT, TO THE EXTENT POSSIBLE, THE EFFECTS OF CONSTRUCTION THAT THE NEW STRUCTURE HAS ON THE EXISTING STRUCTURE.

1.05 COORDINATE STRUCTURAL CONTRACT DOCUMENTS WITH ARCHITECTURAL, MECHANICAL, ELECTRICAL, PLUMBING AND CIVIL. NOTIFY STRUCTURAL ENGINEER OF ANY CONFLICT AND/OR OMISSION. CONTRACTOR SHALL MAKE NO DEVIATION FROM DESIGN DRAWINGS WITHOUT WRITTEN APPROVAL OF THE ARCHITECT. FOR ADDITIONAL OPENINGS NOT SHOWN ON THE STRUCTURAL DRAWINGS, SEE ARCHITECTURAL, MECHANICAL, AND PLUMBING DRAWINGS.

1.06 DESIGN CRITERIA:

THE STRUCTURE HAS BEEN DESIGNED UTILIZING THE FOLLOWING REFERENCES:

A. FLORIDA BUILDING CODE, 2017
B. ASCE 7-10, MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES
C. ACI 302.1 R-5, CONCRETE FLOOR AND SLAB CONSTRUCTION
D. ACI 360 R-10, DESIGN OF SLAB ON GRADES

1.07 DESIGN LOADS

A. DEAD LOADS:
1. MECHANICAL, ELECTRICAL, PLUMBING: 5 PSF
2. CEILINGS AND INSULATION: 5 PSF

B. LIVE LOADS: (MAY BE REDUCED PER CODE)
1. ROOFS: 20 PSF
2. SLAB-ON-GRADE: 100 PSF

C. WIND LOADS - STRUCTURE HAS BEEN DESIGNED TO CONFORM TO THE WIND PROVISIONS OF ASCE 7-10. SEE WIND PRESSURE DIAGRAM & CHART FOR THE FOLLOWING:

1. BASIC WIND SPEED (3-SEC GUST)
2. BUILDING RISK CATEGORY
3. WIND EXPOSURE CATEGORY
4. INTERNAL PRESSURE COEFFICIENT
5. COMPONENT & CLADDING WIND PRESSURES

1.08 SHOP DRAWING SUBMITTALS:

A. THE REVIEW OF SUBMITTALS AND/OR SHOP DRAWINGS DONE BY THE STRUCTURAL ENGINEER OR OTHERS DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY TO REVIEW AND CHECK SHOP DRAWINGS BEFORE SUBMITTAL TO THE STRUCUTRAL ENGINEER. THE REVIEW BY THE STRUCUTRAL ENGINEER IS FOR GENERAL CONFORMANCE ONLY. IF SHOP DRAWINGS HAVE NOT BEEN REVIEWED AND APPROVED BEFORE SUBMITTAL TO THE STRUCUTURAL ENGINEER, THEY SHALL BE RETURNED WITHOUT APPROVAL.

B. THE CONTRACTOR IS SOLEY RESPONSIBLE FOR ANY AND ALL ERRORS AND OMISSIONS ASSOCIATED WITH THE PREPARATION OF ALL SHOP DRAWINGS AS THEY PERTAIN TO MEMBER SIZES, DETAILS, AND DIMENSIONS SPECIFIED IN THE CONSTRUCTION DOCUMENTS.

C. CONTRACTOR IS SOLEY RESPONSIBLE FOR MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES OF CONSTRUCTION.

D. ALL MODIFICATIONS MADE FOR SUBMITTALS THAT ARE RE-SUBMITTED SHALL CLEARLY NOTE ALL CHANGES.

E. REPRODUCING THE CONTRACT DOCUMENTS FOR USE AS SHOP DRAWINGS IS NOT ALLOWED, AND SHOP DRAWINGS WILL BE RETURNED WITHOUT APPROVAL.

F. GENERAL SHOP DRAWING REQUIREMENTS:

1. SUBMIT SHOP DRAWINGS AND ANY OTHER SPECIAL INFORMATION NECCESSARY FOR PROPER FABRICATION, ERECTION, AND PLACEMENT OF STRUCTURAL FABRICATIONS. INCLUDE PLANS, ELEVATIONS, AND SECTIONS. CLEARLY SHOW ANCHORAGES, CONNECTIONS, AND ACCESSORY ITEMS. THE DETAILER MUST INTERPRET THE CONTRACT DOCUMENTS AND CLEARLY CONVEY THIS INTERPRETATION TO THE FIELD IN THE FORM OF PLACING OR ERECTION DRAWINGS.
2. CONCRETE REINFORCING DETAILER - PROVIDE PLACING DRAWINGS FOR FABRICATION AND PLACING OF REINFORCING STEEL. THESE DRAWINGS SHALL INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING: BAR LISTS, SCHEDULES, BENDING DETAILS, PLACING DETAILS, PLACING PLANS, AND PLACING ELEVATIONS. CLEARLY SHOW FOUNDATION REINFORCING. INDICATE BAR LENGTHS, LOCATION AND SPLICES OF CONTINUOUS BARS, AND BAR SUPPORTS. CLEARLY SHOW LOCATIONS OF ALL DOWELS ON PLAN.

1.09 SHOP DRAWINGS BY SPECIALTY ENGINEER:

A. THE FOLLOWING SYSTEMS AND COMPONENTS AS A MINIMUM REQUIRE SPECIALTY ENGINEERED ERECTION AND FABRICATION DRAWINGS WITH INPUT BY A SPECIALTY ENGINEER, BUT ARE NOT LIMITED TO: WINDOW SYSTEMS, STOREFRONT SYSTEM, ROOF SYSTEMS, AWNINGS, LOUVERS, LADDERS, AND ALL EXTIOR SOFFIT FRAMING.
B. THE SPECIALTY ENGINEER OR SUPPLIER SHALL DESIGN AND INSTALL THEIR COMPLETED SYSTEM IN ITS ENTIRETY TO THE PRIMARY STRUCTURE PER THE CRITERIA NOTED ON THESE CONSTRUCTION DOCUMENTS. THE SPECIALTY ENGINEER SHALL ADHERE TO ALL REQUIREMENTS OF THE APPLICABLE BUILDING CODE OR THESE NOTES, WHICHEVER IS MORE STRINGENT.
C. SHOP DRAWINGS SHALL BE PROVIDED TO THE ARCHITECT/E.O.R. AND CALCULATIONS SHALL REQUIRE THE SEAL, DATE, AND SIGNATURE OF THE SPECIALTY ENGINEER.

2.00 FOUNDATIONS AND SLAB-ON-GRADE

2.01 THE DESIGN OF FOUNDATIONS, RETAINING WALLS AND SLAB ON GRADE IS BASED ON THE CRITERIA ESTABLISHED IN THE GEOTECHNICAL REPORT BY NOVA ENGINEERING AND ENVIRONMENTAL, LLC, PENSACOLA, FL; FILE #8218038, DATED APRIL 6, 2018. THE RECOMMENDATIONS OF THAT REPORT SHALL BE CONSIDERED AN INTEGRAL PART OF THE CONTRACT DOCUMENTS.

2.02 SHALLOW FOUNDATIONS HAVE BEEN DESIGNED FOR AN ALLOWABLE SOIL BEARING PRESSURE OF 1500 PSF.

2.03 A QUALIFIED GEOTECHNICAL ENGINEER SHALL VERIFY CONDITION AND/OR ADEQUACY OF ALL SUBGRADES, FILLS AND BACKFILLS BEFORE PLACEMENT OF FOUNDATIONS, FOOTINGS, SLABS, WALLS, FILLS, BACKFILLS, ETC. SHOULD THE CONTRACTOR FIND UNDESIRABLE SOILS, HE SHALL STOP WORK AND IMMEDIATELY CONTACT THE ENGINEER OF RECORD. ALL FOOTINGS SHALL REST EITHER ON UNDISTURBED SOIL OR A MANUALLY OPERATED VIBRATORY SLED OR TAMPER SHOULD BE USED TO DENSIFY ANY SOILS IN THE BOTTOM OF THE FOOTING TRENCHES LOOSENED DURING THE EXCAVATION OPERATION.

2.04 SIDES OF FOUNDATIONS SHALL BE FORMED UNLESS CONDITIONS PERMIT EARTH FORMING. FOUNDATIONS POURED AGAINST THE EARTH REQUIRE THE FOLLOWING PRECAUTIONS: SLOPE SIDES OF EXCAVATIONS AS APPROVED BY GEOTECHNICAL ENGINEER AND CLEAN UP SLOUGHING BEFORE AND DURING CONCRETE PLACEMENT.

2.05 CONTRACTOR IS RESPONSIBLE FOR ADEQUATELY PROTECTING ALL EXCAVATION SLOPES.

2.06 WHERE FOOTING STEPS ARE NECESSARY, THEY SHALL BE NO STEEPER THAN ONE VERTICAL TO TWO HORIZONTAL.

2.07 DEWATER TO AT LEAST TWO FEET BELOW BOTTOM OF LOWEST FOUNDATION IF GROUNDWATER IS ENCOUNTERED.

2.08 SLAB-ON-GRADE REQUIREMENTS:

A. UNLESS NOTED OTHERWISE, THE SLAB-ON-GRADE SHALL BE A MINIMUM OF 4 INCHES THICK, PLACED ON COMPACTED SUBGRADE, AND REINFORCED WITH 6 x 6 - W2.0 x W2.0 WWF IN FLAT SHEETS (ROLLS ARE NOT PERMITTED). PROVIDE POSITIVE SUPPORT 2" CLEAR FROM BOTTOM OF SLAB. LAP MESH 12".

B. PLACE CONTROL OR CONSTRUCTION JOINTS AT LOCATIONS INDICATED BY "C.J." IF NOT INDICATED, LOCATED JOINTS AT COLUMN CENTERLINES AND AT 20'-0" O.C MAX. SAWCUT CONTROL JOINTS AS SOON AFTER POURING AS POSSIBLE, WHEN CONCRETE WILL NOT RAVEL; 12 HRS. MAX. CURE CONCRETE IN ACCORDANCE WITH ACI 301. BEGIN CURING IMMEDIATELY AFTER POURING TO LIMIT CRACKING PRIOR TO SAWCUTTING CONTROL JOINTS.

C. SUBGRADE SHALL BE PREPARED AS RECOMMENDED IN THE GEOTECHNICAL REPORT.

D. VAPOR RETARDER SHALL CONFORM TO ASTM E1745, CLASS A, B, OR C AND BE A MINIMUM OF 10 MIL. THICKNESS. THE VAPOR RETARDER SHOULD BE PLACED OVER THE PREPARED SUBGRADE. TO REDUCE THE POSSIBILITY OF PUNCTURE WHEN THE VAPOR RETARDER IS TO BE PLACED OVER A ROUGH GRANULAR FILL LAYER, PROVIDE A THIN LAYER OF APPROXIMATELY 1/2 INCH OF FINE-GRADED MATERIAL ROLLED OR COMPACTED OVER THE GRANULAR FILL LAYER PRIOR TO INSTALLATION OF THE VAPOR RETARDER. VAPOR RETARDER SHOULD BE OVERLAPPED 8 IN. AND TAPED AT THE JOINTS AND CAREFULLY FITTED AROUND SERVICE OPENINGS.

3.00 REINFORCED CONCRETE

3.01 ALL CONCRETE WORK SHALL CONFORM TO ACI 301-16, SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS. DESIGN IS BASED ON ACI 318-14, BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE. DETAIL CONCRETE REINFORCEMENT AND ACCESSORIES IN ACCORDANCE WITH ACI 315, DETAILING MANUAL. DETAIL ALL CONCRETE WALLS AND BEAMS ON THE SHOP DRAWINGS IN ELEVATION UNLESS SPECIFICALLY APPROVED OTHERWISE. SUBMIT SHOP DRAWINGS FOR APPROVAL, SHOWING ALL FABRICATION DIMENSIONS AND LOCATIONS FOR PLACING REINFORCING STEEL AND ACCESSORIES. DO NOT BEGIN FABRICATION UNTIL SHOP DRAWINGS ARE COMPLETED AND REVIEWED.

3.02 UNLESS NOTED OTHERWISE, ALL CONCRETE SHALL BE NORMAL WEIGHT AND HAVE THE FOLLOWING MINIMUM 28 DAY COMPRESSIVE STRENGTHS:

A.	FOUNDATIONS	3000 PSI
B.	SLAB-ON-GRADE	3000 PSI

CONCRETE MAY CONTAIN A PROPERLY DESIGNED SUPERPLASTICIZER FOR WORKABILITY.

3.03 REINFORCING STEEL SHALL CONFORM TO ASTM A615, GRADE 60 UNLESS NOTED OTHERWISE.

3.04 THE PROPOSED MATERIALS AND MIX DESIGN SHALL BE FULLY DOCUMENTED AND REVIEWED BY THE OWNER'S TESTING LABORATORY. RESPONSIBILITY FOR OBTAINING THE REQUIRED DESIGN STRENGTH IS THE CONTRACTOR'S.

3.05 USE OF CALCIUM CHLORIDE, CHLORIDE IONS, OR OTHER SALTS IN CONCRETE IS NOT PERMITTED.

3.06 TIE ALL REINFORCING STEEL AND EMBEDMENTS SECURELY IN PLACE PRIOR TO PLACING CONCRETE. PROVIDE SUFFICIENT SUPPORTS TO MAINTAIN THE POSITION OF REINFORCEMENT WITHIN SPECIFIED TOLERANCE DURING ALL CONSTRUCTION ACTIVITIES. "STICKING" DOWELS INTO WET CONCRETE IS NOT PERMITTED.

3.07 PROVIDE CONTINUOUS REINFORCEMENT WHEREVER POSSIBLE; SPLICE ONLY AS SHOWN OR APPROVED; STAGGER SPLICE WHERE POSSIBLE; USE FULL TENSION SPLICE (CLASS "B") UNLESS NOTED OTHERWISE. DOWELS SHALL MATCH THE SIZE AND SPACING OF THE SPECIFIED REINFORCEMENT AND SHALL BE LAPPED WITH FULL TENSION SPLICES (CLASS "B") UNLESS NOTED OTHERWISE. TERMINATE BARS WITH STANDARD HOOKS.

3.08 REINFORCING STEEL SHALL HAVE THE FOLLOWING CONCRETE COVER UNLESS NOTED OTHERWISE (PER ACI 318-14 PAR. 20.6.1):

A. CONCRETE AGAINST EARTH (NOT FORMED): 3"

B. FORMED CONCRETE EXPOSED TO THE EARTH OR WEATHER:
1. #6 THROUGH #18 BARS: 2"
2. #5 BARS AND SMALLER: 1-1/2"

C. CONCRETE NOT EXPOSED TO EARTH OR WEATHER:
1. SLABS AND WALLS: 1"
2. BEAMS (STIRRUPS) AND COLUMNS (TIES): 1-1/2"

3.09 DO NOT PLACE DUCTS EXCEEDING ONE-THIRD THE SLAB OR WALL THICKNESS WITHIN THE SLAB OR WALL UNLESS SPECIFICALLY SHOWN AND DETAILED ON STRUCTURAL DRAWINGS.

3.10 DO NOT WELD OR TACK WELD REINFORCING STEEL UNLESS APPROVED OR DIRECTED BY THE STRUCTURAL ENGINEER.

3.11 ALL REINFORCING STEEL PLACEMENTS SHALL BE REVIEWED BY A REGISTERED STRUCTURAL ENGINEER, OR BY A REPRESENTATIVE RESPONSIBLE TO HIM. (RE: ACI 318 PAR. 1.3.1)

3.12 FOR CONCRETE PADS SEE CIVIL, ARCHITECTURAL, MECHANICAL AND ELECTRICAL DRAWINGS.

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REBOL BATTLE & ASSOCIATES

STRUCTURAL:
JOE DEREUIL ASSOCIATES

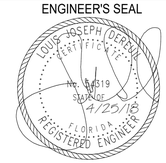
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PROJECT:
LAKEVIEW CENTER/ COMMUNITY HEALTH NORTHWEST FLORIDA RENOVATION & ADDITION

6021 INDUSTRIAL BLVD #A CENTURY, FLORIDA 32535

ENGINEER'S SEAL



L. JOSEPH DEREUIL
NO. 54319

PROJECT NO. : 6617
SHEET TITLE:
GENERAL NOTES

JDA JOE DEREUIL ASSOCIATES, LLC
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S001

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4.00 STRUCTURAL TIMBER:

4.01 MATERIALS:

1. SUBMIT THE FOLLOWING PRODUCT DATA TO ENGINEER FOR REVIEW.
   A. NAILS USED TO FASTEN SHEATHING – SIZE & DIA.
   B. GLULAM BEAMS - DESIGN STRENGTH
   C. METAL CONNECTORS – DESIGN STRENGTH (GRAVITY AND WIND LOADS)

2. TIMBER: NO. 2 SOUTHERN PINE OR BETTER
   LVL: 26F-2.0E
   GLU-LAM: 24F-1.8E

3. ALL TIMBER EXPOSED TO WEATHER (PORTE COCHERE) SHALL BE PRESSURE TREATED AND KILN DRIED AFTER TREATING (KDAT).

4. ALL METAL BASE PLATES, CAPS, BRACKETS, HANGERS AND BOLTS SHALL BE EITHER HOT DIPPED GALVANIZED OR STAINLESS STEEL.

5. BOLTS SHALL BE GALVANIZED A307, ¾" DIAMETER, UNLESS NOTED OTHERWISE.

6. ALL TIMBER CONNECTORS INDICATED ARE SIMPSON FASTENERS. EQUIVALENT FASTENERS BY OTHER MANUFACTURERS MAY BE SUBMITTED FOR REVIEW. ALL HOLES IN CONNECTORS SHALL BE FILLED WITH THE RECOMMENDED NUMBER OF FASTENERS. WHEN MULTIPLE CONNECTORS ARE USED, THEY MUST BE INSTALLED SO FASTENER LOCATIONS TO DO NOT OVERLAP. INSTALL ALL SPECIFIED FASTENERS BEFORE LOADING THE CONNECTION.

4.02 ANCHOR BOLTS: SHALL BE GALVANIZED ASTM F1554, A36, OR A307, ½" DIAMETER X 10" HEADED BOLTS EMBEDDED 6" INTO SLAB, SPACED AT 32" O.C. ANCHOR BOLTS MAY BE REPLACED AT WALL CORNERS AND ENDS BY "HOLD-DOWN" ANCHORS (SEE FOLLOWING PARAGRAPH).

4.03 HOLD-DOWN ANCHORS TO ANCHOR SHEARWALL ENDS TO THE SLAB

1. HOLDOWN ANCHOR MATERIAL: GALVANIZED ASTM F1554, A36, OR A307 STEEL

2. HOLDOWN ANCHOR DIAMETER: 5/8"

3. HOLD-DOWN ANCHORS SHALL BE LOCATED AS CLOSE AS POSSIBLE TO ALL WALL CORNERS AND ENDS. PROPER LOCATION OF THE HOLD-DOWN ANCHORS IS CRITICAL. A HEADED BOLT SHALL BE EMBEDDED INTO THE CONCRETE FOUNDATION TO DEPTH INDICATED AND SHALL BE FASTENED TIGHT TO THE BOTTOM PLATE WITH A SIMPSON HDU5-SDS2.5.

4.04 FRAMING NOTES:

1. TOP PLATES SHALL BE DOUBLE AND LAP SPLICED 4'-0" WITH 9-16 D NAILS.

2. EXTERIOR WALL SHEATHING SHALL BE EXTERIOR GRADE 15/32" PLYWOOD OR ORIENTED STRAND BOARD (OSB). USE NAIL EDGE SPACING OF 4" O.C. AT PANEL EDGES AND 6" O.C. IN THE FIELD. USE 10D DEFORMED SHANK NAILS. PROVIDE 2 X 4 FLATWISE BLOCKING AT ALL HORIZONTAL JOINTS.

3. ROOF DECKING SHALL BE EXTERIOR GRADE 15/32" PLYWOOD OR ORIENTED STRAND BOARD (OSB). USE 10D DEFORMED SHANK NAILS. USE NAIL EDGE SPACING OF 4" O.C. AT PANEL EDGES AND 6" O.C. IN THE FIELD. PROVIDE 2 X 4 FLATWISE BLOCKING AT ALL VALLEY, HIP, AND RIDGE LOCATIONS.

4. WALL STUDS: 2X6 NO. 2 SOUTHERN PINE @ 16" O.C., UNLESS NOTED OTHERWISE
   *SEE PLAN FOR LOCATIONS REQUIRING 1.75X5.5 LVL STUDS

5. ALL CONNECTIONS NOT SPECIFICALLY DETAILED SHALL BE IN ACCORDANCE WITH THE FASTENING SCHEDULE IN THE FLORIDA BUILDING CODE, TABLE 2304.9.1.

4.05 BOLT HOLES SHALL BE AT LEAST A MINIMUM OF 1/32" AND NO MORE THAN A MAXIMUM OF 1/16" LARGER THAN THE BOLT DIAMETER.

4.06 A FASTENER THAT SPLITS THE WOOD WILL NOT TAKE THE DESIGN LOAD. EVALUATE SPLITS TO DETERMINE IF THE CONNECTION WILL PERFORM AS REQUIRED. DRY WOOD MAY SPLIT MORE EASILY AND SHOULD BE EVALUATED AS REQUIRED. IF WOOD TENDS TO SPLIT, CONSIDER PRE-BORING HOLES WITH DIAMETERS NOT EXCEEDING 0.75 OF THE FASTENER DIAMETER.

4.07 WOOD SHRINKS AND EXPANDS AS IT LOSES AND GAINS MOISTURE, PARTICULARLY PERPENDICULAR TO GRAIN. TAKE WOOD SHRINKAGE AND EXPANSION INTO ACCOUNT WHEN INSTALLING CONNECTION. ALL FASTENERS HAVE BEEN DESIGNED USING DRY LUMBER DIMENSIONS.

4.08 SET ROUGH CARPENTRY TO REQUIRED LEVELS AND LINES, WITH MEMBERS PLUMB, TRUE TO LINE, CUT, AND FITTED. FIT ROUGH CARPENTRY TO OTHER CONSTRUCTION; SCRIBE AND COPE AS NEEDED FOR ACCURATE FIT. LOCATE NAILERS, BLOCKING, AND SIMILAR SUPPORTS TO COMPLY WITH REQUIREMENTS FOR ATTACHING OTHER CONSTRUCTION.

4.09 DO NOT SPLICE STRUCTURAL MEMBERS BETWEEN SUPPORTS, UNLESS OTHERWISE INDICATED.

4.10 SORT AND SELECT LUMBER SO THAT NATURAL CHARACTERISTICS WILL NOT INTERFERE WITH INSTALLATION OR WITH FASTENING OTHER MATERIALS TO LUMBER. DO NOT USE MATERIALS WITH DEFECTS THAT INTERFERE WITH FUNCTION OF MEMBER OR PIECES THAT ARE TOO SMALL TO USE WITH MINIMUM NUMBER OF JOINTS OR OPTIMUM JOINT ARRANGEMENT.

5.00 PREFABRICATED, PRE-ENGINEERED WOOD TRUSSES:

5.01 TIMBER PLATE CONNECTED TRUSSES SHALL BE DESIGNED IN ACCORDANCE WITH THE TPI DESIGN SPECIFICATION FOR METAL PLATE CONNECTED WOOD TRUSSES. METAL PLATES SHALL BE GALVANIZED.

5.02 TRUSSES AND THEIR CONNECTIONS TO THE PRIMARY STRUCTURE SHALL BE DESIGNED BY A QUALIFIED PROFESSIONAL ENGINEER. TRUSS DESIGN SHALL BE SUBMITTED FOR ENGINEER'S REVIEW AND SHALL BE SIGNED AND SEALED BY THE PROFESSIONAL ENGINEER RESPONSIBLE FOR THE DESIGN OF THE TRUSSES. ENGINEER SHALL BE REGISTERED IN THE PROJECT STATE. SUBMITTALS SHALL INDICATE THE APPLICABLE BLDG CODE, DESIGN WIND SPEED, DESIGN FORCES, AND REACTIONS AT BEARING POINTS. THE PLAN LAYOUT OF THE TRUSSES SHALL BE INDICATED ON THE SHOP DRAWINGS.

5.03 TRUSSES SHALL BE DESIGNED FOR THE WIND AND SUPERIMPOSED GRAVITY LOADS SHOWN BELOW:

A. TRUSS SELF-WEIGHT
B. BOTTOM CHORD DEAD LOAD = 10 PSF
C. TOP CHORD DEAD LOAD = 10 PSF
D. COLLATERAL LOAD = 5 PSF
E. ATTIC TRUSS SPACE FOR HVAC = 60 PSF LL

5.04 TRUSSES SHALL BE SHOP ASSEMBLED.

5.05 PROVIDE BOTTOM CHORD BRACING AND OTHER BRACING AS REQUIRED BY TRUSS MANUFACTURER.

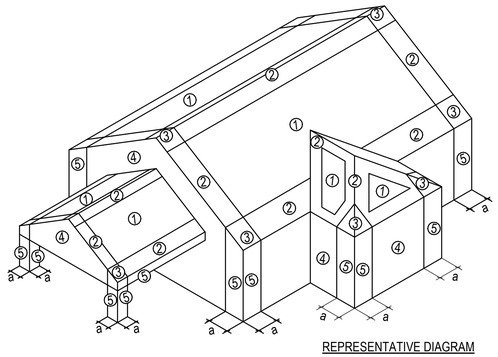
5.06 TRUSS TO TRUSS CONNECTIONS SHALL BE DESIGNED BY TRUSS MANUFACTURER.

WIND LOAD DETERMINATION ASSUMPTIONS - FLORIDA BUILDING CODE 2017					
WIND VELOCITY (MPH)	EXPOSURE CATEGORY	MEAN ROOF HEIGHT (FT.)	ROOF SLOPE	RISK CATEGORY	ENCLOSURE CATEGORY
140	B	16.5	5 ON 12	II	ENCLOSED

ULTIMATE DESIGN WIND PRESSURES FOR COMPONENTS AND CLADDING (PSF)

EFF. AREA (SQ. FT)	ROOF ZONE 1		ROOF ZONE 2		ROOF ZONE 2 O-HANG	ROOF ZONE 3		ROOF ZONE 3 O-HANG	WALL ZONE 4		WALL ZONE 5	
≤ 10	20.3	-32.3	20.3	-56.2	-65.7	20.3	-56.2	-65.7	35.3	-38.2	35.3	-47.2
50	16.1	-30.2	16.1	-45.7	-65.7	16.1	-45.7	-65.7	31.6	-34.6	31.6	-39.8
≥ 100	16.0	-29.3	16.0	-41.2	-65.7	16.0	-41.2	-65.7	30.0	-33.0	30.0	-36.7

NOTES:
1. FOR EFFECTIVE AREAS BETWEEN THOSE GIVEN ABOVE THE LOAD MAY BE INTERPOLATED, OTHERWISE USE THE LOAD ASSOCIATED WITH THE LOWER EFFECTIVE AREA.
2. THE EDGE STRIP, a = 6.0 FT.
3. PRESSURES SHALL BE APPLIED IN ACCORDANCE WITH THE FIGURE SHOWN ON THIS SHEET.
4. PRESSURES GIVEN ARE ULTIMATE LOADS TO BE USED WITH STRENGTH DESIGN. FOR SERVICE LOADS TO BE USED WITH ALLOWABLE STRESS DESIGN, MULTIPLY THE PRESSURES BY 0.60. SEE TABLES 2.3 AND 2.4 IN ASCE 7-10 FOR MORE INFORMATION ON LOAD COMBINATIONS.



REPRESENTATIVE DIAGRAM

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REBOL BATTLE & ASSOCIATES

STRUCTURAL:
JOE DEREUIL ASSOCIATES

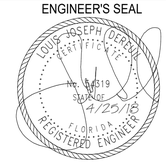
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ENGINEER'S SEAL



L. JOSEPH DEREUIL
NO. 54319

PROJECT NO. : 6617
SHEET TITLE:
GENERAL NOTES AND WIND LOAD DIAGRAM

SHEET NUMBER:
S002

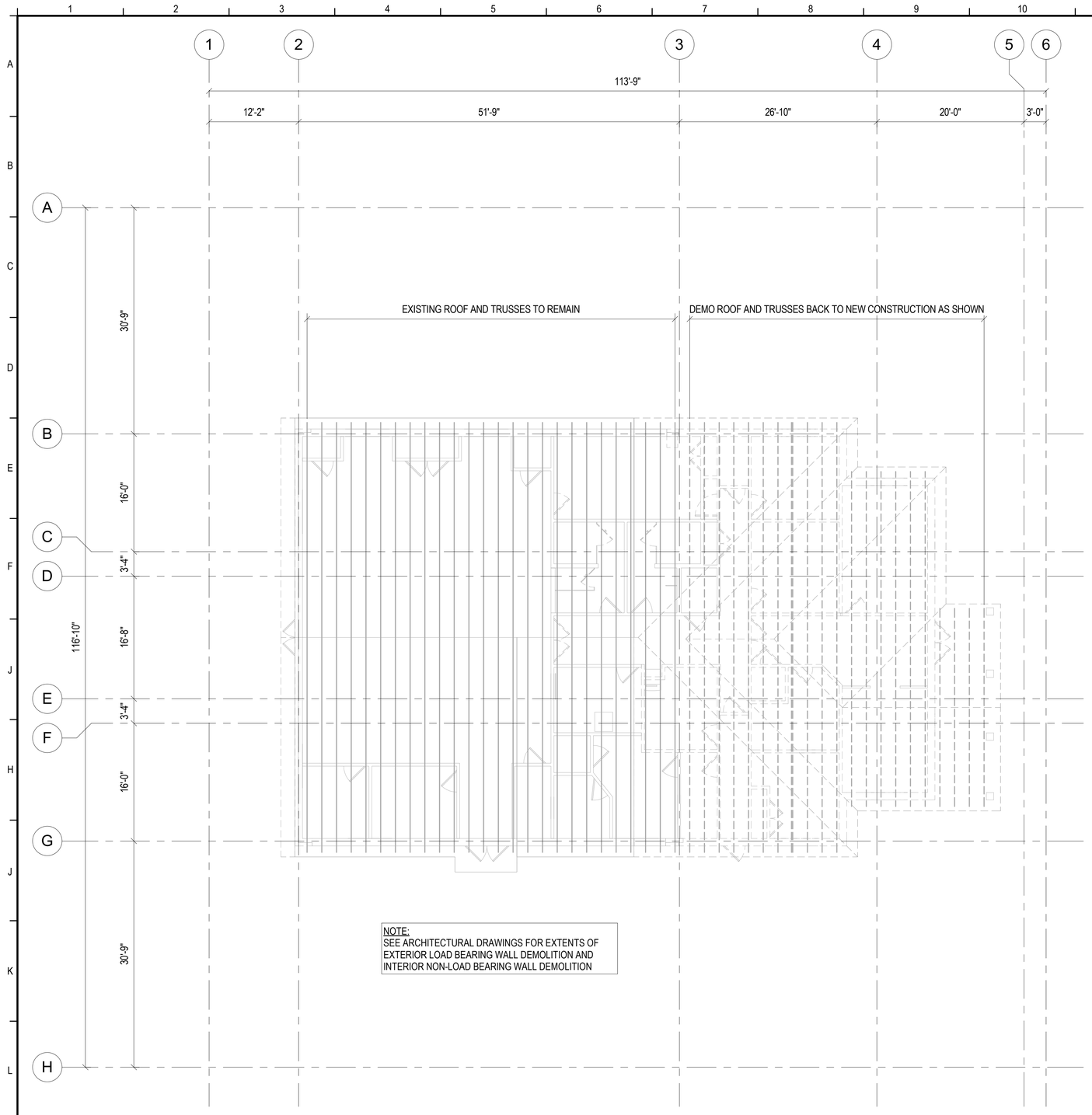
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1 S010 ROOF DEMOLITION PLAN
1/8" = 1'-0"

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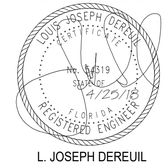
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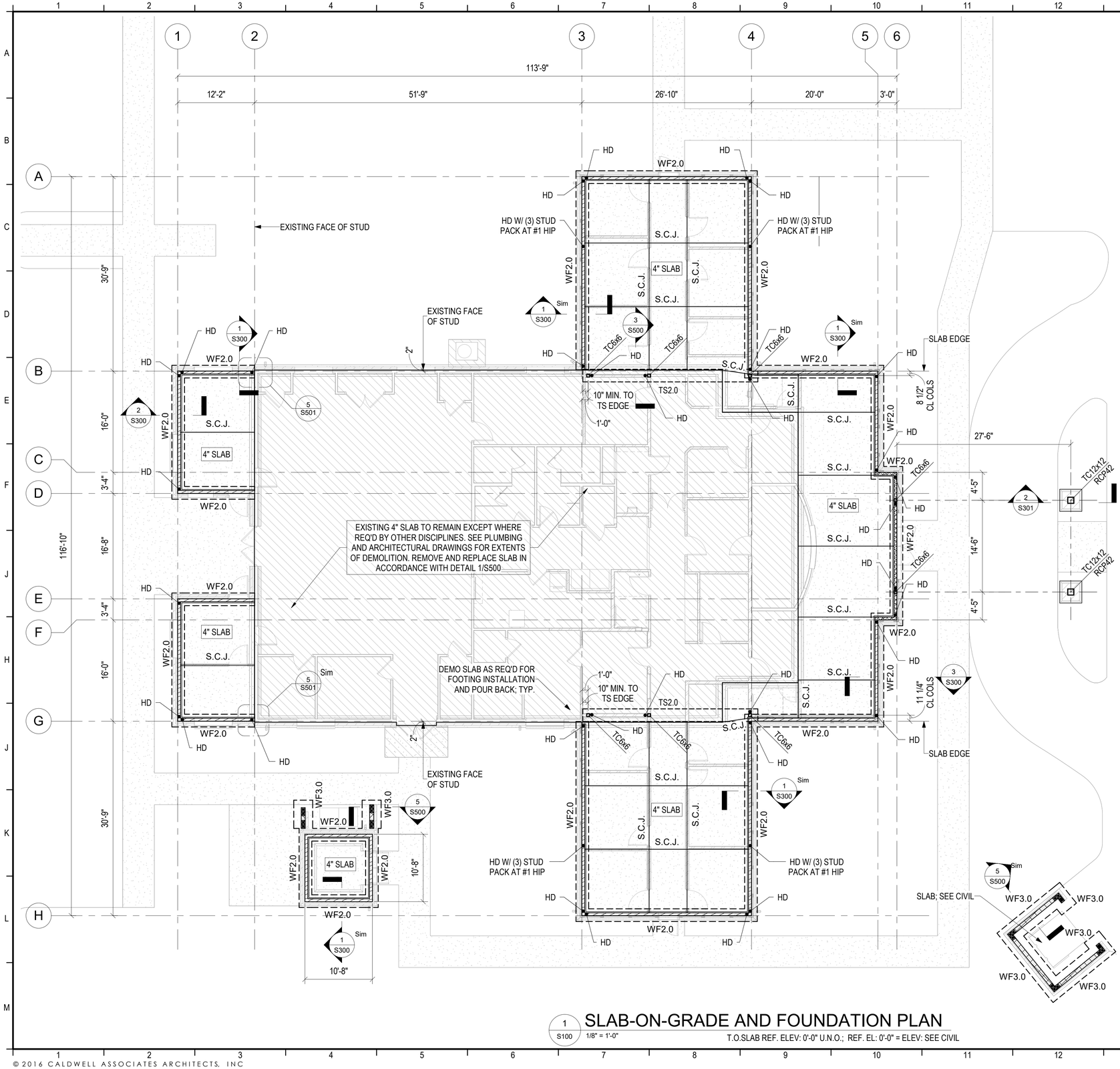
L. JOSEPH DEREUIL
NO. 54319

PROJECT NO. : 6617
SHEET TITLE:
ROOF DEMOLITION PLAN

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LEGEND

	=	2x6 NOMINAL TIMBER STUDS @ 16" O.C. LOAD-BEARING SHEARWALL WITH 15/32" PLYWOOD SHEATHING. SEE GENERAL NOTES FOR SHEATHING ATTACHMENT. REFER TO ARCHITECTURAL DRAWINGS FOR OPENING SIZES AND LOCATIONS AND 1/S501 FOR FRAMED OPENING DETAILS.
	=	1.75"x5.5" LVL STUDS @ 16" O.C. LOAD-BEARING SHEARWALL WITH 15/32" PLYWOOD SHEATHING. SEE GENERAL NOTES FOR SHEATHING ATTACHMENT. REFER TO ARCHITECTURAL DRAWINGS FOR OPENING SIZES AND LOCATIONS AND 1/S501 FOR FRAMED OPENING DETAILS.
	=	8" NOMINAL CMU WALL. UNLESS NOTED OTHERWISE (U.N.O.), WALL SHALL BE REINFORCED WITH #5 VERTICAL REINFORCING AT 4'-0" ON CENTER IN CENTER OF GROUT FILLED CELLS. PROVIDE HORIZONTAL JOINT REINFORCING AT 1'-4" O.C. PROVIDE ADDITIONAL VERTICAL REINFORCING AT WALL CORNERS, WALL ENDS, AND AROUND OPENINGS. ALL EXTERIOR CMU WALLS SHALL BE FULLY GROUT FILLED.
	=	ADDITIONAL GROUT FILLED AND REINFORCED CELL IN ADDITION TO TYPICAL REINFORCING. PROVIDE BAR SIZE TO MATCH WALL REINF.
S.C.J.	=	SAWN CONTRACTION JOINT OR CONSTRUCTION JOINT; CONTRACTOR'S OPTION U.N.O. SEE 2 / S500
-X'-X"	=	SLAB DEPRESSION; SEE ARCH FOR DEPRESSION EXTENTS AND DEPRESSION DEPTH BELOW REF. EL: 0'-0". SEE 2 / S500
4" SLAB	=	4" MINIMUM THICKNESS SLAB-ON-GRADE REINFORCED WITH WWF 6x6 W2.0xW2.0 WITH 2" CLR. POSITIVE SUPPORT FROM BOTTOM OF SLAB. SLAB SHALL BE PLACED OVER A VAPOR BARRIER AND CAPILLARY BREAK AS INDICATED IN THE GENERAL NOTES SECTION 2.08 ON SHEET S001.
	=	(2) #4x4'-0" RE-ENTRANT CRACK CONTROL REINF. W/1" CLR TO TOP OF SLAB
HD	=	SIMPSON HDU5-SDS2.5 HOLD DOWN LOCATION; ATTACH TO STUD PACK OR TIMBER COLUMN PER DETAILS.
TS2.0	=	2'-0" WIDE x 1'-0" DEEP THICKENED SLAB. SEE DETAIL 3 / S500
TC6x6	=	6"x6" NOMINAL TIMBER COLUMN
TC12x12	=	PRESSURE TREATED 12"x12" NOMINAL TIMBER COLUMN
RCP42	=	3'-6" x 3'-6" REINFORCED CONCRETE PIER; SEE SECTION 2 / S301
WF2.0	=	2'-0" WIDE x 1'-0" DEEP WALL FOOTING REINFORCED W/ (3) #5 L.W. AND #5 @ 12" O.C. S.W.
WF3.0	=	3'-0" WIDE x 1'-0" DEEP WALL FOOTING REINFORCED W/ (3) #5 L.W. AND #5 @ 12" O.C. S.W.

SLAB-ON-GRADE AND FOUNDATION PLAN

1 / S100 — 1/8" = 1'-0"

T.O.SLAB REF. ELEV: 0'-0" U.N.O.; REF. EL: 0'-0" = ELEV: SEE CIVIL

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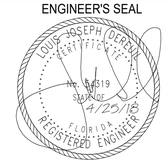
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ROOF FRAMING NOTES AND LEGEND

= 15/32" THICK APA SPAN RATED PLYWOOD OR OSB ROOF SHEATHING. ANCHOR TO TRUSSES PER GENERAL NOTES.

= 15/32" THICK APA SPAN RATED PLYWOOD SOFFIT. ANCHOR TO TRUSSES PER GENERAL NOTES. MATCH ROOF NAILING PATTERNS

TIMBER ROOF TRUSS MFR. NOTES:

1. PROVIDE TRUSSES AT 2'-0" O.C. MAX SPACING. DESIGN TRUSSES TO RESIST ALL LOADS AS DEFINED IN SECTION 1 OF THE GENERAL NOTES ON SHEET S-001.
2. PROVIDE 2x6 BLOCKING AT ALL RIDGE AND HIP LOCATIONS
3. DESIGN AND DETAIL ALL TEMPORARY AND PERMANENT TRUSS BRACING BLOCKING AND BRIDGING.
4. PROVIDE ALL TRUSS TO TRUSS CONNECTIONS AND THEIR REQUIRED CONNECTORS.
5. PROVIDE 2x6 MINIMUM TRUSS TOP CHORD.
6. TRUSS DESIGN AND SHOP DRAWINGS SHALL BE SIGNED AND SEALED BY A REGISTERED STRUCTURAL ENGINEER IN THE STATE OF FLORIDA.
7. ROOF TRUSSES TO BE FULLY VERIFIED TO MATCH EXISTING PROFILE.

113'-9"
12'-2" 51'-9" 26'-10" 20'-0" 3'-0"
NEW ROOF TRUSSES @ 2'-0" O.C. MAX
NEW ROOF TRUSSES @ 2'-0" O.C. MAX
2x6 OUTRIGGERS @ 2'-0" O.C. MAX SPACING
EXISTING TRUSSES AND ROOF DECK TO REMAIN
DRAFT STOP WALL; SEE ARCH.
SCISSOR TRUSSES @ 2'-0" O.C. MAX
3'-6" BEAM EXTENSION
PROVIDE 2x4 BLOCKING @ 2'-0" O.C. FOR DECK SUPPORT IN WIDENED TRUSS BAY
ATTIC SPACE ACCESS HATCH; COORD. LOCATION AND CLEAR SPACE REQUIRED WITH ARCH. AND MECH. DRAWINGS
ENGINEERED OVER-FRAMING BY TRUSS MANUFACTURER TO PROVIDE ROOF SHAPE AS SHOWN
GLU-LAM 3x12.375
2x6 OUTRIGGERS @ 2'-0" O.C. MAX SPACING
BALLOON FRAMED 2x6 WALL
BALLOON FRAMED LVL 1.75x5.5 WALL
GLU-LAM 10.5x16.5
2x6 OUTRIGGERS @ 2'-0" O.C. MAX SPACING
DROP TOP CHORD LOW FOR OUTRIGGER SUPPORT
PROVIDE 15/32" PLYWOOD SOFFITT ON UNDERSIDE OF SCISSOR TRUSSES AT PORTE COCHERE
PROVIDE ATTIC TRUSSES FOR HVAC ROOM; COOR. W/ MECHANICAL AND ARCHITECTURAL DRAWINGS
SCISSOR TRUSSES OVER LOBBY
GABLE END WALL TRUSS; DROP TOP CHORD LOW FOR OUTRIGGER SUPPORT
11'-0" #1 HIP
30'-9"
16'-0"
3'-4"
16'-8"
116'-10"
5" / 1' - 0"
RIDGE
HIP
Sim

ROOF FRAMING PLAN

1 S110 — 1/8" = 1'-0"

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PROJECT ISSUES:

SD - 1	09.29.2017
SD - 2	12.28.2017
ASD	03.16.2018
DD	04.06.2018
BLDG PERMIT SET	04.25.2018

PROJECT TEAM:

CIVIL:
REBOL BATTLE & ASSOCIATES

STRUCTURAL:
JOE DEREUIL ASSOCIATES

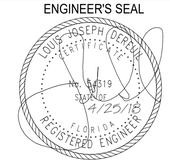
ARCHITECT:
CALDWELL ASSOCIATES ARCHITECTS

MEP / TELECOM:
W3 ENGINEERING

PROJECT:
LAKEVIEW CENTER/ COMMUNITY HEALTH NORTHWEST FLORIDA RENOVATION & ADDITION

6021 INDUSTRIAL BLVD #A CENTURY, FLORIDA 32535

ENGINEER'S SEAL



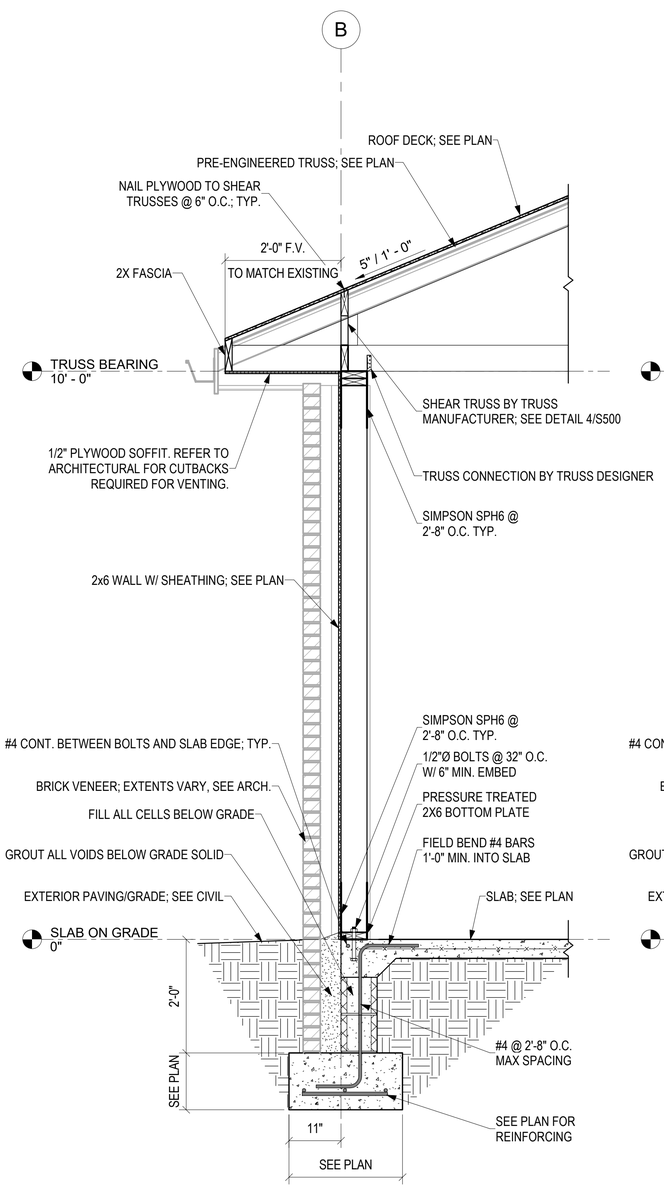
L. JOSEPH DEREUIL
NO. 54319

PROJECT NO. : 6617
SHEET TITLE:
ROOF FRAMING PLAN

SHEET NUMBER:
S110

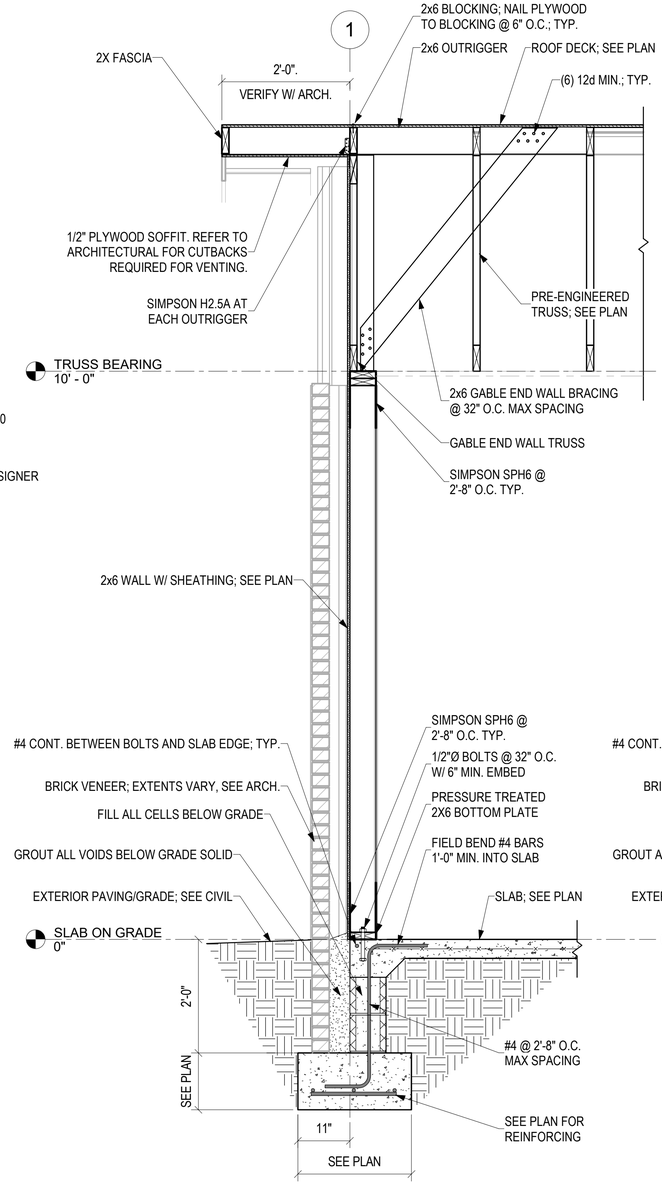
BUILDING PERMIT SET

JDA JOE DEREUIL ASSOCIATES, LLC
STRUCTURAL ENGINEERS
STATE OF FLORIDA
P.E. NO. 54319 / C.A. NO. 9515
301 West Cervantes St. Tel. 850.429.1951
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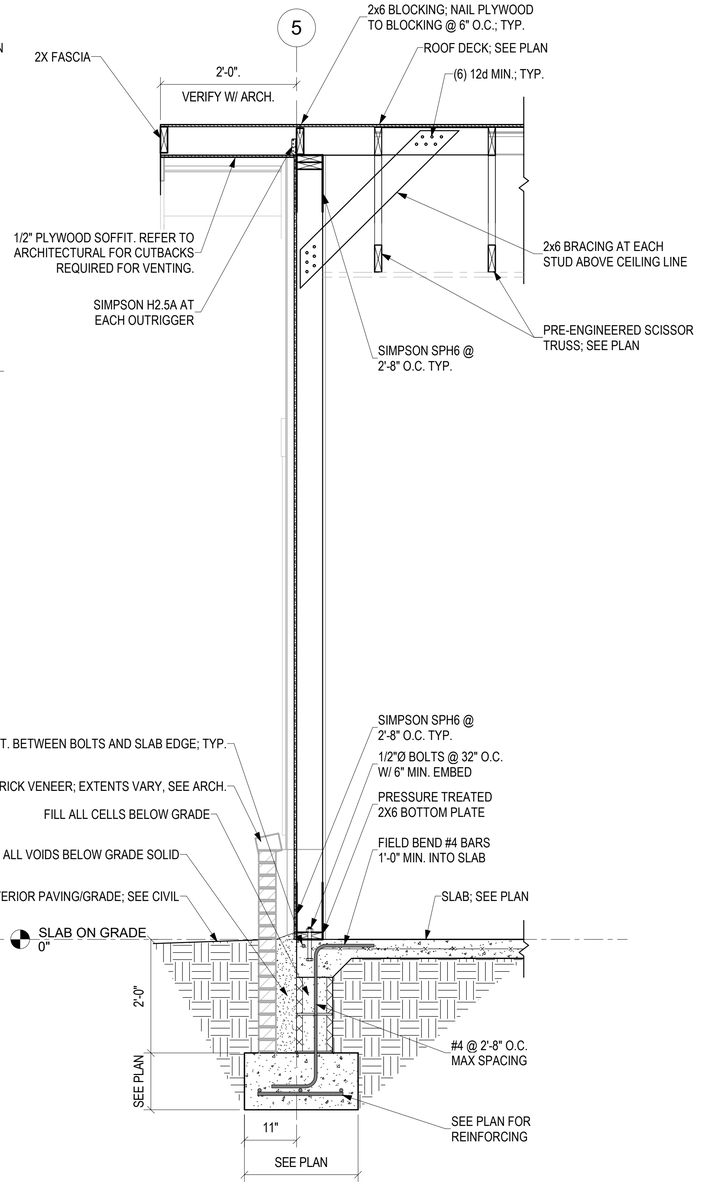
1 S300 TYPICAL WALL SECTION

3/4" = 1'-0"



2 S300 GABLE END WALL SECTION

3/4" = 1'-0"



3 S300 BALLOON FRAMED WALL SECTION

3/4" = 1'-0"

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STRUCTURAL:
JOE DEREUIL ASSOCIATES

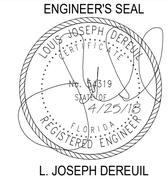
ARCHITECT:
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MEP / TELECOM:
W3 ENGINEERING

PROJECT:
LAKEVIEW CENTER/ COMMUNITY HEALTH NORTHWEST FLORIDA RENOVATION & ADDITION

6021 INDUSTRIAL BLVD #A CENTURY, FLORIDA 32535

ENGINEER'S SEAL



L. JOSEPH DEREUIL
NO. 54319

PROJECT NO. : 6617
SHEET TITLE:
SECTIONS AND DETAILS

JDA JOE DEREUIL ASSOCIATES, LLC
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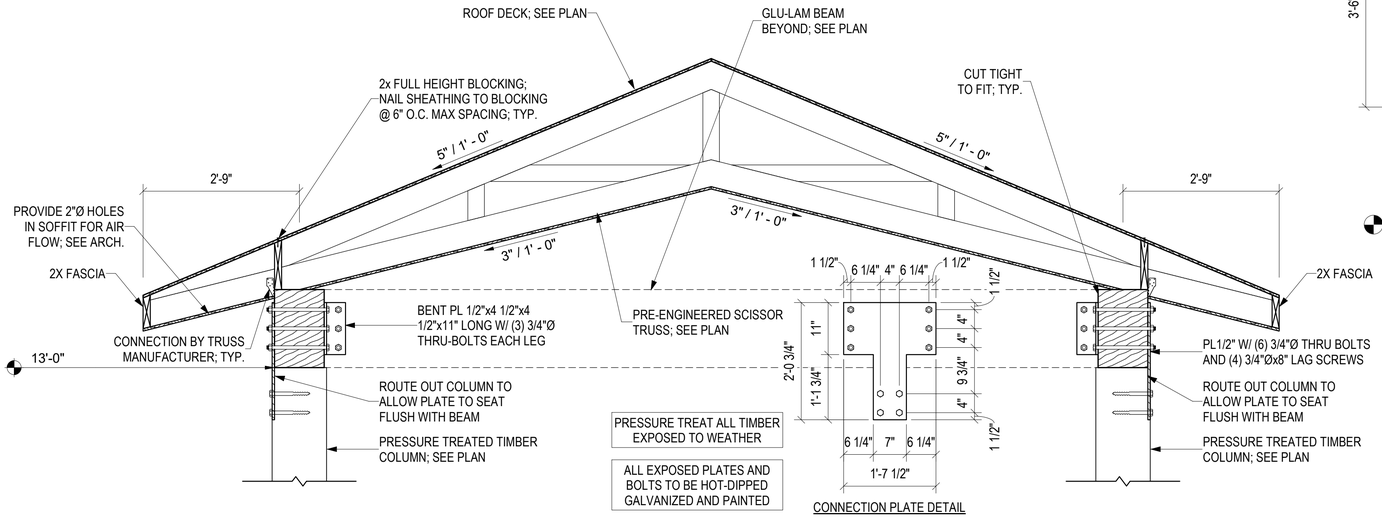
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BUILDING PERMIT SET

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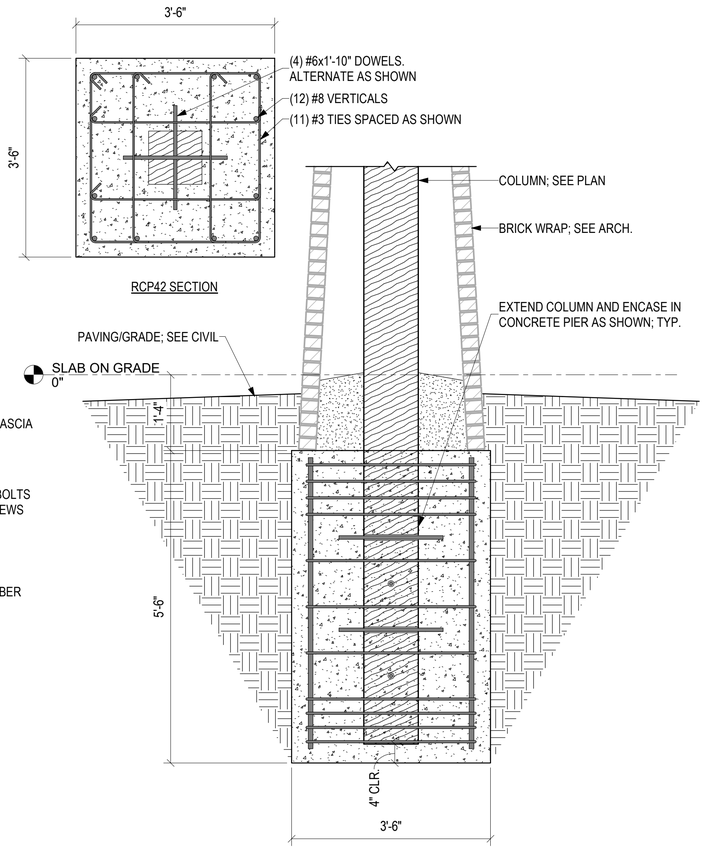
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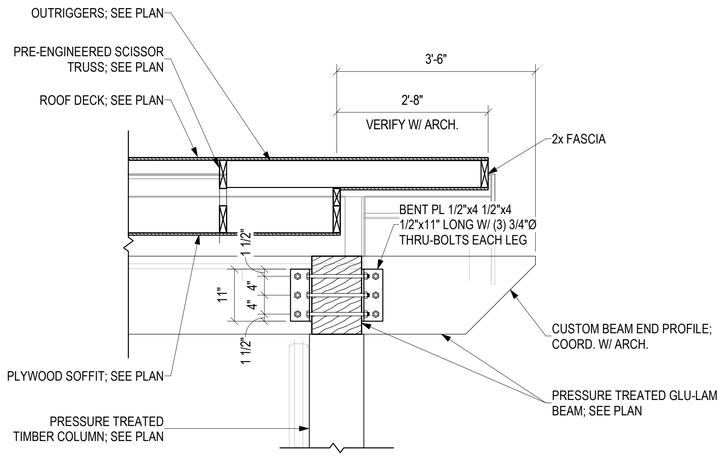
1 S301 — PORTE COCHERE SECTION

3/4" = 1'-0"



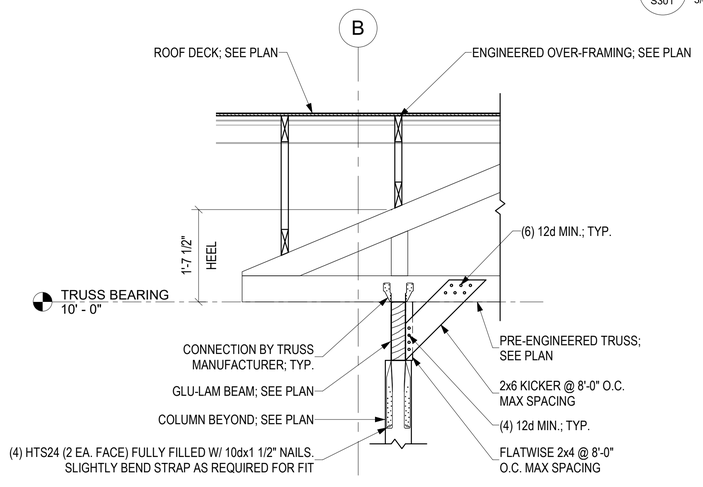
2 S301 — PORTE COCHERE COLUMN FOUNDATION

3/4" = 1'-0"



3 S301 — PORTE COCHERE BEAM END DETAIL

3/4" = 1'-0"



4 S301 — SECTION AT TRUSS SUPPORT BEAM

3/4" = 1'-0"

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STRUCTURAL:
JOE DEREUIL ASSOCIATES

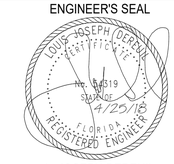
ARCHITECT:
CALDWELL ASSOCIATES ARCHITECTS

MEP / TELECOM:
W3 ENGINEERING

PROJECT:
LAKEVIEW CENTER/ COMMUNITY HEALTH NORTHWEST FLORIDA RENOVATION & ADDITION

6021 INDUSTRIAL BLVD #A CENTURY, FLORIDA 32535

ENGINEER'S SEAL



L. JOSEPH DEREUIL
NO. 54319

PROJECT NO. : 6617
SHEET TITLE:
SECTIONS AND DETAILS

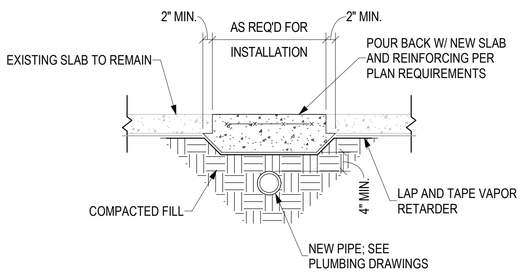
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S301

BUILDING PERMIT SET

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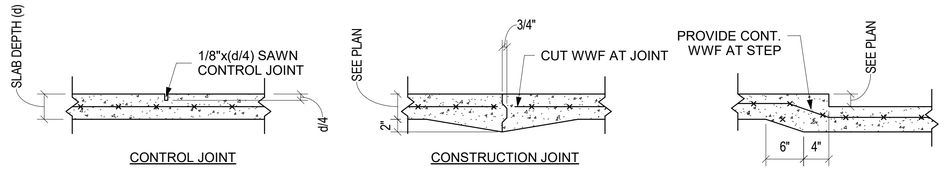
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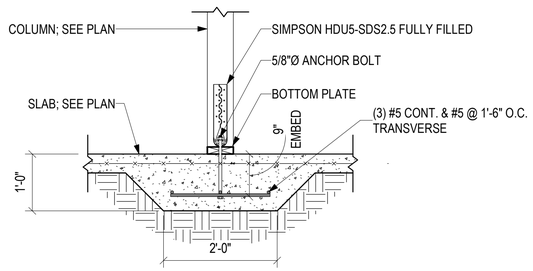
1 S500 PLUMBING TRENCH DETAIL

3/4" = 1'-0"



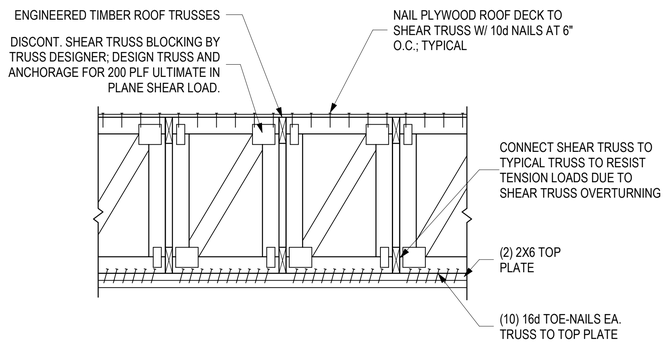
2 S500 TYPICAL SLAB-ON-GRADE DETAILS

1" = 1'-0"



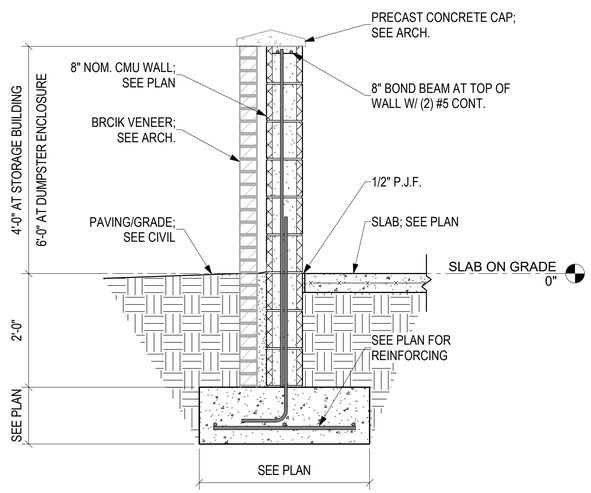
3 S500 TYPICAL THICKENED SLAB TS2.0 DETAIL

3/4" = 1'-0"



4 S500 SHEAR TRUSS BLOCKING DETAIL

3/4" = 1'-0"



5 S500 TYPICAL KNEE WALL SECTION

3/4" = 1'-0"

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STRUCTURAL:
JOE DEREUIL ASSOCIATES

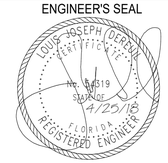
ARCHITECT:
CALDWELL ASSOCIATES ARCHITECTS

MEP / TELECOM:
W3 ENGINEERING

PROJECT:
LAKEVIEW CENTER/
COMMUNITY HEALTH
NORTHWEST FLORIDA
RENOVATION & ADDITION

6021 INDUSTRIAL BLVD
#A
CENTURY, FLORIDA 32535

ENGINEER'S SEAL



L. JOSEPH DEREUIL
NO. 54319

PROJECT NO. : 6617
SHEET TITLE:
TYPICAL DETAILS

JDA JOE DEREUIL ASSOCIATES, LLC
STRUCTURAL ENGINEERS
STATE OF FLORIDA
P.E. NO. 54319 / C.A. NO. 9515
301 West Cervantes St. Tel. 850.429.1951
Pensacola, FL 32501 Fax. 850.429.0158

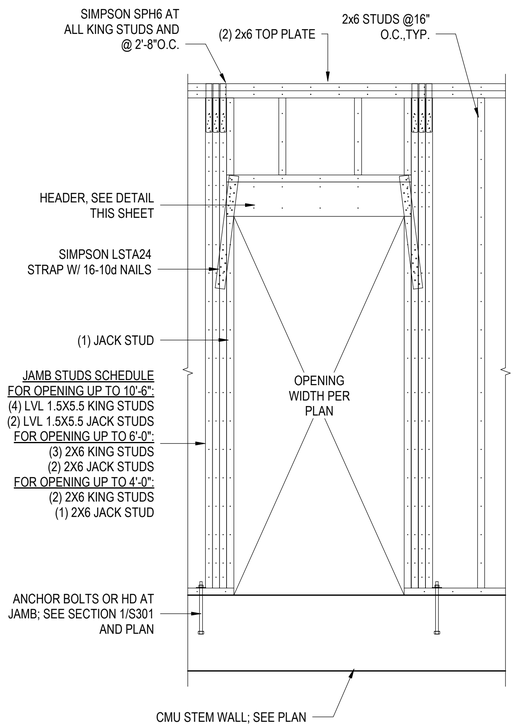
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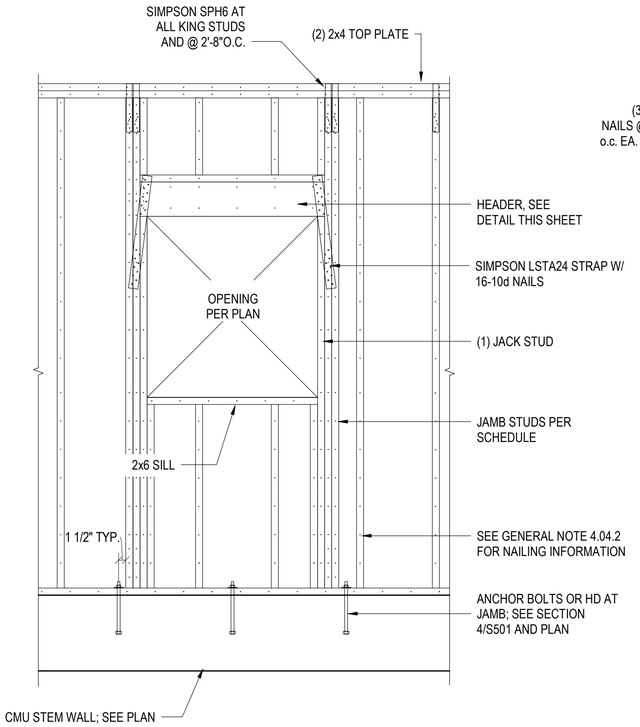
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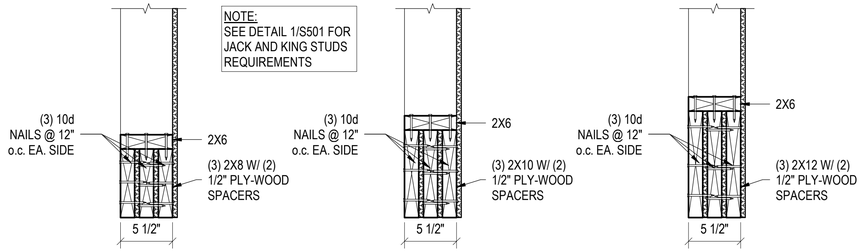




TYPICAL ELEVATION AT WALL OPENINGS

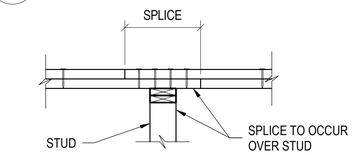
1 S501 TYPICAL WALL OPENING DETAILS

3/4" = 1'-0"

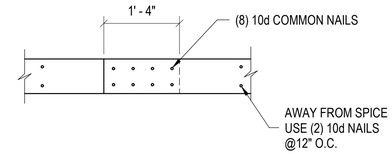


2 S501 TYPICAL HEADER DETAILS

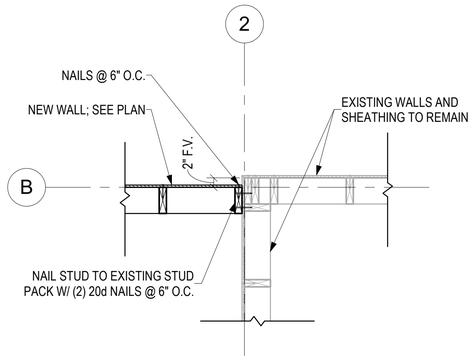
1 1/2" = 1'-0"



ELEVATION

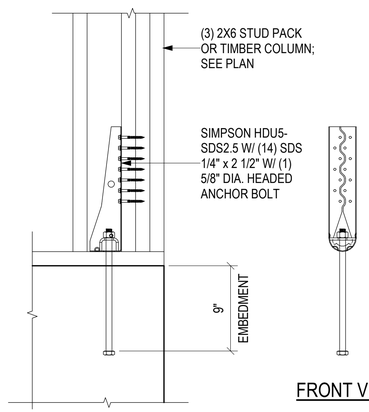


PLAN



5 S501 SHEAR WALL SPLICE DETAIL

3/4" = 1'-0"



FRONT VIEW

HOLD DOWN "HD" DETAIL

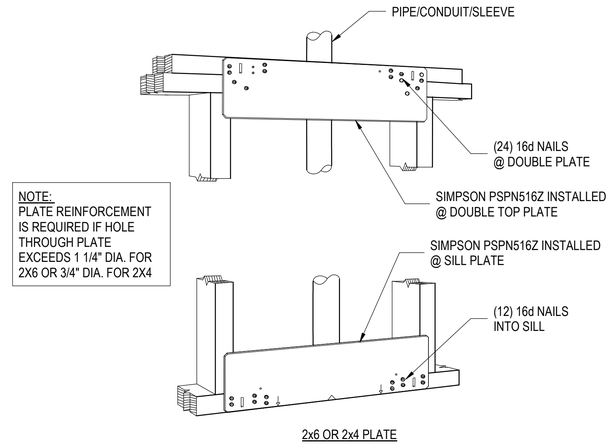
ANCHOR BOLT NOTES:
1) DO NOT WET-SET ANCHOR BOLTS. THEY SHALL INSTEAD BE TIED IN PLACE PRIOR TO THE CONCRETE POUR.
2) CAST-IN-PLACE ANCHORS MAY BE SUBSTITUTED WITH DRILLED AND EPOXY GROUTED SYSTEMS WITH PRIOR APPROVAL FROM THE ENGINEER.
3) "J" BOLTS SHALL NOT BE USED

4 S501 TYPICAL HOLDDOWN DETAIL

1 1/2" = 1'-0"

3 S501 TYPICAL DOUBLE PLATE SPLICE

3/4" = 1'-0"



NOTE:
PLATE REINFORCEMENT IS REQUIRED IF HOLE THROUGH PLATE EXCEEDS 1 1/4" DIA. FOR 2X6 OR 3/4" DIA. FOR 2X4

6 S501 TYPICAL 2X PLATE REINFORCEMENT

1/2" = 1'-0"

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REBOL BATTLE & ASSOCIATES

STRUCTURAL:
JOE DEREUIL ASSOCIATES

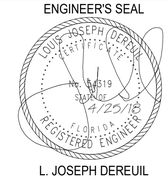
ARCHITECT:
CALDWELL ASSOCIATES ARCHITECTS

MEP / TELECOM:
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PROJECT:
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6021 INDUSTRIAL BLVD #A
CENTURY, FLORIDA 32535

ENGINEER'S SEAL



L. JOSEPH DEREUIL
NO. 54319

PROJECT NO. : 6617
SHEET TITLE:
TYPICAL DETAILS

SHEET NUMBER:
S501

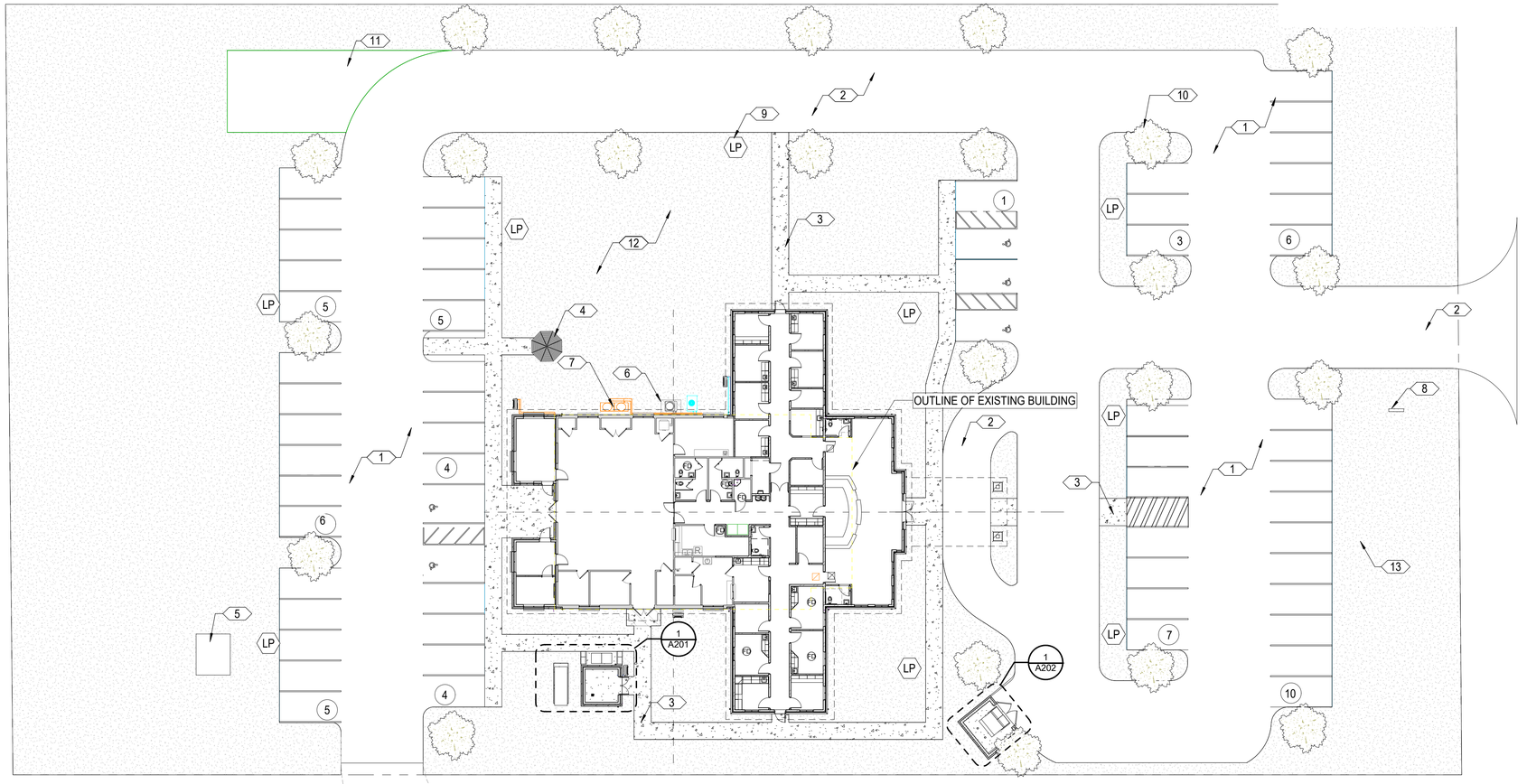
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PARKING COUNT:
56 REGULAR PARKING SPACES (40 REQUIRED)
5 HANDICAP PARKING SPACES (3 REQUIRED)
61 TOTAL PARKING SPACES



KEYNOTES

1 NEW ASPHALT PARKING; SEE CIVIL
2 NEW ASPHALT DRIVE; SEE CIVIL
3 CONCRETE PAVING, SEE CIVIL
4 RELOCATE EXISTING GAZEBO TO NEW LOCATION AS SHOWN
5 RELOCATE EXISTING SHED TO NEW LOCATION AS SHOWN
6 EXISTING MECHANICAL EQUIPMENT; SEE MECHANICAL FOR FURTHER INFORMATION
7 NEW HVAC UNIT, SEE MECHANICAL
8 EXISTING LAKEVIEW SIGN TO REMAIN; PROTECT DURING DEMOLITION & CONSTRUCTION
9 NEW LIGHT POLE; SEE ELECTRICAL
10 NEW PLANTINGS; SEE CIVIL
11 GRAVEL FOR FIRETRUCK TURN-AROUND; SEE CIVIL
12 NEW SOD; SEE CIVIL
13 TURF AND GRASSES

GENERAL NOTES

1. REFER TO CIVIL ENGINEERING DRAWINGS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.
2. REFER TO ELECTRICAL DRAWINGS FOR SITE LIGHTING AND ADDITIONAL INFORMATION.
3. DEVELOP PHASING PLAN FORE REVIEW AND APPROVAL TO ALLOW FOR THE FACILITY TO REMAIN OPERATIONAL DURING DEMOLITION AND CONSTRUCTION.
4. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO COMMENCEMENT OF ANY WORK. ANY DEVIATION FROM THE CONTRACT DOCUMENTS OR UNFORESEEN CONDITIONS SHALL BE REPORTED TO THE ARCHITECT AND OWNER WITHIN 24 HOURS OF THE EVENT. NO WORK SHALL COMMENCE WITHOUT AUTHORIZATION.
5. REFER TO DIVISION 1 OF THE PROJECT SPECIFICATIONS FOR ADDITIONAL DIRECTION AND REQUIREMENTS PRIOR TO COMMENCEMENT OF WORK.
6. CONTRACTOR TO PROVIDE IRRIGATION DESIGN FOR REVIEW & APPROVAL BY ARCHITECT. SEE CIVIL FOR ADDITIONAL INFORMATION & SEPARATE IRRIGATION METER

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ARCHITECT:
CALDWELL ASSOCIATES ARCHITECTS

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PROJECT:
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CENTURY, FLORIDA 32535

ARCHITECT'S SEAL
LIC. INTERIOR DESIGNER 3848 · HARRY MILLER CALDWELL, JR. · STATE OF FLORIDA · REGISTERED ARCHITECT 7462
H. MILLER CALDWELL, JR
AR 7462

PROJECT NO. : 6617
SHEET TITLE:
ARCHITECTURAL SITE PLAN

SHEET NUMBER:
A100

BUILDING PERMIT SET

1 ARCHITECTURAL SITE PLAN
A100 1" = 20'-0"

FOR INFORMATION ONLY

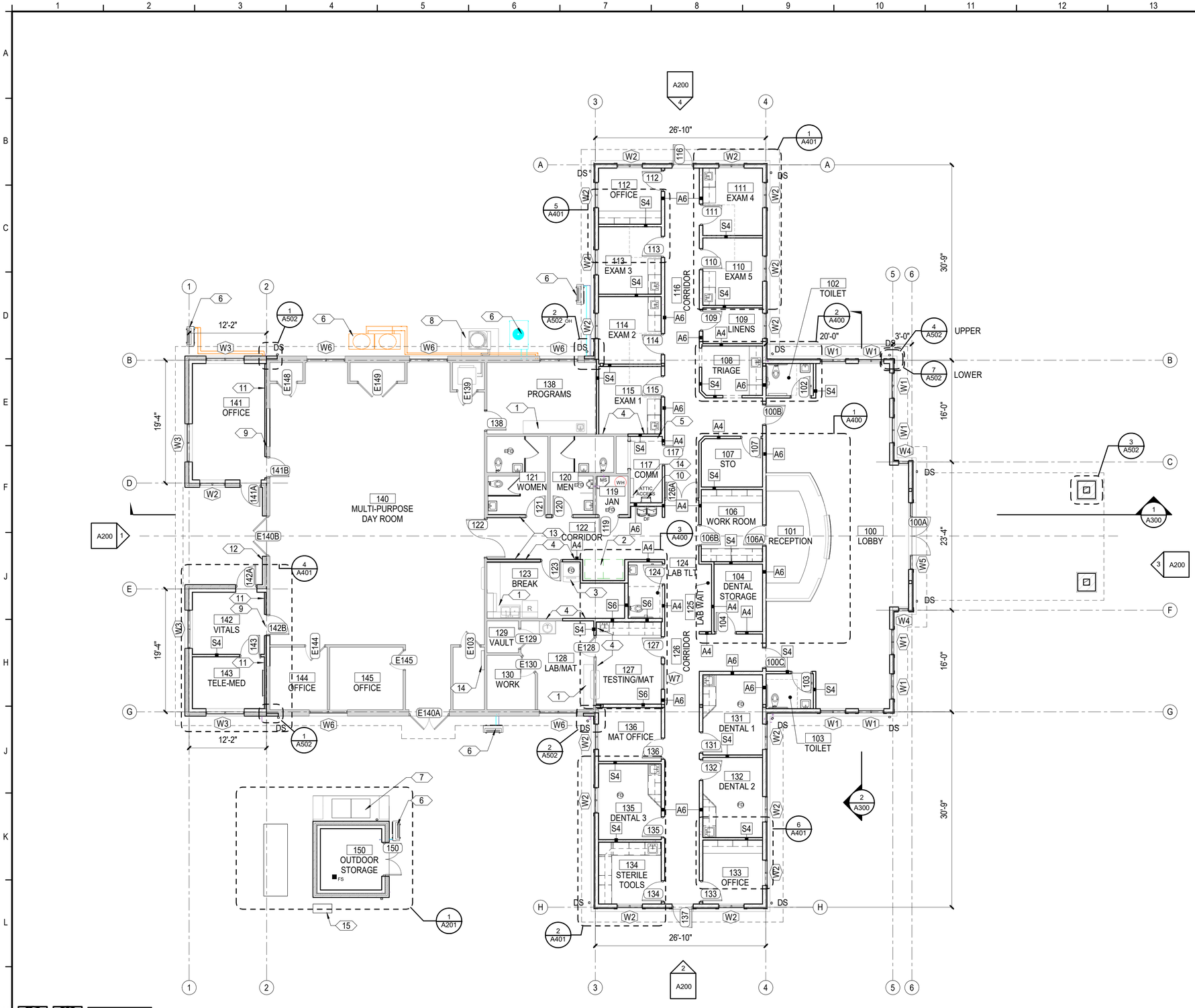
20' 10' 0' 20' 40'

TRUE NORTH PROJECT NORTH

PRINT DATE: 4/25/2018 9:38:23 AM

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DO NOT SCALE DRAWINGS



KEYNOTES

1. EXISTING CASEWORK TO REMAIN; PROTECT DURING DEMOLITION & CONSTRUCTION.
2. OFCI VENDING MACHINES; VERIFY DIMENSIONS OF VENDING MACHINES PRIOR TO CONSTRUCTION OF NEW WALLS.
3. RELOCATE EXISTING ICE MACHINE
4. ALIGN WITH FACE OF EXISTING WALL
5. NEW LOCATION OF ECC SERVER/DATA. SEE ELECTRICAL & TELECOMMUNICATIONS FOR ADDITIONAL INFORMATION
6. NEW HVAC UNIT, SEE MECHANICAL
7. 3'-0" X 3'-0" BIOMEDICAL WASTE LOCKABLE GALVANIZED METAL BOX; SECURE TO CONCRETE PAD. OFCI
8. EXISTING HVAC UNIT TO REMAIN, PROTECT DURING DEMOLITION & CONSTRUCTION. SEE MECHANICAL
9. 5/8" GYPSUM BOARD; SECURE TO EXISTING SHEATHING
10. OSHA COMPLIANT VERTICAL METAL LADDER, INSTALLED TO PROVIDE ALL OSHA-REQUIRED CLEARANCES. PROVIDE SOLID WOOD BLOCKING IN WALL CONSTRUCTION TO SECURE LADDER ADEQUATELY
11. 5/8" GYPSUM BOARD ON 2X4 WOO FRAMING @ 16" O.C.
12. 4" NOMINAL BRICK VENEER; SEE FINISH INDEX FOR COLOR SELECTION
13. 5/8" FIRE RATED GYPSUM BOARD ON BOTH SIDE OF EXISTING STUD ASSEMBLY, EXTEND TO UNDERSIDE OF HORIZONTAL GYPSUM SMOKE DRAFT
14. ELECTRICAL PANEL; SEE ELECTRICAL DRAWINGS
15. GAS METER; SEE ELECTRICAL & MECHANICAL

LEGEND

	EXISTING WALLS; PROTECT DURING DEMOLITION AND CONSTRUCTION.
	NEW WOOD STUD WALLS; SEE PLAN & DETAILS FOR MORE INFORMATION
DF	DRINKING FOUNTAIN; SEE PLUMBING
WH	WATER HEATER; SEE PLUMBING
MS	MOP SINK; SEE PLUMBING
FD	FLOOR DRAIN; SEE PLUMBING
EFD	EXISTING FLOOR DRAIN; SEE PLUMBING
FS	FLOOR SINK; SEE PLUMBING
DS	DOWNSPOUT, SEE ROOF PLAN AND CIVIL DRAWINGS

GENERAL NOTES

1. REFER TO INTERIORS SHEETS AND ENLARGED PLANS FOR MEDICAL EQUIPMENT AND FURNITURE LAY-OUT.
2. REFER TO OTHER DISCIPLINES FOR ADDITIONAL INFORMATION AND REQUIREMENTS.
3. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS PRIOR TO COMMENCING WORK. INFORM ARCHITECT AND OWNER'S REPRESENTATIVE OF ANY DEVIATIONS.
4. CONTRACTOR SHALL COORDINATE WITH ALL TRADES BEFORE COMMENCING WORK.
5. REFER TO DETAILS FOR ADDITIONAL INFORMATION ON WALL TYPES
6. SEE LIFE SAFETY PLANS FOR FIRE EXTINGUISHER LOCATIONS.
7. REFER TO A102 & ENLARGED PLANS FOR ADDITIONAL DIMENSIONS.

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116 N TARRAGONA STREET, PENSACOLA, FL 32502
(850) 432 9500 | CALDWELL-ASSOC.COM
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PROJECT ISSUES:

SD - 1	09.29.2017
SD - 2	12.28.2017
ASD	03.16.2018
DD	04.06.2018
BLDG PERMIT SET	04.25.2018

PROJECT TEAM:

CIVIL:
REBOL BATTLE & ASSOCIATES

STRUCTURAL:
JOE DEREUIL ASSOCIATES

ARCHITECT:
CALDWELL ASSOCIATES ARCHITECTS

MEP / TELECOM:
W3 ENGINEERING

PROJECT:
LAKEVIEW CENTER/ COMMUNITY HEALTH NORTHWEST FLORIDA RENOVATION & ADDITION

6021 INDUSTRIAL BLVD #A
CENTURY, FLORIDA 32535

ARCHITECT'S SEAL
LIC. INTERIOR DESIGNER 3848 HARRY MILLER CALDWELL, JR. STATE OF FLORIDA REGISTERED ARCHITECT 7462
H. MILLER CALDWELL, JR
AR 7462

PROJECT NO. : 6617
SHEET TITLE:
FLOOR PLAN - NOTES

SHEET NUMBER:
A101

BUILDING PERMIT SET

TRUE NORTH | PROJECT NORTH

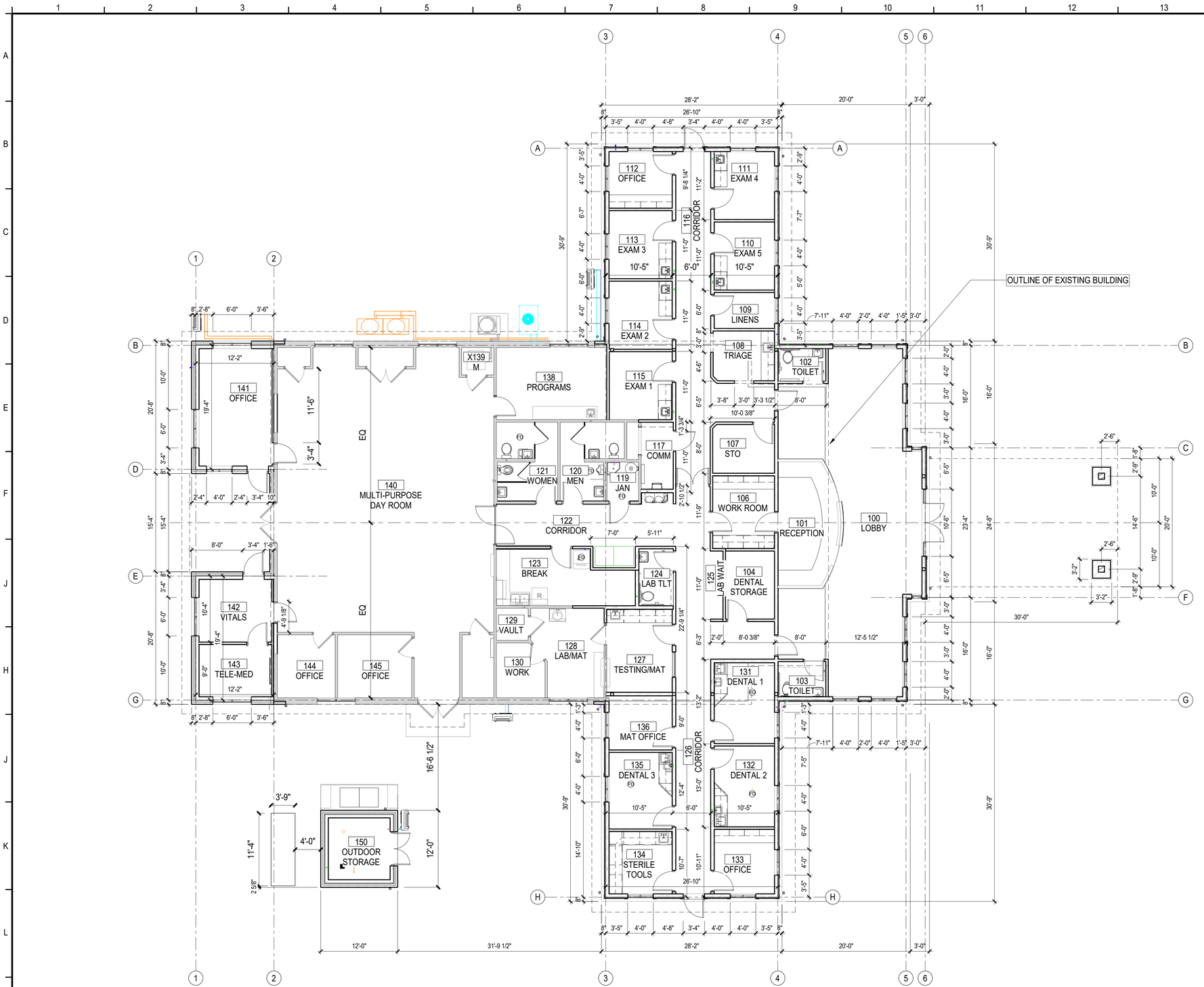
1 FLOOR PLAN - NOTES
A101 1/8" = 1'-0"

8' 4' 0' 8' 16'

DO NOT SCALE DRAWINGS

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KEYNOTES

GENERAL NOTES

1. REFER TO INTERIORS SHEETS AND ENLARGED PLANS FOR MEDICAL EQUIPMENT AND FURNITURE LAY-OUT.
2. REFER TO OTHER DISCIPLINES FOR ADDITIONAL INFORMATION AND REQUIREMENTS.
3. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS PRIOR TO COMMENCING WORK. INFORM ARCHITECT AND OWNER'S REPRESENTATIVE OF ANY DEVIATIONS.
4. CONTRACTOR SHALL COORDINATE WITH ALL TRADES BEFORE COMMENCING WORK.
5. REFER TO DETAILS FOR ADDITIONAL INFORMATION ON WALL TYPES
6. SEE LIFE SAFETY PLANS FOR FIRE EXTINGUISHER LOCATIONS.
7. REFER TO A102 & ENLARGED PLANS FOR ADDITIONAL DIMENSIONS.

TRUE NORTH | PROJECT NORTH

1 A102 — FLOOR PLAN - DIMENSION

1/8" = 1'-0"

8' 4' 0' 8' 16'

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STRUCTURAL:
JOE DEREUIL ASSOCIATES

ARCHITECT:
CALDWELL ASSOCIATES ARCHITECTS

MEP / TELECOM:
W3 ENGINEERING

PROJECT:
LAKEVIEW CENTER/ COMMUNITY HEALTH NORTHWEST FLORIDA RENOVATION & ADDITION

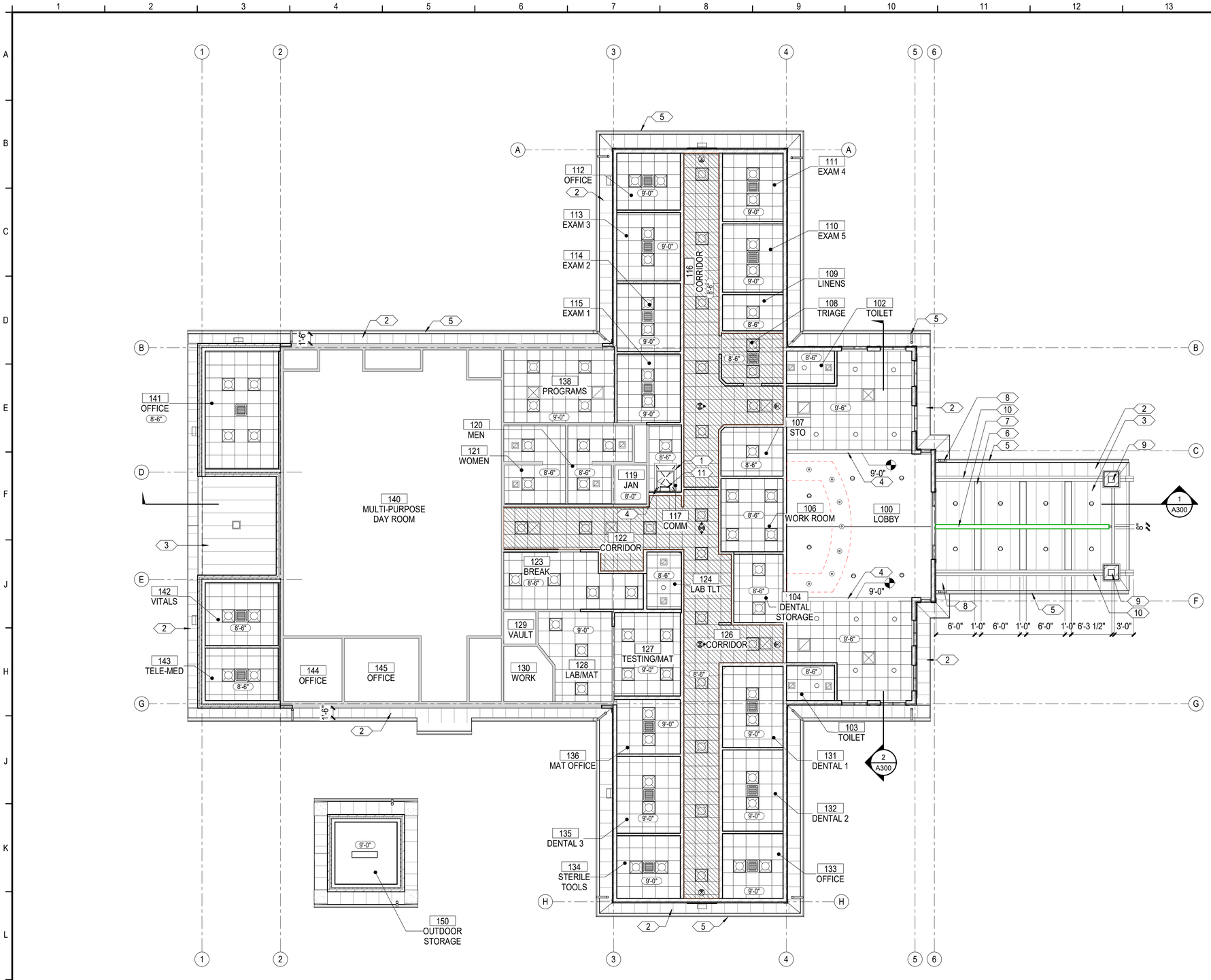
6021 INDUSTRIAL BLVD #A
CENTURY, FLORIDA 32535

ARCHITECT'S SEAL
LIC. INTERIOR DESIGNER 3848 HARRY MILLER CALDWELL JR REGISTERED ARCHITECT STATE OF FLORIDA
H. MILLER CALDWELL, JR
AR 7462

PROJECT NO. : 6617
SHEET TITLE:
FLOOR PLAN - DIMENSION

SHEET NUMBER:
A102

BUILDING PERMIT SET



KEYNOTES

1. 2'-6" WIDE BY 4'-0" LONG FIRE-RATED ATTIC ACCESS HATCH. INSTALL PER MANUFACTURER'S WRITTEN REQUIREMENTS TO MAINTAIN FIRE RATING.
2. VENTED FIBER CEMENT SOFFIT
3. FIBER CEMENT BOARD AND BATTEN SOFFIT SYSTEM
4. 5/8" GYPSUM BOARD SOFFIT
5. PREFINISHED ALUMINUM GUTTER AND DOWNSPOUTS
6. 12" WIDE X 4" DEEP DECORATIVE WOOD BEAM CASING CONSTRUCTED OF 1X WOOD TRIM OVER 2X WOOD FRAMING, STAIN FINISH
7. 8" WIDE X 6" DEEP DECORATIVE WOOD BEAM CASING CONSTRUCTED OF 1X WOOD TRIM OVER 2X WOOD FRAMING, STAIN FINISH
8. PREFINISHED ALUMINUM DOWNSPOUT, RUN ALONG BACKSIDE OF STRUCTURAL COLUMN, INSIDE BRICK PEDESTAL. SEE CIVIL FOR CONNECTION
9. 12 X 12 HEAVY TIMBER COLUMN; SEE STRUCTURAL
10. DOUBLE GLULAM BEAM WITH TAPERED EDGE; SEE STRUCTURAL & EXTERIOR ELEVATIONS
11. OSHA COMPLIANT VERTICAL METAL LADDER, INSTALLED TO PROVIDE ALL OSHA-REQUIRED CLEARANCES. PROVIDE SOLID WOOD BLOCKING IN WALL CONSTRUCTION TO SECURE LADDER ADEQUATELY

LEGEND

- SUSPENDED GYPSUM BOARD CEILING SYSTEM; SEE FINISH SCHEDULE
- 2 x 2 SUSPENDED ACOUSTICAL CEILING TILE & GRID; SEE FINISH SCHEDULE
- LIGHT FIXTURES; SEE ELECTRICAL
- RETURN AND SUPPLY GRILLS; SEE MECHANICAL
- CEILING MOUNT HVAC UNIT; SEE MECHANICAL
- 1-HR RATED ASSEMBLY (UL#469)

GENERAL NOTES

1. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS PRIOR TO COMMENCING WORK. INFORM ARCHITECT AND OWNER'S REPRESENTATIVE OF ANY DEVIATIONS.
2. CONTRACTOR SHALL COORDINATE WITH ALL TRADES BEFORE COMMENCING WORK.
3. PROVIDE MOISTURE-RESISTANT ACT IN TOLIETS
4. CONTRACTOR SHALL COORDINATE WITH MECHANICAL, ELECTRICAL, & FIRE ALARM DRAWINGS PRIOR TO INSTALLING ANY DEVICE ON CEILINGS OR WALLS.
5. CONTRACTOR SHALL COORDINATE WITH ALL TRADES PRIOR TO INSTALLING ANY CEILING MOUNTED DEVICE.
6. SEE ROOM FINISH SCHEDULE AND INDEX FOR ADDITIONAL INFORMATION.
7. THE CONTRACTOR SHALL CAREFULLY STUDY AND COMPARE THE RCP's WITH ALL OTHER DISCIPLINES DRAWINGS AND IMMEDIATELY NOTIFY THE ARCHITECT IN WRITING OF ANY DISCREPENCIES OR OMISSIONS THAT ARE DISCOVERED.
8. CONTRACTOR SHALL COORDINATE WITH OWNER'S CONTRACTOR, SECURITY ENGINEERING, FOR ALL CEILING AND/OR WALL MOUNTED DEVICES, INCLUDING BUT NOT LIMITED TO: ACESS CONTROL, FIRE ALARM, SECURITY CAMERAS, AND BURGLARY ALARMS.

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STRUCTURAL:
JOE DEREUIL ASSOCIATES

ARCHITECT:
CALDWELL ASSOCIATES ARCHITECTS

MEP / TELECOM:
W3 ENGINEERING

PROJECT:
LAKEVIEW CENTER/ COMMUNITY HEALTH NORTHWEST FLORIDA RENOVATION & ADDITION

6021 INDUSTRIAL BLVD #A
CENTURY, FLORIDA 32535

ARCHITECT'S SEAL
HARRY MILLER CALDWELL, JR. LIC. INTERIOR DESIGNER #848 STATE OF FLORIDA REGISTERED ARCHITECT #462
H. MILLER CALDWELL, JR
AR 7462

PROJECT NO. : 6617
SHEET TITLE:
REFLECTED CEILING PLAN

SHEET NUMBER:
A103

BUILDING PERMIT SET

1 REFLECTED CEILING PLAN
A200 | A103
1/8" = 1'-0"

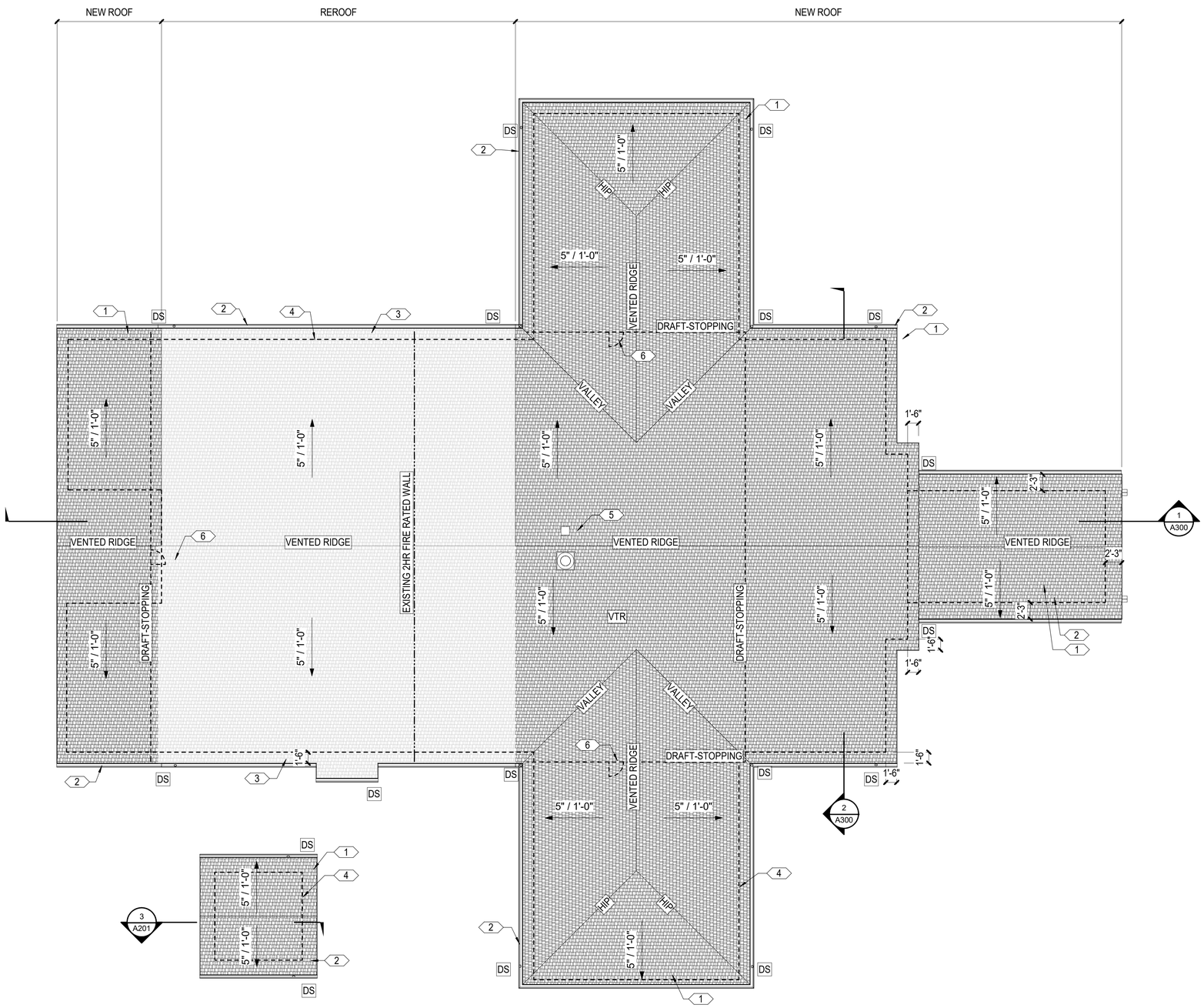
TRUE NORTH | PROJECT NORTH

8' 4' 0' 8' 16'

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KEYNOTES

1. 3-DIMENSIONAL ASPHALT SHINGLES, SEE FINISH INDEX FOR COLOR
2. PREFINISHED ALUMINUM GUTTER AND DOWNSPOUT
3. 3-DIMENSIONAL ASPHALT SHINGLES ON EXISTING ROOF DECK, SEE FINISH INDEX FOR COLOR SELECTION
4. DASHED LINE DENOTES EDGE OF EXTERIOR WALL BELOW
5. INTAKE FAN, SEE MECHANICAL
6. 30" X 48" ATTIC ACCESS HATCH IN DRAFT-STOPPING

LEGEND

- 3-DIMENSIONAL SHINGLES ON NEW ROOF AREA, SEE FINISH SCHEDULE
- NEW 3-DIMENSIONAL SHINGLES ON EXISTING ROOF DECK, SEE FINISH SCHEDULE
- DS — PREFINISHED ALUM DOWNSPOUT, CONNECT TO STORM WATER, SEE CIVIL
- VTR — VENT THRU ROOF, SEE PLUMBING

GENERAL NOTES

1. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS PRIOR TO COMMENCING WORK. INFORM ARCHITECT AND OWNER'S REPRESENTATIVE OF ANY DEVIATIONS.
2. CONTRACTOR SHALL COORDINATE WITH ALL TRADES BEFORE COMMENCING WORK.
3. PROVIDE 24" X 30" ACCESS PANELS AT EACH DRAFTSTOPPING ASSEMBLY.
4. CONTRACTOR SHALL REPLACE OR REPAIR ANY WOOD ROT ON EXISTING REROOF AREA. REMOVE AND REPLACE EXISTING WOOD FASCIA TRIM WITH FIBER CEMENT FASCIA TRIM TO MATCH NEW CONSTRUCTION.
5. REFER TO STRUCTURAL DRAWINGS FOR ADDITIONAL INFORMATION AND WIND LOAD DIAGRAMS.
6. PROVIDE GUTTER EXPANSION JOINTS PER MANUFACTURER'S RECOMMENDATIONS.
7. REFER TO STRUCTURAL DRAWINGS FOR ROOF TRUSS DEMOLITION.

1 ROOF PLAN

A200 | A104

1/8" = 1'-0"

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8' 4' 0' 8' 16'

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STRUCTURAL:
JOE DEREUIL ASSOCIATES

ARCHITECT:
CALDWELL ASSOCIATES ARCHITECTS

MEP / TELECOM:
W3 ENGINEERING

PROJECT:
LAKEVIEW CENTER/ COMMUNITY HEALTH NORTHWEST FLORIDA RENOVATION & ADDITION

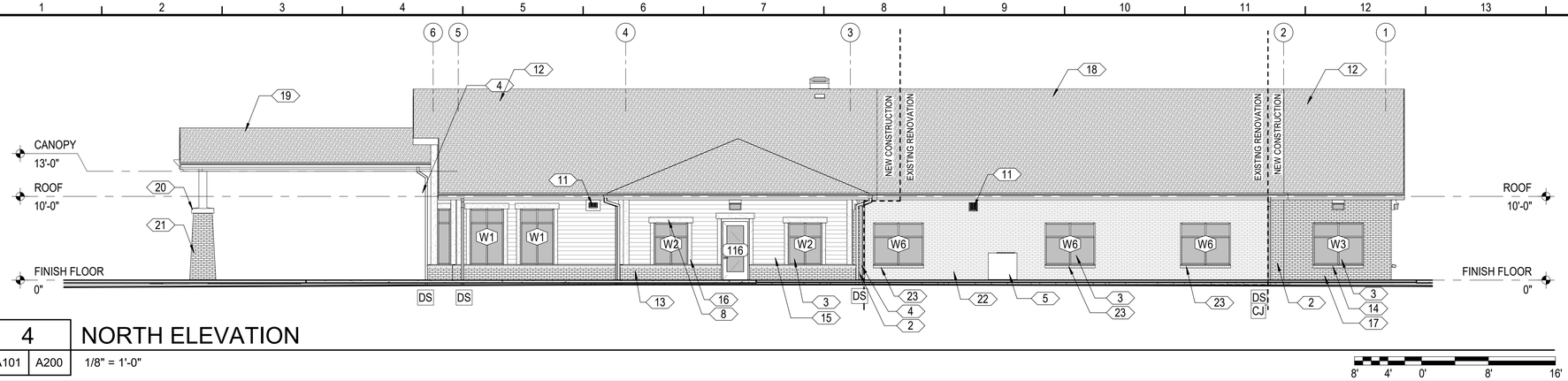
6021 INDUSTRIAL BLVD #A
CENTURY, FLORIDA 32535

ARCHITECT'S SEAL
LIC. INTERIOR DESIGNER #3848 HARRY MILLER CALDWELL, JR. REGISTERED ARCHITECT #7462 STATE OF FLORIDA
H. MILLER CALDWELL, JR
AR 7462

PROJECT NO. : 6617
SHEET TITLE:
ROOF PLAN

SHEET NUMBER:
A104

BUILDING PERMIT SET

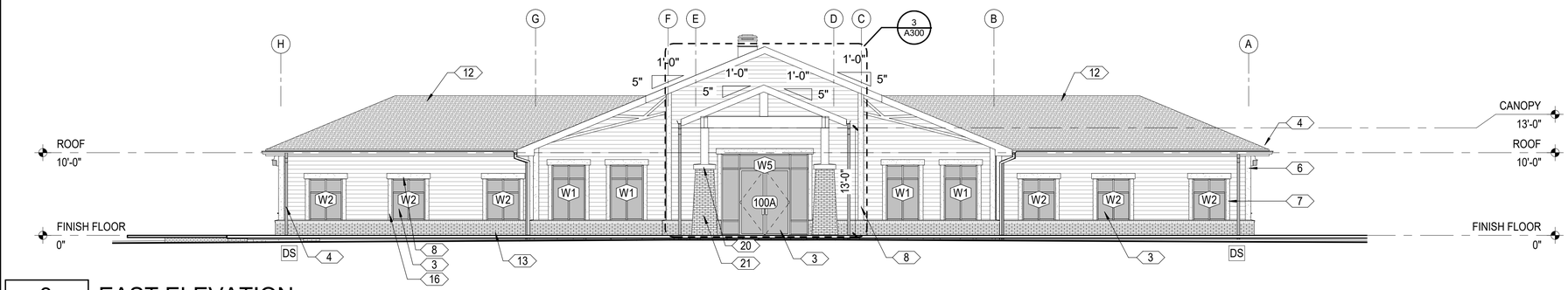


4 NORTH ELEVATION

A101 | A200

1/8" = 1'-0"

8' 4' 0' 8' 16'

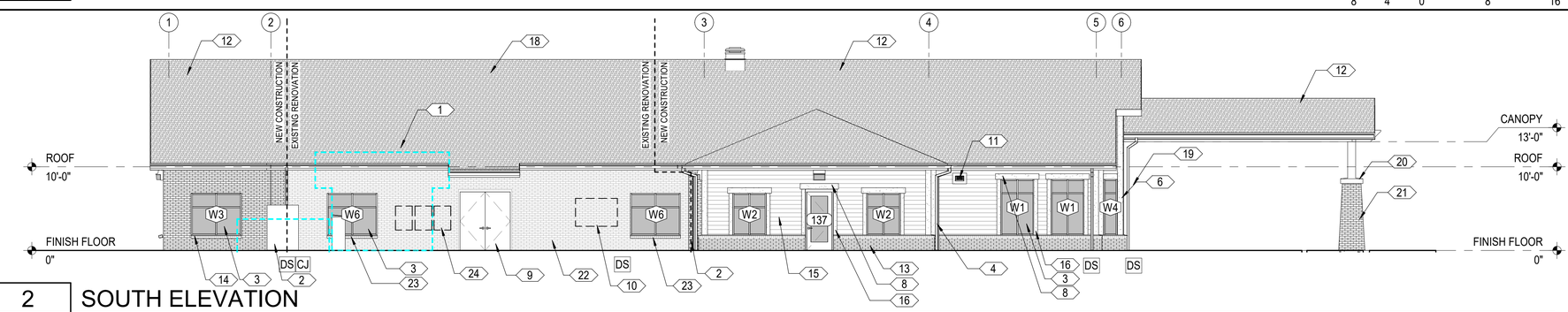


3 EAST ELEVATION

A101 | A200

1/8" = 1'-0"

8' 4' 0' 8' 16'

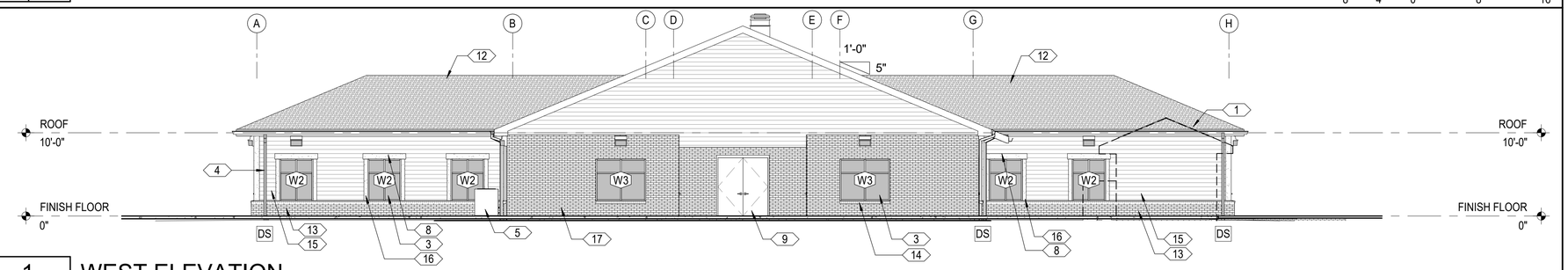


2 SOUTH ELEVATION

A101 | A200

1/8" = 1'-0"

8' 4' 0' 8' 16'



1 WEST ELEVATION

A101 | A200

1/8" = 1'-0"

8' 4' 0' 8' 16'

KEYNOTES

1. OUTLINE OF STORAGE BUILDING REMOVED FOR CLARITY; SEE A201
2. INSTALL BRICK VENEER WHERE REMOVED TO EXTEND AIR BARRIER AT EXISTING SHEATHING. PROVIDE CLEAN VERTICAL JOINT AS SHOWN ON DETAILS
3. PREFINISHED ALUMINUM STOREFRONT SYSTEM WITH IMPACT RESISTANT GLAZING; SEE FINISH SCHEDULE
4. PREFINISHED ALUMINUM GUTTER AND DOWNSPOUT
5. NEW HVAC UNIT, SEE MECHANICAL
6. 1X8 FIBER CEMENT TRIM
7. 1X6 FIBER CEMENT TRIM
8. 1 X 8 FINISH TRIM; SEE DETAILS
9. EXISTING DOOR TO REMAIN, PREP AND PAINT, SEE FINISH SCHEDULE
10. EXISTING WALL MOUNTED CONDENSING UNIT TO REMAIN, SEE MECHANICAL
11. PREFINISHED METAL LOUVER, SEE MECHANICAL
12. 3-DIMENSIONAL ASPHALT SHINGLES, SEE FINISH INDEX FOR COLOR
13. 4" NOMINAL BRICK VENEER WAINSCOT 1'-10" AFF WITH ROWLOCK TRANSITION SILL; SEE DETAILS & FINISH INDEX FOR COLOR SELECTION
14. 4" NOMINAL ROWLOCK BRICK TRANSITION SILL
15. HORIZONTAL FIBER CEMENT SIDING WITH 6-1/2" EXPOSURE; SEE FINISH INDEX FOR COLOR SELECTION
16. 1 X 6 FINISH TRIM; SEE DETAILS
17. 4" NOMINAL BRICK VENEER; SEE FINISH INDEX FOR COLOR SELECTION
18. 3-DIMENSIONAL ASPHALT SHINGLES ON EXISTING ROOF DECK, SEE FINISH INDEX FOR COLOR SELECTION
19. PREFINISHED ALUMINUM DOWNSPOUT, RUN ALONG BACKSIDE OF STRUCTURAL COLUMN, INSIDE BRICK PEDESTAL. SEE CIVIL FOR CONNECTION
20. PRECAST CONCRETE CAP WITH 2" OVERHANG ON SIDES; PAINTED
21. TAPERED BRICK PEDESTAL
22. EXISTING BRICK VENEER TO REMAIN
23. EXISTING ROWLOCK BRICK SILL TO REMAIN; PROTECT DURING DEMOLITION & CONSTRUCTION
24. SEE ELECTRICAL

LEGEND

DS	PREFINISHED ALUM DOWNSPOUT, CONNECT TO STORM WATER, SEE CIVIL
CJ	CONTROL JOINTS AT BRICK, COLOR TO MATCH MORTAR

GENERAL NOTES

1. CONTRACTOR TO FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO COMMENCING WORK.
2. GENERAL CONTRACTOR SHALL PERFORM PREINSTALLATION MEETINGS PRIOR TO EACH TRADE INSTALLARIO OF EXTERIOR COMPONENTS. INFORM ARCHITECT 10 DAY NOTICE.
3. ALL EXTERIOR COMPONENTS TO MEET FLORIDA BUILDING CODE, SUBMIT FLORIDA BUILDING APPROVED PRODUCT WITH ALL SUBMITTALS FOR FINAL REVIEW BY THE ARCHITECT.
4. NEW BRICK TO MATCH EXISTING BRICK AND MORTAR. SUBMIT SAMPLES FOR FINAL APPROVAL.
5. PRIOR TO COMMENCING INSTALLATION OF FIBER CEMENT SIDING A MOCK WALL AREA MUST BE PRESENTED TO THE ARCHITECT FOR FINAL APPROVAL. USE TESTED AND APPROVED FLORIDA BUILDING CODE FASTENERS FOR ALL EXTERIOR CLADDING. PROVIDE FLORIDA INSTALLATION INSTRUCTION WITH SUBMITTAL AND HAVE ON-SITE FOR REFERENCE.
6. EXPOSED FASTENERS SHALL NOT BE PERMITTED FOR FINAL INSPECTIONS ON FIBER CEMENT BOARDS.
7. INSTALL BRICK VENEER CONTROL JOINTS AT ALL INSIDE CORNERS WHERE REQUIRED.

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STRUCTURAL:
JOE DEREUIL ASSOCIATES

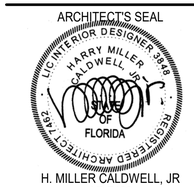
ARCHITECT:
CALDWELL ASSOCIATES ARCHITECTS

MEP / TELECOM:
W3 ENGINEERING

PROJECT:
LAKEVIEW CENTER/ COMMUNITY HEALTH NORTHWEST FLORIDA RENOVATION & ADDITION

6021 INDUSTRIAL BLVD #A
CENTURY, FLORIDA 32535

ARCHITECT'S SEAL



H. MILLER CALDWELL, JR
AR 7462

PROJECT NO. : 6617
SHEET TITLE:
EXTERIOR ELEVATIONS

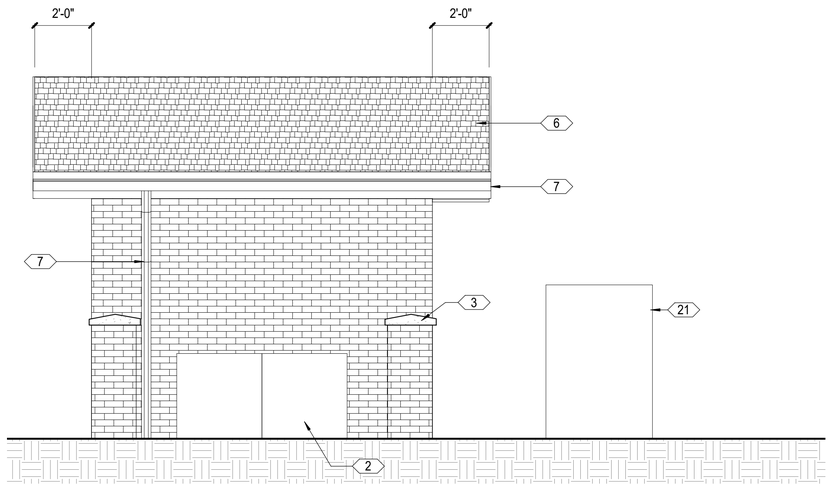
SHEET NUMBER:
A200

BUILDING PERMIT SET

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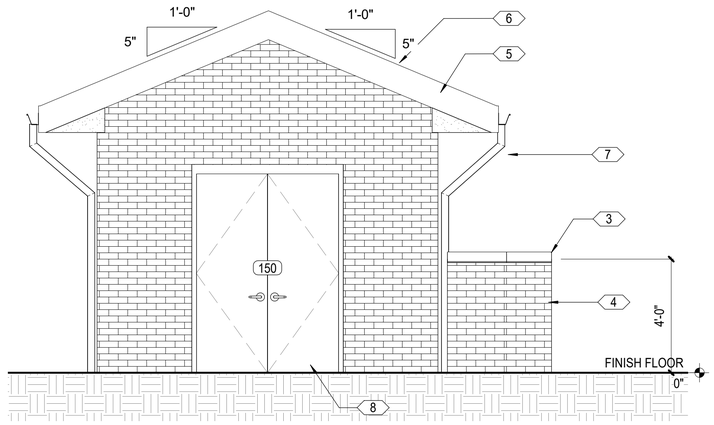
DO NOT SCALE DRAWINGS



4 SIDE ELEVATION

A201 | 3/8" = 1'-0"

2' 1' 0' 2' 4'



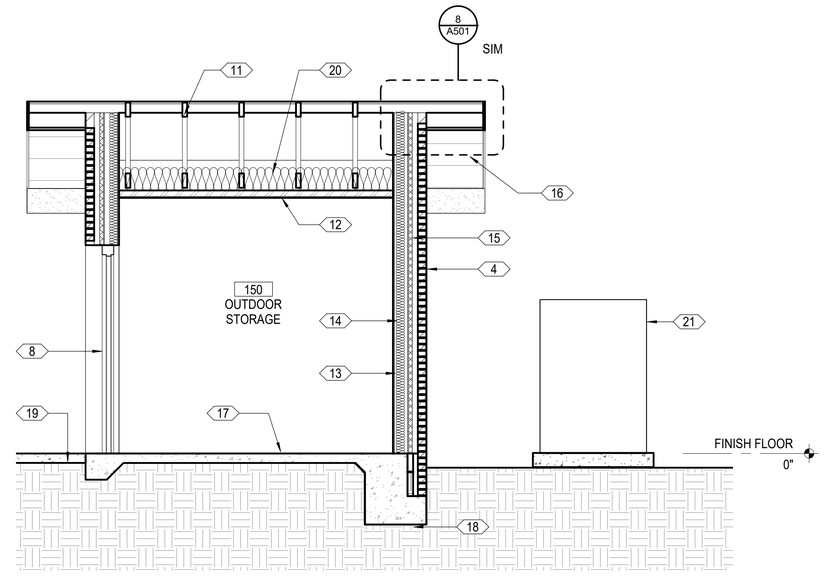
2 FRONT ELEVATION

A201 | A201 | 3/8" = 1'-0"

2' 1' 0' 2' 4'

KEYNOTES

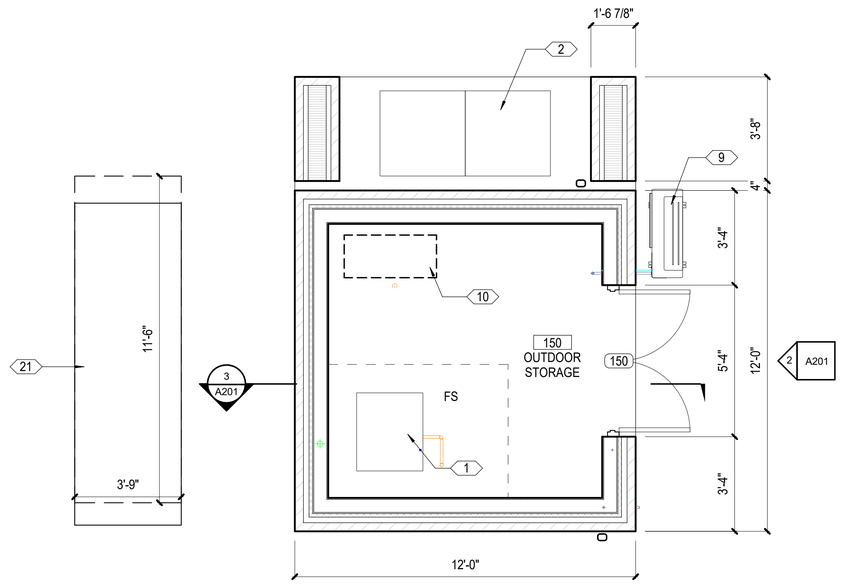
1 MIDMARK POWERAIR OIL-LESS AIR COMPRESSOR; MODEL P32. OFCI
2 3'-0" X 3'-0" BIOMEDICAL WASTE LOCKABLE GALVANIZED METAL BOX; SECURE TO CONCRETE PAD. OFCI
3 PRECAST CONCRETE CAP WITH 2" OVERHANG ON SIDES; PAINTED
4 4" NOMINAL BRICK VENEER; SEE FINISH INDEX FOR COLOR SELECTION
5 FIBER CEMENT FASCIA TRIM
6 3-DIMENSIONAL ASPHALT SHINGLES, SEE FINISH INDEX FOR COLOR
7 PREFINISHED ALUMINUM GUTTER AND DOWNSPOUT
8 DOOR AND FRAME AS SCHEDULED
9 NEW HVAC UNIT, SEE MECHANICAL
10 WHIRLWIND VACUUM PUMP; OFCI
11 PREENGINEERED WOOD TRUSSES, SEE STRUCTURAL
12 5/8" GYPSUM BOARD SUSPENDED CEILING SYSTEM, SEE REFLECTED CEILING PLAN
13 5/8" MOISTURE RESISTANT GYPSUM BOARD
14 R-13 UNFACED BATT INSULATION
15 R-3.8 RIGID INSULATION
16 VENTED FIBER CEMENT SOFFIT
17 SLAB ON GRADE WITH VAPOR BARRIER ; SEE STRUCTURAL
18 CONCRETE FOOTING; SEE STRUCTURAL
19 CONCRETE PAVING, SEE CIVIL
20 R-38 LOOSE FILL BATT INSULATION
21 NATURAL GAS GENERATOR, SEE ELECTRICAL



3 BUILDING SECTION

A104 | A201 | 3/8" = 1'-0"

2' 1' 0' 2' 4'



1 150 - OUTDOOR STORAGE

A100 | A201 | 3/8" = 1'-0"

2' 1' 0' 2' 4'

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License No: AA26000721 | License No: IB0000995

PROJECT ISSUES:

SD - 1	09.29.2017
SD - 2	12.28.2017
ASD	03.16.2018
DD	04.06.2018
BLDG PERMIT SET	04.25.2018

PROJECT TEAM:

CIVIL:
REBOL BATTLE & ASSOCIATES

STRUCTURAL:
JOE DEREUIL ASSOCIATES

ARCHITECT:
CALDWELL ASSOCIATES ARCHITECTS

MEP / TELECOM:
W3 ENGINEERING

PROJECT:
LAKEVIEW CENTER/ COMMUNITY HEALTH NORTHWEST FLORIDA RENOVATION & ADDITION

6021 INDUSTRIAL BLVD #A CENTURY, FLORIDA 32535

ARCHITECT'S SEAL

H. MILLER CALDWELL, JR
AR 7462

PROJECT NO. : 6617
SHEET TITLE:
OUTDOOR STORAGE BUILDING

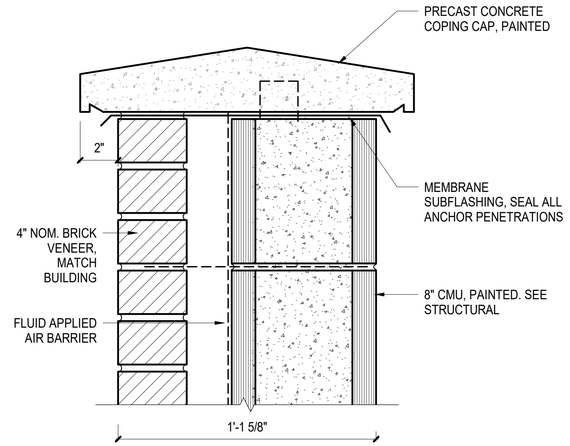
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A201

BUILDING PERMIT SET

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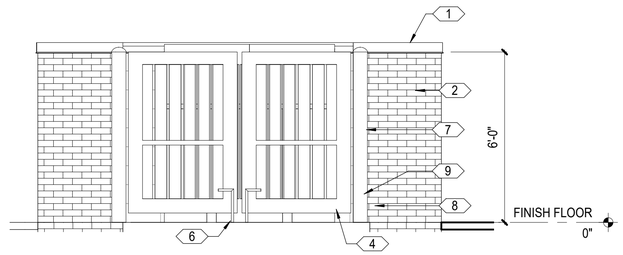
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4 COPING CAP DETAIL

A202 | A202 — 3" = 1'-0"

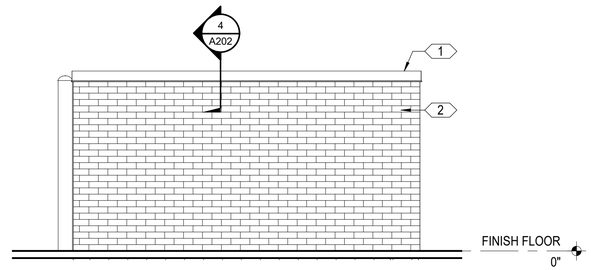
4" 2" 0' 4" 8"



3 TRASH ENCLOSURE - FRONT

A202 | A202 — 3/8" = 1'-0"

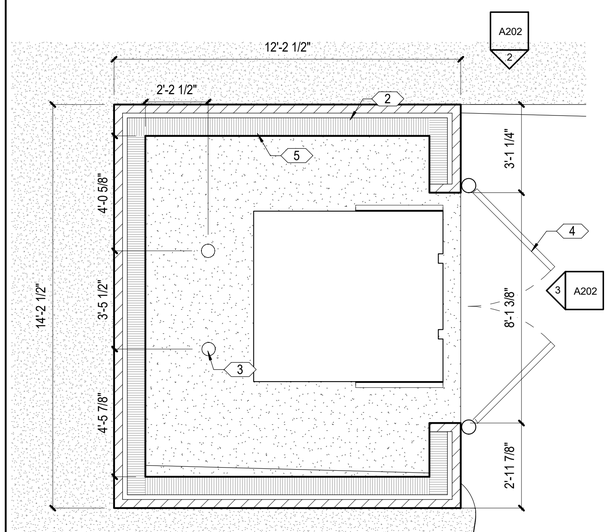
2' 1' 0' 2' 4'



2 TRASH ENCLOSURE - SIDE

A202 | A202 — 3/8" = 1'-0"

2' 1' 0' 2' 4'



1 ENLARGED PLAN - TRASH ENCLOSURE

A100 | A202 — 3/8" = 1'-0"

2' 1' 0' 2' 4'

KEYNOTES

1. PRECAST CONCRETE CAP WITH 2" OVERHANG ON SIDES; PAINTED
2. 4" NOMINAL BRICK VENEER; SEE FINISH INDEX FOR COLOR SELECTION
3. 8" DIAMETER STEEL CONCRETE FILLED BOLLARD, 4'-0" TALL, SEE CIVIL
4. 8'-WIDE BY 6'-0" TALL GALVANIZED STEEL SWING GATES WITH PAINTED FIBER COMPOSITE VERTICAL 1X6 PANELS, SEE FINISH INDEX
5. 8" CMU, SEE STRUCTURAL; PAINT TO MATCH VENEER
6. 3/4" DIAMETER 12" LONG CANE BOLTS, PROVIDE STEEL INSERT INTO CONCRETE SLAB
7. PAINTED 5" DIAMETER GALVANIZED STEEL POST FILLED SOLID WITH CONCRETE ROUND OFF TOP SMOOTH
8. 6" DIAMETER GALVANIZED HINGE SLEEVES (TOP AND BOTTOM) PROVIDE GREASE FITTING IN EACH
9. 6" DIAMETER STEEL HINGE SUPPORT

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ARCHITECT:
CALDWELL ASSOCIATES ARCHITECTS

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PROJECT:
LAKEVIEW CENTER/ COMMUNITY HEALTH NORTHWEST FLORIDA RENOVATION & ADDITION

6021 INDUSTRIAL BLVD #A
CENTURY, FLORIDA 32535

ARCHITECT'S SEAL
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H. MILLER CALDWELL, JR
AR 7462

PROJECT NO. : 6617
SHEET TITLE:
DUMPSTER TRASH ENCLOSURE

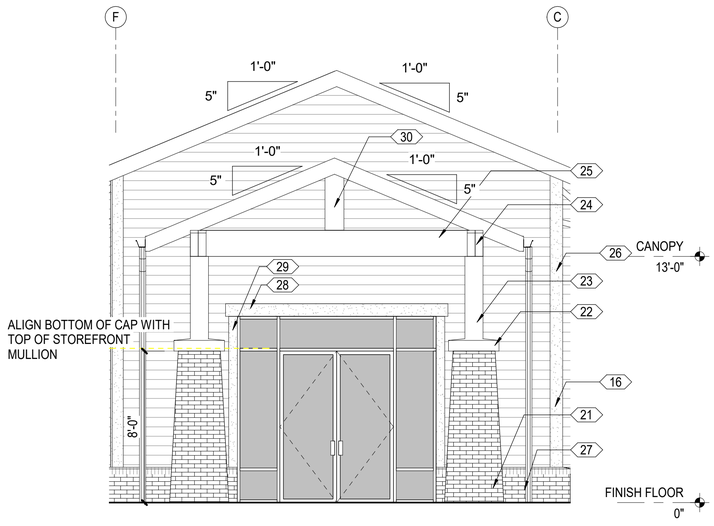
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A202

BUILDING PERMIT SET

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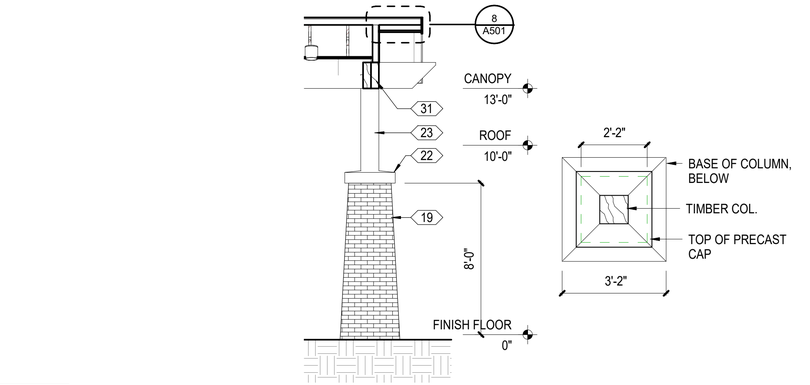
DO NOT SCALE DRAWINGS



3 ENLARGED - PORTE COCHERE ELEVATION

A200 | A300 — 1/4" = 1'-0"

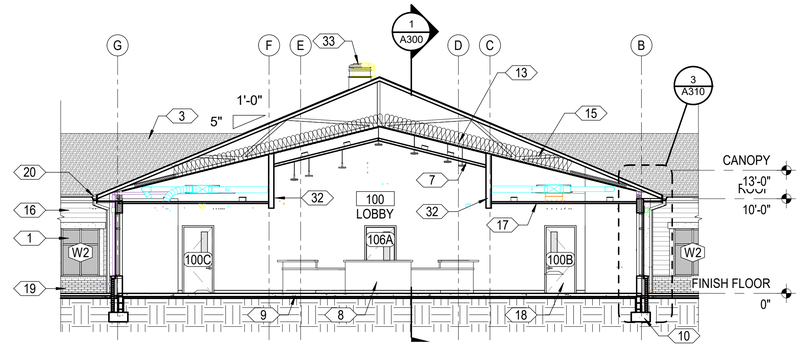
8' 4' 0' 8' 16'



4 CANOPY COLUMN SECTION

A300 | A300 — 1/4" = 1'-0"

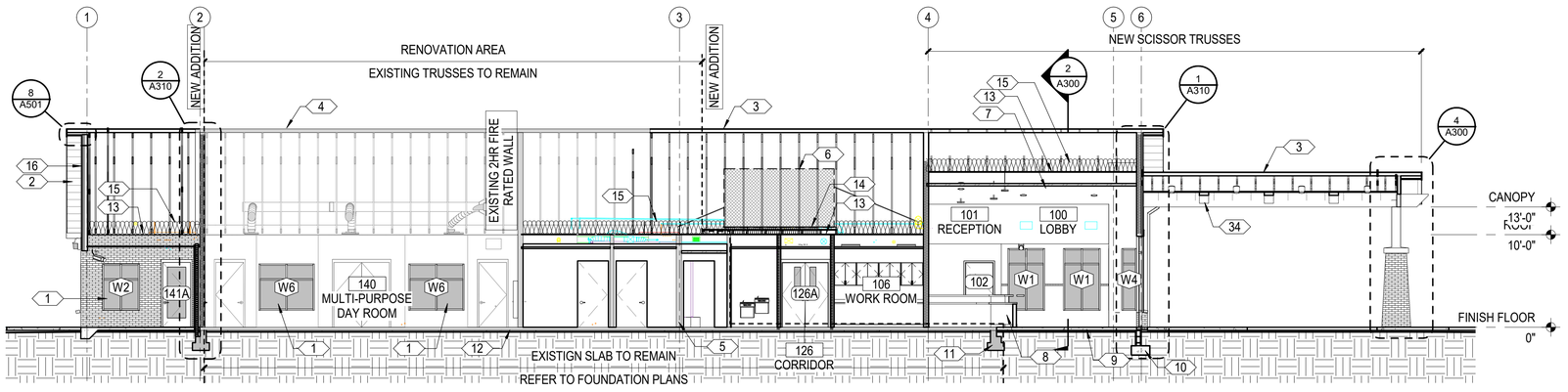
8' 4' 0' 8' 16'



2 CROSS BUILDING SECTION

A101 | A300 — 1/8" = 1'-0"

8' 4' 0' 8' 16'



1 LONGITUDINAL BUILDING SECTION

A101 | A300 — 1/8" = 1'-0"

8' 4' 0' 8' 16'

KEYNOTES

1 PREFINISHED ALUMINUM STOREFRONT SYSTEM WITH IMPACT RESISTANT GLAZING; SEE FINISH SCHEDULE
2 VENTED FIBER CEMENT SOFFIT
3 3-DIMENSIONAL ASPHALT SHINGLES, SEE FINISH INDEX FOR COLOR
4 3-DIMENSIONAL ASPHALT SHINGLES ON EXISTING ROOF DECK, SEE FINISH INDEX FOR COLOR SELECTION
5 EXISTING WALLS TO REMAIN, SEE FINISH SCHEDULE AND FLOOR PLAN FOR ADDITIONAL DIRECTION
6 HATCHED AREA DENOTES MECHANICAL EQUIPMENT IN ATTIC SPACE, PROVIDE ATTIC ACCESS HATCH WITH LADDER, SEE FLOOR AND RCP PLANS
7 5/8" GYPSUM BOARD SUSPENDED CEILING SYSTEM, SEE REFLECTED CEILING PLAN
8 CUSTOM FABRICATED RECEPTION DESK WITH SOLID SURFACE COUNTERTOPS, SEE FINISH SCHEDULE & INTERIOR ELEVATIONS
9 SLAB ON GRADE WITH VAPOR BARRIER ; SEE STRUCTURAL
10 CONCRETE FOOTING, SEE STRUCTURAL
11 EXISTING CONCRETE FOOTING, SEE STRUCTURAL
12 EXISTING SLAB ON GRADE TO REMAIN, SEE STRUCTURAL
13 5/8" FIRE RATED GYPSUM BOARD ON 1X2 FURRING STRIPS; SECURE TO ROOF TRUSSES. MAINTAIN AIR TIGHT SEAL AT ALL PENETRATION AND PERIMETER EDGES.
14 3/4" WOOD DECKING OVER WOOD FRAMING, SEE STRUCTURAL
15 R-38 LOOSE FILL BATT INSULATION
16 HORIZONTAL FIBER CEMENT SIDING WITH 6 1/2" EXPOSURE
17 SUSPENDED ACOUSTICAL TILE AND GRID, SEE FINISH SCHEDULE
18 DOOR AND FRAME AS SCHEDULED
19 4" NOMINAL BRICK VENEER; SEE FINISH INDEX FOR COLOR SELECTION
20 PREFINISHED ALUMINUM GUTTER AND DOWNSPOUT
21 TAPERED BRICK PEDESTAL
22 PRECAST CONCRETE CAP WITH 2" OVERHANG ON SIDES; PAINTED
23 12 X 12 HEAVY TIMBER COLUMN; SEE STRUCTURAL
24 DOUBLE GLULAM BEAM WITH TAPERED EDGE; SEE STRUCTURAL & EXTERIOR ELEVATIONS
25 DOUBLE GLULAM BEAM; SEE STRUCTURAL
26 PREFINISHED ALUMINUM DOWNSPOUT, RUN ALONG BACKSIDE OF STRUCTURAL COLUMN, INSIDE BRICK PEDESTAL. SEE CIVIL FOR CONNECTION
27 4" NOMINAL BRICK VENEER WAINSCOT 1'-10" AFF WITH ROWLOCK TRANSITION SILL; SEE DETAILS & FINISH INDEX FOR COLOR SELECTION
28 1 X 8 FINISH TRIM; SEE DETAILS
29 1 X 6 FINISH TRIM; SEE DETAILS
30 12" WIDE X 2" DECORATIVE WOOD TRIM, STAIN FINISH
31 GLUE LAMINATED BEAMS, SEE STRUCTURAL
32 5/8" GYPSUM BOARD ON WOOD FRAMING HEADER
33 INTAKE FAN, SEE MECHANICAL
34 12" WIDE X 4" DEEP DECORATIVE WOOD BEAM CASING CONSTRUCTED OF 1X WOOD TRIM OVER 2X WOOD FRAMING, STAIN FINISH

GENERAL NOTES

1. CONTRACTOR TO FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO COMMENCING WORK.
2. GENERAL CONTRACTOR SHALL PERFORM PREINSTALLATION MEETINGS PRIOR TO EACH TRADE INSTALLATION. INFORM ARCHITECT 10 DAY NOTICE.

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CALDWELL ASSOCIATES ARCHITECTS

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W3 ENGINEERING

PROJECT:
LAKEVIEW CENTER/ COMMUNITY HEALTH NORTHWEST FLORIDA RENOVATION & ADDITION

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CENTURY, FLORIDA 32535

ARCHITECT'S SEAL
LICENSED INTERIOR DESIGNER 3848 HARRY MILLER CALDWELL, JR. REGISTERED ARCHITECT 7462 STATE OF FLORIDA
H. MILLER CALDWELL, JR
AR 7462

PROJECT NO. : 6617
SHEET TITLE:
BUILDING SECTIONS

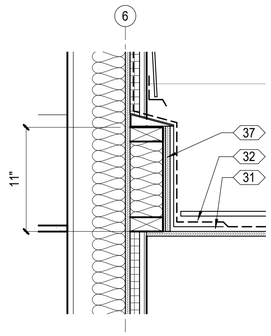
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BUILDING PERMIT SET

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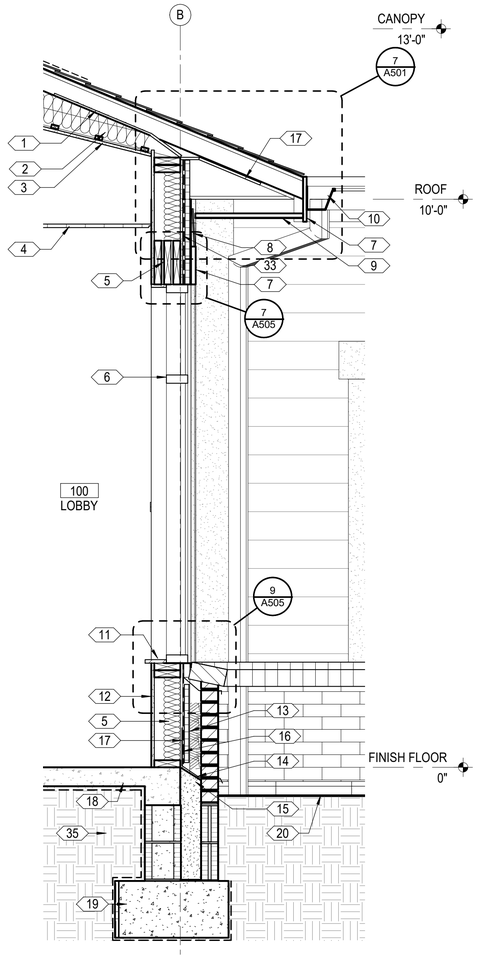
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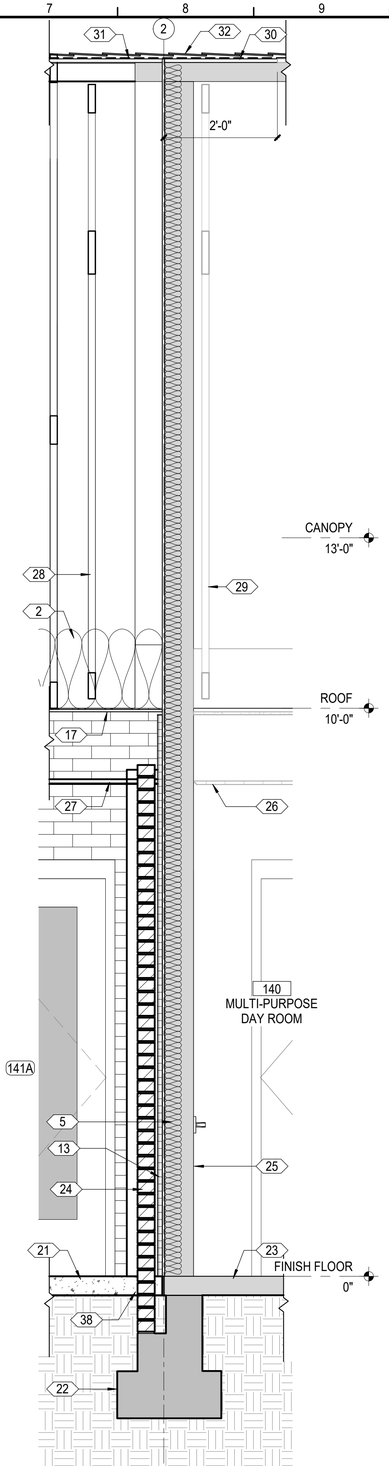
4 WALL TO ROOF DETAIL

A310 | A310 — 1 1/2" = 1'-0"



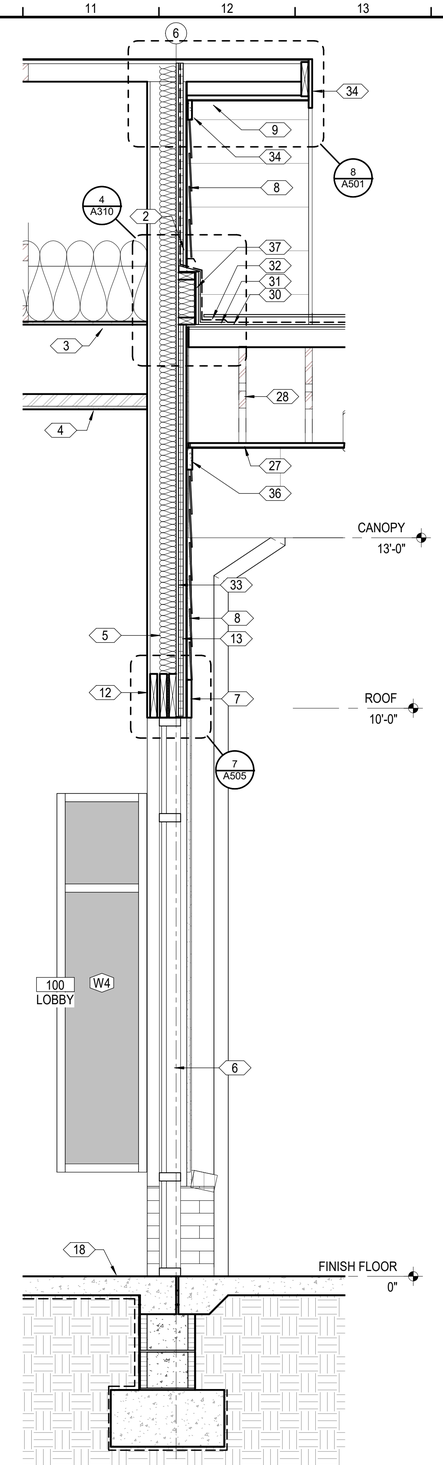
3 WALL SECTION

A300 | A310 — 3/4" = 1'-0"



2 WALL SECTION

A300 | A310 — 3/4" = 1'-0"



1 WALL SECTION

A300 | A310 — 3/4" = 1'-0"

KEYNOTES

1 RAFTER VENT WITH BUILT-IN BAFFLES, INSTALL BETWEEN EACH TRUSS
2 R-38 LOOSE FILL BATT INSULATION
3 5/8" FIRE RATED GYPSUM BOARD ON 1X2 FURRING STRIPS; SECURE TO ROOF TRUSSES. MAINTAIN AIR TIGHT SEAL AT ALL PENETRATION AND PERIMETER EDGES.
4 5/8" GYPSUM BOARD SUSPENDED CEILING SYSTEM, SEE REFLECTED CEILING PLAN
5 R-13 UNFACED BATT INSULATION
6 PREFINISHED ALUMINUM STOREFRONT SYSTEM WITH IMPACT RESISTANT GLAZING; SEE FINISH SCHEDULE
7 1X8 FIBER CEMENT TRIM
8 HORIZONTAL FIBER CEMENT SIDING WITH 6 1/2" EXPOSURE
9 VENTED FIBER CEMENT SOFFIT
10 PREFINISHED ALUMINUM GUTTER AND DOWNSPOUT
11 1/2" SOLID WOOD WINDOW STOOL, PAINT TO MATCH ADJACENT WALL, GLOSSY FINISH
12 5/8" GYPSUM BOARD; SECURE TO EXISTING SHEATHING
13 R-3.8 RIGID INSULATION
14 THRU-WALL FLASHING WITH WEEPS @ 24" O.C.
15 GROUT SOLID CAVITY BELOW GRADE
16 MORTAR NETTING
17 1/2" EXTERIOR SHEATHING
18 SLAB ON GRADE WITH VAPOR BARRIER ; SEE STRUCTURAL
19 CONCRETE FOOTING, SEE STRUCTURAL
20 APPROXIMATE LINE OF GRADE, SEE CIVIL
21 CONCRETE PAVING, SEE CIVIL
22 EXISTING CONCRETE FOOTING, SEE STRUCTURAL
23 EXISTING SLAB ON GRADE TO REMAIN, SEE STRUCTURAL
24 4" NOMINAL BRICK VENEER; SEE FINISH INDEX FOR COLOR SELECTION
25 EXISTING GYPSUM BOARD TO REMAIN, PAINT ENTIRE SURFACE TO MATCH WHERE PREVIOUSLY REMOVED WINDOWS INFILLED
26 EXISTING ACOUSTICAL CEILING TILE TO REMAIN
27 FIBER CEMENT BOARD AND BATTEN SOFFIT SYSTEM
28 PREENGINEERED WOOD TRUSSES, SEE STRUCTURAL
29 EXISTING WOOD TRUSSES TO REMAIN
30 WOOD ROOF DECKING, EXTEND NEW DECKING INTO EXISTING WOOD TRUSSES, SEE STRUCTURAL
31 SELF-ADHERED WATERPROOF MEMBRANE (ICE/WATER SHIELD OR EQUAL)
32 3-DIMENSIONAL ASPHALT SHINGLES, SEE FINISH INDEX FOR COLOR
33 FLUID APPLIED AIR BARRIER
34 FIBER CEMENT FASCIA TRIM
35 COMPACTED FILL, SEE STRUCTURAL
36 1X4 FIBER CEMENT TRIM
37 WOOD ROOF DECKING VERTICAL FACE OF 2X4 WOOD FRAMING, EXTEND SELF ADHERED WATERPROOF MEMBRANE VERTICALLY ABOVE PREFINISHED METAL FLASHING TRIM
38 PREFORMED EXPANSION JOINT

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REGISTERED ARCHITECT 7462
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AR 7462

PROJECT NO. : 6617
SHEET TITLE:
WALL SECTIONS & DETAILS

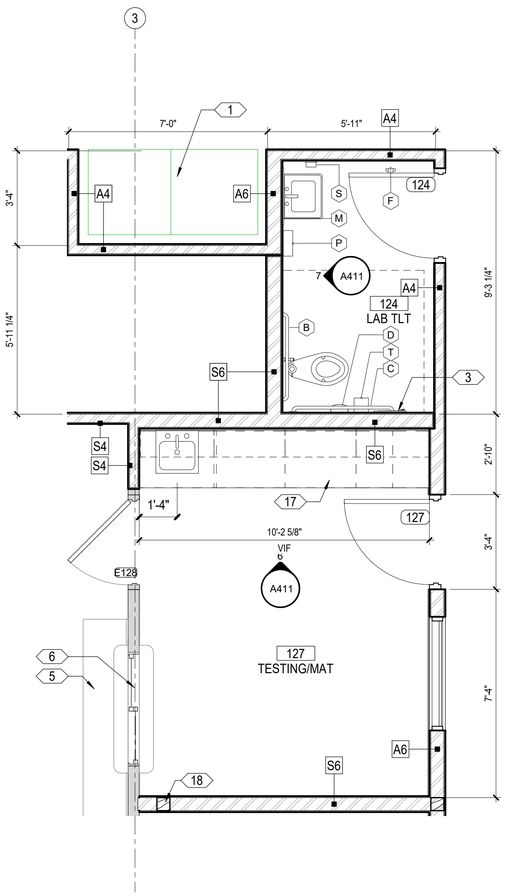
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BUILDING PERMIT SET

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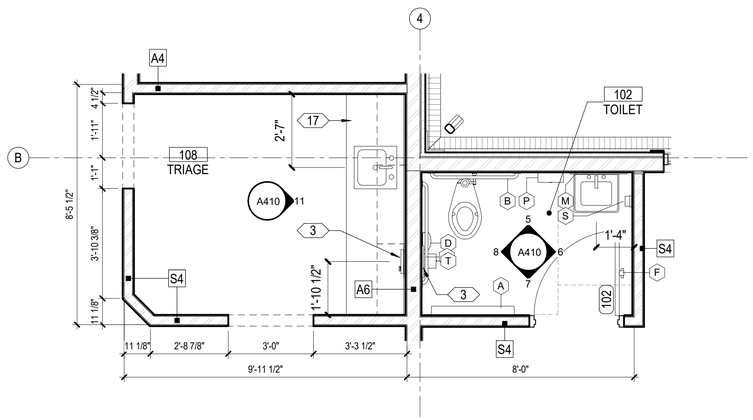
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3 — 124 - TOIELT / 127 - TESTING/MAT

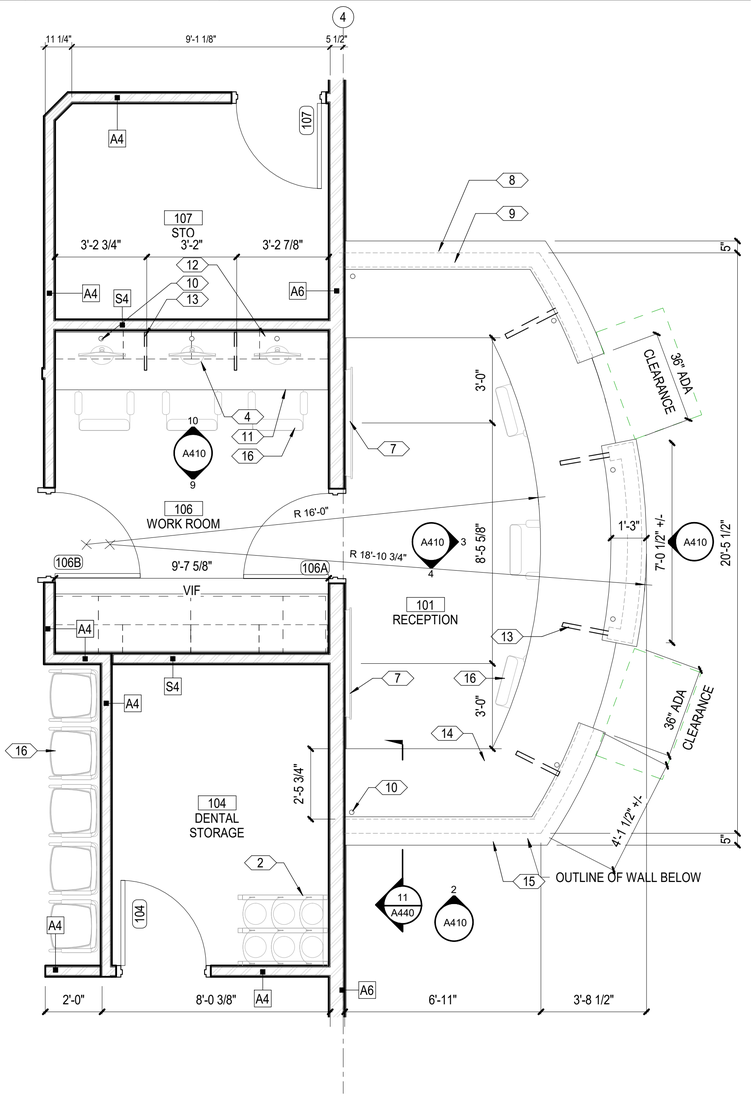
A101 | A400 — 3/8" = 1'-0"



2 — 104 - TRIAGE/102 - TOILET

A101 | A400 — 3/8" = 1'-0"

ACCESSORY SCHEDULE					
MARK	DESCRIPTION	MANUFACTURER	MODEL	MOUNTING HEIGHTS	REMARKS
A	BABY CHANGING STATION	BOBRICK	KB110-SSWM	46 1/2" TO TOP	
B	42" GRAB BAR	BOBRICK	B-6806 X 42	34" AFF TO CENTERLINE	
C	36" GRAB BAR	BOBRICK	B-6806 X 36	34" AFF TO CENTERLINE	
D	SANITARY NAPKIN DISPOSAL	BOBRICK	HS-6140W	30" TO TOP	
E	ROBE HOOK	BOBRICK	B-672 SERIES	48" TO TOP	ON TOILET PARTITION
F	ROBE HOOK	BOBRICK	B-672 Series	48" TO TOP	ON DOOR
M	MIRROR WITH FRAME	BOBRICK	B-165 2436	SEE ELEVATIONS	
P	Surface-Mounted Paper Towel Dispenser	Bobrick Washroom Equipment, Inc.	B-262 ClassicSeries	40" MAX	OFCI
S	SOAP DISPENSER	BETCO CLARIO	91821	40" MAX	OFCI
T	TOILET TISSUE DISPENSER	BAYWEST	BW 80300	19" MIN	OFCI



1 — 101 - RECEPTION/ 106 - WORK ROOM

A101 | A400 — 3/8" = 1'-0"

KEYNOTES

1. OFCI VENDING MACHINES; VERIFY DIMENSIONS OF VENDING MACHINES PRIOR TO CONSTRUCTION OF NEW WALLS.
2. FWF MEDICAL PRODUCTS INLINE OXYGEN CYLINDER WALL MOUNT RACK MODEL #7503-6. PROVIDE BLOCKING IN WALL AS REQUIRED; OFCI
3. SPECIMEN PASS-THRU WINDOW
4. COMPUTER MONITORS; OFOI. PROVIDE CAT 5 CONDUIT & POWER
5. EXISTING CASEWORK TO REMAIN; PROTECT DURING DEMOLITION & CONSTRUCTION.
6. EXISTING PASS-THRU WINDOW TO REMAIN; PROTECT DURING DEMOLITION & CONSTRUCTION
7. TV; OFCI. VERIFY SIZE OF TV WITH OWNER PRIOR TO INSTALLING BLOCKING
8. PROVIDE 5/8" IMPACT-RESISTANT GYPSUM BOARD AT RECEPTIONIST DESK, BOTH SIDES
9. SOLID SURFACE COUNTERTOP (COLOR SS-2)
10. 2 1/2" DIAMETER STAINLESS STEEL GROMMETS
11. 24" DEEP PLASTIC LAMINATE WORKING SURFACE COUNTERTOP WITH 4" BACKPLASH AT REAR
12. 12" DEEP PLASTIC LAMINATE UPPER CABINETS
13. PREFINISHED METAL BRACKETS
14. SOLID SURFACE WORKING SURFACE COUNTERTOP
15. SOLID SURFACE COUNTER SURFACE
16. CHAIR; OFOI
17. SOLID SURFACE COUNTERTOP WITH UPPER AND LOWER CABINETS
18. 6X6 WOOD COLUMN, SEE STRUCTURAL

GENERAL NOTES

1. REFER TO INTERIORS SHEETS AND ENLARGED PLANS FOR MEDICAL EQUIPMENT AND FURNITURE LAY-OUT.
2. REFER TO OTHER DISCIPLINES FOR ADDITIONAL INFORMATION AND REQUIREMENTS.
3. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS PRIOR TO COMMENCING WORK. INFORM ARCHITECT AND OWNER'S REPRESENTATIVE OF ANY DEVIATIONS.
4. CONTRACTOR SHALL COORDINATE WITH ALL TRADES BEFORE COMMENCING WORK.
5. REFER TO DETAILS FOR ADDITIONAL INFORMATION ON WALL TYPES
6. SEE LIFE SAFETY PLANS FOR FIRE EXTINGUISHER LOCATIONS.
7. PROVIDE PT WOOD BLOCKING IN STUD CAVITIES WHERE REQUIRED TO SUPPORT WALL-MOUNTED COMPONENTS, INCLUDING BUT NOT LIMITED TO: UPPER CABINETS, TV's, MEDICAL EQUIPMENT, COUNTER SUPPORT BRACES, & TOILET ACCESSORIES.
8. CONTRACTOR TO SUBMIT PLACEMENT OF ALL WALL MOUNTED BLOCKING DIAGRAM TO ARCHITECT FOR FINAL APPROVAL AND COORDINATION.
9. CONTRACTOR SHALL COORDINATE WITH OWNER PROVIDED ACCESSORIES PROVIDER "SUPPLYWORKS" TO PROVIDE TOILET ACCESSORIES FOR WALL PLACEMENT.

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AR 7462

PROJECT NO. : 6617
SHEET TITLE:
ENLARGED PLANS

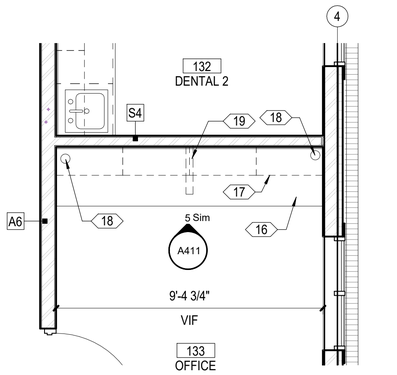
SHEET NUMBER:
A400

BUILDING PERMIT SET

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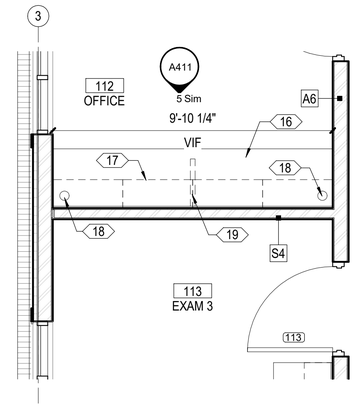
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6 | A101 | A401 — 133 - OFFICE

3/8" = 1'-0"

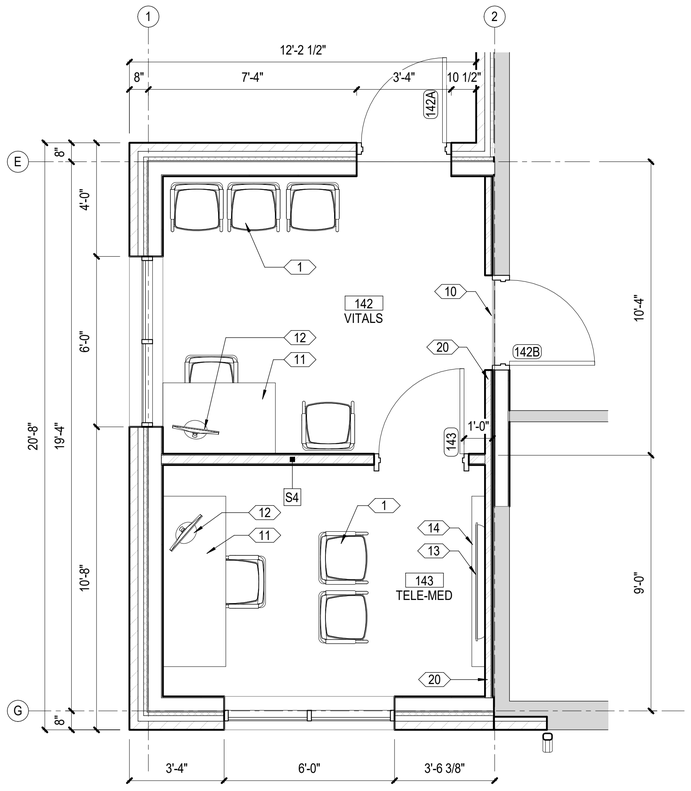


5 | A101 | A401 — 112 - OFFICE

3/8" = 1'-0"

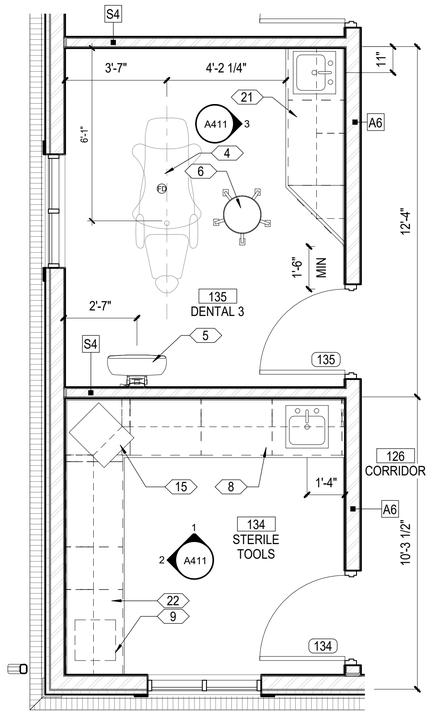
KEYNOTES

1	UPHOLSTERED CHAIR; MODEL/COLOR TBD DURING SUBMITTALS
2	RITTER 204 MANUAL EXAMINATION TABLE; OFOI
3	RITTER 274 PHYSICIAN STOOL; OFOI
4	PELTON & CRANE SPIRIT 1704 DENTAL CHAIR; OFOI
5	WALL MOUNTED COMPUTER SYSTEM; OFOI. PROVIDE BLOCKING IN WALL AS REQUIRED.
6	RITTER 277 AIR LIFT STOOL; OFOI
7	WALL-MOUNTED WELCH-ALLYN GS 777 INTEGRATED DIAGNOSTIC SYSTEM, MODEL #77792-M; OFCI
8	WHIRLWIND VACUUM PUMP; OFCI
9	ULTRASONIC CLEANER ; OFOI
10	5/8" GYPSUM BOARD; SECURE TO EXISTING SHEATHING
11	DESK; OFOI
12	COMPUTER; OFOI. PROVIDE POWER & CAT 5 CONDUIT
13	TELEVISION; OFOI
14	TELEVISION STAND; OFOI
15	RITTER M11 ULTRACLAVE® AUTOMATIC STERILIZER; OFOI
16	SOLID SURFACE WORKING SURFACE COUNTERTOP
17	12" DEEP PLASTIC LAMINATE UPPER CABINETS
18	2 1/2" DIAMETER STAINLESS STEEL GROMMETS
19	PREFINISHED METAL BRACKETS
20	5/8" GYPSUM BOARD ON 2X4 WOO FRAMING @ 16" O.C.
21	24" DEEP PLASTIC LAMINATE WORKING SURFACE COUNTERTOP WITH 4" BACKPLASH AT REAR
22	SOLID SURFACE COUNTERTOP WITH UPPER AND LOWER CABINETS



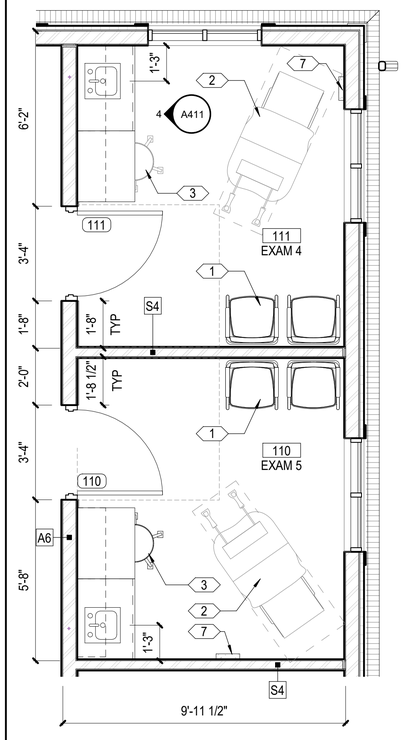
4 | A101 | A401 — 142 - VITALS / 143 - TELE-MED

3/8" = 1'-0"



2 | A101 | A401 — 134 - STERILE TOOLS/ TYPICAL DENTAL EXAM ROOM

3/8" = 1'-0"



1 | A101 | A401 — TYPICAL EXAM ROOM

3/8" = 1'-0"

2' 1' 0' 2' 4'

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PROJECT ISSUES:

SD - 1	09.29.2017
SD - 2	12.28.2017
ASD	03.16.2018
DD	04.06.2018
BLDG PERMIT SET	04.25.2018

PROJECT TEAM:

CIVIL:
REBOL BATTLE & ASSOCIATES

STRUCTURAL:
JOE DEREUIL ASSOCIATES

ARCHITECT:
CALDWELL ASSOCIATES ARCHITECTS

MEP / TELECOM:
W3 ENGINEERING

PROJECT:
LAKEVIEW CENTER/ COMMUNITY HEALTH NORTHWEST FLORIDA RENOVATION & ADDITION

6021 INDUSTRIAL BLVD #A CENTURY, FLORIDA 32535

ARCHITECT'S SEAL
LICENSED INTERIOR DESIGNER 3848 HARRY MILLER CALDWELL, JR. STATE OF FLORIDA REGISTERED ARCHITECT 7462
H. MILLER CALDWELL, JR
AR 7462

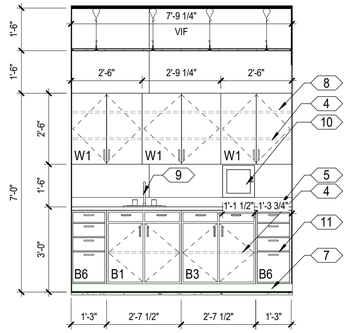
PROJECT NO. : 6617
SHEET TITLE:
ENLARGED PLANS

SHEET NUMBER:
A401

BUILDING PERMIT SET

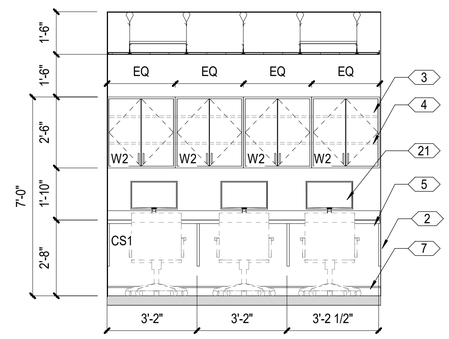
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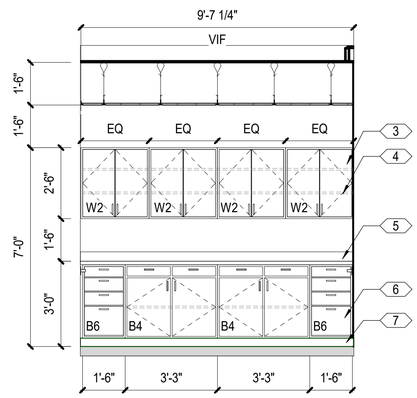
11 TRIAGE CASEWORK ELEVATION

A400 | A410 — 3/8" = 1'-0"



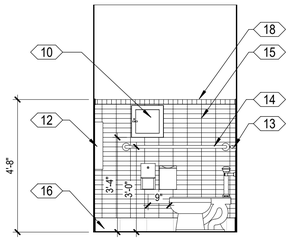
10 106 - WORK ROOM - B

A400 | A410 — 3/8" = 1'-0"



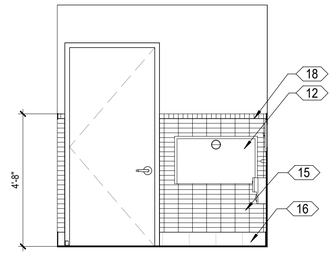
9 106 - WORK ROOM - A

A400 | A410 — 3/8" = 1'-0"



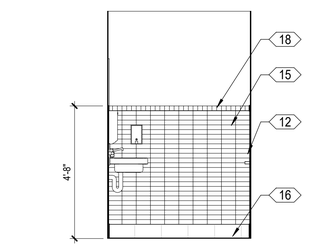
8 102 - TOILET - D

A400 | A410 — 3/8" = 1'-0"



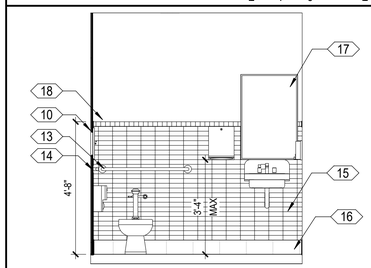
7 102 - TOILET - C

A400 | A410 — 3/8" = 1'-0"



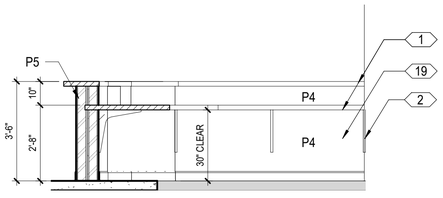
6 102 - TOILET - B

A400 | A410 — 3/8" = 1'-0"



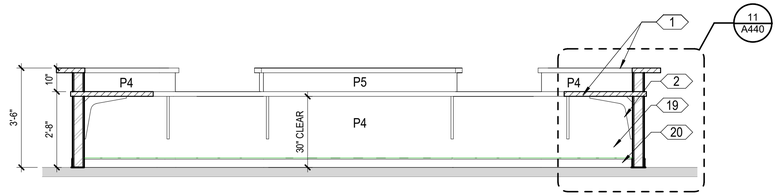
5 102 - TOILET - A

A400 | A410 — 3/8" = 1'-0"



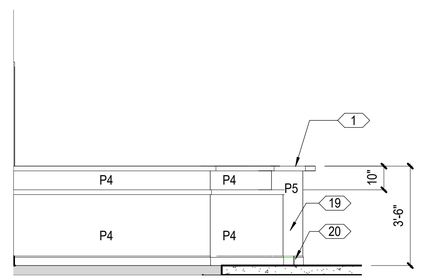
4 RECEPTION 101 - ELEVATION D

A400 | A410 — 3/8" = 1'-0"



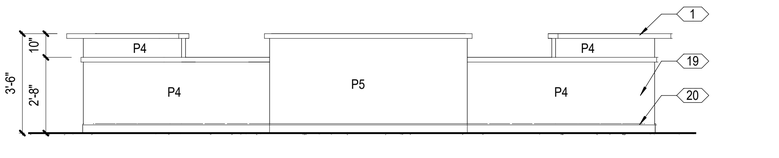
3 RECEPTION 101 - ELEVATION C

A400 | A410 — 3/8" = 1'-0"



2 RECEPTION 101 - ELEVATION B

A400 | A410 — 3/8" = 1'-0"



1 RECEPTION 101 - ELEVATION A

A400 | A410 — 3/8" = 1'-0"

KEYNOTES

1. SOLID SURFACE COUNTERTOP (COLOR SS-2)
2. WALL BRACKETS
3. PLASTIC LAMINATE UPPER WALL CABINETS (COLOR: PL-1) WITH 4" WIRE PULLS; SEE DETAILS
4. ADJUSTABLE SHELVING; MELAMINE FINISH; SEE DETAILS
5. SOLID SURFACE COUNTERTOP WITH 4" BACKSPLASH (COLOR: SS-1)
6. PLASTIC LAMINATE BASE CABINETS (COLOR: PL-1) WITH 4" WIRE PULLS; SEE DETAILS
7. BASE AS SCHEDULED
8. LOCKABLE PLASTIC LAMINATE UPPER WALL CABINETS (COLOR: PL-1) WITH 4" WIRE PULLS; SEE DETAILS
9. SINK; SEE PLUMBING
10. SPECIMEN PASS-THRU WINDOW
11. LOCKABLE PLASTIC LAMINATE BASE CABINETS (COLOR: PL-1) WITH 4" WIRE PULLS; SEE DETAILS
12. DIAPER CHANGING STATION
13. 36" GRAB BAR
14. 42" GRAB BAR
15. PORCELAIN WALL TILE (COLOR: PWT-1); SEE FINISH INDEX
16. PORCELAIN WALL TILE BASE AS SCHEDULED (COLOR: PTB-1); SEE FINISH INDEX
17. 24" X 36" MIRROR
18. PORCELAIN WALL TILE MOSAIC OR BULLNOSE BORDER (COLOR: PWT-1); SEE FINISH INDEX
19. PROVIDE 5/8" IMPACT-RESISTANT GYPSUM BOARD AT RECEPTIONIST DESK, BOTH SIDES
20. BASE AS SCHEDULED; SEE FINISH SCHEDULE
21. COMPUTER MONITORS; OFOI. PROVIDE CAT 5 CONDUIT & POWER

GENERAL NOTES

1. COORDINATE WITH ROOM FINISH SCHEDULE AND FINISH INDEX FOR FINISHES OF ALL SURFACES NOT OUTLINED ON THESE DRAWINGS.
2. SUBMIT PRODUCT LITERATURE, CERTIFICATIONS, TEST REPORTS & FULL MATERIAL SAMPLES OF EACH COLOR SPECIFIED.
3. ALL TOILET ACCESSORIES PROVIDED BY SUPPLYWORKS. SUPPLYWORKS TO SUBMIT CUT-SHEETS, PLANS, & ELEVATIONS SHOWING LOCATIONS OF PROPOSED ACCESSORIES TO ARCHITECT FOR APPROVAL. CONTRACTOR TO PROVIDE BLOCKING IN WALLS AS REQUIRED.

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ARCHITECT:
CALDWELL ASSOCIATES ARCHITECTS

MEP / TELECOM:
W3 ENGINEERING

PROJECT:
LAKEVIEW CENTER/ COMMUNITY HEALTH NORTHWEST FLORIDA RENOVATION & ADDITION

6021 INDUSTRIAL BLVD #A
CENTURY, FLORIDA 32535

ARCHITECT'S SEAL
LIC. INTERIOR DESIGNER 3648 HARRY MILLER CALDWELL JR. REGISTERED ARCHITECT STATE OF FLORIDA
H. MILLER CALDWELL, JR
AR 7462

PROJECT NO. : 6617
SHEET TITLE:
INTERIOR ELEVATIONS

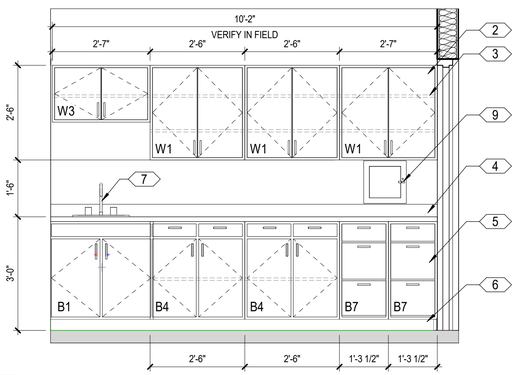
SHEET NUMBER:
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BUILDING PERMIT SET

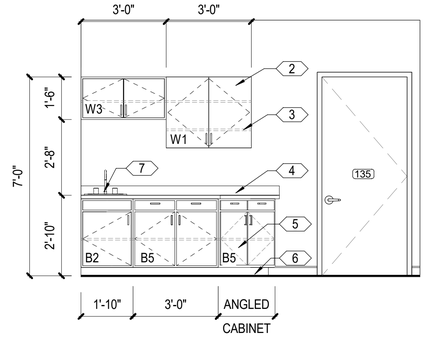
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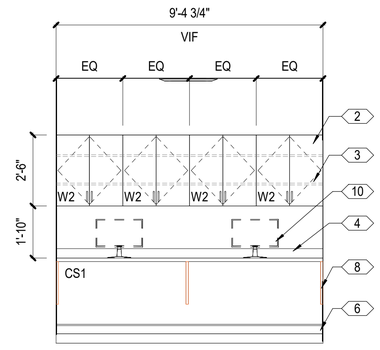
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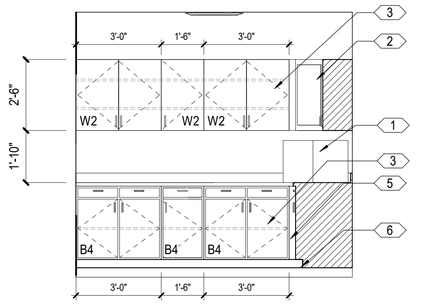
6	127 - TESTING/MAT
A400 A411	1/2" = 1'-0"



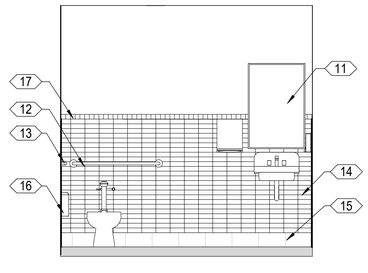
3	TYPICAL DENTAL CASEWORK
A401 A411	3/8" = 1'-0"



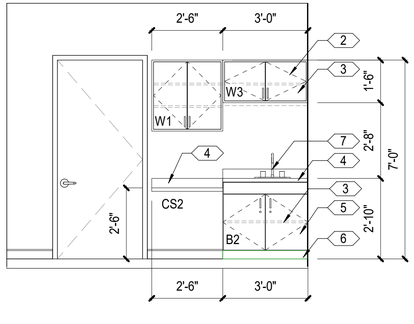
5	112 / 133 - OFFICE
A401 A411	3/8" = 1'-0"



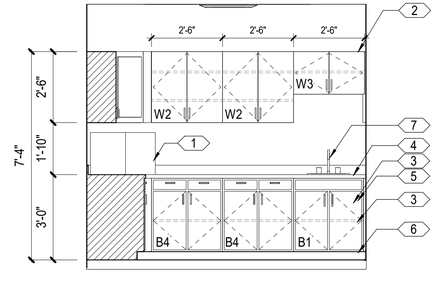
2	134 - STERILE TOOLS - B
A401 A411	3/8" = 1'-0"



7	124 - LAB TOILET
A400 A411	3/8" = 1'-0"



4	TYPICAL EXAM ROOM CASEWORK
A401 A411	3/8" = 1'-0"



1	134 - STERILE TOOLS - A
A401 A411	3/8" = 1'-0"

KEYNOTES

1. RITTER M11 ULTRACLAVE® AUTOMATIC STERILIZER; OFOI
2. LOCKABLE PLASTIC LAMINATE UPPER WALL CABINETS (COLOR: PL-1) WITH 4" WIRE PULLS; SEE DETAILS
3. ADJUSTABLE SHELVING; MELAMINE FINISH; SEE DETAILS
4. SOLID SURFACE COUNTERTOP WITH 4" BACKSPLASH (COLOR: SS-1)
5. LOCKABLE PLASTIC LAMINATE BASE CABINETS (COLOR: PL-1) WITH 4" WIRE PULLS; SEE DETAILS
6. BASE AS SCHEDULED
7. SINK; SEE PLUMBING
8. WALL BRACKETS
9. SPECIMEN PASS-THRU WINDOW
10. COMPUTER; OFOI. PROVIDE POWER & CAT 5 CONDUIT
11. 24" X 36" MIRROR
12. 36" GRAB BAR
13. 42" GRAB BAR
14. PORCELAIN WALL TILE (COLOR: PWT-1); SEE FINISH INDEX
15. PORCELAIN WALL TILE BASE AS SCHEDULED (COLOR: PTB-1); SEE FINISH INDEX
16. SANITARY NAPKIN DISPOSAL; COORDINATE LOCATION WITH ITEMS SUPPLIED BY OWNER'S CONTRACTOR, SUPPLY WORKS,.
17. PORCELAIN WALL TILE MOSAIC OR BULLNOSE BORDER (COLOR: PWT-1); SEE FINISH INDEX

GENERAL NOTES

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2. SUBMIT PRODUCT LITERATURE, CERTIFICATIONS, TEST REPORTS & FULL MATERIAL SAMPLES OF EACH COLOR SPECIFIED.
3. ALL TOILET ACCESSORIES PROVIDED BY SUPPLYWORKS. SUPPLYWORKS TO SUBMIT CUT-SHEETS, PLANS, & ELEVATIONS SHOWING LOCATIONS OF PROPOSED ACCESSORIES TO ARCHITECT FOR APPROVAL. CONTRACTOR TO PROVIDE BLOCKING IN WALLS AS REQUIRED.

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ARCHITECT:
CALDWELL ASSOCIATES ARCHITECTS

MEP / TELECOM:
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PROJECT:
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6021 INDUSTRIAL BLVD #A CENTURY, FLORIDA 32535

ARCHITECT'S SEAL
H. MILLER CALDWELL, JR
AR 7462

PROJECT NO. : 6617
SHEET TITLE:
INTERIOR ELEVATIONS

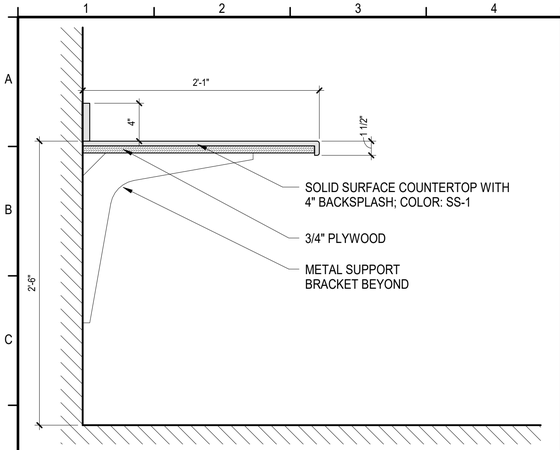
SHEET NUMBER:
A411

BUILDING PERMIT SET

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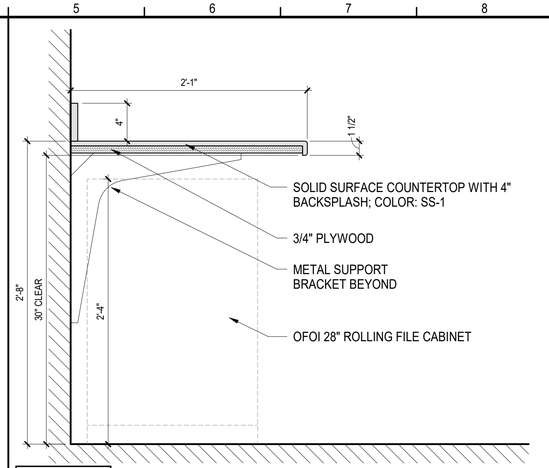
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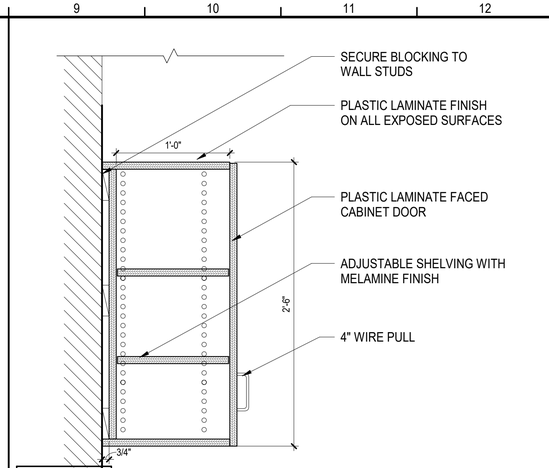
12 SUPPORT BRACKET - CS2

A440 | 1 1/2" = 1'-0" | 4" 2" 0' 4" 8"



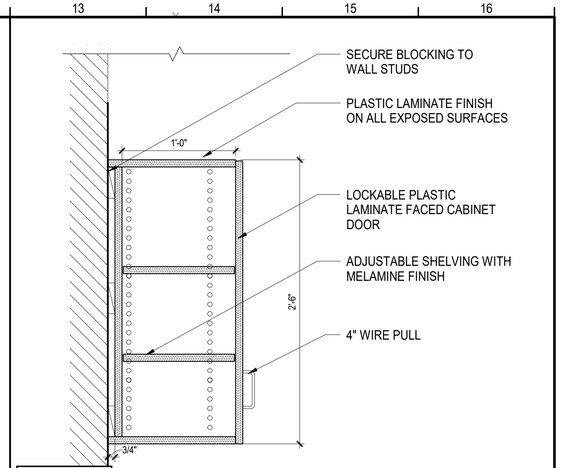
9 SUPPORT BRACKET - CS1

A440 | 1 1/2" = 1'-0" | 4" 2" 0' 4" 8"



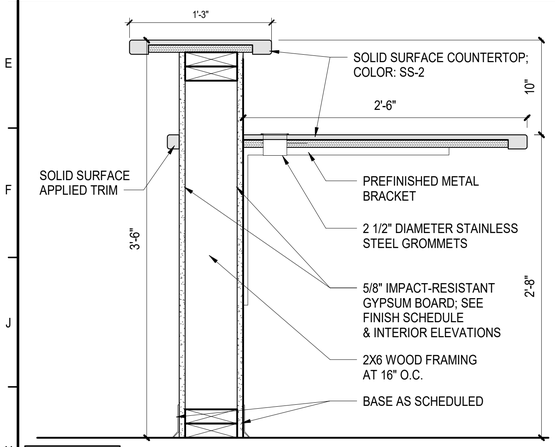
6 WALL CABINET - W2

A440 | 1 1/2" = 1'-0" | 6" 3" 0' 6" 1'



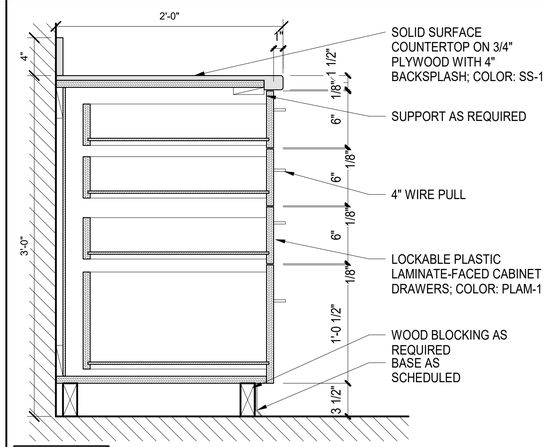
3 WALL CABINET - W1

A440 | 1 1/2" = 1'-0" | 6" 3" 0' 6" 1'



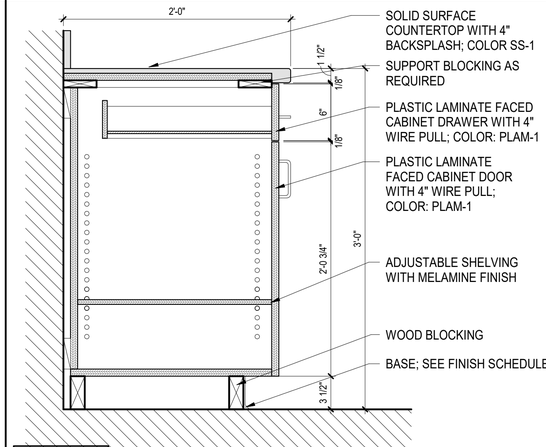
11 BASE - RECEPTIONIST DESK

A400 A440 | 1 1/2" = 1'-0" | 4" 2" 0' 4" 8"



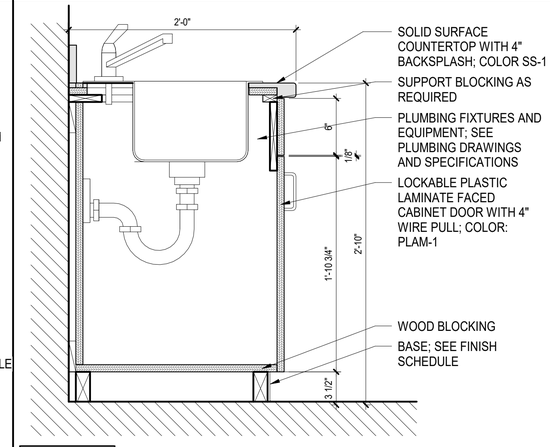
8 CABINET BASE - B6

A440 | 1 1/2" = 1'-0" | 4" 2" 0' 4" 8"



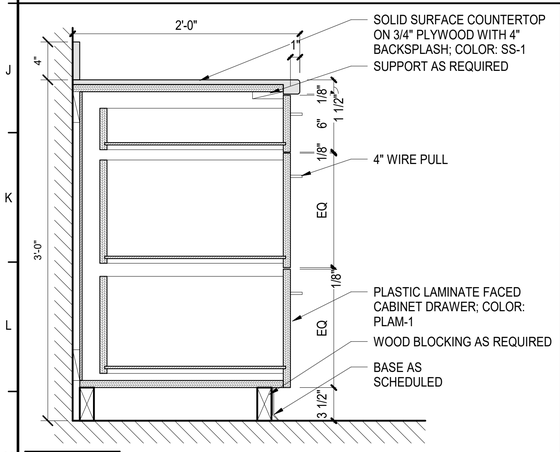
5 CABINET BASE - B4

A440 | 1 1/2" = 1'-0" | 6" 3" 0' 6" 1'



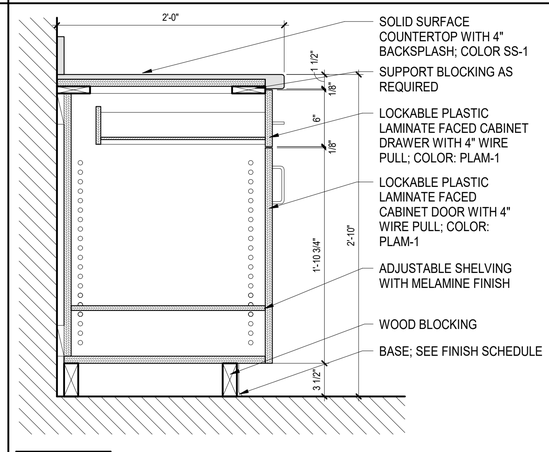
2 CABINET BASE - B2

A440 | 1 1/2" = 1'-0" | 6" 3" 0' 6" 1'



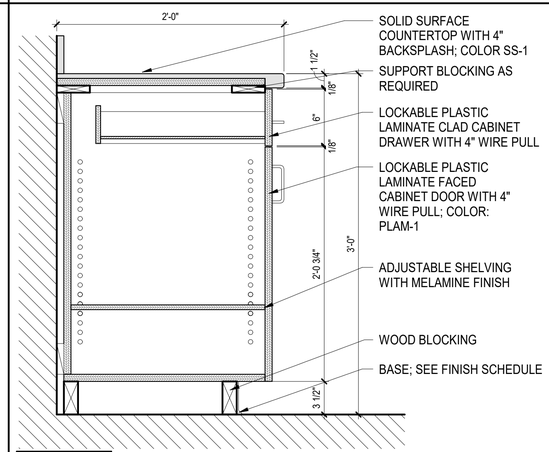
10 CABINET BASE - B7

A440 | 1 1/2" = 1'-0" | 4" 2" 0' 4" 8"



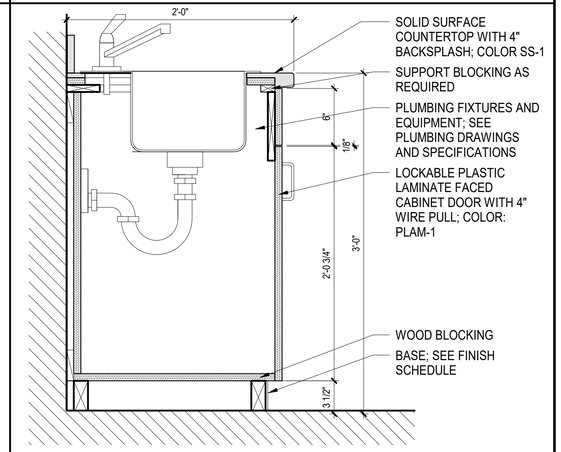
7 CABINET BASE - B5

A440 | 1 1/2" = 1'-0" | 4" 2" 0' 4" 8"



4 CABINET BASE - B3

A440 | 1 1/2" = 1'-0" | 6" 3" 0' 6" 1'



1 CABINET BASE - B1

A440 | 1 1/2" = 1'-0"

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PROJECT ISSUES:

SD - 1	09.29.2017
SD - 2	12.28.2017
ASD	03.16.2018
DD	04.06.2018
BLDG PERMIT SET	04.25.2018

PROJECT TEAM:

CIVIL:
REBOL BATTLE & ASSOCIATES

STRUCTURAL:
JOE DEREUIL ASSOCIATES

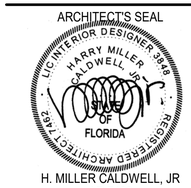
ARCHITECT:
CALDWELL ASSOCIATES ARCHITECTS

MEP / TELECOM:
W3 ENGINEERING

PROJECT:
LAKEVIEW CENTER/ COMMUNITY HEALTH NORTHWEST FLORIDA RENOVATION & ADDITION

6021 INDUSTRIAL BLVD #A
CENTURY, FLORIDA 32535

ARCHITECT'S SEAL

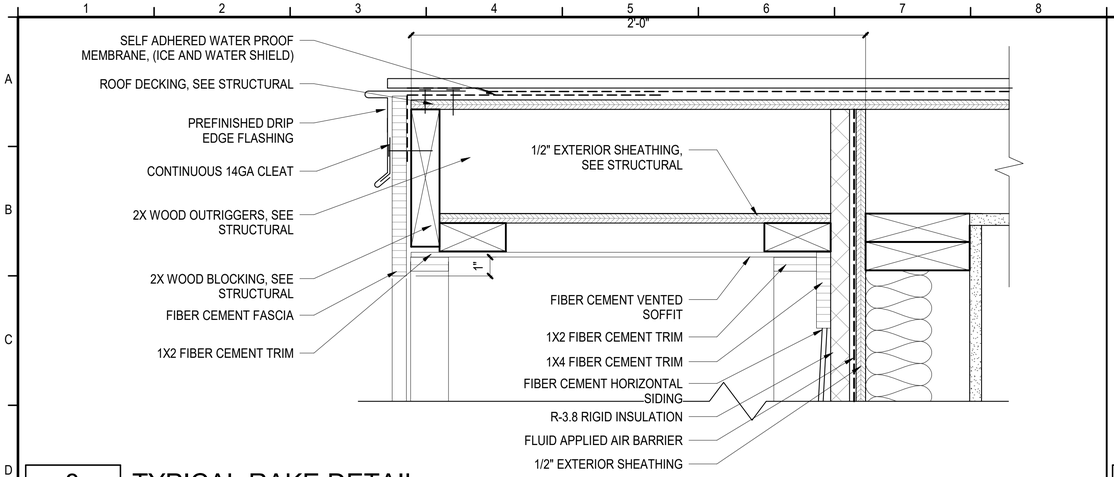


H. MILLER CALDWELL, JR
AR 7462

PROJECT NO. : 6617
SHEET TITLE:
CASEWORK DETAILS

SHEET NUMBER:
A440

BUILDING PERMIT SET



8 TYPICAL RAKE DETAIL

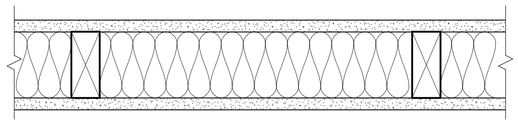
A201 | A501 — 3" = 1'-0"

STC-46 1-HR RATED PARTITION ULU314

- 5/8" GYPSUM BOARD BOTH SIDES
- WOOD STUDS AT 24" O.C.; SEE SIZES BELOW
- SOUND ATTENUATION BATTS BETWEEN STUDS
- EXTEND PARTITION TO UNDERSIDE OF GYPSUM HORIZONTAL ASSEMBLY
- IN ALL CORRIDORS, SEAL ALL PERIMETERS AND PENETRATIONS WITH FIRE CAULK AT THE FIRE-RATED GYPSUM BOARD ASSEMBLY

SEE 2/A501 FOR TOP OF WALL
SEE 2/A501 FOR BOTTOM OF WALL

A4: 2 x 4 WOOD STUD @ 24" O.C.
A6: 2 x 6 WOOD STUD @ 24" O.C.
A8: 2 x 8 WOOD STUD @ 24" O.C.



PLAN

6 WALL TYPE A

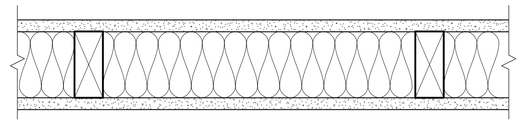
A501 — 3" = 1'-0"

STC-51 PARTITION

- 5/8" QUIETROCK TYPE X GYPSUM BOARD
- WOOD STUDS AT 24" O.C.; SEE SIZES BELOW
- SOUND ATTENUATION BATTS BETWEEN STUDS
- 5/8" TYPE X GYPSUM BOARD
- EXTEND PARTITION TO UNDERSIDE OF GYPSUM BOARD SMOKE LID

SEE 2/A501 FOR TOP OF WALL
SEE 2/A501 FOR BOTTOM OF WALL

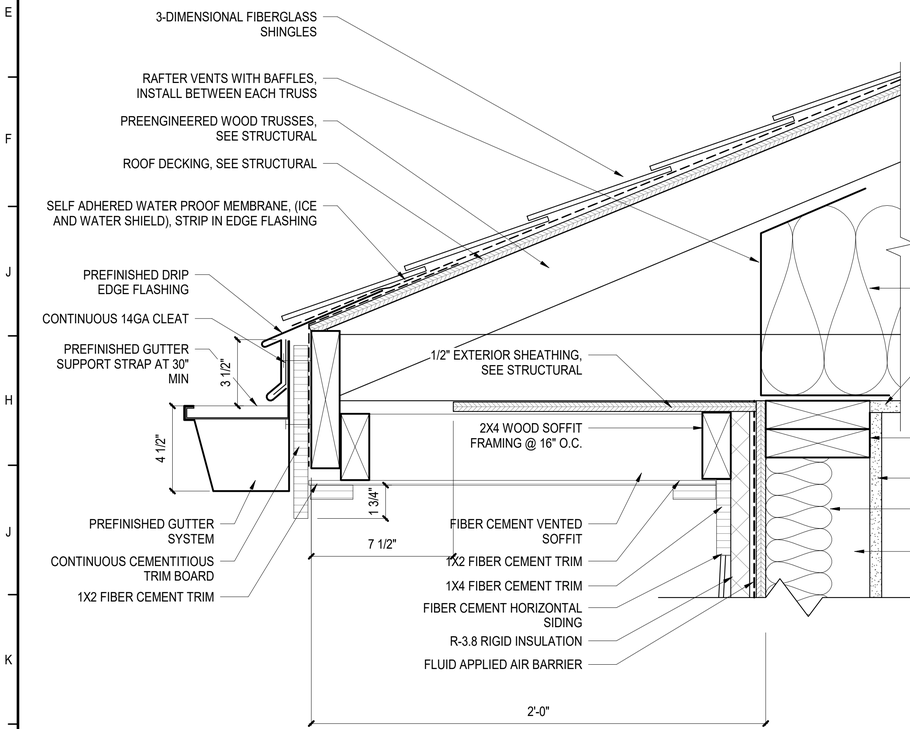
S4: 2 x 4 WOOD STUD @ 24" O.C.
S6: 2 x 6 WOOD STUD @ 24" O.C.



PLAN

3 WALL TYPE S

A501 — 3" = 1'-0"

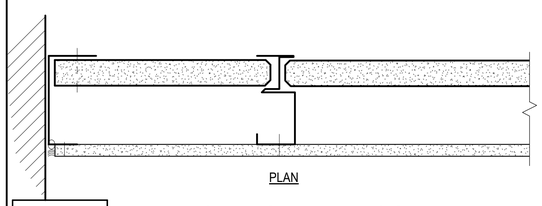


7 TYPICAL OVERHANG DETAIL

A310 | A501 — 3" = 1'-0"

1-HR RATED HORIZONTAL ASSEMBLY UL#U469

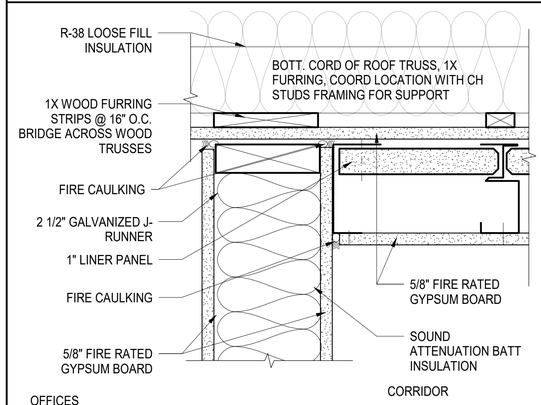
- 1" LINER PANEL
- 2 1/2" GALVANIZED J-RUNNER AT ENDS
- 2 1/2" 25GA. MIN. GALVANIZED CH STUDS 24" O.C. MAX.
- 5/8" FIRE RATED GYPSUM BOARD
- FIRE CAULK ALL PENETRATION AND PERIMETER JOINTS



PLAN

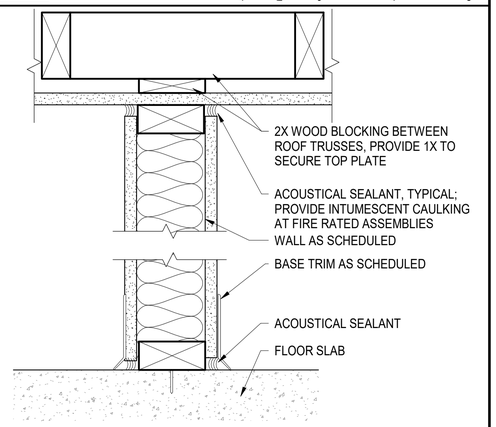
5 1HR HORIZONTAL ASSEMBLY

A501 — 3" = 1'-0"



4 1HR HORIZONTAL ASSEMBLY

A501 — 3" = 1'-0"



2 TYPICAL WALL SECTION

A501 — 3" = 1'-0"

WALL TYPE GENERAL NOTES

1. ALL INTERIOR PARTITIONS SHALL FOLLOW FBC SECTION 1607.14 (SHALL RESIST HORIZONTAL LOAD OF 5 PSF)
2. PROVIDE RESILIENT SEALANT AT ALL SOUND WALL ASSEMBLIES.
3. PROVIDE WATER RESISTANT GYPSUM WALLBOARD INSIDE FACES OF JANITOR CLOSETS, TOILET AND RESTROOMS.
4. PROVIDE TILE BACKERBOARD WHERE TILE INSTALLED ON WALLS (IF REQUIRED).
5. ALL INTERIOR PARTITIONS SHALL FOLLOW FBC SECTION 1607.14 (SHALL RESIST HORIZONTAL LOAD OF 5 PSF, AND AT TILE WALLS IT SHALL RESIST HORIZONTAL LOADS OF 10 PSF.)

GENERAL NOTES FOR FIRE RATED WALLS AND SMOKE PARTITIONS

1. PENETRATIONS FOR CABLES, CONDUITS, PIPES AND MECHANICAL DUCTS SHALL BE PROTECTED BY A SYSTEM OF MATERIAL THAT IS CAPABLE OF LIMITING THE TRANSFER OF SMOKE.

MARKING AND IDENTIFICATION FOR FIRE WALLS, FIRE BARRIERS AND SMOKE BARRIERS

1. WALL REQUIRED TO HAVE PROTECTED OPENINGS OR PENETRATIONS SHALL BE EFFECTIVELY AND PERMANENTLY IDENTIFIED WITH SIGNS OR STENCILING.
2. LOCATE IN ACCESSIBLE CONCEALED FLOOR, FLOOR-CEILING OR ATTIC SPACES;
3. LOCATE WITHIN 15 FT OF THE END OF EACH WALL AND AT INTERVALS NOT EXCEEDING 30 FT MEASURED HORIZONTALLY ALONG THE WALL OR PARTITION; AND
4. INCLUDE LETTERING NOT LESS THAN 3 INCHES IN HEIGHT WITH A MIN. 3/8" STROKE IN CONTRASTING COLOR INCORPORATING THE SUGGESTED WORDING. "FIRE AND/OR SMOKE BARRIER-PROTECT ALL OPENINGS" OR OTHER WORDING.

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LAKEVIEW CENTER/ COMMUNITY HEALTH NORTHWEST FLORIDA RENOVATION & ADDITION

6021 INDUSTRIAL BLVD #A
CENTURY, FLORIDA 32535

ARCHITECT'S SEAL
LICENSED INTERIOR DESIGNER 3848 HARRY MILLER CALDWELL JR STATE OF FLORIDA REGISTERED ARCHITECT 7462
H. MILLER CALDWELL, JR
AR 7462

PROJECT NO. : 6617
SHEET TITLE:
WALL DETAILS

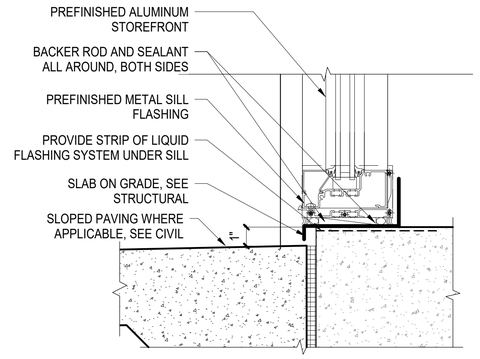
SHEET NUMBER:
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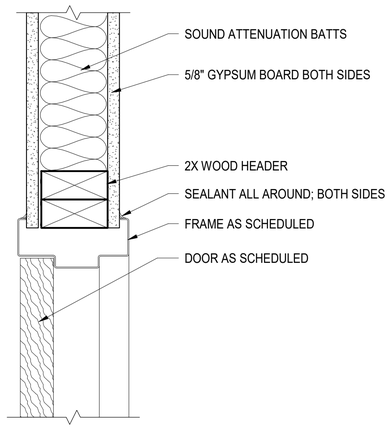
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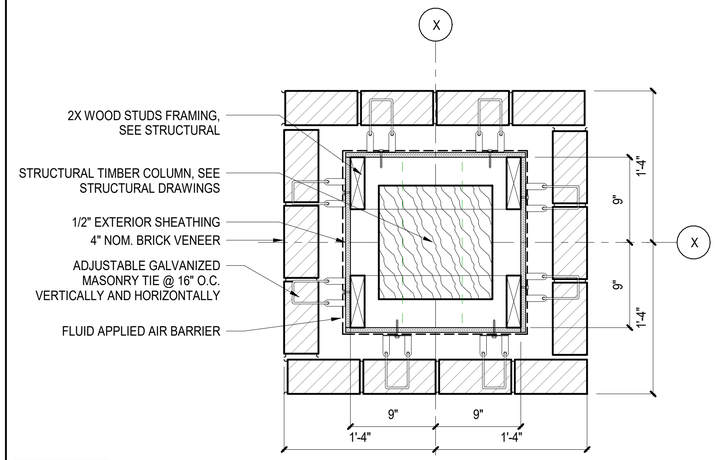
9 STOREFRONT SILL AT EXT

A502 — 3" = 1'-0"



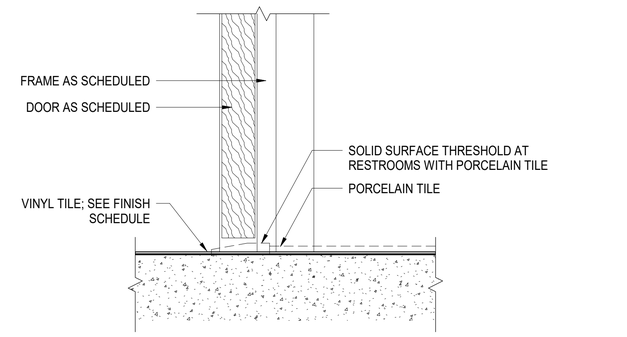
6 HM HEAD DETAIL

A502 — 3" = 1'-0"



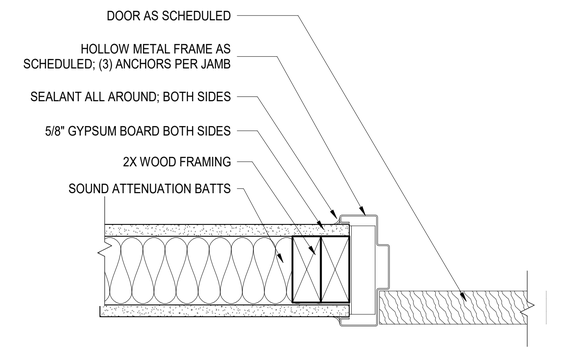
3 ENLARGED COLUMN DETAIL

A101 A502 — 1 1/2" = 1'-0"



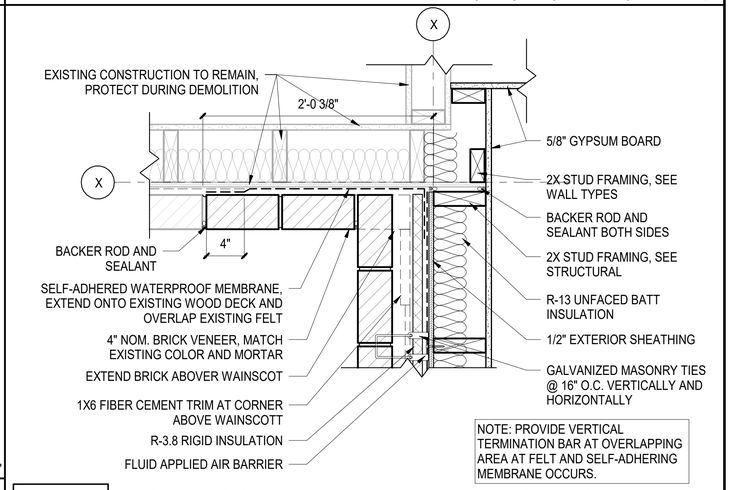
8 INTERIOR DOOR THRESHOLD DETAIL

A502 — 3" = 1'-0"



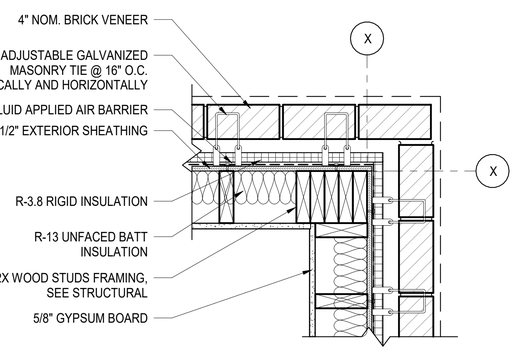
5 HM JAMB DETAIL

A502 — 3" = 1'-0"



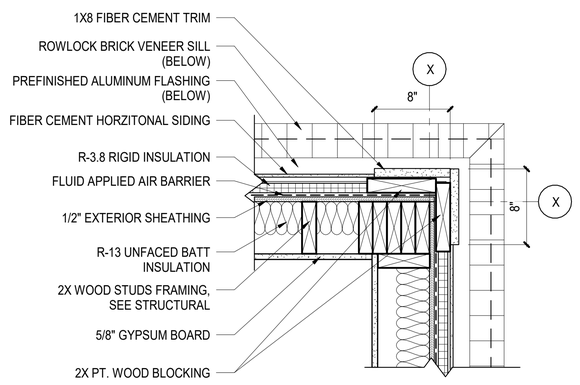
2 INSIDE CORNER DETAIL AT EXISTING WALL

A101 A502 — 1 1/2" = 1'-0"



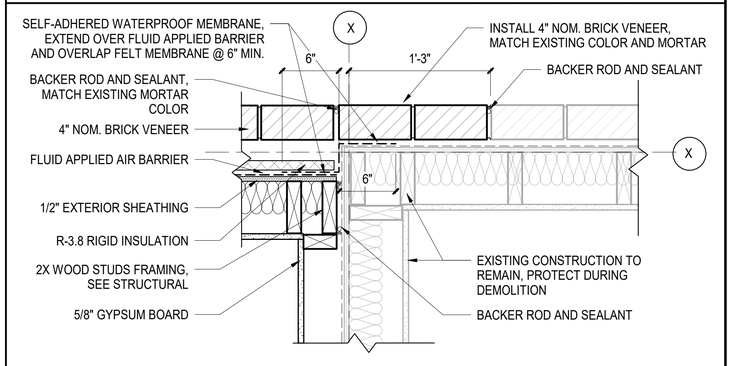
7 OUTSIDE CORNER AT VENEER

A101 A502 — 1 1/2" = 1'-0"



4 OUTSIDE CORNER AT VENEER

A101 A502 — 1 1/2" = 1'-0"



1 WALL TO WALL DETAIL AT EXISTING

A101 A502 — 1 1/2" = 1'-0"

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STRUCTURAL:
JOE DEREUIL ASSOCIATES

ARCHITECT:
CALDWELL ASSOCIATES ARCHITECTS

MEP / TELECOM:
W3 ENGINEERING

PROJECT:
LAKEVIEW CENTER/ COMMUNITY HEALTH NORTHWEST FLORIDA RENOVATION & ADDITION

6021 INDUSTRIAL BLVD #A
CENTURY, FLORIDA 32535

ARCHITECT'S SEAL
LIC. INTERIOR DESIGNER 3548 HARRY MILLER CALDWELL, JR REGISTERED ARCHITECT STATE OF FLORIDA
H. MILLER CALDWELL, JR
AR 7462

PROJECT NO. : 6617
SHEET TITLE:
MISCELLANOUS DETAILS

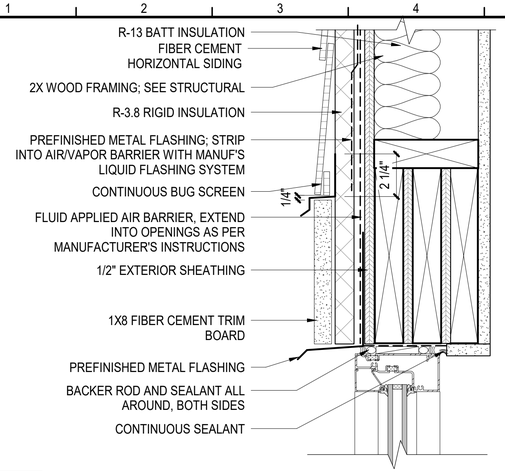
SHEET NUMBER:
A502

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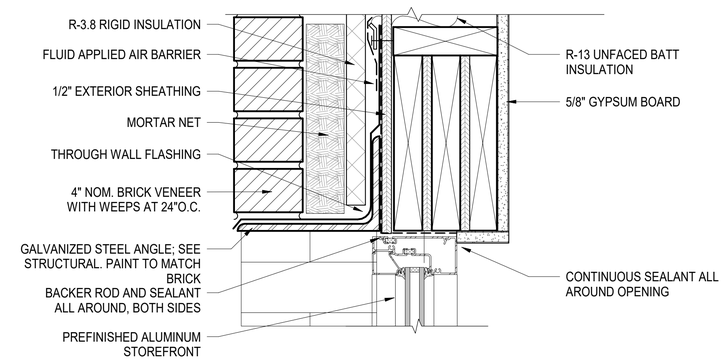
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7 STOREFRONT HD @ EXT - SIDING

A310 | A505 — 3" = 1'-0"

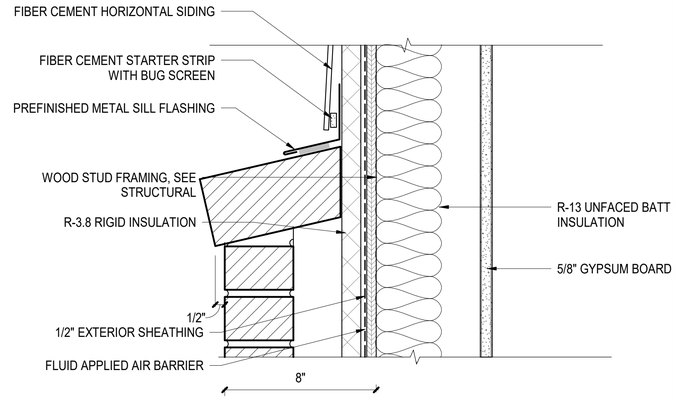
4" 2" 0' 4" 8"



4 SF HEAD AT VENEER

A505 — 3" = 1'-0"

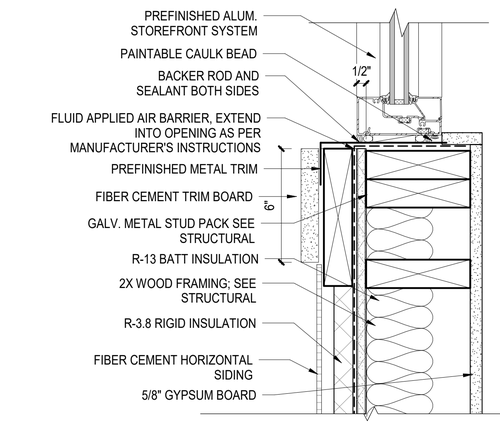
4" 2" 0' 4" 8"



1 TRANSITION SILL DETAIL

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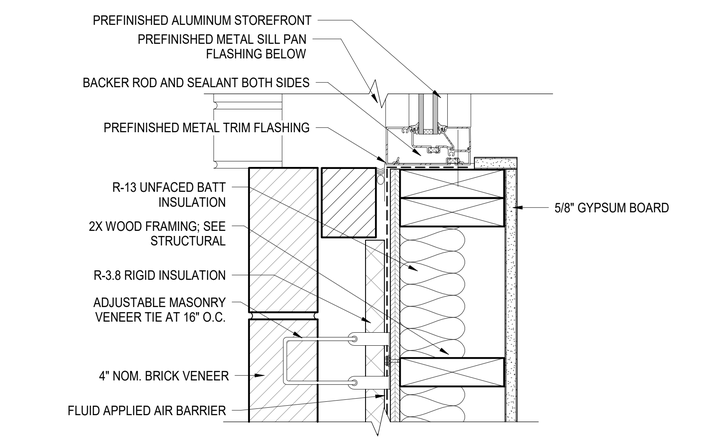
2" 1" 0' 2" 4"



8 STOREFRONT JAMB AT EXT - SIDING

A505 — 3" = 1'-0"

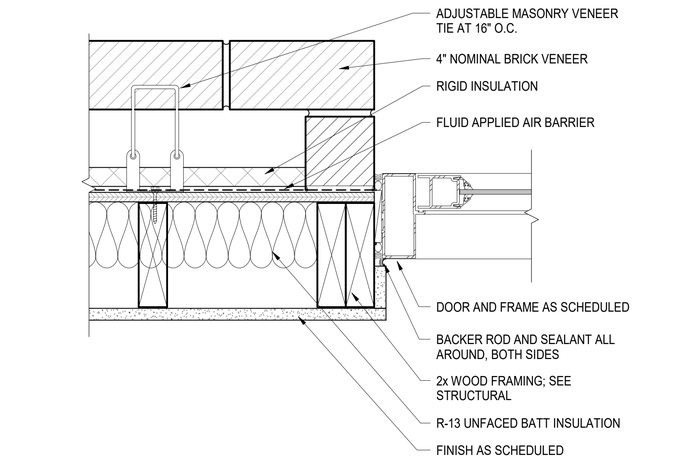
4" 2" 0' 4" 8"



5 SF JAMB DETAIL AT VENEER

A505 — 3" = 1'-0"

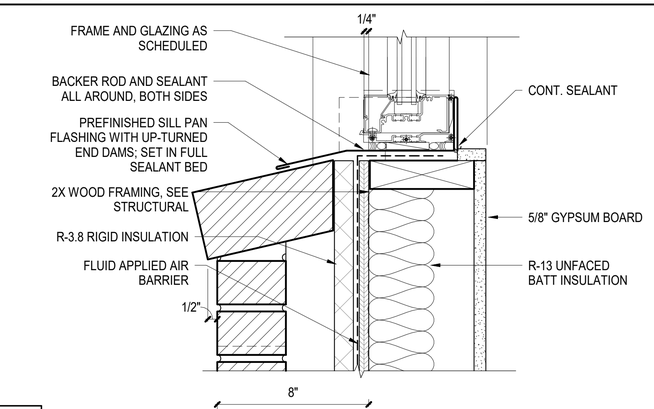
4" 2" 0' 4" 8"



2 STOREFRONT JAMB AT EXT

A505 — 3" = 1'-0"

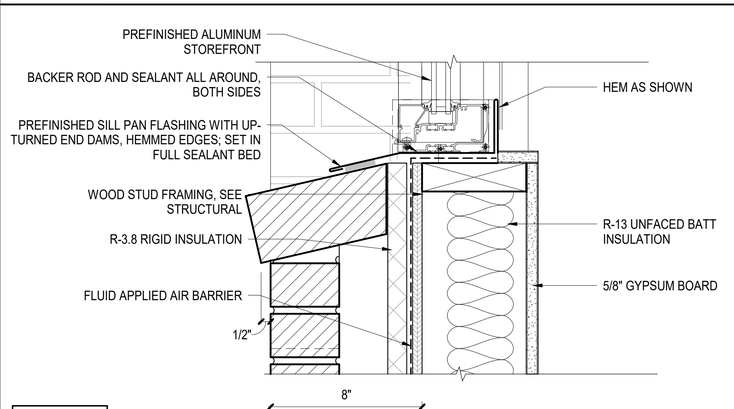
4" 2" 0' 4" 8"



9 STOREFRONT WINDOW SILL

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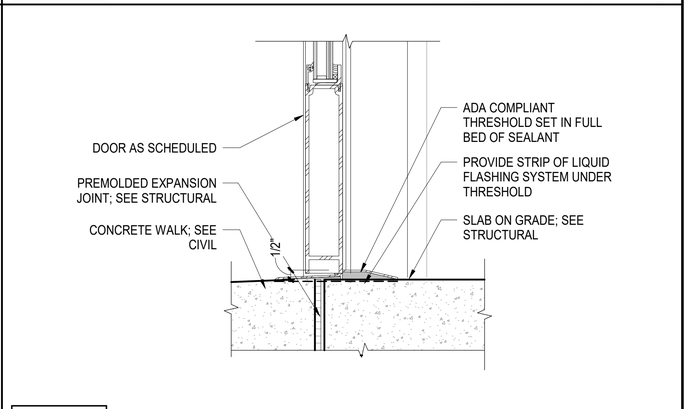
4" 2" 0' 4" 8"



6 SF SILL DETAIL AT VENEER

A505 — 3" = 1'-0"

4" 2" 0' 4" 8"



3 STOREFRONT SILL AT EXT

A505 — 3" = 1'-0"

4" 2" 0' 4" 8"

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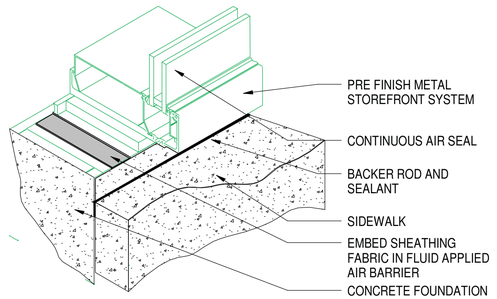
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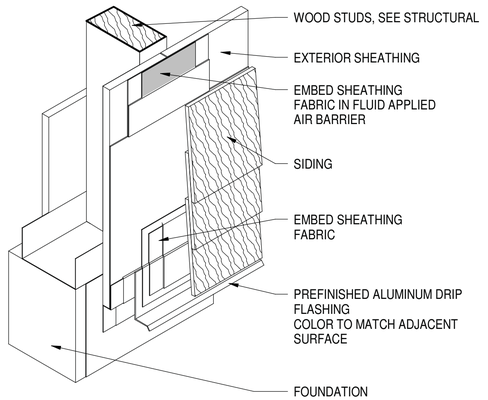
PROJECT NO. : 6617
SHEET TITLE:
WINDOW AND DOOR DETAILS

SHEET NUMBER:
A505

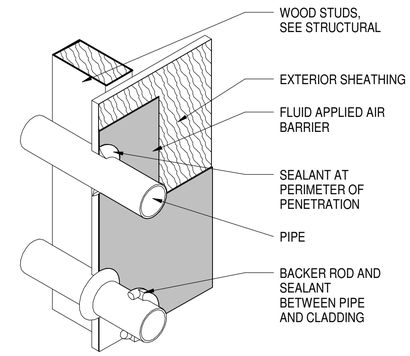
BUILDING PERMIT SET



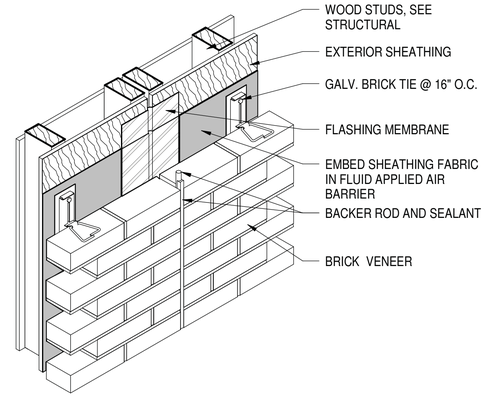
9 | A510 — TYPICAL WINDOW SILL
3" = 1'-0"



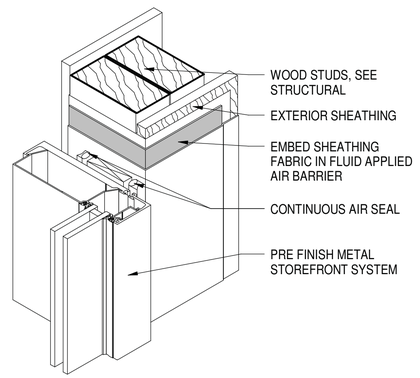
6 | A510 — TERM AT GRADE W/ CLADDING
3" = 1'-0"



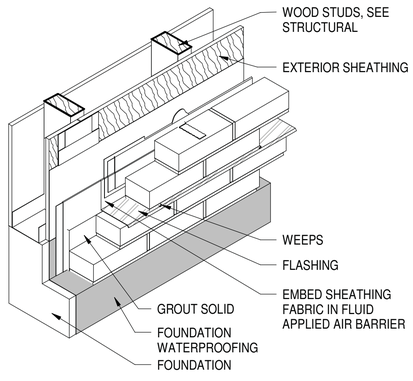
4 | A510 — PIPE PENETRATION SEALANT
3" = 1'-0"



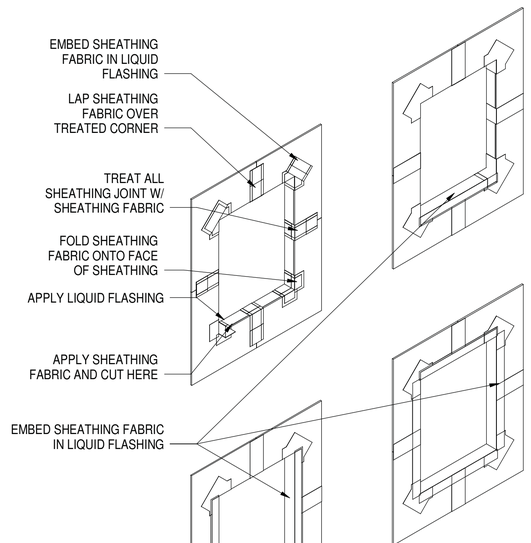
1 | A510 — TYP. BRICK EXPANSION JOINT
1 1/2" = 1'-0"



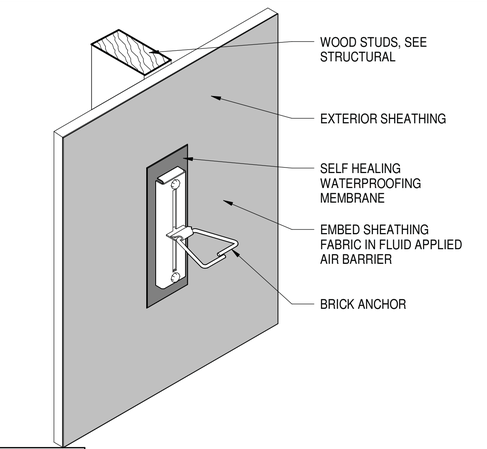
10 | A510 — TYPICAL WINDOW JAMB
3" = 1'-0"



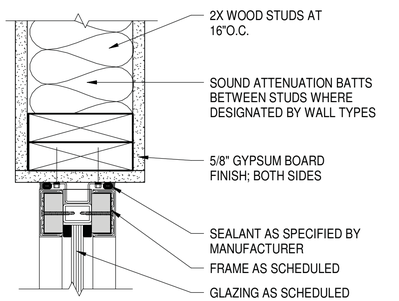
7 | A510 — TERM AT GRADE W/ BRICK
1 1/2" = 1'-0"



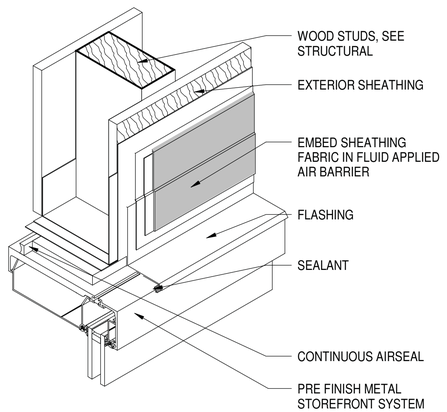
TYPICAL DETAIL AT OPENING AND SIDING BUTT JOINTS
5 | A510 — 1/2" = 1'-0"



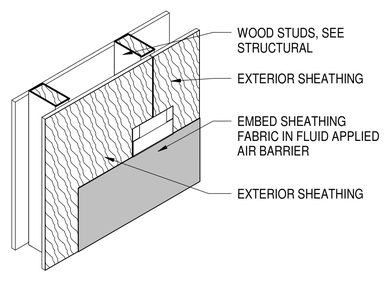
2 | A510 — TYP. BRICK ANCHOR ATTACH
3" = 1'-0"



11 | A510 — 45 MIN FIRE RATED GLAZING
3" = 1'-0"



8 | A510 — TYPICAL WINDOW HEAD
3" = 1'-0"



3 | A510 — JOINT FASTNER TREATMENT
1 1/2" = 1'-0"

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PROJECT ISSUES:

SD - 1	09.29.2017
SD - 2	12.28.2017
ASD	03.16.2018
DD	04.06.2018
BLDG PERMIT SET	04.25.2018

PROJECT TEAM:

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JOE DEREUIL ASSOCIATES

ARCHITECT:
CALDWELL ASSOCIATES ARCHITECTS

MEP / TELECOM:
W3 ENGINEERING

PROJECT:
LAKEVIEW CENTER/ COMMUNITY HEALTH NORTHWEST FLORIDA RENOVATION & ADDITION

6021 INDUSTRIAL BLVD #A
CENTURY, FLORIDA 32535

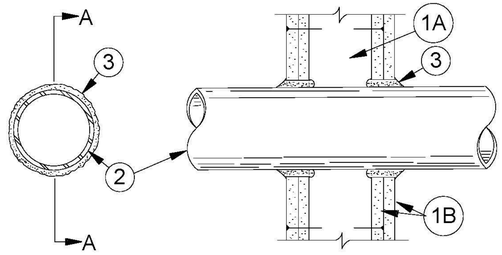
ARCHITECT'S SEAL
LICENSED INTERIOR DESIGNER 1848 · HARRY MILLER CALDWELL JR. · REGISTERED ARCHITECT 7462 · STATE OF FLORIDA
H. MILLER CALDWELL, JR
AR 7462

PROJECT NO. : 6617
SHEET TITLE:
TYPICAL AIR BARRIER DETAILS

SHEET NUMBER:
A510

BUILDING PERMIT SET

System No. W-L-1001
June 15, 2005
F Ratings - 1, 2, 3 and 4 Hr (See Items 2 and 3)
T Ratings - 0, 1, 2, 3, and 4 Hr (See Item 3)
L Rating At Ambient - less than 1 CFM/sq ft
L Rating At 400 F - less than 1 CFM/sq ft



SECTION A-A

5

1. Wall Assembly - The 1, 2, 3 or 4 hr fire-rated gypsum wallboard/stud wall assembly shall be constructed of the materials and in the manner described in the individual U300 or U400 Series Wall or Partition Designs in the UL Fire Resistance Directory and shall include the following construction features:

A. Studs - Wall framing may consist of either wood studs (max 2 h fire rated assemblies) or steel channel studs. Wood studs to consist of nom 2 by 4 in. (51 by 102 mm) lumber spaced 16 in. (406 mm) OC with nom 2 by 4 in. (51 by 102 mm) lumber end plates and cross braces. Steel studs to be min 3-5/8 in. (92 mm) wide by 1-3/8 in. (35 mm) deep channels spaced max 24 in. (610 mm) OC.

B. Gypsum Board* - Nom1/2 or 5/8 in. (13 or 16 mm) thick, 4 ft. (122 cm) wide with square or tapered edges. The gypsum wallboard type, thickness, number of layers, fastener type and sheet orientation shall be as specified in the individual U300 or U400 Series Design in the UL Fire Resistance Directory. Max diam of opening is 26 in. (660 mm).

2. Through-Penetrant - One metallic pipe, conduit or tubing installed either concentrically or eccentrically within the firestop system. The annular space between pipe, conduit or tubing and periphery of opening shall be min of 0 in / (0 mm). (point contact) to max 2 in. (51 mm) Pipe, conduit or tubing to be rigidly supported on both sides of wall assembly. The following types and sizes of metallic pipes, conduits or tubing may be used:

A. Steel Pipe - Nom 24 in. (610 mm) diam (or smaller) Schedule 10 (or heavier) steel pipe.

B. Iron Pipe - Nom 24 in. (610 mm) diam (or smaller) service weight (or heavier) cast iron soil pipe, nom 12 in (305 mm) diam (or smaller) or Class 50 (or heavier) ductile iron pressure pipe.

C. Conduit - Nom 6 in. (152 mm) diam (or smaller) steel conduit or nom 4 in (102 mm) diam (or smaller) steel electrical metallic tubing

D. Copper Tubing - Nom 6 in. (152 mm) diam (or smaller) Type L (or heavier) copper tubing

E. Copper Pipe - Nom 6 in. (152 mm) diam (or smaller) Regular (or heavier) copper pipe.

F. Through Penetrating Product* - Flexible Metal Piping The following types of steel flexible metal gas piping may be used:

1. Nom 2 in. (51 mm) diam (or smaller) steel flexible metal gas piping. Plastic covering on piping may or may not be removed on both sides of floor or wall assembly.
OMEGA FLEX INC

2. Nom 1 in. (25 mm) diam (or smaller) steel flexible metal gas piping. Plastic covering on piping may or may not be removed on both sides of floor or wall assembly.
GASTITE, DIV OF TITEFLEX

3. Nom 1 in. (25 mm) diam (or smaller) steel flexible metal gas piping. Plastic covering on piping may or may not be removed on both sides of floor or wall assembly.
WARD MFG INC

3. Fill, Void or Cavity Material* - Caulk or Sealant - Min 5/8. , 1-1/4,1-7/8 and 2-1/2 in. (16, 32, 48 and 64 mm) thickness of caulk for 1, 2, 3 and 4 hr rated assemblies, respectively, applied within annulus, flush with both surfaces of wall. Min 1/4 in. (6 mm) diam bead of caulk applied to gypsum board/penetrant interface at point contact location on both sides of wall. The hourly F Rating of the firestop system is dependent upon the hourly fire rating of the wall assembly in which it is installed, as shown in the following table. The hourly T Rating of the firestop system is dependent upon the type or size of the pipe or conduit and the hourly fire rating of the wall assembly in which it is installed, as tabulated below:

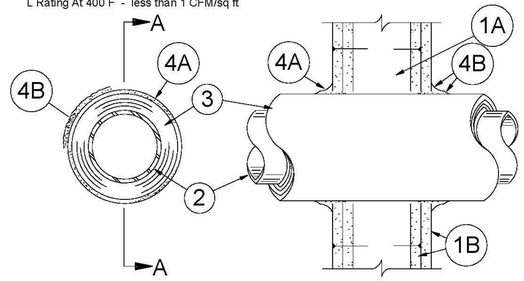
Maximum Pipe or Conduit Diameter Inches	F Rating Hour	F Rating Hour
1 (25)	1 or 2	0+, 1 or 2
1 (25)	3 or 4	3 or 4
4 (102)	1 or 2	0
6 (152)	3 or 4	0
12 (305)	1 or 2	0

+When copper pipe is used, T Rating is 0 h.
3M COMPANY - CP 25WB+ or FB-3000 WT.

*Bearing the UL Classification Mark Last Updated on 2005-06-15

UL Listed and Classified Products UL Recognized Components Products Certified for Canada

System No. W-L-5001
May 19, 2005
F Ratings - 1 and 2 Hr (See Item 1)
T Ratings - 3/4, 1 and 1-1/2 Hr (See Item 3)
L Rating At Ambient - 2 CFM/sq ft
L Rating At 400 F - less than 1 CFM/sq ft



SECTION A-A

6

1. Wall Assembly - The 1 or 2 hr fire-rated gypsum board/stud wall assembly shall be constructed of the materials and in the manner described in the individual U300, U400 or V400 Series Wall or Partition Design in the UL Fire Resistance Directory and shall include the following construction features:

A. Studs - Wall framing may consist of either wood studs or steel channel studs. Wood studs to consist of nom 2 by 4 in. (51 by 102 mm) lumber spaced 16 in. (406 mm) OC with nom 2 by 4 in. (51 by 102 mm) lumber end plates and cross braces. Steel studs to be min 3-5/8 in. (92 mm) wide by 1-3/8 in. (35 mm) deep channels spaced max 24 in. (610 mm) OC.

B. Gypsum Board* - Nom 5/8 in. (16 mm) thick, 4 ft (122 cm) wide with square or tapered edges. The gypsum board type, thickness, number of layers, fastener type and sheet orientation shall be as specified in the individual Design in the UL Fire Resistance Directory. Max diam of opening is 14-1/2 (368mm) in for wood stud walls and 18 in. (457 mm) for steel stud walls.
The hourly F Rating of the firestop system is 1 hr when installed in a 1 hr fire rated wall and 2 hr when installed in a 2 hr fire rated wall.

2. Through Penetrants - One metallic pipe or tubing to be centered within the firestop system. Pipe or tubing to be rigidly supported on both sides of wall assembly. The following types and sizes of metallic pipes or tubing may be used:

A. Steel Pipe - Nom 12 in. (305 mm) diam (or smaller) Schedule 10 (or heavier) steel pipe.

B. Copper Tubing - Nom 6 in. (152 mm) diam (or smaller) Type L (or heavier) copper tubing.

C. Copper Pipe - Nom 6 in. (152 mm) diam (or smaller) Regular (or heavier) copper pipe.

3. Pipe Covering* - Nom 1 or 2 in. (25 or 51 mm) thick hollow cylindrical heavy density (min 3.5 pcf or 56 kg/m3) glass fiber units jacketed on the outside with an all service jacket. Longitudinal joints sealed with metal fasteners or factory-applied self-sealing lap tape. Transverse joints sealed with metal fasteners or with butt strip tape supplied with the product. When nom 1 in. (25 mm) thick pipe covering is used, the annular space between the pipe covering and the circular cutout in the gypsum wallboard layers on each side of the wall shall be min 1/4 in. (6 mm) to max 3/8 in. (10 mm) When nom 2 in. (51 mm) thick pipe covering is used, the annular space between the pipe covering and the circular cutout in the gypsum board layers on each side of the wall shall be min 1/4 in. (13 mm) to max 3/4 in. (19 mm)
See Pipe and Equipment Covering Materials (BRGU) category in Building Materials Directory for names of manufacturers. Any pipe covering material meeting the above specifications and bearing the UL Classification Marking with a Flame Spread Index of 25 or less and a Smoke Developed Index of 50 or less may be used.
The hourly T Rating of the firestop system 3/4 hr when nom 1 in. (25 mm) thick pipe covering is used. The hourly T Rating of the firestop system is 1 hr and 1-1/2 hr when nom 2 in. (52 mm) thick pipe covering is used with 1 hr and 2 hr fire rated walls, respectively.

4. Firestop System - Installed symmetrically on both sides of wall assembly. The details of the firestop system shall be as follows:

A. Fill, Void or Cavity Materials* - Wrap Strip - Nom 1/4 in. (6 mm) thick intumescent elastomeric material faced on one side with aluminum foil, supplied in 2 in. (51 mm) wide strips. Nom 2 in. (51 mm) wide strip tightly wrapped around pipe covering (foil side out) with seam butted. Wrap strip layer securely bound with steel wire or aluminum foil tape and slid into annular space approx 1-1/4 in. (32 mm) such that approx 3/4 in. (19 mm) of the wrap strip width protrudes from the wall surface. One layer of wrap strip is required when nom 1 in. (25 mm) thick pipe covering is used. Two layers of wrap strip are required when nom 2 in. (51 mm) thick pipe covering is used.

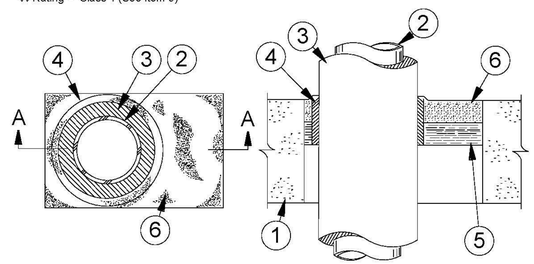
3M COMPANY - FS-195+

B. Fill, Void or Cavity Materials* - Caulk or Sealant — Min,in. (6 mm) diam continuous bead applied to the wrap strip/wall interface and to the exposed edge of the wrap strip layer approx 3/4 in. (19 mm) from the wall surface.
3M COMPANY - CP 25WB+, IC 15WB+, FireDam 150+ caulk or FB-3000 WT sealant

*Bearing the UL Classification Mark Last Updated on 2005-05-19

UL Listed and Classified Products UL Recognized Components Products Certified for Canada

System No. C-AJ-5017
August 23, 2004
(Formerly System No. 395)
F Rating - 3 Hr
T Ratings - 1/2 and 1 Hr (See Item 3)
L Rating At Ambient - less than 1 CFM/sq ft
L Rating At 400 F - less than 1 CFM/sq ft
W Rating - Class 1 (See Item 6)



SECTION A-A

3

1. Floor or Wall Assembly - Min 4-1/2 in. thick lightweight or normal weight (100-150 pcf) concrete. Wall may also be constructed of any UL Classified Concrete Blocks* Max area of square, rectangular or circular opening is 45 sq in. with max dimension of 9 in.
See Concrete Blocks (CAZT) category in the Fire Resistance Directory for names of manufacturers.

2. Pipe - Nom 3 in. diam (or smaller) Type L (or heavier) copper pipe or nom 2-1/2 in. diam (or smaller) Schedule 10 (or heavier) steel pipe. One or more insulated pipes may be installed with a min clearance ofin. maintained between insulated pipes and with a min clearance of,in. maintained between insulated pipe and sides of through opening. Pipes to be rigidly supported on both sides of floor or wall assembly.

3. Pipe Insulation - Plastics# - Nom 3/4 in. thick acrylonitrile butadiene/polyvinyl chloride (AB/PVC) flexible foam furnished in the form of tubing with skin. When nom 2-1/2 or 3 in. diam insulated steel or copper pipe is used, T Rating ishr. When max 2 in. diam insulated steel or copper pipe is used, T rating is 1 hr.
See Plastics# (QMFZ2) category in the Recognized Component Directory for names of manufacturers. Any Recognized Component tube insulation material meeting the above specifications and having a UL94 Flammability Classification of 94-5VA may be used.

4. Fill, Void or Cavity Materials* - Wrap Strip - Nom 1/4 in. thick intumescent elastomeric material faced on one side with aluminum foil, supplied in 2 in. wide strips. One nom 2 in. wide strip tightly-wrapped around pipe insulation (Item 3) with the foil side exposed and slid into through opening such that the top edge is flush with top surface of floor. When a single insulated pipe is installed in a circular through opening and when the max annular space between the insulated pipe and the sides of the through opening is...in., the wrap strip layer may be secured in place with pressure-sensitive tape. In all other situations, the wrap strip layer shall be secured in place with min No. 18 gauge galv steel tie wire. In wall assemblies, the wrap strip layer is to be installed on the insulated pipe in the same manner used for floor assemblies but shall be installed symmetrically on both sides of the wall.
3M COMPANY - Type FS-195+

5. Packing Material - Min 1 in. thick mineral wool batt insulation firmly packed into opening with its top surface recessed min 1 in. from top surface of the floor. In wall assemblies, packing material to be firmly packed into opening on both sides of wall and recessed min 1 in. from wall surface. When a single insulated pipe (with wrap strip layer) is installed in a circular through opening and when the max annular space between the wrap strip layer and the sides of the through opening is,in., no forming material is required.

6. Fill, Void or Cavity Materials* - Caulk or Sealant - Applied to fill through opening to a min depth of 1 in. In floor assemblies, fill material to be installed flush with top surface of floor. In wall assemblies, fill material to be installed flush with wall surface on both sides of wall.
3M COMPANY - CP 25WB+ or FB-3000 WT.

(Note - W Rating applies only when FB-3000 WT is used.)
*Bearing the UL Classification Mark
Last Updated on 2004-08-23

UL Listed and Classified Products UL Recognized ComponentsProducts Certified for Canada

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PROJECT ISSUES:

SD - 1	09.29.2017
SD - 2	12.28.2017
ASD	03.16.2018
DD	04.06.2018
BLDG PERMIT SET	04.25.2018

PROJECT TEAM:

CIVIL:
REBOL BATTLE & ASSOCIATES

STRUCTURAL:
JOE DEREUIL ASSOCIATES

ARCHITECT:
CALDWELL ASSOCIATES ARCHITECTS

MEP / TELECOM:
W3 ENGINEERING

PROJECT:
LAKEVIEW CENTER/ COMMUNITY HEALTH NORTHWEST FLORIDA RENOVATION & ADDITION

6021 INDUSTRIAL BLVD #A
CENTURY, FLORIDA 32535

ARCHITECT'S SEAL
LIC. INTERIOR DESIGNER #3848 HARRY MILLER CALDWELL JR REGISTERED ARCHITECT #462 STATE OF FLORIDA
H. MILLER CALDWELL, JR
AR 7462

PROJECT NO. : 6617
SHEET TITLE:
UL ASSEMBLIES

SHEET NUMBER:
A517

BUILDING PERMIT SET

PRINT DATE: 4/25/2018 9:39:52 AM

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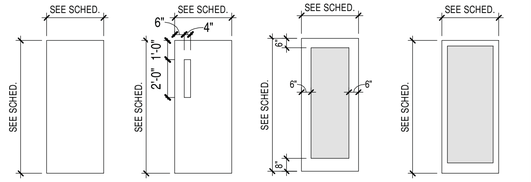
DO NOT SCALE DRAWINGS

DOOR SCHEDULE

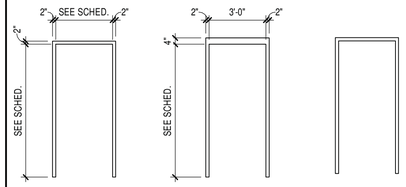
MARK	DOOR SIZE WIDTH	DOOR SIZE HEIGHT	DOOR SIZE THICKNESS	DOOR TYPE	DOOR MATERIAL	DOOR FINISH	DOOR UNDERCUT	DOOR GLAZING	FRAME TYPE	FRAME FINISH	FRAME DETAIL HEAD	FRAME DETAIL JAMB	FRAME DETAIL SILL	FIRE RATING	HARDWARE SET NO.	REMARKS
100A	6'-0"	8'-0"	1 3/4"	FG	ALUM	AL-1	-----	G2	-	AL-1	-	-	3/A505	-	HW-1	1
100B	3'-0"	7'-0"	1 3/4"	NV	WD	ST-1	-----	G5	HM-1	PT3	6/A502	5/A502	8/A502	45 MIN.	HW-6	
100C	3'-0"	7'-0"	1 3/4"	NV	WD	ST-1	-----	G5	HM-1	PT3	6/A502	5/A502	8/A502	45 MIN.	HW-6	
102	3'-0"	7'-0"	1 3/4"	F	WD	ST-1	-----		HM-1	PT3	6/A502	5/A502	8/A502	-	HW-2	
103	3'-0"	7'-0"	1 3/4"	F	WD	ST-1	-----		HM-1	PT3	6/A502	5/A502	8/A502	-	HW-2	
104	3'-0"	7'-0"	1 3/4"	F	WD	ST-1	-----		HM-1	PT7	6/A502	5/A502	8/A502	45 MIN.	HW-3	
106A	3'-0"	7'-0"	1 3/4"	NV	WD	ST-1	-----	G5	HM-1	PT3	6/A502	5/A502	8/A502	45 MIN.	HW-6	
106B	3'-0"	7'-0"	1 3/4"	NV	WD	ST-1	-----	G5	HM-1	PT3	6/A502	5/A502	8/A502	45 MIN.	HW-6	
107	3'-0"	7'-0"	1 3/4"	F	WD	ST-1	-----		HM-1	PT10	6/A502	5/A502	8/A502	45 MIN.	HW-3	
109	3'-0"	7'-0"	1 3/4"	F	WD	ST-1	-----		HM-1	PT10	6/A502	5/A502	8/A502	45 MIN.	HW-3	
110	3'-0"	7'-0"	1 3/4"	F	WD	ST-1	-----		HM-1	PT10	6/A502	5/A502	8/A502	45 MIN.	HW-7	
111	3'-0"	7'-0"	1 3/4"	F	WD	ST-1	-----		HM-1	PT10	6/A502	5/A502	8/A502	45 MIN.	HW-7	
112	3'-0"	7'-0"	1 3/4"	F	WD	ST-1	-----		HM-1	PT10	6/A502	5/A502	8/A502	45 MIN.	HW-4	
113	3'-0"	7'-0"	1 3/4"	F	WD	ST-1	-----		HM-1	PT10	6/A502	5/A502	8/A502	45 MIN.	HW-7	
114	3'-0"	7'-0"	1 3/4"	F	WD	ST-1	-----		HM-1	PT10	6/A502	5/A502	8/A502	45 MIN.	HW-7	
115	3'-0"	7'-0"	1 3/4"	F	WD	ST-1	-----		HM-1	PT10	6/A502	5/A502	8/A502	45 MIN.	HW-7	
116	3'-0"	7'-0"	1 3/4"	FG	ALUM	AL-1	-----	G2	SF-1	AL-1	7/A505	8/A505	3/A505	-	HW-1	1
117	3'-0"	7'-0"	1 3/4"	F	WD	ST-1	-----		HM-1	PT10	6/A502	5/A502	8/A502	45 MIN.	HW-4	
119	3'-0"	7'-0"	1 3/4"	F	WD	ST-1	-----		HM-1	PT3	6/A502	5/A502	8/A502	45 MIN.	HW-4	
120	3'-0"	7'-0"	1 3/4"	F	WD	ST-1	-----		HM-1	PT3	6/A502	5/A502	8/A502	45 MIN.	HW-5	
121	3'-0"	7'-0"	1 3/4"	F	WD	ST-1	-----		HM-1	PT3	6/A502	5/A502	8/A502	45 MIN.	HW-5	
122	3'-0"	7'-0"	1 3/4"	F	WD	ST-1	-----		HM-1	PT3	6/A502	5/A502	8/A502	90 MIN.	HW-8	
123	3'-0"	7'-0"	1 3/4"	F	WD	ST-1	-----		HM-1	PT3	6/A502	5/A502	8/A502	45 MIN.	HW-5	
124	3'-0"	7'-0"	1 3/4"	F	WD	ST-1	-----		HM-1	PT7	6/A502	5/A502	8/A502	45 MIN.	HW-2	
126A	5'-0"	7'-0"	1 3/4"	NV (x2)	WD	ST-1	-----	G5	HM-1	PT3	6/A502	5/A502	8/A502	-	HW-8	
127	3'-0"	7'-0"	1 3/4"	F	WD	ST-1	-----		HM-1	PT7	6/A502	5/A502	8/A502	45 MIN.	HW-4	
131	3'-0"	7'-0"	1 3/4"	F	WD	ST-1	-----		HM-1	PT7	6/A502	5/A502	8/A502	45 MIN.	HW-5	
132	3'-0"	7'-0"	1 3/4"	F	WD	ST-1	-----		HM-1	PT7	6/A502	5/A502	8/A502	45 MIN.	HW-5	
133	3'-0"	7'-0"	1 3/4"	F	WD	ST-1	-----		HM-1	PT7	6/A502	5/A502	8/A502	45 MIN.	HW-4	
134	3'-0"	7'-0"	1 3/4"	F	WD	ST-1	-----		HM-1	PT7	6/A502	5/A502	8/A502	45 MIN.	HW-4	
135	3'-0"	7'-0"	1 3/4"	F	WD	ST-1	-----		HM-1	PT7	6/A502	5/A502	8/A502	45 MIN.	HW-5	
136	3'-0"	7'-0"	1 3/4"	F	WD	ST-1	-----		HM-1	PT7	6/A502	5/A502	8/A502	45 MIN.	HW-4	
137	3'-0"	7'-0"	1 3/4"	FG	ALUM	AL-1	-----	G2	SF-1	AL-1	7/A505	8/A505	3/A505	-	HW-1	1
138	3'-0"	7'-0"	1 3/4"	F	WD	ST-1	-----		HM-1	PT3	6/A502	5/A505	8/A502	90 MIN.	HW-4	
141A	3'-0"	7'-0"	1 3/4"	FG	ALUM	AL-1	-----	G2	SF-1	AL-1	7/A505	8/A505	3/A505	-	HW-1	1
141B	3'-0"	7'-0"	1 3/4"	NV	WD	ST-1	-----	G5	HM-1	PT3	6/A502	5/A502	8/A502		HW-4	
142A	3'-0"	7'-0"	1 3/4"	FG	AUM	AL-1	-----	G2	SF-1	AL-1	4/A505	2/A505	3/A505	-	HW-4	
142B	3'-0"	7'-0"	1 3/4"	NV	WD	ST-1	-----	G5	HM-1	PT3	6/A502	5/A502	8/A502		HW-4	
143	3'-0"	7'-0"	1 3/4"	NV	WD	ST-1	-----	G5	HM-1	PT3	6/A502	5/A502	8/A502		HW-4	
150	5'-0"	7'-0"	1 3/4"	F (x2)	HM	PT	-----		HM-2	PT3	4/A505	2/A505	3/A505		HW-9	

EXISTING DOOR FRAMES:
E128, E129, E130 - FRAMES PAINT PT7
E144, E145, E103,E148, E149, MECHANICAL CLOSET - FRAMES PAINT PT3

DOOR TYPES



FRAME TYPES



HARDWARE SETS

SET #1:
ALL DOOR HARDWARE PROVIDED BY MFG; COORDINATE WITH SECURITY ENGINEERING FOR ACCESS CONTROL REQUIREMENTS

SET #2:
(3) HINGES
(1) PRIVACY SET LOCK
(3) SILENCERS
(1) CLOSER
(1) DOOR STOP

SET #3:
(3) HINGES
(1) ENTRANCE LOCK
(1) CLOSER
(1) GASKETING
(1) DOOR STOP

SET #4:
(3) HINGES
(1) CLASSROOM LOCK
(1) CLOSER
(1) GASKETING
(1) DOOR STOP

SET #5:
(3) HINGES
(1) PASSAGE LOCK
(1) CLOSER
(1) GASKETING
(1) DOOR STOP

SET #6:
(3) HINGES
(1) PRIVACY SET LOCK
(1) CLOSER WITH OVERHEAD STOP
(1) GASKETING

SET #7:
(3) HINGES
(1) PASSAGE LOCK
(1) CLOSER WITH OVERHEAD STOP
(1) GASKETING

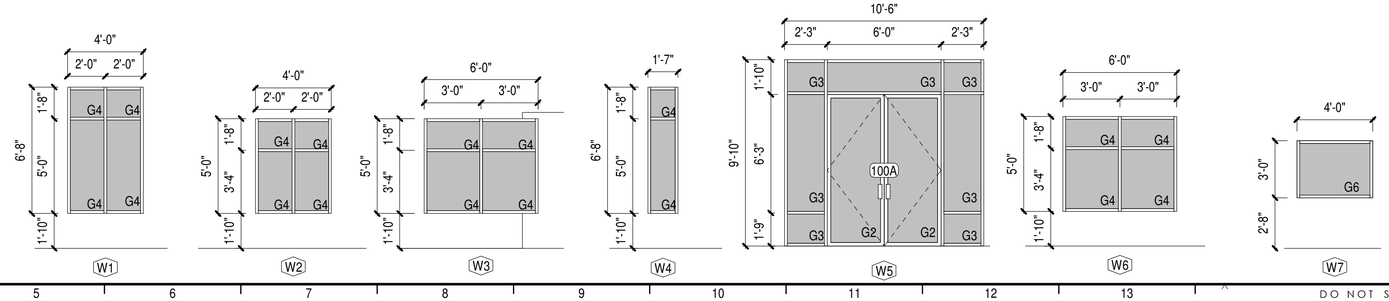
SET #8:
(6) HINGES
(2) EXIT DEVICES
(2) CLOSERS WITH OVERHEAD STOP
(1) GASKETING

SET #9:
(6) HINGES
(2) CLASSROOM LOCKS
(2) CLOSERS WITH OVERHEAD STOP
(1) THRESHOLD

WINDOW SCHEDULE

MARK	DIMENSIONS L	DIMENSIONS H	FINISHES FIN	FINISHES MAT	DETAILS HEAD	DETAILS JAMB	DETAILS SILL	Glazing Type	Fire Rating	REMARKS
W1	4'-0"	6'-8"	AL-1	ALUM	7/A505	8/A505	9/A505	SEE ELEV.		
W2	4'-0"	5'-0"	AL-1	ALUM	7/A505	8/A505	9/A505	SEE ELEV.		
W3	6'-0"	5'-0"	AL-1	ALUM	4/A505	5/A505	6/A505	SEE ELEV.		
W4	1'-7"	6'-8"	AL-1	ALUM	7/A505	8/A505	9/A505	SEE ELEV.		
W5	10'-6"	9'-10"	AL-1	ALUM	7/A505	8/A505	9/A502	SEE ELEV.		
W6	6'-0"	5'-0"	AL-1	ALUM	4/A505	5/A505	6/A505	SEE ELEV.		
W7	4'-0"	3'-0"	AL-1	ALUM	11/A510	11/A510	11/A510	SEE ELEV.	45 MIN.	

WINDOW ELEVATIONS



ABBREVIATIONS

ALUM	ALUMINUM
F	FLUSH
FF	FACTORY FINISH
FG	FULL GLASS
HG	HALF GLASS
HM	HOLLOW METAL
IN ST	INSULATED STEEL
L	LOUVER
MANUF	MANUFACTURER PROVIDED FRAME/ MANUFACTURER DETERMINED DETAIL
NV	NARROW VIEW
OHCD	OVER HEAD COILING DOOR
OHCG	OVER HEAD COILING GRILLE
OHSD	OVER HEAD SECTIONAL DOOR
PLAM	PLASTIC LAMINATE
P	PAINT - T.B.D.
SCWD	SOLID CORE WOOD DOOR
SF	STOREFRONT

GLAZING INDEX

G1	1/4" TEMPERED GLAZING PER FBC 2406, CLEAR
G2	9/16" LAMINATED GLAZING, LARGE MISSLE IMPACT-RESISTANT, TEMPERED PER FBC 2406; TINTED REFLECTIVE COATED
G3	1 5/16" INSULATED GLAZING, LARGE MISSLE IMPACT-RESISTANT, TEMPERED PER FBC 2406; TINTED REFLECTIVE COATED, LOW-E
G4	1 5/16" INSULATED GLAZING, LARGE MISSLE IMPACT-RESISTANT, PLATE GLASS; TINTED REFLECTIVE COATED, LOW-E
G5	1/4" TEMPERED GLAZING FIRE RATED TO MATCH RATING OF FIRE DOOR, SHALL MEET NFPA 80 REQUIREMENTS
G6	FIRE RATED TO MATCH RATING OF FRAME, SHALL MEET ASTM E119 REQUIREMENTS

REMARKS

1. ACCESS CONTROL DEVICE TO BE INSTALLED BY OWNER DIRECTED CONTRACTOR. COORDINATE WITH TRADE PRIOR TO FINAL INSTALLATION.

GENERAL NOTES

1. CONTRACTOR SHALL PERFORM A PREINSTALLATION MEETING TO VERIFY THAT ALL TRADES HAVE BEEN COORDINATED FOR ACCESS CONTROL DEVICES AND HARDWARE INSTALLATION WITH OWNER'S SUBCONTRACTOR
2. CONTRACTOR SHALL SUBMIT FLORIDA PRODUCT APPROVAL INFORMATION WITH ALL SUBMITTALS.
3. DOOR AND WINDOWS SHALL BE INSTALLED PER FLORIDA PRODUCT APPROVED FASTENERS AND MANUFACTURER'S INSTRUCTIONS TO MEET THE DESIGN WIND PRESSURES.
4. REFER TO STRUTURAL DRAWINGS FOR ADDITIONAL INFORMATION FOR WIND PRESSURES.
5. CONTRACTOR SHALL FIELD DIMENSIONS ALL FINAL ERECTED OPENING PRIOR TO INSTALLATION
6. EXTERIOR HOLLOW METAL DOORS AND FRAMES SHALL BE GALVANIZED AND DOOR FULLY INSULATED AS SPECIFIED.
7. SUBMIT FLORIDA PRODUCT APPROVAL TO MEET IMPACT RATING AND GLAZING REQUIREMENTS PER THE FLORIDA BUILDING CODE.
8. EXTERIOR DOORS HAVING ACCESS CONTROL DEVICES SHALL BEE COORDINATED OWNER'S DIRECTED CONTRACTOR.

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ARCHITECT:
CALDWELL ASSOCIATES ARCHITECTS

MEP / TELECOM:
W3 ENGINEERING

PROJECT:
LAKEVIEW CENTER/ COMMUNITY HEALTH NORTHWEST FLORIDA RENOVATION & ADDITION

6021 INDUSTRIAL BLVD #A
CENTURY, FLORIDA 32535

ARCHITECT'S SEAL
HARRY MILLER CALDWELL JR. LIC. INTERIOR DESIGNER 3848 REGISTERED ARCHITECT 7462 STATE OF FLORIDA
H. MILLER CALDWELL, JR
AR 7462

PROJECT NO. : 6617
SHEET TITLE:
DOOR & WINDOW SCHEDULE

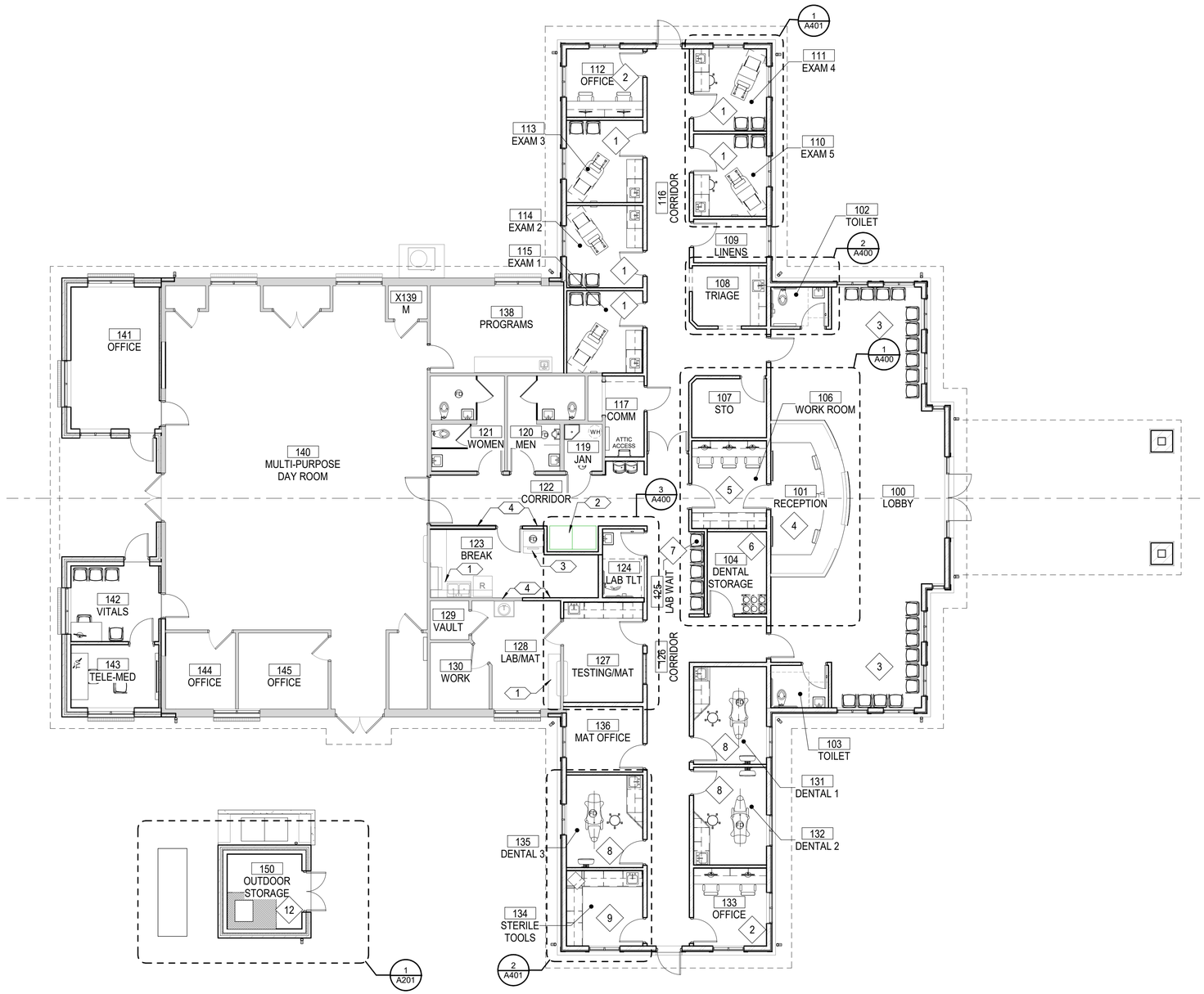
SHEET NUMBER:
A600

BUILDING PERMIT SET

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1 FLOOR PLAN - FURNITURE

I101 1/8" = 1'-0"

8' 4' 0' 8' 16'

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FURNITURE & EQUIPMENT SCHEDULE

1
- (2) UPHOLSTERED CHAIRS; SUBMIT PRODUCT DATA & SAMPLES FOR ARCHITECT'S APPROVAL

OWNER FURNISHED, CONTRACTOR INSTALLED:
- (1) WALL-MOUNTED WELCH-ALLYN GS777 INTEGRATED DIAGNOSTIC SYSTEM; MODEL # 77792-M

OWNER FURNISHED, OWNER INSTALLED:
- (1) RITTER 204 MANUAL EXAMINATION TABLE
- (1) RITTER 274 PHYSICIAN STOOL

2
- (2) OFFICE CHAIRS; SUBMIT PRODUCT DATA & SAMPLES FOR ARCHITECT'S APPROVAL

OWNER FURNISHED, CONTRACTOR INSTALLED:
- NONE

OWNER FURNISHED, OWNER INSTALLED:
- (2) COMPUTER SYSTEMS

3
- (10) UPHOLSTERED CHAIRS; SUBMIT PRODUCT DATA & SAMPLES FOR ARCHITECT'S APPROVAL
- (1) END-TABLE; SUBMIT PRODUCT DATA & SAMPLES FOR ARCHITECT'S APPROVAL

4
- (3) OFFICE CHAIRS; SUBMIT PRODUCT DATA & SAMPLES FOR ARCHITECT'S APPROVAL

OWNER FURNISHED, CONTRACTOR INSTALLED:
- (2) WALL-MOUNTED TELEVISIONS; VERIFY SIZE PRIOR TO INSTALLING WALL BLOCKING

OWNER FURNISHED, OWNER INSTALLED:
- (3) COMPUTER SYSTEMS

5
- (3) OFFICE CHAIRS; SUBMIT PRODUCT DATA & SAMPLES FOR ARCHITECT'S APPROVAL

OWNER FURNISHED, CONTRACTOR INSTALLED:
- NONE

OWNER FURNISHED, OWNER INSTALLED:
- (3) COMPUTER SYSTEMS

6
OWNER FURNISHED, CONTRACTOR INSTALLED:
- FWF MEDICAL PRODUCTS INLINE OXYGEN CYLINDER WALL MOUNT RACK MODEL #7503-6. PROVIDE BLOCKING IN WALL AS REQUIRED;

7
- (5) UPHOLSTERED CHAIRS; SUBMIT PRODUCT DATA & SAMPLES FOR ARCHITECT'S APPROVAL

8
OWNER FURNISHED, CONTRACTOR INSTALLED:
- (1) BLOCKING IN WALL (SEE BELOW)

OWNER FURNISHED, OWNER INSTALLED:
- (1) PELTON & CRANE SPIRIT 1704 DENTAL CHAIR
- (1) RITTER 277 AIR LIFT STOOL
- (1) WALL MOUNTED COMPUTER SYSTEM; GENERAL CONTRACTOR TO. PROVIDE BLOCKING IN WALL AS REQUIRED

9
OWNER FURNISHED, OWNER INSTALLED:
- (1) ULTRASONIC CLEANER
- (1) RITTER M11 ULTRACLAVE® AUTOMATIC STERILIZER

10
- (4) UPHOLSTERED CHAIRS; SUBMIT PRODUCT DATA & SAMPLES FOR ARCHITECT'S APPROVAL
- (1) OFFICE CHAIR; SUBMIT PRODUCT DATA & SAMPLES FOR ARCHITECT'S APPROVAL

OWNER FURNISHED, CONTRACTOR INSTALLED:
- NONE

OWNER FURNISHED, OWNER INSTALLED:
- (1) DESK
- (1) COMPUTER SYSTEM

11
- (2) UPHOLSTERED CHAIRS; SUBMIT PRODUCT DATA & SAMPLES FOR ARCHITECT'S APPROVAL
- (1) OFFICE CHAIR; SUBMIT PRODUCT DATA & SAMPLES FOR ARCHITECT'S APPROVAL

OWNER FURNISHED, CONTRACTOR INSTALLED:
- NONE

OWNER FURNISHED, OWNER INSTALLED:
- (1) DESK
- (1) COMPUTER SYSTEM
- (1) TABLE
- (1) TV

12
OWNER FURNISHED, CONTRACTOR INSTALLED:
- (1) MIDMARK POWERAIR OIL-LESS AIR COMPRESSOR; MODEL P32
- (1) WHIRLWIND VACUUM PUMP

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PROJECT:
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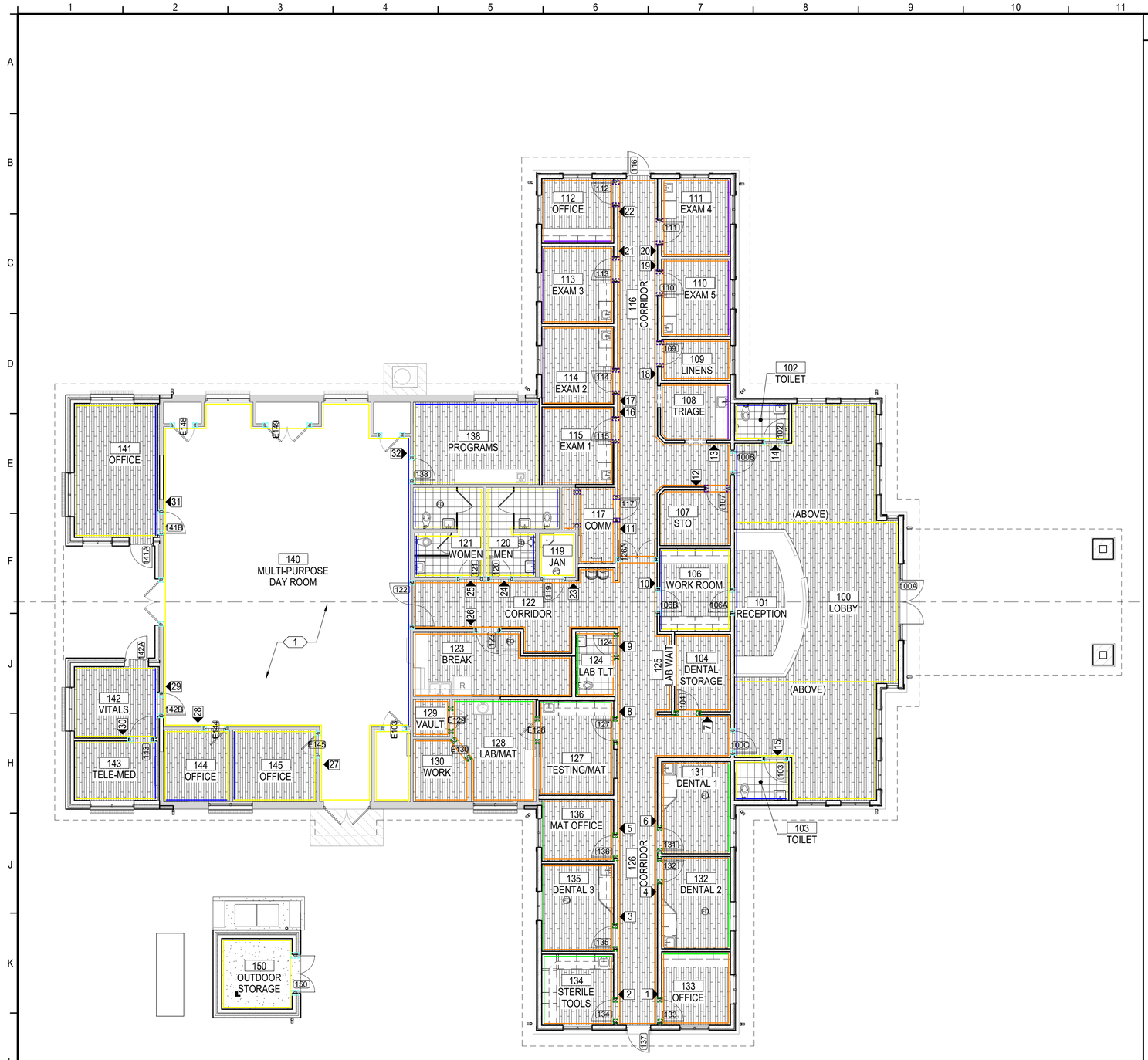
6021 INDUSTRIAL BLVD #A
CENTURY, FLORIDA 32535

ARCHITECT'S SEAL
LIC. INTERIOR DESIGNER 1848 HARRY MILLER CALDWELL JR STATE OF FLORIDA REGISTERED ARCHITECT 7462
H. MILLER CALDWELL, JR
AR 7462

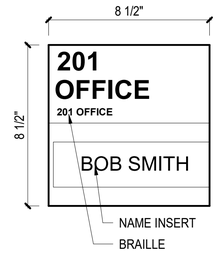
PROJECT NO. : 6617
SHEET TITLE:
FURNITURE PLAN

SHEET NUMBER:
I101

BUILDING PERMIT SET

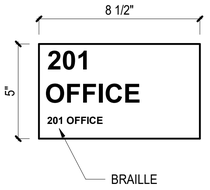


SIGNAGE TYPES

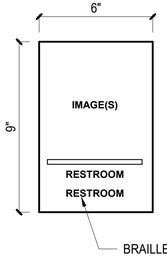


SIGNAGE SHALL HAVE PERMANENT ROOM NUMBER, ROOM NAME, BRAILLE, AND DIE CUT INSERTS FOR ROOM NAMES.

A



B



C

NOTE:
1. ALL SIGNAGE SHALL COMPLY WITH ADA GUIDELINES.
2. SEE SIGNAGE SCHEDULE
3. TOILETS # 102, 103, 124 ARE UNISEX RESTROOMS, PROVIDE BOTH MALE AND FEMALE IMAGE ON SIGN TYPE C AT THESE LOCATIONS
4. TOILET #121, PROVIDE FEMALE IMAGE ONLY ON SIGN TYPE C AT THIS LOCATION
5. TOILET #120, PROVIDE MALE IMAGE ONLY ON SIGN TYPE C AT THIS LOCATION

KEYNOTES

1 EXISTING FLOORING TO REMAIN; PROTECT DURING DEMOLITION & CONSTRUCTION

LEGEND

- PAINT COLOR: P1
- PAINT COLOR: P2
- PAINT COLOR: P6
- PAINT COLOR: P8
- PAINT COLOR: P9
- DOOR FRAME PAINT COLOR: P3
- DOOR FRAME PAINT COLOR: P7
- DOOR FRAME PAINT COLOR: P10
- LVT-1 LUXURY VINYL TILE
- PT-1 PORCELAIN TILE
- SC-1 SEALED CONCRETE

GENERAL NOTES

1. THIS SHEET TO BE PRINTED IN COLOR.
2. SEE FINISH SCHEDULE & INDEX FOR ADDITIONAL INFORMATION.
3. SEE INTERIOR ELEVATIONS FOR RECEPTIONIST DESK COLOR LOCATIONS.
4. PROVIDE MARBLE THRESHOLDS WHERE LVT TRANSITIONS TO PORCELAIN TILE, COLOR: TBD

SIGNAGE SCHEDULE

MARK	TYPE	ROOM #	ROOM NAME	INSERT
1	A	133	OFFICE	( )
2	B	134	STERILE TOOLS	-----
3	B	135	EXAM 3	-----
4	B	132	EXAM 2	-----
5	A	136	OFFICE	( )
6	B	131	EXAM 1	-----
7	B	104	DENTAL STORAGE	-----
8	B	127	TESTING / MAT	-----
9	C	-----	-----	-----
10	B	106	NURSE	-----
11	B	117	TELECOMM UNICATION S	-----
12	B	107	STORAGE	-----
13	B	108	TRIAGE	-----
14	C	-----	-----	-----
15	C	-----	-----	-----
16	B	115	EXAM 1	-----
17	B	114	EXAM 2	-----
18	B	109	LINENS	-----
19	B	110	EXAM 5	-----
20	B	111	EXAM 4	-----
21	B	113	EXAM 3	-----
22	A	112	OFFICE	( )
23	B	119	JANITOR	-----
24	C	-----	-----	-----
25	C	-----	-----	-----
26	B	123	BREAK ROOM	-----
27	A	145	OFFICE	( )
28	A	144	OFFICE	( )
29	B	142	VITALS	-----
30	B	143	TELE-MED	-----
31	A	141	OFFICE	( )
32	B	138	PROGRAMS	-----

1 FINISH & SIGNAGE PLAN

I600 1/8" = 1'-0"

8' 4' 0' 8' 16'

PRINT DATE: 4/25/2018 9:34:38 AM

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LIC. INTERIOR DESIGNER #1846 HARRY MILLER CALDWELL JR STATE OF FLORIDA REGISTERED ARCHITECT #7462
H. MILLER CALDWELL, JR
AR 7462

PROJECT NO. : 6617
SHEET TITLE:
FINISH & SIGNAGE PLAN

SHEET NUMBER:
I600

BUILDING PERMIT SET

FINISH SCHEDULE

ROOM No.	Name	FLOOR MAT'L	FLOOR FINISH	BASE MAT'L	BASE FINISH	WALLS NORTH MAT'L	WALLS NORTH FINISH	WALLS EAST MAT'L	WALLS EAST FINISH	WALLS SOUTH MAT'L	WALLS SOUTH FINISH	WALLS WEST MAT'L	WALLS WEST FINISH	CEILING MAT'L	CEILING FINISH	REMARKS
100	LOBBY	CONC	LVT-1	GB	RB-1	GB	P1	GB	P1	GB	P1	GB	P2	-/GB	ACT-1/P11	1
101	RECEPTION	EX CONC	LVT-1	GB	RB-1	GB	P1	GB	P1	GB	P1	GB	P2	GB	P11	1 , 4
102	TOILET	EX CONC	PT-1	GB	PTB-1	GB	P2/PWT-1	GB	P1/PWT-1	GB	P1/PWT-1	GB	P1/PWT-1	-	-	2
103	TOILET	EX CONC	PT-1	GB	PTB-1	GB	P1/PWT-1	GB	P1/PWT-1	GB	P2/PWT-1	GB	P1/PWT-1	-	ACT-1	2
104	DENTAL STORAGE	EX CONC	LVT-1	GB	RB-1	GB	P1	GB	P8	GB	P8	GB	P8	-	ACT-1	
106	WORK ROOM	EX CONC	LVT-1	GB	RB-1	GB	P8	GB	P1	GB	P1	GB	P2	-	ACT-1	
107	STO	EX CONC	LVT-1	GB	RB-1	GB	P8	GB	P8	GB	P8	GB	P8	-	ACT-1	
108	TRIAGE	EX CONC	LVT-1	GB	RB-1	GB	P8	GB	P9	GB	P8	GB	P8	-	ACT-1	
109	LINENS	CONC	LVT-1	GB	RB-1	GB	P8	GB	P8	GB	P8	GB	P8	-	ACT-1	
110	EXAM 5	CONC	LVT-1	GB	RB-1	GB	P8	GB	P9	GB	P8	GB	P8	-	ACT-1	
111	EXAM 4	CONC	LVT-1	GB	RB-1	GB	P8	GB	P9	GB	P8	GB	P8	-	ACT-1	
112	OFFICE	CONC	LVT-1	GB	RB-1	GB	P8	GB	P8	GB	P9	GB	P8	-	ACT-1	
113	EXAM 3	CONC	LVT-1	GB	RB-1	GB	P8	GB	P8	GB	P8	GB	P9	-	ACT-1	
114	EXAM 2	CONC	LVT-1	GB	RB-1	GB	P8	GB	P8	GB	P8	EXGB/GB	P9	-	ACT-1	
115	EXAM 1	EX CONC	LVT-1	EXGB/GB	RB-1	GB	P8	GB	P8	EXGB/GB	P8	GB	P9	-	ACT-1	
116	CORRIDOR	EX CONC	LVT-1	GB	RB-1	GB	P8	GB	P8	GB	P8	GB	P8	-	ACT-1	
117	COMM	EX CONC	LVT-1	EXGB	RB-1	GB	P8	GB	P8	GB	P8	EXGB	P8	-	ACT-1	
118	COMM	EX CONC	LVT-1	EXGB	RB-1	EXGB	P8	EXGB	P8	EXGB	P8	EXGB	P8	-	ACT-1	
119	JAN	EX CONC	LVT-1	EXGB	RB-1	EXGB	P8	EXGB	P8	EXGB	P8	EXGB	P8	-	ACT-1	
120	MEN	EX CONC	PT-1	EXGB	PTB-1	EXGB	P1/PWT-1	EXGB	P2/PWT-1	EXGB	P1/PWT-1	EXGB	P1/PWT-1	-	ACT-1	
121	WOMEN	EX CONC	PT-1	EXGB	PTB-1	EXGB	P1/PWT-1	EXGB	P1/PWT-1	EXGB	P1/PWT-1	EXGB	P2/PWT-1	-	ACT-1	
122	CORRIDOR	EX CONC	LVT-1	EXGB/GB	RB-1	EXGB/GB	P8	GB	P8	EXGB/GB	P8	EXGB	P8	-	ACT-1	
123	BREAK	EX CONC	LVT-1	EXGB/GB	RB-1	EXGB	P8	GB	P8	EXGB/GB	P8	GB	P8	-	ACT-1	
124	LAB TLT	EX CONC	PT-1	GB	PTB-1	GB	P8/PWT-1	GB	P8/PWT-1	GB	P8/PWT-1	GB	P6/PWT-1	-	ACT-1	
125	LAB WAIT	EX CONC	LVT-1	GB	RB-1	GB	P8	GB	P8	GB	P8	GB	P8	-	ACT-1	
126	CORRIDOR	EX CONC	LVT-1	GB	RB-1	GB	P8	GB	P8	GB	P8	EXGB/GB	P8	-	ACT-1	
127	TESTING/MAT	EX CONC	LVT-1	GB	RB-1	GB	P6	GB	P8	GB	P8	EXGB	P8	-	ACT-1	
128	LAB/MAT	EX CONC	LVT-1	EXGB/GB	RB-1	EXGB/GB	P6	EXGB	P8	EXGB	P8	EXGB	P8	-	ACT-1	
129	VAULT	EX CONC	LVT-1	EXGB	RB-1	EXGB	P8	EXGB	P8	EXGB	P8	EXGB	P8	EXIST	EXIST	
130	WORK	EX CONC	LVT-1	EXGB	RB-1	EXGB	P8	EXGB	P8	EXGB	P8	GB	P8	EXIST	EXIST	
131	DENTAL 1	CONC	LVT-1	GB	RB-1	GB	P8	GB	P6	GB	P8	GB	P8	-	ACT-1	
132	DENTAL 2	CONC	LVT-1	GB	RB-1	GB	P8	GB	P6	GB	P8	GB	P8	-	ACT-1	
133	OFFICE	CONC	LVT-1	GB	RB-1	GB	P6	GB	P8	GB	P8	GB	P8	-	ACT-1	
134	STERILE TOOLS	CONC	LVT-1	GB	RB-1	GB	P6	GB	P8	GB	P8	GB	P6	-	ACT-1	
135	DENTAL 3	CONC	LVT-1	GB	RB-1	GB	P8	GB	P8	GB	P8	GB	P6	-	ACT-1	
136	MAT OFFICE	CONC	LVT-1	GB	RB-1	GB	P8	GB	P8	GB	P8	GB	P6	-	ACT-1	
137	CORRIDOR	EX CONC	LVT-1	GB	RB-1	GB		GB		GB		GB		-	ACT-1	
138	PROGRAMS	EX CONC	LVT-1	EXGB	RB-1	EXGB	P2	GB	P1	EXGB	P1	EXGB	P1	-	ACT-1	
140	MULTI-PURPOSE DAY ROOM	EX CONC	EXIST	EXGB	EXIST	EXGB	P1	EXGB	P1	EXGB	P1	EXGB	P1	EXIST	EXIST	3
141	OFFICE	CONC	LVT-1	GB	RB-1	GB	P1	GB	P1	GB	P1	GB	P1	-	ACT-1	
142	VITALS	CONC	LVT-1	GB	RB-1	GB	P1	GB	P1	GB	P1	GB	P1	-	ACT-1	
143	TELE-MED	CONC	LVT-1	GB	RB-1	GB	P1	GB	P1	GB	P1	GB	P1	-	ACT-1	
144	OFFICE	EX CONC	LVT-1	EXGB	RB-1	EXGB	P1	EXGB	P2	EXGB	P2	EXGB	P1	EXIST	EXIST	
145	OFFICE	EX CONC	LVT-1	EXGB	RB-1	EXGB	P1	EXGB	P1	EXGB	P1	EXGB	P2	EXIST	EXIST	
150	OUTDOOR STORAGE	CONC	SC	GB	RB-1	GB	P1	GB	P1	GB	P1	GB	P1	GB	P11	

REMARKS

1. PAINT GB CEILING COLOR P11; PAINT GB WALLS AT HIGH CEILINGS COLOR P1.
2. SEE INTERIOR ELEVATIONS FOR HEIGHT OF PORCELAIN WALL TILE.
3. MULTI-PURPOSE ROOM TO RECEIVE NEW PAINT ONLY; PROTECT FLOORS AND CEILING FINISHES FROM OVER SPRAY.
4. SEE RECEPTION DESK ELEVATIONS FOR LOCATIONS OR COLORS P4 AND P5.

MATERIAL COLOR LEGEND

FLOORS

LVT LUXURY VINYL TILE

LVT-1 BURKE FLOORING
COLOR: PECAN 2365WB
MATCH EXISTING SIZE

PCT PORCELAIN FLOOR TILE

PT-1 CROSSVILLE NEST
COLOR: AV363 BLISSFUL OLIVE
SIZE: 6" X 36"
GROUT: TBD

BASE

RB RUBBER WALL BASE

RB-1 BURKE
COLOR: #597 MOCHA
SIZE: 4" TRADITIONAL BASE

PTB PORCELAIN TILE BASE

PTB-1 DALTILE EVER COLLECTION
COLOR: LIGHT EV02
SIZE: 6" x 12" COVE
GROUT:

WALLS

PT WALL PAINT

P-1 SHERWIN WILLIAMS
COLOR: SW7036 ACCESSIBLE BEIGE
SHEEN: SEMI-GLOSS

P-2 SHERWIN WILLIAMS
COLOR: SW9139 DEBONAIR
SHEEN: SEMI-GLOSS

P-4 SHERWIN WILLIAMS
COLOR: SW7038 TONY TAUPE
SHEEN: SEMI-GLOSS

P-5 SHERWIN WILLIAMS
COLOR: SW7039 VIRTUAL TAUPE
SHEEN: SEMI-GLOSS

P-6 SHERWIN WILLIAMS
COLOR: SW6177 SOFTENED GREEN
SHEEN: SEMI-GLOSS

P-8 SHERWIN WILLIAMS
COLOR: SW7531 CANVAS TAN
SHEEN: SEMI-GLOSS

P-9 SHERWIN WILLIAMS
COLOR: SW9157 AUTUMN ORCHID
SHEEN: SEMI-GLOSS

PWT PORCELAIN WALL TILE

PWT-1 DALTILE EVER COLLECTION
COLOR: LIGHT EV02
SIZE: 8" X 24"
SIZE: 3" X 24" BULLNOSE
GROUT:

CEILING

ACT ACOUSTICAL CEILING TILE

ACT-1 ARMSTRONG ULTIMA #1912
BEVELED TEGULAR EDGE, WHITE
SIZE: 24" x 24" x 7/8"
GRID: 9/16" SUPRAFINE XL, EXPOSED "T"

GB PAINTED GYPSUM BOARD

PT-10 SHERWIN WILLIAMS
COLOR: SW7006 EXTRA WHITE
SHEEN: FLAT

COUNTERTOPS AND MILLWORK

PLAM PLASTIC LAMINATE

PLAM-1 FORMICA
EARTH 5342-SP
SCULPTED FINISH

SS SOLID SURFACE

SS-1 CORIAN
COLOR: FOSSIL

SS-2 CORIAN
COLOR: SORREL
(AT RECEPTIONIST DESK ONLY)

MISCELLANEOUS:

TP TOILET PARTITION

TP-1 MANUFACTURER: ECLIPSE PARTITIONS;
HINY HINDERS
COLOR: MOCHA
FINISH: ORANGE PEEL

DOORS & WINDOWS:

STOREFRONT DOORS & ALUMINUM FRAMES:

AL-1 CLEAR ANNODIZED ALUMINUM

WOOD DOORS:

WHITE BURCH, SERENGETI SE15

HOLLOW METAL FRAMES:

P-3 SHERWIN WILLIAMS
COLOR: SW9140 BLUSTERY SKY
SHEEN: GLOSS

P-7 SHERWIN WILLIAMS
COLOR: SW9128 GREEN ONYX
SHEEN: GLOSS

P-10 SHERWIN WILLIAMS
COLOR: SW6271 EXPRESSIVE PLUM
SHEEN: GLOSS

EXTERIOR

4" NOM. BRICK VENEER; COLOR: MATCH EXISTING BRICK; PROVIDE THE ARCHITECT A MINIMUM OF 3 SELECTIONS THAT MOST CLOSELY MATCH THE EXISTING BRICK TO CHOOSE FROM

FIBER CEMENT BOARD
FB-1 COLOR:TBD
SUBMIT SAMPLES IN THE TAN/BEIGE/NEUTRAL COLOR FAMILY FOR FINAL SELECTION

FIBER CEMENT BOARD TRIM
FB-2 COLOR: TBD
SUBMIT SAMPLES IN THE WHITE COLOR FAMILY FOR FINAL SELECTION

FL PREFINISHED FLASHING AND TRIM
FL-1 COLOR : MATCH AL-1

PAINTED CMU
P-12 PAINT TO MATCH BRICK

GUTTERS & DOWNSPOUTS
DS-1 COLOR: TBD
SUBMIT COLOR SAMPLES FOR SELECTION

BOLLARDS
P-13 COLOR: YELLOW (DOT STANDARDS)

STEEL GATE
P-14 COLOR: TBD

GLU-LAMINATED BEAMS & TRIM
STAIN: TBD

GENERAL NOTES

1. COLOR MATCH ALL SHERWIN WILLIAMS COLORS TO GLIDDEN PAINT.
2. ALL WALLS TO RECEIVE SEMI-GLOSS FINISH, ALL DOOR FRAMES TO RECEIVE GLOSS FINISH.

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PROJECT:
LAKEVIEW CENTER/ COMMUNITY HEALTH NORTHWEST FLORIDA RENOVATION & ADDITION

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H. MILLER CALDWELL, JR
AR 7462

PROJECT NO. : 6617
SHEET TITLE:
FINISH SCHEDULE AND INDEX

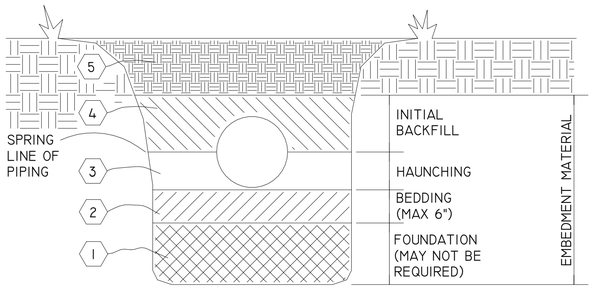
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BUILDING PERMIT SET

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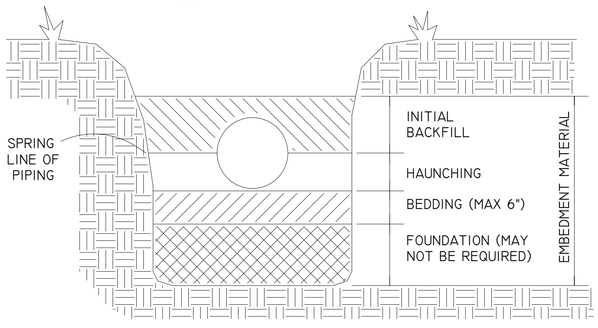


1. A FOUNDATION MAY BE REQUIRED IN VERY POOR SOIL CONDITIONS.
2. BEDDING IS REQUIRED PRIMARILY TO BRING THE TRENCH BOTTOM UP TO GRADE. BEDDING MATERIALS SHALL PROVIDE A UNIFORM AND ADEQUATE LONGITUDINAL SUPPORT UNDER THE PIPE. IN DRY SOIL CONDITIONS, CLASS II OR III MATERIAL SHALL BE HAND PLACED IN 4-6", LIGHTLY COMPACTED UNIFORM AND NOT FINER THAN THE FOUNDATION MATERIAL. IN WET CONDITIONS, CLASS I, II OR III MATERIAL SHALL BE HAND PLACED, 4-6", UNIFORM AND NOT FINER THAN THE FOUNDATION MATERIAL. WHEN UTILIZING CLASS I MATERIAL, SUFFICIENT AMOUNTS OF CLASS II OR III MATERIAL SHALL BE ADDED TO FILL ALL VOIDS CREATED BY THE USE OF CLASS I MATERIAL.
3. HAUNCHING MATERIAL SHALL BE HAND PLACED TO THE SPRINGLINE OF THE PIPE. CLASS II OR III MATERIAL SHALL BE CONSOLIDATED UNDER THE PIPE AND HAND TAMPED TO PROVIDE ADEQUATE SIDE SUPPORT.
4. INITIAL BACKFILL MATERIAL SHALL BE CLASS II OR III. IT SHALL BE PLACED WITHIN 24-30" ABOVE THE TOP OF THE PIPE AND TAMPED BY A PORTABLE VIBRATOR.
5. FINAL BACKFILL MATERIAL MAY BE MACHINE PLACED. THE MATERIAL SHALL BE CLASS II OR III MATERIAL. CLASS IV MATERIAL MAY BE INSTALLED OUTSIDE OF ROADWAY. FINAL BACKFILL UNDER ROADWAYS MAY REQUIRE SPECIAL COMPACTION AND DENSITY TESTS. A MINIMUM OF 30" OF COVER OVER THE TOP OF THE PIPE SHALL BE PROVIDED BEFORE THE TRENCH IS WHEEL-LOADED.

NOTE: ALL EMBEDMENT MATERIALS SHALL BE NO LESS THAN 95% OF MAXIMUM DENSITY. LABORATORY TESTING OF THE SOIL WILL BE REQUIRED. THIS PROCEDURE SHALL BE REQUIRED ON ALL INSTALLATIONS.

GENERAL DATA BACKFILLING REQ.

NOT TO SCALE



EMBEDMENT MATERIALS

CLASS I:
ANGULAR, 1/2" TO 1-1/2", GRADED STONE, INCLUDING A NUMBER OF FILL MATERIALS THAT HAVE REGIONAL SIGNIFICANCE SUCH AS CORAL, SLAG, CINDERS, CRUSHED STONE AND CRUSHED SHELLS.

CLASS II:
COARSE SANDS AND GRAVELS WITH MAXIMUM PARTICLE SIZE OF 1" INCLUDING VARIOUS GRADED SANDS AND GRAVELS CONTAINING SMALL PERCENTAGES OF FINES, GENERALLY GRANULAR AND NON-COHESIVE, EITHER WET OR DRY. SOIL TYPES GW, GP, SW, AND SP ARE INCLUDED IN THIS CLASS.

CLASS III:
FINE SAND AND CLAY GRAVELS, INCLUDING FINE SANDS, SAND-CLAY MIXTURES AND GRAVEL-CLAY MIXTURES. SOIL TYPES GM, GC, SM, AND SC ARE INCLUDED IN THIS CLASS.

CLASS IV:
SILT, SILTY CLAYS, AND CLAYS, INCLUDING INORGANIC CLAYS AND SILT OF MEDIUM TO HIGH PLASTICITY AND LIQUID LIMITS. SOIL TYPES MH, ML, CH, AND CL ARE INCLUDED IN THIS CLASS. THESE MATERIALS ARE NOT TO BE USED FOR BEDDING, HAUNCHING, OR INITIAL BACKFILL.

CLASS V:
THIS CLASS INCLUDES THE ORGANIC SOILS, AS WELL AS SOILS CONTAINING FROZEN EARTH, DEBRIS, ROCKS LARGER THAN 1-1/2" IN DIAMETER AND OTHER FOREIGN MATERIALS. THESE MATERIALS ARE NOT TO BE USED FOR BEDDING, HAUNCHING, OR INITIAL BACKFILL.

GENERAL DATA SOIL CLASSIFICATION

NOT TO SCALE

PLUMBING MATERIALS

A. PIPE AND FITTINGS

1. DOMESTIC HOT AND COLD WATER:
(A) UNDERGROUND - TYPE "K" HARD DRAWN COPPER WITH WROUGHT COPPER FITTINGS.
(B) ABOVE GRADE - TYPE "L" HARD DRAWN COPPER WITH WROUGHT COPPER FITTINGS.
2. SANITARY SOIL, WASTE AND VENT:
(A) UNDERGROUND - SERVICE WEIGHT CAST IRON BELL AND SPIGOT ENDS OR SCHEDULE 40 PVC.
(B) ABOVE GRADE - SERVICE WEIGHT CAST IRON NO-HUB OR SCHEDULE 40 PVC.
3. GAS: THREADED SCHEDULE 40 CAST IRON.
4. COMPRESSED AIR:
(A) UNDERGROUND - TYPE "K" HARD DRAWN COPPER WITH PRECLEANED WROUGHT COPPER FITTINGS.
(B) ABOVE GRADE - TYPE "L" HARD DRAWN COPPER WITH PRECLEANED WROUGHT COPPER FITTINGS.
5. VACUUM:
(A) UNDERGROUND - TYPE "K" HARD DRAWN COPPER WITH PRECLEANED WROUGHT COPPER FITTINGS.
(B) ABOVE GRADE - TYPE "L" HARD DRAWN COPPER WITH PRECLEANED WROUGHT COPPER FITTINGS.

B. PIPE JOINTS

1. SWEAT SOLDER JOINTS IN COPPER PIPING SYSTEMS SHALL BE MADE WITH STAY-SAFE "BRIDGIT" LEAD FREE BEARING SOLDER WITH STAY-CLEAN LIQUID OR STAY-CLEAN PASTE FLUX BY J.W. HARRIS AND CO. INC.
2. CAST IRON BELL AND SPIGOT - TYLER "TY-SEAL" NEOPRENE JOINTS.
3. CAST IRON NO-HUB NEOPRENE SLEEVE - STAINLESS STEEL TYPE 304 SHIELD AND CLAMP, 24 GUAGE WITH HI-TORQUE CLAMPS TIGHTENED TO 100-12 INCH-POUNDS. CLAMPS SHALL BE CLAMP-ALL CORPORATION, ANAHEIM FOUNDRY CO. "HUSKY" OR MISSION.

C. VALVES

1. BALL VALVES SHALL HAVE CHROME PLATED BRASS BALL, VINYL COVERED STEEL HANDLE, TEFLON OR TFE SEATS, TWO-PIECE CONSTRUCTION. VALVES SHALL BE 150 LB. CLASS, MILWAUKEE BA-50, CRANE 9322 , OR WATTS B600I.
2. CHECK VALVES SHALL HAVE BRASS BODY WITH SCREW PATTERN; MILWAUKEE NO. 509, STOCKHAM OR HAMMOND.
3. PLUG VALVES (COCKS): IRON BODIES WITH SCREW PATTERN; A.Y. MCDONNEL #10686, NORDSTROM FIG. 114 OR NORDSTROM FIG. 115.

D. PIPE INSULATION

1. FIBERGLASS, 1" THICK FOR DOMESTIC HOT WATER AND 1/2" THICK FOR DOMESTIC COLD WATER SYSTEMS; 1" THICK FOR STORM WATER (PRIMARY, SECONDARY PIPING IN ITS ENTIRETY) OWENS CORNING TYPE ASJ/SSL-II. ENDS OF FIBERGLASS PIPE INSULATION SHALL BE SEALED WITH FOSTER 30-35 COATING AT ALL FLANGES, VALVES, FITTINGS AND AT INTERVALS OF NOT MORE THAN 20' OF CONTINUOUS RUNS OF PIPE. VALVE BODIES AND BONNETS SHALL BE INSULATED. NO STAPLES SHALL BE PERMITTED FOR INSTALLATION OF INSULATION.

E. PIPE HANGERS AND SUPPORTS

1. HANGERS - ADJUSTABLE CARBON STEEL CLEVIS; GRINNEL NO. 260, CT-65.
2. VERTICAL SUPPORT - STEEL RISER CLAMP.
3. PROVIDE COPPER PLATED HANGERS AND SUPPORTS FOR COPPER PIPING.
4. SPACE SUPPORTS NO MORE THAN 8 FEET APART FOR 10-FOOT SECTION OF CAST IRON SOIL PIPE WITH A MINIMUM OF TWO SUPPORTS PER 10-FOOT SECTION. SUPPORT HORIZONTAL SOIL PIPE NEAR EACH HUB. SUPPORTS FOR COPPER PIPE SHALL BE SPACED NO MORE THAN 5 FEET APART.

F. DRAIN PANS

1. ALL FLOOR DRAIN, EXCEPT FOR THOSE IN CONCRETE SLAB ABOVE EARTHFILL, SHALL BE PROVIDED WITH NON-PLATICIZED CHLORINATED POLYETHYLENE, "CHLORALOY 240" BRAND CONCEALED WATERPROOFING MEMBRANE.

ADA REQUIREMENTS

THIS APPLIES TO HANDICAPPED ACCESSIBLE FIXTURES ONLY.

WATER CLOSETS: THE HEIGHT OF WATER CLOSETS SHALL BE 17" TO 19" MEASURED TO THE TOP OF THE TOILET SET. SEATS SHALL NOT BE SPRUNG TO RETURN TO A LIFTED POSITION. THE WATER CLOSET SHALL BE LOCATED 18" FROM THE SIDE WALL TO THE CENTER LINE OF THE BOWL. HAND OPERATED FLUSH CONTROLS SHALL BE MOUNTED ON THE WIDE SIDE OF TOILET AREAS NO MORE THAN 29" ABOVE THE FINISH FLOOR. SEE ARCHITECTURAL DRAWINGS FOR GRAB BAR LOCATIONS.

URINALS: THE URINALS SHALL BE WALL HUNG WITH AN ELONGATED RIM AT A MAXIMUM OF 17" ABOVE THE FINISH FLOOR. HAND OPERATED FLUSH CONTROLS SHALL BE MOUNTED NO MORE THAN 44" ABOVE FINISH FLOOR.

LAVATORIES: LAVATORIES SHALL BE MOUNTED WITH THE RIM OR COUNTER SURFACE NO HIGHER 34" ABOVE THE FINISH FLOOR. PROVIDE A CLEARANCE OF AT LEAST 29" ABOVE THE FINISH FLOOR TO THE BOTTOM OF THE APRON. KNEE SPACE SHALL BE 8" FROM BOTTOM EDGE OF APRON TO THE LEADING EDGE OF THE BOTTOM OF THE BOWL. THE BOTTOM OF THE BOWL SHALL BE A MINIMUM OF 27" ABOVE THE FINISH FLOOR. ALL WATER AND DRAIN PIPING UNDER LAVATORIES SHALL BE INSULATED WITH A FOAM INSERT COVERED WITH A 1/8" VINYL OUTER SHELL. ANGLE STOPS SHALL HAVE A FLIP TOP ACCESS.

FAUCETS: CONTROLS SHALL BE LEVER HANDLES OPERABLE WITH ONE HAND AND SHALL NOT REQUIRE TIGHT GRASPING, PINCHING, OR TWISTING OF THE WRIST. THE FORCE REQUIRED TO ACTIVATE CONTROLS SHALL BE NO GREATER THAN 5 LBF.

SINKS: SINKS SHALL BE MOUNTED WITH THE RIM OR COUNTER SURFACE NO HIGHER 34" ABOVE THE FINISH FLOOR. PROVIDE A KNEE CLEARANCE OF AT LEAST 27" HIGH, 30" WIDE, AND 19" DEEP. SINKS SHALL BE A MAXIMUM OF 6 1/2" DEEP. ALL WATER AND DRAIN PIPING UNDER LAVATORIES SHALL BE INSULATED WITH A FOAM INSERT COVERED WITH A 1/8" VINYL OUTER SHELL. ANGLE STOPS SHALL HAVE A FLIP TOP ACCESS.

DRINKING FOUNTAINS/WATER COOLERS: WHERE ONLY ONE DRINKING FOUNTAIN IS PROVIDED ON A FLOOR THERE SHALL BE A DRINKING FOUNTAIN WHICH IS ACCESSIBLE TO INDIVIDUALS WHO USE WHEEL CHAIRS AND ONE ACCESSIBLE TO THOSE HAVING DIFFICULTY BENDING OR STOOPING. THIS CAN BE ACCOMPLISHED BY USING A "HI-LO" FOUNTAIN. LOWEST SPOUT SHALL BE NO HIGHER THAN 36" ABOVE FINISHED FLOOR AND HIGHEST SPOUT SHALL BE MOUNTED AT 40" ABOVE FINISH FLOOR. SPOUTS SHALL BE AT FRONT OF THE UNIT AND SHALL DIRECT THE WATER FLOW IN A TRAJECTORY THAT IS PARALLEL OR NEARLY PARALLEL TO THE FRONT OF THE UNIT. THE SPOUT SHALL PROVIDE A FLOW OF WATER AT LEAST 4" HIGH. CONTROLS SHALL BE FRONT MOUNTED OR SIDE MOUNTED NEAR THE FRONT EDGE. CONTROLS SHALL BE OPERABLE WITH ONE HAND AND SHALL NOT REQUIRE TIGHT GRASPING, PINCHING, OR TWISTING OF THE WRIST. THE FORCE REQUIRED TO ACTIVATE CONTROLS SHALL BE NO GREATER THAN 5 LBF. WALL MOUNTED UNITS SHALL HAVE A CLEAR KNEE SPACE OF BETWEEN THE BOTTOM OF THE APRON AND THE FINISHED FLOOR AT LEAST 27" HIGH, 30" WIDE, AND 17" TO 19" DEEP. FOUNTAINS SHALL NOT PROTRUDE MORE THAN 4" OUT INTO WALKWAYS.

GENERAL PLUMBING NOTES

1. THE FOLLOWING NOTES ARE GENERAL IN NATURE AND PERTAIN TO THE ENTIRE PROJECT. WHERE THERE ARE EXCEPTIONS, ADDITIONS, OR REVISIONS TO THESE NOTES SUCH EXCEPTIONS, ADDITIONS OR REVISIONS ARE SO NOTED ON THE PARTICULAR DRAWING THEY OCCUR.
2. PIPING IS SHOWN IN SCHEMATIC FORM. ALL WORK SHALL BE COORDINATED WITH ALL TRADES INVOLVED.
3. REFER TO ARCHITECTURAL PLANS FOR LOCATION OF ALL EQUIPMENT.
4. ACCESS PANELS SHALL BE PROVIDED, WHERE REQUIRED, TO SERVICE VALVES AND OTHER MECHANICAL EQUIPMENT.
5. ALL VALVES IN CORRIDORS SHALL BE LOCATED 1'- 0" AWAY FROM WALLS CLEAR OF SOFFITS UNLESS NOTED OTHERWISE.
6. STORM AND SANITARY PIPING 3" AND LARGER SHALL BE SLOPED AT 1/8" PER FOOT UNLESS NOTED OTHERWISE.
7. VERIFY ALL EQUIPMENT CONNECTIONS WITH MANUFACTURERS CERTIFIED DRAWINGS. FIELD VERIFY AND COORDINATE ALL DIMENSIONS PRIOR TO FABRICATION.
8. FIELD VERIFY ALL EXISTING CONDITIONS DURING DEMOLITION AND REROUTE PIPING CONFIGURATIONS AS NECESSARY.
9. UNLESS NOTED OR OBVIOUS OTHERWISE, PIPE RUNS SHOWN OCCUR IN THE CEILING SPACE OF THE LEVEL INDICATED ON PLANS.
10. CONTRACTOR SHALL OBTAIN LANDLORD STANDARD PLUMBING FIXTURE PACKAGE AND PROVIDE ALL FIXTURES PER BUILDING STANDARD.

PLUMBING LEGEND

NOTE: NOT ALL SYMBOLS SHOWN MAY BE REQUIRED FOR THIS PROJECT

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	SANITARY SEWER	FD	FLOOR DRAIN
	VENT	VTR	VENT THRU ROOF
CD	CONDENSATE DRAIN	FCO	CLEANOUT (FLOOR)
	STORM	GCO	CLEANOUT (GRADE)
	COLD WATER	WCO	CLEANOUT (WALL)
	HOT WATER	WC	WATER CLOSET
	HOT WATER RETURN	UR	URINAL
	RISER DOWN (ELBOW)	L	LAVATORY
	RISER UP (ELBOW)	SH	SHOWER
	RISE OR DROP	S	SINK
	BRANCH - TOP CONNECTION	HB	HOSE BIBB
	BRANCH - BOTTOM CONNECTION	WH	WALL HYDRANT
C	COMPRESSED AIR		
V	VACUUM		

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ENGINEER'S SEAL



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PROJECT NO. : 6617
SHEET TITLE:
PLUMBING LEGEND

SHEET NUMBER:
P001

BLDG PERMIT SET

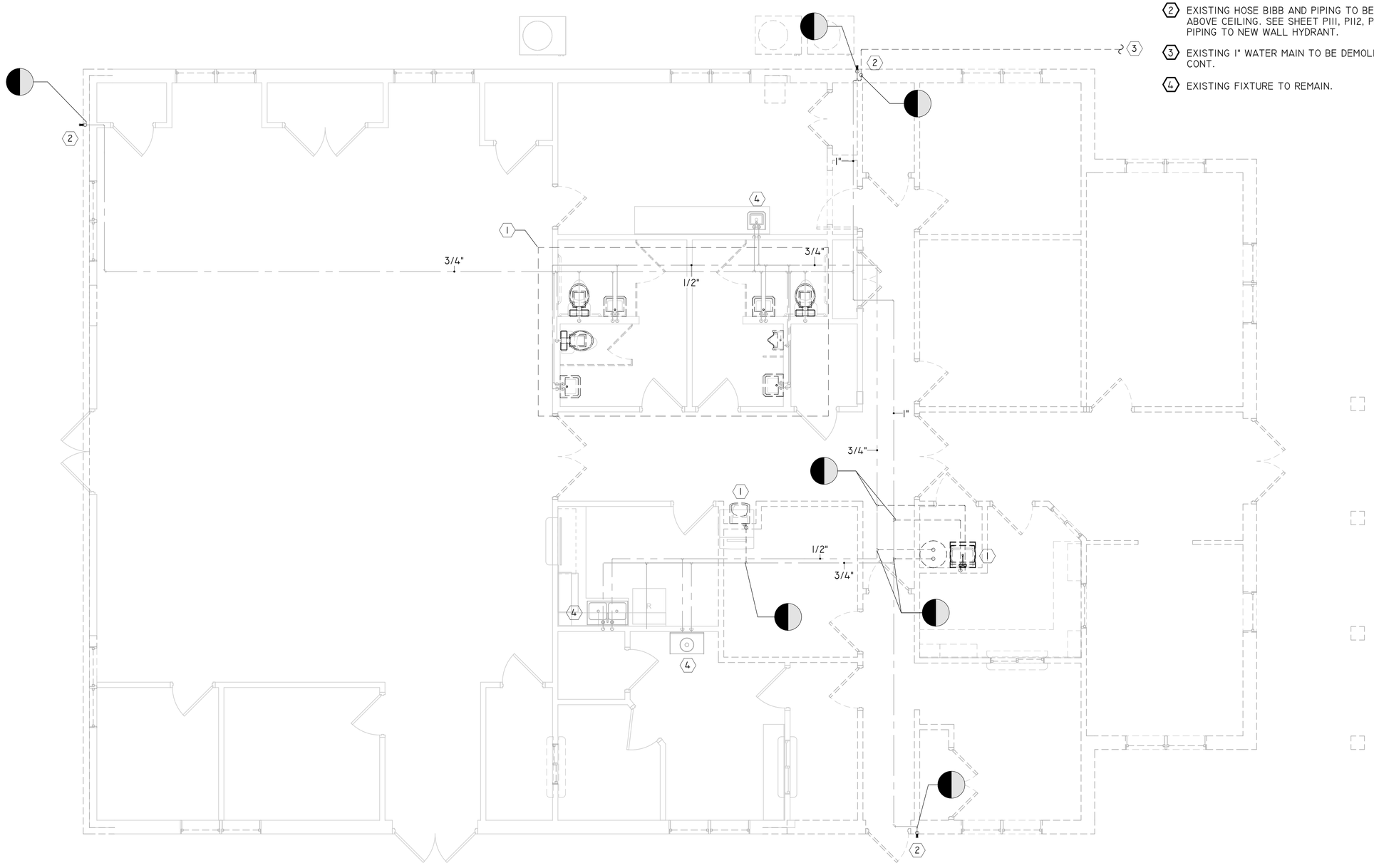
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PLUMBING SHEET NOTES

1. EXISTING FIXTURE TO BE DEMOLISHED.
2. EXISTING HOSE BIBB AND PIPING TO BE DEMOLISHED TO ABOVE CEILING. SEE SHEET PIII, PII2, PII3 TO EXTEND PIPING TO NEW WALL HYDRANT.
3. EXISTING I" WATER MAIN TO BE DEMOLISHED. SEE CIVIL FOR CONT.
4. EXISTING FIXTURE TO REMAIN.



N

PLUMBING DOMESTIC WATER DEMOLITION PLAN

4' 0 4' 8'

SCALE: 1/4" = 1' - 0"

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W3 ENGINEERING INC.
213A S. BAYLEN ST.
PENSACOLA, FL 32502
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F: (888)478-4898
FL P.E. #: 70595
FL AUTHORIZATION #: 31078

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PROJECT ISSUES:

SD - 1	09.29.2017
SD - 2	12.28.2017
ASD	03.16.2018
DD	04.06.2018
BLDG PERMIT SET	04.25.2018

PROJECT TEAM:

CIVIL:
REBOL BATTLE & ASSOCIATES

STRUCTURAL:
JOE DEREUIL ASSOCIATES

ARCHITECT:
CALDWELL ASSOCIATES ARCHITECTS

MEP / TELECOM:
W3 ENGINEERING

PROJECT:
LAKEVIEW CENTER/ COMMUNITY HEALTH NORTHWEST FLORIDA RENOVATION & ADDITION

6021 INDUSTRIAL BLVD #A CENTURY, FLORIDA 32535

ENGINEER'S SEAL

JAMES E. WELLS III LICENSE No. 70595 STATE OF FLORIDA PROFESSIONAL ENGINEER

JAMES E. WELLS III
P.E.#: 70595

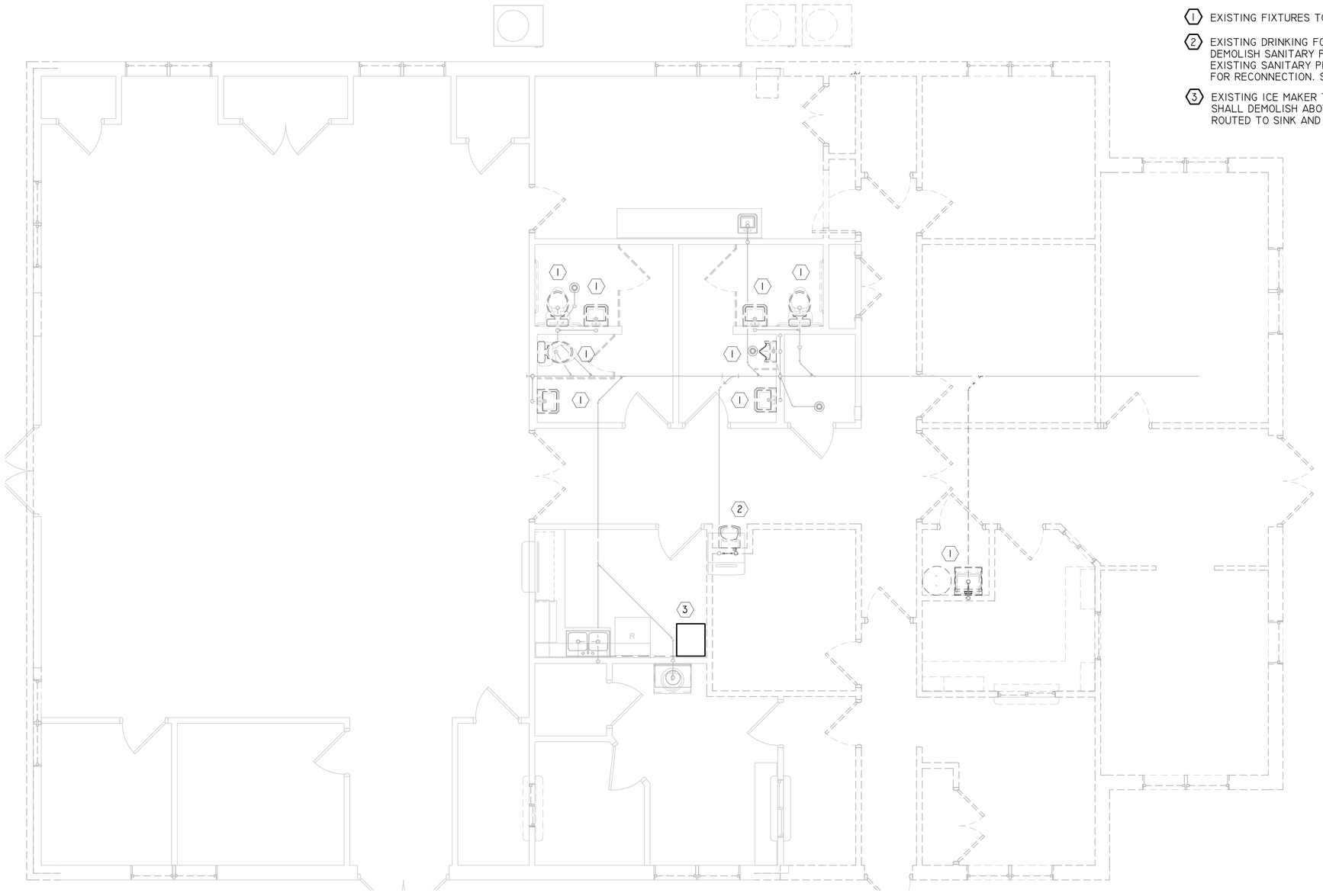
PROJECT NO. : 6617
SHEET TITLE:
DOMESTIC PIPING DEMOLITION

SHEET NUMBER:
P101

BLDG PERMIT SET

PLUMBING SHEET NOTES

1. EXISTING FIXTURES TO BE DEMOLISHED.
2. EXISTING DRINKING FOUNTAIN SHALL BE DEMOLISHED. DEMOLISH SANITARY PIPING DOWN TO CONCRETE SLAB. EXISTING SANITARY PIPING UNDER SLAB SHALL REMAIN FOR RECONNECTION. SEE SHEET P-115 FOR NEW WORK.
3. EXISTING ICE MAKER TO BE RELOCATED. CONTRACTOR SHALL DEMOLISH ABOVE GRADE SANITARY PIPING ROUTED TO SINK AND CAP SEAL.



N

PLUMBING SANITARY DEMOLITION PLAN

4' 0 4' 8'

SCALE: 1/4" = 1' - 0"

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LICENSE
No. 70595
STATE OF FLORIDA
PROFESSIONAL ENGINEER

JAMES E. WELLS III
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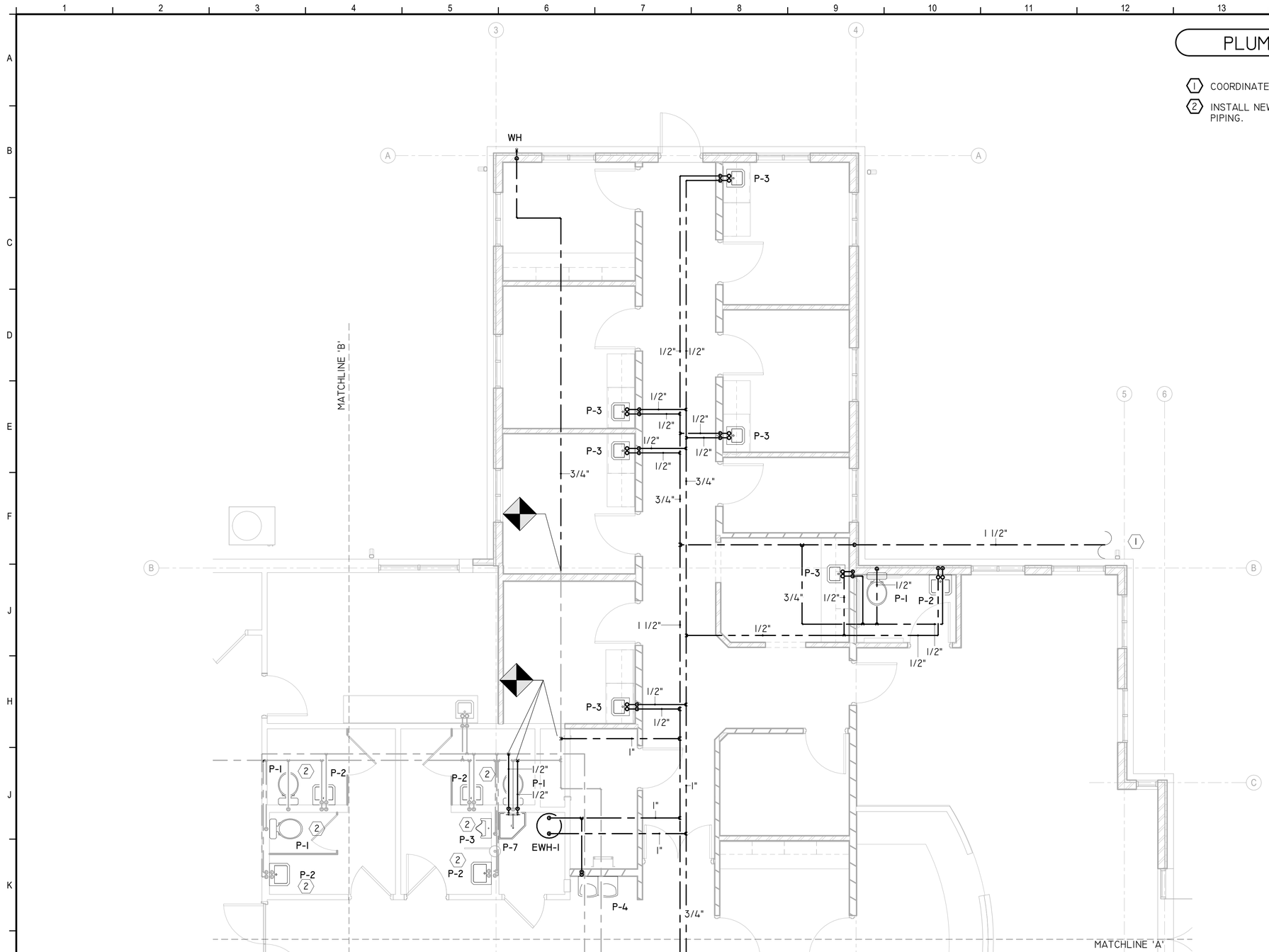
PROJECT NO. : 6617
SHEET TITLE:
SANITARY PIPING DEMOLITION

SHEET NUMBER:
P102

BLDG PERMIT SET

PLUMBING SHEET NOTES

1. COORDINATE W/ CIVIL FOR CONT.
2. INSTALL NEW FIXTURE(S); RECONNECT TO EXISTING PIPING.



PLUMBING DOMESTIC PIPING NEW WORK - NORTH

SCALE: 1/4" = 1' - 0"

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ARCHITECT:
CALDWELL ASSOCIATES ARCHITECTS

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CENTURY, FLORIDA 32535

ENGINEER'S SEAL

JAMES E. WELLS III
P.E.#: 70595

PROJECT NO. : 6617
SHEET TITLE:
DOMESTIC PIPING NEW WORK PLAN - NORTH

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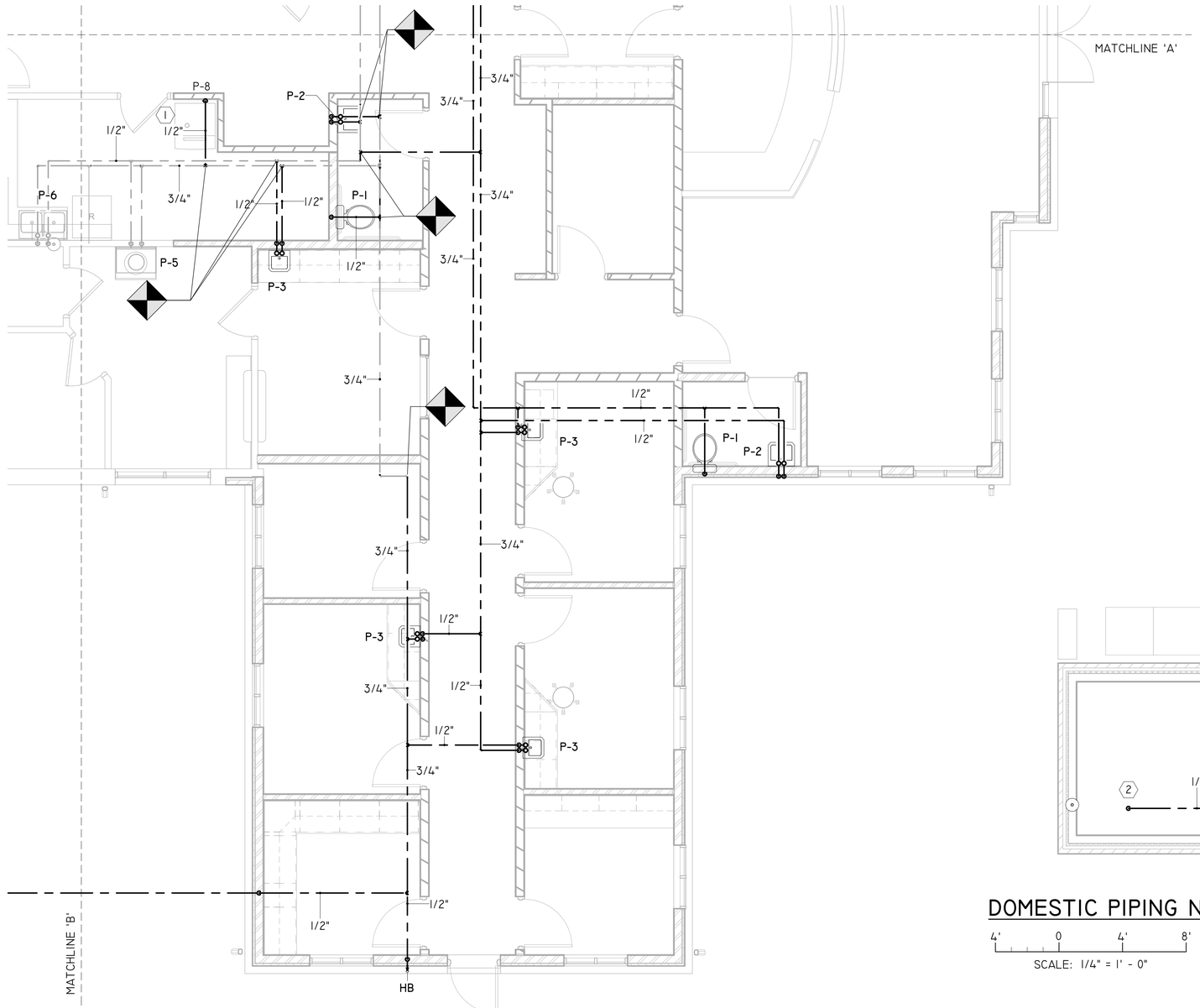
W3 ENGINEERING INC.
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F: (888)478-4898
FL P.E. #: 70595
FL AUTHORIZATION #: 31078

SHEET NUMBER:
P111

BLDG PERMIT SET

PLUMBING SHEET NOTES

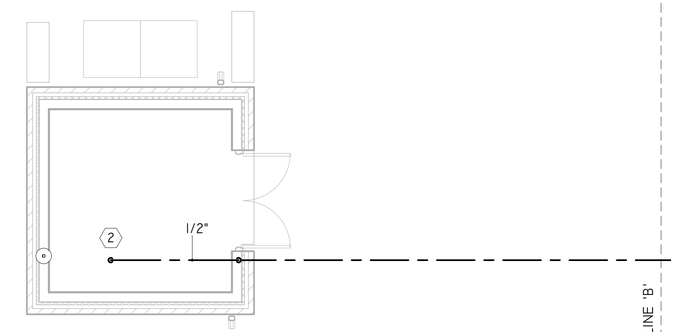
1. ICEMAKER NEW LOCATION.
2. DOMESTIC COLD WATER PIPING TO OWNER PROVIDED CONTRACTOR INSTALLED VACUUM PUMP. COORDINATE EXACT LOCATION AND PROVIDE BALL VALVE AND FLEXIBLE PIPING (MIN. 24" LONG) TO EQUIPMENT.



PLUMBING DOMESTIC PIPING NEW WORK - SOUTH

4' 0 4' 8'

SCALE: 1/4" = 1' - 0"



DOMESTIC PIPING NEW WORK - MEDICAL STORAGE

4' 0 4' 8'

SCALE: 1/4" = 1' - 0"

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STRUCTURAL:
JOE DEREUIL ASSOCIATES

ARCHITECT:
CALDWELL ASSOCIATES ARCHITECTS

MEP / TELECOM:
W3 ENGINEERING

PROJECT:
LAKEVIEW CENTER/ COMMUNITY HEALTH NORTHWEST FLORIDA RENOVATION & ADDITION

6021 INDUSTRIAL BLVD #A
CENTURY, FLORIDA 32535

ENGINEER'S SEAL

JAMES E. WELLS III
P.E.#: 70595

PROJECT NO. : 6617
SHEET TITLE:
DOMESTIC PIPING NEW WORK PLAN - SOUTH

SHEET NUMBER:
P112

BLDG PERMIT SET

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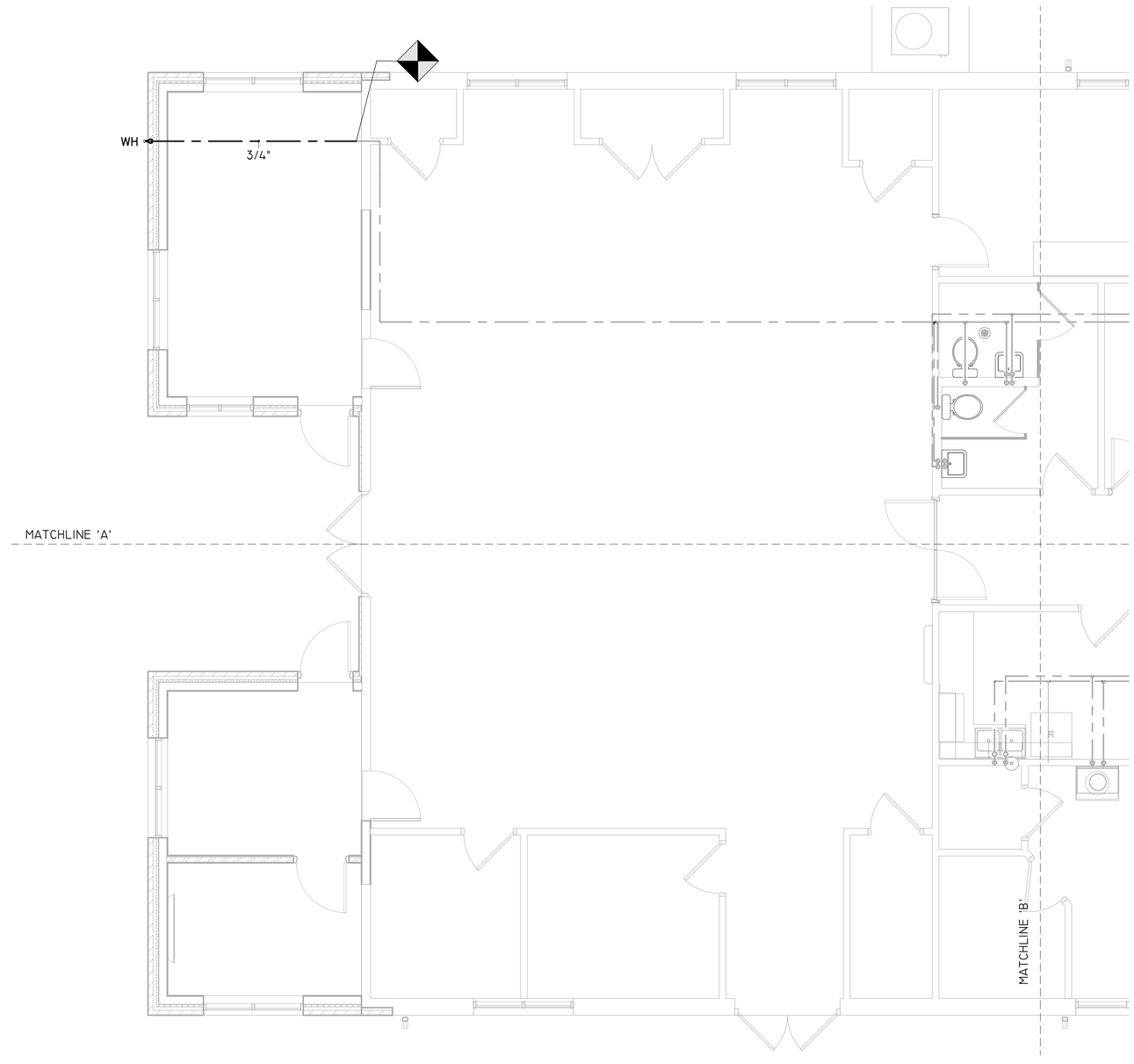
W3 ENGINEERING INC.
213A S. BAYLEN ST.
PENSACOLA, FL 32502
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PLUMBING DOMESTIC PIPING NEW WORK - WEST

4' 0 4' 8'

SCALE: 1/4" = 1' - 0"

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PROJECT TEAM:

CIVIL:
REBOL BATTLE & ASSOCIATES

STRUCTURAL:
JOE DEREUIL ASSOCIATES

ARCHITECT:
CALDWELL ASSOCIATES ARCHITECTS

MEP / TELECOM:
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PROJECT:
LAKEVIEW CENTER/ COMMUNITY HEALTH NORTHWEST FLORIDA RENOVATION & ADDITION

6021 INDUSTRIAL BLVD #A CENTURY, FLORIDA 32535

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JAMES E. WELLS III
P.E.#: 70595

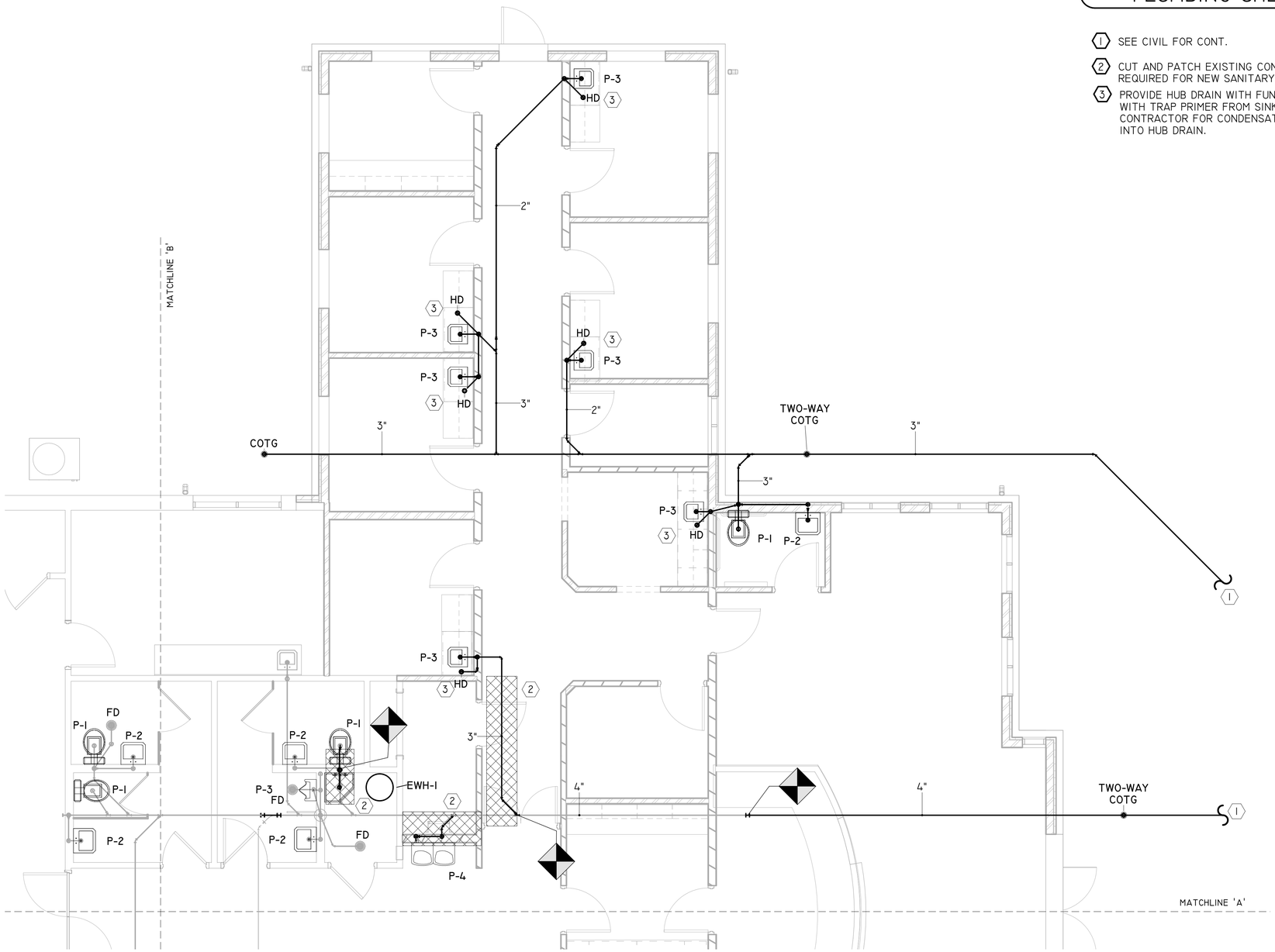
PROJECT NO. : 6617
SHEET TITLE:
DOMESTIC PIPING NEW WORK - WEST

SHEET NUMBER:
P113

BLDG PERMIT SET

PLUMBING SHEET NOTES

1. SEE CIVIL FOR CONT.
2. CUT AND PATCH EXISTING CONCRETE SLAB AS REQUIRED FOR NEW SANITARY PIPING.
3. PROVIDE HUB DRAIN WITH FUNNEL UNDER SINK IN CABINETRY WITH TRAP PRIMER FROM SINK. COORDINATE W/ HVAC CONTRACTOR FOR CONDENSATE PIPING IN WALL TO STUB OUT INTO HUB DRAIN.



N

PLUMBING SANITARY PIPING NEW WORK - NORTH

4' 0 4' 8'

SCALE: 1/4" = 1' - 0"

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PROJECT TEAM:

CIVIL:
REBOL BATTLE & ASSOCIATES

STRUCTURAL:
JOE DEREUIL ASSOCIATES

ARCHITECT:
CALDWELL ASSOCIATES ARCHITECTS

MEP / TELECOM:
W3 ENGINEERING

PROJECT:
LAKEVIEW CENTER/ COMMUNITY HEALTH NORTHWEST FLORIDA RENOVATION & ADDITION

6021 INDUSTRIAL BLVD #A
CENTURY, FLORIDA 32535

ENGINEER'S SEAL

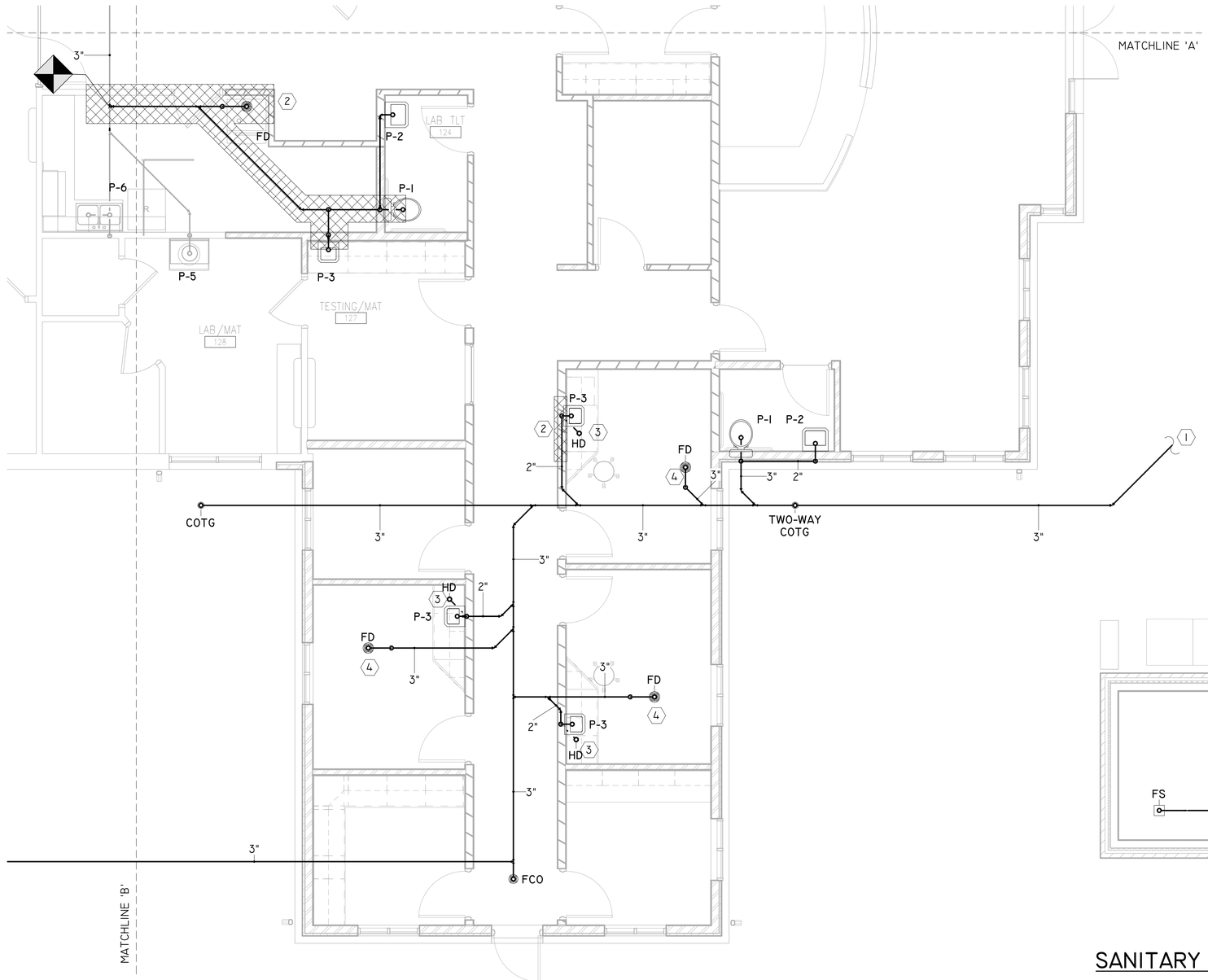
JAMES E. WELLS III LICENSE No. 70595 STATE OF FLORIDA PROFESSIONAL ENGINEER

JAMES E. WELLS III
P.E.#: 70595

PROJECT NO. : 6617
SHEET TITLE:
SANITARY PIPING NEW WORK - NORTH

SHEET NUMBER:
P114

BLDG PERMIT SET



PLUMBING SHEET NOTES

1. SEE CIVIL FOR CONT.
2. CUT AND PATCH EXISITING CONCRETE SLAB AS REQUIRED FOR NEW SANITARY PIPING.
3. PROVIDE HUB DRAIN W/ FUNNEL UNDERSINK IN CABINETRY WITH TRAP PRIMER FROM INK. COORDINATE W/ HVAC CONTRACTOR FOR CONDENSATE PIPING IN WALL TO STUB OUT INTO HUB DRAIN.
4. COORDINATE EXACT LOCATION OF FLOOR DRAIN WITH DENTAL CHAIR MANUFACTURER'S REQUIREMENTS.

PLUMBING SANITARY PIPING NEW WORK - SOUTH

4' 0 4' 8'

SCALE: 1/4" = 1' - 0"

SANITARY PIPING NEW WORK - MEDICAL STORAGE

4' 0 4' 8'

SCALE: 1/4" = 1' - 0"

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REBOL BATTLE & ASSOCIATES

STRUCTURAL:
JOE DEREUIL ASSOCIATES

ARCHITECT:
CALDWELL ASSOCIATES ARCHITECTS

MEP / TELECOM:
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PROJECT:
LAKEVIEW CENTER/ COMMUNITY HEALTH NORTHWEST FLORIDA RENOVATION & ADDITION

6021 INDUSTRIAL BLVD #A
CENTURY, FLORIDA 32535

ENGINEER'S SEAL

JAMES E. WELLS III
P.E.#: 70595

PROJECT NO. : 6617
SHEET TITLE:
SANITARY PIPING NEW WORK - SOUTH

SHEET NUMBER:
P115

BLDG PERMIT SET

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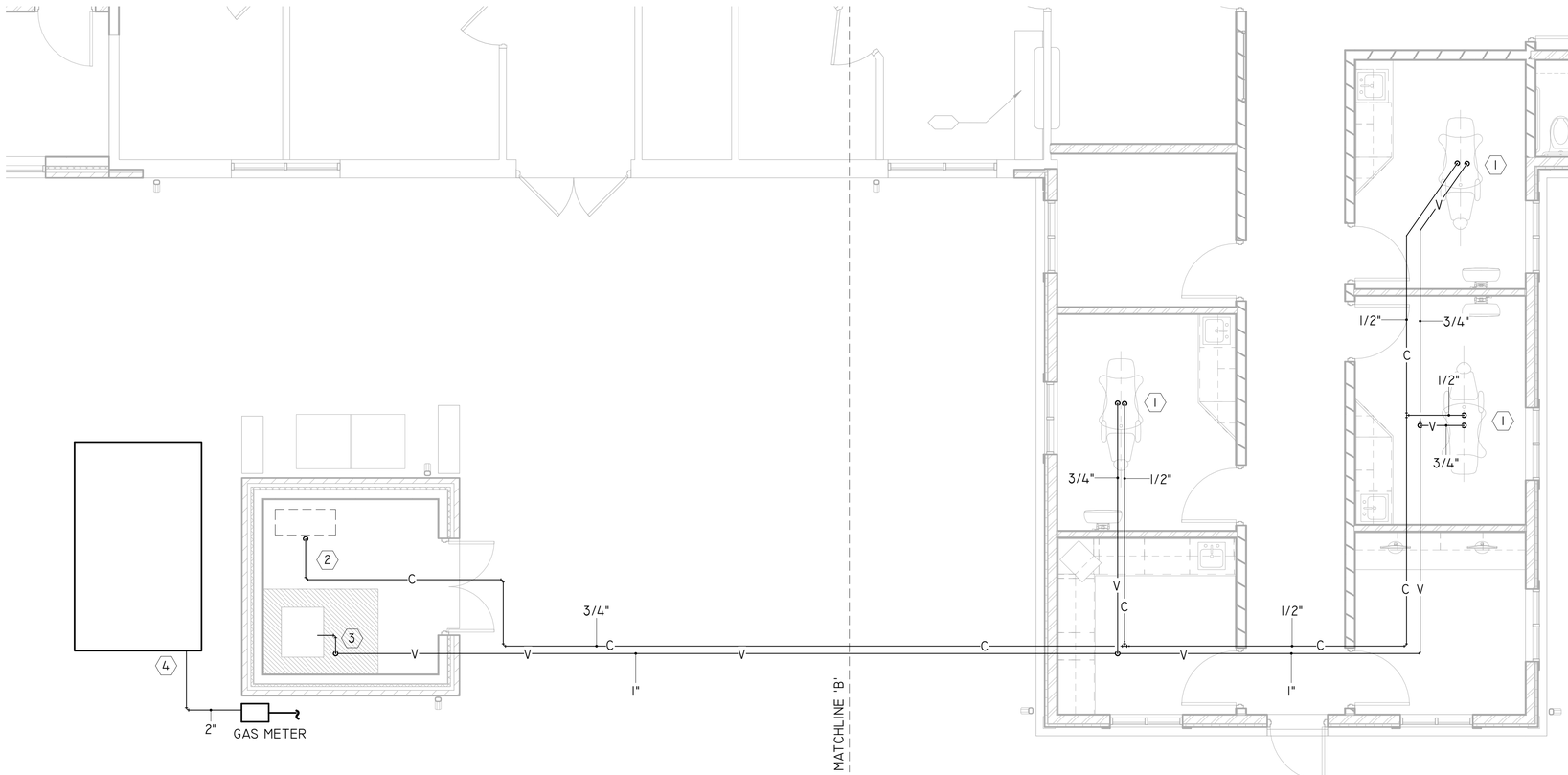
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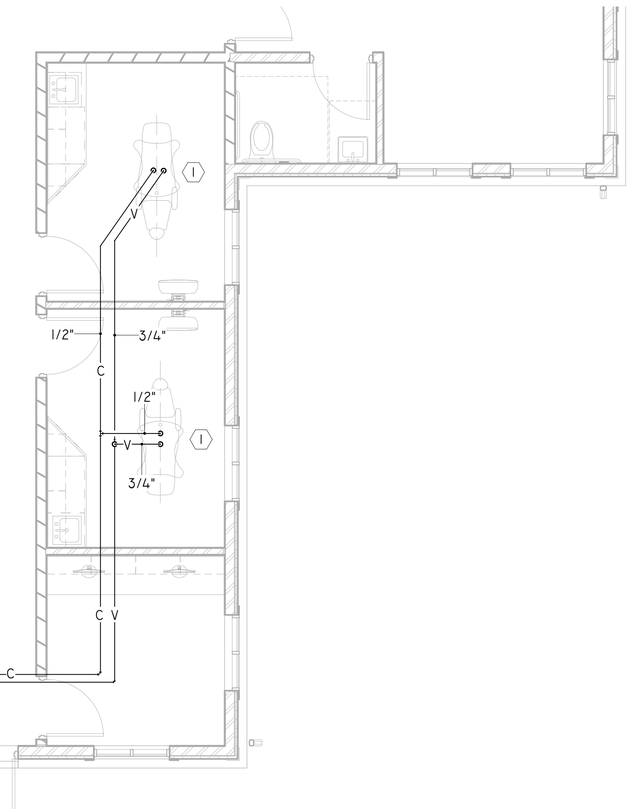
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PLUMBING SHEET NOTES

1. COORDINATE EXACT LOCATION FOR UNDERGROUND COMPRESSED AIR AND VACUUM PIPING W/ DENTAL CHAIR MANUFACTURER.
2. PROVIDE BALL VALVE AND STAINLESS STELL BRAIDED FLEX CONNECTION TO COMPRESSOR. AIR COMPRESSOR PROVIDED BY OWNER, INSTALLED BY CONTRACTOR. INSTALL IN ACCORDANCE W/ MANF. RECOMMENDATIONS.
3. PROVIDE BALL VALVE AND TWO UNIONS AT VACUUM PUMP. PROVIDE FLEXIBLE HOSE TO VACUUM INTAKE MANIFOLD. EXTEND 2" PVC VENT FROM VACUUM PUMP THROUGH ROOF. VACUUM PUMP PROVIDED BY OWNER, INSTALLED BY CONTRACTOR. INSTALL IN ACCORDANCE W/ MANUFACTURERS RECOMMENDATIONS.
4. NEW GAS METER BY TOWN OF CENTURY. CONTRACTOR SHALL COORDINATE INSTALLATION WITH GAS PROVIDER AND INSTALL GAS PIPING FROM METER TO GENERATOR.





N

COMPRESSED AIR AND VACUUM PIPING NEW WORK PLAN

4' 0 4' 8'

SCALE: 1/4" = 1' - 0"

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ARCHITECT:
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MEP / TELECOM:
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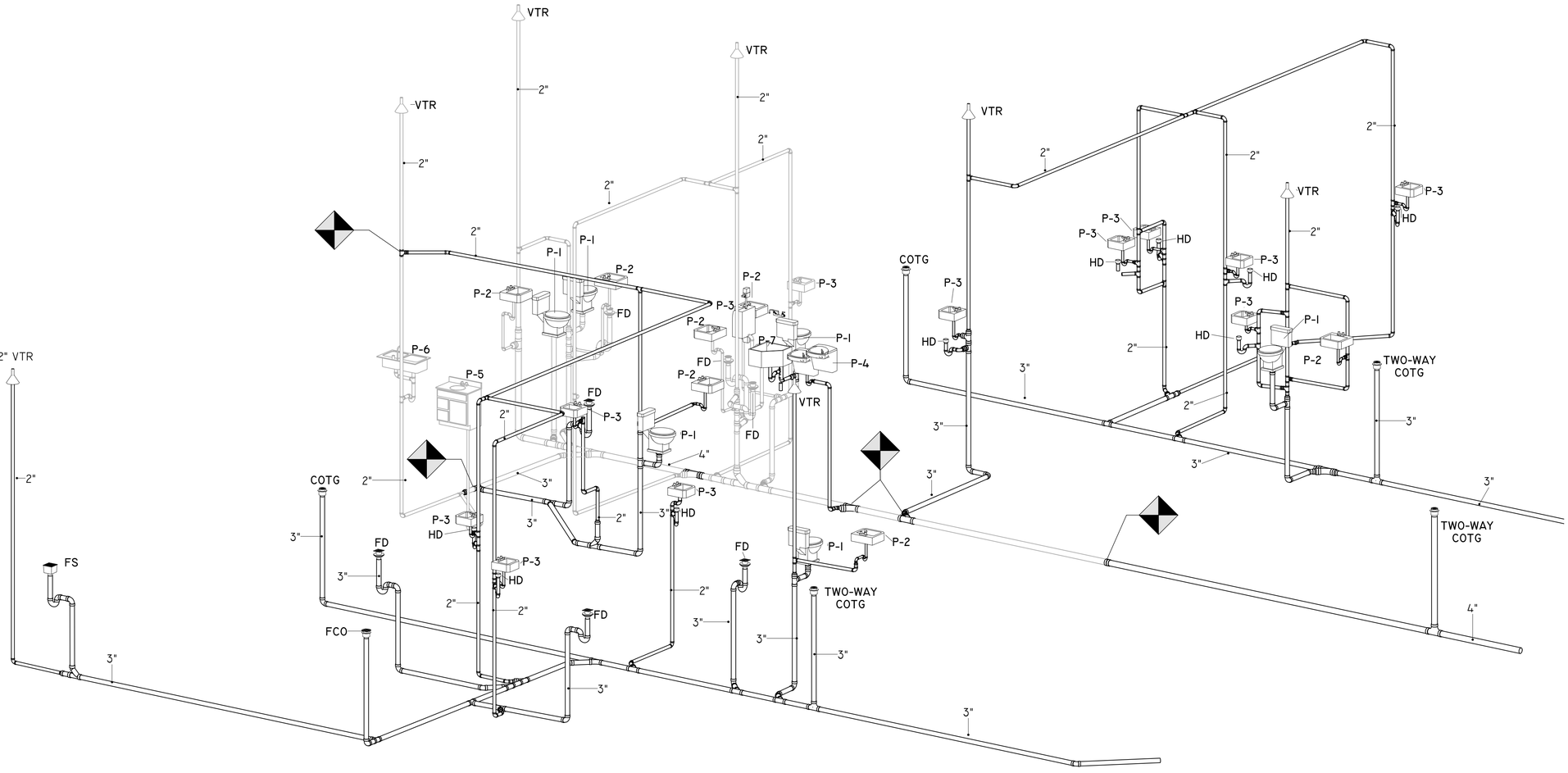
ENGINEER'S SEAL

JAMES E. WELLS III
P.E.#: 70595

PROJECT NO. : 6617
SHEET TITLE:
COMPRESSED AIR AND VACUUM PIPING NEW WORK PLAN

SHEET NUMBER:
P116

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SANITARY RISER DIAGRAM

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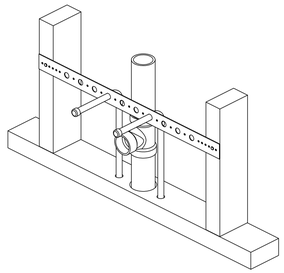
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P.E.#: 70595

PROJECT NO. : 6617
SHEET TITLE:
PLUMBING RISER DIAGRAMS

SHEET NUMBER:
P301

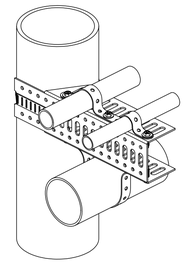
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LAVATORY OR SINK PIPE SUPPORT DETAIL

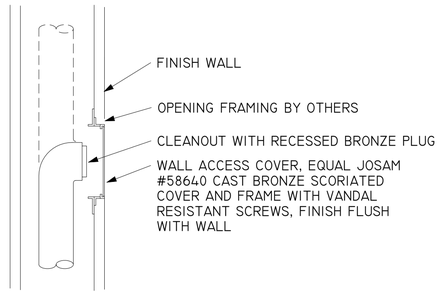
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HOLDRITE #115-C COPPER JACKETED BRACKET. STRAP OR SOLDER TUBING TO THE BRACKET. INCLUDES STAINLESS STEEL BAND AND FELT PAD.

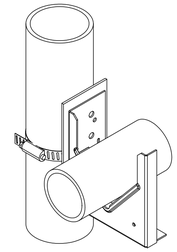
HORIZONTAL - VERTICAL PIPING SUPPORT DETAIL

NOT TO SCALE



WALL CLEANOUT DETAIL

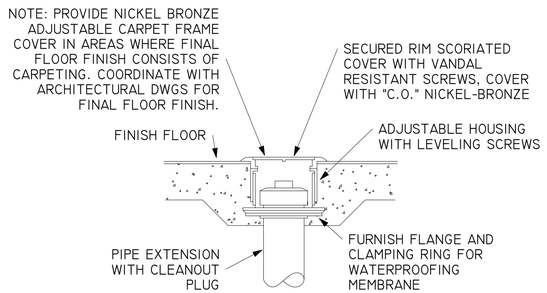
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HOLDRITE #V-2 COPPER JACKETED BRACKET. INCLUDES STAINLESS STEEL BAND AND FELT PAD.

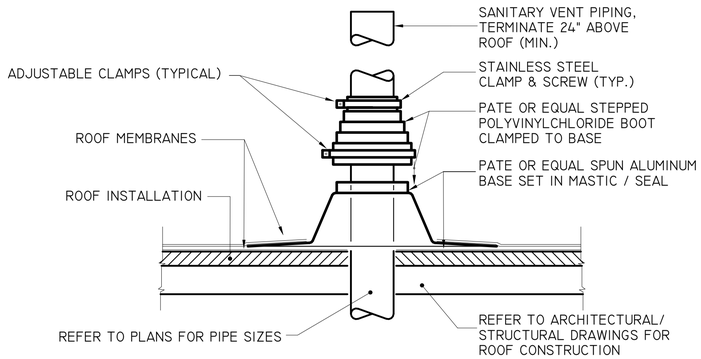
HORIZONTAL PIPING SUPPORT DETAIL

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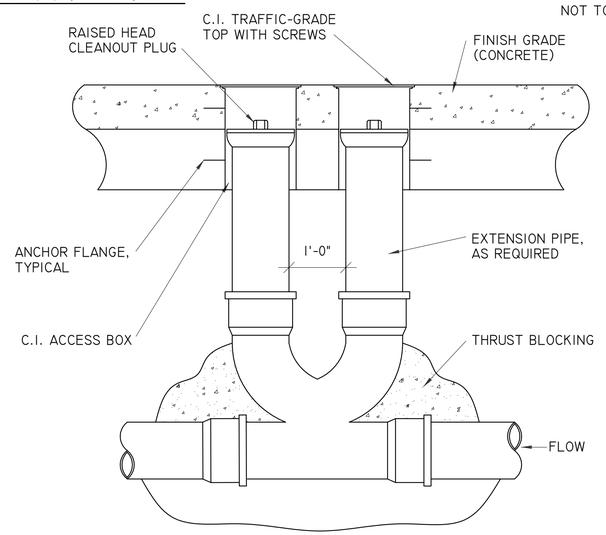
FLOOR CLEANOUT DETAIL

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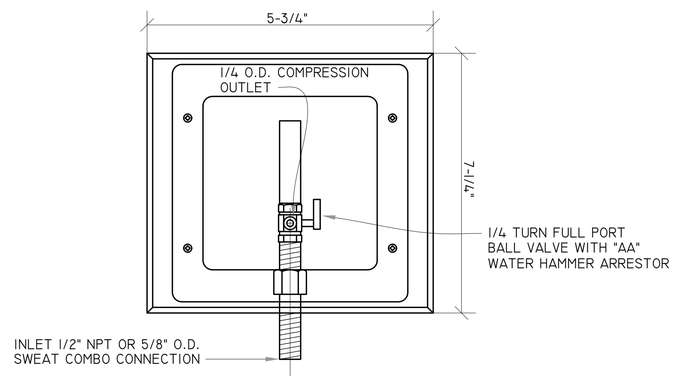
VENT THRU ROOF DETAIL

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DOUBLE CLEANOUT DETAIL

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ICE MAKER VALVE BOX DETAIL

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REBOL BATTLE & ASSOCIATES

STRUCTURAL:
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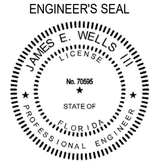
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W3 ENGINEERING

PROJECT:
LAKEVIEW CENTER/ COMMUNITY HEALTH NORTHWEST FLORIDA RENOVATION & ADDITION

6021 INDUSTRIAL BLVD #A CENTURY, FLORIDA 32535

ENGINEER'S SEAL



JAMES E. WELLS III
P.E.#: 70595

PROJECT NO. : 6617
SHEET TITLE:
PLUMBING DETAILS

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SHEET NUMBER:
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PLUMBING FIXTURE SCHEDULE

LABEL	FIXTURE	CW	HW	SAN	REMARKS
P-1	WATER CLOSET	1/2"	-	3"	FLOOR MOUNT TANK TYPE. WHITE VITREOUS CHINA.
P-2	WALL HUNG LAVATORY	1/2"	1/2"	2"	VITREOUS CHINA, KOHLER K-2035-1, HC WALL MOUNT AND KOHLER K-12463-VS STAINLESS STEEL.
P-3	HAND SINK	1/2"	1/2"	1-1/2"	16" X 13-1/2" 20 GUAGE STAINLESS STEEL SELF RIMMING W/ FAUCET LEDGE AND 4" WRIST BLADES.
P-4	DRINKING FOUNTAIN	1/2"	-	1-1/4"	WALL HUNG STAINLESS STEEL; SPLIT LEVEL STYLE
P-5	LAVATORY	1/2"	1/2"	1-1/4"	20-1/4"X17-1/2" OVAL WHITE VITREOUS CHINA
P-6	SINK	1/2"	1/2"	1-1/2"	33"X22" TWO COMPARTMENT STAINLESS STEEL W/ INTEGRAL MOUNTAING RIM.
P-7	MOP SINK	1/2"	1/2"	1-1/2"	23"X21-1/2" FLOOR MOUNTED MOP SINK FOR CORNER INSTALLATION W/ FAUCET SET.
P-8	ICE MAKER OUTLET BOX	1/2"	-	-	PROVIDE WITH QUARTER TURN BALL VALVE AND "AA" WATER HAMMER ARRESTOR.
FD	FLOOR DRAIN	-	-	3"	6" ROUND DEEP SEAL AND TRAP PRIMER, PROVIDE INSIDE CAULK BOTTOM OUTLET OR TY-SEAL HUB OUTLET WITH ADAPTOR FOR CAST IRON TRAP INSTALLATION. PROVIDE CLAMPING RINGS FOR FLOORS WITH MEMBRANE.
HD	HUB DRAIN W/ FUNNEL	-	-	2"	HUB DRAIN W/ FUNNEL; COORDINATE W/ HVAC CONTRACTOR FOR CONDENSATE
COTG	CLEANOUT TO GRADE	-	-	4"	-
VTR	VENT THROUGH ROOF	-	-	2"	-
WH	WALL HYDRANT	1/2"	-	-	PROVIDE 3/4" WALL HYDRANT WITH BRONZE CASING, SATIN BRONZE BOX, STRAIGHT INLET CONNECTION, AND INTEGRAL VACUUM BREAKER BACKFLOW PREVENTER.
FS	FLOOR SINK	-	-	3"	PROVIDE 8"X8"X6"D PVC FLOOR SINK W/ PVC STRAINER. INSTALL TRAP PRIMER FOR 1/2" COLD WATER LINE TO VACUUM PUMP.
FCO	FLOOR CLEAN OUT	-	-	3"	ADJUSTABLE LEVELING FLOOR CLEANOUT W/ NICKEL BRONZE COVER

NOTES:
--COORDINATE FLOOR DRAIN TYPES WITH FLOOR TYPE ON ARCHITECTURAL PLAN. FLOOR DRAINS IN KITCHEN W/ EPOXY FLOORING SHALL BE PROVIDED WITH MEMBRANE CLAMP AND ADJUSTABLE COLLAR.
--PROVIDE DEEP SEAL TRAP OR TRAP PRIMER FROM NEAREST FIXTURE TO FLOOR DRAINS IN ACCORDANCE W/ FLORIDA PLUMBING CODE.

ELECTRIC WATER HEATER SCHEDULE

MARK	TYPE	DESCRIPTION	VOLTAGE	PHASE	Hz	NOTES
EWH-1	TANK	80 GALLON (3) ELEMENTS	208	3	60	15KW TOTAL

WATER HAMMER ARRESTOR SCHEDULE

P.D.I. UNITS	A	B	C	D	E	F
FIXTURE UNITS	1-11	12-32	33-60	61-113	114-154	155-330
CLASSIFICATIONS ESTABLISHED BY THE PLUMBING AND DRAINAGE INSTITUTE "STANDARD P.D.I.-WH201".						
APPROVED MANUFACTURERS:						
1. ZURN, WADE, J.R. SMITH, JOSAM, MIFAB						

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ENGINEER'S SEAL

JAMES E. WELLS III
P.E.#: 70595

PROJECT NO. : 6617
SHEET TITLE:
PLUMBING SCHEDULES

SHEET NUMBER:
P601

BLDG PERMIT SET

HVAC LEGEND

SYMBOL	ITEM
WxH	RECTANGULAR DUCTWORK, SIZES SHOWN ARE INTERNAL CLEAR DIMENSIONS. (WIDTH x HEIGHT) FIRST FIGURE IS SLIDE SHOWN.
WxH	INTERNALLY LINED RECTANGULAR DUCTWORK, SIZES SHOWN ARE INTERNAL CLEAR DIMENSIONS.
8"	ROUND SNAPLOCK GALVANIZED STEEL DUCKTWORK, EXTERNALLY INSULATED, SMACNA STATIC PRESSURE CONSTRUCTION CLASS 1/2" W.G., SEAL CLASS C. SIZE SHOWN IS SHEET METAL DIAMETER. SHALL BE USED ONLY AT RUNOUTS TO AIR OUTLETS.
	FACTORY FABRICATED/INSULATED FLEXIBLE ROUND DUCT, SIZE SHOWN IS INSIDE DIAMETER.
16"	ROUND SPIRAL SEAM GALVANIZED STEEL DUCTWORK, EXTERNALLY INSULATED. SIZE SHOWN IS SHEET METAL DIAMETER. SMACNA STATIC PRESSURE CLASS 4" W.G., SEAL CLASS C.
	SQUARE THROAT ELBOW IN RECTANGULAR DUCT WITH DOUBLE WALL TURNING VANES.
	LONG RADIUS ELBOW IN RECTANGULAR DUCT.
	FLEXIBLE DUCT CONNECTION
	TRANSITIO
	RECTANGULAR TO ROUND DUCT TRANSITION.
	RECTANGULAR BRANCH DUCT TAKE OFF FROM RECTANGULAR DUCT MAIN WITH 45" COLLAR.
	RECTANGULAR DUCTWORK TURNING 90" UP.
	RECTANGULAR DUCTWORK TURNING 90" DOWN.
	CEILING DIFFUSER WITH 24"x24" FACE EQUAL TO "TITUS OMNI". PROVIDE SURFACE MOUNT STYLE FOR GYPSUM BOARD CEILING AND LAY-IN TYPE AT T-BAR CEILING GRID. ROUND NECK SIZE AND AIRFLOW AS INDICATED. 4-WAY DIRECTION OF THROW. PROVIDE WITH OPPOSED BLADE VOLUME CONTROL DAMPER BACK FACE OF DIFFUSER SHALL HAVE INSULATION BLANKET.

SYMBOL	ITEM
SD	SMOKE DETECTOR
	FLEXIBLE PIPE CONNECTOR
	PRESSURE GAGE WITH GAGE COCK
P/T	COMBINATION PRESSURE AND TEMPERATURE TEST PLUG WITH EXTENDED NECK AND CAP
C	CONDENSATE PIPING
	ELBOW TURN UP
	ELBOW TURN DOWN
	CONNECTION, TOP
	CONNECTION, BOTTOM
MS	MOTOR STARTER
H	SPACE HUMITITY SENSOR, MOUNT 48" A.F.F.; PROVIDE LOCKING THERMOSTAT COVER
T #	SPACE THERMOSTAT SERVING UNIT #, MOUNT 48" A.F.F.; PROVIDE LOCKING THERMOSTAT COVER
	MANUAL VOLUME DAMPER, PROVIDE WITH LOCKING QUADRANT
	TRANSITION POINT IN CHWS/R OR HWS/R PIPING
U	DOOR UNDERCUT
	ROUND BRANCH DUCT TAKEOFF FROM RECTANGULAR DUCT MAIN. BRANCH DUCT SHALL BE FLEXIBLE ROUND DUCT OR ROUND SNAPLOCK DUCT AS INDICATED. ROUND DUCT TAP IN SHALL BE MADE WITH SPIN-IN COLLAR WITH MANUAL VOLUME DAMPER.

SYMBOL	ITEM
	NEW CONNECTION POINT
	DISCONNECTION POINT
	DUCTWORK TO BE DEMOLISHED
M	MOTORIZED DAMPER
FD / DUCT	FIRE DAMPER WITH ACCESS PANELS
# / #	LETTER INDICATES SECTION
	SHEET WHERE SECTION IS DRAWN
	SHEET WHERE SECTION OCCURS

VENTILATION SCHEDULE

ROOM TYPE	VENTILATION RATE PER PERSON (CFM)	VENTILATION RATE PER SQ. FT. (CFM)	AIR CLASS	ROOM TYPE	VENTILATION RATE PER PERSON (CFM)	VENTILATION RATE PER SQ. FT. (CFM)	AIR CLASS
OFFICE	5	0.06	1	MAIN ENTRY	5	0.06	1
BREAKROOM	5	0.06	1	RECEPTION	5	0.06	1
CONFERENCE	5	0.06	1	MULTI-PURPOSE	5	0.06	1
CORRIDOR	-	0.06	1	ELECTRIC EQUIP.	-	0.06	1
STORAGE	-	0.12	1	RESTROOMS	75 CFM/FIXTURE EXHAUST		2
CLASSROOM	10	0.12	1	SCIENCE LAB.	10	0.18	1

ROOM SETPOINT SCHEDULE

SPACE	COOLING SETPOINT	HEATING SETPOINT	HUMIDITY SETPOINT	NIGHT SETBACK COOLING SETPOINT	NIGHT SETBACK HEATING SETPOINT	NIGHT SETBACK HUMIDITY SETPOINT	DEADBAND
INSIDE - GENERAL	74 DEG F	68 DEG F	50% RH	85 DEG F	55 DEG F	65% RH	3 DEG F
REPTILE ROOM	78 DEG F	68 DEG F	50% RH	85 DEG F	68 DEG F	65% RH	3 DEG F

ABBREVIATIONS

ACD - AUTOMATIC CONTROL DAMPER
ACT - ACOUSTICAL CEILING TILE
AHU - AIR HANDLING UNIT
AMB - AMBIENT
CD - CEILING DIFFUSER
CFH - CUBIC FEET PER HOUR
CFM - CUBIC FEET PER MINUTE
CW - COLD WATER
DB - DRY BULB
DDC - DIRECT DIGITAL CONTROL
EAL - EXHAUST AIR LOUVER
EF - EXHAUST FAN
EAG - EXHAUST AIR GRILLE
EAL - EXHAUST AIR LOUVER
ET - EXPANSION TANK
EX - EXISTING
FD - FIRE DAMPER
FLR - FLOOR
FO - FLAT OVAL
FT - FEET
GPM - GALLONS PER MINUTE
HOA - HAND-OFF-AUTOMATIC
HGR - HOT GAS REHEAT
HP - HORSEPOWER
HW - HOT WATER
IAW - IN ACCORDANCE WITH
IPLV - INTEGRATED PART LOAD VALUE
LSD - LINEAR SLOT DIFFUSER
MAX - MAXIMUM
MBTU - THOUSAND BRITISH THERMAL UNIT
MH - MANHOLE
MIN - MINIMUM
MVD - MANUAL VOLUME DAMPER
NIC - NOT IN CONTRACT
OA - OUTSIDE AIR
OAL - OUTSIDE AIR LOUVER
RA - RETURN AIR
RPM - REVOLUTIONS PER MINUTE
SA - SUPPLY AIR
SPT - STATIC PRESSURE TRANSMITTER
SWR - SIDE WALL REGISTER
SWS - SIDE WALL SUPPLY GRILLE
SQ FT - SQUARE FEET
T'STAT - THERMOSTAT
TG - TRANSFER GRILLE
TYP - TYPICAL
VAV - VARIABLE AIR VOLUME
VFD - VARIABLE FREQUENCY DRIVE
WB - WET BULB

HVAC NOTES

1. T'STATS INDICATED ADJACENT TO DOORWAYS SHALL BE LOCATED WITHIN 18" OF JAMB. AT LOCATIONS WITH LIGHT SWITCHES, LOCATE T'STAT SUCH THAT LIGHT SWITCH IS BETWEEN T'STAT AND JAMB. T'STATS SHALL BE LOCATED 48" AFF. VERIFY T'STAT LOCATIONS WITH SYSTEMS FURNITURE LAYOUT PRIOR TO INSTALLING ANY T'STAT.

2. LOUVER DIMENSIONS INDICATED DOES NOT INCLUDE FRAME OR FLANGES. APPROXIMATE ROUGH OPENING IN WALL ASSEMBLY IS INDICATED ON ARCHITECTURAL.

3. ALL CONDENSATE PIPING SHALL BE SCHEDULE 40 PVC. INSULATE WITH 1/2" ARMAFLEX.

TYPICAL DUCTWORK & INSULATION NOTES

1. ALL ROUND FLEXIBLE DUCT SHALL BE FACTORY PREINSULATED WITH THERMOFLEX OR EQUAL. MAXIMUM LENGTH OF ANY FLEXIBLE DUCT RUNOUT SHALL BE 6'-0". WHERE LENGTH REQUIRED EXCEEDS 6'-0", INSTALL EXTERNALLY INSULATED ROUND SNAPLOCK DUCT FOR BALANCE OF DISTANCE TO SPIN-IN TAP AT MAIN DUCT TRUNK.

2. SEAL ALL DUCT PENETRATIONS OF WALLS AIRTIGHT, REGARDLESS OF WHETHER WALLS ARE FIRE RATED OR NOT.

3. ALL SUPPLY AIR DUCTWORK (EXCEPT TAKEOFFS TO SUPPLY AIR DIFFUSERS) SHALL BE LOW PRESSURE RECTANGULAR, SMACNA STATIC PRESSURE CLASS 1" W.G., SEAL CLASS C, EXTERNALLY INSULATED WITH 2" THICK FIBERGLASS DUCT WRAP.

4. ALL RETURN AIR DUCTWORK SHALL BE LOW PRESSURE RECTANGULAR, SMACNA STATIC PRESSURE CLASS 1" W.G., SEAL CLASS B. DUCT SIZES INDICATED ARE INSIDE CLEAR DIMENSIONS, WITH 1" ACOUSTICAL LINER, PROVIDE 2" THICK EXTERNAL FIBERGLASS WRAP.

5. ALL OUTSIDE AIR INTAKE DUCTWORK SHALL BE LOW PRESSURE RECTANGULAR, SMACNA STATIC PRESSURE CLASS 1" W.G., SEAL CLASS B. PROVIDE 2" THICK EXTERNAL FIBERGLASS WRAP.

6. EXHAUST AIR DUCTWORK SHALL BE LOW PRESSURE RECTANGULAR, SMACNA STATIC PRESSURE CLASS 1/2" W.G., SEAL CLASS B.

7. ALL DUCT SIZES INDICATED ARE INSIDE CLEAR DIMENSIONS.

8. AVOID ROUTING DUCTWORK OVER LIGHTS WHEREVER POSSIBLE. MAINTAIN MINIMUM 6" CLEARANCE BETWEEN DUCT INSULATION TO TOP OF LIGHTS.

9. ALL EXPOSED DUCTWORK SHALL BE 1" DOUBLE WALL SPIRAL (MIN. R=4.2) PAINTED W/ DRIP PROOF PAINT.

10. WHERE DUCTWORK PASSES THRU FIREWALL OR FIRE LID AND IS LESS THAN 100 SQ. IN. IN CROSS-SECTIONAL AREA, PROVIDE SLEEVE AND FIRE STOP PER LATEST EDITION OF FLORIDA MECHANICAL CODE 607.5.3.

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JAMES E. WELLS III
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PROJECT NO. : 6617
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LEGEND & GENERAL NOTES

SHEET NUMBER:
M001

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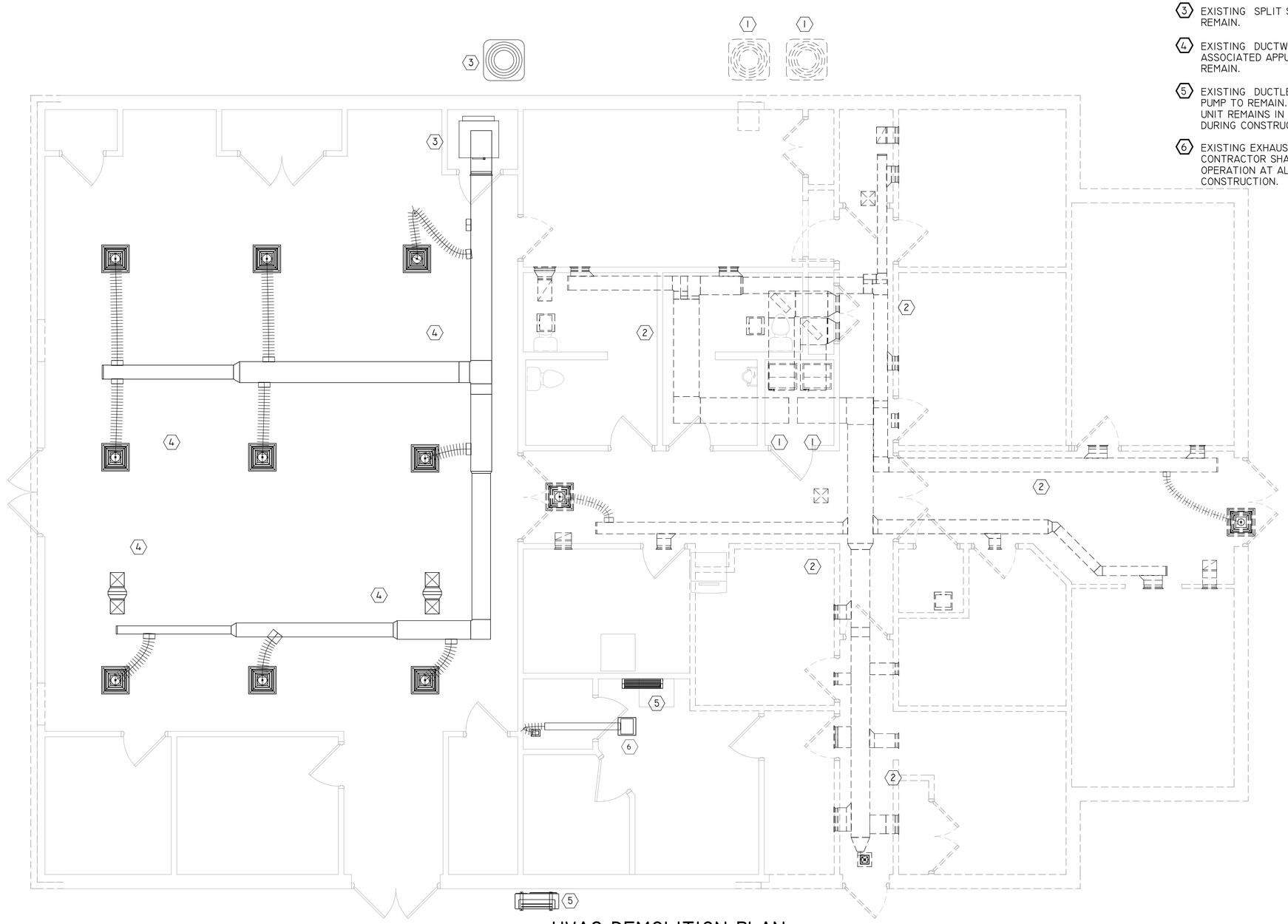
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HVAC SHEET NOTES

1. EXISTING SPLIT SYSTEM HEAT PUMP SHALL BE DEMOLISHED.
2. EXISTING DUCTWORK, GRILLES, AND ASSOCIATED APPURTENANCES SHALL BE DEMOLISHED.
3. EXISTING SPLIT SYSTEM HEAT PUMP SHALL REMAIN.
4. EXISTING DUCTWORK, GRILLES, AND ASSOCIATED APPURTENANCES SHALL BE REMAIN.
5. EXISTING DUCTLESS SPLIT SYSTEM HEAT PUMP TO REMAIN. CONTRACTOR SHALL ENSURE UNIT REMAINS IN OPERATION AT ALL TIMES DURING CONSTRUCTION.
6. EXISTING EXHAUST FAN TO REMAIN. CONTRACTOR SHALL ENSURE FAN REMAINS IN OPERATION AT ALL TIMES DURING CONSTRUCTION.



HVAC DEMOLITION PLAN

N

4' 0 4' 8'

SCALE: 1/4" = 1' - 0"

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No. 70595
STATE OF FLORIDA
PROFESSIONAL ENGINEER

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P.E.#: 70595

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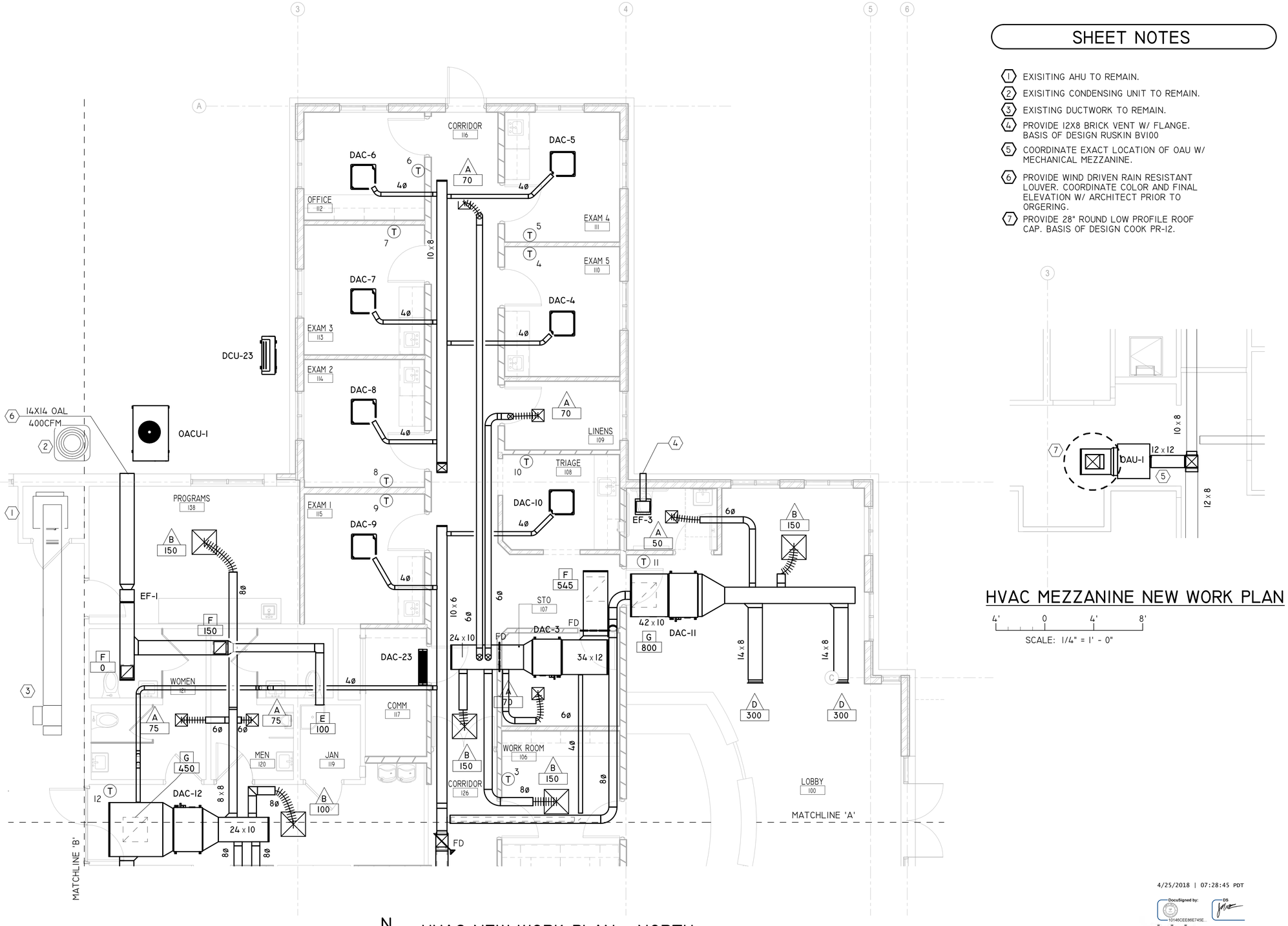
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SHEET NOTES

1. EXISITING AHU TO REMAIN.
2. EXISITING CONDENSING UNIT TO REMAIN.
3. EXISTING DUCTWORK TO REMAIN.
4. PROVIDE 12X8 BRICK VENT W/ FLANGE. BASIS OF DESIGN RUSKIN BV100
5. COORDINATE EXACT LOCATION OF OAU W/ MECHANICAL MEZZANINE.
6. PROVIDE WIND DRIVEN RAIN RESISTANT LOUVER. COORDINATE COLOR AND FINAL ELEVATION W/ ARCHITECT PRIOR TO ORGERING.
7. PROVIDE 28" ROUND LOW PROFILE ROOF CAP. BASIS OF DESIGN COOK PR-12.



HVAC NEW WORK PLAN - NORTH

4' 0 4' 8'

SCALE: 1/4" = 1' - 0"

HVAC MEZZANINE NEW WORK PLAN

4' 0 4' 8'

SCALE: 1/4" = 1' - 0"

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HVAC NEW WORK PLAN - NORTH

SHEET NUMBER:
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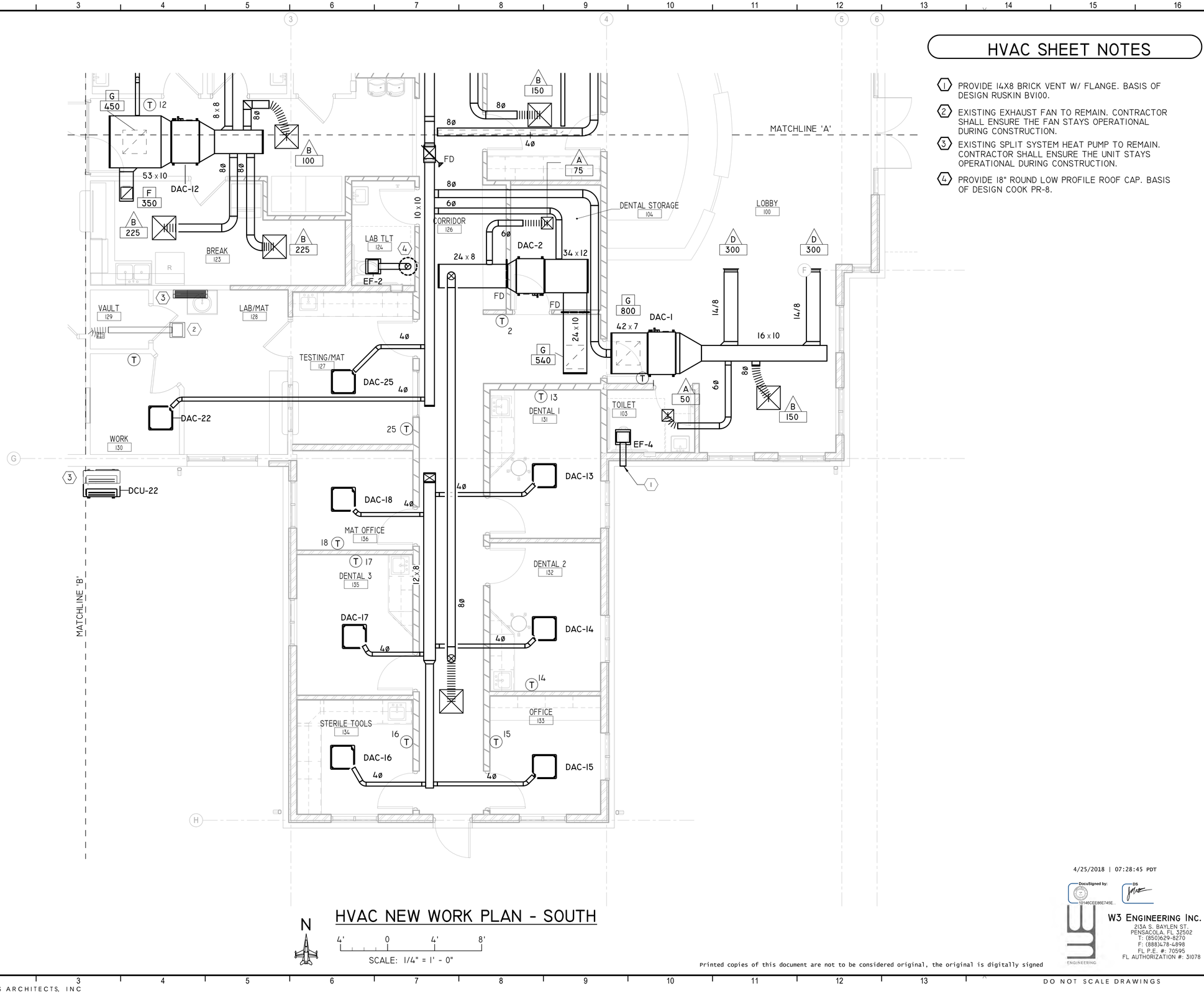
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HVAC NEW WORK PLAN - SOUTH

N

4' 0 4' 8'

SCALE: 1/4" = 1' - 0"

HVAC SHEET NOTES

1. PROVIDE 14X8 BRICK VENT W/ FLANGE. BASIS OF DESIGN RUSKIN BVI00.
2. EXISTING EXHAUST FAN TO REMAIN. CONTRACTOR SHALL ENSURE THE FAN STAYS OPERATIONAL DURING CONSTRUCTION.
3. EXISTING SPLIT SYSTEM HEAT PUMP TO REMAIN. CONTRACTOR SHALL ENSURE THE UNIT STAYS OPERATIONAL DURING CONSTRUCTION.
4. PROVIDE 18" ROUND LOW PROFILE ROOF CAP. BASIS OF DESIGN COOK PR-8.

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PROJECT ISSUES:

SD - 1	09.29.2017
SD - 2	12.28.2017
ASD	03.16.2018
DD	04.06.2018
BLDG PERMIT SET	04.25.2018

PROJECT TEAM:

CIVIL:
REBOL BATTLE & ASSOCIATES

STRUCTURAL:
JOE DEREUIL ASSOCIATES

ARCHITECT:
CALDWELL ASSOCIATES ARCHITECTS

MEP / TELECOM:
W3 ENGINEERING

PROJECT:
LAKEVIEW CENTER/ COMMUNITY HEALTH NORTHWEST FLORIDA RENOVATION & ADDITION

6021 INDUSTRIAL BLVD #A CENTURY, FLORIDA 32535

ENGINEER'S SEAL

JAMES E. WELLS III LICENSE No. 70595 STATE OF FLORIDA PROFESSIONAL ENGINEER

JAMES E. WELLS III
P.E.#: 70595

PROJECT NO. : 6617
SHEET TITLE:
HVAC NEW WORK PLAN - SOUTH

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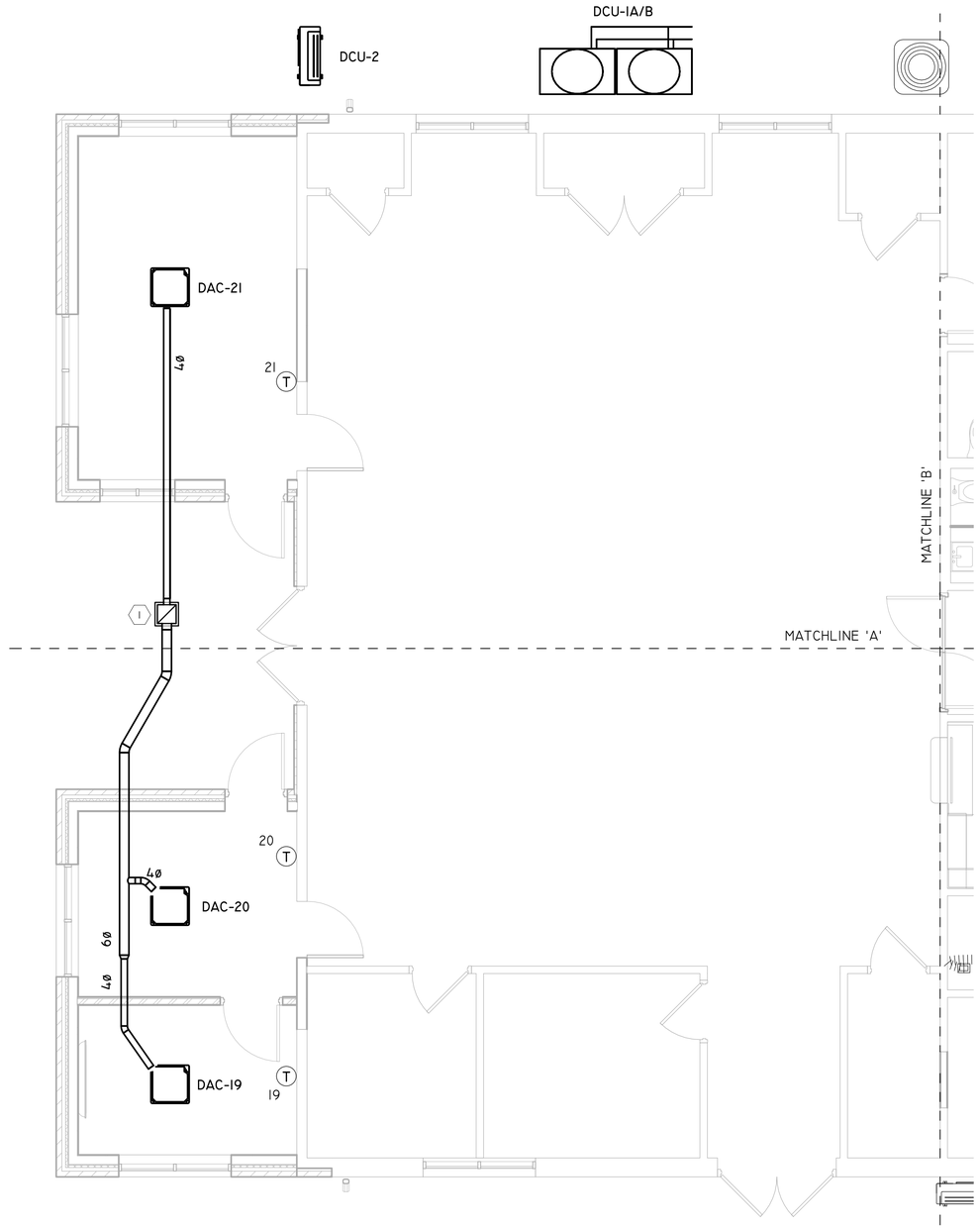
W3 ENGINEERING INC.
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FL P.E. #: 70595
FL AUTHORIZATION #: 31078

SHEET NUMBER:
M112

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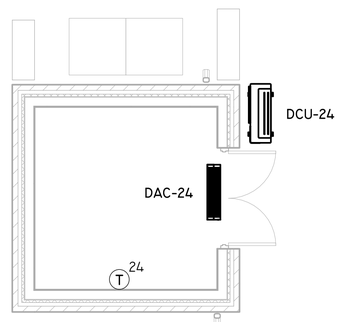
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SHEET NOTES

1. PROVIDE I2xI2 SOFFIT GRILLE.



HVAC NEW WORK PLAN - GENERATOR AND STORAGE BUILDING

4' 0 4' 8'

SCALE: I/4" = I' - 0"

HVAC NEW WORK PLAN - WEST

N

4' 0 4' 8'

SCALE: I/4" = I' - 0"

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6021 INDUSTRIAL BLVD #A
CENTURY, FLORIDA 32535

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P.E.#: 70595

PROJECT NO. : 6617
SHEET TITLE:
HVAC NEW WORK PLAN - WEST

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SHEET NUMBER:
M113

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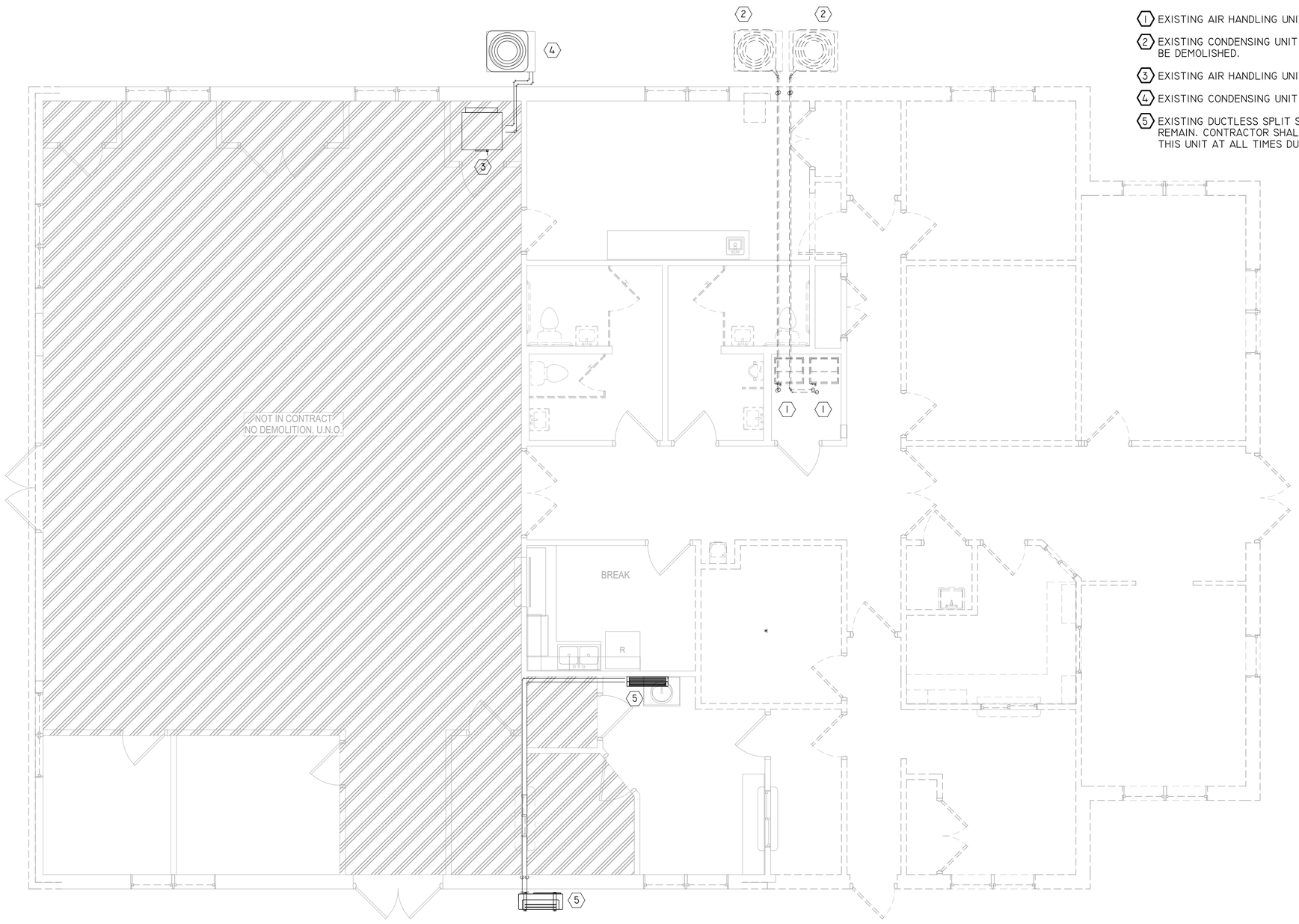
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SHEET NOTES

1. EXISTING AIR HANDLING UNIT TO BE DEMOLISHED.
2. EXISTING CONDENSING UNIT AND ASSOCIATED PIPING TO BE DEMOLISHED.
3. EXISTING AIR HANDLING UNIT TO REMAIN.
4. EXISTING CONDENSING UNIT TO REMAIN.
5. EXISTING DUCTLESS SPLIT SYSTEM HEAT PUMP SHALL REMAIN. CONTRACTOR SHALL MAINTAIN OPERATION OF THIS UNIT AT ALL TIMES DURING CONSTRUCTION.



N

HVAC PIPING DEMOLITION PLAN

4' 0 4' 8'

SCALE: 1/4" = 1' - 0"

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ARCHITECT:
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MEP / TELECOM:
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6021 INDUSTRIAL BLVD #A CENTURY, FLORIDA 32535

ENGINEER'S SEAL

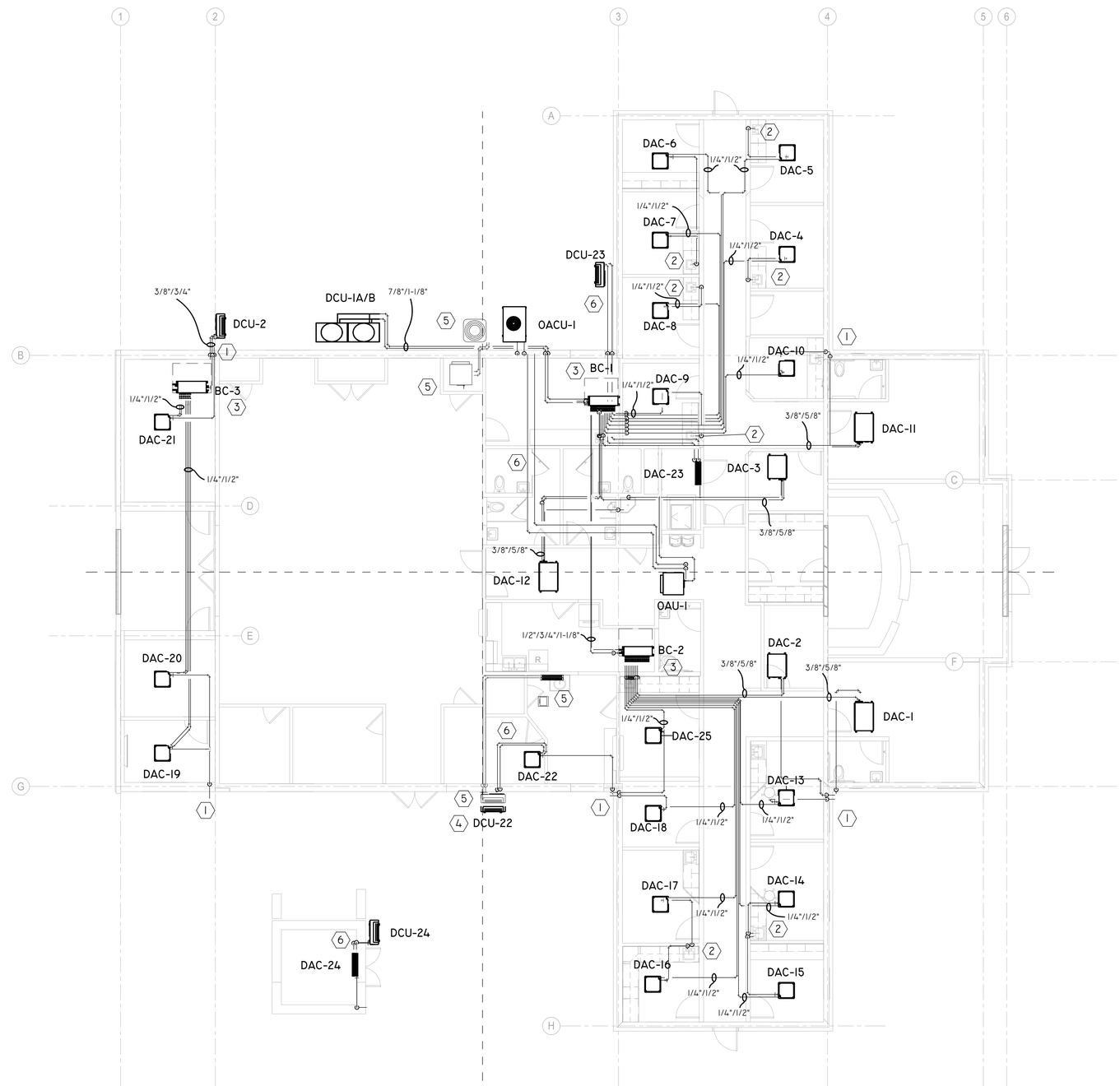
JAMES E. WELLS III LICENSE No. 70595 STATE OF FLORIDA PROFESSIONAL ENGINEER

JAMES E. WELLS III
P.E.#: 70595

PROJECT NO. : 6617
SHEET TITLE:
HVAC PIPING DEMOLITION PLAN

SHEET NUMBER:
M201

BLDG PERMIT SET



SHEET NOTES

1. PROVIDE CONCRETE SPLASH BLOCK.
2. ROUTE 3/4" CONDENSATE PIPING DOWN WALL AND TO HUB DRAIN IN CABINET SPACE.
3. PROVIDE ISOLATION VALVES FOR EACH BRANCH CONNECTION AT BRANCH BOX.
4. MOUNT NEW CONDENSING UNIT ON CONCRETE HOUSEKEEPING PAD BELOW EXISTING WALL MOUNT CONDENSING UNIT.
5. EXISTING UNIT TO REMAIN.
6. SIZE REFRIGERANT LINESET PER MANUFACTURER'S RECOMMENDATIONS.

N

HVAC PIPING NEW WORK PLAN

8' 0 8' 16'

SCALE: 1/8" = 1' - 0"

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JOE DEREUIL ASSOCIATES

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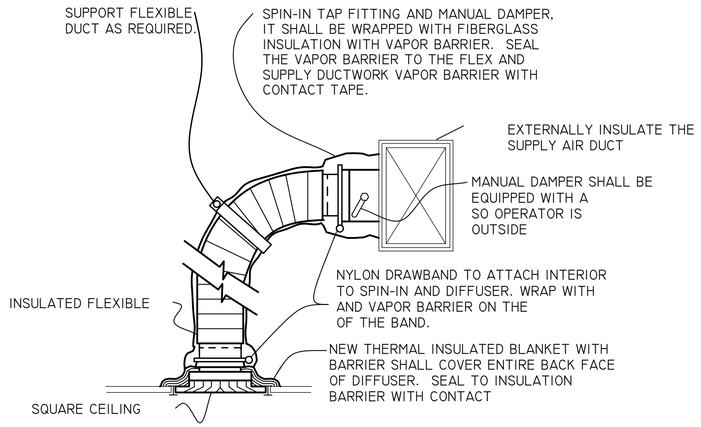
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HVAC PIPING NEW WORK PLAN

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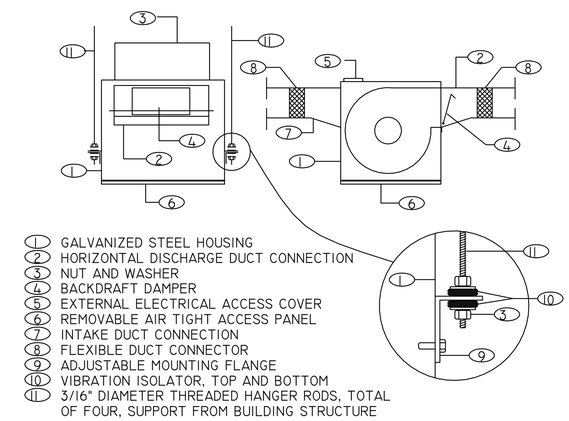
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FL P.E. #: 70595
FL AUTHORIZATION #: 31078

SHEET NUMBER:
M211

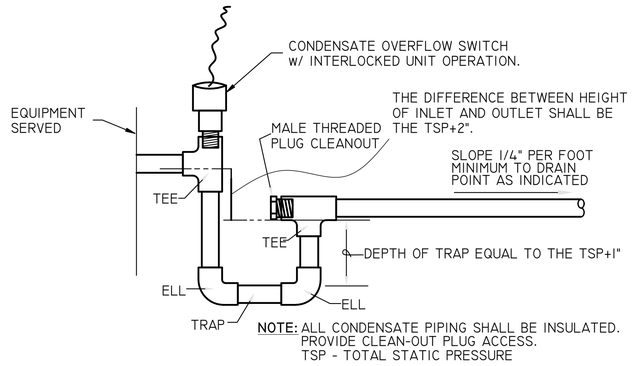
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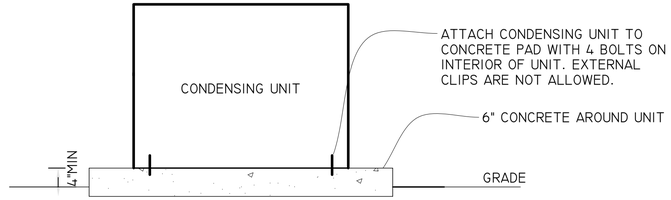
PANEL DIFFUSER
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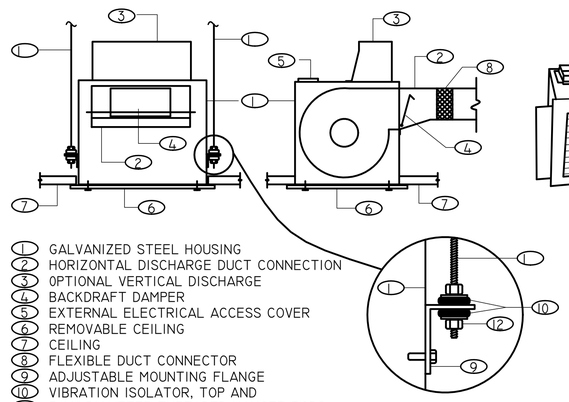
CABINET EXHAUST FAN DETAIL
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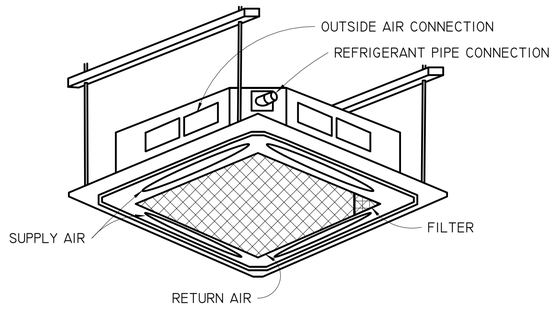
TYPICAL CONDENSATE DRAIN DETAIL DRAW THROUGH UNIT
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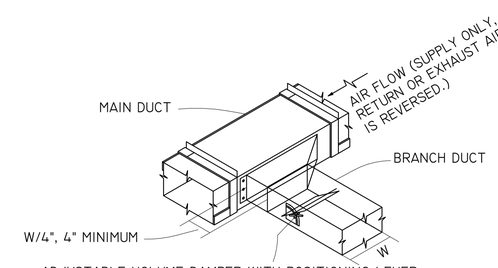
CONDENSING UNIT MOUNTING DETAIL
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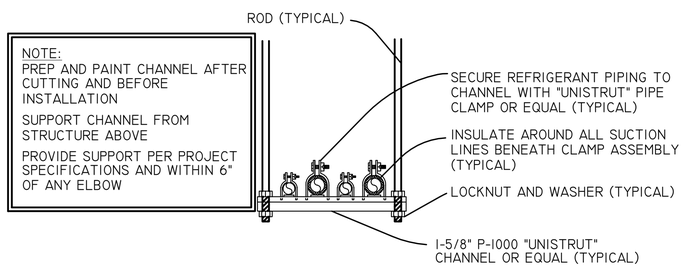
CEILING EXHAUST FAN
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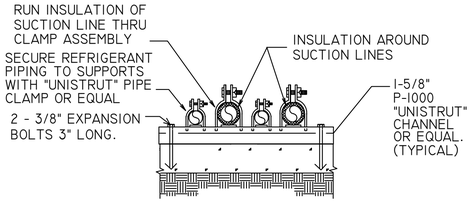
CEILING CASSETTE MOUNTING DETAIL
NOT TO SCALE



TYPICAL BRANCH DUCT TAKEOFF
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OVERHEAD REFRIGERANT PIPE SUPPORT
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EXTERIOR REFRIGERANT PIPE SUPPORT
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LAKEVIEW CENTER/ COMMUNITY HEALTH NORTHWEST FLORIDA RENOVATION & ADDITION

6021 INDUSTRIAL BLVD #A CENTURY, FLORIDA 32535

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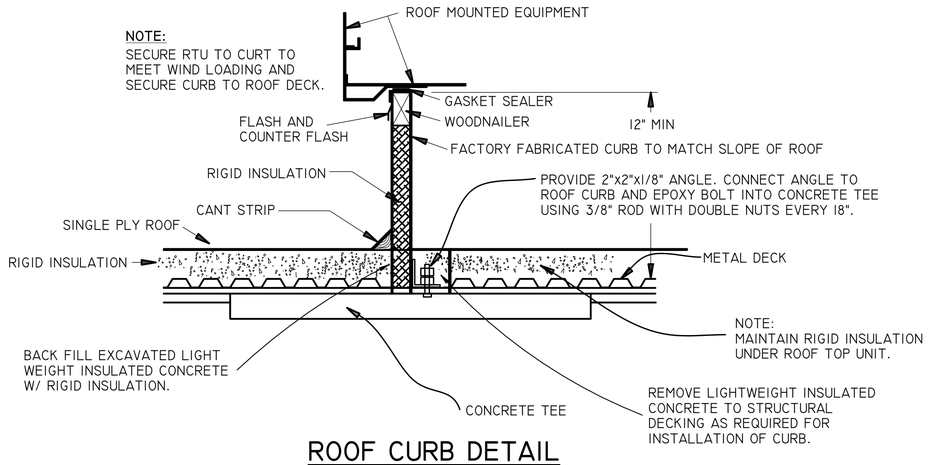
PROJECT NO. : 6617
SHEET TITLE:
HVAC DETAILS

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FL AUTHORIZATION #: 31078

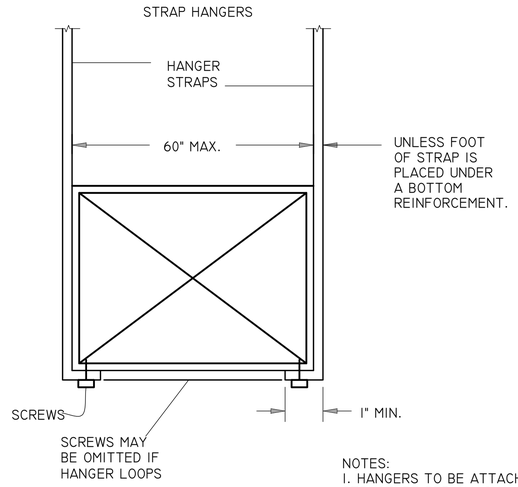
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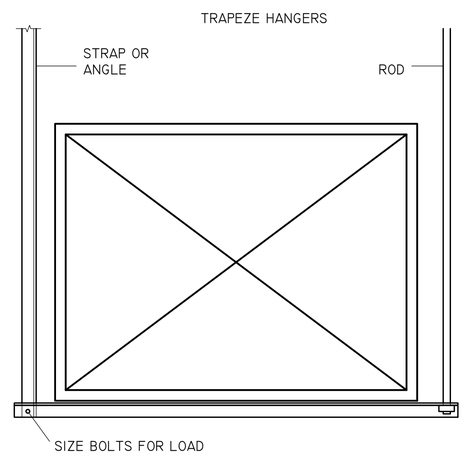
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ROOF CURB DETAIL

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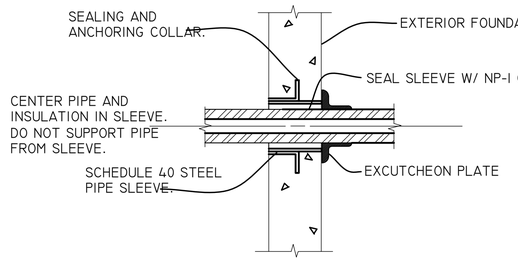




NOTES:
1. HANGERS TO BE ATTACHED TO STRUCTURE PER SMACNA STANDARDS.
2. SIZE OF STRAPS, RODS, AND OR ANGLES TO BE PER SMACNA STANDARDS.

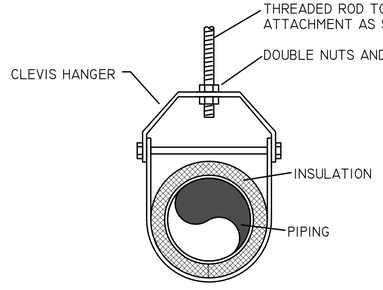
DUCT SUPPORT DETAIL

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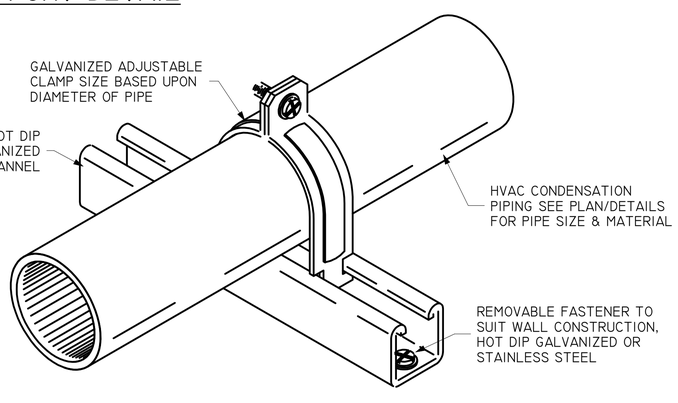
TYPICAL EXTERIOR WALL SLEEVE DETAIL

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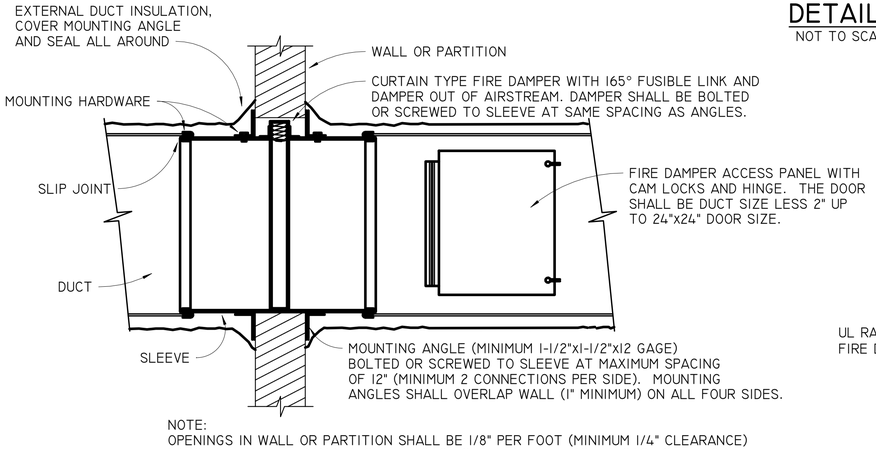
SINGLE OR GANG PIPE HANGER DETAIL

NOT TO SCALE



CONDENSATE PIPING MOUNTING DETAIL

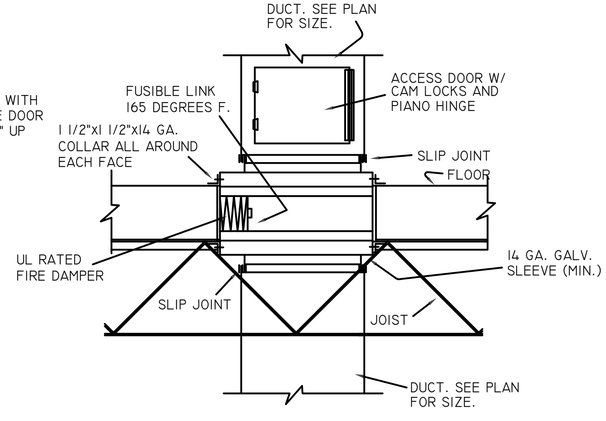
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NOTE:
OPENINGS IN WALL OR PARTITION SHALL BE I/8" PER FOOT (MINIMUM I/4" CLEARANCE) LARGER THAN FIRE DAMPER. SLEEVE GAGE SHALL BE AT LEAST I4 GAGE STEEL OR EQUAL TO DUCT GAGE IF IT IS THICKER. INSTALLATION OF FIRE DAMPER SHALL BE IN ACCORDANCE WITH SMACNA DUCT CONSTRUCTION STANDARDS AND PER NFPA90A. AND UL-APPROVED INSTALLATION INSTRUCTION.

TYPICAL FIRE DAMPER DETAIL - WALL MOUNTED

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FLOOR MOUNTED FIRE DAMPER DETAIL

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STRUCTURAL:
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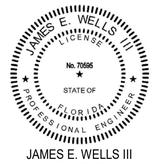
ARCHITECT:
CALDWELL ASSOCIATES ARCHITECTS

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ENGINEER'S SEAL



JAMES E. WELLS III
P.E.#: 70595

PROJECT NO. : 6617
SHEET TITLE:
HVAC DETAILS CONT.

SHEET NUMBER:
M502

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OUTSIDE AIR UNIT SCHEDULE

MARK	TYPE	REFRIGERANT TYPE	OUTSIDE AIR (CFM)	E.S.P. (INWC)	FAN HP	TOTAL COOLING CAPACITY	SENSIBLE COOLING CAPACITY	COIL ENT. DB TEMP.	COIL ENT. WB TEMP.	COIL LVG. DB TEMP.	COIL LVG. WB TEMP.	AMBIENT TEMP. (DEGF)	HEATING CAPACITY	COIL ENT. TEMP.	COIL LVG. TEMP.	HEATING AMBIENT TEMP. (DEG F)	# OF COMPRESSORS	COMPRESSOR RLA (EACH)	ELECTRIC HEAT (kW)	ELECTRIC HEAT (Btu/h)	EER	ELECTRICAL DATA					REMARKS
																						MCA	MOCP	VOLTAGE	PHASE	Hz	
OAU-1	HORIZONTAL	R-410A	700	0.7	1/2	64200.0 Btu/h	25900.0 Btu/h	88 °F	80 °F	55 °F	55 °F	95	33200.0 Btu/h	25 °F	59 °F	47	1	16	11.3	38400	16.3	42.5	45	208	3	60	

NOTES:

-- CONTRACTOR SHALL ALLOW 0.2 INCHES EXTRA STATIC PRESSURE DROP FOR DIRTY FILTERS.
-- PROVIDE BACNET INTERFACE.
-- ROUTE CONDENSATE TO JANITORS CLOSET MOP SINK.
-- UNIT SEASONAL MRE RATED PER AHRI 920.

OUTSIDE AIR REMOTE CONDENSER SCHEDULE

MARK	REFRIGERANT TYPE	COOLING DATA		HEATING DATA		NO. OF FANS	FAN FLA (EACH)	ELECTRICAL DATA					REMARKS
		TOTAL CAPACITY	AMBIENT AIR TEMP.	TOTAL CAPACITY	AMBIENT AIR TEMP.			VOLTAGE	PHASE	Hz	UNIT MCA	UNIT MOCP	
OACU-1	R-410A	64200.0 Btu/h	95	33200.0 Btu/h	47	1	19	208	3	60	23	35	

NOTES:

-- UNIT CAPACITIES RATED AT ARI CONDITIONS @ NONIMAL AIRFLOW.

AIR HANDLING UNIT SCHEDULE

MARK	TYPE	SUPPLY AIRFLOW (CFM)	OUTSIDE AIR FLOW (CFM)	E.S.P. (INWC)	TOTAL COOLING CAPACITY	SENSIBLE COOLING CAPACITY	COIL ENT. (DB/WB)	AMBIENT AIR TEMP.	TOTAL HEATING CAPACITY	COIL ENT. (DB)	AMBIENT AIR TEMP.	ELECTRICAL DATA					REMARKS
												MCA	MOCP	VOLTAGE	PHASE	Hz	
DAC-1	CEILING CONCEALED DUCTED LOW PROFILE	883	80	0.4	20492.0 Btu/h	14698 Btu/h	80 / 67	95	25818.0 Btu/h	70	47	2.73	15	208	1	60	
DAC-2	CEILING CONCEALED DUCTED LOW PROFILE	600	60	0.4	15369.0 Btu/h	11024 Btu/h	80 / 67	95	19364.0 Btu/h	70	47	1.56	15	208	1	60	
DAC-3	CEILING CONCEALED DUCTED LOW PROFILE	600	55	0.4	15369.0 Btu/h	11024 Btu/h	80 / 67	95	19364.0 Btu/h	70	47	1.56	15	208	1	60	
DAC-4	CEILING CASSETTE RECESSED UNIT	167	25	0.2	6786.0 Btu/h	5716 Btu/h	80 / 67	95	8624.0 Btu/h	70	47	0.29	15	208	1	60	
DAC-5	CEILING CASSETTE RECESSED UNIT	167	25	0.2	6786.0 Btu/h	5716 Btu/h	80 / 67	95	8624.0 Btu/h	70	47	0.29	15	208	1	60	
DAC-6	CEILING CASSETTE RECESSED UNIT	167	25	0.2	6786.0 Btu/h	5716 Btu/h	80 / 67	95	8624.0 Btu/h	70	47	0.29	15	208	1	60	
DAC-7	CEILING CASSETTE RECESSED UNIT	167	25	0.2	6786.0 Btu/h	5716 Btu/h	80 / 67	95	8624.0 Btu/h	70	47	0.29	15	208	1	60	
DAC-8	CEILING CASSETTE RECESSED UNIT	167	25	0.2	6786.0 Btu/h	5716 Btu/h	80 / 67	95	8624.0 Btu/h	70	47	0.29	15	208	1	60	
DAC-9	CEILING CASSETTE RECESSED UNIT	167	25	0.2	6786.0 Btu/h	5716 Btu/h	80 / 67	95	8624.0 Btu/h	70	47	0.29	15	208	1	60	
DAC-10	CEILING CASSETTE RECESSED UNIT	167	25	0.2	6786.0 Btu/h	5716 Btu/h	80 / 67	95	8624.0 Btu/h	70	47	0.29	15	208	1	60	
DAC-11	CEILING CONCEALED DUCTED LOW PROFILE	883	80	0.4	6786.0 Btu/h	5716 Btu/h	80 / 67	95	25818.0 Btu/h	70	47	2.73	15	208	1	60	
DAC-12	CEILING CONCEALED DUCTED LOW PROFILE	883	80	0.4	20492.0 Btu/h	14698 Btu/h	80 / 67	95	25818.0 Btu/h	70	47	2.73	15	208	1	60	
DAC-13	CEILING CASSETTE RECESSED UNIT	167	25	0.2	6786.0 Btu/h	5716 Btu/h	80 / 67	95	8624.0 Btu/h	70	47	0.29	15	208	1	60	
DAC-14	CEILING CASSETTE RECESSED UNIT	167	25	0.2	6786.0 Btu/h	5716 Btu/h	80 / 67	95	8624.0 Btu/h	70	47	0.29	15	208	1	60	
DAC-15	CEILING CASSETTE RECESSED UNIT	167	25	0.2	6786.0 Btu/h	5716 Btu/h	80 / 67	95	8624.0 Btu/h	70	47	0.29	15	208	1	60	
DAC-16	CEILING CASSETTE RECESSED UNIT	167	25	0.2	6786.0 Btu/h	5716 Btu/h	80 / 67	95	8624.0 Btu/h	70	47	0.29	15	208	1	60	
DAC-17	CEILING CASSETTE RECESSED UNIT	167	25	0.2	6786.0 Btu/h	5716 Btu/h	80 / 67	95	8624.0 Btu/h	70	47	0.29	15	208	1	60	
DAC-18	CEILING CASSETTE RECESSED UNIT	167	25	0.2	6786.0 Btu/h	5716 Btu/h	80 / 67	95	8624.0 Btu/h	70	47	0.29	15	208	1	60	
DAC-19	CEILING CASSETTE RECESSED UNIT	167	20	0.2	6786.0 Btu/h	5716 Btu/h	80 / 67	95	8624.0 Btu/h	70	47	0.29	15	208	1	60	
DAC-20	CEILING CASSETTE RECESSED UNIT	167	20	0.2	6786.0 Btu/h	5716 Btu/h	80 / 67	95	8624.0 Btu/h	70	47	0.29	15	208	1	60	
DAC-21	CEILING CASSETTE RECESSED UNIT	167	20	0.2	6786.0 Btu/h	5716 Btu/h	80 / 67	95	8624.0 Btu/h	70	47	0.29	15	208	1	60	
DAC-22	CEILING CASSETTE RECESSED UNIT	167	20	0.2	6786.0 Btu/h	5716 Btu/h	80 / 67	95	8624.0 Btu/h	70	47	0.29	15	208	1	60	
DAC-23	WALL MOUNT; SINGLE ZONE	883	N/A	0.2	20492.0 Btu/h	14698 Btu/h	80 / 67	95	25818.0 Btu/h	70	47	2.73	15	208	1	60	NOTE 1
DAC-24	WALL MOUNT; SINGLE ZONE	883	N/A	0.2	20492.0 Btu/h	14698 Btu/h	80 / 67	95	25818.0 Btu/h	70	47	2.73	15	208	1	60	NOTE 1
DAC-25	CEILING CASSETTE RECESSED UNIT	167	20	0.2	6786.0 Btu/h	5716 Btu/h	80 / 67	95	8624.0 Btu/h	70	47	0.29	15	208	1	60	

NOTES:

-- UNIT CAPACITIES RATED AT ARI CONDITIONS @ NONIMAL AIRFLOW.
-- PROVIDE FACTORY SUPPLIED WIRED WALL-MOUNTED PROGRAMMABLE THERMOSTAT. LOCATE AS INDICATED.
-- PROVIDE CONDENSATE PUMP WHERE REQUIRED.
-- NOTE 1: INDOOR UNIT SHALL BE POWERED FROM OUTDOOR UNIT.

HEAT PUMP UNIT SCHEDULE

MARK	REFRIGERANT TYPE	COOLING DATA		HEATING DATA		NO. OF FANS	# OF COMPRESSORS	MIN. EER	MIN. COP	ELECTRICAL DATA					REMARKS
		TOTAL CAPACITY	AMBIENT AIR TEMP.	HP HEATING CAPACITY	HT. AMBIENT AIR TEMP.					VOLTAGE	PHASE	Hz	UNIT MCA	UNIT MOCP	
DCU-1A/B	R-410A	192000.0 Btu/h	95	215000.0 Btu/h	47	2	2	12.1	3.3	208	3	60	60 / 54	65 / 65	PROVIDE TWINNING KIT
DCU-2	R-410A	36000.0 Btu/h	95	42000.0 Btu/h	47	2	1	12.1	3.3	208	1	60	31	45	
DCU-22	R-410A	28400.0 Btu/h	95	28600.0 Btu/h	47	1	1	17.6	10	208	1	60	30.5	40	
DCU-23	R-410A	28400.0 Btu/h	95	28600.0 Btu/h	47	1	1	17.6	10	208	1	60	30.5	40	
DCU-24	R-410A	28400.0 Btu/h	95	28600.0 Btu/h	47	1	1	17.6	10	208	1	60	30.5	40	

NOTES:

-- UNIT CAPACITIES RATED AT ARI CONDITIONS @ NONIMAL AIRFLOW.

EXHAUST FAN SCHEDULE

MARK	DRIVE/TYPE	AIRFLOW (CFM)	E.S.P.	MAX. FAN RPM	MAX SONES	FAN MOTOR HP	ELECTRICAL DATA			CONTROL
							VOLTAGE	PHASE	Hz	
EF-1	DIRECT / INLINE	400	0.50 IN-WG	1100	1	1/2	120 V	1	60	INTERLOCK W/ OAU-1
EF-2	DIRECT / CEILING	75	0.40 IN-WG	1100	1	1/5	120 V	1	60	INTERLOCK W/ LIGHT SWITCH; PROVIDE 10 MIN. OFF DELAY
EF-3	DIRECT / CEILING	75	0.40 IN-WG	1100	1	1/5	120 V	1	60	INTERLOCK W/ LIGHT SWITCH; PROVIDE 10 MIN. OFF DELAY
EF-4	DIRECT / CEILING	75	0.40 IN-WG	1100	1	1/5	120 V	1	60	INTERLOCK W/ LIGHT SWITCH; PROVIDE 10 MIN. OFF DELAY

NOTES:

-- ALL FANS SHALL BE INSTALLED W/ FLEXIBLE DUCT CONNECTION, VIBRATION ISOLATORS, AND FLEXIBLE CONDUIT. FAN SHALL NOT BE IN CONTACT WITH ANY OTHER DUCT, PIPING, CONDUIT, OR STRUCTURAL MEMBERS.
-- FANS SHALL BE PROVIDED WITH BACKDRAFT DAMPERS.
-- ALL DIRECT DRIVE FANS WITH MOTORS LESS THAN 1/2HP SHALL BE PROVIDED WITH AN ADJUSTABLE ELECTRONIC SPEED CONTROLLER.

DIFFUSER & REGISTER SCHEDULE

MARK	MIN. FLOW	MAX. FLOW	AIR DEVICE SIZE	DUCT CONNECTION SIZE	DESCRIPTION
A	0	80	12" X 12"	6" ROUND	PANEL CEILING DIFFUSER: BASIS OF DESIGN TITUS SPECTRUM
B	85	215	24" X 24"	8" ROUND	PANEL CEILING DIFFUSER: BASIS OF DESIGN TITUS SPECTRUM
C	220	355	24" X 24"	10 " ROUND	PANEL CEILING DIFFUSER: BASIS OF DESIGN TITUS SPECTRUM
D	300	300	14" X 8"	14" X 8"	DOUBLE DEFLECTION SIDEWALL SUPPLY; BASIS OF DESIGN TITUS 300FL
E	100	100	8" X 6"	8" X 6"	EXHAUST/RETURN GRILLE 35 DEG DEFLECTION 1/2" SPACING
F	0	350	12" X 12"	12" X 12"	EXHAUST/RETURN GRILLE 35 DEG DEFLECTION 1/2" SPACING
G	355	1200	24" X 24"	22" X 22"	EXHAUST/RETURN GRILLE 35 DEG DEFLECTION 1/2" SPACING

NOTES:

-- PROVIDE 24"X24" LAY IN PANEL FOR LAY IN TYPE CEILINGS. PROVIDE PLASTER FRAME FOR AIR DEVICES IN GYP. BOARD CEILINGS.
-- PROVIDE AIR DEVICE WITH DUCT CONNECTION SHOWN ON SCHEDULE UNLESS OTHERWISE NOTED ON PLANS.
-- MAXIMUM NC FOR DEVICES IS 30.
-- PROVIDE REGISTERS WITH BALANCING DAMPERS.
-- PROVIDE BOWDEN CABLE SYSTEM FOR BALANCING DAMPERS WHERE DAMPERS ARE LOCATED ABOE GYP. BOARD CEILINGS.

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PROJECT ISSUES:

SD - 1	09.29.2017
SD - 2	12.28.2017
DD	03.01.2018
BLDG PERMIT SET	04.25.2018

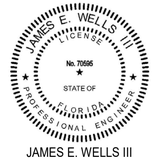
PROJECT TEAM:

ARCHITECT:
CALDWELL ASSOCIATES ARCHITECTS

PROJECT:
LAKEVIEW CENTER/ COMMUNITY HEALTH NORTHWEST FLORIDA RENOVATION & ADDITION

6021 INDUSTRIAL BLVD #A CENTURY, FLORIDA 32535

ENGINEER'S SEAL



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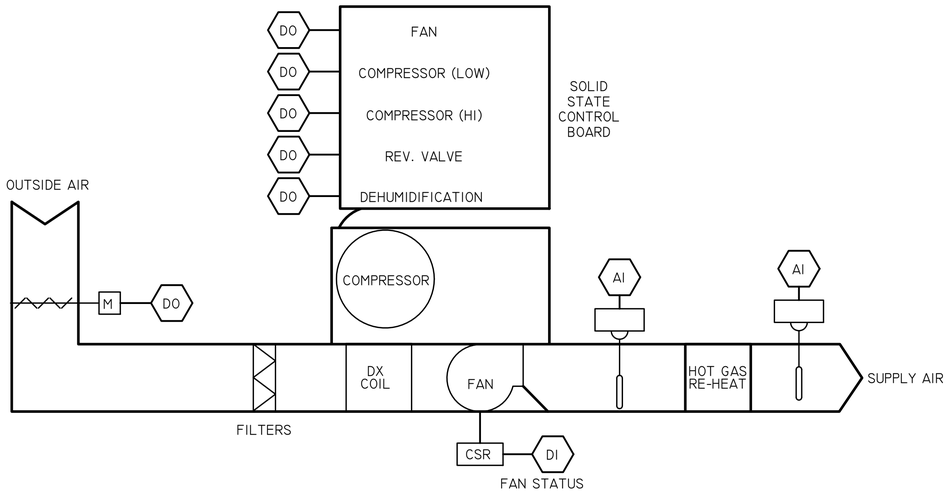
PROJECT NO. : 6617
SHEET TITLE:
HVAC SCHEDULES

SHEET NUMBER:
M601

BLDG PERMIT SET

PRINT DATE: 4/20/2018 9:00:29 AM

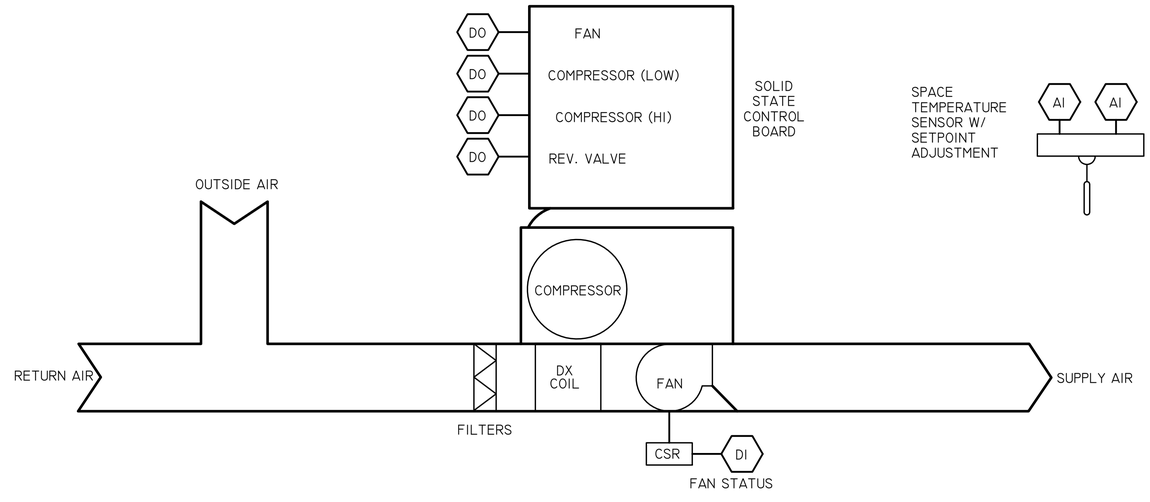
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100% OUTSIDE AIR HEAT PUMP UNIT'CONTROL

SEQUENCE OF OPERATION

THE 100% OUTSIDE AIR HEAT PUMP UNIT FAN SHALL BE STARTED BY THE DDC CONTROLS ACCORDING TO ITS' OCCUPIED/UNOCCUPIED SCHEDULE.
OCCUPIED MODE: THE OUTSIDE AIR DAMPER SHALL OPEN TO ITS' BALANCED POSITION.
THE 100% OUTSIDE AIR HEAT PUMP UNIT REVERSING VALVE AND EACH STAGE OF DX COOLING SHALL BE CYCLED AS
NEEDED TO MAINTAIN A DISCHARGE AIR SETPOINT OF 55 DEG F (ADJUSTABLE). THE HOT GAS REHEAT SHALL MODULATE TO MAINTAIN A DISCHARGE AIR TEMPERATURE OF 70 DEG F (ADJUSTABLE).
DURING UNOCCUPIED HOURS, THE OUTSIDE AIR UNIT SHALL REMAIN OFF.



INDOOR HEAT PUMP UNIT CONTROL

SEQUENCE OF OPERATION

THE INDOOR HEAT PUMP UNIT FAN SHALL BE STARTED BY THE DDC CONTROLS ACCORDING TO ITS' OCCUPIED/UNOCCUPIED SCHEDULE. WHEN THE ROOM TEMPERATURE RISES ABOVE THE COOLING SETPOINT, THE INDOOR HEAT PUMP UNIT REVERSING VALVE AND EACH STAGE OF DX COOLING SHALL BE CYCLED AS NEEDED TO SATISFY SPACE COOLING REQUIREMENTS. WHEN ROOM TEMPERATURE FALLS BELOW THE HEATING SET POINT THE INDOOR HEAT PUMP UNIT REVERSING VALVE AND EACH STAGE OF COMPRESSOR HEATING SHALL BE CYCLED AS NEEDED TO SATISFY SPACE HEATING REQUIREMENTS.
DURING HOURS OF UNOCCUPIED OPERATION A PUSH BUTTON OVERRIDE SHALL BE PROVIDED TO BRING THE SYSTEM INTO OCCUPIED MODE FOR 3 HOURS (ADJUSTABLE).
A NIGHT HIGH AND LO LIMIT SHALL BE PROGRAMMED INTO THE DDC CONTROL SYSTEM TO BRING THE OUTSIDE AIR SYSTEM ON IN UNOCCUPIED TIMES SHOULD THE ROOM TEMPERATURE BE OUTSIDE THE SETPOINTS AS SCHEDULED.

GENERAL NOTES FOR CONTROL SYSTEMS

THE FOLLOWING ITEMS APPLY TO THE CONTROL SEQUENCES SPECIFIED HEREIN:
1. VARIABLE SPEED CONTROLS SHALL START AT LOW SPEED.
2. THE OPERATING POWER FOR VALVES, DAMPERS, ETC. SHALL BE ELECTRIC. POWER SHALL BE PROVIDED AS REQUIRED BY THE TEMPERATURE CONTROL CONTRACTOR.
3. UPON FAILURE AND RESTORATION OF POWER, SYSTEMS SHALL AUTOMATICALLY RESTART AND RETURN TO THEIR NORMAL MODE OF OPERATION. ADJUSTABLE TIME DELAYS SHALL BE PROVIDED TO SEQUENTIALLY STAGE STARTING OF EQUIPMENT WITH MOTORS GREATER THAN 5 HP OR LOADS GREATER THAN 4 KW.
4. HAND-OFF-AUTOMATIC SWITCHES:
   A. SAFETY DEVICES SHALL BE INTERLOCKED WITH BOTH HAND AND AUTOMATIC POSITIONS IN SERIES WITH MOTOR CONTROLLERS HOLDING COILS CIRCUIT.
   B. INTERLOCKING WITH OTHER FANS AND EQUIPMENT OF THE SYSTEM SHALL BE THROUGH AUTOMATIC POSITION ONLY.
   C. REMOTE CONTROL FROM THE DDC SYSTEM SHALL BE THROUGH THE AUTOMATIC POSITION.
   D. HAND POSITION SHALL BE FOR MAINTENANCE OPERATION ONLY.
   E. OPERATION REQUIRED FOR RESPONSE TO THE FIRE ALARM SYSTEM RELAYS AND EMERGENCY FAN SHUTDOWN STATIONS SHALL BE THROUGH BOTH HAND AND AUTOMATIC POSITION.

5. CONTROL SET POINTS SHALL BE ADJUSTABLE OVER THE RANGE OF THE SENSED MEDIA. MEANS OF ADJUSTMENT AND CURRENT SET POINT SHALL BE IDENTIFIED. DDC SET POINTS SHALL BE PROGRAMMED AS VARIABLES, EXPRESSED IN THE APPROPRIATE ENGINEERING UNITS, WHICH CAN BE ADJUSTED THROUGH THE DIGITAL DISPLAY UNIT OR FROM A CENTRAL STATION WITHOUT REQUIRING MODIFICATION OR RELOADING OF THE DDC CONTROL PROGRAMS.

6. CONTROL OUTPUTS SHALL PROVIDE MAXIMUM RATED ACTUATOR POWER AT EXTREMES OF ACTUATOR TRAVEL. CONTROL OUTPUT RANGE (0-100%) SHALL CORRESPOND TO ACTUATOR TRAVEL (0-100%).

7. THE DDC SYSTEMS SHALL BE SETUP TO DISPLAY ALL ITEMS INDICATED ON THE FLOW DIAGRAMS.

8. ALL VFD'S SHALL BE PROVIDED w/ BACNET MSTP COMMUNICATION CARDS. ALL LOCAL CONTROLLERS SHALL COMMUNICATE VIA BACNET IP.

9. PRIOR TO PROJECT COMPLETION, DDC COMMUNICATION AND CONTROL FROM THE WORLD WIDE WEB SHALL BE PROVEN.

10. THE DDC CONTROLS CONTRACTOR SHALL PROVIDE BUILDING LEVEL SUPERVISORY CONTROLLERS BASED ON NIAGARA AX FRAMEWORK REVISION 4.0 OR LATER. THE BUILDING LEVEL SUPERVISORY CONTROLLERS SHALL INCLUDE POINT-TO-POINT, SECURE SOCKET LAYER, WEB SERVER, AND EMBEDDED WORKBENCH. THE BUILDING SUPERVISORY CONTROLLERS SHALL CONTAIN ALL BUILDING LOGIC AND GRAPHICS.

11. ALL GRAPHICS AND POINTS SHALL BE LOCATED IN THE NIAGARA AX SERVER USING WORKBENCH SOFTWARE WHICH SHALL SERVE AS THE WEB SERVER FOR THE SYSTEM. ALL TRENDED POINTS SHALL BE TRANSFERRED VIA POINT TO POINT TO THE SERVER FOR HISTORY TRENDING OF POINTS.

12. THE SYSTEM SHALL ALLOW TECHNICIANS TO CONNECT TO ALL CONTROLLERS WITH ALL AVAILABLE SOFTWARE IN ALL MODES AVAILABLE FROM THE MANUFACTURER FROM THE HALL CENTER VIA THE LOCAL AREA NETWORK TO PROGRAM, BACKUP, DOWNLOAD, CONFIGURE, AND PERFORM ALL FUNCTIONS NECESSARY TO MAINTAIN THE SYSTEM AS IF ONSITE AND DIRECT CONNECTED TO THE DEVICE.

13. ALL HARDWARE AND SOFTWARE ADMINISTRATOR LEVEL PASSWORDS SHALL BE PROVIDED TO ESCAMBIA COUNTY SCHOOLS TO ACCESS ALL LEVELS OF ALL CONTROLLERS INCLUDING THE NIAGARA FRAMEWORK CONTROLLERS. THE PASSWORD SHALL ALLOW COMPLETE ACCESS TO EVERYTHING THE MANUFACTURER HAS ACCESS TO.

14. THE DDC CONTROLS CONTRACTOR SHALL PROVIDE SYSTEMS ENGINEERING TRAINING TO MAINTENANCE PERSONNEL FOR 1 FULL DAY.

15. ALL FIELD CONTROLLERS SHALL UTILIZE THE BACNET PROTOCOL FOR COMMUNICATIONS.

16. THE DDC CONTROLS CONTRACTOR SHALL PROVIDE TWO LAN DROPS WITHIN THREE FEET OF THE BUILDING SUPERVISORY CONTROLLER AND PROVIDE A PATCH CABLE BETWEEN THE LAN DROP AND THE BUILDING LEVEL SUPERVISORY CONTROLLER.

17. GRAPHICS SHALL BE PROVIDED ON THE WEB SERVER / NIAGARA FRONT END. THE DATE AND TIME SHALL BE INCLUDED ON ALL GRAPHICS SCREENS. GRAPHIC SCREENS FOR EACH SYSTEM SHALL BE PROVIDED. THE FLOORPLAN GRAPHIC SCREEN SHALL INCLUDE COLOR CODED ZONES WITH ROOM NUMBERS, SENSOR LOCATIONS, AND EQUIPMENT LOCATIONS. THE BUILDING GRAPHIC SCREEN SHALL BE LINKED TO THE MAIN MAP GRAPHIC SCREEN AND THE MAIN MAP GRAPHIC SCREEN SHALL BE UPDATED IF APPLICABLE. THE BUILDING GRAPHIC SCREEN SHALL CONTAIN LINKS TO ALL ALARMS, REPORTS, SCHEDULES, HISTORY, AND USER SERVICE.

18. TEMPERATURE SENSORS IN AIR HANDLING UNITS SHALL BE UNIT MOUNTED AVERAGING TYPE SENSORS.

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PROJECT ISSUES:

SD - 1	09.29.2017
SD - 2	12.28.2017
ASD	03.16.2018
DD	04.06.2018
BLDG PERMIT SET	04.25.2018

PROJECT TEAM:

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REBOL BATTLE & ASSOCIATES

STRUCTURAL:
JOE DEREUIL ASSOCIATES

ARCHITECT:
CALDWELL ASSOCIATES ARCHITECTS

MEP / TELECOM:
W3 ENGINEERING

PROJECT:
LAKEVIEW CENTER/ COMMUNITY HEALTH NORTHWEST FLORIDA RENOVATION & ADDITION

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ENGINEER'S SEAL
JAMES E. WELLS III LICENSE No. 70595 STATE OF FLORIDA PROFESSIONAL ENGINEER
JAMES E. WELLS III
P.E.#: 70595

PROJECT NO. : 6617
SHEET TITLE:
DDC CONTROLS FLOW DIAGRAMS AND SEQUENCE

SHEET NUMBER:
M701

BLDG PERMIT SET

PRINT DATE: 4/20/2018 9:00:37 AM

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DO NOT SCALE DRAWINGS

EQUALS TO BE SUBMITTED TO ARCHITECT/ENGINEER 10 DAYS PRIOR TO SUBMITTING BID FOR APPROVAL.

LIGHTING FIXTURE SCHEDULE

MARK	MANUFACTURER AND CATALOG No.	LAMPS No.	LAMPS TYPE	MOUNTING	REMARKS
BP	CHLORIDE CAX6	2	1.5 W LED	WALL @ 7'-6" AFF	120V
BPX	CHLORIDE CCAX-3-R-W	--	LED	WALL @ 7'-6" AFF	BATTERY PACK/EXIT SIGN COMBO, SELF DIAGNOSTICS, 120V, USE PUNCH-OUTS TO SHOW DIRECTIONAL ARROWS AS DENOTED ON DRAWING(S)
DL6	H.E. WILLIAMS L60-L30C-835-CS-W-DIM-120	36W	3500K LED	CEILING RECESSED	6" RECESSED DOWNLIGHT, STD 0-10V DIMMING, CLEAR SEMI-SPECULAR, 120V
L22A	H.E. WILLIAMS AHT-22-L40-835-A-DIM-UNV	39W	3500K LED	CEILING LAY-IN	2X2 LED DIRECT/INDIRECT TROFFER, 120V
L22B	H.E. WILLIAMS AHT-22-L60-835-A-DIM-UNV	61W	3500K LED	CEILING LAY-IN	2X2 LED DIRECT/INDIRECT TROFFER, 120V
LS	H.E. WILLIAMS 75R-4-L50-835-7511-DRV-UNV	44W	3500K LED	SURFACE MOUNT	4' LED STRIP, 3500K, 120V
PD4A	V2 LTG C2CP-D-V-D-20-83-35-60-R-(FINISH)-RSXX	15W	3500K LED	*PENDANT-MOUNT	3.5" DIA DECORATIVE PENDANT, DEEP CANOPY DRIVER, FINISH BY ARCH, 120V, VERIFY PENDANT LENGTH W/ ARCH/ENG PRIOR TO ORDERING, 120V
DLO	H.E. WILLIAMS L60-L40C-835-CS-M-DRV-120	39W	3500K LED	CEILING RECESSED	6" RECESSED DOWNLIGHT, CLEAR SEMI-SPECULAR, MEDIUM DIST, 120V
DLOE	H.E. WILLIAMS L60-L40C-835-CS-M-DRV-120	39W	3500K LED	CEILING RECESSED	6" RECESSED DOWNLIGHT, CLEAR SEMI-SPECULAR, MEDIUM DIST, 120V...W/ INTEGRAL EMERG BATTERY BACKUP
PDO	CONTECH CYL6-540K-MVD-P-X-M-CLR-(FINISH)	37W	4000K LED	*PENDANT-MOUNT	6" PENDANT-MOUNT CYLINDER, CLEAR REFLECT, MEDIUM DIST, WET LOC, 120V
PDOE	CONTECH CYL6-540K-MVD-P-X-M-CLR-(FINISH)-RDB(20WATT)	37W	4000K LED	*PENDANT-MOUNT	6" PENDANT-MOUNT CYLINDER, CLEAR REFLECT, MEDIUM DIST, WET LOC, 120V..W/ REMOTE DRIVER & BATTERY PACK (MAX DISTANCE OF 50')/USE BODINE "BSL-20" (20W EMERGENCY)
WB	H.E. WILLIAMS#VWPH-L30/740-T3-(*FINISH)-SDGL-120	36W	4000K LED	*WALL-MOUNT	ARCHITECTURAL LED WALLPACK, 120V, FINISH BY ARCH
WBE	H.E. WILLIAMS#VWPH-L30/740-T3-(*FINISH)-SDGL-120/EMERG	36W	4000K LED	*WALL-MOUNT	ARCHITECTURAL LED WALLPACK, 120V, FINISH BY ARCH...W/ INTEGRAL EMERG BATTERY BACKUP
X	CHLORIDE# CXXL-3-R-W	1	LED	WALL/PENDANT MT	THERMOPLASTIC LED EXIT SIGN, SELF DIAGNOSTICS, 120V,
X/XCA	CHLORIDE# CXXL-3-R-W	1	LED	CEILING MOUNT	THERMOPLASTIC LED EXIT SIGN, SELF DIAGNOSTICS, 120V, USE PUNCH-OUTS TO SHOW DIRECTIONAL ARROWS AS DENOTED ON DRAWING(S)

*PRIOR TO ORDER, VERIFY ALL FNISHES WITH ARCHITECT. IN ADDITION, FIELD-VERIFY EXACT HEIGHT TO BE MOUNTED WITH GC/ARCH PRIOR TO INSTALLATION.

ELECTRICAL GENERAL NOTES

1. CONTRACTOR SHALL COORDINATE ALL WORK WITH OTHER TRADES PRIOR TO INSTALLATION. REFER TO A/V DRAWINGS FOR REQUIRED RACEWAYS, EXACT SIZE, AND LOCATION OF EQUIPMENT WHICH IS FURNISHED BY OTHERS AND CONNECTED BY ELECTRICAL.
2. RECEPTACLES, SWITCHES AND COVERPLATES COLOR SHALL BE SELECTED BY THE ARCHITECT FROM STANDARD COLORS.
3. LOCATION OF LIGHTING FIXTURES, DISCONNECT SWITCHES, ETC. FOR AUDIO-VISUAL EQUIPMENT/ROOM SHALL BE COORDINATED WITH FINAL 'AV' EQUIPMENT LOCATIONS TO PROVIDE NATIONAL ELECTRIC CODE REQUIRED ACCESS SPACE.
4. FINAL CONNECTION TO ALL MOTORS SHALL BE WITH FLEXIBLE CONDUIT CONNECTION.
5. ALL EXIT AND EMERGENCY FIXTURES SHALL BE CONNECTED TO LIGHT CIRCUIT AHEAD OF LOCAL SWITCH.
6. ALL PANELBOARDS, BACKBOARDS, TERMINAL CABINETS, ETC SHALL HAVE CUSTOM ENGRAVED MICARTA NAMEPLATE MECHANICALLY AFFIXED IDENTIFYING SYSTEM.
7. GENERAL CONTRACTOR SHALL FIELD-VERIFY ALL EXISTING CONDITIONS PRIOR TO BEGINNING ANY WORK, AND SHALL IMMEDIATELY NOTIFY THE ARCHITECT OF ANY DISCREPANCIES. FAILURE TO DO SO INDICATES THAT THE CONTRACTOR ACCEPTS THE CONDITIONS AS THEY EXIST, AND SHALL PERFORM THE WORK REQUIRED AS SHOWN AND SPECIFIED.
8. THE ELECTRICAL CONTRACTOR SHALL OBTAIN AND REVIEW THE AUDIO-VISUAL AND SPECIAL EQUIPMENT SUBMITTALS PRIOR TO SUBMITTING THE ELECTRICAL SUBMITTALS. ANY ELECTRICAL EQUIPMENT, CONDUIT, AND WIRE SIZE CHANGES RESULTING FROM THIS REVIEW SHALL ALSO BE SUBMITTED FOR APPROVAL.
9. FURNISH ALL EQUIPMENT AND LABOR, PERFORM ALL LABOR WITH SUPERVISION, BEAR ALL EXPENSES, AS NECESSARY FOR THE SATISFACTORY COMPLETION OF ALL WORK READY FOR OPERATION.
10. COMPLY WITH ALL LOCAL CODE, LAWS, AND ORDINANCES APPLICABLE TO ELECTRICAL WORK, THE STATE BUILDING CODE AND THE NATIONAL ELECTRIC CODE. OBTAIN ALL PERMITS REQUIRED BY LOCAL ORDINANCES.
11. OBTAIN ARCHITECT'S/ENGINEER'S APPROVAL OF ALL LIGHT FIXTURES, SWITCHES, RECEPTACLES, PANELBOARDS, ETC. PRIOR TO PURCHASING.
12. TERMINATIONS FOR ALL EQUIPMENT SHOWN TO HAVE TEMPERATURE RATING OF 75deg C PER NEC 2011 ART. 110.14 & TABLE 310.15(B)(16).
13. WHERE USED, PROVIDE MEANS TO SIMULTANEOUSLY DISCONNECT ALL UNGROUNDED CONDUCTORS AT THE CIRCUIT BREAKERS SERVING MULTI-WIRE BRANCH CIRCUITS IN ACCORDANCE WITH NEC 210.4(B).

ELECTRICAL LEGEND

CEILING OUTLETS

- RECESSED 2'x4' FLUORESCENT/LED FIXTURE MARK "A" CIRCUIT TYPICAL
- NL RECESSED 2'x4' FLUORESCENT/LED FIXTURE INSTALLED FOR CONTINUOUS OPERATION
- INDICATES FIXTURE WITH EMERGENCY UNIT BATTERY PACK
- SURFACE MOUNTED, RECESSED OR SUSPENDED FLUORESCENT/LED FIXTURE MARK "A" AS NOTED
- SURFACE MOUNTED FLUORESCENT/LED STRIP FIXTURE MARK "FS" AS NOTED
- EXIT LIGHT
- JUNCTION BOX
- RECESSED/SURFACE MOUNT LIGHT
- NL RECESSED/SURFACE MOUNT LIGHT INSTALLED FOR CONTINUOUS OPERATION
- EF EXHAUST FAN

PANELS AND POWER

- 120/208 VOLT PANELBOARD
- EXISTING 120/208 VOLT PANELBOARD
- NON-FUSIBLE DISCONNECT SWITCH; XX/YY/ZZ WHERE X INDICATES AMPERAGE, Y INDICATES # OF POLES, AND Z INDICATES NEMA RATING

WALL SWITCHES (UNLESS OTHERWISE NOTED, MOUNT 48" A.F.F.)

- S A.C. TYPE, SINGLE POLE, 20 AMP, 120/277 VOLT
- S_3 A.C. TYPE, 3-WAY, 20 AMP, 120/277 VOLT
- S_4 A.C. TYPE, 4-WAY, 20 AMP, 120/277 VOLT
- S_M MOTOR-RATED TOGGLE SWITCH
- S_R WALL MOUNTED OCCUPANCY SENSOR (PASSIVE INFRARED) EQUAL TO WATTSTOPPER PW-100; SET DELAY OFF TIME FOR 10 MINUTES (120/277V)
- S_{RD} WALL MOUNTED OCCUPANCY SENSOR EQUAL TO WATTSTOPPER DW-100; DUAL TECHNOLOGY; MOUNT 48" AFF TO C/L; SET DELAY OFF TIME FOR 10 MINUTES (120/277V)

BRANCH CIRCUITING

- RUN CONCEALED UNDER FLOOR OR IN GRADE
- RUN CONCEALED IN CEILING OR WALLS
- LA-1 HOMERUN TO PANEL. ANY CIRCUIT WITHOUT FURTHER IDENTIFICATION INDICATES 2#12, 1#12 GROUND-1/2"C; ~~///~~ 3 #12, 1 #12 GROUND - 1/2" C; ~~////~~ 4#12, 1#12 GROUND - 1/2" C; ETC. AS PER NEC. LETTERS AND NUMERALS INDICATE PANEL AND CIRCUIT NUMERALS INDICATE PANEL AND CIRCUIT NUMBER.
- LIQUID-TIGHT FLEXIBLE CONDUIT CONNECTION
- SURFACE MOUNTED CONDUIT; RUN PARALLEL OR PERPINDICULAR TO BUILDING LINES

MISCELLANEOUS

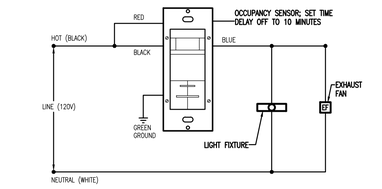
- A.F.F. ABOVE FINISH FLOOR
- B.F.C. BELOW FINISHED CEILING

TELEPHONE & TV SYSTEM

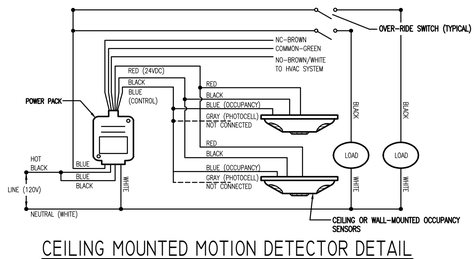
- WALL OUTLET - 4" SQ X 2-1/8" DEEP BOX (W/ COVERPLATE) @18" A.F.F. TO C/L OF DEVICE U.N.O.; INSTALL 3/4"C TO ACCESSIBLE LOCATION ABOVE CEILING. NO CABLE/INSERTS TO BE PRESENTLY INSTALLED
- C WALL OUTLET - 4" SQ X 2-1/8" DEEP BOX (W/ COVERPLATE) @6" ABOVE COUNTER TO C/L OF DEVICE U.N.O.; INSTALL 3/4"C TO ACCESSIBLE LOCATION ABOVE CEILING. NO CABLE/INSERTS TO BE PRESENTLY INSTALLED
- WALL OUTLET - 4" SQ X 2-1/8" DEEP BOX @18" A.F.F. TO C/L OF DEVICE U.N.O.; INSTALL TWO (2) ACCESSIBLE LOCATION ABOVE CEILING AND TWO (2) CAT5e CABLES TO 'CBB'. COMMUNICATIONS CONTRACTOR SHALL PROVIDE COVERPLATES, INSERTS, TERMINATIONS, ETC.
- C WALL OUTLET - 4" SQ X 2-1/8" DEEP BOX @6" ABOVE COUNTER TO C/L OF DEVICE U.N.O.; INSTALL TWO (2) ACCESSIBLE LOCATION ABOVE CEILING AND TWO (2) CAT5e CABLES TO 'CBB'. COMMUNICATIONS CONTRACTOR SHALL PROVIDE COVERPLATES, INSERTS, TERMINATIONS, ETC.
- CBB 3/4" (48"WIDE X 72" HIGH) TELEPHONE BACKBOARD EXTERIOR GRADE PLYWOOD WITH TWO COATS OF INSULATING VARNISH, SIZE AS SHOWN
- TV TELEVISION CABLE WALL OUTLET - 4" SQ X 2-1/8" DEEP BOX; INSTALL 3/4"C TO ACCESSIBLE LOCATION ABOVE CEILING AND ONE (1) CAT5e TO 'CBB'. COMMUNICATIONS CONTRACTOR SHALL PROVIDE COVERPLATES, TERMINATIONS, INSERTS, ETC... MOUNT 18" A.F.F. TO C/L OF DEVICE U.N.O.

WALL OUTLETS

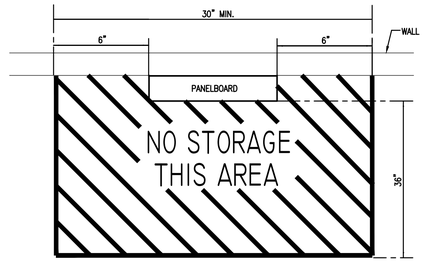
- DUPLEX RECEPTACLE - 20 AMP, 125 VOLT, 2 POLE, 3 WIRE GROUNDED TYPE, NEMA 5-20R. MOUNT 18" A.F.F. UNLESS NOTED OTHERWISE
- T DUPLEX RECEPTACLE - 20 AMP, 125 VOLT, 2 POLE, 3 WIRE GROUNDED TYPE, NEMA 5-20R. MOUNT 18" A.F.F. UNLESS NOTED OTHERWISE. 'TAMPER RESISTANT'
- G DUPLEX RECEPTACLE - 20 AMP, 125 VOLT, GFI, 2 POLE, 3 WIRE GROUNDED TYPE, NEMA 5-20R. MOUNT 18" A.F.F. UNLESS NOTED OTHERWISE
- H DUPLEX RECEPTACLE - 20 AMP, 125 VOLT, 2 POLE, 3 WIRE GROUNDED TYPE, NEMA 5-20R. MOUNT 18" A.F.F. UNLESS NOTED OTHERWISE. 'H' DENOTES DEVICE TO BE MOUNTED HORIZONTALLY
- HP DUPLEX RECEPTACLE - 20 AMP, 125 VOLT, 2 POLE, 3 WIRE GROUNDED TYPE, NEMA 5-20R. HOSPITAL-GRADE W/ STAINLESS STEEL, MOUNT 18" A.F.F. UNLESS NOTED OTHERWISE.
- WP DUPLEX WEATHERTIGHT RECEPTACLE - 20 AMP, 125 VOLT, GFI, 2 POLE, 3 WIRE GROUNDED TYPE, NEMA 5-20R. MOUNT 18" A.F.F. UNLESS NOTED OTHERWISE; PROVIDE WEATHERPROOF BOX FOR RECEPTACLE
- DUPLEX RECEPTACLE - 20 AMP, 125 VOLT, 2 POLE, 3 WIRE GROUNDED TYPE, NEMA 5-20R. MOUNT FLUSH IN CEILING
- DUPLEX RECEPTACLE - 20 AMP, 125 VOLT, 2 POLE, 3 WIRE GROUNDED TYPE, NEMA 5-20R. MOUNT ADJACENT TO TELEVISION OUTLET AT SAME HEIGHT.
- DUPLEX RECEPTACLE - 20 AMP, 125 VOLT, 2 POLE, 3 WIRE GROUNDED TYPE, NEMA 5-20R. MOUNT 6" ABOVE COUNTER
- G DUPLEX RECEPTACLE - 20 AMP, 125 VOLT, GFI, 2 POLE, 3 WIRE GROUNDED TYPE, NEMA 5-20R. MOUNT 6" ABOVE COUNTER
- G,H DUPLEX RECEPTACLE - 20 AMP, 125 VOLT, GFI, 2 POLE, 3 WIRE GROUNDED TYPE, NEMA 5-20R. MOUNT 6" ABOVE COUNTER...HORIZONTALLY
- DUPLEX RECEPTACLE - 20 AMP, 125 VOLT, GFI, 2 POLE, 3 WIRE GROUNDED TYPE, NEMA GF-5-20R. MOUNT 26" AFF TO C/L FOR DRINKING FOUNTAIN
- QUADRAPLEX RECEPTACLE - 20 AMP, 125 VOLT, 2 POLE, 3 WIRE GROUNDED TYPE, NEMA 5-20R. MOUNT 18" A.F.F. UNLESS NOTED OTHERWISE
- H QUADRAPLEX RECEPTACLE - 20 AMP, 125 VOLT, 2 POLE, 3 WIRE GROUNDED TYPE, NEMA 5-20R. MOUNT 18" A.F.F. UNLESS NOTED OTHERWISE 'H' DENOTES DEVICE TO BE MOUNTED HORIZONTALLY
- 240V RECEPTACLE - MOUNT 18" AFF UNLESS NOTED OTHERWISE; VERIFY TYPE REQUIRED WITH EQUIPMENT FURNISHED
- JUNCTION BOX WITH BLANK SCREW COVER AND FLEXIBLE CONDUIT CONNECTION
- SURFACE-MOUNTED JUNCTION BOX WITH BLANK SCREW COVER (UNLESS DEVICE SHOWN TO BE INSTALLED); SIZE OF BOX TO BE DETERMINED BY DEVICE BEING INSTALLED
- WALL MOUNTED EXIT LIGHT
- WALL MOUNTED HIGH INTENSITY DISCHARGE FIXTURE
- WALL MOUNTED EMERGENCY UNIT BATTERY PACK
- WALL MOUNTED EXIT LIGHT/BATTERY PACK COMBO FIXTURE
- P SIDEWALL PHOTOCELL EQUAL TO TORK #2101 (120V)
- DUPLEX RECEPTACLE - 20 AMP, 125 VOLT, 2 POLE, 3 WIRE GROUNDED TYPE, NEMA 5-20R. MOUNT 18" A.F.F. UNLESS NOTED OTHERWISE; LABEL "COMPUTER USE ONLY"



WALL-MTD OCC SENSOR WITH EXHAUST FAN
NOT TO SCALE



CEILING MOUNTED MOTION DETECTOR DETAIL
NOT TO SCALE



TYPICAL CLEARANCE AT ELECTRICAL PANELS
NOT TO SCALE

CALDWELL ASSOCIATES | ARCHITECTS
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PROJECT ISSUES:

SD - 1	09.29.2017
SD - 2	12.28.2017
ASD	03.16.2018
DD	04.06.2018
BLDG PERMIT SET	04.25.2018

PROJECT TEAM:

CIVIL:
REBOL BATTLE & ASSOCIATES

STRUCTURAL:
JOE DEREUIL ASSOCIATES

ARCHITECT:
CALDWELL ASSOCIATES ARCHITECTS

MEP / TELECOM:
W3 ENGINEERING

PROJECT:
LAKEVIEW CENTER/ COMMUNITY HEALTH NORTHWEST FLORIDA RENOVATION & ADDITION

6021 INDUSTRIAL BLVD #A CENTURY, FLORIDA 32535

ANTHONY L. DAVIS LICENSE No. 57918 STATE OF FLORIDA PROFESSIONAL ENGINEER

PROJECT NO. : 6617
SHEET TITLE:
GENERAL NOTES,

SHEET NUMBER:
E001

BUILDING PERMIT SET

PRINT DATE: 3/22/2018 10:09:56 AM

TRUE NORTH | PROJECT NORTH

1 | E001 GENERAL NOTES, LEGEND, & DETAILS

N.T.S.

16' 8' 0' 16' 32'

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DO NOT SCALE DRAWINGS

CIRCUIT BREAKER PANEL SCHEDULE
PANEL 'MP'

120/208 VOLT 3ø 4W
500 AMP MAIN BREAKER

SURFACE MOUNTED
NEMA 3R LOCKABLE ENCLOSURE

CKT	LOAD DESCRIPTION	BREAKER POLE	BREAKER AMP	LOAD KVA		LOAD KVA	BREAKER AMP	BREAKER POLE	LOAD DESCRIPTION	CKT
1	DCU-22	2	40 ①	5.08						2
3	↓	↓	↓			12.1	45 ①	3	OAU-1	4
5	DCU-24	2	40 ①	5.08			↓	↓	↓	6
7	↓	↓	↓			2.29	30 ①	2	MIDMARK MODEL#P32 DENTAL COMPRESSOR	8
9	DAC-23	2	15 ①	0.45			↓	↓	↓	10
11	↓	↓	↓			2.7	25 ①	2	WHIRLWIND VACUUM PUMP (2HP)	12
13	↓	↓	↓				↓	↓	↓	14
15	WATER HEATER	3	60	15.0		8.32	50 ①	2	MEDICAL VAN	16
17	↓	↓	↓				↓	↓	↓	18
19	GENSET BLOCK HEATER	1	20	0.5			↓	↓	↓	20
21	GENSET BATTERY CHARGER	1	20	0.1			--	3	SPACE	22
23	REC-EQUIP BLDG	1	20	0.58			↓	↓	↓	24
25	↑	↑	↑				↓	↓	↓	26
27	PANEL 'ME'	3	200	65.76			--	3	SPACE	28
29	↓	↓	↓				↓	↓	↓	30
31	↓	↓	↓				↓	↓	↓	32
33	PANEL 'LP1'	3	150	34.94			--	3	SPACE	34
35	↓	↓	↓				↓	↓	↓	36
37	↓	↓	↓				↓	↓	↓	38
39	PANEL 'LP2'	3	100	12.4		--	30	3	SURGE SUPPRESSOR	40
41	↓	↓	↓				↓	↓	↓	42

① HACR RATED BREAKER; VERIFY SIZE REQUIRED FOR EQUIPMENT FURNISHED
② IN LIEU OF INSTALLING DISCONNECT, EC MAY INSTALL 'LOCKABLE' BREAKER AT EC'S DISCRETION.

TOTAL CONNECTED LOAD: 165.3 KVA
MINIMUM INTERRUPTING CAPACITY: 22,000 AMPS SYMMETRICAL

CIRCUIT BREAKER PANEL SCHEDULE
PANEL 'LP2'

120/208 VOLT 3ø 4W
125 AMP MAIN LUG ONLY

SURFACE MOUNTED
NEMA 1 ENCLOSURE

CKT	LOAD DESCRIPTION	BREAKER POLE	BREAKER AMP	LOAD KVA		LOAD KVA	BREAKER AMP	BREAKER POLE	LOAD DESCRIPTION	CKT
1	DAC-19,20,21	2	15 ①	0.14		0.18	20	1	REC-BREAK123	2
3	↓	↓	↓			1.55	20	1	MICROWAVE-BREAK123	4
5	SPARE	1	20	--		0.54	20	1	REC-BREAK123	6
7	SPARE	1	20	--		0.54	20	1	REC-VITALS142	8
9	SPARE	1	20	--		0.36	20	1	REC-TELE/MED143	10
11	SPARE	1	20	--		0.54	20	1	REC-TELE/MED143	12
13	SPARE	1	20	--		1.08	20	1	REC-OFFICE141	14
15	SPARE	1	20	--		0.4	20	1	LTS-OFFICE141/VITALS142/TELE-MED143	16
17	SPARE	1	20	--		--	20	1	SPARE	18
19	SPARE	1	20	--		--	20	1	SPARE	20
21	SPARE	1	20	--		--	20	1	SPARE	22
23	SPARE	1	20	--			--	1	SPACE	24
25	SPARE	1	20	--			↓	↓	↓	26
27	SPARE	1	20	--			↓	↓	↓	28
29	SPARE	1	20	--			↓	↓	↓	30
31										32
33										34
35										36
37										38
39										40
41										42

① HACR RATED BREAKER; VERIFY SIZE REQUIRED FOR EQUIPMENT FURNISHED
② IN LIEU OF INSTALLING DISCONNECT, EC MAY INSTALL 'LOCKABLE' BREAKER AT EC'S DISCRETION.

TOTAL CONNECTED LOAD: 14.7 KVA
MINIMUM INTERRUPTING CAPACITY: 22,000 AMPS SYMMETRICAL

CIRCUIT BREAKER PANEL SCHEDULE
NEW PANEL 'LPI'

120/208 VOLT 3ø 4W
225 AMP MAIN LUG ONLY

SURFACE MOUNTED
NEMA 1 ENCLOSURE
PROVIDE TWO EQUAL SECTIONS

CKT	LOAD DESCRIPTION	BREAKER POLE	BREAKER AMP	LOAD KVA		LOAD KVA	BREAKER AMP	BREAKER POLE	LOAD DESCRIPTION	CKT
1	EF-4	1	20 ①	1.18	0.72	20	1	REC-STERILE TOOLS134/CORR126	2	
3	DAC-3,4,5,10,11	2	15 ①	0.86	0.18	20	1	REC-STERILE TOOLS134/CORR126	4	
5	↓	↓	↓		0.54	20	1	REC-OFFICE133	6	
7	DAC-6,7,8,9,23	2	15 ①	0.64	0.72	20	1	REC-DENTAL132	8	
9	↓	↓	↓		0.72	20	1	REC-DENTAL131	10	
11	DAC-1,2,13,14,15	2	15 ①	0.86	0.72	20	1	REC-DENTAL135	12	
13	↓	↓	↓		0.5	20	1	CHAIR, DENTAL 135	14	
15	DAC-12,16,17,18,22,25	2	15 ①	0.7	0.5	20	1	CHAIR, DENTAL 131,132	16	
17	↓	↓	↓		1.08	20	1	REC-OFFICE136	18	
19	EWC	1	20 ①	0.48	0.72	20	1	REC-TESTING/MAT127	20	
21	REFRIGERATOR	1	20 ①	1.0	0.66	20	1	WATER BOTTLE	22	
23	ULTRASONIC CLEANER	1	20	0.5	0.9	20	1	REC-LOBBY100	24	
25	RITTER M11 ULTRACLAVE	1	20	1.43	0.9	20	1	REC-LOBBY100	26	
27	ICE MAKER	1	20 ①	1.11	1.08	20	1	REC-RECEPTION101/STOR104	28	
29	VENDING MACHINE	1	20 ①	1.2	1.08	20	1	REC-RECEPTION101	30	
31	VENDING MACHINE	1	20 ①	0.5	0.36	20	1	REC-WORK RM106	32	
33	RECIRC PUMP	1	20 ①	0.1	0.18	20	1	REC-WORK RM106	34	
35	CBB	1	20	0.2	0.36	20	1	REC-WORK RM106	36	
37	CBB	1	20	0.2	0.54	20	1	REC-WORK RM106/STOR107	38	
39	EXISTING FIRE ALARM CONTROL PANEL	1	20 ②	0.2	0.54	20	1	REC-BREAK123/LAB TLT124	40	
41	SPACE	1	--		0.54	20	1	REC-STOR117/MEN120/WOMEN121	42	
43					0.2	20	1	SECURITY HEAD-END EQUIPMENT	44	
45					0.72	20	1	REC-EXAM115	46	
47					0.72	20	1	REC-EXAM114	48	
49					0.72	20	1	REC-EXAM113	50	
51					0.72	20	1	REC-EXAM111	52	
53					0.72	20	1	REC-EXAM110	54	
55					0.72	20	1	REC-OFFICE112	56	
57					0.72	20	1	REC-TRIAGE108/LINEN109	58	
59					1.49	20	1	LTS-X	60	
61					0.91	20	1	LTS-X	62	
63					0.66	20	1	LTS-X	64	
65					0.81	20	1	LTS-X	66	
67					1.23	20	1	LTS-X	68	
69					0.4	20	1	NEW SERVER	70	
71					--	20	1	SPARE	72	
73										74
75										76
77										78
79										80
81										82
83										84

① HACR RATED BREAKER; VERIFY SIZE REQUIRED FOR EQUIPMENT FURNISHED
② FURNISH W/ HANDLE 'LOCK-ON' BREAKER

TOTAL CONNECTED LOAD: 34.94 KVA
MINIMUM INTERRUPTING CAPACITY: 10,000 AMPS SYMMETRICAL

CIRCUIT BREAKER PANEL SCHEDULE
PANEL 'ME'

120/208 VOLT 3ø 4W
225 AMP MAIN LUG ONLY

SURFACE MOUNTED
NEMA 3R LOCKABLE ENCLOSURE

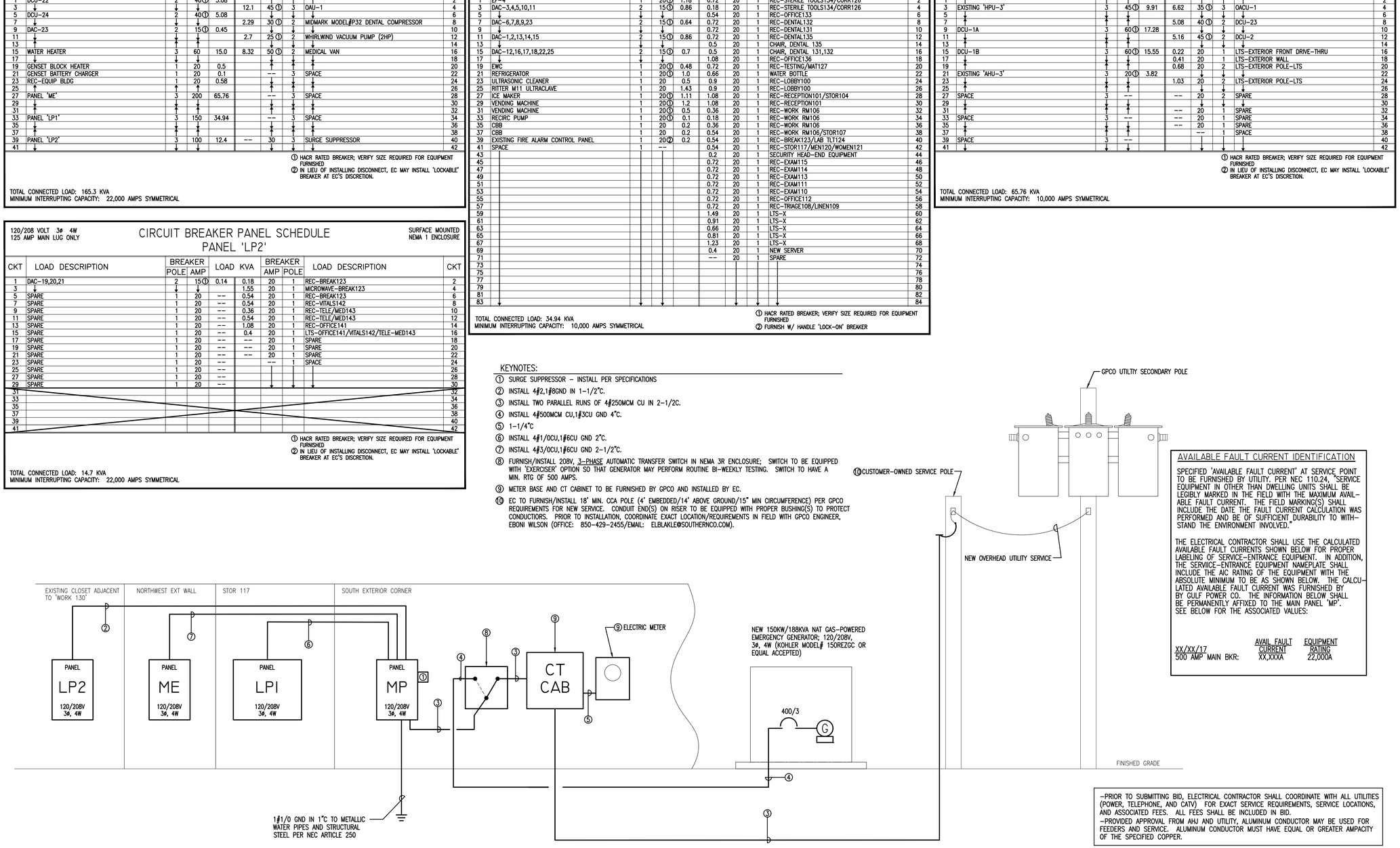
CKT	LOAD DESCRIPTION	BREAKER POLE	BREAKER AMP	LOAD KVA		LOAD KVA	BREAKER AMP	BREAKER POLE	LOAD DESCRIPTION	CKT
1	↑	↑	↑				↑	↑	↑	2
3	EXISTING 'HPU-3'	3	45 ①	9.91		6.62	35 ①	3	OACU-1	4
5	↓	↓	↓				↓	↓	↓	6
7	↓	↓	↓			5.08	40 ①	2	DCU-23	8
9	DCU-1A	3	60 ①	17.28			↓	↓	↓	10
11	↓	↓	↓			5.16	45 ①	2	DCU-2	12
13	↓	↓	↓				↓	↓	↓	14
15	DCU-1B	3	60 ①	15.55		0.22	20	1	LTS-EXTERIOR FRONT DRIVE-THRU	16
17	↓	↓	↓			0.41	20	1	LTS-EXTERIOR WALL	18
19	↑	↑	↑			0.68	20	2	LTS-EXTERIOR POLE-LTS	20
21	EXISTING 'AHU-3'	3	20 ①	3.82			↓	↓	↓	22
23	↓	↓	↓			1.03	20	2	LTS-EXTERIOR POLE-LTS	24
25	↓	↓	↓				↓	↓	↓	26
27	SPACE	3	--			--	20	2	SPARE	28
29	↓	↓	↓				↓	↓	↓	30
31	↓	↓	↓			--	20	1	SPARE	32
33	SPACE	3	--			--	20	1	SPARE	34
35	↓	↓	↓			--	20	1	SPARE	36
37	↓	↓	↓				--	1	SPACE	38
39	SPACE	3	--				↓	↓	↓	40
41	↓	↓	↓				↓	↓	↓	42

① HACR RATED BREAKER; VERIFY SIZE REQUIRED FOR EQUIPMENT FURNISHED
② IN LIEU OF INSTALLING DISCONNECT, EC MAY INSTALL 'LOCKABLE' BREAKER AT EC'S DISCRETION.

TOTAL CONNECTED LOAD: 65.76 KVA
MINIMUM INTERRUPTING CAPACITY: 10,000 AMPS SYMMETRICAL

KEYNOTES:

① SURGE SUPPRESSOR – INSTALL PER SPECIFICATIONS
② INSTALL 4#2,1#8GND IN 1-1/2"C.
③ INSTALL TWO PARALLEL RUNS OF 4#250MCM CU IN 2-1/2C.
④ INSTALL 4#500MCM CU,1#3CU GND 4"C.
⑤ 1-1/4"C
⑥ INSTALL 4#1/0CU,1#6CU GND 2"C.
⑦ INSTALL 4#3/0CU,1#6CU GND 2-1/2"C.
⑧ FURNISH/INSTALL 208V, 3-PHASE AUTOMATIC TRANSFER SWITCH IN NEMA 3R ENCLOSURE; SWITCH TO BE EQUIPPED WITH 'EXERCISER' OPTION SO THAT GENERATOR MAY PERFORM ROUTINE BI-WEEKLY TESTING. SWITCH TO HAVE A MIN. RTG OF 500 AMPS.
⑨ METER BASE AND CT CABINET TO BE FURNISHED BY GPCO AND INSTALLED BY EC.
⑩ EC TO FURNISH/INSTALL 18' MIN. CCA POLE (4' EMBEDDED/14' ABOVE GROUND/15" MIN CIRCUMFERENCE) PER GPCO REQUIREMENTS FOR NEW SERVICE. CONDUIT END(S) ON RISER TO BE EQUIPPED WITH PROPER BUSHING(S) TO PROTECT CONDUCTORS. PRIOR TO INSTALLATION, COORDINATE EXACT LOCATION/REQUIREMENTS IN FIELD WITH GPCO ENGINEER, EBONI WILSON (OFFICE: 850-429-2455/EMAIL: ELBLAKLE@SOUTHERNCO.COM).



POWER RISER DIAGRAM
NOT TO SCALE

AVAILABLE FAULT CURRENT IDENTIFICATION

SPECIFIED 'AVAILABLE FAULT CURRENT' AT SERVICE POINT TO BE FURNISHED BY UTILITY. PER NEC 110.24, "SERVICE EQUIPMENT IN OTHER THAN DWELLING UNITS SHALL BE LEGIBLY MARKED IN THE FIELD WITH THE MAXIMUM AVAILABLE FAULT CURRENT. THE FIELD MARKING(S) SHALL INCLUDE THE DATE THE FAULT CURRENT CALCULATION WAS PERFORMED AND BE OF SUFFICIENT DURABILITY TO WITHSTAND THE ENVIRONMENT INVOLVED."

THE ELECTRICAL CONTRACTOR SHALL USE THE CALCULATED AVAILABLE FAULT CURRENTS SHOWN BELOW FOR PROPER LABELING OF SERVICE-ENTRANCE EQUIPMENT. IN ADDITION, THE SERVICE-ENTRANCE EQUIPMENT NAMEPLATE SHALL INCLUDE THE AIC RATING OF THE EQUIPMENT WITH THE ABSOLUTE MINIMUM TO BE AS SHOWN BELOW. THE CALCULATED AVAILABLE FAULT CURRENT WAS FURNISHED BY BY GULF POWER CO. THE INFORMATION BELOW SHALL BE PERMANENTLY AFFIXED TO THE MAIN PANEL 'MP'. SEE BELOW FOR THE ASSOCIATED VALUES:

	AVAIL FAULT CURRENT	EQUIPMENT RATING
XX/XX/17		
500 AMP MAIN BKR:	XX,XXXA	22,000A

-PRIOR TO SUBMITTING BID, ELECTRICAL CONTRACTOR SHALL COORDINATE WITH ALL UTILITIES (POWER, TELEPHONE, AND CATV) FOR EXACT SERVICE REQUIREMENTS, SERVICE LOCATIONS, AND ASSOCIATED FEES. ALL FEES SHALL BE INCLUDED IN BID.
-PROVIDED APPROVAL FROM AHJ AND UTILITY, ALUMINUM CONDUCTOR MAY BE USED FOR FEEDERS AND SERVICE. ALUMINUM CONDUCTOR MUST HAVE EQUAL OR GREATER AMPACITY OF THE SPECIFIED COPPER.

TRUE NORTH | PROJECT NORTH

1 / E002 PANEL SCHEDULES & POWER RISER DIAGRAM

N.T.S.

16' 8' 0' 16' 32'

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SD - 1	09.29.2017
SD - 2	12.28.2017
ASD	03.16.2018
DD	04.06.2018
BLDG PERMIT SET	04.25.2018

PROJECT TEAM:

CIVIL:
REBOL BATTLE & ASSOCIATES

STRUCTURAL:
JOE DEREUIL ASSOCIATES

ARCHITECT:
CALDWELL ASSOCIATES ARCHITECTS

MEP / TELECOM:
W3 ENGINEERING

PROJECT:
LAKEVIEW CENTER/ COMMUNITY HEALTH NORTHWEST FLORIDA RENOVATION & ADDITION

6021 INDUSTRIAL BLVD #A CENTURY, FLORIDA 32535

ANTHONY L. DAVIS — LICENSED — No. 57818 — STATE OF FLORIDA — PROFESSIONAL ENGINEER

PROJECT NO. : 6617
SHEET TITLE:
PANEL SCHEDULES &

SHEET NUMBER:
E002

BUILDING PERMIT SET

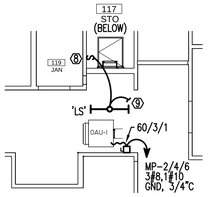
KEYNOTES:

1. FIXTURE TO BE WIRED FOR CONTINUOUS OPERATION.
2. ENTIRE CIRCUIT FROM PANEL TO LAST FIXTURE IN CIRCUIT TO BE 2#10,1#10GND IN 3/4"C.
3. EC TO FIELD-COORDINATE THE EXACT LOCATION OF REMOTE EMERGENCY DRIVER/BATTERY ON THE INTERIOR OF BUILDING FOR FIXTURE 'PDOE'. MAXIMUM ALLOWED DISTANCE FROM FIXTURE IS 50'.
4. CONNECT TO RECEPTACLE ADJACENT TO DOOR. SEE SHEET 'E103' FOR EXACT LOCATION OF DEVICE.
5. TO ALLOW MANUAL OPERATION OF LIGHTS AT CUSTOMER'S OPTION, INSTALL 2#10,1#10GND IN 3/4"C VIA LIGHTING CONTACTOR TO DESIGNATED PANEL. NOTE THAT CIRCUIT MUST HAVE NON-SWITCHED HOTLEG FOR FOR CHARGING EMERGENCY EGRESS BATTERY IN FIXTURE 'PDOE'.
6. INSTALL 2#10,1#10GND IN 3/4"C VIA LIGHTING CONTACTOR TO DESIGNATED PANEL. NOTE THAT CIRCUIT MUST HAVE NON-SWITCHED HOTLEG FOR FOR CHARGING EMERGENCY EGRESS BATTERY IN EGRESS FIXTURES.
7. PANEL TO BE SURFACE-MOUNTED ON 2-HR RATED FIRE BARRIER WALL.
8. PRIOR TO ROUGH-IN, FIELD-COORDINATE EXACT LOCATION OF SWITCH TO ALLOW EASY ACCESS FROM TOP OF ACCESS LADDER.
9. CONNECT TO LIGHTING CIRCUIT BELOW AHEAD OF LOCAL SWITCH.

GENERAL NOTE(S) FOR ELECTRICAL CONTRACTOR:

-PRIOR TO CONSTRUCTION, ELECTRICAL CONTRACTOR SHALL COORDINATE WITH OWNER-SELECTED SECURITY AND A/V CONTRACTORS FOR REQUIRED RACEWAYS/BACKBOXES/JUNCTION BOXES, ETC..

-REDUNDANT GROUNDING SHALL BE PROVIDED IN ALL PATIENT CARE AREAS AND EXAM ROOMS. REFER TO NEC 517.13 FOR ALL LOCATIONS REQUIRED AND ACCEPTABLE METHODS OF GROUNDING. 'MC' CABLE MAY BE USED IN APPLICABLE AREAS AS SHOWN PER APPROVAL OF LOCAL AHJ. CIRCUITS SHOWN WITH 'MC' ARE TO MEET THE 'REDUNDANT GROUNDING' REQUIREMENT.



ATTIC LIGHTING PLAN

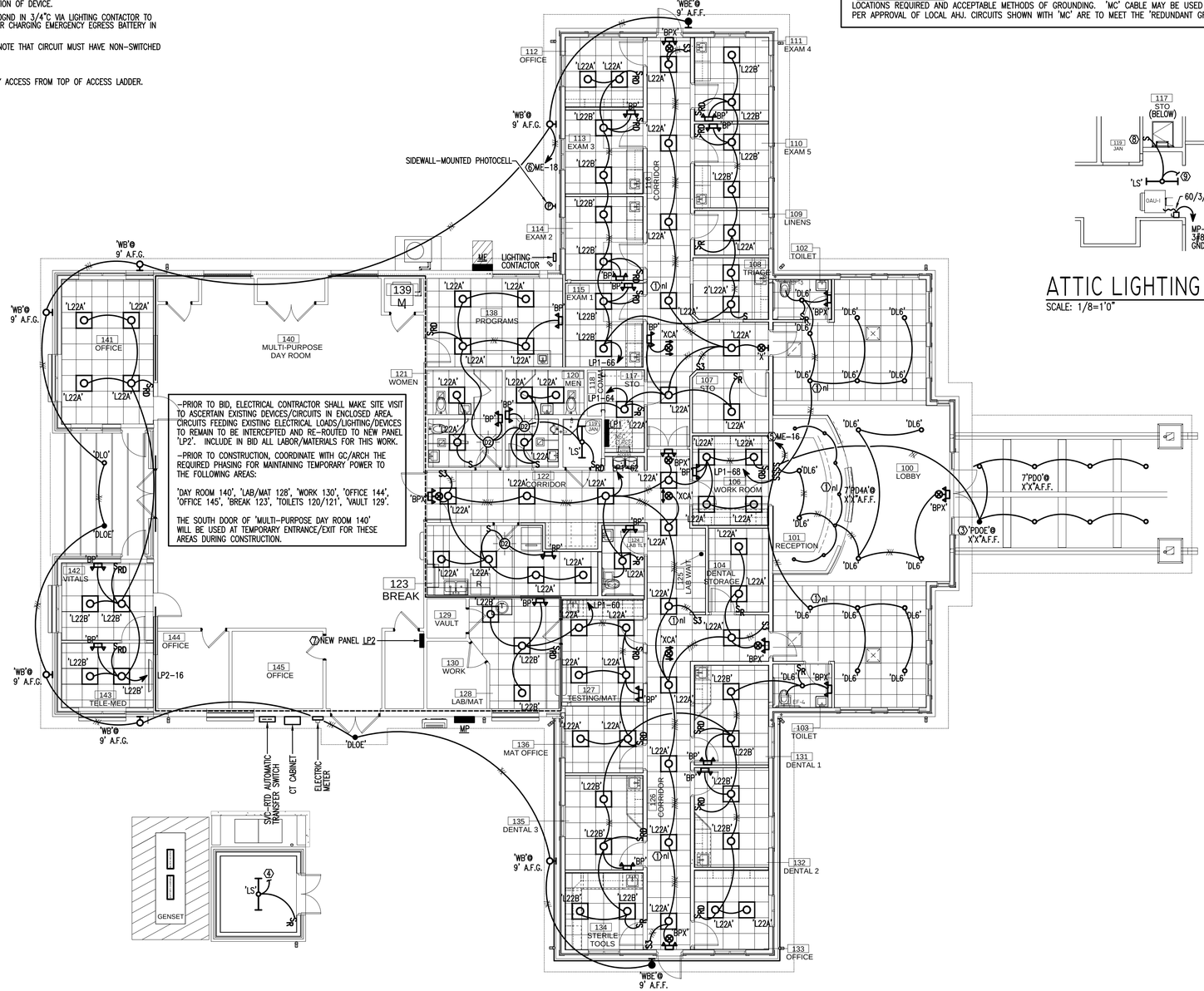
SCALE: 1/8=1'0"

-PRIOR TO BID, ELECTRICAL CONTRACTOR SHALL MAKE SITE VISIT TO ASCERTAIN EXISTING DEVICES/CIRCUITS IN ENCLOSED AREA. CIRCUITS FEEDING EXISTING ELECTRICAL LOADS/LIGHTING/DEVICES TO REMAIN TO BE INTERCEPTED AND RE-ROUTED TO NEW PANEL 'LP2'. INCLUDE IN BID ALL LABOR/MATERIALS FOR THIS WORK.

-PRIOR TO CONSTRUCTION, COORDINATE WITH GC/ARCH THE REQUIRED PHASING FOR MAINTAINING TEMPORARY POWER TO THE FOLLOWING AREAS:

'DAY ROOM 140', 'LAB/MAT 128', 'WORK 130', 'OFFICE 144', 'OFFICE 145', 'BREAK 123', 'TOILETS 120/121', 'VAULT 129'.

THE SOUTH DOOR OF 'MULTI-PURPOSE DAY ROOM 140' WILL BE USED AT TEMPORARY ENTRANCE/EXIT FOR THESE AREAS DURING CONSTRUCTION.



LIGHTING PLAN

SCALE: 1/8=1'0"

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JOE DEREUIL ASSOCIATES

ARCHITECT:
CALDWELL ASSOCIATES ARCHITECTS

MEP / TELECOM:
W3 ENGINEERING

PROJECT:

LAKEVIEW CENTER/ COMMUNITY HEALTH NORTHWEST FLORIDA RENOVATION & ADDITION

6021 INDUSTRIAL BLVD #A
CENTURY, FLORIDA 32535

ANTHONY L. DAY LICENSE No. 57918 STATE OF FLORIDA PROFESSIONAL ENGINEER

PROJECT NO. : 6617
SHEET TITLE:
LIGHTING PLAN

SHEET NUMBER:

E102

BUILDING PERMIT SET

TRUE NORTH | PROJECT NORTH

1 | E102 — LIGHTING PLAN

1/8" = 1'-0"

16' 8' 0' 16' 32'

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KEYNOTES:

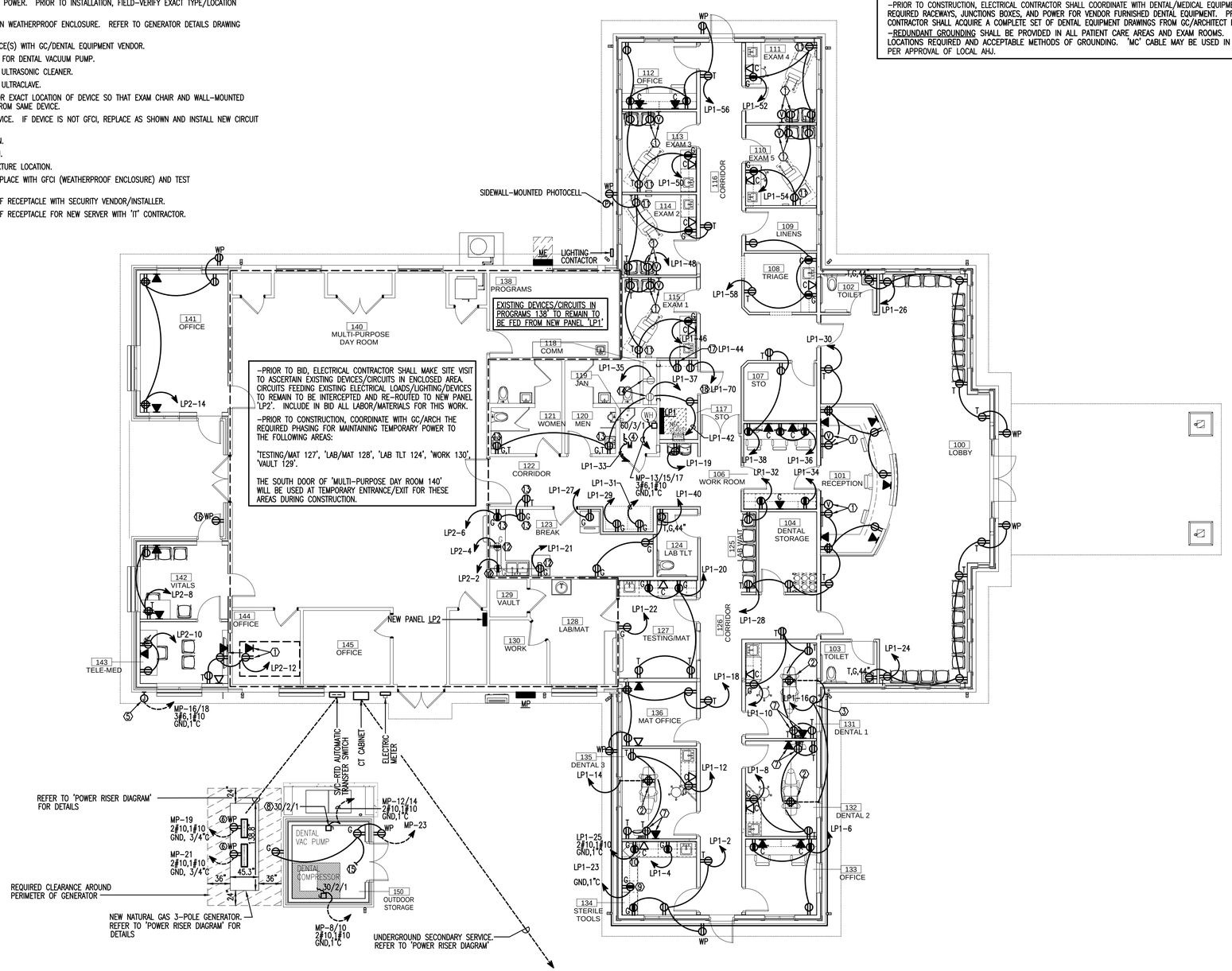
1. PRIOR TO ROUGH-IN, EC TO FIELD-COORDINATE WITH GC/ARCH THE EXACT LOCATION/HEIGHT OF DEVICES FOR TV/MONITOR.
2. EC TO INSTALL 2#10,1#10GND IN 1/2"RMC FROM ADJACENT TO WALL AND STUB UP UNDER DENTAL CHAIR. FURNISH/INSTALL FLOORBOX WITH QUADRAPLEX RECEPTACLE SO THAT DEVICE IS NO HIGHER THAN 2-5/8" A.F.F. PRIOR TO INSTALLATION, FIELD-VERIFY REQUIREMENTS WITH DENTAL EQUIPMENT VENDOR.
3. EC TO INSTALL JUNCTION BOX FOR CONNECTION SO THAT FUTURE ACCESS IS AVAILABLE FOR SPLICE LOCATION.
4. PRIOR TO INSTALLATION, EC TO COORDINATE WITH PLUMBING CONTRACTOR EXACT LOCATION OF MOTOR-RATED TOGGLE SWITCH FOR CIRCULATION PUMP.
5. EC TO SURFACE-MOUNTED 50A RECEPTACLE FOR MEDICAL VAN POWER. PRIOR TO INSTALLATION, FIELD-VERIFY EXACT TYPE/LOCATION OF DEVICE WITH GC/ARCH.
6. ELECTRICAL CONTRACTOR TO FURNISH NON-GFCI RECEPTACLE IN WEATHERPROOF ENCLOSURE. REFER TO GENERATOR DETAILS DRAWING FOR LOCATION.
7. PRIOR TO ROUGH-IN, VERIFY EXACT LOCATION/HEIGHT OF DEVICE(S) WITH GC/DENTAL EQUIPMENT VENDOR.
8. PRIOR TO ROUGH-IN, VERIFY EXACT LOCATION OF DISCONNECT FOR DENTAL VACUUM PUMP.
9. PRIOR TO ROUGH-IN, VERIFY EXACT LOCATION OF DEVICE FOR ULTRASONIC CLEANER.
10. PRIOR TO ROUGH-IN, VERIFY EXACT LOCATION OF DEVICE FOR ULTRACLAVE.
11. PRIOR TO ROUGH-IN, EC TO COORDINATE WITH GC/VENDOR FOR EXACT LOCATION OF DEVICE SO THAT EXAM CHAIR AND WALL-MOUNTED WELCH-ALLYN GS777 DIAGNOSTIC SYSTEM MAY BE POWERED FROM SAME DEVICE.
12. EC TO FIELD-VERIFY INTEGRITY/FUNCTIONALITY OF EXISTING DEVICE. IF DEVICE IS NOT GFCI, REPLACE AS SHOWN AND INSTALL NEW CIRCUIT FOR EXISTING EQUPMENT TO DESIGNATED PANEL.
13. REPLACE EXISTING DEVICE AS SHOWN AND CONNECT AS SHOWN.
14. EXISTING DEVICE TO BE CONNECTED TO NEW PANEL AS SHOWN.
15. CONNECT TO FIXTURE 'LS' ABOVE. SEE SHEET 'E102' FOR FIXTURE LOCATION.
16. VERIFY INTEGRITY/FUNCTIONALITY OF DEVICE. IF REQUIRED, REPLACE WITH GFCI (WEATHERPROOF ENCLOSURE) AND TEST FOR CONNECTIVITY.
17. PRIOR TO ROUGH-IN, FIELD-VERIFY EXACT HEIGHT/LOCATION OF RECEPTACLE WITH SECURITY VENDOR/INSTALLER.
18. PRIOR TO ROUGH-IN, FIELD-VERIFY EXACT HEIGHT/LOCATION OF RECEPTACLE FOR NEW SERVER WITH 'IT' CONTRACTOR.

GENERAL NOTE(S) FOR ELECTRICAL CONTRACTOR:

-PRIOR TO CONSTRUCTION, ELECTRICAL CONTRACTOR SHALL COORDINATE WITH OWNER-SELECTED SECURITY AND A/V CONTRACTORS FOR REQUIRED RACEWAYS/BACKBOXES/JUNCTION BOXES, ETC...

-PRIOR TO CONSTRUCTION, ELECTRICAL CONTRACTOR SHALL COORDINATE WITH DENTAL/MEDICAL EQUIPMENT VENDOR/DRAWINGS ALL REQUIRED REQUIRED RACEWAYS, JUNCTIONS BOXES, AND POWER FOR VENDOR FURNISHED DENTAL EQUIPMENT. PRIOR TO BID, ELECTRICAL CONTRACTOR SHALL ACQUIRE A COMPLETE SET OF DENTAL EQUIPMENT DRAWINGS FROM GC/ARCHITECT FOR COORDINATION AND DETAILS.

-REDUNDANT GROUNDING SHALL BE PROVIDED IN ALL PATIENT CARE AREAS AND EXAM ROOMS. REFER TO NEC 517.13 FOR ALL LOCATIONS REQUIRED AND ACCEPTABLE METHODS OF GROUNDING. 'MC' CABLE MAY BE USED IN APPLICABLE AREAS AS SHOWN PER APPROVAL OF LOCAL AHJ.



POWER & MISCELLANEOUS SYSTEMS PLAN

SCALE: 1/8"=1'0"

POWER & MISCELLANEOUS SYSTEM PLAN

1 | E101 — 1/8" = 1'-0"

TRUE NORTH | PROJECT NORTH

16' 8' 0' 16' 32'

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STRUCTURAL:
JOE DEREUIL ASSOCIATES

ARCHITECT:
CALDWELL ASSOCIATES ARCHITECTS

MEP / TELECOM:
W3 ENGINEERING

PROJECT:
LAKEVIEW CENTER/ COMMUNITY HEALTH NORTHWEST FLORIDA RENOVATION & ADDITION

6021 INDUSTRIAL BLVD #A CENTURY, FLORIDA 32535

ANTHONY L. DAVIS LICENSE No 57[illegible] STATE OF FLORIDA PROFESSIONAL ENGINEER

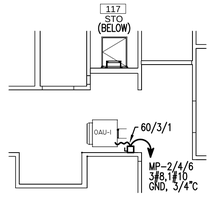
PROJECT NO. : 6617
SHEET TITLE:
POWER & MISCELLANEOUS SYSTEMS PLAN

SHEET NUMBER:
E103

BUILDING PERMIT SET

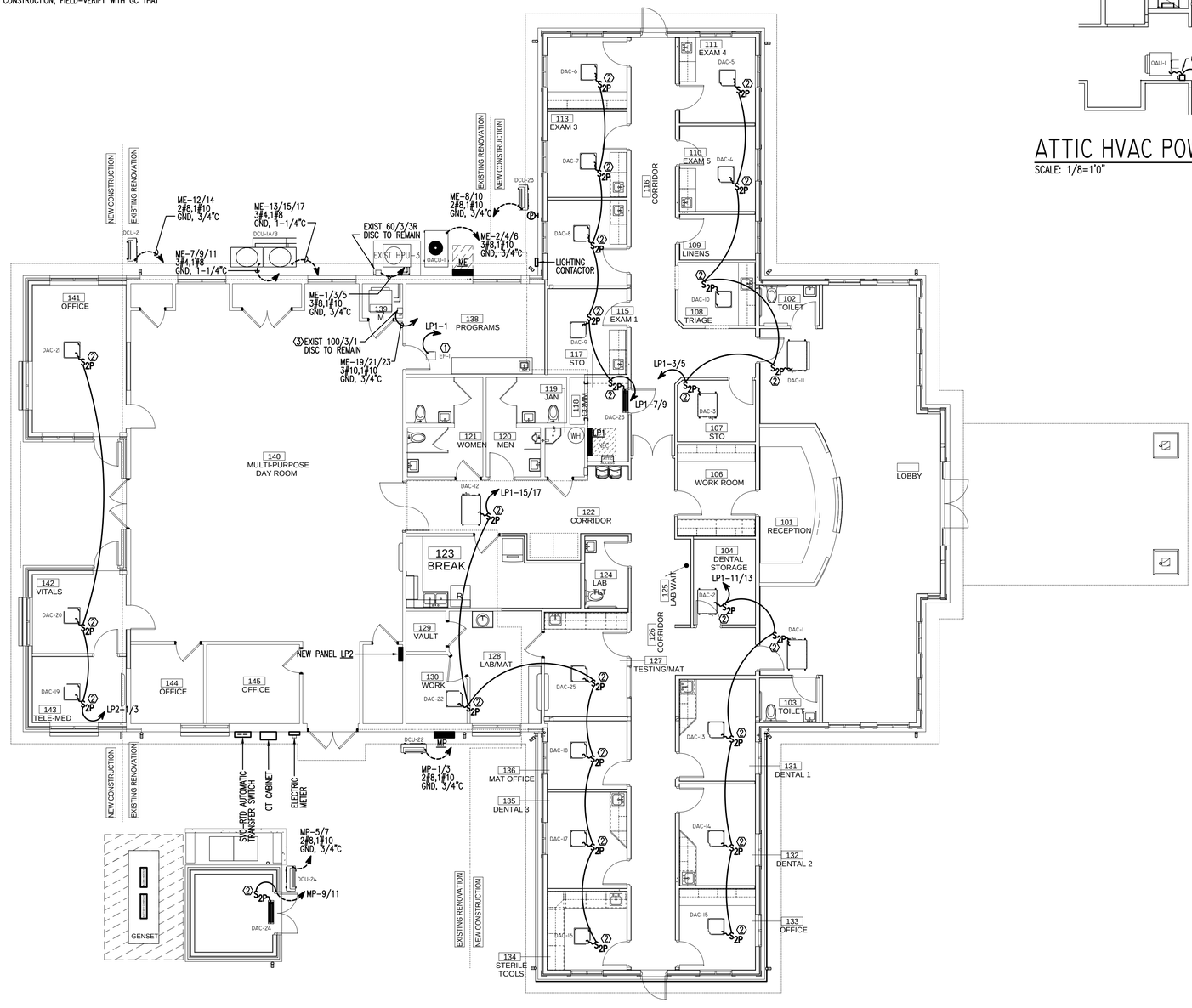
KEYNOTES:

1. FAN TO BE INTERLOCKED WITH 'OAU-1'.
2. EC TO FURNISH/INSTALL 2-POLE, 208V MIN RTG, MOTOR-RATED TOGGLE SWITCH FOR HVAC EQUIPMENT. PRIOR TO INSTALLATION, FIELD-VERIFY EXACT LOCATION WITH MECHANICAL CONTRACTOR.
3. EXISTING 'AHU' TO REMAIN. EC TO INSTALL NEW CIRCUIT TO DESIGNATED PANEL. PER MECHANICAL ENGINEER, UNLIKELY THAT UNIT HAS A SECONDARY HEAT STRIP. UNIT IS CURRENTLY FED VIA 20/3 BREAKER. PRIOR TO CONSTRUCTION, FIELD-VERIFY WITH GC THAT HEAT STRIP IS NOT PRESENT AND ADJUST AS REQUIRED.



ATTIC HVAC POWER PLAN

SCALE: 1/8=1'0"



HVAC SYSTEM POWER PLAN

SCALE: 1/8=1'0"

POWER & MISCELLANEOUS SYSTEM PLAN

1 / E101

1/8" = 1'-0"

TRUE NORTH | PROJECT NORTH

16' 8' 0' 16' 32'

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JOE DEREUIL ASSOCIATES

ARCHITECT:
CALDWELL ASSOCIATES ARCHITECTS

MEP / TELECOM:
W3 ENGINEERING

PROJECT:
LAKEVIEW CENTER/ COMMUNITY HEALTH NORTHWEST FLORIDA RENOVATION & ADDITION

6021 INDUSTRIAL BLVD #A CENTURY, FLORIDA 32535

ANTHONY L. DAVIS LICENSED No 57919 STATE OF FLORIDA PROFESSIONAL ENGINEER

PROJECT NO. : 6617
SHEET TITLE:
HVAC SYSTEM POWER PLAN

SHEET NUMBER:
E104

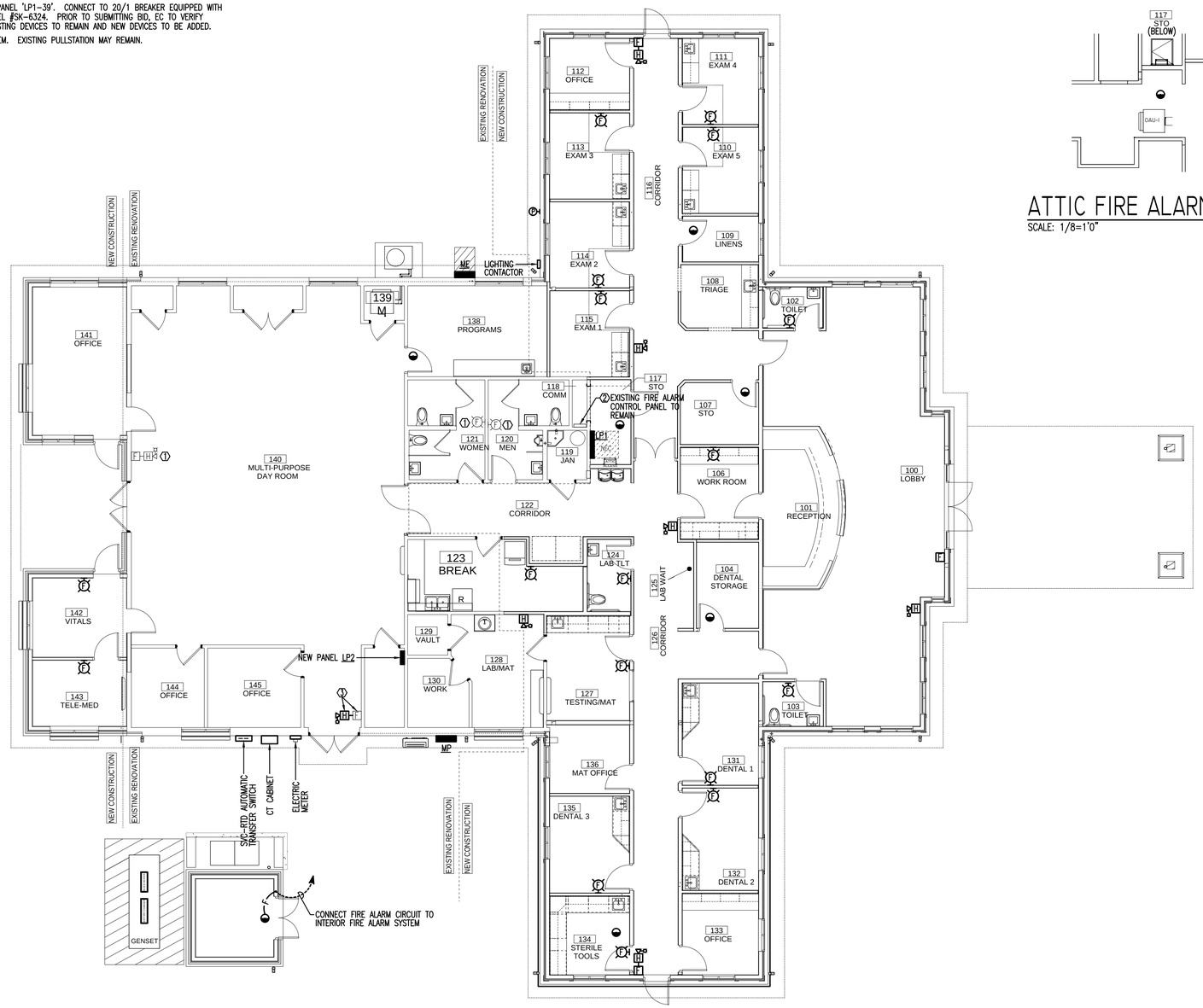
BUILDING PERMIT SET

KEYNOTES:

① EXISTING DEVICE(S) TO REMAIN AND CONNECTED TO EXISTING FIRE ALARM SYSTEM.

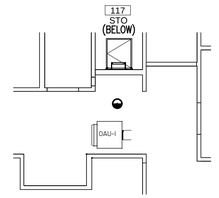
② EXISTING FIRE ALARM CONTROL PANEL TO REMAIN AND POWERED FROM PANEL 'LP1-39'. CONNECT TO 20/1 BREAKER EQUIPPED WITH HANDLE 'LOCK-ON' CAPABILITY. EXISTING PANEL IS SILENT KNIGHT MODEL #SK-6324. PRIOR TO SUBMITTING BID, EC TO VERIFY WITH FIRE ALARM CONTRACTOR IF EXISTING FACP HAS CAPACITY FOR EXISTING DEVICES TO REMAIN AND NEW DEVICES TO BE ADDED.

③ INSTALL NEW HORNSTROBE AND CONNECT TO EXISTING FIRE ALARM SYSTEM. EXISTING PULLSTATION MAY REMAIN.



FIRE ALARM SYSTEM PLAN

SCALE: 1/8=1'0"



ATTIC FIRE ALARM PLAN

SCALE: 1/8=1'0"

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6021 INDUSTRIAL BLVD #A
CENTURY, FLORIDA 32535

ANTHONY L. DAVIS LICENSE No 57919 STATE OF FLORIDA PROFESSIONAL ENGINEER

PROJECT NO. : 6617
SHEET TITLE:
FIRE ALARM SYSTEM PLAN

SHEET NUMBER:
E105

BUILDING PERMIT SET

TRUE NORTH | PROJECT NORTH

1 | E103 — FIRE ALARM SYSTEM PLAN — 1/8" = 1'-0"

16' 8' 0' 16' 32'

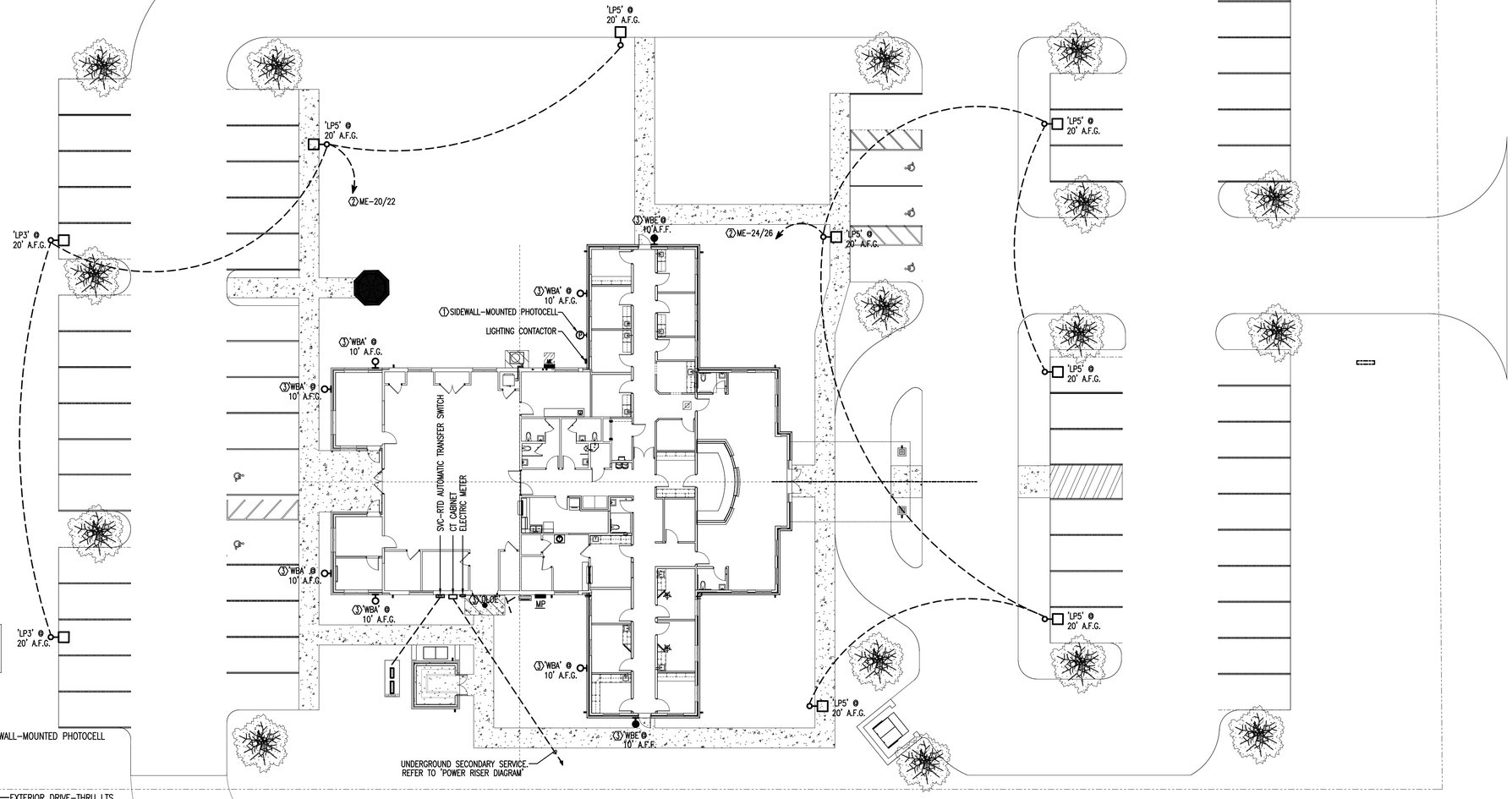
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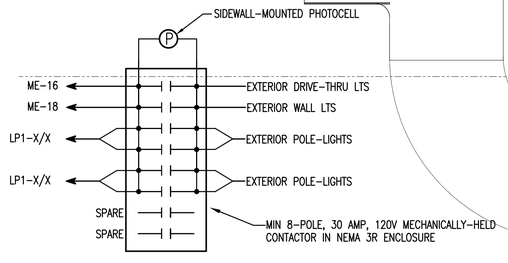
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Luminaire Schedule		MANUFACTURERS CONSIDERED EQUAL MUST SUBMITE TO ENGINEER 10 DAYS PRIOR TO BID FOR WRITTEN APPROVAL			
Label	Arrangement	Description	[LAMPCAT]	LLF	Lum. Watts
LP3	SINGLE	GARDCO#ECF-S-32L-700-NW-G2-3-208V-(FINISH BY ARCH)-POLE:VALMONT#1908-30504TE-D1-(FINISH BY ARCH)	4000K	0.900	72.9
LP4	SINGLE	GARDCO#ECF-S-32L-700-NW-G2-4-208V-(FINISH BY ARCH)-POLE:VALMONT#1908-30504TE-D1-(FINISH BY ARCH)	4000K	0.900	72.9
LP5	SINGLE	GARDCO#ECF-S-32L-700-NW-G2-5W-208V-(FINISH BY ARCH)-POLE:VALMONT#1908-30504TE-D1-(FINISH BY ARCH)	4000K	0.900	72.9
WBA	SINGLE	H.E. WILLIAMS#VWPH-L30-740-T3-SDGL-(OPTIONS)-DIM-UNV	4000K	0.900	35.4
WBE	SINGLE	H.E. WILLIAMS#VWPH-L30-740-T3-SDGL-EM/10WC-(OPTIONS)-DIM-UNV	4000K	0.900	35.4

KEYNOTES:

1. SIDEWALL-MOUNTED PHOTOCELL TO BE MOUNTED SO THAT ADJACENT EXTERIOR LIGHTING DOES NOT INTERFERE WITH ITS PROPER OPERATION.
2. INSTALL 2#10,1#10GND IN 3/4"C VIA LIGHTING CONTACTOR ADJACENT TO PANEL 'LP1'.
3. SEE SHEET 'E102' FOR WIRING DETAILS OF EXTERIOR WALL FIXTURES.





LIGHTING CONTACTOR FOR EXTERIOR LIGHTING

NOT TO SCALE

ELECTRICAL SITE PLAN

SCALE: 1/16"=1'0"

TRUE NORTH | PROJECT NORTH

1 / E201 — ELECTRICAL SITE PLAN

1/16" = 1'-0"

16' 8' 0' 16' 32'

DO NOT SCALE DRAWINGS

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W3 ENGINEERING

PROJECT:
LAKEVIEW CENTER/ COMMUNITY HEALTH NORTHWEST FLORIDA RENOVATION & ADDITION

6021 INDUSTRIAL BLVD #A CENTURY, FLORIDA 32535

ANTHONY L. DAVIS LICENSED No 57919 STATE OF FLORIDA PROFESSIONAL ENGINEER

PROJECT NO. : 6617

SHEET TITLE:
ELECTRICAL SITE PLAN

SHEET NUMBER:
E201

BUILDING PERMIT SET

KEYNOTES:

① EC TO REMOVE EXISTING POLE-LIGHTS AND COORDINATE WITH GC STORAGE/DELIVERY OF FIXTURE/POLE.

② EC TO WITH GC/OWNER FOR REMOVAL OF LEASED LIGHTING POLE BY GPCO.

② EXISTING GPCO LEASED LIGHTING POLE

EXISTING HVAC UNITS TO BE REMOVED

EXISTING 'CBB'/COMM EQUIPMENT TO REMAIN; EC TO FIELD-COORDINATE THE ROUTING OF THE EXISTING TELE/DATA UTILITY SERVICE AND PROVIDE NECESSARY MEASURES TO PROTECT FROM DAMAGE DURING CONSTRUCTION

MULTI-PURPOSE DAY ROOM

NOT IN CONTRACT NO DEMOLITION, U.N.O.

PRIOR TO SUBMITTING BID, EC TO FIELD-VERIFY EXISTING CONDITIONS AND REQUIREMENTS TO RECONNECT EXISTING CIRCUITS/FIXTURES/EQUIPMENT TO NEW PANEL 'LP2'. (SEE SHEET 'E103') IN ADDITION, FIELD-COORDINATE WITH GC THE REQUIREMENTS FOR PROVIDING TEMPORARY POWER FOR THE 'MULTI-PURPOSE DAY RM', LABMAT, VAULT, AND ASSOCIATED EXAM ROOM.

BREAK

R

T

VAULT

LAB/MAT

OFFICE

OFFICE

REMOVE EXISTING PANEL 'A'

REMOVE EMERGENCY PANEL

REMOVE TRANSFER SWITCH

REMOVE EXISTING PANEL 'MP'

EXISTING HVAC UNIT TO BE REMOVED AND REPLACED WITH GROUND-MTD UNIT

GENSET

EC TO COORDINATE WITH GC FOR REMOVAL OF GENERATOR AND ASSOCIATED FEEDER

② EXISTING GPCO LEASED LIGHTING POLE

① EXISTING POLE-LIGHT TO BE REMOVED

ELECTRICAL DEMOLITION PLAN

SCALE: 1/8=1'0"

CALDWELL ASSOCIATES | ARCHITECTS

116 N TARRAGONA STREET, PENSACOLA, FL 32502
(850) 432 9500 | CALDWELL-ASSOC.COM

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PROJECT ISSUES:

SD - 1	09.29.2017
SD - 2	12.28.2017
ASD	03.16.2018
DD	04.06.2018
BLDG PERMIT SET	04.25.2018

PROJECT TEAM:

CIVIL:
REBOL BATTLE & ASSOCIATES

STRUCTURAL:
JOE DEREUIL ASSOCIATES

ARCHITECT:
CALDWELL ASSOCIATES ARCHITECTS

MEP / TELECOM:
W3 ENGINEERING

PROJECT:

LAKEVIEW CENTER/ COMMUNITY HEALTH NORTHWEST FLORIDA RENOVATION & ADDITION

6021 INDUSTRIAL BLVD #A CENTURY, FLORIDA 32535

ANTHONY L. DAVIS LICENSE No 57[illegible] STATE OF FLORIDA PROFESSIONAL ENGINEER

PROJECT NO. : 6617

SHEET TITLE:
ELECTRICAL DEMOLITION PLAN

SHEET NUMBER:

ED101

BUILDING PERMIT SET

TRUE NORTH | PROJECT NORTH

1 E103 — ELECTRICAL DEMOLITON PLAN

1/8" = 1'-0"

16' 8' 0' 16' 32'

PRINT DATE: 3/22/2018 10:09:56 AM

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DO NOT SCALE DRAWINGS

ADA Compliance Attestation

I, the undersigned authorized representative of Escambia Community Clinics Inc. D/B/A Community Health Northwest Florida, attest that the proposed clinical site located at 501 Church Street, Century, FL 32535 has been reviewed for accessibility and is intended to operate in compliance with applicable Americans with Disabilities Act (ADA) accessibility requirements and applicable Florida Building Code accessibility standards.

To the best of my knowledge, the site includes accessible patient entry, accessible routes to patient-care areas, accessible restroom access, and clinical space designed to accommodate patients, visitors, and staff with disabilities. Community Health Northwest Florida will maintain accessibility standards during operation and will address any identified accessibility deficiencies in accordance with applicable law and regulatory requirements.

Signature: _____

Printed Name: Chandra Smiley

Title: Chief Executive Officer

Organization: Escambia Community Clinics Inc. D/B/A Community Health Northwest Florida

Date: 6/16/2026

Infection Control Policy

community health
northwest florida
HealthcareWithinReach.org

Title: **Infection Control Policy**	Issue Date: Nov 22, 2013
Policy Number: 1600-10	Revision Date: Nov 11, 2014 July 2017
Total Pages: 4	Department: Risk Management
Author: David Hostler, Director of Risk Management	Distributed: Sunny Notimoh, Chief Employee Services Officer
Approved: Chandra Smiley, Executive Director	

This Standard Operating Procedure establishes CHNWF's requirements specific to Infection Control and the procedures staff must follow to prevent the transmission of communicable disease and infection in the medical clinic and dental settings.

DEFINITIONS

Personal Protective Equipment (PPE) – This includes gloves, disposable lab coats, facemasks, safety glasses or goggles.

STANDARD PRECAUTIONS

Standard precautions can be defined in three ways. They are:

- Safe work practices for the care and treatment of all clients regardless of their known or presumed infectious status,
- The minimum required level of infection control in all settings and all situations, and
- Designed to protect both clients and health care workers.

Standard precautions include the following five procedures:

- hand washing,
- use of personal protective equipment,
- correct handling and disposal of waste,
- appropriate cleaning of client care equipment, and
- hygienic environmental control.

Standard precautions apply whenever you may come in contact with the following four bodily substances:

- blood (including dried blood),
- all body substances, secretions and excretions (excluding sweat), regardless of whether or not they contain visible blood,
- non-intact skin, and
- mucous membranes.

Hand washing

Hand washing is the single most effective way to reduce the number of microorganisms on the surface of the skin. It should always be performed:

- before and after contact with a client,
- before and after eating,

- after using the toilet,
- before andafter using gloves,
- after contact with used equipment, and
- immediately following contact with bodily fluids.

Standard hand washing procedure:

1. Remove jewelry.
2. Wet handsthoroughly all over.
3. Use pH neutral soap.
4. Lather soap all over hands.
5. Rub hands together vigorously for 15-20 seconds. Pay particular attention to the fingertips, thumbs, wrists, finger webs and the backs of the hands.
6. Rinse under running water.
7. Pat hands dry with paper towels.

Waterless **hand washing**

There are waterless alcohol based hand wash solutions that are as effective as soap and water hand washing. These preparations should only be used when there is no visible soiling of the hands. If there is visible soiling, then soap and water hand washing should be used. These waterless preparations contain an emollient and aid in reducing damage to the hands.

Personal Protective Equipment (PPE)

Some of the duties that you perform in the workplace may require you to protect yourself from either the environment in which you are working, infectious clients, or to protect the client from you if you are infectious. Proper selection, care, maintenance, and training on the use of PPE will be provided.

Types **of PPE:**

Respiratory Protection - wear to reduce the potential exposure to bioaerosols through inhalation or ingestion

FaceMask, Surgical Mask, or N95

- Wear in areas where droplet infection of the client and the employee is a concern.
- Wear to protect from droplet infection from active pulmonary tuberculosis clients.

Hand Protection - hand washing should be carried out before and after glove use as gloves may have pinholes or other defects. Gloves made from Latex should be used with caution to reduce the risk of hypersensitivity reactions by the employee or the client.

Sterile Gloves

- Wear when likely to have contact with sterile body cavity or tissue of a client.

Non-Sterile Gloves

- Wear to reduce contact with blood, bodily secretions, excretions, disinfectants, chemicals.

General Purpose Utility Gloves

- Wear for cleaning and during manual decontamination of used instruments and equipment.

Body Protection - paper gowns and lab coats reduce the possibility of contact with bio-hazardous or contaminated substances.

- Paper Gown
- Disposable Lab Coat

Eye Protection - Eyewear provides the employee or client with protection from bioaerosols,body fluids, or splashes.

Goggles

- Wear if there is potential for injury from airborne particles or , chemical vapors or splashes.

Safety Eyewear

- Wear if there is potential for minor potential spray from contaminated body fluids or saliva.

All PPE must be discarded before leaving the treatment room.

Sharps Management

Sharps are any item that has the possibility to puncture or penetrate. They include:

- needles, scissors, scalpels, razors, or anything that could constitute a danger of penetration the development and use of retractable needles and syringes and needle-free IV delivery systems

Sharps containers:

- are made of a puncture proof, rigid plastic material, with a non-opening lid,
- have an opening section through which all "sharp" objects should be placed
- come in different sizes with larger and smaller openings
- may be portable or fixed to a wall
- must be labeled with BIOHAZARD symbol and wording per OSHA Bloodborne Pathogen Regulation

Sharps containers should be:

- removed and replaced with a new one when full
- readily available in all areas where sharps are used and discarded
- placed in the biohazard box for discarding once sealed (see Biomedical Waste Policy)

Each staff member:

- is responsible for the safe disposal of any sharp theyuse
- should at no time try to empty the self-closing container
- should be educated as to appropriate disposal of sharps and biomedical waste (see Biomedical Waste Policy)

Linen Handling

- All linen should be handled carefully so that there is minimum dispersion of microorganisms.
- Appropriate personal protective equipment should be selected and worn when handling linen soiled with bodily substances.
- Used linen should be bagged at location of use in appropriate laundry receptacle.
- Linen that is heavily soiled with blood or other bodily substances should be placed in leak proof bags and securely tied.
- Hands should be washed after handling used linen.

Additional precautions

Additional precautions are put into place when there is a higher level of protection required to prevent the transmission of infectious diseases. They are used in addition to standard precautions.

There are three types of infection transmission possible in health care settings:

- Airborne transmission which includes pulmonary tuberculosis, Varicella (chickenpox), measles.
- Droplet transmission which includes rubella. Pertussis, influenza and some types of meningitis.
- Contact transmission which includes Vancomycin Resistant Enterococci (VRE), open or discharging purulent wounds, skin ulcers or clients with Methicillin Resistant Staphylococcus Aureus (MRSA).

ATTACHMENTS

NA

REFERENCES

OSHA Bloodborne Pathogen Regulation DHHS (NIOSH) Pub. No. 97-135 - Preventing Allergic Reactions to Natural Rubber Latex in the Workplace
OSHA PPE Regulations
OSHA Respiratory Protection Regulation
Guideline for infection control in healthcare personnel From CDC Version 2.3 -September 2016

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Section J Cohort 1 - Budget Proposal

Applicant Organization Legal Name	Escambia Community Clinics Inc. D/B/A Community Health Northwest Florida			
Name of Standalone Initiative:	TRUE	Initiative 1: Rural & Satellite Clinics	FALSE	Initiative 11: Value-Based Purchasing
	FALSE	Initiative 8: Workforce	FALSE	Initiative 9: Health & Lifestyle
Region Applied for (Select 1 Region per Submission):	TRUE	Northwest	FALSE	Southwest
	FALSE	Northeast	FALSE	Southeast

Cost Category	Year 1	Year 2	Year 3	Year 4	Year 5	Total Program Lifetime
Subtotal Salaries & Wages	$960,500.00	$720,375.00	$384,200.00	$336,175.00	$288,150.00	$2,689,400.00
Subtotal Fringe Benefits	$259,335.00	$194,501.25	$103,734.00	$90,767.25	$77,800.50	$726,138.00
TOTAL PERSONNEL	$1,219,835.00	$914,876.25	$487,934.00	$426,942.25	$365,950.50	$3,415,538.00
TOTAL EQUIPMENT	$192,000.00	$144,000.00	$76,800.00	$67,200.00	$57,600.00	$537,600.00
TOTAL SUPPLIES	$150,000.00	$112,500.00	$60,000.00	$52,500.00	$45,000.00	$420,000.00
TOTAL TRAVEL	$2,890.00	$2,167.50	$1,156.00	$1,011.50	$867.00	$8,092.00
TOTAL OTHER DIRECT COSTS	$595,000.00	$446,250.00	$238,000.00	$208,250.00	$178,500.00	$1,666,000.00
TOTAL SUBCONTRACTUAL COSTS	**$380,000.00**	$285,000.00	$152,000.00	$133,000.00	$114,000.00	$1,064,000.00
TOTAL OPERATIONAL COSTS	**$2,159,725.00**	$1,619,793.75	$863,890.00	$755,903.75	$647,917.50	$6,047,230.00
Administrative Costs	$76,191.75	$48,593.81	$25,916.70	$22,677.11	$19,437.53	$192,816.90
TOTAL PROJECTED PROJECT COSTS	**$2,615,916.75**	**$1,668,387.56**	**$889,806.70**	**$778,580.86**	**$667,355.03**	**$6,620,046.90**

Escambia Community Clinics Inc. D/B/A Community Health Northwest Florida
Applicant Organization Name

DocuSigned by:
Chandra Smiley
4DFCC1FE660B433...
AOR Signature

6/16/2026
Date

Chandra Smiley
AOR Printed Name

CEO
AOR Title

Budget Period 1 (Year 1): ***Full approved budget.*** *Year 1 represents the highest allowable funding level and must include all major procurement, capital acquisitions, infrastructure buildout, and program launch costs. Year 1 is the baseline against which all subsequent years are measured.*

Budget Period 2 (Year 2): ***Not to exceed 75% of the Year 1 approved budget.****. Remaining procurement, phased technology rollouts, and continued onboarding activities are allowable, but must have been identified and justified in the original application. No new large-scale capital items may be introduced in Year 2 that were not included in the Year 1 approved budget unless approved by the Agency.*

Budget Period 3 (Year 3): ***Not to exceed 40% of the Year 1 approved budget.*** *Allowable costs are limited to maintenance of existing infrastructure, software licensing renewals, personnel supporting ongoing service delivery and data reporting, and required compliance and reporting activities.*

Budget Period 4 (Year 4): ***Not to exceed 35% of the Year 1 approved budget.*** *Allowable costs are limited to the same categories as Year 3. Continuation of any Year 3 waiver requires a new, separately justified waiver request reviewed against Year 4 performance data.*

Budget Period 5 (Year 5): ***Not to exceed 30% of the Year 1 approved budget.*** *Year 5 is the final program year and must reflect the program's transition toward financial self-sufficiency. By Year 5, programs should be primarily funded through third party payer billing (i.e., Medicaid, Medicare, Tricare, Commercial, etc.), value-based arrangements, or other sustainable revenue sources. Year 5 budgets must demonstrate a credible path to post-grant operational continuity consistent with Section G (Sustainability Plan).*

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Applicant Organization Legal Name	ll (Sub-applicant Community Health Northwest Florida & Pc

Budget Category				Year 1 Total
PERSONNEL				
Salaries & Wages	**Annual**	**# FTE**	**Level of**	**Amount**
Grants Coordinator and Compliance (CHNWF)	$75,000.00	1.00	1.00	$75,000.00
Project Director (CHNWF & PWMC)	$75,000.00	1.50	1.00	$112,500.00
Finance Clerk (CHNWF)	$55,000.00	1.00	1.00	$55,000.00
Healthcare Navigator (CHNWF)	$48,000.00	2.00	1.00	$96,000.00
RN,LPN (CHNWF)	$57,000.00	2.00	1.00	$114,000.00
Front Desk (Patient service Advisor)	$43,000.00	3.00	1.00	$129,000.00
Clinical Office Manager (CHNWF)	$65,000.00	1.00	1.00	$65,000.00
MA non clinical(CHNWF)	$48,000.00	3.00	1.00	$144,000.00
Case Manager/ Social Worker (CHNWF)	$55,000.00	1.00	1.00	$55,000.00
Student Rotation Coordinator (CHNWF)	$60,000.00	1.00	1.00	$60,000.00
Pharmacy Navigator (CHNWF)	$55,000.00	1.00	1.00	$55,000.00
			Subtotal Salaries & Wages	**$960,500.00**
Fringe Benefits	% Estimate		27%	$259,335.00
			TOTAL PERSONNEL:	**$1,219,835.00**
EQUIPMENT	**Unit Rate**		**# Units**	**Amount**
Digital intraoral scanner (capital) (PWMC)	$35,000.00		1.00	$35,000.00
Medical equipment & exam-room furnishings	$10,000.00		5.00	$50,000.00
Vital Machines (CHNWF)	$10,000.00		1.50	$15,000.00
GE Voluson E10 (Ultrasound machine) (CHNWF)	$60,000.00		1.00	$60,000.00
Exam room furniture (CHNWF)	$10,000.00		3.20	$32,000.00
			TOTAL EQUIPMENT:	**$192,000.00**
SUPPLIES	**Unit Rate**		**# Units**	**Amount**
Reception, IT setup, office furniture, signage	$5,000.00		4.00	$20,000.00
IT systems, computers, and routers (CHNWF)	$5,000.00		10.00	$50,000.00
Waiting room and office furniture (CHNWF)	$5,000.00		4.00	$20,000.00
Clinic refresh supplies, paint, plaster repair,	$5,000.00		2.00	$10,000.00
Clinic Supplies cotton balls, Band-Aids, gloves etc.	$5,000.00		10.00	$50,000.00
			TOTAL SUPPLIES:	**$150,000.00**
TRAVEL	**Unit Rate**		**# Units**	**Amount**
Vicinity Mileage	$0.445		2000.00	$890.00
Lodging and meals for regional and state meetings	$500.00		4.00	$2,000.00
			TOTAL TRAVEL:	**$2,890.00**
OTHER DIRECT COSTS	**Unit Rate**		**# Units**	**Amount**
Workforce recruitment & onboarding (sign on,	$30,000.00		1.00	$30,000.00
Care coordination & scheduling system, closed-	$20,000.00		1.00	$20,000.00
Minor renovations to operatory (PWMC)	$15,000.00		1.00	$15,000.00
Dental practice management / EHR software	$17,000.00		1.00	$17,000.00
Quality tracking, reporting, dashboard	$17,000.00		1.00	$17,000.00
Tele dentistry consultation platform (PWMC)	$10,000.00		1.00	$10,000.00
Medical EHR / practice management system setup	$15,000.00		1.00	$15,000.00
(PWMC)Lease — clinic space (~2,500 sqft @	$62,500.00		1.00	$62,500.00
(PWMC)Minor renovations (cosmetic + plumbing	$50,000.00		1.00	$50,000.00
Workforce recruitment & onboarding for FSU	$35,000.00		1.00	$35,000.00
Insurance — general liability, professional liability,	$15,000.00		1.00	$15,000.00
Utilities — electric, water, internet, phone (Year 1	$7,500.00		1.00	$7,500.00
Rent for support service staff workspace * 12	$8,000.00		12.00	$96,000.00
Epic EMR change over less than 5% (CHNWF)	$100,000.00		1.00	$100,000.00
Parking lot refresh and repair (CHNWF)	$30,000.00		1.00	$30,000.00
Clinic Signage (CHNWF)	$15,000.00		1.00	$15,000.00
Black Creek Clinic Rent (LCI)	$5,000.00		12.00	$60,000.00
			TOTAL OTHER DIRECT:	**$595,000.00**
			TOTAL DIRECT COSTS:	**$2,159,725.00**
SUBCONTRACTUAL COSTS	**Unit Rate**		**# Units**	**Amount**
Dental laboratory partnership (program-related	$30,000.00		1.00	$30,000.00
Gants compliance coordination fiscal reporting and	$350,000.00		1.00	$350,000.00
			TOTAL SUBCONTRACTUAL COSTS:	**$380,000.00**
			TOTAL OPERATIONAL COSTS:	**$2,539,725.00**
Administrative Costs			*3.00%*	**$76,191.75**
			TOTAL ANNUAL AMOUNT REQUESTED:	**$2,615,916.75**

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Section J Attachment

Compliance Attestation For Eligible Rural Activity Implementation

Applicant Legal Organization Name:	Escambia Community Clinics, Inc. D/B/A Community Health Northwest Florida

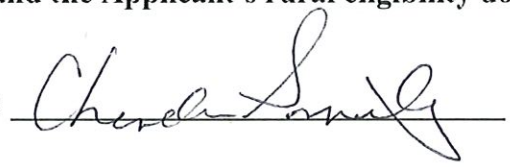
On behalf of Escambia Community Clinics, Inc. D/B/A Community Health Northwest Florida, the undersigned Authorized Organization Representative attests that 100% of the RHTP-funded activities described in this application and supported by the Section J budget will occur in eligible rural communities and/or at eligible rural service delivery sites identified in the application.

The Applicant further attests that the costs included in Section J are directly tied to the approved rural service area, rural implementation sites, rural partner activities, or grant administration necessary to support those eligible rural activities. No RHTP funds requested in Section J will be used to support program activities outside the eligible rural communities identified in the application.

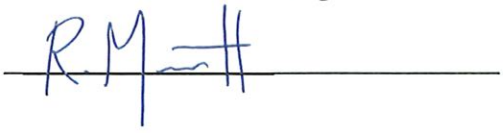
As an additional compliance and integrity measure, Northwest Florida Health Council will support the ongoing monitoring, review, and documentation of funded activities to help ensure that implementation remains aligned with the approved rural service area, the approved Section J budget, the approved work plan, partner/subrecipient responsibilities, and applicable AHCA and federal grant requirements.

The Applicant will maintain documentation demonstrating that funded activities, services, equipment, staffing, outreach, implementation, and partner/subrecipient activities are limited to and directly support eligible rural communities. The Applicant will also monitor partner and subrecipient implementation to ensure continued compliance with RHTP rural eligibility requirements, the approved budget, the approved work plan, and all applicable grant requirements.

This attestation is provided in support of Section J and the Applicant's rural eligibility documentation requirements.

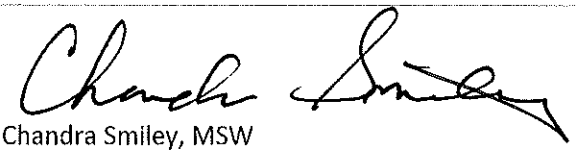
Authorized Organization Representative Signature: 
Printed Name: Chandra Smiley
Title: Chief Executive Officer
Date: 6/16/2026

Northwest Florida Health Council Compliance Review Acknowledgment, if applicable:
The undersigned acknowledges Northwest Florida Health Council's role in supporting implementation monitoring, compliance review, and documentation related to eligible rural activity implementation.

NWFLHC Representative Signature: 
Printed Name: R. Kyle Merritt
Title: Executive Director
Date: 6/15/2026

3. Certification

To the best of my knowledge, I certify that the information in this application is true and correct and that the document has been duly authorized by the governing body of the applicant. I will comply with the program rules and regulations if assistance is approved. I also certify that I am aware that providing false information on the application can subject the individual signing such application to criminal sanctions. I further certify that I am authorized to submit this application and have followed all policies and procedures of my agency regarding grant application submissions.

Authorized Organization Representative — Signature	
Typed Name	Chandra Smiley, MSW
Title	Chief Executive Officer
Date	9/3/2020