

**BOARD OF COUNTY COMMISSIONERS
ESCAMBIA COUNTY, FLORIDA**

OFFICE OF PURCHASING

213 PALAFOX PLACE, 2nd Floor
P.O. BOX 1591
PENSACOLA, FL 32591-1591
TELEPHONE (850)595-4980
(SUNCOM) 695-4980
TELEFAX (850)595-4805

<http://www.myescambia.com/business/solicitations>



CLAUDIA SIMMONS
Purchasing Manager

April 7, 2016

To: All Known Prospective Bidders

ADDENDUM NUMBER 2:

Re: Crescent Lake Outfalls
Specification Number: PD 15-16.033

Bidders:

We recently sent you an Invitation to Bid on the above mentioned specification.

This Addendum #1 provides for:

Revised Bid Documents

1. Revised Project Scope Summary

This project consists of six (5) existing stormwater piped outfalls from local county roads leading into the Crescent Lake. Due to the catastrophic storm of April 29 and 30 of 2014, these pipe systems are dilapidated and in need of replacement. The contractor is to assume Crescent Lake is filled to max capacity when pricing the work. A Geotechnical Report was conducted by NOVA Engineering & Environmental.

Contractor is to perform all recommendations as described in the Geotechnical Report which was conducted by NOVA Engineering & Environmental dated February 2, 2016. The construction plans are split up into 6 parts (3 outfalls on West Shore Drive and 3 on East Shore Drive).

Outfall W1

The existing curb inlet, storm pipe, and headwall are to be removed & replaced. The existing concrete driveway, fencing, irrigation system, and landscaping are to be removed & replaced as needed. West Shore Drive is to be cut & patched as required to replace the curb inlet. Safety fence is to be installed temporarily while the 4' chainlink fence is down.

Outfall W2

The existing curb inlet, storm pipe, and headwall are to be removed & replaced. The existing concrete driveway, fencing, irrigation system, and landscaping are to be removed & replaced as needed. The existing metal storage building within the easement is to be relocated (coordinate with owner for location). West Shore Drive is to be cut & patched as required to replace the curb inlet. Contractor is to complete the sidewalk path.

Outfall W3

The existing stormwater pipe is too close to the existing residence to be disturbed. The stormwater is to be rerouted around the south side of the existing ECUA pumpstation. A new concrete driveway is to be constructed to provide access to the Crescent Lake dam. Within this driveway, a drop inlet is to be installed to help catch stormwater that may overwhelm the curb inlet. The existing abandoned pipe is to be filled with flowable fill. The existing deck at the headwall location is to be removed & replaced with a similar deck with electrical features. West Shore Drive is to be cut & patched as required to replace the curb inlet. The existing ECUA concrete driveway, fencing, and landscaping are to be removed & replaced as needed. The water service to the ECUA pumpstation and forcemain coming out of the pumpstation are potential conflicts. The proposed stormwater pipe should be under the existing forcemain. The water service is to be adjusted as needed.

Outfall E1

The existing curb inlet, storm pipe, and headwall are to be removed & replaced. The existing fencing is to be removed & replaced as needed. East Shore Drive is to be cut & patched as required to replace the curb inlet. The proposed storm pipe will cross a force main and gas main. The pipe should be under both utilities without conflict.

Outfall E2

~~The existing curb inlet & dual storm pipes are to be removed & replaced. The existing headwall is to be removed & replaced with a box for possible future connection. The existing fencing, irrigation system, and landscaping are to be removed & replaced as needed. East Shore Drive is to be cut & patched as required to replace the curb inlet. The existing concrete pad within the easement is to be removed & replaced to match existing. The proposed storm pipe will cross a force main and gas main. The pipe should be under both utilities without conflict.~~

Outfall E3

The existing curb inlet, storm pipe, drop inlet, and headwall are to be removed & replaced. The existing fencing and landscaping are to be removed & replaced as needed. The (2) wood decks are to be removed and replaced outside of easement. The existing storage building is to be relocated outside of easement. Contractor is to coordinate with homeowner for locations of each. East Shore Drive is to be cut & patched as required to replace the curb inlet. The proposed storm pipe will cross a force main and gas main. The pipe should be under both utilities without

is to be cut & patched as required to replace the curb inlet. The proposed storm pipe will cross a force main and gas main. The pipe should be under both utilities without conflict. The storm pipe will also be in close proximity to a utility pole. The contractor is to temporarily brace pole during pipe installation.

2. Revised Bid Form (Attached 2 pages)

3. Revised Drawings (Attached 25 pages)

This Addendum Number 2 is furnished to all known prospective Bidders. Please sign and return one copy of this Addendum, with original signature, with your proposal as an acknowledgement of your having received same. You may photo copy for your record.

Sincerely,



Paul R. Nobles, CPPO, CPPB, FCCM, FCN
Senior Purchasing Coordinator

SIGNED: _____

COMPANY: _____

PRN:abh

BID FORM
Crescent Lakes Outfalls
Specification Number PD 15-16.033

Crescent Lakes Outfalls
Board of County Commissioners
Escambia County, Florida
Pensacola, Florida 32502

Date: _____

Commissioners:

In accordance with your “ Invitation for Bids” and “Instructions to Bidders” for **Crescent Lakes Outfalls** as described and listed in this Invitation for Bids, and subject to all conditions thereof, I, _____undersigned, hereby propose to provide at the following price: _____
Company

Item No.	Description	Quantity	Unit	Unit Price	Amount
1	Mobilization	1	LS		
2	Bonds and Insurance	1	LS		
3	Prepare & Implement Maintenance of Traffic Plan	1	LS		
4	Clearing & Grubbing, Tree & Shrub Removal, Tree Trimming	1	LS		
5	Remove, Protect, & Replace Brick Mailbox, Place Temporarily at Edge of Property	1	EA		
6	Replace Standard Mailbox with FDOT Approved Heavy Duty Plastic Mailbox w/ Rear Door and Post	1	EA		
7	Remove & Replace Unsuitable Materials	850	CY		
8	Provide Fill Over Pipes	125	CY		
9	Establish Grade over fill.	370	SY		
10	3" Topsoil	3000	SY		
11	Dewater Cofferdam W1	1	LS		
12	Dewater Cofferdam W2	1	LS		
13	Dewater Cofferdam W3	1	LS		
14	Dewater Cofferdam E1	1	LS		
15	Dewater Cofferdam E3	1	LS		
16	Sawcut Existing Asphalt & Patch with Typical County Detail (12" Stabilized Subgrade, 6" GAB, 1.5" SP-12.5)	158	SY		
17	County Type-B Curb (Including FDOT Type-F County Type-B Transitions)	32	LF		
18	6" Fiber Reinforced Concrete Driveway	25	SY		
19	4" Driveway Cut & Patch (Sawcut, Removal, & Replacement)	279	SY		
20	4' Fiber Reinforced Concrete Sidewalk	8	LF		
21	Sawcut & Remove Existing Concrete	8	SY		
22	Sawcut & Remove Existing Layback Curb	67	LF		
23	Flowable Fill	30	CY		
24	FDOT Type-D Ditch Bottom Inlet	2	EA		
25	FDOT Type-2 Curb Inlet w/ Bottom	1	EA		

Item No.	Description	Quantity	Unit	Unit Price	Amount
26	FDOT Type-4 Curb Inlet w/ Bottom	2	EA		
27	County Type-A Double Curb Inlet w/ Bottom	1	EA		
28	Modified County Type-A Double Curb Inlet w/ Bottom	1	EA		
29	Storm Manhole W3C	1	EA		
30	Connect to Storm Structures to Existing Pipes	1	LS		
31	Remove Existing Stormwater Pipe & Structures	1	LS		
32	30" HDPE DW Pipe	248	LF		
33	36" HDPE DW Pipe	418	LF		
34	42" HDPE DW Pipe	402	LF		
35	Concrete Endwalls	5	EA		
36	Centipede Sod	3000	SY		
37	Remove Existing Rubble	40	CY		
38	Install 18" Depth Rip Rap w/ Filter Fabric	80	SY		
39	Erosion Control (Silt Fence, Haybales, etc.)	1	LS		
40	Safety Fence	100	LF		
41	Remove & Replace 4' Chainlink Fence	379	LF		
42	Remove & Replace 6' Chainlink Fence	8	LF		
43	Remove & Replace 6'x12' Double Chainlink Swing Gate	1	EA		
44	Remove & Replace 6'x12' Double Wood Swing Gate	1	EA		
45	Remove & Replace 6' Wood Fence	163	LF		
46	Remove & Replace Irrigation Systems w/ Conduit	1	LS		
47	Landscaping (Includes Trees)	1	LS		
48	Relocate Existing Storage Buildings (Outfalls W2 & E3)	1	LS		
49	Remove & Replace Existing Deck (Outfall E3)	1	LS		
50	Remove & Replace Existing Generator Deck (Outfall E3)	1	LS		
51	Remove Deck & Replace w/ 170 sq ft Deck w/ Electrical; Including Utility Pole (Outfall W3)	1	LS		
52	Adjust Existing Water Service (Outfall W3)	1	EA		
				Total	

CONTRACTOR REQUIREMENTS

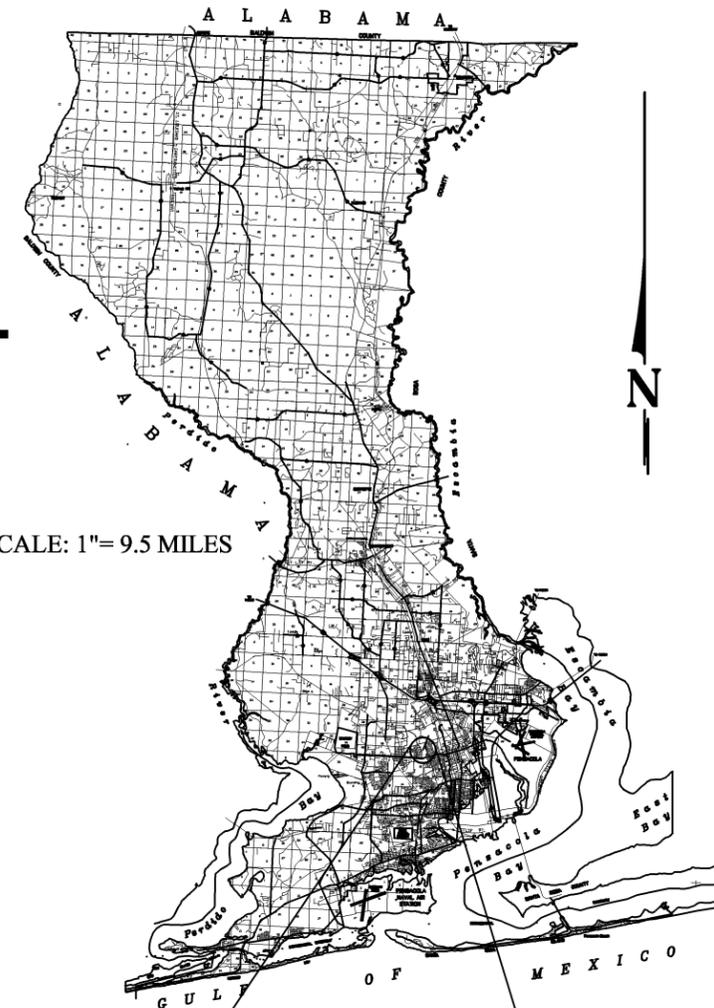
Acknowledgment is hereby made of receipt of the following addenda issued during the bidding period:

Addendum No. _____ Date _____ Addendum No. _____ Date _____

Addendum No. _____ Date _____ Addendum No. _____ Date _____



**BOARD OF COUNTY COMMISSIONERS
 ESCAMBIA COUNTY, FLORIDA
 PUBLIC WORKS DEPARTMENT
 ENGINEERING / INFRASTRUCTURE DIVISION**



SCALE: 1"= 9.5 MILES

INDEX OF PLANS

SHEET NO. SHEET DESCRIPTION

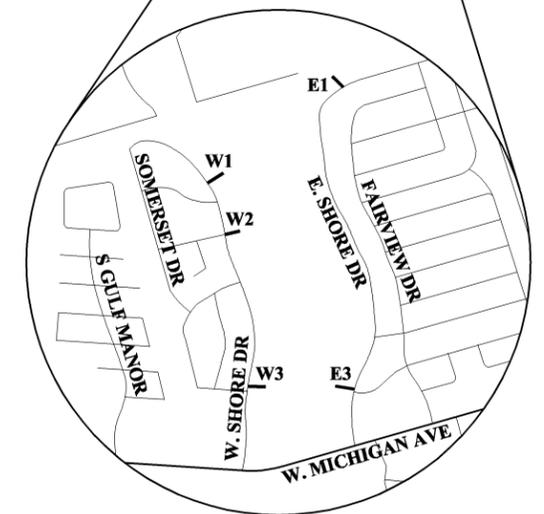
1	KEY SHEET
2	GENERAL NOTES
3	SUMMARY OF QUANTITIES
4	PROJECT LAYOUT
5	W1 - EXISTING CONDITIONS / DEMOLITION PLAN
6	W1 - PLAN / PROFILE
7	W2 - EXISTING CONDITIONS / DEMOLITION PLAN
8	W2 - PLAN / PROFILE
9	W3 - EXISTING CONDITIONS / DEMOLITION PLAN
10	W3 - PLAN / PROFILE
11	E1 - EXISTING CONDITIONS / DEMOLITION PLAN
12	E1 - PLAN / PROFILE
13	E3 - EXISTING CONDITIONS / DEMOLITION PLAN
14	E3 - PLAN / PROFILE
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17-22	DRAINAGE DETAILS
23-24	SWPPP DETAILS
25	MOT

**PLANS PROPOSED FOR
 ENGFLOOD0414-91H
 CRESCENT LAKES
 OUTFALLS**

DAVID W. FITZPATRICK, P.E., P.A.

FBPE CERTIFICATE OF AUTHORIZATION NO. 00008423
 10250 N. PALAFOX STREET
 PENSACOLA, FL 32534
 (850) 476-8677
 FAX: (850) 476-7708

**100% PLANS SUBMITTAL
 APRIL 2016**



SCALE: 1"= 0.33 MILES

THESE PLANS HAVE BEEN PREPARED IN ACCORDANCE WITH THE LATEST ESCAMBIA COUNTY TECHNICAL SPECIFICATIONS.

ANY REFERENCE TO FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, LATEST EDITION, DIVISION 1, GENERAL REQUIREMENTS AND COVENANTS, SHALL BE EXCLUDED AND NOT APPLICABLE TO ANY SPECIFICATION REFERRED HEREIN OR OTHERWISE LISTED IN THESE PLANS OR RELATED DOCUMENTS OR THE ESCAMBIA COUNTY TECHNICAL SPECIFICATIONS.

COMMISSIONERS

- | | |
|----------------|----------------------------------|
| DISTRICT ONE | WILSON ROBERTSON (VICE-CHAIRMAN) |
| DISTRICT TWO | DOUG UNDERHILL |
| DISTRICT THREE | LUMON MAY |
| DISTRICT FOUR | GROVER ROBINSON (CHAIRMAN) |
| DISTRICT FIVE | STEVEN BARRY |

NUMBER	REVISIONS	DATE	APPROVED BY
1	60% COMMENTS	12/17/15	
2	90% COMMENTS	1/18/16	
3	100% COMMENTS - CHANGED TO FOOT CURB INLETS WHERE POSSIBLE (2 OUTFALLS)	2/9/16	
4	100% COMMENTS - RELOCATED ALL LANDSCAPING & IRRIGATION SYSTEMS OUTSIDE OF EASEMENTS	2/29/16	
5	REMOVED E2 OUTFALL	4/6/16	

PROJECT MANAGER: DWIGHT AUSTIN	
SECTION / TOWNSHIP / RANGE: 44 / 1S / 30W	DISTRICT: 1
PROJECT ENGINEER: DAVID W. FITZPATRICK, P.E.	REG FLA ENG NO: 47818
SIGNATURE:	DATE:

GENERAL NOTES:

- THE CONTRACTORS SHALL NOTIFY THE COUNTY DESIGN ENGINEER OR DESIGNEE 48 HOURS PRIOR TO CONSTRUCTION.
- ALL CONDITIONS AND STIPULATIONS OF THE CONSTRUCTION PERMITS AND THE APPROVALS ISSUED BY THE ESCAMBIA COUNTY ENGINEER SHALL BE COMPLIED WITH IN EVERY DETAIL.
- ALL ROADS DAMAGED BY CONSTRUCTION OPERATIONS ARE TO BE PATCHED OR RECONSTRUCTED AS DIRECTED BY THE COUNTY ENGINEER OR DESIGNEE.
- THE CONTRACTOR SHALL TAKE STEPS NECESSARY TO PREVENT EROSION AND ANY OFF SITE SEDIMENT TRANSPORT RESULTING FROM INCREASED RUNOFF DURING CONSTRUCTION BY PROVIDING SILT FENCE AND/OR STAKED HAY BALES AS REQUIRED BY FDOT INDEX 102, THE FLORIDA STORMWATER, EROSION, AND SEDIMENT CONTROL INSPECTOR'S MANUAL, 2000 EDITION, OR AS INDICATED ON THE PLANS. ALL EROSION CONTROL MEASURES SHALL REMAIN IN PLACE UNTIL ASSOCIATED DISTURBED AREAS ARE STABILIZED AS TO REDUCE SEDIMENT RUNOFF, UNLESS OTHERWISE DIRECTED BY THE ENGINEER OR DESIGNEE.
- ANY NECESSARY PERMITS WILL BE THE RESPONSIBILITY OF THE CONTRACTOR. ESCAMBIA COUNTY OR ITS DESIGNEE WILL ASSIST CONTRACTOR WITH REQUIRED PERMITS.
- THE CONTRACTOR IS CAUTIONED TO VISIT THE SITE AND FAMILIARIZE HIMSELF WITH THE PROJECT PRIOR TO BIDDING AND/OR CONSTRUCTION.
- IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO PRESERVE OR RELOCATE ALL BENCHMARKS (VERTICAL CONTROL) AS NEEDED DURING CONSTRUCTION. ALL PUBLIC OR PRIVATE CORNER MONUMENTATION SHALL BE PROTECTED. IF A PUBLIC OR PRIVATE CORNER MONUMENTATION IS IN DANGER OF BEING DESTROYED AND HAS NOT BEEN PROPERLY REFERENCED, THE CONTRACTOR SHALL NOTIFY THE ENGINEER OR DESIGNEE IMMEDIATELY. ANY ESCAMBIA COUNTY HARN/GPS NETWORK MONUMENTS OR BUREAU OF SURVEY AND MAPPING GPS NETWORK MONUMENTS WITHIN THE LIMITS OF CONSTRUCTION SHALL BE PROTECTED. IF A HARN/GPS NETWORK MONUMENTS OR BUREAU OF SURVEY AND MAPPING GPS NETWORK MONUMENTS ARE DISTURBED OR DESTROYED THE CONTRACTOR SHALL BE RESPONSIBLE FOR RELOCEMENT OF THE MONUMENTS AND HAVE THE MONUMENTS POSITION DETERMINED BY A FLORIDA LICENSED PROFESSIONAL SURVEYOR AND MAPPER USING GUIDELINES AS ESTABLISHED BY NATIONAL GEODETIC SURVEY FOR BLUE BOOKING AND APPROVAL.
- EXISTING DRAINAGE FEATURES WITHIN CONSTRUCTION LIMITS SHALL REMAIN UNLESS OTHERWISE NOTED.
- THE CONTRACTOR SHALL MATCH EXISTING CONDITIONS AT THE BEGINNING AND END OF CONSTRUCTION AS DIRECTED BY THE COUNTY ENGINEER OR DESIGNEE.
- EXISTING STREETS AND DRIVES SHALL BE MAINTAINED TO LOCAL TRAFFIC AND PROPERTY OWNERS.
- ALL ROADWAY CONSTRUCTION SHALL COMPLY WITH THE ESCAMBIA COUNTY TECHNICAL SPECIFICATIONS AND STANDARDS, LATEST EDITION.
- ALL MATERIALS, TESTING AND CONSTRUCTION METHODS SHALL CONFORM TO THE ESCAMBIA COUNTY TECHNICAL SPECIFICATIONS, LATEST EDITION.
- ANY REFERENCE TO FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, LATEST EDITION, DIVISION 1, GENERAL REQUIREMENTS AND COVENANTS, SHALL BE EXCLUDED AND NOT APPLICABLE TO ANY SPECIFICATION REFERRED HEREIN OR OTHERWISE LISTED IN THESE PLANS OR RELATED DOCUMENTS OR THE ESCAMBIA COUNTY TECHNICAL SPECIFICATIONS.
- EXISTING STREET AND ROAD NAME SIGNS ON THE PROJECT SHALL BE KEPT VISIBLE AT ALL TIMES FOR THE FACILITATION OF ACCESS BY EMERGENCY VEHICLES. ALL OTHER EXISTING SIGNS THAT CONFLICT WITH CONSTRUCTION OPERATIONS SHALL BE TAKEN DOWN AND STOCKPILED WITHIN THE R/W LIMITS BY THE CONTRACTOR AS DIRECTED BY THE COUNTY ENGINEER OR DESIGNEE. ANY EXISTING SIGNS THAT ARE TO BE RELOCATED AND ARE DAMAGED BEYOND USE BY THE CONTRACTOR SHALL BE REPLACED BY THE CONTRACTOR AT HIS EXPENSE.
- THE CONTRACTOR SHALL MAINTAIN AT LEAST ONE 10' OPEN LANE AT ALL TIMES. NO OPEN EXCAVATION SHALL REMAIN OVER NIGHT. CONTRACTOR SHALL RESTORE ROAD TO TWO LANES OF TRAFFIC AT THE END OF EACH WORK DAY.
- CONTRACTOR SHALL COMPLY WITH ALL F.D.E.P. AND ARMY CORP. OF ENGINEERS REQUIREMENTS.
- ONLY ACCESS TO THE ROAD R/W AS SHOWN IS GUARANTEED BY THE COUNTY. PRIVATE R/W REQUIRED BY THE CONTRACTOR TO FACILITATE CONSTRUCTION SHALL BE ACQUIRED BY THE CONTRACTOR WITH NO ADDITIONAL COMPENSATION OR ASSISTANCE FROM THE COUNTY.
- IN THE EVENT THAT SURVEY MONUMENTATION OR REFERENCE POINTS ARE MISSING OR HAVE BEEN DESTROYED, PLEASE CONTACT:

DANNY SWAIN
ESCAMBIA COUNTY SURVEYOR
3363 WEST PARK PLACE
PENSACOLA, FLORIDA 32505 PH (850) 595-1615
- VEGETATION ON R/W AND EASEMENTS SHALL BE RESTORED TO ORIGINAL CONDITION UNLESS OTHERWISE NOTED ON THE PLAN SHEETS. COST OF SAID RESTORATION SHALL BE CONSIDERED INCIDENTAL TO OTHER PAY ITEMS.
- GRADED AGGREGATE BASE SHALL BE REQUIRED.
- ALL TREES WITHIN LIMITS OF CONSTRUCTION SHALL BE REMOVED UNLESS OTHERWISE NOTED IN PLANS.
- ALL COMPACTED FILL SHALL BE PLACED IN 4" LIFTS FOR HAND POWERED TAMPERS AND 8" LIFTS FOR HEAVY EQUIPMENT OPERATED TAMPERS.
- MAINTENANCE OF TRAFFIC AS PER FDOT INDEX 600.
- ALL SPEED BUMPS THAT ARE DISTURBED DURING CONSTRUCTION SHALL BE REPLACED TO THE LATEST ESCAMBIA COUNTY DESIGN SPECIFICATIONS. ALL COSTS FOR REPLACEMENT OF SAID SPEED BUMPS SHALL BE INCIDENTAL TO OTHER ITEMS AND NO ADDITIONAL COMPENSATION SHALL BE CONSIDERED.
- ALL EXISTING MAILBOXES INTERFERING WITH NEW CONSTRUCTION SHALL BE RELOCATED OR REPLACED BY THE CONTRACTOR IN ACCORDANCE WITH POSTAL REQUIREMENTS AND IN ACCORDANCE WITH ESCAMBIA COUNTY TECHNICAL SPECIFICATION, FDOT DESIGN STANDARDS AND UNITED POSTAL REQUIREMENTS. ALL EXISTING BRICK MAILBOXES WITHIN LIMITS OF CONSTRUCTION OR COUNTY RIGHT OF WAY SHALL BE TEMPORARILY REMOVED AND REPLACED ONCE CONSTRUCTION IS COMPLETE. ANY DAMAGE TO EXISTING MAILBOXES SHALL BE REPAIRED BY THE CONTRACTOR AT HIS EXPENSE.
- THE CONTRACTOR SHALL, AT A MINIMUM, MATCH EXISTING SIGNING AND PAVEMENT MARKINGS. ALL SIGNING AND PAVEMENT MARKINGS SHALL BE PLACED IN ACCORDANCE WITH THE LATEST FDOT DESIGN STANDARDS. THE CONTRACTOR SHALL CONTACT THE COUNTY TRAFFIC DEPARTMENT PRIOR TO INSTALLATION OF ANY SIGNING AND PAVEMENT MARKINGS.
- WHERE UNSUITABLE MATERIAL, AS DEFINED BY THE COUNTY SPECIFICATIONS SECTION 02300, 1.3(1), IS ENCOUNTERED IN THE AREAS PROPOSED FOR PAVING, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE COUNTY ENGINEER OR DESIGNEE PRIOR TO ANY EXCAVATION.
- PIPE LENGTHS SHOWN IN THE PLANS DO NOT INCLUDE THE LENGTH OF PIPE THAT MUST BE INSTALLED WITH THE MITERED END SECTION. THEREFORE, ALL PIPES LENGTHS ASSOCIATED WITH MITERED END SECTIONS SHALL BE PAID FOR IN THE UNIT COST OF THE MITERED END SECTION.

- IF ARCHAEOLOGICAL MATERIAL/PREHISTORIC ARTIFACTS SUCH AS POTTERY OR CERAMICS, STONE TOOLS OR METAL IMPLEMENTS, OR ANY OTHER PHYSICAL REMAINS THAT COULD BE ASSOCIATED WITH NATIVE AMERICAN CULTURES, OR EARLY COLONIAL OR AMERICAN SETTLEMENT ARE ENCOUNTERED AT ANY TIME, THE PROJECT SHOULD CEASE ALL ACTIVITIES INVOLVING SUBSURFACE DISTURBANCE IN THE IMMEDIATE VICINITY OF SUCH DISCOVERIES. THE APPLICANT/RECIPIENT, OR OTHER DESIGNEE, SHOULD CONTACT THE FLORIDA DEPARTMENT OF STATE, DIVISION OF HISTORICAL RESOURCES, THE STATE HISTORIC PRESERVATION OFFICER (SHPO) AND THE DSH/FEMA REGION IV ENVIRONMENTAL OFFICER AND FDEM STATE ENVIRONMENTAL LIAISON OFFICER FOR FURTHER GUIDANCE. PROJECT ACTIVITIES SHOULD NOT RESUME WITHOUT WERBAL AND/OR WRITTEN AUTHORIZATION FROM THE DIVISION OF HISTORICAL RESOURCES.
- IN THE EVENT THAT UNMARKED HUMAN REMIANS ARE ENCOUNTERED DURING PERMITTED ACTIVITIES, ALL WORK MUST STOP IMMEDIATELY AND THE PROPER AUTHORITIES NOTIFIED IN ACCORDANCE WITH F.S. 872.05.
- REPLACE PORTION OF IRRIGATION SYSTEM TO ACHIEVE 100% COVERAGE UPON RELOCATION OUTSIDE OF EASEMENT.

UTILITY NOTES:

- THE LOCATION SHOWN FOR EXISTING UNDERGROUND UTILITIES IS APPROXIMATE. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK IN EACH AREA. THE CONTRACTOR AGREES TO BE COMPLETELY RESPONSIBLE FOR ALL DAMAGES WHICH MIGHT OCCUR BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ALL UTILITIES.
- UTILITY OWNERS SHALL BE NOTIFIED AT LEAST 48 HOURS PRIOR TO ANY CONSTRUCTION SO THAT THE UTILITY OWNER CAN SPOT VERIFY AND/OR EXPOSE THEIR UTILITIES. KNOWN UTILITIES OWNERS INCLUDE:

UTILITY CONTACTS	
SUNSHINE ONE CALL	PHONE: 1-800-432-4770
CDX COMMUNICATIONS 3405 MCLEMORE DRIVE PENSACOLA, FL 32514	CONTACT: TROY YOUNG PHONE: 850-857-4551 FAX: 850-475-0621
PENSACOLA ENERGY 1625 ATWOOD DRIVE PENSACOLA, FL 32514	CONTACT: DARRYL SINGLETON PHONE: 850-474-5300
GULF POWER 5120 DOGWOOD DRIVE MILTON, FL 32570	CONTACT: CHAD SWAILS PHONE: 850-429-2446
ATT/ DISTRIBUTION 605 WEST GARDEN STREET PENSACOLA, FL 32502	CONTACT: BARRY POWELL PHONE: 850-436-1483
ECUA 9255 STURDENVANT STREET PENSACOLA, FL 32514	CONTACT: BRANDON KNIGHT PHONE: 850-969-3310

- AT&T FLORIDA WILL COMPLETE ALL WORK DURING THE HOURS OF 7:30 AM - 4:30 PM, MONDAY THRU FRIDAY. NO NIGHT OR WEEKEND WORKWORK.
- ALL CABLE DAMAGE MUST BE REPORTED TO THE ATT FLORIDA REPAIR SERVICE DEPARTMENT AT 611 FROM A LAND LINE OR 877-737-2478 IF USING A CELL PHONE.
- ALL LOOP DETECTOR INSTALLATION SHALL BE DONE AS PER FDOT INDEX 17781.
- CONTRACTOR IS TO USE CAUTION WHEN WORKING IN OR AROUND AREAS OF OVERHEAD TRANSMISSION LINES AND UNDERGROUND UTILITIES.
- UTILITIES TO REMAIN AND BE PROTECTED DURING CONSTRUCTION. NECESSARY REPAIRS SHALL BE CONSIDERED INCIDENTAL TO OTHER PAY ITEMS AND SHALL BE TO THE SATISFACTION OF UTILITY OWNERS.
- SUNSHINE ONE-CALL SHALL BE NOTIFIED 48 HOURS PRIOR TO CONSTRUCTION.

PROJECT SPECIFIC NOTES:

- MAINTENANCE OF TRAFFIC PLAN TO BE IMPLEMENTED PRIOR TO ANY WORK COUNTY R/W IN ACCORDANCE WITH THE LATEST FDOT DESIGN STANDARDS.
- STORMWATER POLLUTION PREVENTION PLAN TO BE IMPLEMENTED PRIOR TO ANY WORK IN THE IN ACCORDANCE WITH THE LATEST FDOT DESIGN STANDARDS.
- ALL CONCRETE IS TO BE 3000 PSI UNLESS OTHERWISE NOTED ON PLAN.
- ALL DISTURBED AREAS ARE TO BE STABILIZED WITH SOLID SOD.
- CUTTING & PATCHING OF ROADS IS TO BE DONE DURING NON PEAK HOURS AS PER FDOT SPECIFICATIONS.
- CONTRACTOR IS TO COORDINATE WITH CRESCENT LAKE DAM PROJECT MANAGER (JEREMY KING, 595-3453) FOR LAKE LEVEL & ACCESS ISSUES.
- ALL EXISTING TREES/SHRUBS THAT ARE CALLED OUT TO BE REMOVED & REPLACED SHALL BE REPLACED WITH THE SAME SPECIES AS PER ESCAMBIA COUNTY PLANTING SPECIFICATIONS.
- CONTRACTOR IS TO CUT ALONG C/L OF EXISTING ROAD TO AVOID LONGITUDINAL CUTS WITHIN TRAVEL WAY.
- MANY EXISTING INFLUENT STORMWATER PIPES WERE NOT SURVEYED. CONTRACTOR IS TO DETERMINE ALL INFLUENT PIPE LOCATIONS AND SIZES PRIOR TO ORDERING STORMWATER STRUCTURES.

100% SUBMITTAL
PLOT DATE: 4/4/16

PHASE	REVIEW	DATE	ORIGINATOR (RP)	CHECKER (RP)	CHANGE INCORPORATION	DATE	ORIGINATOR (OR)	CHECKER (OR)	CHANGE INCORPORATION	DATE	VERIFICATION, CHECKER (OR)	REMARK INCORPORATION	ORIGINATOR VERIFICATION	DATE
	SIGNATURE:		PRODUCTION CHECKING COMPLETE, READY FOR SUBMITTAL											



CRESCENT LAKES OUTFALLS

DAVID W. FITZPATRICK, P.E., P.A.
 FBPE CERTIFICATE OF AUTHORIZATION NO. 00008423
 10250 N PALFOX STREET
 PENSACOLA, FL 32504
 PHONE: (850) 418-8877 FAX: (850) 476-7708

DESIGNED BY: D. FITZPATRICK
 DRAWN BY: A. BURGETT
 DATE: OCTOBER 2015
 FIELD BOOK PAGES:

NUMBER	REVISIONS	DATE	APPROVED BY
1	60% COMMENTS	2/27/15	
2	90% COMMENTS	1/16/16	
3	100% COMMENTS - CHANGED TO FDOT CURB INLETS WHERE POSSIBLE (OUTFALLS)	2/9/16	
4	ADDED COMMENTS TO ALL LAKES AND A BRIDGES SYSTEM OUTSIDE OF LANDMARKS	2/29/16	
5	REMOVED BY OUTFALL	4/4/16	

DATE: 4/1/16	SCALE: 1"=40'
CHECKED BY: D. FITZPATRICK	DATE: 4/1/16
DRAWN BY: A. BURGETT	DATE: 10/15/15
DATE: OCTOBER 2015	SCALE: 1"=40'
FIELD BOOK PAGES:	DATE: 4/1/16

DRAWING NUMBER: **15-102**

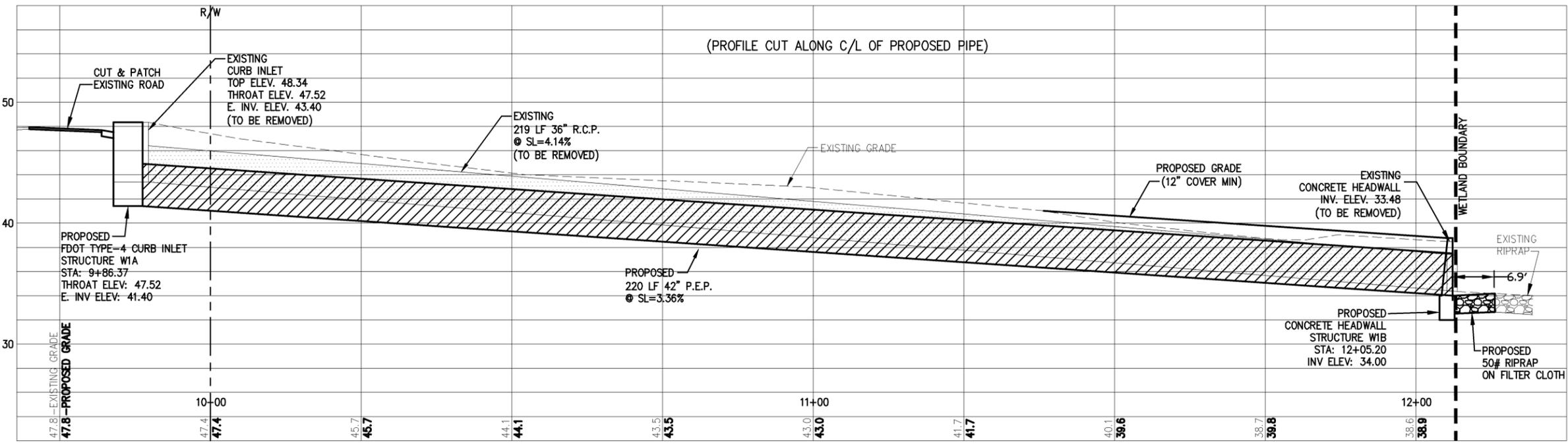
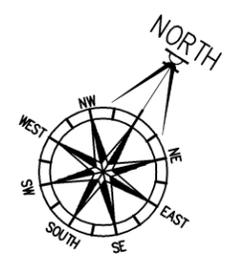
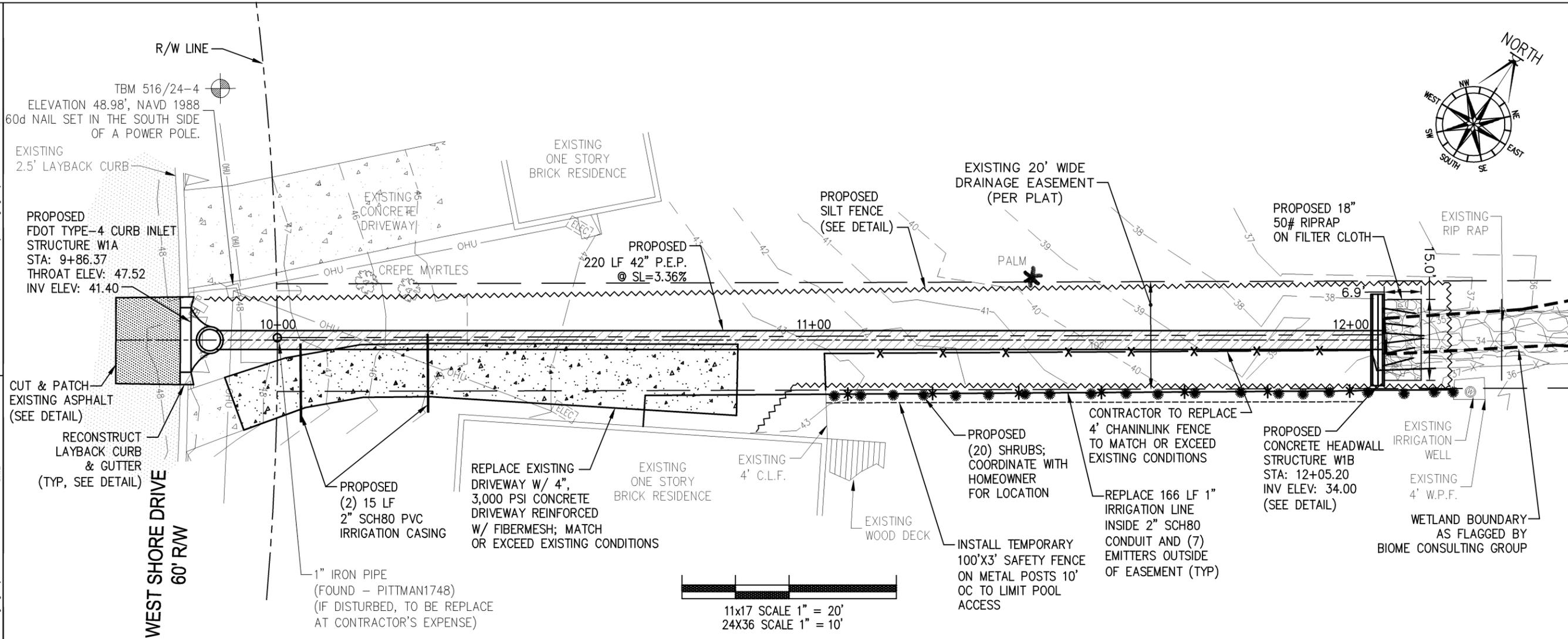
PROJECT NUMBER: ENGFLOOD0414-91H

SURVEY NUMBER: L-5015

SHEET: **C2** OF **C25**

GENERAL NOTES

PHASE REVIEW DATE ORIGINATOR (RP) PRODUCTION CHECKING COMPLETE, READY FOR SUBMITTAL REVIEW (RP) CHECKER (RP) CHANGE INCORPORATION (Yellow Highlighter) ORIGINATOR (OR) CORRECT (Green Highlighter) Change (Red Pen) DATE VERIFICATION, CHECKER (OR) REMARK INCORPORATION (Blue Highlighter) ORIGINATOR VERIFICATION CORRECT (Pink Highlighter) DATE



11x17 PROFILE VERTICAL SCALE 1" = 10'
24X36 PROFILE VERTICAL SCALE 1" = 5'

100% SUBMITTAL
PLOT DATE: 4/4/16

CRESCENT LAKES OUTFALLS



DAVID W. FITZPATRICK, P.E., P.A.
FBPE CERTIFICATE OF AUTHORIZATION NO. 00008423
10250 N PALMBOY STREET
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PHONE: (850) 478-8877 FAX: (850) 478-7708

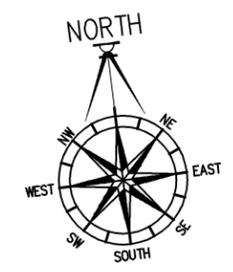
DESIGNED BY: D. FITZPATRICK
DRAWN BY: A. BURGETT
DATE: FEBRUARY 2015
FIELD BOOK PAGES: 44 / 151 / 30W

NUMBER	REVISIONS	DATE	APPROVED BY
1	60% COMMENTS	2/27/15	
2	90% COMMENTS	1/16/16	
3	100% COMMENTS - CHANGED TO FDOT CURB INLETS WHERE POSSIBLE (OUTFALLS)	3/9/16	
4	ADDED COMMENTS TO ADDRESS CONCERNING A BRIDGE OVER SYSTEM OUTSIDE OF LANDMARKS	2/29/16	
5	REMOVED 15 OUTFALLS	4/4/16	

DRAWING NUMBER: 15-102
PROJECT NUMBER: ENGFLOOD0414-91H
SURVEY NUMBER: L-5015
SHEET: C6 OF C25

W1 - PLAN / PROFILE

PHASE	REVIEW	DATE	ORIGINATOR (RP)	PRODUCTION CHECKING COMPLETE, READY FOR SUBMITTAL	DATE	ORIGINATOR (RP)	CORRECT (Green Highlighter) Change (Red Pen)	DATE	VERIFICATION, CHECKER (OR)	(Blue Highlighter)	DATE
SIGNATURE:			CHECKER (RP)	CHANGE INCORPORATION		CHECKER (RP)	(Red Pen X-Out to Disagree or Remark)		REMARK INCORPORATION	(Blue Highlighter)	
			ORIGINATOR (OR)	CHANGE INCORPORATION		ORIGINATOR (OR)	Correct (Yellow Highlighter)		ORIGINATOR VERIFICATION	Correct (Pink Highlighter)	



CRESCENT LAKES OUTFALLS
W3 - EXISTING CONDITIONS / DEMOLITION PLAN



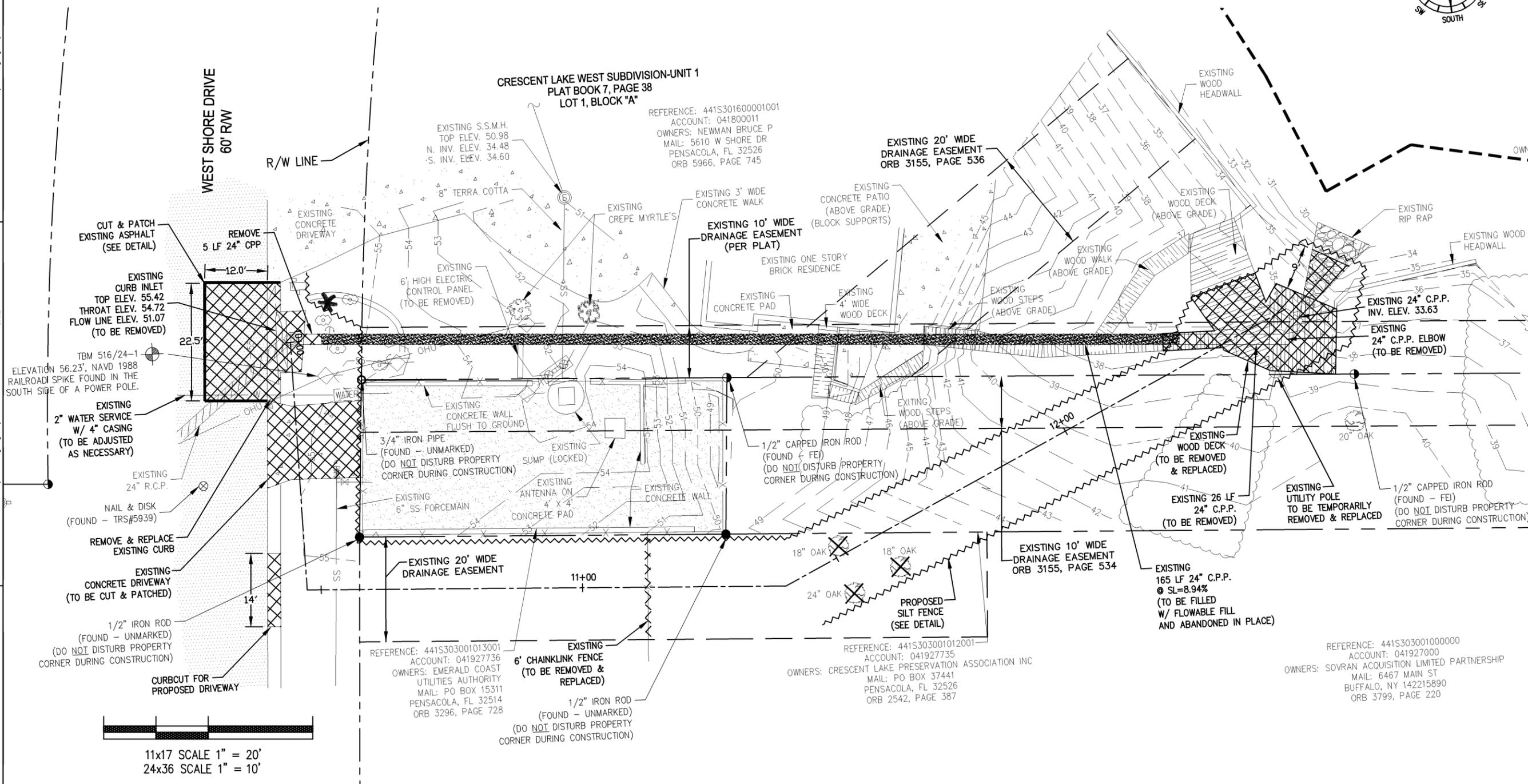
DAVID W. FITZPATRICK, P.E., P.A.
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 10250 N PALAFOX STREET
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DESIGNED BY: D. FITZPATRICK
 DRAWN BY: A. BURGETT
 DATE: FEBRUARY 2015
 FIELD BOOK: PAGES 44, 118, 200

CHECKED BY: J. ALLEN
 DATE: 4/18/16

NUMBER	REVISIONS	DATE	APPROVED BY
1	60% COMMENTS	2/27/15	
2	90% COMMENTS	1/16/16	
3	100% COMMENTS - CHANGED TO POOL CURB INLETS WHERE POSSIBLE OUTFALLS	2/9/16	
4	ADDED COMMENTS TO ADDRESS CONCERNS & REMOVED OUTFALL	2/29/16	
5	REMOVED OUTFALL	4/4/16	

DRAWING NUMBER: 15-102
 PROJECT NUMBER: ENGFLOOD0414-91H
 SURVEY NUMBER: L-5015
 SHEET: C9 OF C25



11x17 SCALE 1" = 20'
 24x36 SCALE 1" = 10'

100% SUBMITTAL
 PLOT DATE: 4/4/16

CRESCENT LAKES OUTFALLS

W3 - PLAN / PROFILE

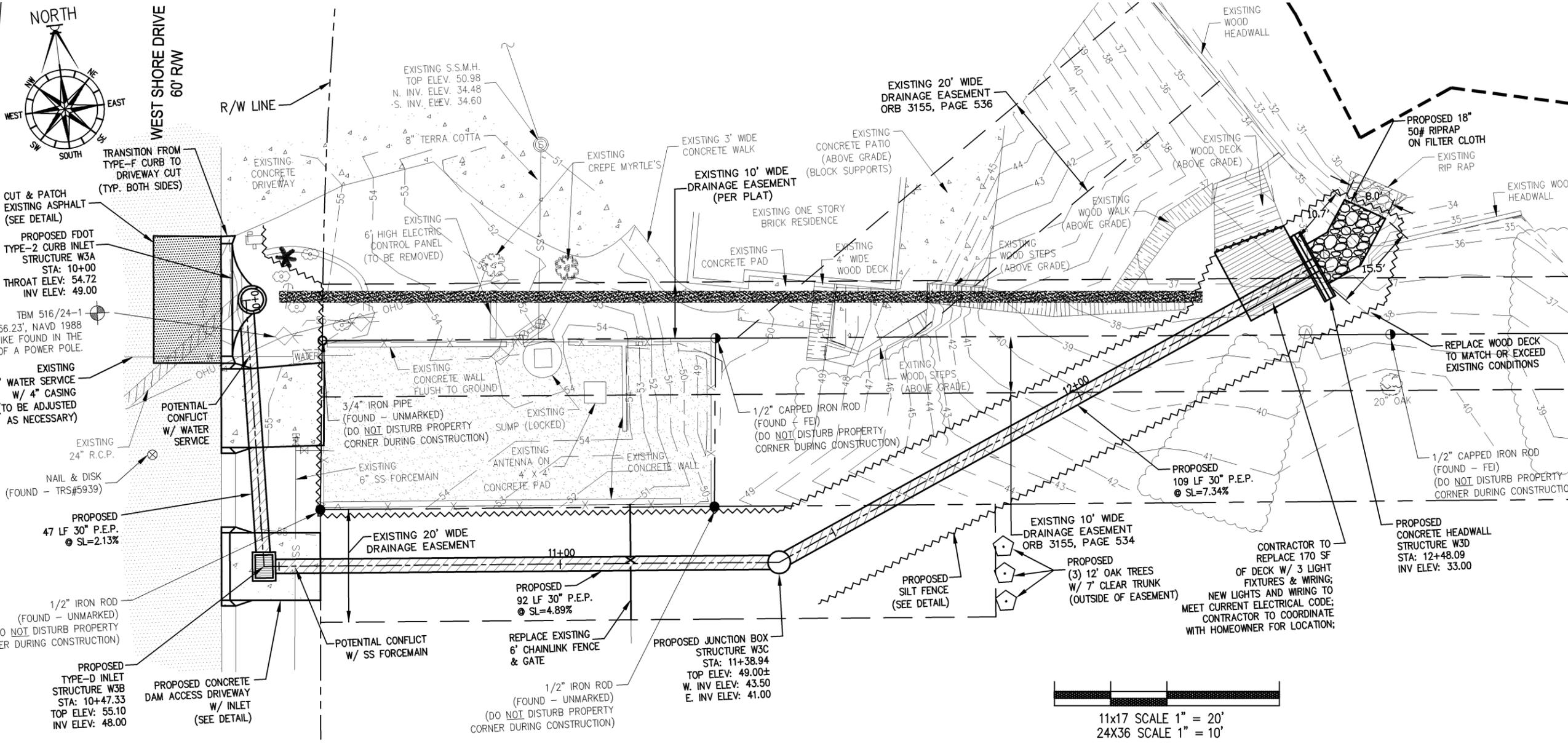


DAVID W. FITZPATRICK, P.E., P.A.
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 10250 N PALMVIEW STREET
 PANAMA CITY, FL 32350
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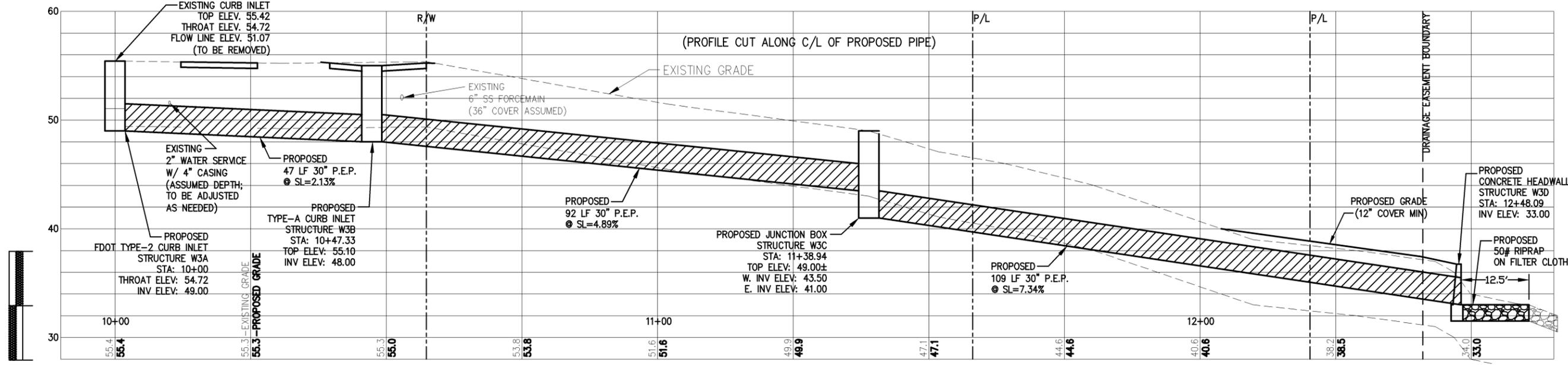
DESIGNED BY: D. FITZPATRICK
 DRAWN BY: A. BURGETT
 DATE: OCTOBER 2015
 FIELD BOOK PAGES: 44 / 151 / 300

REVISION NUMBER	DATE	APPROVED BY
1	12/15	
2	1/16	
3	2/16	
4	2/16	
5	4/16	

DRAWING NUMBER: 15-102
 PROJECT NUMBER: ENGFLOOD414-91H
 SURVEY NUMBER: L-5015
 SHEET: C10 OF C25



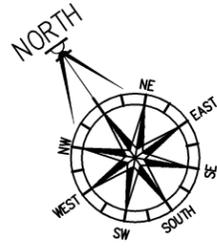
11x17 SCALE 1" = 20'
 24X36 SCALE 1" = 10'



11x17 PROFILE VERTICAL SCALE 1" = 10'
 24X36 PROFILE VERTICAL SCALE 1" = 5'

100% SUBMITTAL
 PLOT DATE: 4/4/16

PHASE: REVIEW
 SIGNATURE: _____
 DATE: _____
 ORIGINATOR (RP): PRODUCTION CHECKING COMPLETE, READY FOR SUBMITTAL REVIEW (RP) CHECKER (RP): _____
 DATE: _____
 CHANGE INCORPORATION (Yellow Highlighter): _____
 DATE: _____
 ORIGINATOR (GT): CORRECT (Green Highlighter) Change (Red Pen) _____
 DATE: _____
 REMARK INCORPORATION (Blue Highlighter): _____
 DATE: _____
 VERIFICATION, CHECKER (GT): _____
 DATE: _____
 ORIGINAL VERIFICATION (Pink Highlighter): _____
 DATE: _____



TBM 511/61-A
ELEVATION 48.08', NAVD 1988
60d NAIL IN THE SOUTH SIDE OF
A POWER POLE

1/2" IRON ROD
(FOUND - UNMARKED)

R/W LINE

EXISTING
2.5' LAYBACK CURB

EAST SHORE DRIVE
66' R/W

PROPOSED
DOUBLE TYPE-A
CURB INLET
STRUCTURE E1A
STA: 10+16.57
THROAT ELEV: 45.40
INV ELEV: 40.00

CUT & PATCH
EXISTING ASPHALT
(SEE DETAIL)

APPROXIMATE LOCATION OF
EXISTING SS FORCEMAIN
(LOCATION ASSUMED)

1/2" CAPPED IRON ROD
(FOUND - PITTMAN1748)
(DO NOT DISTURB PROPERTY
CORNER DURING CONSTRUCTION)

EXISTING
UNDERGROUND
GAS MAIN

POTENTIAL CONFLICT
W/ GAS MAIN
& FORCEMAIN

OVERHEAD UTILITIES
RECONSTRUCT LAYBACK
CURB & GUTTER
(SEE DETAIL)

EXISTING
ONE STORY
BRICK RESIDENCE

OVERHEAD UTILITY

EXISTING
4' C.L.F.

PROPOSED
CONCRETE HEADWALL
STRUCTURE E1B
STA: 8+35.68
INV ELEV: 33.00
(SEE DETAIL)

PROPOSED
50# RIPRAP
ON FILTER CLOTH

APPROXIMATE LOCATION OF
EXISTING SS FORCEMAIN
(LOCATION ASSUMED)

EXISTING
4' C.L.F.

12" PECAN

EXISTING
4' C.L.F.

PROPOSED
182 LF 42" P.E.P.
@ SL=3.85%

18" PECAN

EXISTING
4' C.L.F.

EXISTING
PUBLIC EASEMENT
WIDTH VARIES

EXISTING
ONE STORY
BRICK RESIDENCE

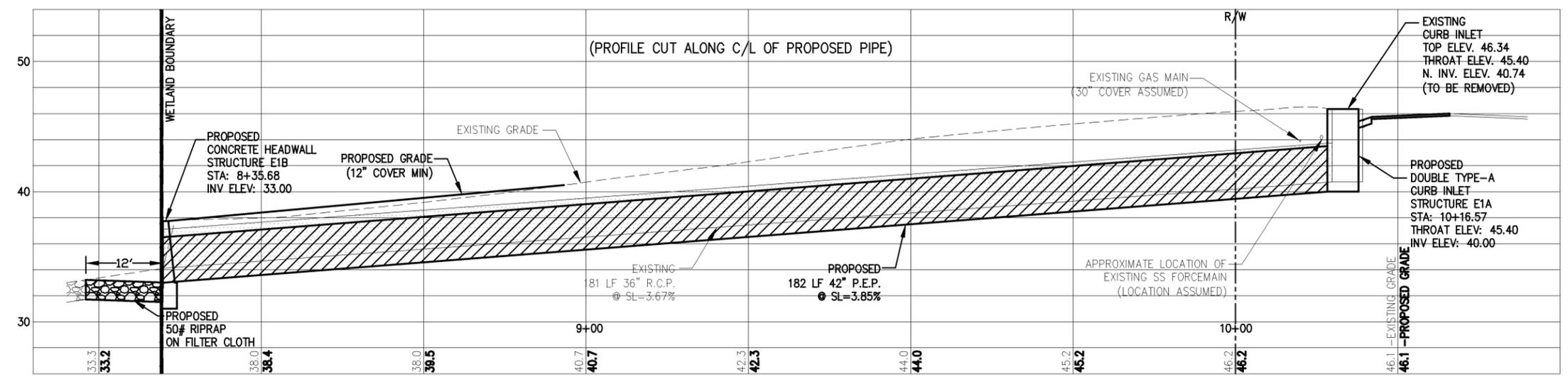
EXISTING
ONE STORY
WOOD FRAME BUILDING
ON CONCRETE SLAB

PROPOSED
SILT FENCE
(SEE DETAIL)

WETLAND BOUNDARY
AS FLAGGED BY
BIOME CONSULTING GROUP

EXISTING
RIP RAP

11x17 SCALE 1" = 20'
24X36 SCALE 1" = 10'



11x17 PROFILE VERTICAL SCALE 1" = 10'
24X36 PROFILE VERTICAL SCALE 1" = 5'

100% SUBMITTAL
PLOT DATE: 4/4/16

PHASE	REVIEW	DATE	ORIGINATOR (RP)	PRODUCTION CHECKING COMPLETE, READY FOR SUBMITTAL	DATE	ORIGINATOR (OR)	CORRECT (Green Highlighter) Change	DATE	VERIFICATION, CHECKER (OR)	(Blue Highlighter)	DATE
SIGNATURE:			CHECKER (RP)	(Red Pen X-Out to Disagree or Remark)		CHECKER (RP)	(Yellow Highlighter)		REMARK INCORPORATION	(Blue Highlighter)	
			CHANGE INCORPORATION			ORIGINATOR VERIFICATION	Correct (Pink Highlighter)				

CRESCENT LAKES OUTFALLS
E1 - PLAN / PROFILE



DAVID W. FITZPATRICK, P.E., P.A.
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10250 N PALMVIEW STREET
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PHONE: (850) 478-8877 FAX: (850) 478-7708

DESIGNED BY: D. FITZPATRICK
PROJECT MANAGER: DWIGHT ALUSTIN
DATE: DECEMBER 2015
FIELD BOOK PAGES: 44 / 151 / 30W

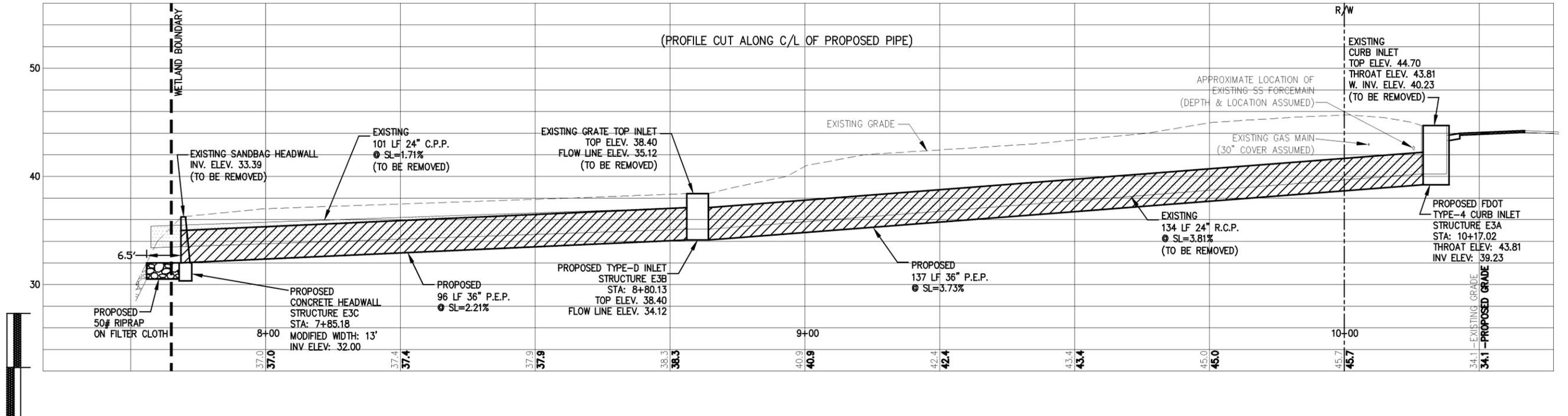
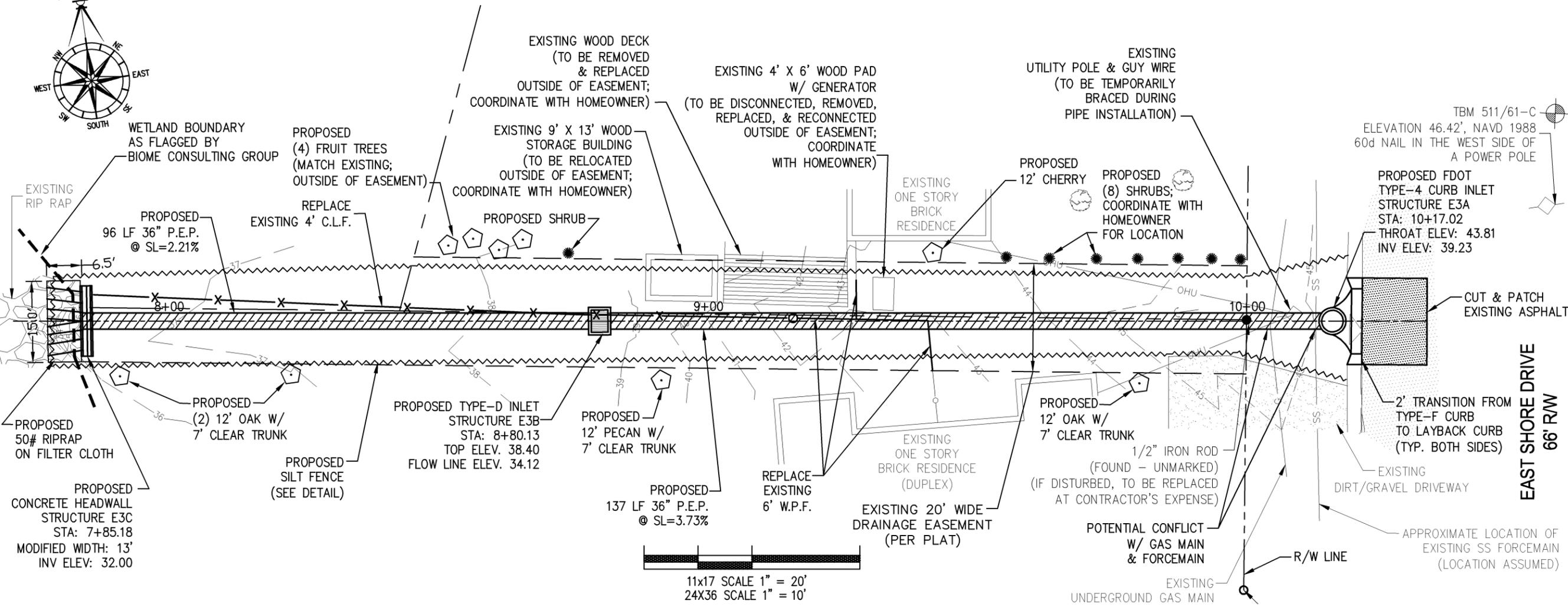
CHECKED BY: D. FITZPATRICK
DATE: 4/7/16

SCALE: 1" = 10'

NUMBER	REVISIONS	DATE	APPROVED BY
1	60% COMMENTS	2/27/15	
2	90% COMMENTS	1/16/16	
3	100% COMMENTS - CHANGED TOP OF CURB INLETS WHERE POSSIBLE (OUTFALLS)	3/9/16	
4	ADDED COMMENTS TO LANSING AND BIRDAVEN SYSTEMS OUTFALLS	2/29/16	
5	REMOVED OUTFALL	4/4/16	

DRAWING NUMBER: 15-102
PROJECT NUMBER: ENGFLOOD0414-91H
SURVEY NUMBER: L-5015
SHEET: C12 OF C25

PHASE REVIEW SIGNATURE: DATE ORIGINATOR (RP) PRODUCTION CHECKING COMPLETE, READY FOR SUBMITTAL REVIEW (RP) CHECKER (RP) DATE ORIGINATOR (OR) CORRECT (Green Highlighter) Change (Red Pen, X-Out to Disagree or Remark) DATE VERIFICATION, CHECKER (OR) REMARK INCORPORATION (Blue Highlighter) DATE ORIGINATOR VERIFICATION CORRECT (Pink Highlighter) DATE



11x17 PROFILE VERTICAL SCALE 1" = 10'
24X36 PROFILE VERTICAL SCALE 1" = 5'

100% SUBMITTAL
PLOT DATE: 4/4/16

CRESCENT LAKES OUTFALLS

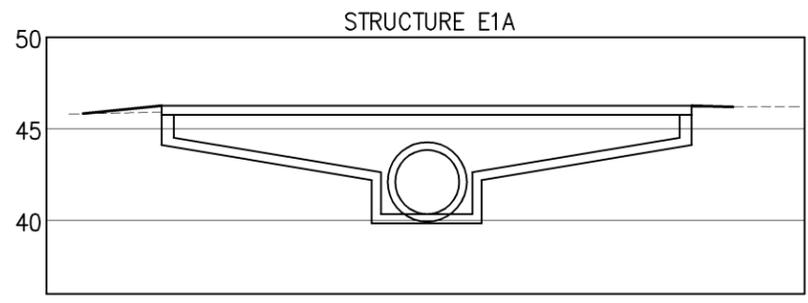
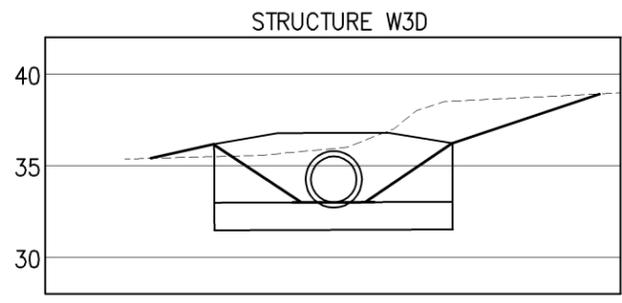
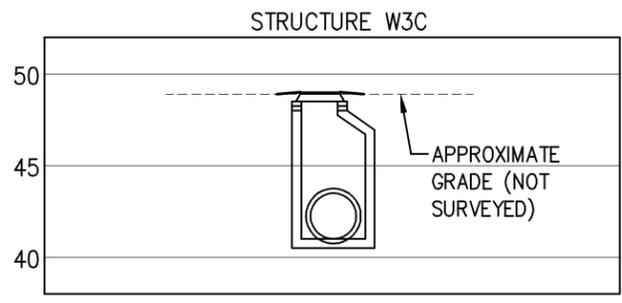
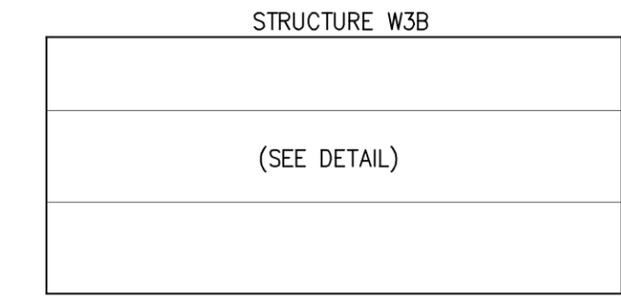
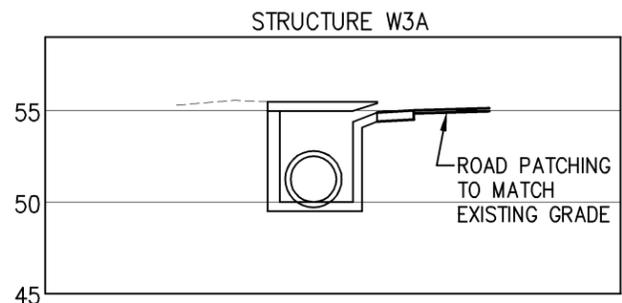
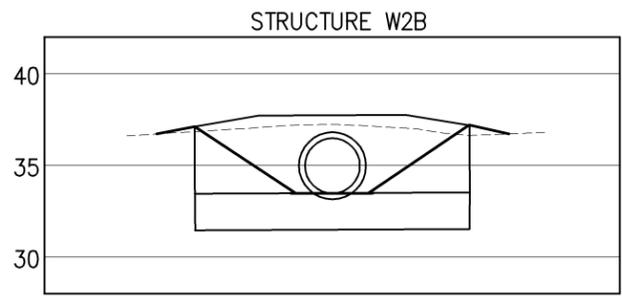
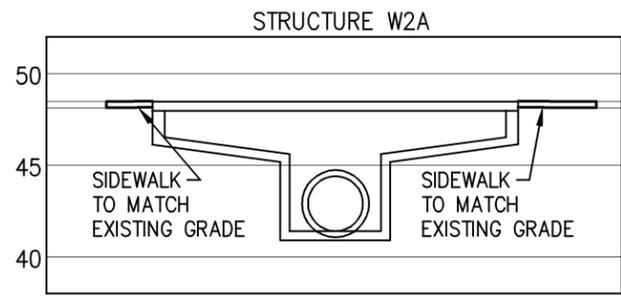
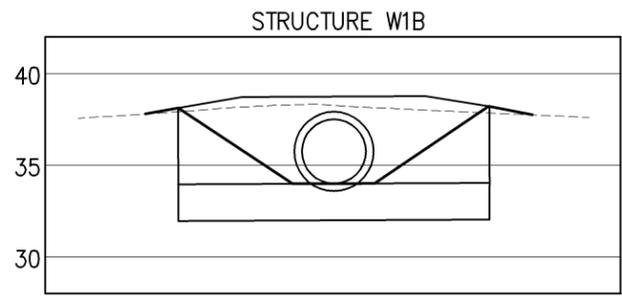
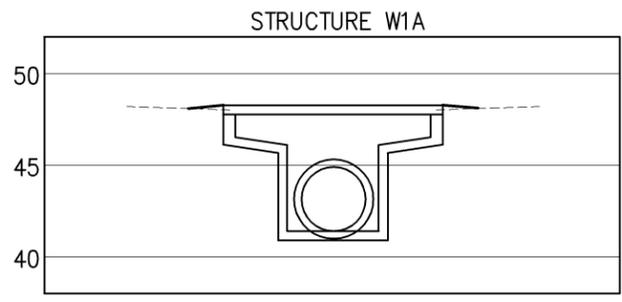
E3 - PLAN / PROFILE

DAVID W. FITZPATRICK, P.E., P.A. FBPE CERTIFICATE OF AUTHORIZATION NO. 00008423 10250 N PALAFOX STREET PENSACOLA, FL 32504 PHONE: (850) 478-8877 FAX: (850) 476-7708		DESIGNED BY: D. FITZPATRICK	CHECKED BY: D. FITZPATRICK	DATE: 4/7/16
DRAWN BY: A. BURGETT	PROJECT MANAGER: DWIGHT ALSTON	SURVEYOR: DWIGHT ALSTON	SIGNATURE: DWIGHT ALSTON	LICENSE NO.: 47818
DATE: 2/27/15	DATE: 1/18/16	DATE: 2/29/16	DATE: 4/4/16	DATE: 4/1/16

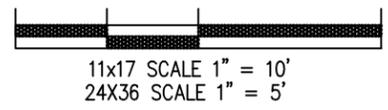
NUMBER	REVISIONS	DATE	APPROVED BY
1	60% COMMENTS	2/27/15	
2	90% COMMENTS	1/18/16	
3	100% COMMENTS - CHANGED TO FOOT CURB INLETS WHERE POSSIBLE (OUTFALLS)	2/29/16	
4	REMOVED EXISTING 12" R.C.P. IN PLACE OF 36" P.E.P. (OUTFALLS)	4/4/16	
5	REMOVED EXISTING 12" R.C.P. IN PLACE OF 36" P.E.P. (OUTFALLS)	4/4/16	

DRAWING NUMBER	15-102
PROJECT NUMBER	ENGFLOOD0414-91H
SURVEY NUMBER	L-5015
SHEET	C14 OF C25

PHASE	REVIEW	ORIGINATOR (RP)	DATE	ORIGINATOR (OR)	DATE						
		PRODUCTION CHECKING COMPLETE, READY FOR SUBMITTAL REVIEW (RP)		CORRECT (GREEN HIGHLIGHTER) CHANGE (RED PEN)							
SIGNATURE:		CHECKER (RP)		CHECKER (RP)		CHECKER (RP)		CHECKER (RP)		CHECKER (RP)	
		CHANGE INCORPORATION (YELLOW HIGHLIGHTER)		CHANGE INCORPORATION (YELLOW HIGHLIGHTER)		CHANGE INCORPORATION (YELLOW HIGHLIGHTER)		CHANGE INCORPORATION (YELLOW HIGHLIGHTER)		CHANGE INCORPORATION (YELLOW HIGHLIGHTER)	
		VERIFICATION, CHECKER (OR)		VERIFICATION, CHECKER (OR)		VERIFICATION, CHECKER (OR)		VERIFICATION, CHECKER (OR)		VERIFICATION, CHECKER (OR)	
		REMARK INCORPORATION (BLUE HIGHLIGHTER)		REMARK INCORPORATION (BLUE HIGHLIGHTER)		REMARK INCORPORATION (BLUE HIGHLIGHTER)		REMARK INCORPORATION (BLUE HIGHLIGHTER)		REMARK INCORPORATION (BLUE HIGHLIGHTER)	
		ORIGINATOR VERIFICATION (CORRECT (PINK HIGHLIGHTER))		ORIGINATOR VERIFICATION (CORRECT (PINK HIGHLIGHTER))		ORIGINATOR VERIFICATION (CORRECT (PINK HIGHLIGHTER))		ORIGINATOR VERIFICATION (CORRECT (PINK HIGHLIGHTER))		ORIGINATOR VERIFICATION (CORRECT (PINK HIGHLIGHTER))	



LEGEND
 - - - - - EXISTING GRADE
 _____ PROPOSED GRADE





CRESCENT LAKES OUTFALLS

DRAINAGE STRUCTURE CROSS-SECTIONS

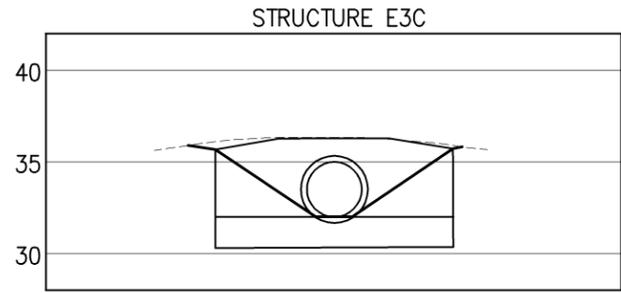
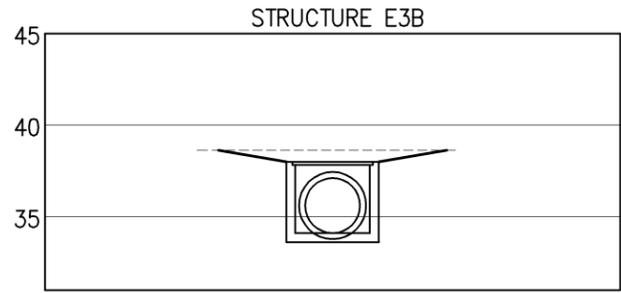
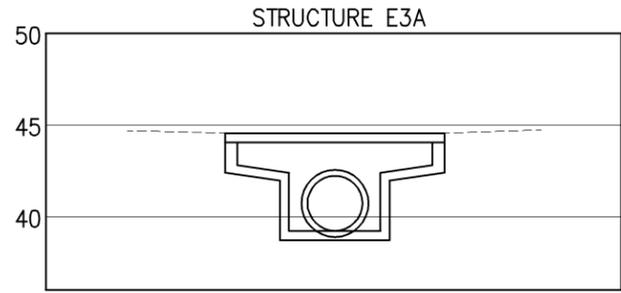
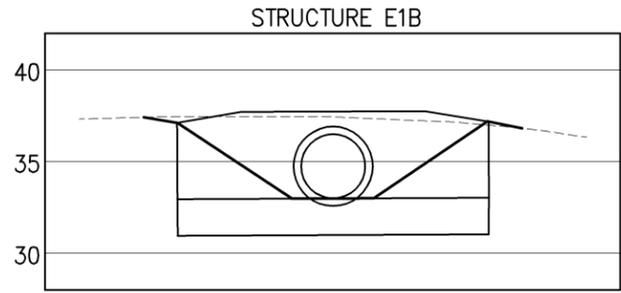
DAVID W. FITZPATRICK, P.E., P.A. FBPE CERTIFICATE OF AUTHORIZATION NO. 00008423 10250 N PALAFOX STREET PASADENA, FL 32534 PHONE: (850) 478-8877 FAX: (850) 478-7708		REG. SEAL NO. 47818 DATE:
DESIGNED BY: D. FITZPATRICK DRAWN BY: A. BURGETT DATE: DECEMBER 2015 FIELD BOOK: PAGES	CHECKED BY: D. FITZPATRICK PROJECT MANAGER: DWIGHT ALSTON SURVEY STATION: SUPP-RANGE 44.118.30W	SIGNATURE:

NUMBER	REVISIONS	DATE	APPROVED BY
1	60% COMMENTS	12/15	
2	90% COMMENTS	1/16	
3	100% COMMENTS - CHANGED TO FOOT CURB INLETS WHERE POSSIBLE OUTFALLS	2/16	
4	REMOVED COMMENTS - CHANGED TO 15" DIA. MANHOLES & REMOVED OUTFALL	2/16	
5	REMOVED OUTFALL	4/16	

DRAWING NUMBER	15-102
PROJECT NUMBER	ENGFLOOD0414-91H
SURVEY NUMBER	L-5015
SHEET	C15 OF C25

100% SUBMITTAL
 PLOT DATE: 4/4/16

PHASE	REVIEW	DATE	ORIGINATOR (RP)	ORIGINATOR (OR)	CORRECT (Green Highlighter) Change (Red Pen)	DATE	VERIFICATION, CHECKER (OR)	(Blue Highlighter)	DATE
SIGNATURE:	PRODUCTION CHECKING COMPLETE, READY FOR SUBMITTAL		CHECKER (RP)	CHECKER (OR)	(Red Pen X-Out to Disagree or Remark)		REMARK INCORPORATION	(Blue Highlighter)	
			CHANGE INCORPORATION	(Yellow Highlighter)			ORIGINATOR VERIFICATION	Correct (Pink Highlighter)	



LEGEND

----- EXISTING GRADE
 _____ PROPOSED GRADE

11x17 SCALE 1" = 10'
 24x36 SCALE 1" = 5'

STORMWATER STRUCTURE TABLE

#	TYPE	ELEVATIONS		
		TOP	THROAT	INVERT
W1A	FDOT TYPE-4 CURB INLET	48.27	47.52	41.40
W1B	HEADWALL	-	-	34.00
W2A	MOD DBL TYPE-A CURB INLET	49.90	49.15	42.82
W2B	HEADWALL	-	-	33.48
W3A	FDOT TYPE-2 CURB INLET	55.47	54.72	49.00
W3B	TYPE-D DROP INLET	54.90	-	48.00
W3C	JUNCTION BOX	49.00	-	41.00
W3D	HEADWALL	-	-	33.00
E1A	DBL TYPE-A CURB INLET	46.15	45.40	40.00
E1B	HEADWALL	-	-	33.00
E3A	FDOT TYPE-4 CURB INLET	44.56	43.81	39.23
E3B	TYPE-D DROP INLET	38.40	-	34.12
E3C	HEADWALL	-	-	32.00

CRESCENT LAKES OUTFALLS DRAINAGE STRUCTURE CROSS-SECTIONS	
DAVID W. FITZPATRICK, P.E., P.A. FBPE CERTIFICATE OF AUTHORIZATION NO. 00008423 10250 N PALAFOX STREET PENSACOLA, FL 32504 PHONE: (850) 478-8877 FAX: (850) 476-7708	
DESIGNED BY: D. FITZPATRICK	CHECKED BY: D. FITZPATRICK
DRAWN BY: A. BURGETT	DATE PLOTTED: DECEMBER 2015
PROJECT MANAGER: DWIGHT ALSTIN	SERVICE: SANITARY ENGINEERING
FIELD BOOK PAGES: 44 / 15 / 30W	SIGNATURE: 47818
DATE APPROVED BY: 12/15	DATE: 1/16/16
NUMBER: 1 60% COMMENTS 2 90% COMMENTS - CHANGED TO FDOT CURB INLETS WHERE POSSIBLE OUTFALLS 3 100% COMMENTS - CHANGED TO FDOT CURB INLETS WHERE POSSIBLE OUTFALLS 4 REMOVED OUTFALL 5 REMOVED OUTFALL	DATE: 2/9/16 4/4/16
DRAWING NUMBER: 15-102	PROJECT NUMBER: ENGFLOOD0414-91H
SURVEY NUMBER: L-5015	SHEET: C16 OF C25

100% SUBMITTAL
 PLOT DATE: 4/4/16

PHASE REVIEW SIGNATURE: DATE 07/01/09

ORIGINATOR (RP) CHECKER (RP) CHANGE INCORPORATION (Yellow Highlighter)

ORIGINATOR (OR) CHECKER (RP) CHANGE INCORPORATION (Red Pen X-Out to Disagree or Remark)

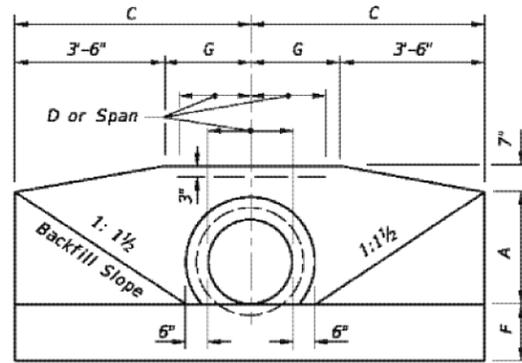
ORIGINATOR (OR) CHECKER (OR) CORRECT (Green Highlighter) Change (Red Pen)

VERIFICATION, CHECKER (OR) (Blue Highlighter)

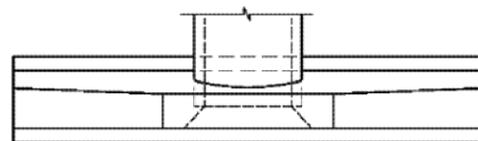
REMARK INCORPORATION (Blue Highlighter)

ORIGINATOR VERIFICATION CORRECT (Pink Highlighter)

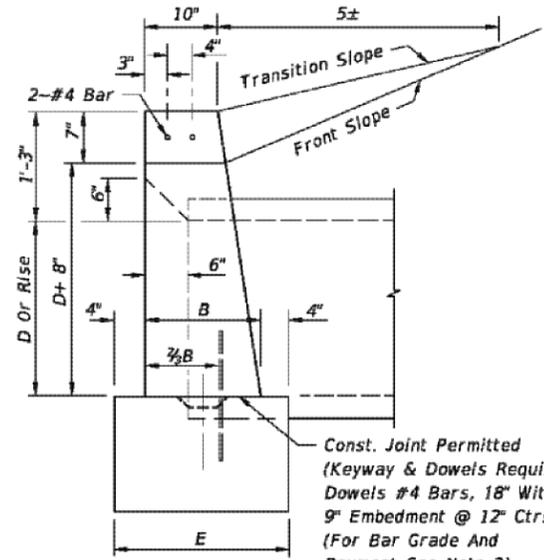
DATE DATE DATE



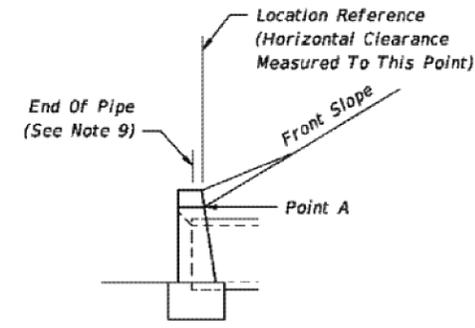
FRONT VIEW



TOP VIEW



END VIEW (ENLARGED)

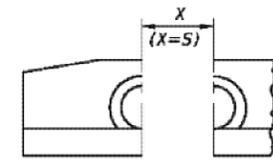


END VIEW

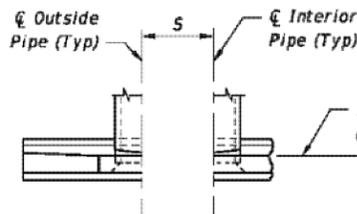
1. Position is set by the intersection of the front slope and Point A where this intersection falls outside the clear zone.
2. Where the front slope and Point A intersects inside the clear zone, the endwall is positioned so the location reference point is at the clear zone limit. The front slope is transitioned to the endwall as shown in Index No. 280.

STANDARD LOCATION CONTROL

ENDWALL DIMENSIONS (EXCLUSIVE OF MULTIPLE PIPE SPACING)

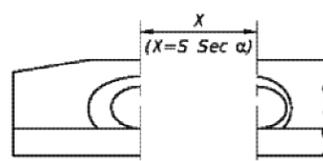


FRONT VIEW

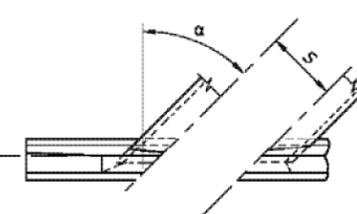


TOP VIEW

NORMAL PIPE



FRONT VIEW



TOP VIEW

SKewed PIPE

LEGEND

- α Pipe Skew
- S Center To Center Pipe Spacing
- X Centerline To Centerline Dimension At Face Of Headwall

**PIPE AND SPACING FOR MULTIPLE PIPE
ENDWALL POSITIONS FOR SINGLE AND MULTIPLE**

LAST REVISION 07/01/09	DESCRIPTION:	2016 DESIGN STANDARDS	INDEX NO. 250	SHEET NO. 1 of 2
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GENERAL NOTES

1. Endwall dimensions, locations and positions are for round and elliptical concrete pipe and for round and pipe-arch corrugated metal pipe. Round concrete pipe shown.
2. Front slope and ditch transitions shall be in accordance with Index No. 280.
3. Endwalls may be cast in place or precast concrete. Reinforcing steel shall be Grades 40 or 60. Additional reinforcement necessary for handling precast units shall be determined by the Contractor or the supplier. Cost of reinforcement shall be included in the contract unit price for Concrete, (Endwalls).
4. All exposed corners and edges of concrete are to be chamfered 3/4".
5. Concrete shall be Class I, except ASTM C478 (4000 psi) concrete may be substituted for precast items manufactured in plants meeting the requirements of Section 449 of the Specifications.
6. On outfall ditches with side slopes flatter than 1:1 1/2 provide 20' transitions from the endwall to the flatter side slopes, right of way permitting.
7. For sodding around endwalls see Index No. 281.
8. Payment for concrete quantities for endwalls skewed to the pipe shall be made on the following basis:

Endwall Skew to Pipe	Use Tabulated Value
0° to 5°	0°
6°	15°
16°	30°
31° or over	45°
9. Pipe length plan quantities shall be based on the pipe end locations shown in the standard location control end view, or lengths based on special endwall locations called for in the plans.
10. Payment for pipe in pipe culverts shall be based on plan quantities, adjusted for endwall locations subsequently established by the Engineer.
11. Endwalls to be paid for under the contract unit price for Class I Concrete (Endwalls), CY.



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 PANAMA CITY, FL 32350
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 DESIGNED BY: D. FITZPATRICK
 DRAWN BY: A. BURGETT
 DATE: FEBRUARY 2015
 FIELD BOOK: PAGES

REVISIONS	DATE	APPROVED BY
1	12/15	
2	1/16	
3	2/16	
4	2/16	
5	4/16	

DRAWING NUMBER: 15-102
 PROJECT NUMBER: ENGFLOOD0414-91H
 SURVEY NUMBER: L-5015
 SHEET: C17 of C25

CRESCENT LAKES OUTFALLS

DETAILS

100% SUBMITTAL
 PLOT DATE: 4/4/16

DATA AND ESTIMATED QUANTITIES FOR ONE ENDWALL

ROUND CONCRETE AND CORRUGATED METAL PIPE

D	Opening Area (SF)				Dimensions												Class I Concrete (CY)																D										
																	Number And Type Of Pipe And Skew Angle Of Pipe																										
	Number Of Pipes				Single				Double				Triple				Quadruple																										
					Conc		Metal		Concrete		Metal		Concrete		Metal		Concrete		Metal																								
1	2	3	4	A	B	C	E	F	G	S	X				0°	15°	30°	45°	0°	15°	30°	45°	0°	15°	30°	45°	0°	15°	30°	45°	0°	15°	30°	45°									
15"	1.23	2.46	3.69	4.92	1'-11"	1'-2"	4'-0"	1'-10"	1'-2"	0'-6"	2'-7"	2'-7"	2'-8"	3'-0"	3'-8"	1.23	1.24	1.59	1.60	1.65	1.74	1.62	1.63	1.68	1.78	1.94	1.96	2.05	2.23	1.99	2.02	2.11	2.30	2.30	2.34	2.47	2.74	2.37	2.41	2.75	2.84	15"	
18"	1.77	3.54	5.31	7.08	2'-2"	1'-3"	4'-6"	1'-11"	1'-3"	1'-0"	2'-10"	2'-10"	2'-11"	3'-3"	4'-0"	1.56	1.59	1.99	2.01	2.06	2.17	2.04	2.06	2.11	2.23	2.43	2.46	2.56	2.79	2.51	2.54	2.65	2.89	2.86	2.91	3.06	3.40	2.96	3.01	3.17	3.53	18"	
21"	2.41	4.82	7.23	9.64	2'-5"	1'-4"	5'-0"	2'-0"	1'-4"	1'-6"	3'-2"	3'-2"	3'-3"	3'-8"	4'-6"	1.97																											21"
24"	3.14	6.28	9.42	12.56	2'-8"	1'-4"	5'-6"	2'-0"	1'-4"	2'-0"	3'-5"	3'-5"	3'-6"	3'-11"	4'-10"	2.24	2.29	2.82	2.84	2.91	3.06	2.91	2.93	3.01	3.17	3.39	3.43	3.57	3.87	3.52	3.56	3.71	4.03	3.97	4.03	4.24	4.69	4.14	4.20	4.43	4.91	24"	
27"	3.98	7.96	11.94	15.92	2'-11"	1'-5"	6'-0"	2'-1"	1'-5"	2'-6"	3'-10"	3'-10"	4'-0"	4'-5"	5'-5"	2.73																											27"
30"	4.91	9.82	14.73	19.64	3'-2"	1'-6"	6'-6"	2'-2"	1'-6"	3'-0"	4'-3"	4'-3"	4'-5"	4'-11"	6'-0"	3.26	3.34	4.13	4.16	4.26	4.49	4.28	4.31	4.43	4.67	4.98	5.04	5.25	5.69	5.20	5.27	5.49	5.97	5.84	5.93	6.24	6.91	6.13	6.23	6.56	7.29	30"	
36"	7.07	14.14	21.21	28.28	3'-8"	1'-8"	7'-6"	2'-4"	1'-8"	4'-0"	5'-1"	5'-1"	5'-3"	5'-10"	7'-2"	4.53	4.64	5.73	5.77	5.92	6.23	5.95	6.00	6.15	6.49	6.92	7.00	7.29	7.91	7.25	7.34	7.65	8.33	8.13	8.26	8.69	9.62	8.57	8.71	9.18	10.20	36"	
42"	9.62	19.24	28.86	38.48	4'-2"	1'-10"	8'-6"	2'-6"	2'-0"	5'-0"	6'-0"	6'-0"	6'-3"	6'-11"	8'-6"	6.33	6.49	8.11	8.17	8.39	8.85	8.43	8.50	8.73	9.23	9.90	10.02	10.45	11.38	10.38	10.52	10.98	11.99	11.68	11.87	12.51	13.89	12.32	12.52	13.22	14.73	42"	
48"	12.57	25.14	37.71	50.28	4'-8"	2'-1"	9'-6"	2'-9"	2'-0"	6'-0"	6'-9"	6'-9"	7'-0"	7'-10"	9'-7"	8.15	8.38	10.40	10.48	10.75	11.33	10.85	10.94	11.23	11.87	12.64	12.80	13.34	14.50	13.34	13.51	14.11	15.39	14.89	15.13	15.93	17.68	15.82	16.08	16.97	18.90	48"	
54"	15.90	31.80	47.70	63.60	5'-2"	2'-6"	10'-6"	3'-2"	2'-3"	7'-0"	7'-8"	7'-8"	7'-11"	8'-10"	10'-10"	11.71	11.77	15.23	15.35	15.78	16.69	15.35	15.48	15.90	16.83	18.77	19.02	19.86	21.69	18.93	19.18	20.04	21.89	22.29	22.66	23.93	26.67	22.51	22.89	24.17	26.96	54"	

CORRUGATED METAL PIPE ARCH

Span	Rise	Opening Area (SF)				Dimensions												Class I Concrete (CY)																Span	Rise	Approx. Equiv. Round Pipe
																		Number Of Pipe And Skew Angle Of Pipe																		
		Number Of Pipes				Single				Double				Triple				Quadruple																		
						0°	15°	30°	45°	0°	15°	30°	45°	0°	15°	30°	45°	0°	15°	30°	45°															
1	2	3	4	A	B	C	E	F	G	S	X				0°	15°	30°	45°	0°	15°	30°	45°	0°	15°	30°	45°	0°	15°	30°	45°						
17"	13"	1.1	2.2	3.3	4.4	1'-9"	1'-2"	3'-10"	1'-10"	1'-2"	0'-4"	2'-6"	2'-6"	2'-7"	2'-11"	3'-6"	1.16	1.47	1.48	1.52	1.60	1.78	1.80	1.88	2.04	2.09	2.12	2.23	2.48	17"	13"	15"				
21"	15"	1.6	3.2	4.8	6.4	1'-11"	1'-2"	4'-3"	1'-10"	1'-2"	0'-9"	2'-10"	2'-10"	2'-11"	3'-3"	4'-0"	1.33	1.69	1.70	1.75	1.84	2.04	2.06	2.15	2.33	2.40	2.44	2.57	2.84	21"	15"	18"				
28"	20"	2.8	5.6	8.4	11.2	2'-4"	1'-3"	5'-2"	1'-11"	1'-3"	1'-8"	3'-5"	3'-5"	3'-6"	3'-11"	4'-10"	1.78	2.31	2.33	2.39	2.53	2.83	2.87	2.99	3.26	3.36	3.42	3.60	4.01	28"	20"	24"				
35"	24"	4.3	8.6	12.9	17.2	2'-8"	1'-4"	5'-11½"	2'-0"	1'-4"	2'-5½"	4'-0"	4'-0"	4'-2"	4'-7"	5'-8"	2.34	3.03	3.05	3.14	3.32	3.72	3.77	3.93	4.29	4.40	4.47	4.72	5.25	35"	24"	30"				
42"	29"	5.9	11.8	17.7	23.6	3'-1"	1'-5"	6'-10½"	2'-1"	1'-5"	3'-4½"	4'-9"	4'-9"	4'-11"	5'-6"	6'-9"	3.13	4.06	4.09	4.20	4.45	4.99	5.06	5.28	5.76	5.93	6.03	6.36	7.09	42"	29"	36"				
49"	33"	8.4	16.8	25.2	33.6	3'-5"	1'-6"	7'-8"	2'-2"	1'-6"	4'-2"	5'-6"	5'-6"	5'-8"	6'-4"	7'-9"	3.83	5.00	5.04	5.18	5.48	6.16	6.24	6.52	7.12	7.32	7.44	7.86	8.76	49"	33"	42"				
57"	38"	10.6	21.2	31.8	42.4	3'-10"	1'-7"	8'-7½"	2'-3"	1'-7"	5'-1½"	6'-4"	6'-4"	6'-7"	7'-4"	8'-11"	4.87	6.31	6.36	6.53	6.91	7.74	7.84	8.18	8.93	9.18	9.33	9.85	10.96	57"	38"	48"				
64"	43"	13.2	26.4	39.6	52.8	4'-3"	1'-8"	9'-6½"	2'-4"	1'-8"	6'-0½"	7'-1"	7'-1"	7'-4"	8'-2"	10'-0"	5.88	7.64	7.70	7.91	8.37	9.40	9.52	9.94	10.86	11.15	11.33	11.97	13.33	64"	43"	54"				
71"	47"	16.9	33.8	50.7	67.6	4'-7"	1'-10"	10'-4"	2'-6"	2'-0"	6'-10"	7'-10"	7'-10"	8'-1"	9'-1"	11'-1"	7.80	10.15	10.23	10.51	11.12	12.49	12.65	13.22	14.43	14.85	15.10	15.94	17.77	71"	47"	60"				

Note: Use the guidelines of General Note No. 8 for selecting tabular quantities.

CONCRETE ELLIPTICAL PIPE

Rise	Span	Opening Area (SF)				Dimensions												Class I Concrete (CY)																Rise	Span	Approx. Equiv. Round Pipe
																		Number Of Pipe And Skew Angle Of Pipe																		
		Number Of Pipes				Single				Double				Triple				Quadruple																		
						0°	15°	30°	45°	0°	15°	30°	45°	0°	15°	30°	45°	0°	15°	30°	45°															
1	2	3	4	A	B	C	E	F	G	S	X				0°	15°	30°	45°	0°	15°	30°	45°	0°	15°	30°	45°	0°	15°	30°	45°						
12"	18"	1.3	2.6	3.9	5.2	1'-8"	1'-2"	3'-9"	1'-10"	1'-2"	0'-3"	2'-10"	2'-10"	2'-11"	3'-3"	4'-0"	1.09	1.45	1.46	1.51	1.60	1.80	1.82	1.91	2.09	2.16	2.20	2.33	2.60	12"	18"	15"				
14"	23"	1.8	3.6	5.4	7.2	1'-10"	1'-3"	4'-2½"	1'-11"	1'-3"	8½"	3'-5"	3'-5"	3'-6"	3'-11"	4'-10"	1.36	1.82	1.84	1.89	2.01	2.29	2.32	2.43	2.68	2.75	2.80	2.97	3.33	14"	23"	18"				
19"	30"	3.3	6.6	9.9	13.2	2'-3"	1'-4"	5'-1½"	2'-0"	1'-4"	1'-7½"	4'-2"	4'-2"	4'-4"	4'-10"	5'-11"	1.89	2.55	2.57	2.65	2.82	3.22	3.27	3.43	3.77	3.88	3.95	4.19	4.70	19"	30"	24"				
24"	38"	5.1	10.2	15.3	20.4	2'-8"	1'-5"	6'-3"	2'-1"	1'-5"	2'-9"	5'-2"	5'-2"	5'-4"	6'-0"	7'-4"	2.64	3.55	3.58	3.69	3.93	4.48	4.54	4.77	5.24	5.39	5.49	5.82	6.53	24"	38"	30"				
29"	45"	7.4	14.8	22.2	29.6	3'-1"	1'-6"	7'-0"	2'-2"	1'-6"	3'-6"	6'-0"	6'-0"	6'-3"	6'-11"	8'-6"	3.32	4.48	4.52	4.66	4.96	5.64	5.72	6.00	6.60	6.80	6.92	7.34	8.24	29"	45"	36"				
34"	53"	10.2	20.4	30.6	40.8	3'-6"	1'-7"	7'-11½"	2'-3"	1'-7"	4'-5½"	7'-1"	7'-1"	7'-4"	8'-2"	10'-0"	4.24	5.76	5.81	6.00	6.39	7.29	7.40	7.76	8.55	8.81	8.97	9.52	10.70	34"	53"	42"				
38"	60"	12.9	25.8	38.7	51.6	3'-10"	1'-8"	8'-9"	2'-4"	1'-8"	5'-3"	7'-11"	7'-11"	8'-2"	9'-2"	11'-2"	5.22	7.16	7.23	7.46	7.96	9.10	9.24	9.70	10.71	11.05	11.25	11.95	13.46	38"	60"	48"				
43"	68"	16.6	33.2	49.8	66.4	4'-3"	1'-10"	9'-8½"	2'-6"	1'-10"	6'-2½"	8'-10"	8'-10"	9'-2"	10'-2"	12'-6"	6.63	9.01	9.09	9.38	10.00	11.39	11.56	12.13	13.36	13.77	14.02	14.88	16.73	43"	68"	54"				
48"	76"	20.5	41.0	61.5	82.0	4'-8"	2'-1"	10'-8"	2'-9"	2'-0"	7'-2"	9'-9"	9'-9"	10'-1"	11'-3"	13'-9"	8.66	11.74	11.85	12.22	13.02	14.82	15.04	15.77	17.37	17.91	18.23	19.34	21.74	48"	76"	60"				
53"	83"	24.8	49.6	74.4	99.2	5'-1"	2'-6"	11'-7"	3'-2"	2'-6"	8'-1"	10'-7"	10'-7"	10'-11"	12'-3"	15'-0"	12.50	16.98	16.98	17.67	18.83	21.47	21.78	22.86	25.18	25.97	26.44	28.06	31.55	53"	83"	66"				
58"	91"	29.5	59.0	88.5	118.0	5'-6"	2'-10"	12'-6½"	3'-6"	2'-10"	9'-0½"	11'-4"	11'-4"	11'-9"	13'-1"	16'-0"	16.46	22.26	22.46	23.16	24.66	28.05	28.46	29.85	32.85	33.85	34.46	36.55	41.05	58"	91"	72"				

LAST REVISION 07/01/01	REVISION	DESCRIPTION:	 2016 DESIGN STANDARDS	STRAIGHT CONCRETE ENDWALLS SINGLE AND MULTIPLE PIPE	INDEX NO. 250	SHEET NO. 2 of 2
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100% SUBMITTAL
PLOT DATE: 4/4/16

CRESCENT LAKES OUTFALLS
DETAILS



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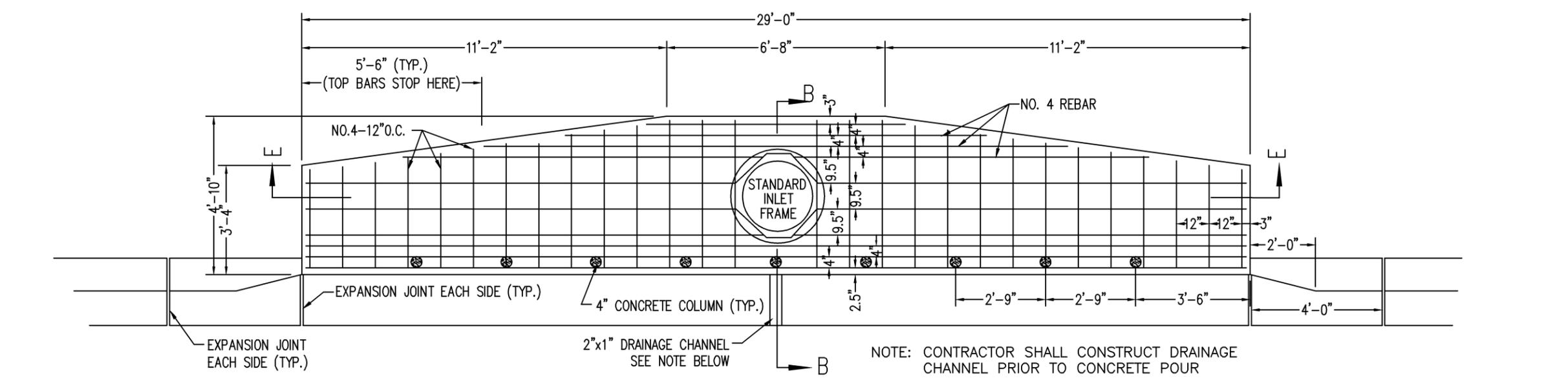
DESIGNED BY: D. FITZPATRICK
 DRAWN BY: A. BURGETT
 CHECKED BY: DWIGHT ALSTON
 DATE: 4/4/16

SCALE: 1" = 10'-0"

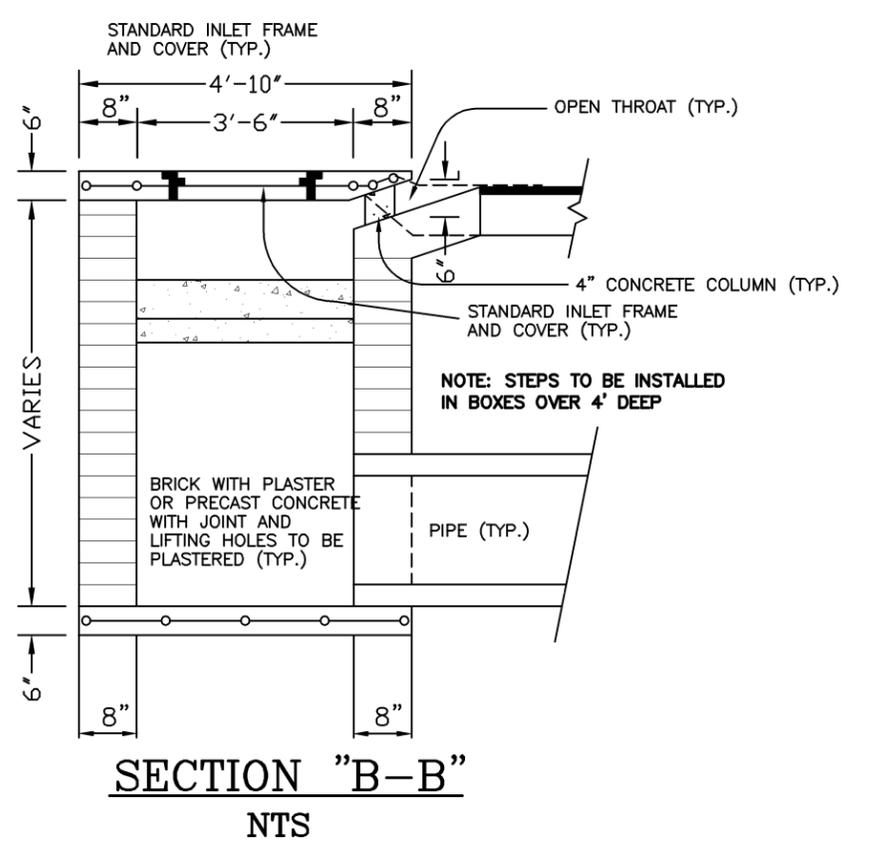
PROJECT NUMBER: ENGFLOOD0414-91H
 SURVEY NUMBER: L-5015
 SHEET: C18 of C25

PHASE REVIEW
 ORIGINATOR (RP) PRODUCTION CHECKING COMPLETE, READY FOR SUBMITTAL REVIEW (RP) CHECKER (RP) CHANGE INCORPORATION
 DATE
 VERIFICATION, CHECKER (CP) (Blue Highlighter)
 REMARK INCORPORATION (Blue Highlighter)
 ORIGINATOR VERIFICATION (Correct (Pink Highlighter))
 DATE
 DATE
 DATE

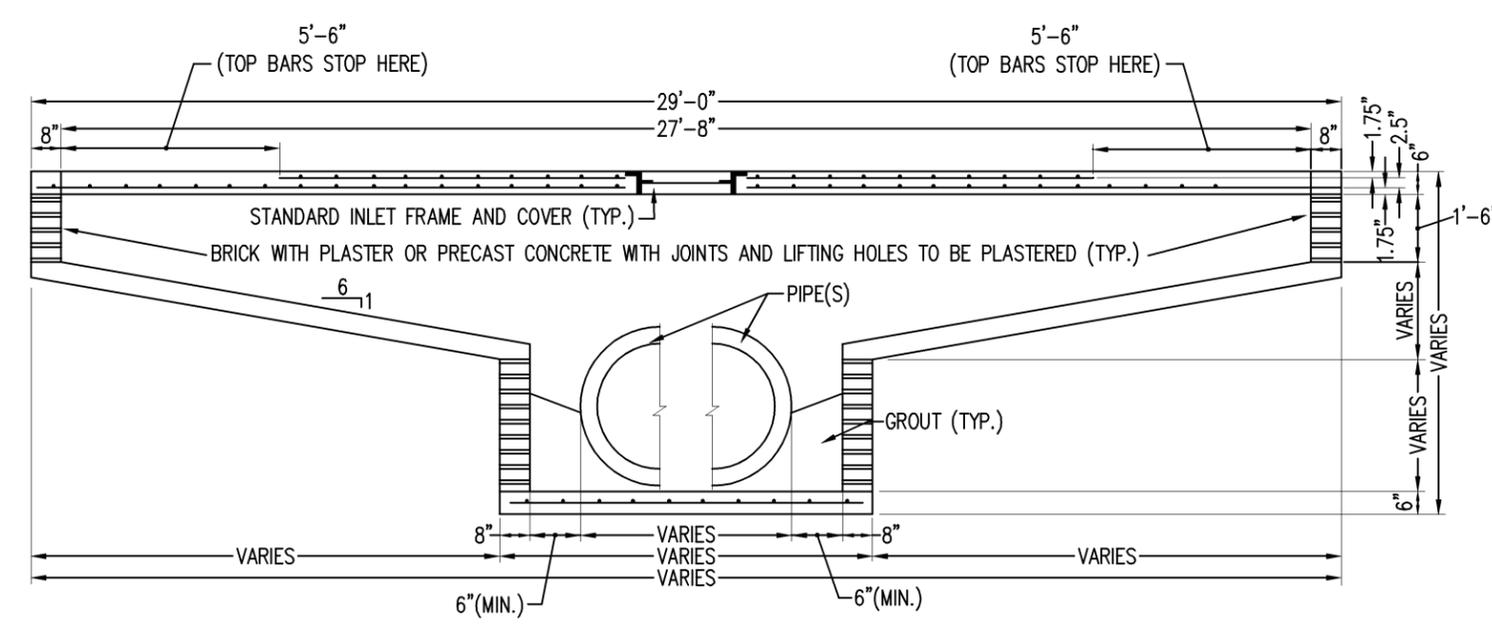
PHASE	REVIEW	DATE	ORIGINATOR (RP)	PRODUCTION CHECKING COMPLETE, READY FOR SUBMITTAL	DATE	ORIGINATOR (OR)	CORRECT (Green Highlighter) Change (Red Pen)	DATE	VERIFICATION, CHECKER (OR)	(Blue Highlighter)	DATE
SIGNATURE:									REMARK INCORPORATION	(Blue Highlighter)	DATE
									ORIGINATOR VERIFICATION	Correct (Pink Highlighter)	DATE



TYPE DOUBLE "A" DROP INLET DETAIL
N.T.S.



SECTION "B-B"
NTS



SECTION "E-E"
N.T.S.



CRESCENT LAKES OUTFALLS

DETAILS

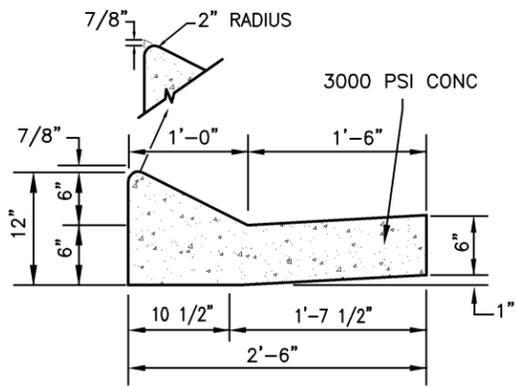
DAVID W. FITZPATRICK, P.E., P.A. FBPE CERTIFICATE OF AUTHORIZATION NO. 00008423 10250 N PALAFOX STREET PENSACOLA, FL 32504 PHONE: (850) 476-8877 FAX: (850) 476-7708		REG. T.A. REG. NO. 47818 SIGNATURE
DESIGNED BY: D. FITZPATRICK	CHECKED BY: D. FITZPATRICK	DATE: 4/4/16
DRAWN BY: A. BURGETT	PROJECT MANAGER: DWIGHT ALSTON	SHEET / TOTAL SHEETS: 44 / 151
DATE: NOVEMBER 2015	FIELD BOOK PAGES:	

NUMBER	REVISIONS	DATE	APPROVED BY
1	60% COMMENTS	12/7/15	
2	90% COMMENTS	1/16/16	
3	100% COMMENTS - CHANGED TO DROP CURB INLETS WHERE POSSIBLE OUTFALLS	2/9/16	
4	REMOVED SYSTEMS FROM LAKES AND BRIDGES SYSTEMS OUTSIDE OF LAKES	2/9/16	
5	REMOVED OUTFALL	4/4/16	

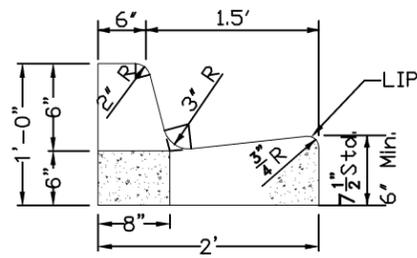
DRAWING NUMBER	15-102
PROJECT NUMBER	ENGFLOOD0414-91H
SURVEY NUMBER	L-5015
SHEET	C19 OF C25

100% SUBMITTAL
PLOT DATE: 4/4/16

PHASE	REVIEW	DATE	ORIGINATOR (RP)	PRODUCTION CHECKING COMPLETE, READY FOR SUBMITTAL REVIEW (RP)	DATE	ORIGINATOR (RP)	Correct (Green Highlighter) Change (Red Pen)	DATE	VERIFICATION, CHECKER (GT)	(Blue Highlighter)	DATE
SIGNATURE:			CHECKER (RP)	(Red Pen X-Out to Disagree or Remark)		CHECKER (GT)	REMARK INCORPORATION		INCORPORATION	(Blue Highlighter)	
			CHANGE INCORPORATION	(Yellow Highlighter)		ORIGINATOR VERIFICATION	Correct (Pink Highlighter)				

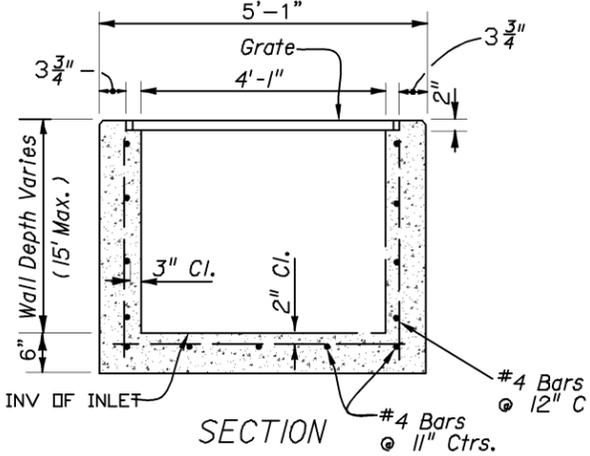
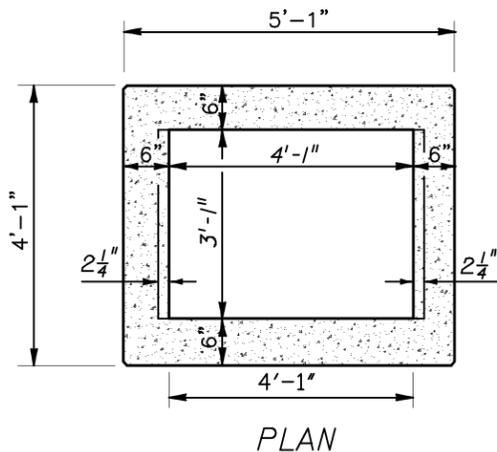


LAYBACK CURB & GUTTER
N.T.S.



FDOT TYPE F CURB & GUTTER
NTS

NOTE: 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.



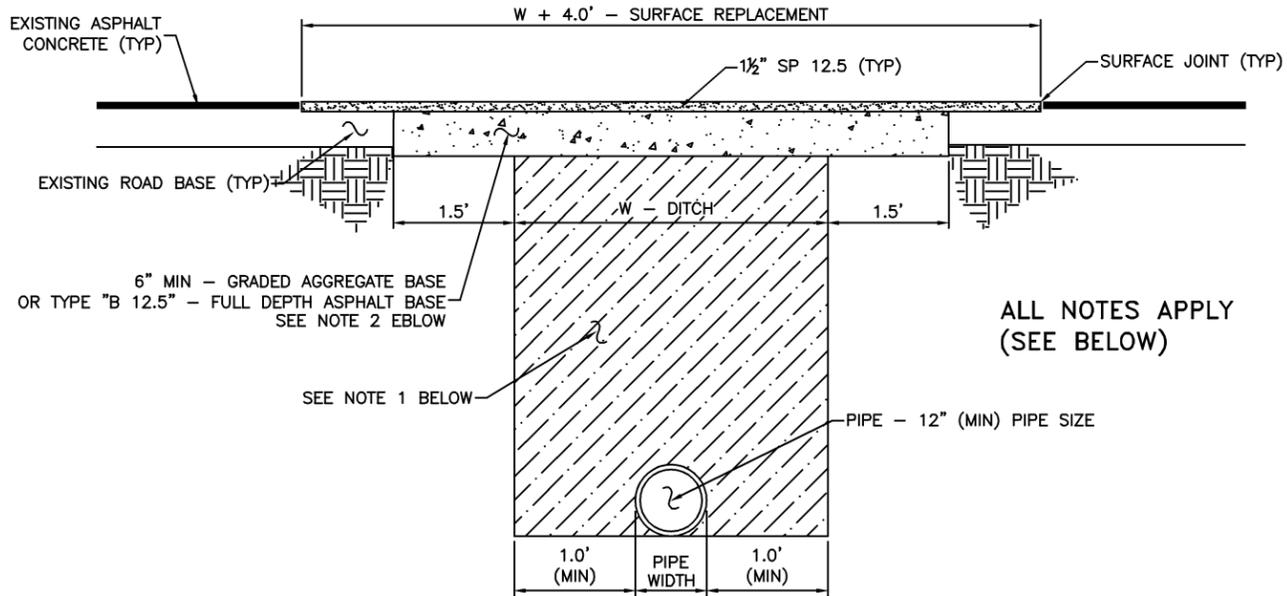
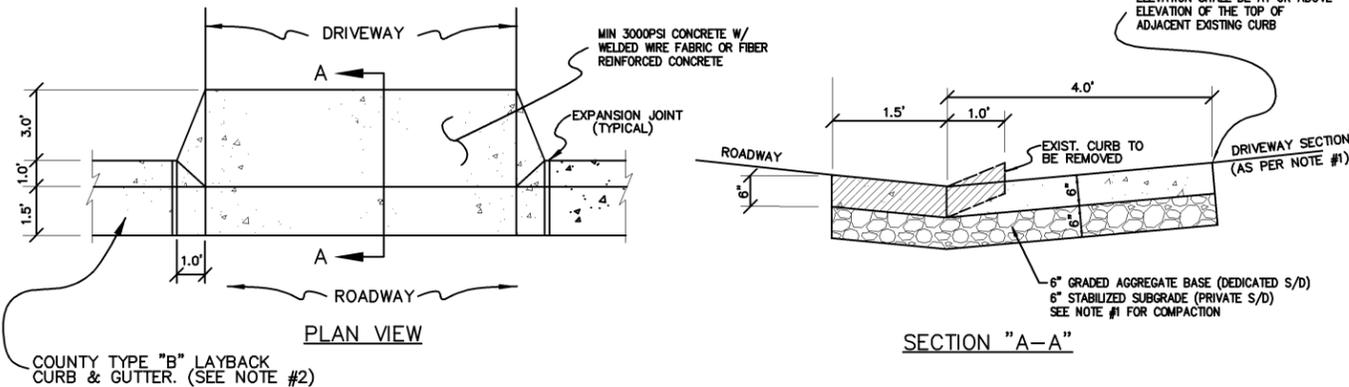
FDOT TYPE-D INLET DETAIL
NTS

Recommended Maximum Pipe Size:
3'-1" Wall - 24" Pipe
4'-1" Wall - 36" Pipe

NOTES:

1. DRIVEWAY SECTIONS ABUTTING CURB OR CURB CUT SHALL BE 6" CONCRETE WITH 6" STABILIZED SUBGRADE AND 4" TO 6" CONCRETE DRIVEWAY WITH 4" STABILIZED SUBGRADE ~ 95% COMPACTION (MODIFIED PROCTOR) WITH LBR 40 BETWEEN EDGE OF ROADWAY AND R/W LINE.
2. FOR OTHER TYPE CURBS, DIMENSIONS MAY BE ADJUSTED TO FIT. IF NECESSARY, REFER TO F.D.O.T. INDEX DETAILS.
3. DRIVEWAYS WITHIN PROPERTY BOUNDARY SHALL PROVIDE A MINIMUM OF 2 PARKING SPACES.
4. TYPICAL DRIVEWAY SECTIONS ARE TO BE 12' WIDE MINIMUM.

TYPE I CURB CUT DRIVEWAY FOR COUNTY TYPE "B" LAYBACK CURBS.



PAVED ROAD (LARGE PATCH) DETAIL
FOR PATCHES 24" WIDE OR GREATER

NOT TO SCALE

NOTES:

1. DIRT ROAD PATCH WORK SUB BASE MATERIAL SHALL BE PLACED IN NOT MORE THAN 8" LIFTS. EACH LAYER TO BE TAMPED TO A MINIMUM OF 40 LBR.
2. GRADED AGGREGATE BASE SHALL BE COMPACTED TO A MIN LBR 100.
3. ROAD CUTS SHALL BE MECHANICALLY SAW CUT TO FORM A SURFACE PAVEMENT JOINT AND TACK COATED ALONG THE FACE OF CUT JOINTS PRIOR TO ASPHALT PLACEMENT.
4. LONGITUDINAL ROAD CUTS THAT AFFECT ONE TRAVEL LANE SHALL REQUIRE MILLING AND REPAVING OF THE AFFECTED TRAVEL LANE 5.0' BEYOND THE CUT AND PATCHED WITH THE SAME BASE MATERIAL. LONGITUDINAL ROAD CUTS THAT AFFECT BOTH TRAVEL LANES SHALL REQUIRE MILLING AND REPAVING OF THE ENTIRE ROADWAY 5.0' BEYOND THE CUT AND PATCHED WITH THE SAME BASE MATERIAL.



CRESCENT LAKES OUTFALLS

DETAILS

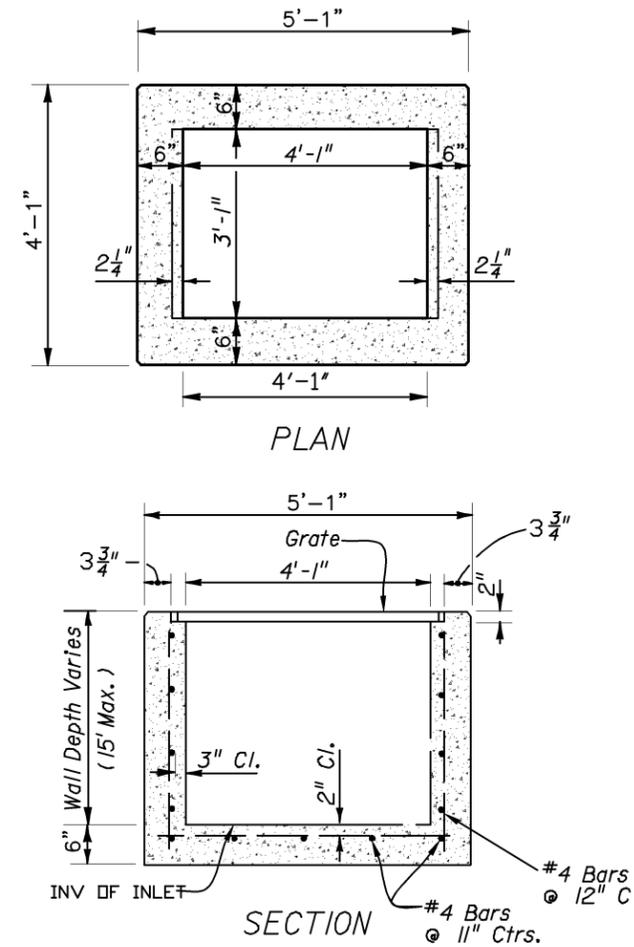
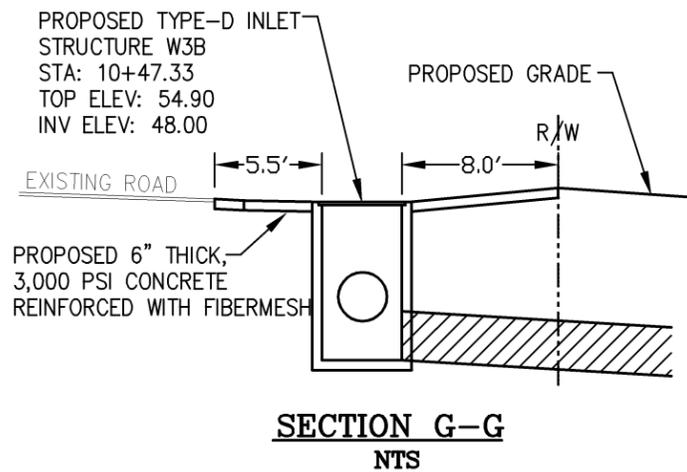
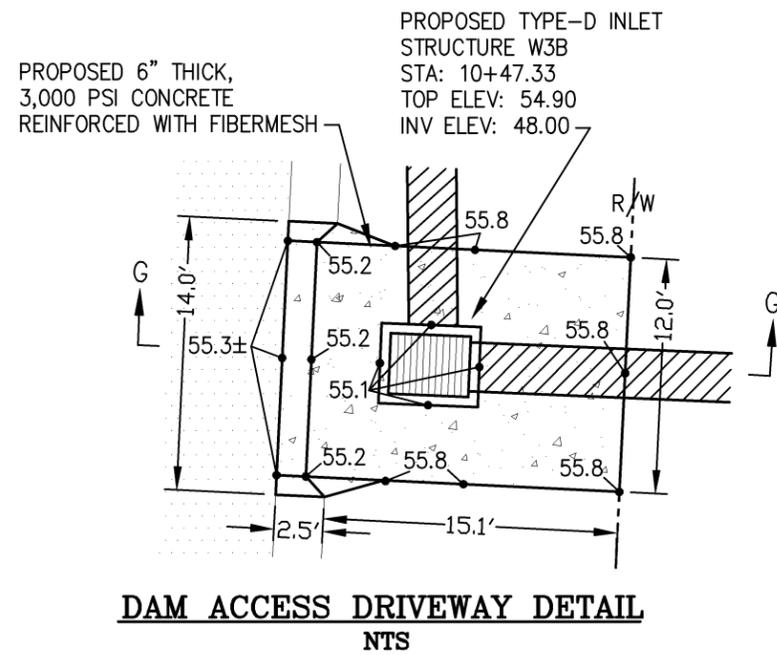
DAVID W. FITZPATRICK, P.E., P.A. FBPE CERTIFICATE OF AUTHORIZATION NO. 00008423 10250 N PALAFOX STREET PANAMA CITY, FL 32350 PHONE: (850) 918-8877 FAX: (850) 476-7708		REG. SEAL NO. 47818 DATE:
DESIGNED BY: D. FITZPATRICK DRAWN BY: A. BURGETT DATE: FEBRUARY 2015 FIELD BOOK PAGES:	CHECKED BY: D. FITZPATRICK DWIGHT ALSTON SIGNATURE:	SHEET RANGE: 44 OF 130

NUMBER	REVISIONS	DATE	APPROVED BY
1	60% COMMENTS	2/27/15	
2	90% COMMENTS	1/16/16	
3	100% COMMENTS - CHANGED TO POT CURB INLETS WHERE POSSIBLE (OUTFALLS)	2/9/16	
4	REMOVED COMMENTS - CHANGED TO POT CURB INLETS WHERE POSSIBLE (OUTFALLS)	2/29/16	
5	REMOVED CURB CUT	4/4/16	

DRAWING NUMBER	15-102
PROJECT NUMBER	ENGFLOOD0414-91H
SURVEY NUMBER	L-5015
SHEET	C20 OF C25

100% SUBMITTAL
PLOT DATE: 4/4/16

PHASE	REVIEW	DATE	ORIGINATOR (RP)	PRODUCTION CHECKING COMPLETE, READY FOR SUBMITTAL REVIEW (RP)	DATE	ORIGINATOR (OR)	CORRECT (Green Highlighter) Change (Red Pen)	DATE	VERIFICATION, CHECKER (OR)	(Blue Highlighter)	DATE
SIGNATURE:									REMARK INCORPORATION	(Blue Highlighter)	DATE
									ORIGINATOR VERIFICATION	Correct (Pink Highlighter)	DATE



Recommended Maximum Pipe Size:
3'-1" Wall - 24" Pipe
4'-1" Wall - 36" Pipe

100% SUBMITTAL
PLOT DATE: 4/4/16

CRESCENT LAKES OUTFALLS



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CHECKED BY: DWIGHT ALSTON

DATE: 4/18/16

REVISIONS	DATE	APPROVED BY
1 60% COMMENTS	2/27/15	
2 90% COMMENTS	1/16/16	
3 100% COMMENTS - CHANGED TO FOOT CURB INLETS WHERE POSSIBLE (OUTFALLS)	2/9/16	
4 REMOVED SYSTEMS OUTFALLS	2/29/16	
5 REMOVED OUTFALL	4/4/16	

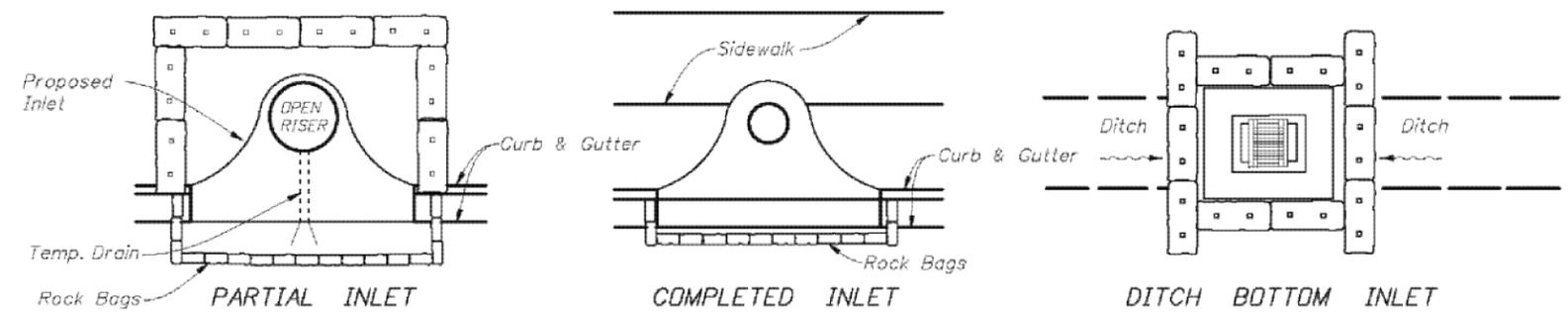
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PROJECT NUMBER: ENGFLOOD0414-91H
SURVEY NUMBER: L-5015
SHEET: C21 OF C25

DETAILS

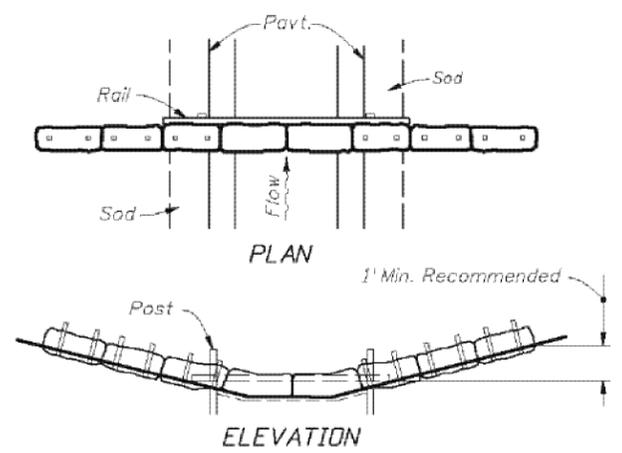
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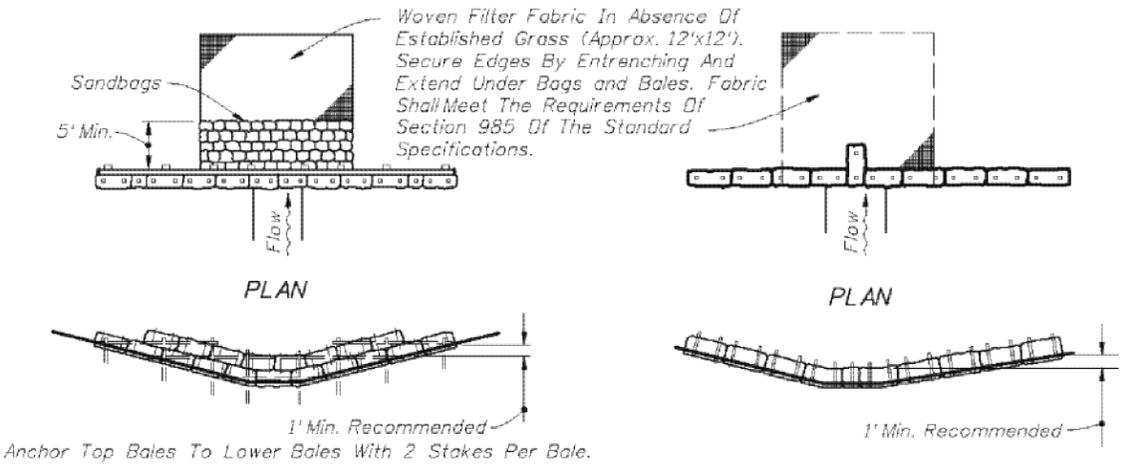
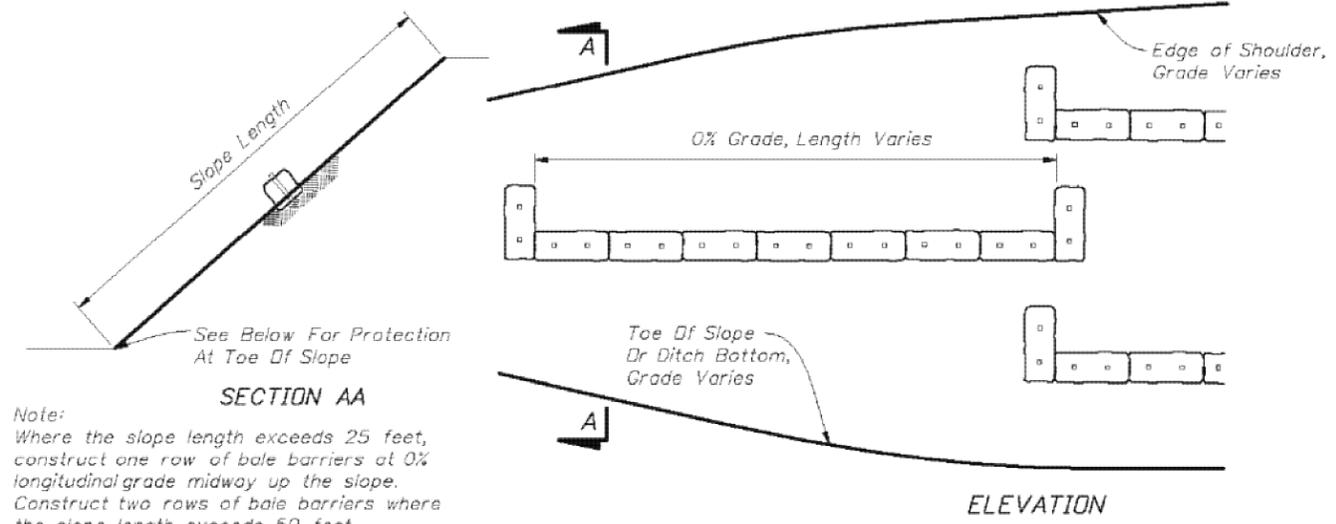
VERIFICATION, CHECKER (RP) REMARK INCORPORATION (Blue Highlighter) CORRECT (Pink Highlighter) DATE DATE DATE



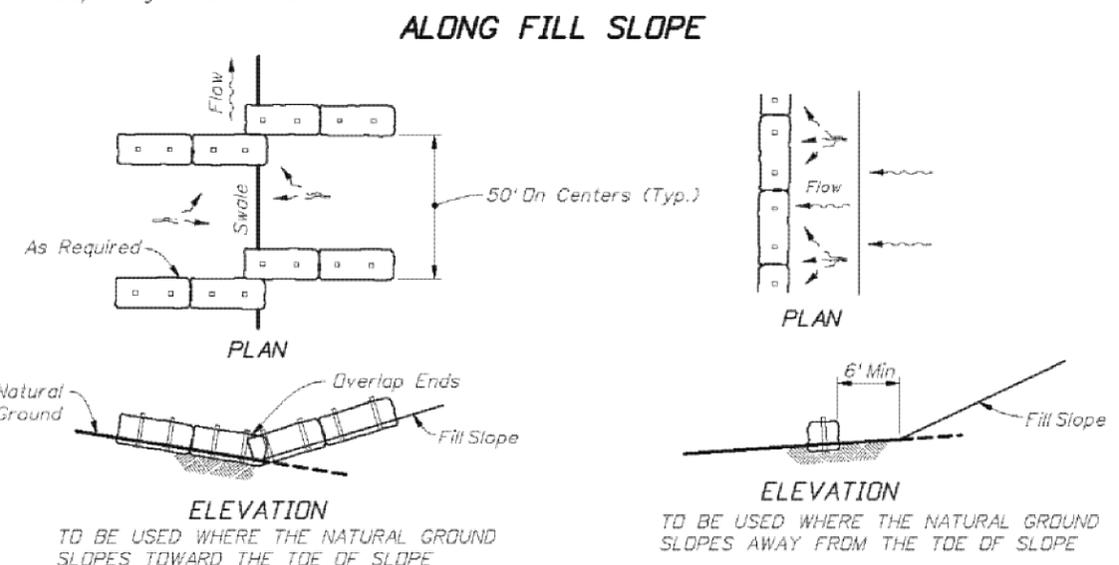
PROTECTION AROUND INLETS OR SIMILAR STRUCTURES



SYNTHETIC BALES OR BALE TYPE BARRIERS FOR PAVED DITCHES



SYNTHETIC BALES OR BALE TYPE BARRIERS FOR UNPAVED DITCHES



BARRIERS FOR FILL SLOPES

NOTES FOR SYNTHETIC BALES OR BALE TYPE BARRIERS

1. Type I and II Synthetic Barrier should be spaced in accordance with Chart 1, Sheet 1.
2. Bales shall be anchored with 2-1" x 2" (or 1" dia.) x 4' wood stakes. Stakes of other material or shape providing equivalent strength may be used if approved by the Engineer. Stakes other than wood shall be removed upon completion of the project.
3. Rails and posts shall be 2" x 4" wood. Other materials providing equivalent strength may be used if approved by the Engineer.
4. Adjacent bales shall be butted firmly together.
5. Where used in conjunction with silt fence, bales shall be placed on the upstream side of the fence.
6. Bales to be paid for under the contract unit price for Synthetic Bales, LF. The unit price shall include the cost of filter fabric for Type I and II Barriers. Sandbags shall be paid for under the unit price for Sandbagging, CY. Rock bags to be paid for under the contract unit price for Rock Bags, EA.

CRESCENT LAKES OUTFALLS



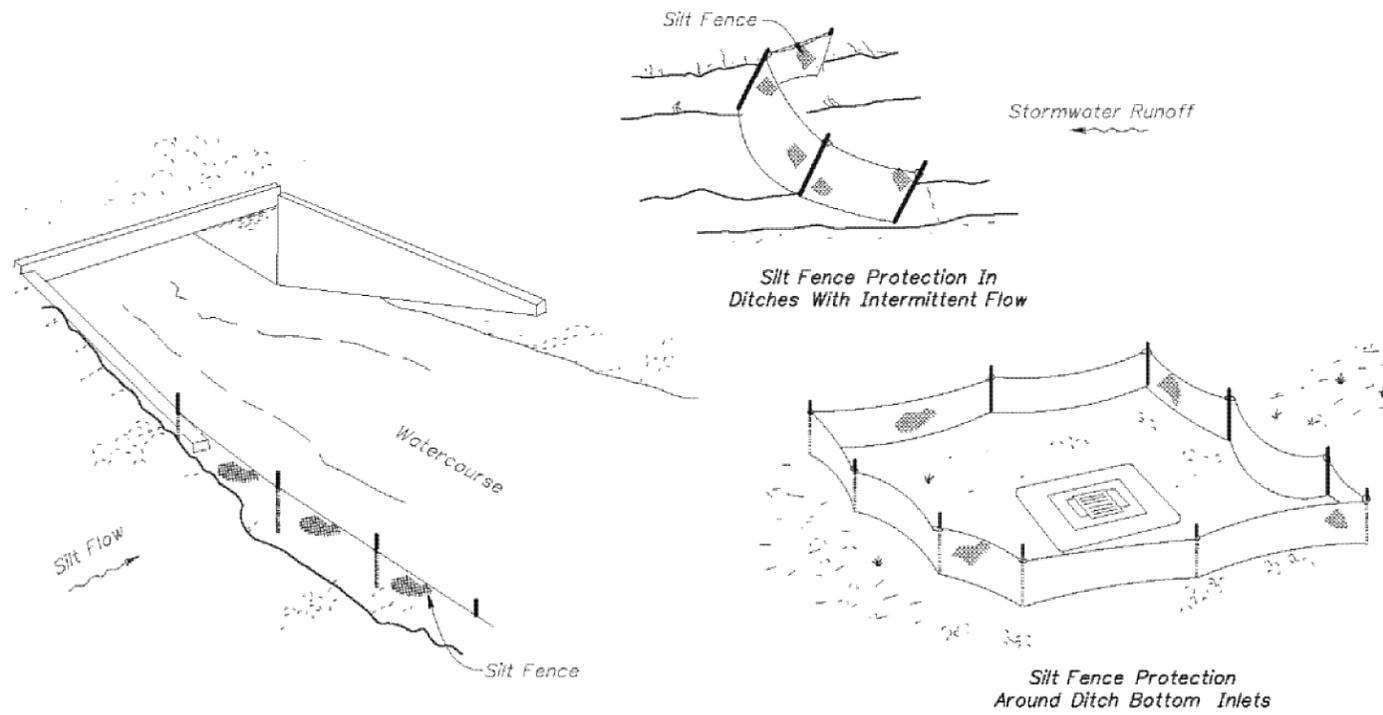
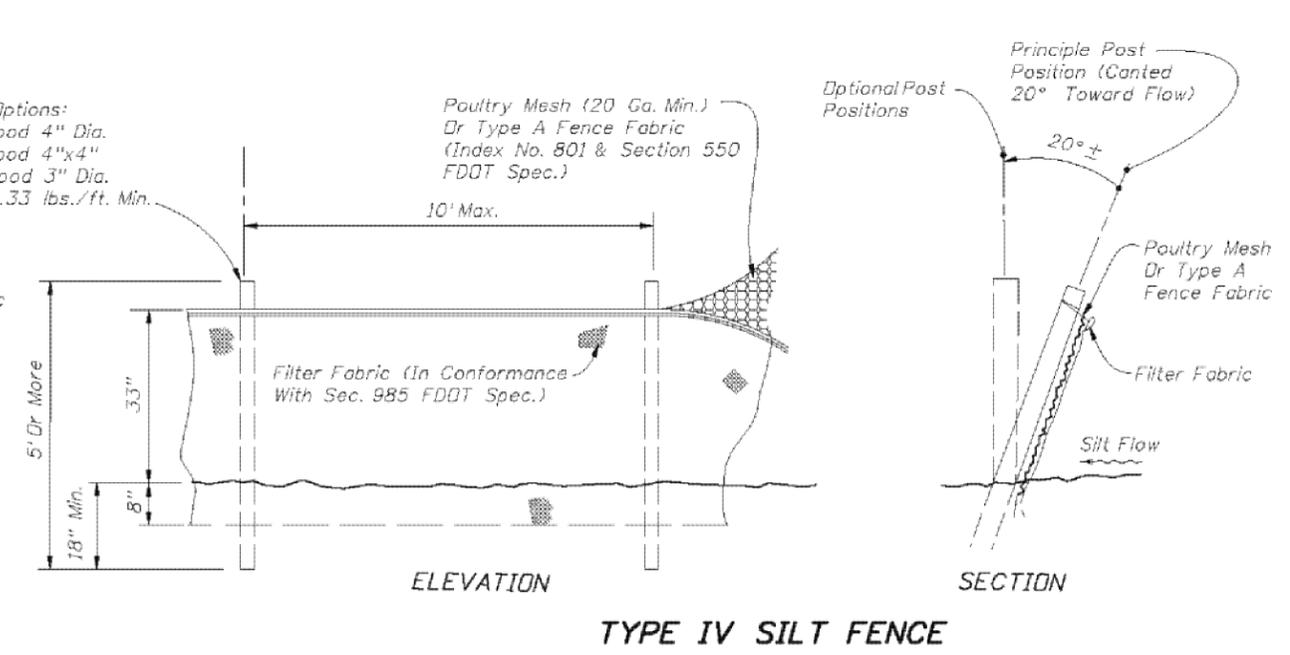
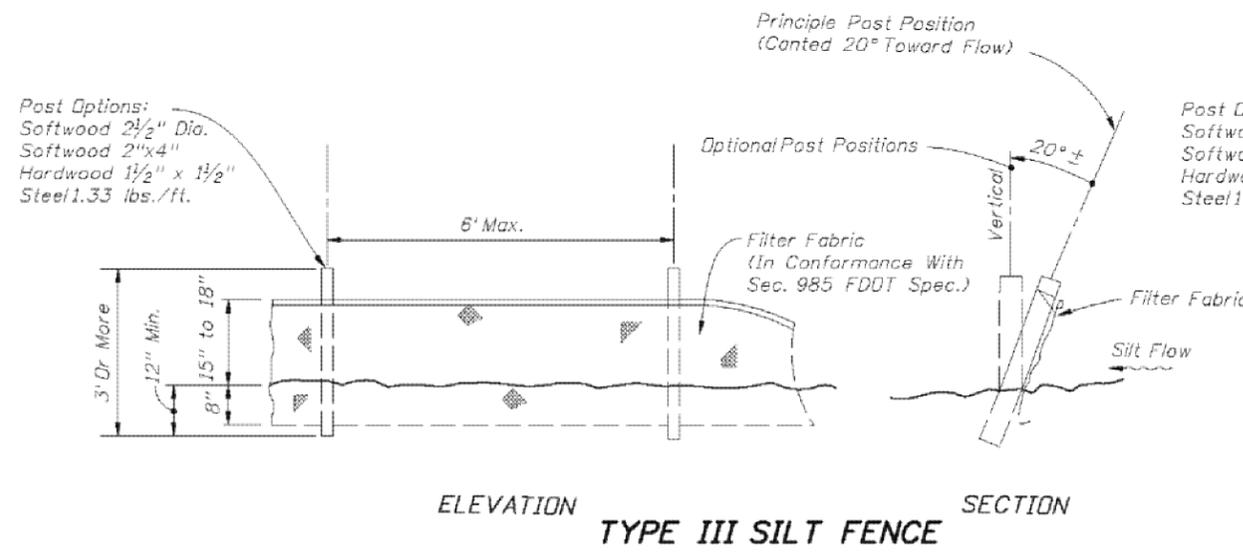
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DATE	APPROVED BY
2/27/15	
1/18/16	
2/9/16	
2/29/16	
4/4/16	
REVISIONS	
1	60% COMMENTS
2	90% COMMENTS
3	100% COMMENTS - CHANGED TO PAVT CURB INLETS WHERE POSSIBLE OUTFALLS
4	REMOVED SYSTEM OUTFALLS
5	REMOVED OUTFALL
DRAWING NUMBER	15-102
PROJECT NUMBER	ENGFLOOD0414-91H
SURVEY NUMBER	L-5015
SHEET	C23 of C25

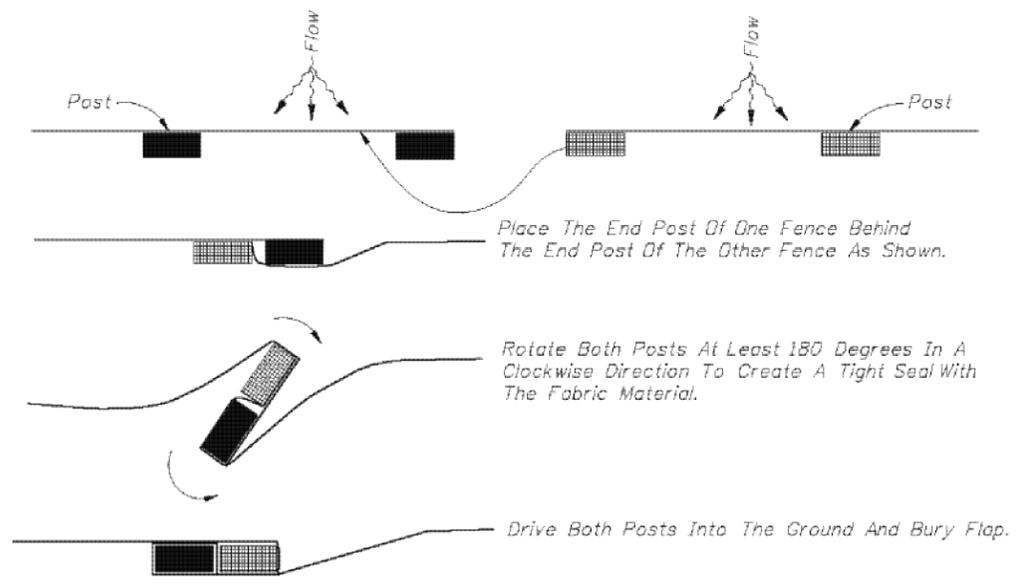
100% SUBMITTAL
 PLOT DATE: 4/4/16

DETAILS

PHASE	REVIEW	DATE	ORIGINATOR (RP)	PRODUCTION CHECKING COMPLETE, READY FOR SUBMITTAL	DATE	ORIGINATOR (OR)	Correct (Green Highlighter) Change (Red Pen)	DATE	VERIFICATION, CHECKER (OR)	(Blue Highlighter)	DATE
SIGNATURE:			CHECKER (RP)	(Red Pen X-Out to Disagree or Remark)	DATE	CHECKER (OR)	Correct (Pink Highlighter)	DATE	REMARK INCORPORATION	(Blue Highlighter)	DATE
			CHANGE INCORPORATION	(Yellow Highlighter)	DATE	ORIGINATOR VERIFICATION		DATE			



SILT FENCE APPLICATIONS



NOTES FOR SILT FENCES

1. Type III Silt Fence to be used at most locations. Where used in ditches, the spacing for Type III Silt fence shall be in accordance with Chart 1, Sheet 1.
2. Type IV Silt Fence to be used where large sediment loads are anticipated. Suggested use is where fill slope is 1:2 or steeper and length of slope exceeds 25 feet. Avoid use where the detained water may back into travel lanes or off the right of way.
3. Do not construct silt fences across permanent flowing watercourses. Silt fences are to be at upland locations and turbidity barriers used at permanent bodies of water.
4. Where used as slope protection, Silt Fence is to be constructed on 0% longitudinal grade to avoid channelizing runoff along the length of the fence.
5. Silt Fence to be paid for under the contract unit price for Staked Silt Fence, (LF).



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 DRAWN BY: A. BURGETT
 DATE: OCTOBER 2015
 FIELD BOOK: PAGES

CHECKED BY: D. FITZPATRICK
 PROJECT MANAGER: DWIGHT ALSTIN
 DATE: 11/18/15
 SIGNATURE: [Signature]

REG. NO. 47818
 BIRTHDAY: 4/18/30

NUMBER	REVISIONS	DATE	APPROVED BY
1	60% COMMENTS	12/17/15	
2	90% COMMENTS	1/16/16	
3	100% COMMENTS - CHANGED TO POST CURB INLETS WHERE POSSIBLE OUTFALLS	2/9/16	
4	100% COMMENTS - CHANGED TO 12" GALVANIZED & BRIMMED STEEL OUTFALLS	2/29/16	
5	REMOVED OUTFALL	4/4/16	

DRAWING NUMBER: 15-102
 PROJECT NUMBER: ENGFLOOD0414-91H
 SURVEY NUMBER: L-5015
 SHEET: C24 OF C25

PHASE REVIEW SIGNATURE: DATE 6/16/2015 10:46:45 AM

ORIGINATOR (RP) CHECKER (RP) DATE 6/16/2015

PRODUCTION CHECKING COMPLETE, READY FOR SUBMITTAL REVIEW (RP) CHECKER (RP) DATE 6/16/2015

ORIGINATOR (OR) CHECKER (Green Highlighter) Change (Red Pen) DATE 6/16/2015

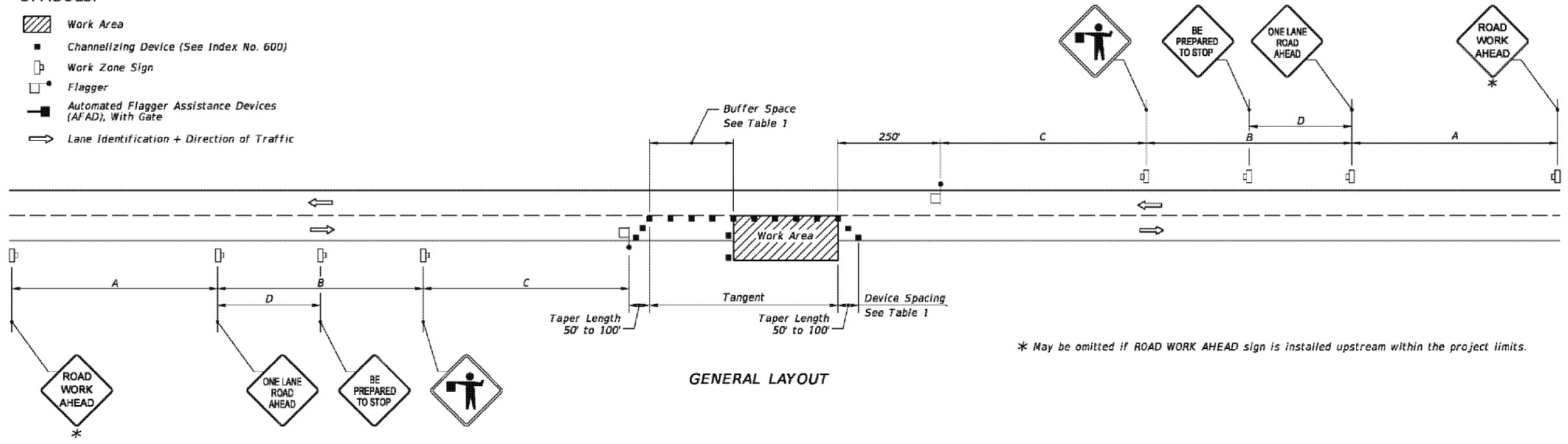
CHANGE INCORPORATION (Yellow Highlighter) DATE 6/16/2015

ORIGINATOR VERIFICATION (Correct) DATE 6/16/2015

REMARK INCORPORATION (Blue Highlighter) DATE 6/16/2015

VERIFICATION, CHECKER (OR) (Blue Highlighter) DATE 6/16/2015

- SYMBOLS:**
- Work Area
 - Channelizing Device (See Index No. 600)
 - Work Zone Sign
 - Flagger
 - Automated Flagger Assistance Devices (AFAD), With Gate
 - Lane Identification + Direction of Traffic



* May be omitted if ROAD WORK AHEAD sign is installed upstream within the project limits.

GENERAL NOTES:

1. Special Conditions may be required in accordance with these notes and the following sheets.
2. If the Work Area encroaches on the Centerline, use the Layout for Temporary Lane Shift to Shoulder on Sheet 2 only if the Existing Paved Shoulder width is sufficient to provide for an 11' lane between the Work Area and the Edge of Existing Paved Shoulder. Reduce the posted speed when appropriate.
3. Temporary Raised Rumble Strips:
 - a. Use when both of the following conditions are met concurrently:
 - i. Existing Posted Speed is 50 mph or greater;
 - ii. Work duration is greater than 60 minutes.
 - b. Use a consistent Strip color throughout the work zone.
 - c. Place each Rumble Strip Set transversely across the lane at locations shown.
 - d. Use Option 1 or Option 2 as shown on Sheet 2. Use only one option throughout work zone.
4. Additional one-way control may be provided by the following means:
 - a. Flag-carrying vehicle;
 - b. Official vehicle;
 - c. Pilot vehicles;
 - d. Traffic signals.

When flaggers are the sole means of one-way control, the flaggers must be in sight of each other or in direct communication at all times.
5. When a side road intersects the highway within the TTC zone, place additional TTC devices in accordance with other applicable TCZ Indexes.
6. The two channelizing devices directly in front of the work area may be omitted provided vehicles in the work area have high-intensity rotating, flashing, oscillating, or strobe light operating.
7. When Buffer Space cannot be attained due to geometric constraints, use the greatest attainable length, not less than 200 ft.
8. Railroad Crossings:
 - a. If an active railroad crossing is located closer to the Work Area than the queue length plus 300 feet, extend the Buffer Space as shown on Sheet 2.
 - b. If the queuing of vehicles across an active railroad crossing cannot be avoided, provide a uniformed traffic control officer or flagger at the highway-rail grade crossing to prevent vehicles from stopping within the highway-rail grade crossing, even if automatic train warning devices are in place.
9. ROAD WORK AHEAD and the BE PREPARED TO STOP signs may be omitted if all of the following conditions are met:
 - a. Work operations are 60 minutes or less.
 - b. Speed limit is 45 mph or less.
 - c. There are no sight obstructions to vehicles approaching the work area for a distance equal to the Buffer Space shown in Table 1.
 - d. Vehicles in the work area have high-intensity, rotating, flashing, oscillating, or strobe lights operating.
 - e. Volume and complexity of the roadway has been considered.
 - f. If a railroad crossing is present, vehicles will not queue across rail tracks.
 - g. AFADs are not in use.
10. See Index 600 for general TCZ requirements and additional information.
11. Automated Flagger Assistance Devices (AFADs) may be used in accordance with the Notes on Sheet 3.

TABLE 1

Posted Speed	DEVICE SPACING				Distance Between Signs				Buffer Space
	Maximum Spacing of Cones or Tubular Markers		Maximum Spacing of Type I or Type II Barricades/Panels/Drums		A	B	C	D	
	On a Taper	On a Tangent	On a Taper	On a Tangent					
25	20'	50'	20'	50'	200'	200'	200'	100'	155'
30	20'	50'	20'	50'	200'	200'	200'	100'	200'
35	20'	50'	20'	50'	200'	200'	200'	100'	250'
40	20'	50'	20'	50'	200'	200'	200'	100'	305'
45	20'	50'	20'	50'	350'	350'	350'	175'	360'
50	20'	50'	20'	100'	500'	500'	500'	250'	425'
55	20'	50'	20'	100'	2640'	1500'	1000'	500'	495'
60	20'	50'	20'	100'	2640'	1500'	1000'	500'	570'
65	20'	50'	20'	100'	2640'	1500'	1000'	500'	645'
70	20'	50'	20'	100'	2640'	1500'	1000'	500'	730'

CONDITIONS

WHERE ANY VEHICLE, EQUIPMENT, WORKERS OR THEIR ACTIVITIES ENCRUCH THE AREA BETWEEN THE CENTERLINE AND A LINE 2' OUTSIDE THE EDGE OF TRAVEL WAY.

LAST REVISION 07/01/15	DESCRIPTION:	FDOT 2016 DESIGN STANDARDS	TWO-LANE, TWO-WAY, WORK WITHIN THE TRAVEL WAY	INDEX NO. 603	SHEET NO. 1 of 3
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CRESCENT LAKES OUTFALLS

MOT

ESCALABA COUNTY, FLORIDA

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 FIELD BOOK PAGES:

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 PROJECT MANAGER: DWIGHT AUSTIN
 DATE: 11/17/15
 SIGNATURE: 44118/15/1508

DATE: 12/17/15
 DATE: 1/18/16
 DATE: 2/9/16
 DATE: 2/29/16
 DATE: 4/4/16

REVISIONS:

1	60% COMMENTS	
2	90% COMMENTS	
3	100% COMMENTS - CHANGED TO POST CURB INLETS WHERE POSSIBLE (OUTFALLS)	
4	ADDED TO THE SYSTEM (OUTFALLS)	
5	REMOVED OUTFALL	

DRAWING NUMBER: 15-102
 PROJECT NUMBER: ENGFLOOD0414-91H
 SURVEY NUMBER: L-5015
 SHEET: C25 OF C25