

INDIAN RIVER COUNTY BOARD OF COUNTY COMMISSIONERS

CONTRACT PLANS

FDOT FPID 436416-1-54-01

INDIAN RIVER COUNTY (88)
PROJECT #1325

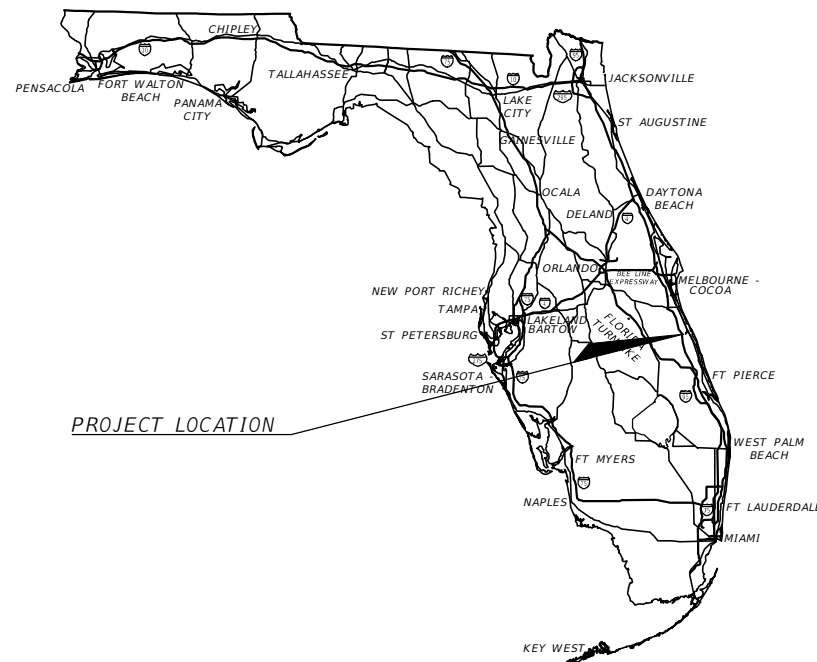
58th AVENUE
(57th STREET TO 85TH STREET)
FULL DEPTH RECLAMATION PROJECT

COMPONENTS OF CONTRACT PLANS SET:

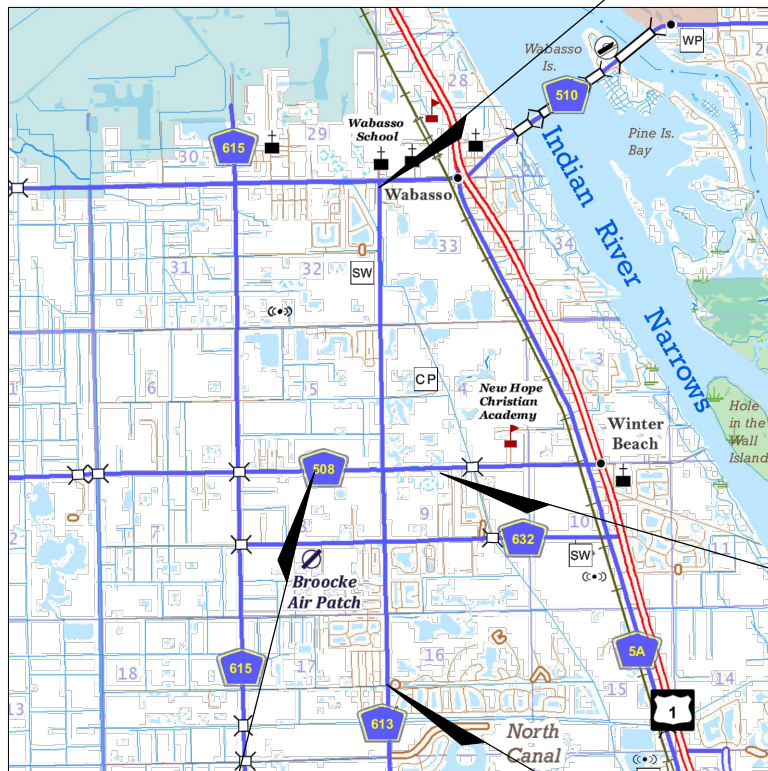
- ROADWAY PLANS: 1-188
- SIGNING AND PAVEMENT MARKING PLANS: S1-S46
- SIGNALIZATION PLANS: T1-T9
- 20 - INCH WATERMAIN RELOCATION UCP#4144

INDEX OF ROADWAY PLANS

SHEET NO.	SHEET DESCRIPTION
1	KEY SHEET
2	SIGNATURE SHEET
3-4	SUMMARY OF QUANTITIES AND PAY ITEMS
5-7	TYPICAL SECTIONS
8-19	TYPICAL DETAILS
20	GENERAL NOTES
21-25	PROJECT LAYOUT SHEETS - CONTROL POINTS
26-42	STORM WATER POLLUTION PREVENTION PLANS
43-44	STORM WATER POLLUTION PREVENTION PLANS
45-78	58TH AVENUE PLAN & PROFILE SHEETS
79-82	69TH STREET PLAN & PROFILE SHEETS
83-99	DETAILED INTERSECTION PLAN SHEETS
100-169	58TH AVENUE SECTIONS
170-179	69TH STREET SECTIONS
180-188	DRAINAGE PLAN AND PROFILES



PROJECT LOCATION



Ending of Project
County Road 613
58th Avenue (Kings Highway)
STA. 593+03



Ending of Turn Lane Project
County Road 508
69th Street
STA. 31+15.88

Beginning of Turn Lane Project
County Road 508
69th Street
STA. 12+74.10

Beginning of Project
County Road 613
58th Avenue (Kings Highway)
STA. 418+76



ELEVATIONS SHOWN HEREIN REFER TO THE NORTH AMERICAN VERTICAL DATUM 1988.

EXISTING CONTOURS SHOWN AT 1.0 FOOT INTERVAL
PROPOSED CONTOURS SHOWN AT 0.5 FOOT INTERVAL

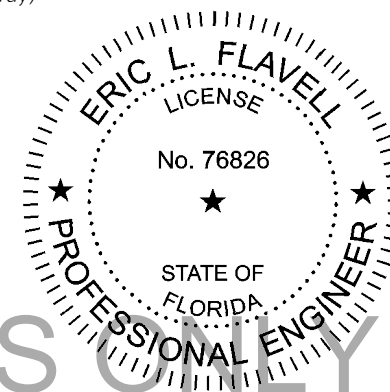
58th AVENUE L= 17,678.53'
69th STREET L= 1,841.78'

GOVERNING DESIGN STANDARDS:
Florida Department of Transportation, FY2017-18 Design Standards eBook (DSeB) and applicable Design Standards Revisions (DSRs) at the following website:
<http://www.fdot.gov/roadway/DesignStandards/Standards.shtm>

APPLICABLE DSRs:

GOVERNING STANDARD SPECIFICATIONS:
Florida Department of Transportation, JAN, 2017 Standard Specifications for Road and Bridge Construction at the following website:
<http://www.fdot.gov/programmanagement/Implemented/SpecBooks>

PREPARED FOR THE BOARD OF COUNTY COMMISSIONERS
INDIAN RIVER COUNTY, FLORIDA
SUSAN ADAMS, CHAIRMAN
JOSEPH E. FLESCHER, VICE-CHARIMAN
COMMISSIONER BOB SOLARI
COMMISSIONER PETER D. O'BRYAN
COMMISSIONER TIM ZORC
JASON E. BROWN, COUNTY ADMINISTRATOR
JEFFREY R. SMITH, CLERK OF COURT AND COMPTROLLER
DYLAN REINGOLD, COUNTY ATTORNEY
RICHARD B. SZPYRKA, P.E., PUBLIC WORKS DIRECTOR
JAMES W. ENNIS, P.E., PMP, ASSISTANT PUBLIC WORKS DIRECTOR

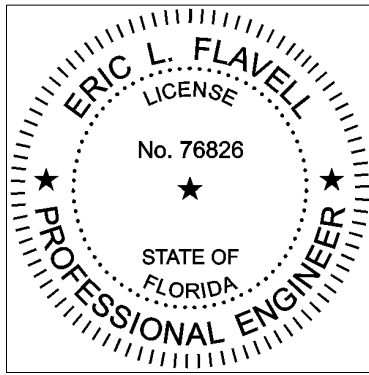


Civil Engineer
ENGINEER OF RECORD:

ERIC L. FLAVELL P.E.
P.E. NO.: 76826
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4450 W. Eau Gallie Blvd., Suite 232
Melbourne, Florida 32934
CONTRACT NO.: 436316-1
VENDOR NO.:
CERTIFICATE OF AUTHORIZATION NO.: 30462

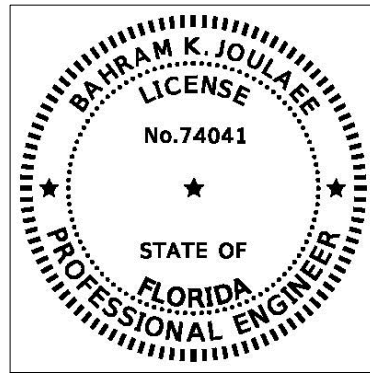
CONSTRUCTION CONTRACT NO.	FISCAL YEAR	SHEET NO.
IRC-1325	17	1

FOR BIDDING PURPOSES ONLY



**ERIC L.
FLAVELL**

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SUITE 232
MELBOURNE FLORIDA, 32934
OFFICE: 321-255-5434
DIRECT: 321-270-8993



THIS ITEM HAS BEEN ELECTRONICALLY SIGNED AND SEALED BY BAHRAM K. JOULAEI, P.E. ON DATE SHOWN USING A DIGITAL SIGNATURE

LASSITER TRANSPORTATION GROUP, INC.
D/B/A LTG, INC.
1450 WEST GRANADA BOULEVARD, SUITE 2
ORMOND BEACH FL, 32174
CERTIFICATE OF AUTHORIZATION NO. 9227
BAHRAM K. JOULAEI No. 74041

INDEX OF ROADWAY PLANS

SHEET NO.	SHEET DESCRIPTION
1	KEY SHEET
2	SIGNATURE SHEET
3-4	SUMMARY OF QUANTITIES AND PAY ITEMS
5-7	TYPICAL SECTIONS
8-15	TYPICAL DETAILS
16	GENERAL NOTES
17-21	PROJECT LAYOUT SHEETS - CONTROL POINTS
22-38	STORM WATER POLLUTION PREVENTION PLANS
39-40	STORM WATER POLLUTION PREVENTION PLANS
41-74	58TH AVENUE PLAN & PROFILE SHEETS
75-78	69TH STREET PLAN & PROFILE SHEETS
79-95	DETAILED INTERSECTION PLAN SHEETS
96-165	58TH AVENUE SECTIONS
166-175	69TH STREET SECTIONS
176-184	DRAINAGE PLAN AND PROFILES

INDEX OF 20TH AVE WATERMAIN RELOCATION

SHEET NO.	SHEET DESCRIPTION
C0.0	COVER SHEET
C0.1	SUMMARY OF QUANTITIES
C1.0	SITE PLAN
C1.1	WATER MAIN PLAN & PROFILE
C1.2	WATER MAIN PLAN & PROFILE
C2.0	TEMPORARY ROAD WIDENING PLAN
C2.1	TEMPORARY ROAD SECTIONS & DETAILS
D1.0	DETAILS
D1.1	DETAILS

PRINTED COPIES OF THE DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ANY ELECTRONIC COPIES.

THE ABOVE NAMED PROFESSIONAL ENGINEER SHALL BE RESPONSIBLE FOR THE FOLLOWING SHEETS IN ACCORDANCE WITH RULE 61G15-23.003, F.A.C.

PLAN INDEX

INDEX OF SIGNALIZATION PLANS

SHEET NO.	SHEET DESCRIPTION
T-1	KEY SHEET
T-2	TABULATION OF QUANTITIES
T-3 THRU T-6	GENERAL NOTES
T-7	SIGNALIZATION PLAN
T-8	STRAIN POLE SCHEDULE
T-9	GUIDE SIGN WORKSHEET

INDEX OF SIGNING AND PAVEMENT MARKING PLANS

SHEET NO.	SHEET DESCRIPTION
S-1	KEY SHEET
S-2 THRU S-7	TABULATION OF QUANTITIES
S-8	GENERAL NOTES
S-9 THRU S-42	SIGN & PAVEMENT MARKINGS PLANS - 58TH AVE
S-43 THRU S-46	SIGN & PAVEMENT MARKINGS PLANS - 69TH ST

REVISIONS

DATE	DESCRIPTION	DATE	DESCRIPTION
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ERIC L. FLAVELL, P.E.
P.E. LICENSE NUMBER 76826
BOWMAN CONSULTING GROUP
4450 W. EAU GALLIE BLVD.
MELBOURNE, FL 32934
CERTIFICATE OF AUTHORIZATION 30462

INDIAN RIVER COUNTY
DEPARTMENT OF PUBLIC WORKS/ENGINEERING DIVISION
ROAD NO. COUNTY FINANCIAL PROJECT ID
CR-613 INDIAN RIVER IRC: 1325
58th AVE FD01:436416-1-54-01

SHEET NO.

2

FOR BIDDING PURPOSES ONLY

SIGNATURE SHEET

Item No.	Description	Unit	Quantity	Unit Price	Amount
101-1	MOBILIZATION	LS	1		
102-1	MAINTENANCE OF TRAFFIC	LS	1		
104-1	PREVENTION, CONTROL AND ABATEMENT OF EROSION AND WATER POLLUTION	LS	1		
110-1-1	CLEARING & GRUBBING	LS	1		
110-7-1	MAILBOX RELOCATION	EA	37		
120-1	REGULAR EXCAVATION	CY	6,700		
120-1A	EXCAVATION OF EXISTING ASPHALT AND BASE	SF	5,000		
120-2	BORROW EXCAVATION (RECLAIMED FDR)	CY	6,000		
120-6	EMBANKMENT	CY	4,150		
121-70	FLOWABLE FILL (NON-EXCAVATABLE)	CY	200		
160-4	TYPE B STABILIZATION, 3' SHOULDER & WIDENING (LBR 40), 12"	SY	25,000		
285-709	OPTIONAL BASE, GROUP 8 (LBR 100) LIME ROCK	CY	1,400		
283-71	RECLAIMED ASPHALT BASE COURSE (FULL DEPTH RECLAMATION), 12"	SY	72,000		
300-1	ASPHALT EMULSION TYPE CSS-1h - PAYMENT WILL BE BASED ON ACTUAL QUANTITY	GAL	260,000		
300-2	CEMENT TYPE 1 OR TYPE 2 - PAYMENT WILL BE BASED ON ACTUAL QUANTITY	TN	1,400		
327-70-6	MILL EXISTING ASPHALT (1.5" AVERAGE DEPTH)	SY	3,000		
334-1-13A	TYPE SP - 12.5 ASPHALTIC CONCRETE (2" THICK)	SY	86,000		
334-1-13B	TYPE SP - 12.5, ASPHALTIC CONCRETE OVERBUILD (VARIABLE THICKNESS)	TN	900		
334-1-13C	TYPE SP - 12.5, ASPHALTIC CONCRETE DRIVEWAY, (1-1/2") REMOVE AND REPLACE	SY	400		
337-7-82	TYPE F.C. - 9.5 ASPHALTIC CONCRETE (1" THICK)	SY	89,000		
400-4-2A	CONCRETE HEADWALL (INCLUDE STEEL)	EA	1		
425-2-14	MANHOLE ALT A, 4', P-7, <10'	EA	3		
425-3-81	JUNCTION BOX, DRAINAGE, SPECIAL, <10, 6"x10"	EA	1		
425-3-81A	JUNCTION STRUCTURE, TYPE H, <10'	EA	1		
425-5	MANHOLE ADJUSTMENT	EA	4		
425-5A	VAULT ADJUSTMENT	EA	9		
425-6	VALVE BOX ADJUSTMENT	EA	79		
425-6A	FIRE HYDRANT ADJUSTMENT	EA	4		
425-6B	FIRE HYDRANT RELOCATION	EA	6		
425-15-21	DITCH BOTTOM INLET, TYPE C, <10'	EA	3		
430-175-112	PIPE CULVERT, RCP, ROUND, 12", S/CD	LF	55		
430-175-112A	PIPE CULVERT, CMP, ROUND, 12", S/CD	LF	20		
430-175-115A	PIPE CULVERT, CMP, ROUND, 15", S/CD	LF	185		
430-175-118	PIPE CULVERT, RCP, ELLIPTICAL, 23"x14", S/CD	LF	84		
430-175-124	PIPE CULVERT, RCP, ROUND, 24", S/CD	LF	327		
430-175-124A	PIPE CULVERT, CMP, ROUND, 24", S/CD	LF	10		
430-175-148	PIPE CULVERT, RCP, ROUND, 48" S/CD	LF	155		
430-175-152	PIPE CULVERT, RCP, ROUND, 52" S/CD (FIELD VERIFY)	LF	10		
430-175-276	PIPE CULVERT, RCP, ELLIPTICAL, 76" x 48" S/CD (FIELD VERIFY)	LF	10		
430-982-121	MITERED END SECTION, RCP, ROUND, 12"	EA	2		
430-982-123	MITERED END SECTION, CMP, ROUND, 15"	EA	6		
430-982-129	MITERED END SECTION, CMP, ROUND, 24"	EA	1		
430-982-129A	MITERED END SECTION, RCP, ROUND, 24"	EA	4		
430-982-625	MITERED END SECTION, RCP, ELLIPTICAL, 23"x14"	EA	4		
520-1-10	CONCRETE CURB & GUTTER, TYPE F	LF	350		
0520-2-1	CONCRETE CURB, TYPE A	LF	40		
522-1	CONCRETE, 6" THICK, FIBER REINFORCED SIDEWALK, REMOVE & REPLACE	SY	70		

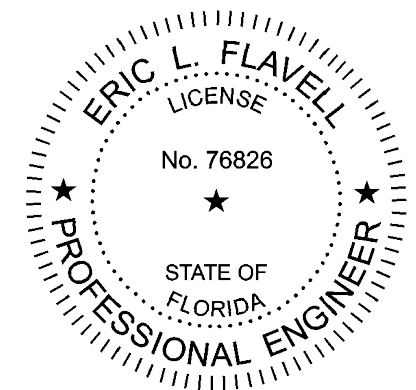
Item No.	Description	Unit	Quantity	Unit Price	Amount
522-1A	HC RAMP, 6" THICK, REMOVE AND REPLACE	SF	240		
522-2	DRIVEWAY CONCRETE, 6" THICK, REMOVE AND REPLACE	SF	1,550		
522-4	BUS SHELTER PAD - CONCRETE, 8", REINFORCED	SF	320		
527-2	DETECTABLE WARNING STRIPS	SF	265		
530-3-3A	RIP RAP, RUBBLE, BANK AND SHORE	CY	60		
536-1-1A	GUARDRAIL, LONG STEEL POSTS WITH A.C. PAVEMENT	LF	1,890		
536-85-24	GUARDRAIL END ANCHORAGE ASSEMBLY PARALLEL WITH A.C. PAVEMENT	EA	6		
550-10-231	FENCE, TYPE B WITH BARBED WIRE	LF	75		
570-1-2	PERFORMANCE TURF - SOD (BAHIA, OR MATCH EXIST)	SY	44,500		
630-2-11A	CONDUIT (INCLUDES 2-2" DIA HDPE), F&I, OPEN TRENCH	LF	15,000		
630-2-12A	CONDUIT (INCLUDES 2-2" DIA HDPE), F&I, DIRECTIONAL DRILL	LF	2,200		
635-2-12A	PULL BOX, F&I, WITH 6" FIBER CONCRETE COLLAR	EA	27		
706-3	REFLECTIVE PAVEMENT MARKERS (BLUE/BLUE)	EA	22		

* PAY ITEM FOOT NOTES: SEE SHEET 4

Item No.	Description	Unit	Quantity	Unit Price	Amount
630-2-11	CONDUIT, F&I, OPEN TRENCH	LF	28		
630-2-14	CONDUIT, F&I, ABOVEGROUND	LF	25		
632-7-1	SIGNAL CABLE - NEW OR RECONSTRUCTED INTERSECTION, FURNISH & INSTALL	PI	1		
633-2-31	FIBER OPTIC CONNECTION, INSTALL, SPLICE	EA	12		
633-3-11	FIBER OPTIC CONNECTION HARDWARE, F&I, SPLICE ENCLOSURE	EA	1		
633-3-15	FIBER OPTIC CONNECTION HARDWARE, F&I, PRETERMINATED PATCH PANEL	EA	1		
634-4-153	SPAN WIRE ASSEMBLY, F&I, TWO POINT, BOX	PI	1		
635-2-11	PULL & SPLICE BOX, F&I, 13"x24" COVER SIZE	EA	4		
635-2-12	PULL & SPLICE BOX, F&I, 24" X 36" COVER SIZE	EA	1		
639-1-122	ELECTRICAL POWER SERVICE, F&I, UG, METER PURCHASED BY CONTRACTOR	AS	1		
639-2-1	ELECTRICAL SERVICE WIRE, FURNISH & INSTALL	LF	100		
641-2-18	PRESTRESSED CONCRETE POLE, F&I, TYPE P-VIII	EA	4		
641-2-80	PRESTRESSED CONCRETE POLE, COMPLETE REMOVAL	EA	2		
650-1-24	TRAFFIC SIGNAL, FURNISH & INSTALL POLYCARBONATE W/ALUM TOP, 3 SECTION, 1 WAY	AS	4		
650-1-29	TRAFFIC SIGNAL, FURNISH & INSTALL POLYCARBONATE W ALUMIN, 5 SECTION CLUSTER	AS	4		
660-4-11	VEHICLE DETECTION SYSTEM- VIDEO, F&I CABINET EQUIPMENT	EA	1		
660-4-12	VEHICLE DETECTION SYSTEM- VIDEO, F&I ABOVE GROUND EQUIPMENT	EA	4		
670-5-111	TRAFFIC CONTROLLER ASSEMBLY, F&I	AS	1		
684-1-1	MANAGED FIELD ETHERNET SWITCH, FURNISH & INSTALL	EA	1		
700-5-22	INTERNALLY ILLUMINATED SIGN, F&I, OVERHEAD MOUNT, 12-18 SF	EA	4		
715-5-31	LUMINAIRE & BRACKET ARM, F&I, ALUMINUM	EA	4		

Item No.	Description	Unit	Quantity	Unit Price	Amount
700-1-11	SINGLE POST SIGN, F&I GROUND MOUNT, UP TO 12 SF	AS	10.00		
700-1-50	SINGLE POST SIGN, RELOCATE	AS	28.00		
700-1-60	SINGLE POST SIGN, REMOVE	AS	8		
700-3-601	SIGN PANEL, REMOVE, UP TO 12 SF	EA	8.00		
706-3	RETRO-REFLECTIVE PAVEMENT MARKERS (Y)	EA	1,337		
706-3	RETRO-REFLECTIVE PAVEMENT MARKERS (WR)	EA	230		
711-11-123	THERMOPLASTIC, STANDARD, WHITE, SOLID, 12" FOR CROSSWALK AND ROUNDABOUT	LF	243		
711-11-125	THERMOPLASTIC, STANDARD, WHITE, SOLID, 24" FOR STOP LINE AND CROSSWALK	LF	464.00		
711-11-141	THERMOPLASTIC, STANDARD, WHITE, 2-4 DOTTED GUIDELINE/6-10 GAP EXTENSION, 6"	GM	0.49		
711-11-241	THERMOPLASTIC, STANDARD, YELLOW, 2-4 DOTTED GUIDELINE/6-10 GAP EXTENSION, 6"	GM	0.08		
711-11-170	THERMOPLASTIC, STANDARD, WHITE, ARROW	EA	53		
711-11-224	THERMOPLASTIC, STANDARD, YELLOW, SOLID, 18" FOR DIAGONAL OR CHEVRON	LF	938		
711-14-160	THERMOPLASTIC, PREFORMED, WHITE, MESSAGE	EA	32		
711-14-170	THERMOPLASTIC, PREFORMED, WHITE, ARROW (BIKE THRU)	EA	32		
711-16-101	THERMOPLASTIC, STANDARD-OTHER SURFACES, WHITE, SOLID, 6"	GM	7.09		
711-16-201	THERMOPLASTIC, STANDARD-OTHER SURFACES, YELLOW, SOLID, 6"	GM	8.02		
711-16-231	THERMOPLASTIC, STANDARD-OTHER SURFACES, YELLOW, SKIP, 6"	GM	0.42		
999-1	RECORD DRAWINGS/AS-BUILTS	LS	1		

Item No.	Description	Unit	Quantity	Unit Price	Amount
101-1A	Mobilization	LS	1		
102-1A	Maintenance of Traffic	LS	1		
104-1A	Erosion Control	LS	1		
110-1-1A	Clearing and Grubbing	LS	1		
120-1B	Excavation and Embankment	LS	1		
285-706	Optional Base Course 8" Limerock (LBR = 100)	SY	640		
334-1-13D	Superpave Asphalt Concrete, 2" SP 12.5	SY	580		
570-1-2A	Sod and Site Restoration	SY	900		
630-2-11B	4 - 2" Conduits	LF	560		
1050-42-224A	Furnish and Install 24" HDPE HDD	LF	560		
1050-11-425A	Furnish and Install 20" DIP Water Main	LF	40		
1055-11-4A	Furnish and Install Fittings and Appurtenances	TO N	5		
1080-11-404A	Furnish, Install and Remove 12" Bypass Assembly	LS	1		
1080-11-506A	Furnish and Install Air Release Valve and Vault	EA	1		
1080-11-512A	Sample Points	EA	2		
1080-11-512B	Pigging and Flushing	LS	1		
1080-11-512C	Disinfection and Testing	LS	1		
1080-23-120A	Furnish and Install 20" X 12" Wet Tap Assembly	EA	2		
1080-24-112A	Furnish and Install 12" Gate Valve	EA	2		
1080-24-120A	Furnish and Install 20" Gate Valve	EA	2		
1080-27-120A	Furnish and Install 20" Line Stop	EA	2		



REVISIONS	
DATE	DESCRIPTION
2/19/20	RESPONSE TO COUNTY COMMENTS
3/19/20	RESPONSE TO COUNTY COMMENTS

FOR BIDDING PURPOSES ONLY

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P.E. LICENSE NUMBER 76826
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DEPARTMENT OF PUBLIC WORKS/ENGINEERING DIVISION
ROAD NO. COUNTY FINANCIAL PROJECT ID
CR-613 INDIAN RIVER IRC: 1325
58th AVE FDOT: 436416-1-54-01

SUMMARY OF QUANTITIES
AND PAY ITEMS

SHEET NO.
3

PAY ITEM FOOTNOTES

BID ITEM DESCRIPTIONS FOR 20" WATER MAIN RELOCATION

101-1 MOBILIZATION: THE LUMP SUM PRICE PAID INCLUDES ALL COSTS ASSOCIATED WITH INSURANCE, BONDS, REQUIRED PERMITS AND FEES, PREPARATION AND SUBMITTAL OF FDEP NOTICE OF INTENT (NOI), SHOP DRAWINGS AND SUBMITTALS, MOVING ONTO THE JOB (MOBILIZATION), MOVING OFF THE JOB (DEMOBILIZATION), PROJECT PHASING, SUPERVISION, COORDINATION OF CONCURRENT WORK WITH OTHER CONTRACTORS, MEETINGS, SURVEYING, RESETTling SURVEY MONUMENTS, VIDEO TAPING SITE PRIOR TO START OF WORK, POT-HOLING, REWORKING, AS-BUILT PLANS, AND CLEAN UP OF WORK INDICATED IN THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL MAINTAIN ALL GRASSED AND LANDSCAPED AREA WITHIN THE PROJECT LIMITS IN A SATISFACTORY CONDITION UNTIL FINAL ACCEPTANCE OF THE PROJECT. SUCH MAINTENANCE WITHIN THE LIMITS OF CONSTRUCTION SHALL INCLUDE THE MOWING OF ALL EXISTING GRASSED AREA WITHIN THE RIGHT-OF-WAY, REMOVAL OF ALL TRASH AND DEBRIS ON A WEEKLY BASIS AND KEEPING VEGETATION TRIMMED ON ALL SIDEWALKS. GRASS HEIGHT SHALL NOT EXCEED 6" WITH OUT MOWING. CLIPPINGS SHALL BE REMOVED FROM SIDEWALKS

102-1 MAINTENANCE OF TRAFFIC: INCLUDES BARRIER WALLS, VERTICAL PANELS, ATTENUATORS, TEMPORARY STRIPING, INCLUDING TEMPORARY STRIPING FOR 15 DAY CURE PERIOD, SIGNS, MESSAGE BOARDS, BARRICADES, PERMANENT RELOCATION OF SIGNS AND ALL OTHER TRAFFIC INCIDENTAL ITEMS REQUIRED FOR THE MAINTENANCE OF TRAFFIC ON A 24 HOUR / 7 DAY BASIS. VARIABLE CHANGING MESSAGE SIGN SHALL IN PLACE 2 WEEKS PRIOR TO ALL ROAD CLOSINGS, ALL COSTS FOR EACH PHASE OF WORK AND THE OVERALL PROJECT SHALL BE INCLUDED. COST SHALL INCLUDE MOT PLANS PREPARED FOR EACH PHASE OF WORK AND THE OVERALL PROJECT, PREPARED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF FLORIDA.

110-1-1 CLEARING AND GRUBBING: THE LUMP SUM PRICE PAID INCLUDES REMOVAL AND DISPOSAL OF ALL ITEMS CALLED FOR REMOVAL IN THE DRAWINGS AND SPECIFICATIONS INCLUDING VEGETATION & TOPSOIL, SAW CUTTING, PAVEMENT, ASPHALT OR CONCRETE, CURB AND SIDEWALK, GUARDRAIL, POLES, FENCE, PIPES, HEADWALLS AND/OR STRUCTURES. WORK ALSO INCLUDES RELOCATION OF EXISTING DRAINAGE STRUCTURES, WHERE EXISTING PIPES ARE REMOVED AND THE EXISTING STRUCTURE REMAINS, THE RESULTING HOLE SHALL BE FORMED AND REPAIRED WITH CONCRETE. THE CONTRACTOR SHALL COMPLY WITH THE STATE OF FLORIDA TRENCH SAFETY ACT.

120-1 EXCAVATION: THE UNIT PRICE PAID PER CUBIC YARD INCLUDES ALL COSTS FOR EXCAVATION SHOWN ON THE PLANS FOR ROAD WIDENING AND LOWERING, PROTECTION AND RELOCATION OF EXISTING INFRASTRUCTURE, COMPACTING SUBGRADE TO 12" WITHIN THE PAVED AREA AND STABILIZED SHOULDERS; AND FOR FURNISHING, PLACING AND COMPACTING MATERIAL SHOWN ON THE PLANS FOR CONFORM AREAS OUTSIDE OF THE PAVED ROAD, COMPLETE AND IN PLACE. EXCESS MATERIAL SHALL BE HAULED OFF AND PROPERLY DISPOSED OF. THIS IS A FINAL PAY ITEM BASED ON PLAN QUANTITIES, AND NO ADDITIONAL PAYMENT WILL BE MADE THEREFORE.

120-2 BORROW EXCAVATION (RECLAIMED FDR): THE UNIT PRICE PAID PER CUBIC YARD INCLUDES ALL COSTS FOR REMOVAL OF THE TOP 3" OF PROCESSED BASE MINIMUM, AND ADJUSTED AS REQUIRED FOR ADDITIONAL BASE PREPARED FOR WIDENING, AND INCLUDES PAVEMENT FROM THE ROAD, MATERIAL HANDLING, STOCK PILING, AND FOR FURNISHING, PLACING AND COMPACTING MATERIAL SHOWN AT ROAD WIDENING AND ROAD OVER EXCAVATION AREAS, OR REMOVED AND DISPOSED OF AS REQUIRED TO BALANCE THE SITE. PAY ITEM IS BASED ON WORK OUTSIDE OF EXISTING PAVEMENT TO ACCOMMODATE WIDENING. THIS IS A FINAL PAY ITEM BASED ON PLAN QUANTITIES AND NO ADDITIONAL PAYMENT WILL BE MADE THEREFORE.

120-6 EMBANKMENT: THE UNIT PRICE PAID PER CUBIC YARD INCLUDES ALL COSTS FOR EMBANKMENT SHOWN ON THE PLANS FOR ROAD WIDENING AND LOWERING, PROTECTION AND RELOCATION OF INFRASTRUCTURE, COMPACTING SUBGRADE TO 12" (STRUCTURAL OR STABILIZED SECTION) WITHIN THE PAVED AREA AND STABILIZED SHOULDERS; AND FOR FURNISHING, PLACING AND COMPACTING MATERIAL SHOWN ON THE PLANS FOR CONFORM AREAS OUTSIDE OF THE PAVED ROAD, COMPLETE AND IN PLACE. EXCESS MATERIAL SHALL BE HAULED OFF AND PROPERLY DISPOSED OF. THIS IS A FINAL PAY ITEM BASED ON PLAN QUANTITIES, AND NO ADDITIONAL PAYMENT WILL BE MADE THEREFORE.

160-4 CONSTRUCTION OF STABILIZED SHOULDERS SHALL BE PAID ONLY IN THOSE AREA WHERE THE EXISTING STABILIZED SHOULDER IS IMPACTED BY ROAD WIDENING. THIS ITEM INCLUDES ALL STABILIZED SUB-BASE. THIS IS A FINAL PAY ITEM BASED ON PLAN QUANTITIES AND NO ADDITIONAL PAYMENT WILL BE MADE THERE FOR.

283-71 RECLAIMED ASPHALT BASE COURSE (FULL DEPTH RECLAMATION): THE UNIT PRICE PAID PER SQUARE YARD INCLUDES ALL COSTS FOR PROCESSING AND MIXING EXISTING ROADWAY TO REQUIRED DEPTH, PLUS ADDITIONAL BASE, STOCK PILING AND HANDLING MATERIAL MULTIPLE TIMES, HANDLING ADDITIONAL BASE, TEMPLETING FULL ROADWAY WIDTH, INTRODUCING AND MIXING ADMIXTURES, COMPACTION, MAINTENANCE OF THE SURFACE, AND LEVELING COURSE AS REQUIRED FOR A READY TO PAVE SURFACE. WORK INCLUDES CONFIRMING LOWERING OF OBSTRUCTIONS AND WORKING AROUND SHALLOW FEATURES AS CALLED FOR IN THE DRAWINGS. PAY ITEM IS BASED ON EXISTING PAVEMENT AREA FOR THE LIMITS OF WORK.

285-709 BASE MATERIAL SHALL BE MIXED IN WITH FDR TO PRODUCE A HOMOGENOUS BASE MATERIAL.

334 INCLUDES TACK COAT BETWEEN ASPHALT CONCRETE LAYERS.

334-1-13B NOTE: "CONFORM" ON THE DRAWINGS = "OVERBUILD"

334-1-13C INCLUDES SAW CUT, REMOVAL OF EXISTING PAVEMENT, GRADE AND AUGMENT BASE AND PAVE.

425-XX ALL WORK SHALL BE IN ACCORDANCE WITH INDIAN RIVER DEPARTMENT OF UTILITY SERVICE STANDARDS.

425-3-8 CONSTRUCT SPECIAL JUNCTION BOX, INCLUDING DEWATERING, EXCAVATION, SUBGRADE BEDDING, PREPARATION AND COMPACTION, BACKFILL AND COMPACTION AND AREA GRADING, WITH SWALE AND CONFORMS.

430-175-XXX ALLOWABLE OPTIONAL MATERIAL IS REINFORCED CONCRETE PIPE, CLASS III, COST INCLUDES CONCRETE COLLARS.

522-XX ALL CONCRETE SHALL BE 6" FIBER REINFORCED AND 3000 PSI STRENGTH.

527-2 DETECTABLE WARNING STRIPS SHALL BE FEDERAL YELLOW IN COLOR.

530-3-3A RIP RAP, RUBBLE, BANK AND SHORE: THE UNIT PRICE PAID PER SQUARE YARD INCLUDES ALL COSTS FOR EXCAVATION, COMPACTION OF SUBGRADE, PLACING AND SECURING FILTER FABRIC, SETTING KEYSTONE ROCKS, PLACING BEDDING STONE AND ROCK RUBBLE RIP-RAP FROM DRAINAGE FLOW TO LINE TOP OF SLOPE WITHIN THE CANAL RIGHT OF WAY IN ACCORDANCE WITH THE DESIGN DRAWINGS AND DETAILS, COMPLETE AND IN PLACE.

570-1-2 CONTRACTOR TO REPLACE SOD TO MATCH SURROUNDING SOD, COST SHALL BE INCLUDED.

630-2-11A OPEN TRENCH CONDUIT INSTALLATION INCLUDES INSTALLATION OF 2-2" HDPE PIPES PER LINIAL FOOT PAID, ADJUSTING ALIGNMENT FOR OBSTRUCTIONS, MINIMUM DEPTH OF 36" BELOW FINISH GRADE, WARNING TAPE, SWAB PIPE, PULL STRING INSTALLED, INCLUDES 2 CONDUITS PER LINEAL FOOT OF TRENCH INSTALLED, ALL EXCAVATION, BACK FILL, COMPACTION AND RESTORATION.

630-2-12A DIRECTIONAL BORE CONDUIT INSTALLATION INCLUDES 2-2" HDPE PIPES PER LINIAL FOOT PAID, SWAB PIPE, PULL STRING INSTALLED.

635-2-12A SPLICE-PULL BOX SHALL BE PER FDOT INDEX NO. 17700, TELECOM FIBER PULL BOX 17" X 30" / TIER 15 RATING SET TO FINISH GRADE. CONCRETE APRON SHALL BE 3000 PSI CONCRETE WITH FIBER. PULL BOXES WITHIN 5' OF EDGE OF PAVEMENT SHALL BE TRAFFIC RATED.

GENERAL DESCRIPTIONS OF THE WORK FOR WATERLINE REPLACEMENT: PAYMENT FOR CONFORMING TO ALL THE PROVISIONS OF THE CONTRACT DOCUMENTS SHALL BE CONSIDERED TO BE INCLUDED IN THE CONTRACT UNIT PRICES OR LUMP SUM PRICE FOR THE ITEMS OF WORK BID AND SHALL INCLUDE ALL COSTS FOR LABOR, MATERIALS, AND EQUIPMENT REQUIRED FOR THE EXECUTION OF THE WORK UNLESS OTHERWISE SET FORTH. THE FOLLOWING SETS FORTH A GENERAL DESCRIPTION OF THE TYPE OF WORK FOR EACH BID ITEM LISTED IN THE SCHEDULE, BUT IS NOT INTENDED TO BE ALL INCLUSIVE. ALL WORK SPECIFICALLY SHOWN, CALLED FOR OR INDICATED IN THE WATERLINE REPLACEMENT CONTRACT DOCUMENTS SHALL BE PERFORMED WHETHER OR NOT SPECIFICALLY LISTED UNDER AN ITEM DESCRIPTION. ALL WORK SHALL BE IN CONFORMANCE WITH SEPARATE SPECIFICATIONS FOR WATER LINE IMPROVEMENTS AND 2019 IRC UTILITY CONSTRUCTION STANDARDS INCLUDING NOTES, DRAINAGE AND SPECIFICATIONS.

101-1A, MOBILIZATION: THE LUMP SUM PRICE PAID INCLUDES ALL COSTS ASSOCIATED WITH INSURANCE, BONDS, REQUIRED PERMITS AND FEES, SHOP DRAWINGS, MOVING ONTO THE JOB (MOBILIZATION), MOVING OFF THE JOB (DEMOBILIZATION), PROJECT PHASING, SUPERVISION, COORDINATION OF CONCURRENT WORK WITH OTHER CONTRACTORS, MEETINGS, CONSTRUCTION SURVEYING, RESETTling SURVEY MONUMENTS, VIDEO TAPING SITE PRIOR TO START OF WORK, POT-HOLING, AS-BUILT PLANS, AND CLEANUP OF WORK INDICATED IN THE CONTRACT DOCUMENTS FOR BOTH THE WATERLINE WORK AND THE ROAD WIDENING WORK. THE CONTRACTOR SHALL MAINTAIN ALL GRASSED AND LANDSCAPED AREA WITHIN THE PROJECT LIMITS IN A SATISFACTORY CONDITION UNTIL FINAL ACCEPTANCE OF THE PROJECT. SUCH MAINTENANCE WITHIN THE LIMITS OF CONSTRUCTION SHALL INCLUDE THE MOWING OF ALL EXISTING GRASSED AREA WITHIN THE RIGHT-OF-WAY, REMOVAL OF ALL TRASH AND DEBRIS ON A WEEKLY BASIS AND KEEPING VEGETATION TRIMMED ON ALL SIDEWALKS. GRASS HEIGHT SHALL NOT EXCEED 6" WITH OUT MOWING. CLIPPINGS SHALL BE REMOVED FROM SIDEWALKS

102-1A, MAINTENANCE OF TRAFFIC: THE LUMP SUM PRICE PAID INCLUDES ALL COSTS FOR PREPARATION OF MOT PLANS BY A CERTIFIED FLORIDA PREPARER FOR ALL PHASES OF THE PROJECT, INSTALLATION, AND MAINTENANCE OF TRAFFIC CONTROL AND TEMPORARY SIGNING AND STRIPING, INCLUDING FLAGGERS, BARRICADES, AND TEMPORARY FACILITIES REQUIRED FOR THE SAFE HANDLING OF PEDESTRIAN, BICYCLE AND VEHICULAR TRAFFIC FOR 24 HOURS PER CALENDAR DAY IN ACCORDANCE WITH THE FDOT REQUIREMENTS. THIS BID ITEM INCLUDES, CONSTRUCTING TEMPORARY CONCRETE BARRIERS, INCLUDING CRASH BARRIERS PER THE CONSTRUCTION DRAWINGS, MAINTAINING THEM AND REMOVING THEM AND RESTORING THE PAVEMENT. THIS ITEM INCLUDES, AS-BUILTING THE EXISTING STRIPING WITHIN THE LIMITS OF WORK, REMOVE EXISTING STRIPING AND PLACING TEMPORARY PAINTED LANE STRIPING FOR THE TRAFFIC DIVERSION, MAINTAINING STRIPING AND REMOVING TEMPORARY STRIPING, AND ORIGINAL STRIPING OF THE ROAD TO ORIGINAL CONDITION, COMPLETE AND IN PLACE.

104-1A, EROSION CONTROL: THE LUMP SUM PRICE PAID INCLUDES ALL EROSION CONTROL MEASURES, INCLUDING THE CONTRACTOR PREPARING AND FILING THE NOTICE OF INTENT (NOI) WITH THE FDEP PRIOR TO BEGINNING CONSTRUCTION, SILT FENCE, FLOATING TURBIDITY BARRIERS, ETC. NEEDED TO COMPLY WITH THE SEDIMENTATION AND EROSION CONTROL MEASURES DELINEATED IN THE DESIGN DRAWINGS TO ENSURE NO MIGRATION OF SOILS OFFSITE.

110-1-1A, CLEARING AND GRUBBING: THE LUMP SUM PRICE PAID INCLUDES ALL COSTS FOR CLEARING, DEMOLITION WATERLINE: INCLUDES REMOVAL OF EXISTING ASPHALT AND SOIL AND OTHER IMPROVEMENTS, REMOVAL OF 20" WATERLINE AND APPURTENANCES AS CALLED FOR ON THE DRAWINGS, GRUBBING, IMPORTING SELECT, SUBSTRUCTURE PROTECTION AND MAINTENANCE, ADJUSTING VAULTS AND BOXES AND VALVES AND MANHOLES AND ETC. TO FINISH GRADE, SALVAGE OF PORTIONS OF THE PIPING THAT WILL BE REMOVED AND DELIVERED TO THE COUNTY, DUST CONTROL, TESTING, AND DISPOSING OF WASTE;

ROAD WIDENING: PRE-CONSTRUCTION LAYOUT, REMOVALS REQUIRED FOR ROAD WORK, CLEARING OF VEGETATION REPLACEMENT OF PAVEMENT STRUCTURAL SECTION DAMAGED OR REMOVED FROM EITHER INCIDENTAL OR DUE TO CONSTRUCTION ACTIVITIES AND, AND FOR ALL OF ABOVE, APPURTENANT WORK AS REQUIRED TO COMPLETE THE WORK INDICATED IN THE CONTRACT DOCUMENTS.

120-1B, EXCAVATION AND EMBANKMENT: THE LUMP SUM PRICE PAID INCLUDES ALL COSTS FOR EXCAVATION AND FILL FOR ROAD WIDENING (INCLUDING IMPORTED MATERIAL), SHOULDER CONSTRUCTION, SITE AND SUBGRADE PREPARATION AND COMPACTION READY TO ACCEPT BASE, POST PAVING CLEAN UP AND DRESSING SLOPES AND SHOULDER, IN ACCORDANCE WITH THE DESIGN DRAWINGS, DETAILS, AND SPECIFICATIONS FOR A COMPLETE INSTALLATION.

285-706, OPTIONAL BASE COURSE, 8" LIMEROCK (LBR=100): THE UNIT PRICE PAID PER SQUARE YARD OF BASE PLACED INCLUDES ALL COSTS FOR PROVIDING, PLACING AND COMPACTION BASE COURSE, COMPLETE AND IN PLACE.

334-1-13D, SUPERPAVE ASPHALT CONCRETE, 2" SP 12.5: THE UNIT PRICE PAID PER SQUARE YARD OF PAVEMENT PLACED INCLUDES ALL COSTS FOR PROVIDING, PLACING AND COMPACTION ASPHALT CONCRETE, COMPLETE AND IN PLACE.

570-1-2A, SOD AND SITE RESTORATION: THE UNIT PRICE PAID PER SQUARE YARD PAID INCLUDES ALL COSTS FOR PREPPING, INSTALLING, WATERING AND MAINTAINING SOD IN ACCORDANCE WITH THE DESIGN DRAWINGS AND SPECIFICATIONS, SITE CLEANUP AND RESTORATION COMPLETE AND IN PLACE.

630-2-11B, 4-2" CONDUITS: WORK INCLUDES THE ATTACHMENT OF FOUR 2" CONDUITS TO THE 24" HDPE DIRECTIONAL DRILL, SWAB, INSTALL PULL STRING AND CAP. THIS ITEM WILL BE PAID FOR AS THE LINEAL FOOTAGE OF THE 24" HDPE DIRECTIONAL DRILL AND WILL INCLUDE THE FOUR CONDUITS FOR THAT LENGTH.

1050-42-224A, FURNISH AND INSTALL 24" HDPE HORIZONTAL DIRECTIONAL DRILL (HDD): THE UNIT PRICE PAID PER LINEAL FOOT INCLUDES ALL COSTS FOR EXCAVATION, DIRECTIONAL DRILLING OPERATIONS, PIPE SUPPORTS, 24" HDPE (DR 11) PIPE, FUSION WELDING, LOCATOR WIRE, FOUR CONDUITS (PAID FOR UNDER SEPARATE BID ITEM), TESTING, RESTORATION, AND ALL OTHER INCIDENTAL APPURTENANCES AND OPERATIONS REQUIRED TO CONSTRUCT IN ACCORDANCE WITH THE DESIGN DRAWINGS AND SPECIFICATIONS, COMPLETE AND IN PLACE.

1050-11-425A, FURNISH AND INSTALL 20" DIP WATER MAIN: THE PRICE PAID PER LINEAL FOOT INCLUDES ALL COSTS FOR EXCAVATION, CONNECTING TO EXISTING FACILITIES BEDDING AND BACKFILL, SUBSTRUCTURE PROTECTION, INSTALL PIPE (DIP PRESSURE CLASS 350), AND APPURTENANCES, LOCATOR WIRE, TESTING, DISINFECTION, AND FLUSHING, RESTORATION, COMPLETE AND IN PLACE.

1055-11-4A, FURNISH AND INSTALL FITTINGS AND APPURTENANCES: THE UNIT PRICE PAID PER TON INCLUDES ALL COSTS FOR THE INSTALLATION OF ALL MECHANICAL JOINT AND FLANGED FITTINGS, RESTRAINTS, AND APPURTENANCES, EXCAVATION, BACKFILL, COMPLETE AND IN PLACE. THIS BID ITEM DOES NOT INCLUDE THOSE FITTINGS ASSOCIATED WITH THE 12" BYPASS ASSEMBLIES AS IDENTIFIED IN DETAILS A AND B ON BID ITEM 1080-11-404A ABOVE.

1080-11-404A, FURNISH, INSTALL AND REMOVE 12" BYPASS ASSEMBLY: THE LUMP SUM PRICE PAID INCLUDES ALL COSTS FOR EXCAVATION, CONNECTING TO EXISTING FACILITIES BEDDING AND BACKFILL, SUBSTRUCTURE PROTECTION, INSTALL PIPE (PVC C-900 DR18), AND FITTINGS, APPURTENANCES, LOCATOR WIRE, TESTING, DISINFECTION, AND FLUSHING, COMPLETE AND IN PLACE. THIS WORK INCLUDES THE CONSTRUCTION AND REMOVAL OF THE BYPASS PIPING ASSEMBLY AS ILLUSTRATED IN DETAILS A AND B, JUMPER ASSEMBLY, AND CAPPING OF THE GATE VALVES, RESTORATION.

1080-11-506A, FURNISH AND INSTALL AIR RELEASE VALVE (ARV) AND VAULT: THE LUMP SUM PRICE PAID INCLUDES ALL COSTS FOR A 2" ARV ASSEMBLY AND VAULT IN ACCORDANCE WITH COUNTY STANDARD DETAILS, COMPLETE AND IN PLACE

1080-11-512A, SAMPLE POINTS: THE UNIT PRICE PAID FOR EACH INCLUDES ALL LABOR AND MATERIALS ASSOCIATED WITH INSTALLATION, COMPLETE AND IN PLACE.

1080-11-512B, PIGGING AND FLUSHING: THE LUMP SUM PRICE PAID INCLUDES ALL LABOR, MATERIALS, TESTING, TEMPORARY CONSTRUCTION AND EQUIPMENT INCLUDING WATER, BACKFLOW PREVENTERS AND METERS, INCIDENTAL PIPING AND VALVES, FOR COMPLETE PIGGING AND FLUSHING OF ALL INSTALLED MAINS TO THE SATISFACTION OF THE UTILITY.

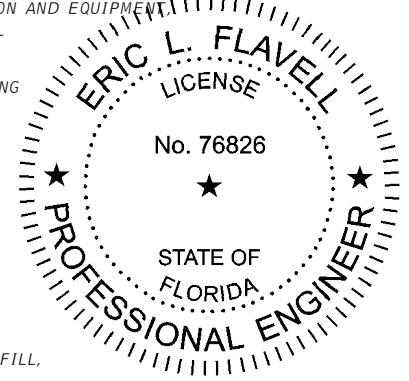
1080-11-512C, DISINFECTION AND TESTING: THE LUMP SUM PRICE PAID INCLUDES ALL COSTS FOR DISINFECTION AND TESTING, INCLUDING WATER, PRESSURE TESTING BEFORE AND AFTER BORING, CONTINUITY TESTING, FOR A COMPLETE INSTALLATION.

1080-23-120A, FURNISH AND INSTALL 20" X 12" WET TAP ASSEMBLY: THE UNIT PRICE PAID FOR EACH WET TAP INCLUDES ALL EXCAVATION, MATERIALS, LABOR AND PREPARATION FOR THE TESTING AND INSTALLATION OF STAINLESS STEEL TAPPING SLEEVE AND VALVE, ALL APPURTENANCES, DISINFECTION, TESTING, RESTORATION, COMPLETE AND IN PLACE.

1080-24-112A, FURNISH AND INSTALL 12" GATE VALVE: THE UNIT PRICE PAID FOR EACH INCLUDES ALL COSTS FOR EXCAVATION AND BACKFILL, INSTALLING VALVES, OPERATORS, VALVE BOXES, STEMS, RETAINER GLANDS, TESTING, RESTORATION, COMPLETE AND IN PLACE.

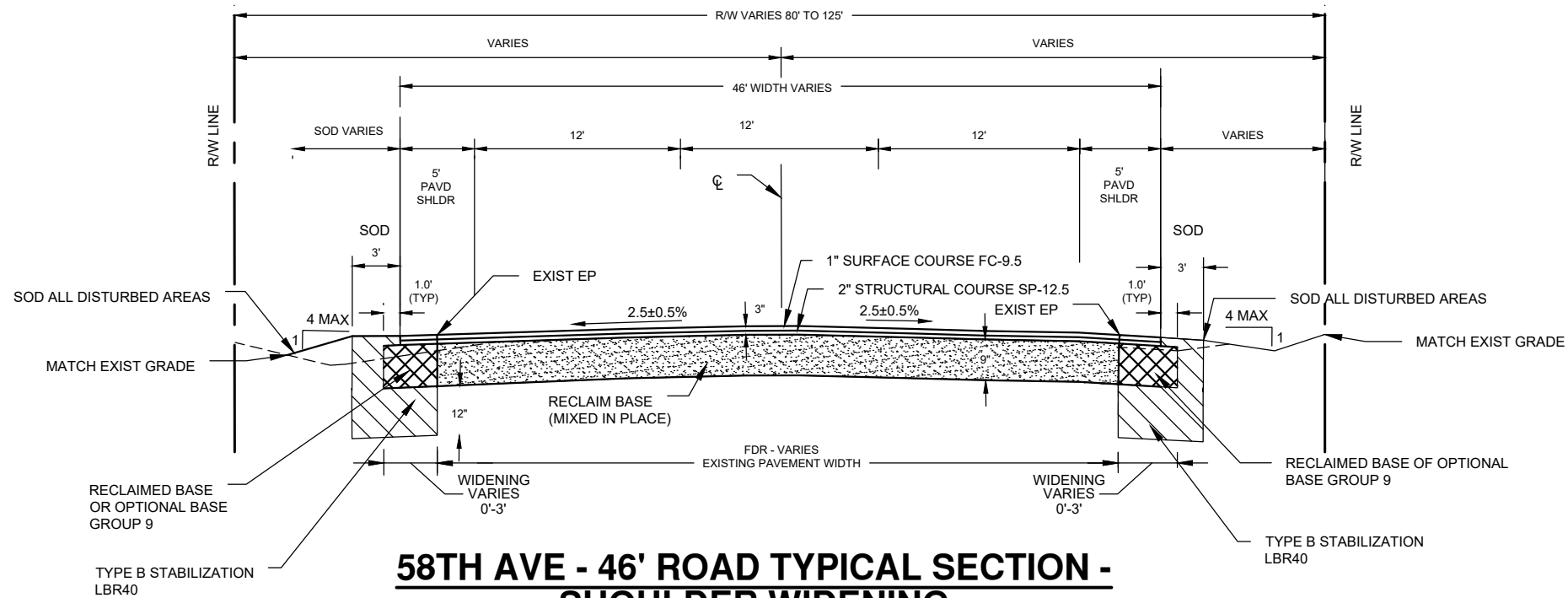
1080-24-120A, FURNISH AND INSTALL 20" GATE VALVE: THE UNIT PRICE PAID FOR EACH INCLUDES ALL COSTS FOR EXCAVATION AND BACKFILL, INSTALLING VALVES, OPERATORS, VALVE BOXES, STEMS, RETAINER GLANDS, TESTING, RESTORATION, COMPLETE AND IN PLACE.

1080-27-120A, FURNISH AND INSTALL 20" LINE STOP: THE UNIT PRICE PAID FOR EACH INCLUDES ALL COSTS FOR EXCAVATION AND BACKFILL, INSTALLING LINE STOPS AND APPURTENANCES, AND TESTING, COMPLETE AND IN PLACE.



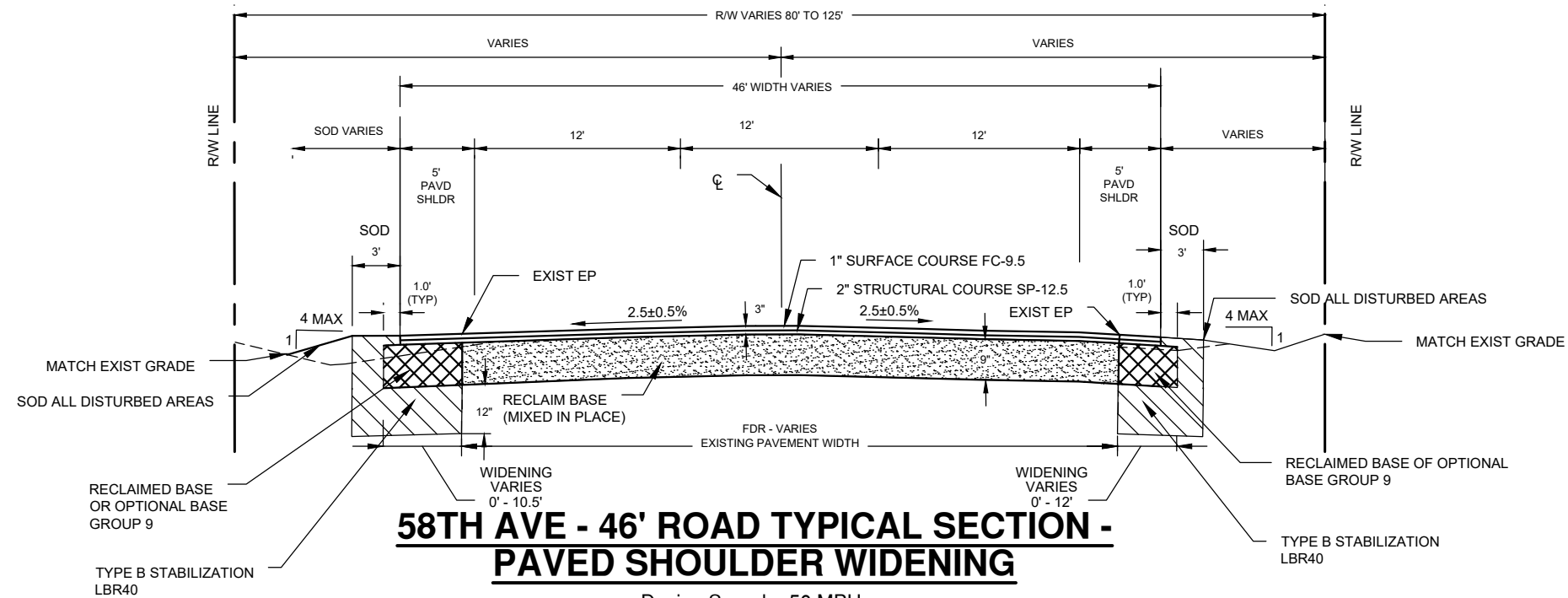
REVISIONS		ERIC L. FLAVELL, P.E.		INDIAN RIVER COUNTY		SUMMARY OF QUANTITIES AND PAY ITEMS	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION	ROAD NO.	COUNTY		
2/19/20	RESPONSE TO COUNTY COMMENTS			CR-613	INDIAN RIVER	IRC: 1325	4
3/19/20	RESPONSE TO COUNTY COMMENTS			58th AVE		FDOT:436416-1-54-01	

FOR BID PURPOSES ONLY



**58TH AVE - 46' ROAD TYPICAL SECTION -
SHOULDER WIDENING**

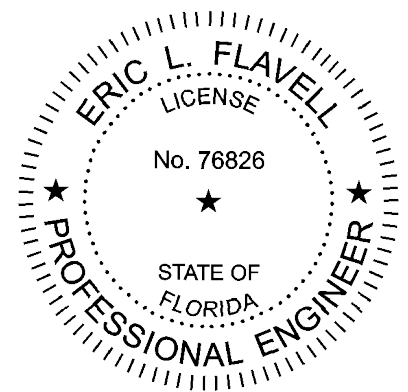
Design Speed = 50 MPH
 Scale: NTS
 STATION: 531+51 - 546+69
 STATION: 557+83 - 571+66
 STATION: 583+68 - 591+90



**58TH AVE - 46' ROAD TYPICAL SECTION -
PAVED SHOULDER WIDENING**

Design Speed = 50 MPH
 Scale: NTS
 STATION: 480+67 - 493+31
 STATION: 546+69 - 563+93
 STATION: 591+90 - 595+03

LEGEND	
	RECLAIMED BASE MIXED IN PLACE
	RECLAIMED BASE OR OPTIONAL BASE GROUP 9
	TYPE B STABILIZATION LBR40

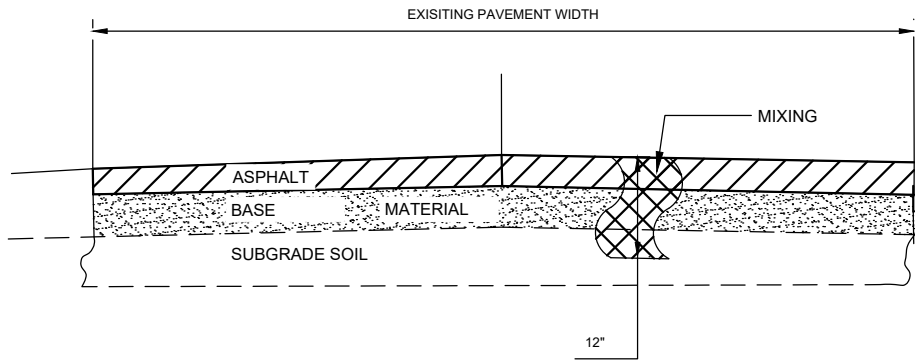


REVISIONS		ERIC L. FLAVELL, P.E. P.E. LICENSE NUMBER 76826 BOWMAN CONSULTING GROUP 4450 W. EAU GALLIE BLVD. MELBOURNE, FL 32934 CERTIFICATE OF AUTHORIZATION 30462		INDIAN RIVER COUNTY DEPARTMENT OF PUBLIC WORKS/ENGINEERING DIVISION		TYPICAL SECTIONS	SHEET NO. 5
DATE	DESCRIPTION	DATE	DESCRIPTION	ROAD NO. CR-613 58th AVE	COUNTY INDIAN RIVER		

FOR BIDDING PURPOSES ONLY

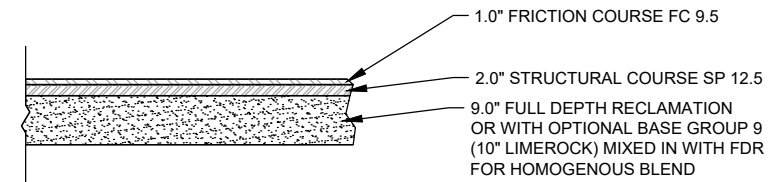
FULL DEPTH RECLAMATION (FDR) MIXING NOTES:

1. EXISTING ASPHALT BASE AND SUBBASE SHALL BE CRUSHED AND MIXED TOGETHER TO FORM A HOMOGENOUS BLEND 12" DEEP. THE BASE AND SUBBASE THROUGHOUT THE PROJECT FALL INTO TWO CATEGORIES WHICH ARE "LIMEROCK BASE" AND "SANDY/CLAY BASE". THE ASPHALT EMULSION AND CEMENT APPLICATION RATES SHALL BE AS LISTED IN THE GEOTECHNICAL REPORTS.
2. APPROXIMATE LOCATION OF "LIMEROCK" AND "SANDY/CLAY" BASE IS SHOWN ON THE PHASING PLANS.
3. THE TOP 3" OF HOMOGENOUS BLENDED MATERIAL (RECLAIMED FDR) SHALL BE REMOVED AND USED IN ROAD WIDENING AREAS OR DISPOSED IF IN EXCESS.
4. AREAS RECEIVING RECLAIMED FDR FROM BOTH CATEGORIES SHALL BE TREATED WITH THE HIGHER APPLICATION RATES FOR ASPHALT EMULSION AND CEMENT.
5. AREAS WITH ROAD LOWERING WILL REQUIRE FDR STOCKPIILING AND EXCAVATING SUBGRADE TO THE DESIGN DEPTH AND COMPACTION PRIOR TO PLACING FDR
6. TYPICAL ROAD CROSS SLOPE IS 2.5%, +/- 0.5%. MINIMUM ROAD CROSS SECTION IS 2%, MAXIMUM CROSS SECTION IS 4%. INTERSECTION CROSS SLOPE IS 1%.
7. ADDITIONAL BASE SHOULD BE MIXED IN TO FDR TO FORM HOMOGENOUS BASE MATERIAL.



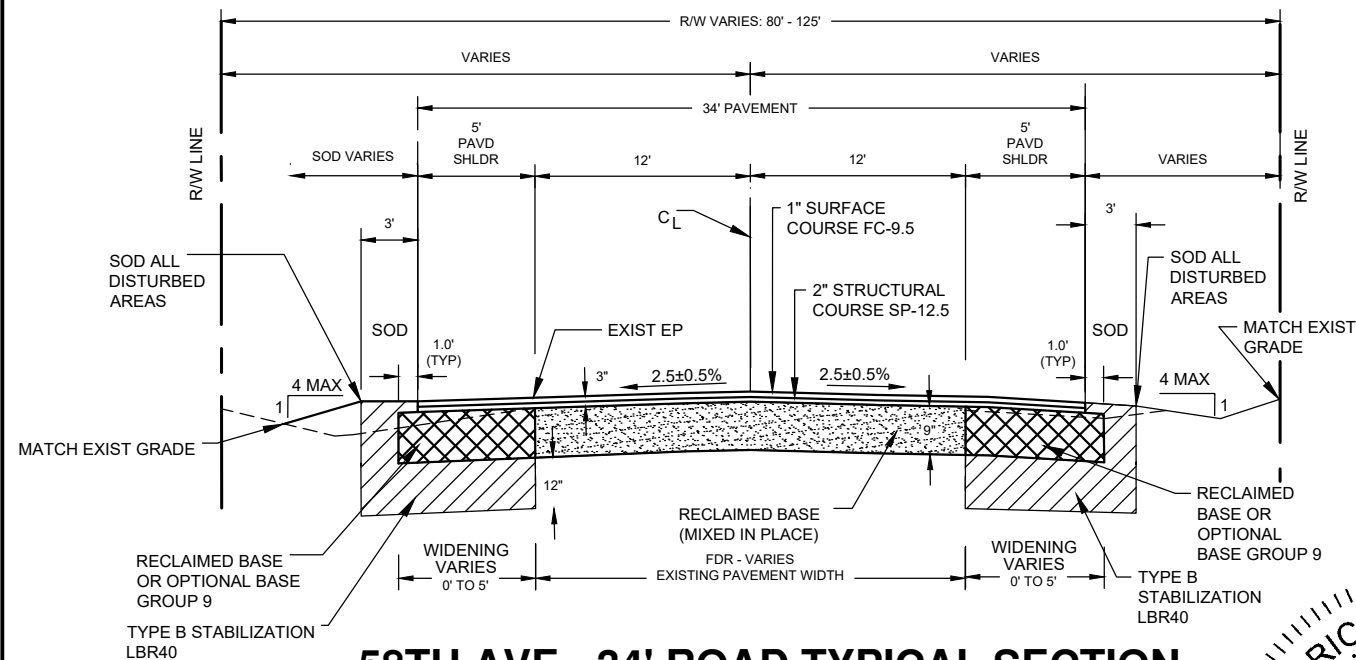
FULL DEPTH RECLAMATION MIXING DETAIL

Scale: NTS



TYPICAL PAVEMENT STRUCTURAL SECTION

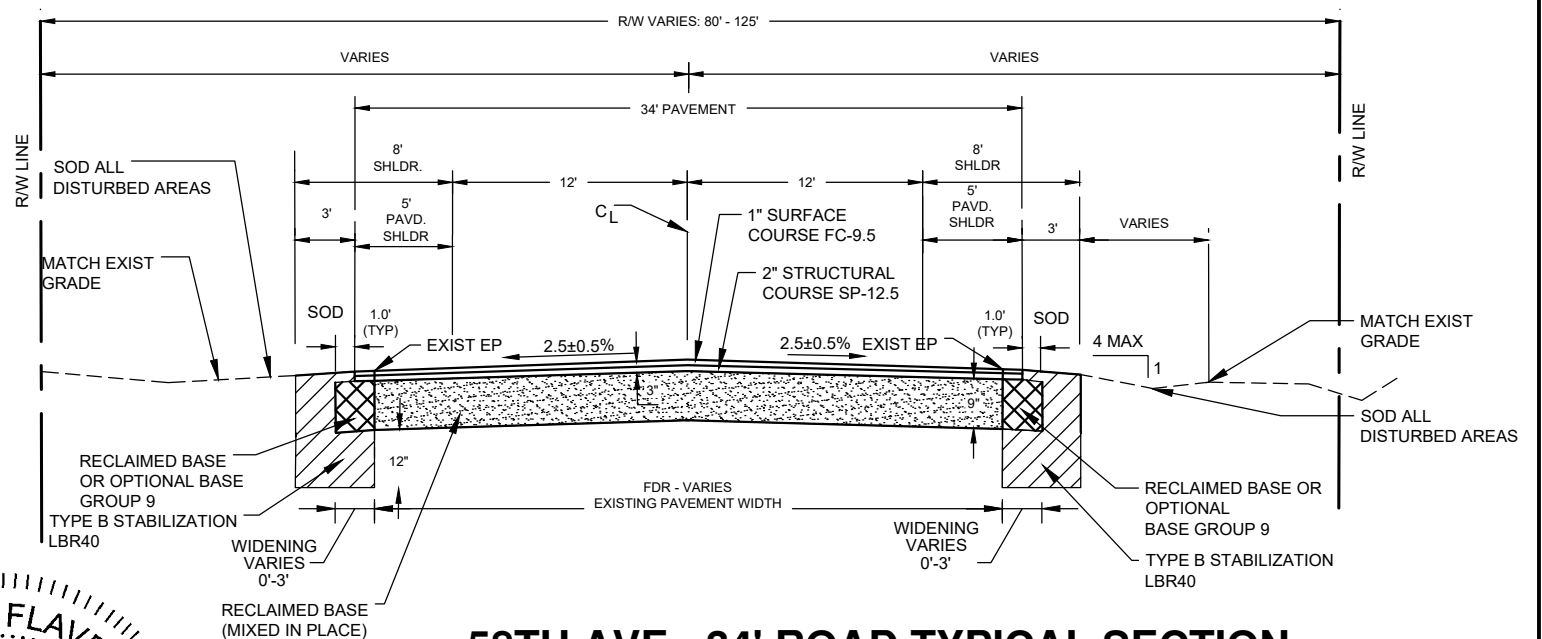
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58TH AVE - 34' ROAD TYPICAL SECTION - PAVED SHOULDER WIDENING

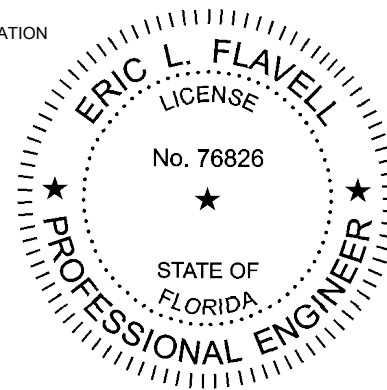
Design Speed = 50 MPH
Scale: NTS
STATION: 418+86 - 480+67

LEGEND	
	RECLAIMED BASE MIXED IN PLACE
	RECLAIMED BASE OR OPTIONAL BASE GROUP 9
	TYPE B STABILIZATION LBR40



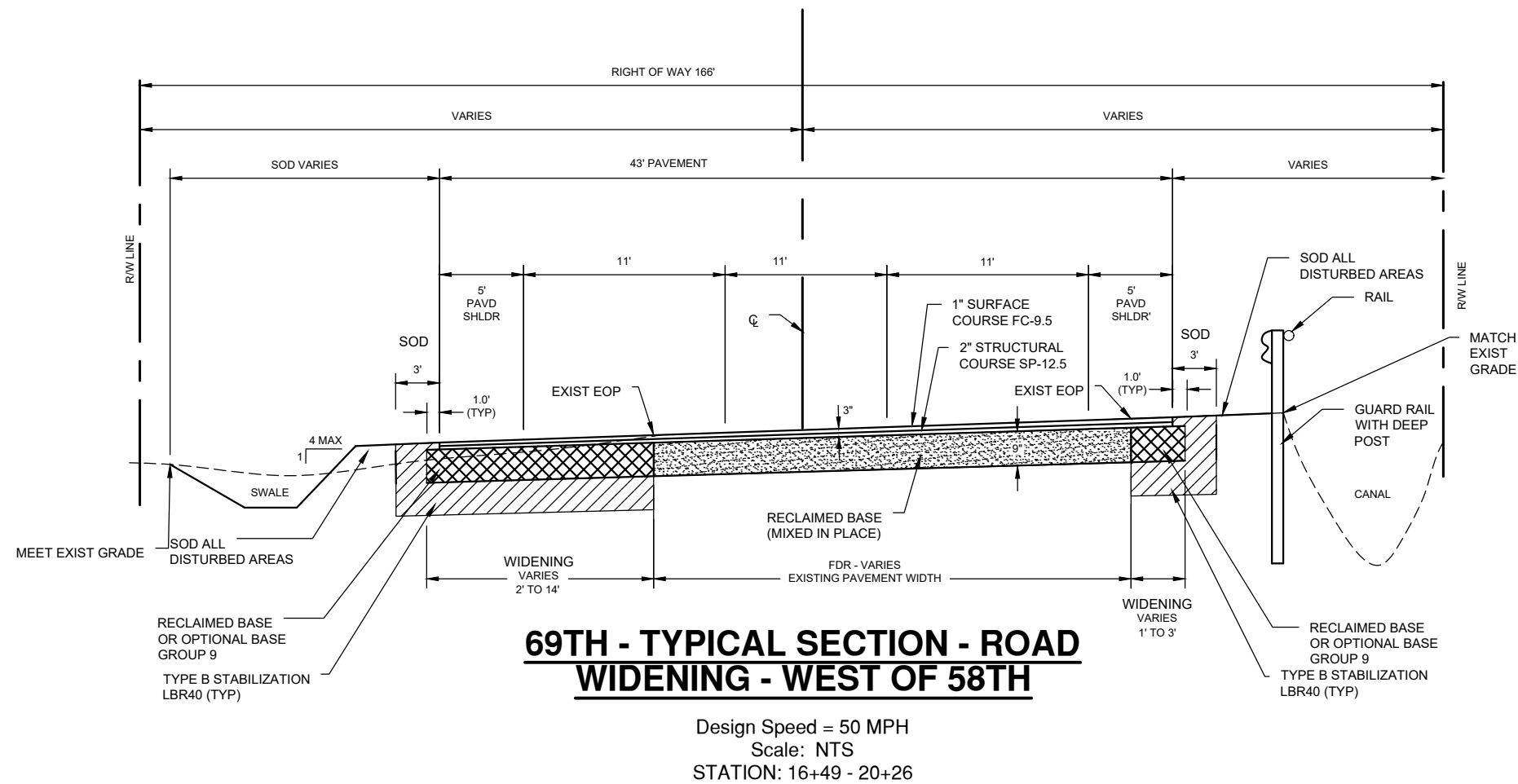
58TH AVE - 34' ROAD TYPICAL SECTION SHOULDER WIDENING

Design Speed = 50 MPH
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STATION: 493+31 - 531+51
STATION: 571+66 - 583+68



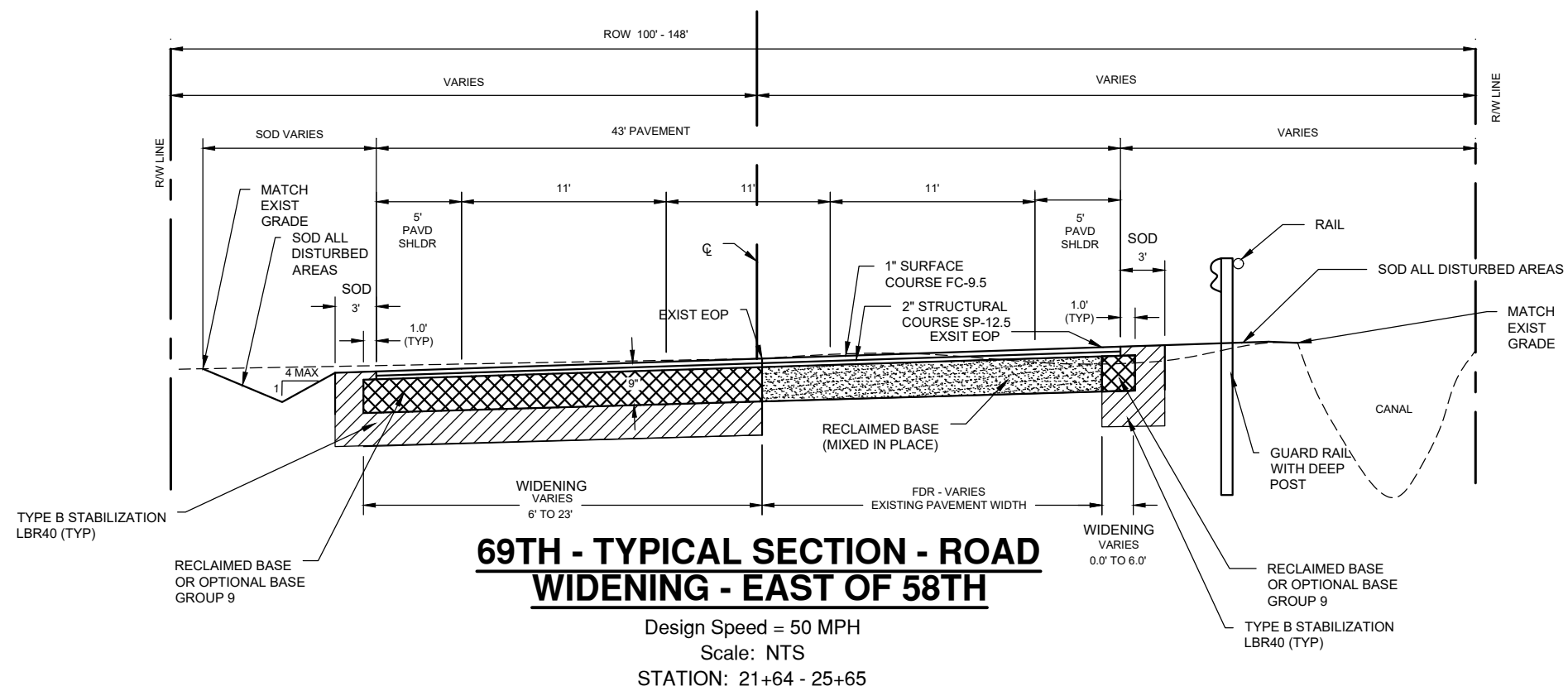
REVISIONS				ERIC L. FLAVELL, P.E. P.E. LICENSE NUMBER 76826 BOWMAN CONSULTING GROUP 4450 W. EAU GALLIE BLVD. MELBOURNE, FL 32934 CERTIFICATE OF AUTHORIZATION 30462	INDIAN RIVER COUNTY DEPARTMENT OF PUBLIC WORKS/ENGINEERING DIVISION			SHEET NO. 6
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO. CR-613 58th AVE	COUNTY INDIAN RIVER	FINANCIAL PROJECT ID IRC: 1325 FDOT:436416-1-54-01	

FOR BIDDING PURPOSES ONLY TYPICAL SECTIONS



**69TH - TYPICAL SECTION - ROAD
WIDENING - WEST OF 58TH**

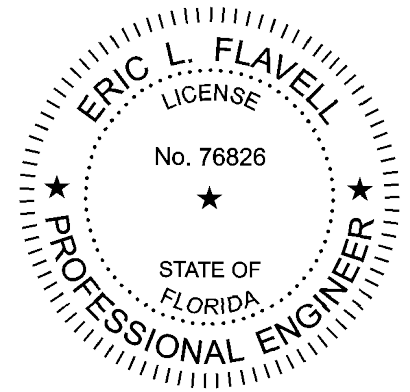
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**69TH - TYPICAL SECTION - ROAD
WIDENING - EAST OF 58TH**

Design Speed = 50 MPH
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STATION: 21+64 - 25+65

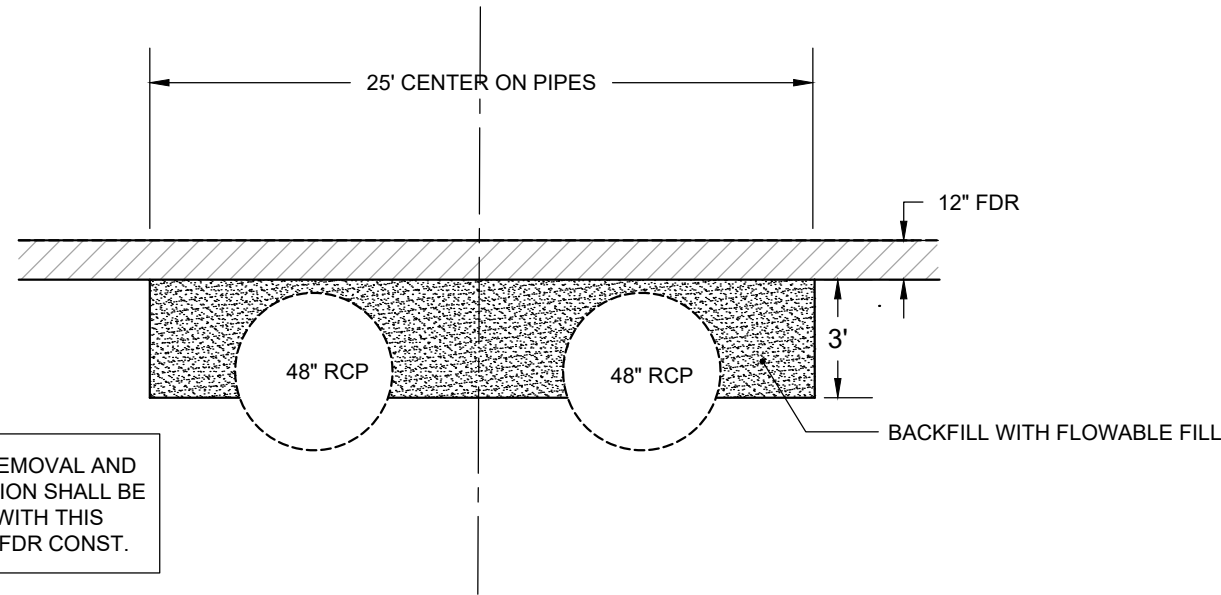
LEGEND	
	RECLAIMED BASE MIXED IN PLACE
	RECLAIMED BASE OR OPTIONAL BASE GROUP 9
	TYPE B STABILIZATION LBR40



REVISIONS		DESCRIPTION		INDIAN RIVER COUNTY			SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION	DEPARTMENT OF PUBLIC WORKS/ENGINEERING DIVISION	ROAD NO.	COUNTY	
				CR-613	INDIAN RIVER	FINANCIAL PROJECT ID: IRC: 1325	7
				58th AVE	INDIAN RIVER	FDOT:436416-1-54-01	

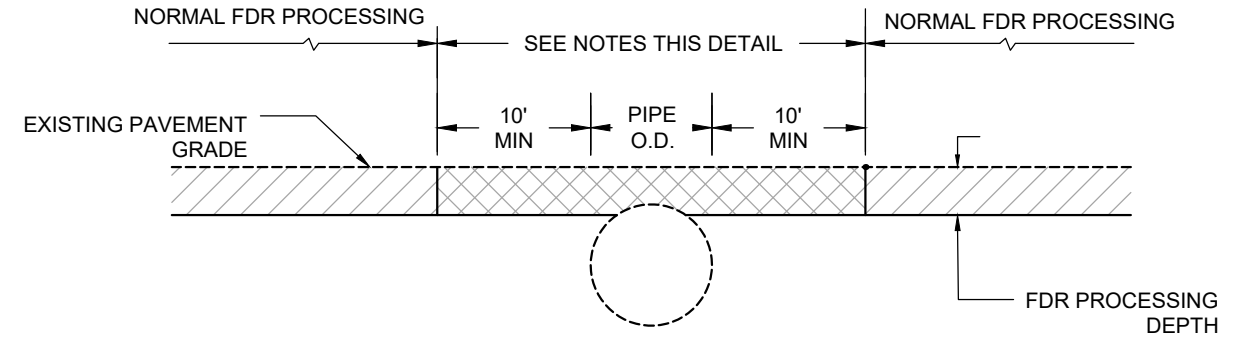
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TYPICAL SECTIONS



CULVERT CROSSING AREA RECONSTRUCTION

Scale: NTS

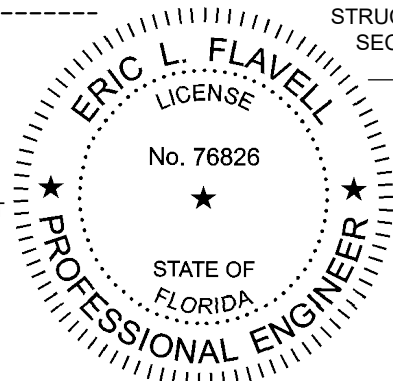
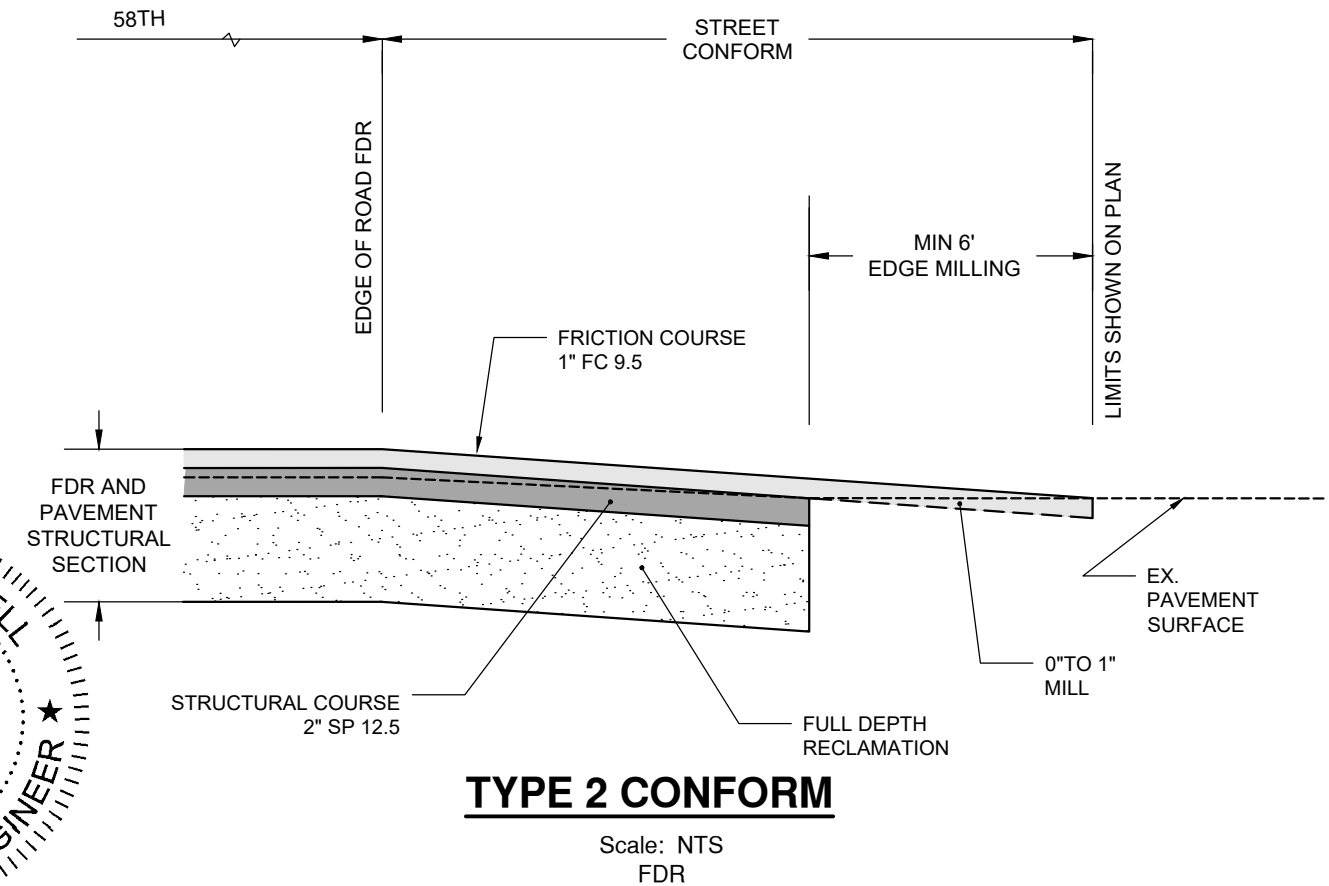
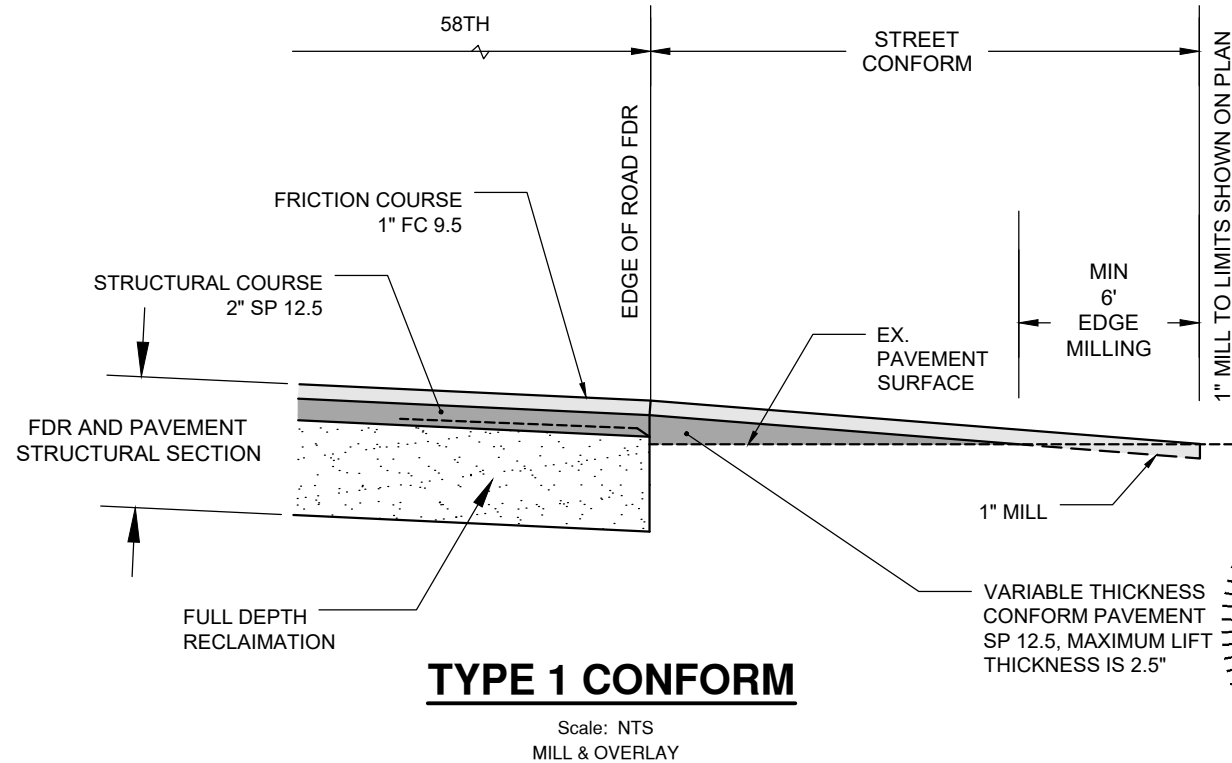


NOTES THIS DETAIL:

1. CONTRACTOR SHALL PERFORM INDEPENDENT RECONNAISSANCE OF ALL STORM STRUCTURES CROSSING THE ROAD TO DETERMINE IF THERE ARE ANY STRUCTURES THAT COULD BE WITHIN THE FDR PROCESSING DEPTH, AND THESE SHALL BE POTHOLED TO CONFIRM THE DEPTH TO TOP OF PIPE. THESE LOCATIONS SHALL BE FLAGGED BY THE CONTRACTOR SO HE CAN CONTROL HIS OPERATIONS AROUND SHALLOW PIPES.
2. ALL WORK AROUND SHALLOW PIPES SHALL CONFORM TO THIS DETAIL AND WILL REQUIRE HAND WORK. THE VOID LEFT BY EXCAVATING EXISTING BASE AND ASPHALT MATERIAL TO THE FDR PROCESSING DEPTH SHALL BE BACKFILLED WITH PROCESSED FDR MATERIAL. COMPACTION SHALL BE BY STATIC ROLLER AROUND THE SHALLOW PIPES AND CARE SHALL BE TAKEN TO PROTECT EXISTING PIPES IN PLACE.

FDR AT SHALLOW PIPE

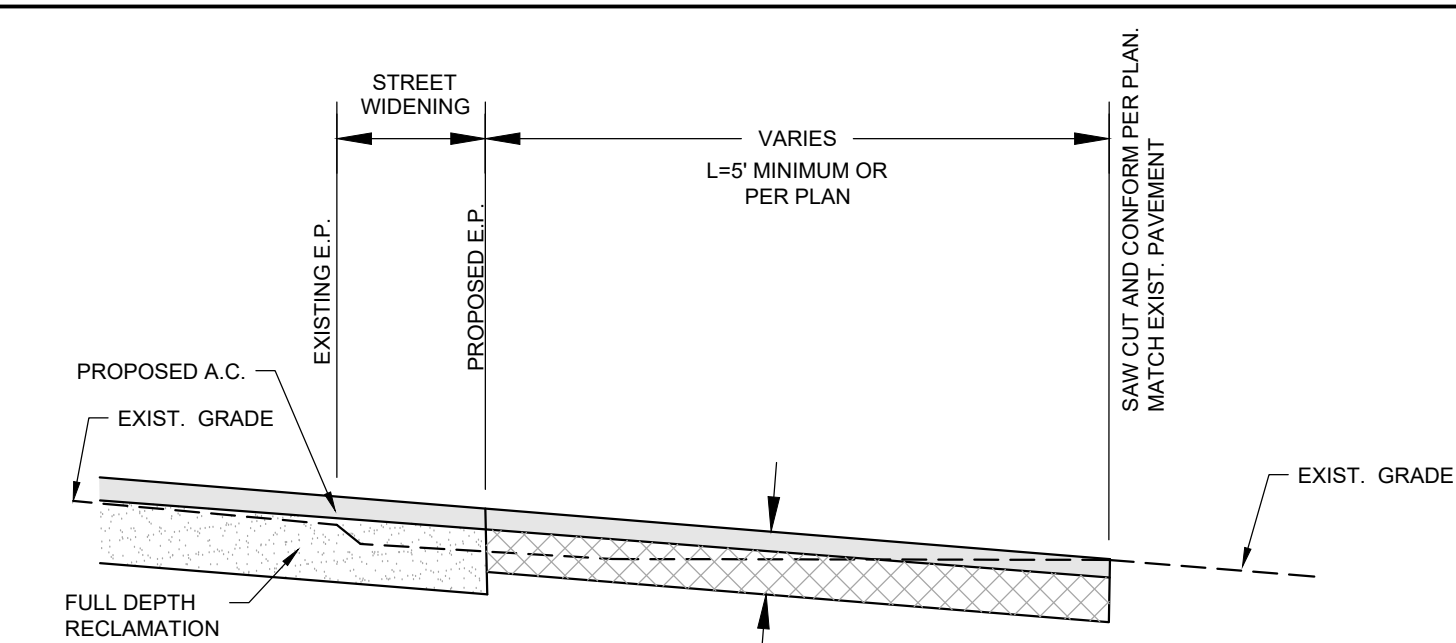
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REVISIONS		DESCRIPTION		ERIC L. FLAVELL, P.E.		INDIAN RIVER COUNTY		DETAILS
DATE	DESCRIPTION	DATE	DESCRIPTION	P.E. LICENSE NUMBER 76826		DEPARTMENT OF PUBLIC WORKS/ENGINEERING DIVISION		
----	----	----	----	BOWMAN CONSULTING GROUP		ROAD NO. COUNTY FINANCIAL PROJECT ID		
				4450 W. EAU GALLIE BLVD.		CR-613 INDIAN RIVER IRC: 1325		
				MELBOURNE, FL 32934		58th AVE FDOT:436416-1-54-01		
				CERTIFICATE OF AUTHORIZATION 30462				

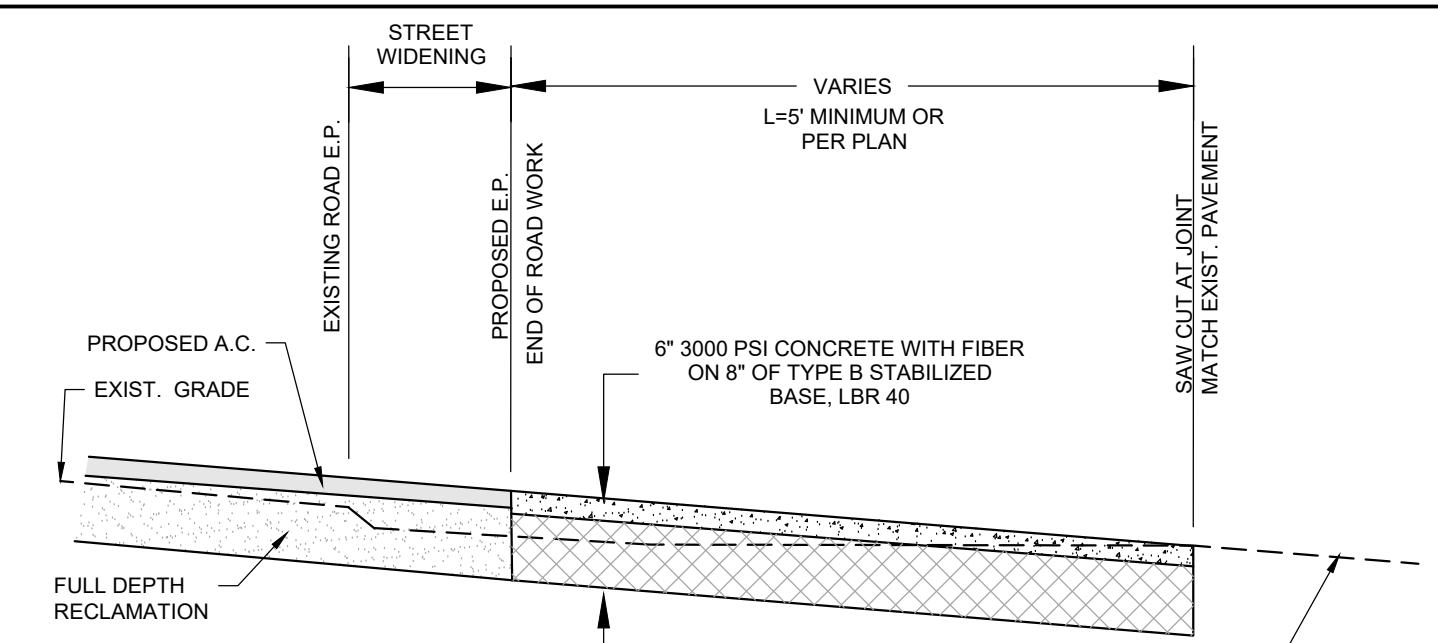
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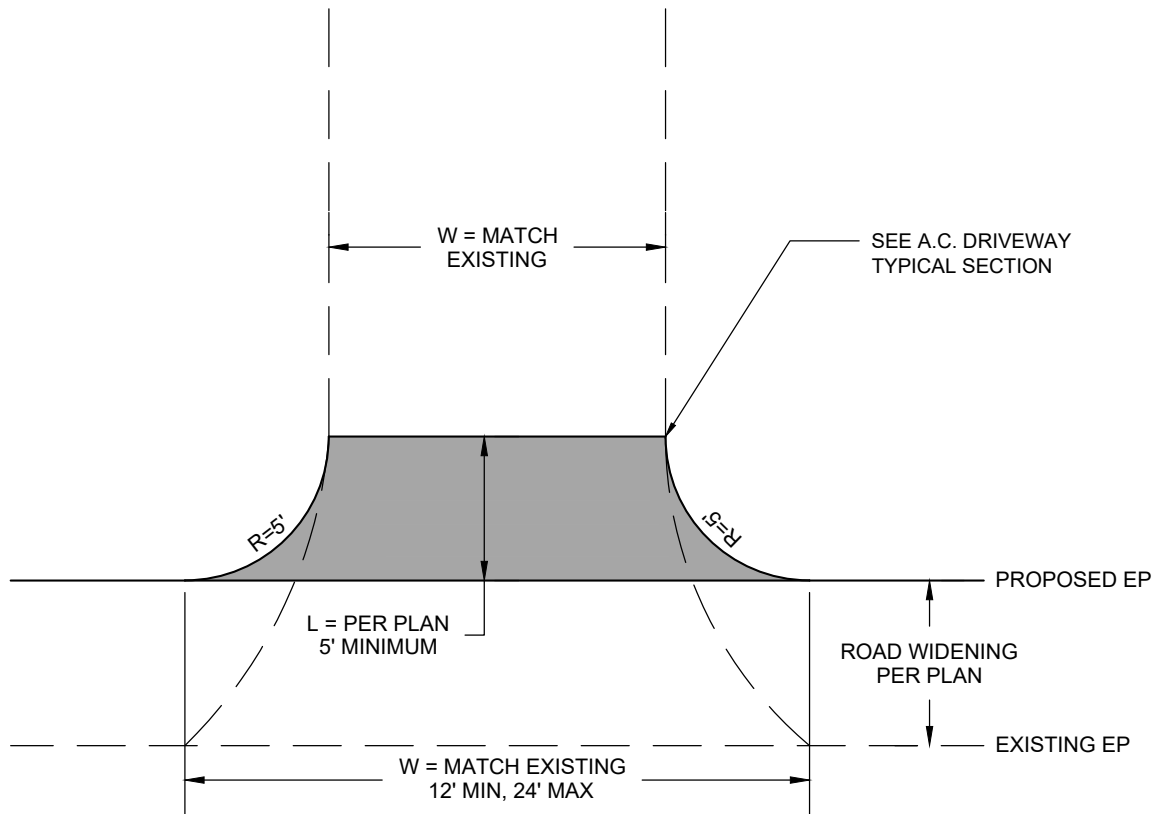
CUT OR FILL AND GRADE FOR SMOOTH TRANSITION

A.C. PAVEMENT DRIVEWAY
Scale: NTS

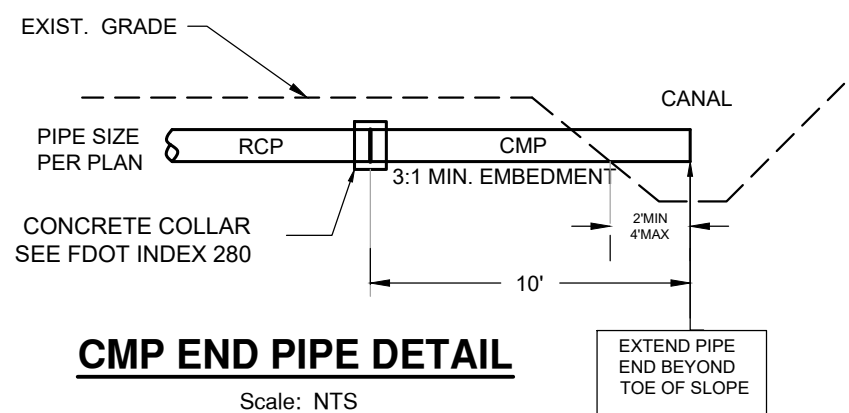


CUT OR FILL AND GRADE FOR SMOOTH TRANSITION CONFORM TO EXISTING DRAINAGE PATTERN

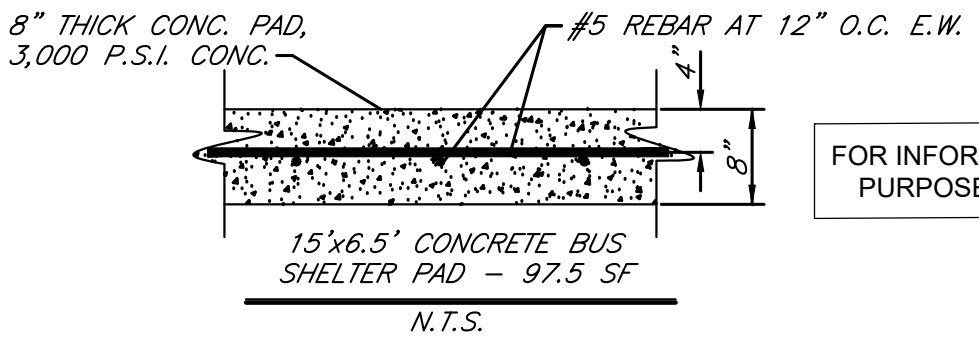
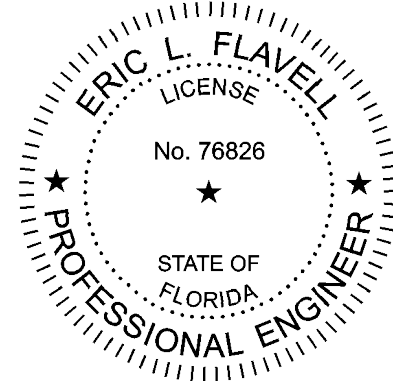
CONCRETE DRIVEWAY
Scale: NTS



A.C. DRIVEWAY LAYOUT
Scale: NTS



CMP END PIPE DETAIL
Scale: NTS



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INDIAN RIVER COUNTY 1801 27TH STREET VERO BEACH, FL 32960 (772) 567-8000	DEPARTMENT OF PUBLIC WORKS ENGINEERING DIVISION	BUS SHELTER PAD TYPICAL SECTION
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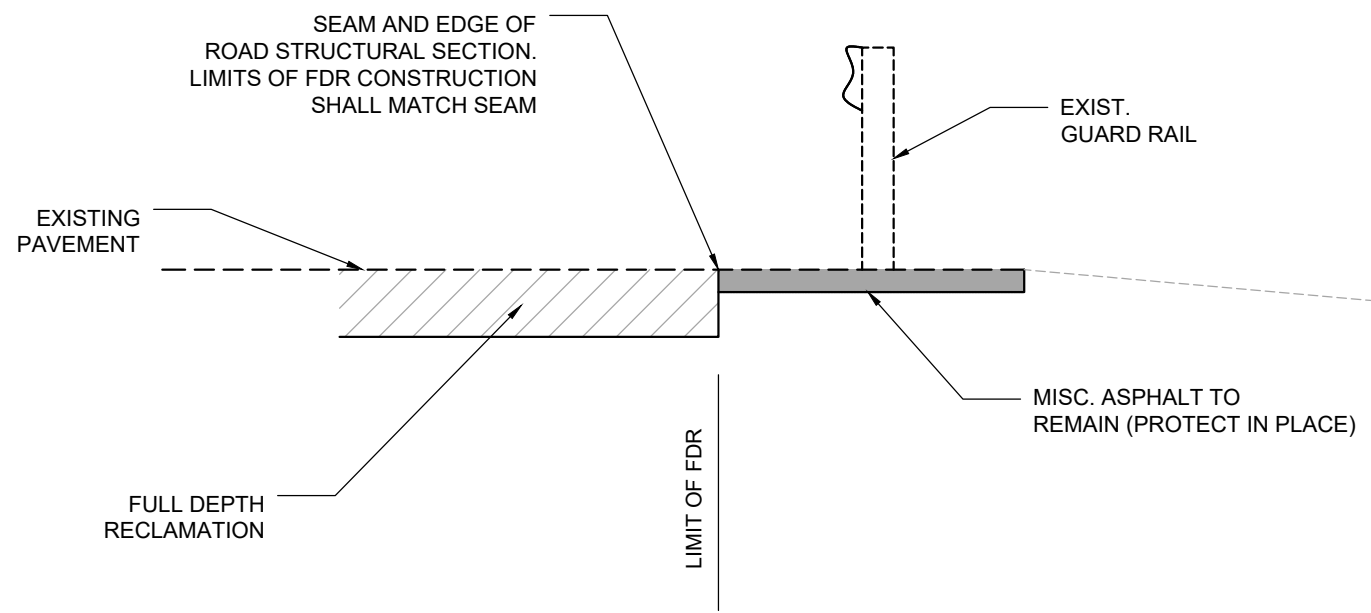
REVISIONS		DESCRIPTION		DESCRIPTION	
DATE	DESCRIPTION	DATE	DESCRIPTION	DESCRIPTION	DESCRIPTION
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ERIC L. FLAVELL, P.E.
 P.E. LICENSE NUMBER 76826
 BOWMAN CONSULTING GROUP
 4450 W. EAU GALLIE BLVD.
 MELBOURNE, FL 32934
 CERTIFICATE OF AUTHORIZATION 30462

INDIAN RIVER COUNTY
 DEPARTMENT OF PUBLIC WORKS/ENGINEERING DIVISION
 ROAD NO. COUNTY FINANCIAL PROJECT ID
 CR-613 INDIAN RIVER IRC: 1325
 58th AVE FDOT: 436416-1-54-01

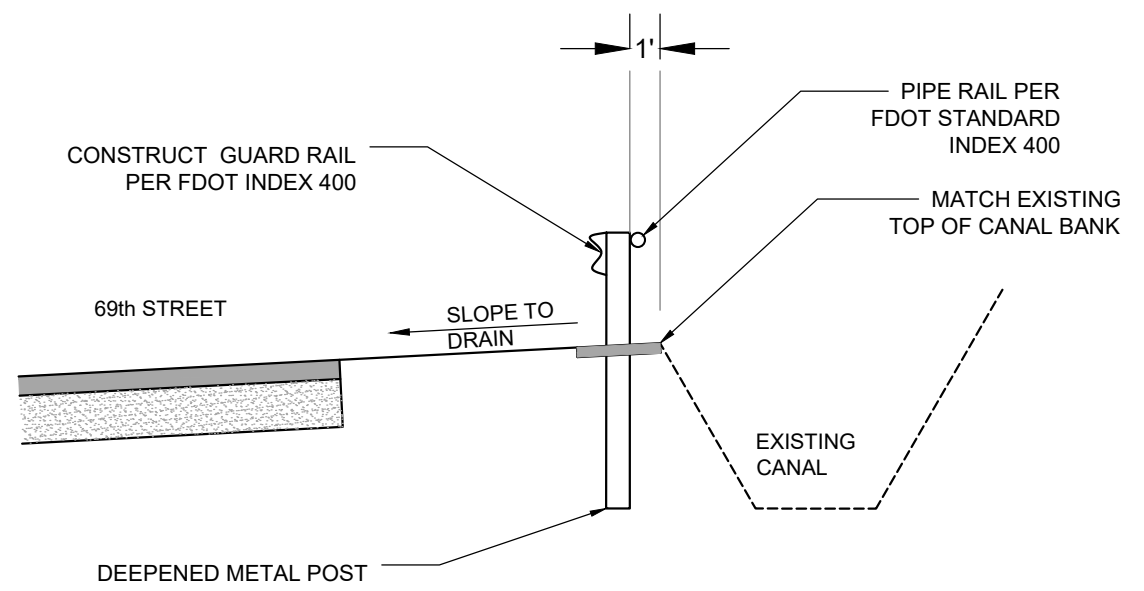
DETAILS

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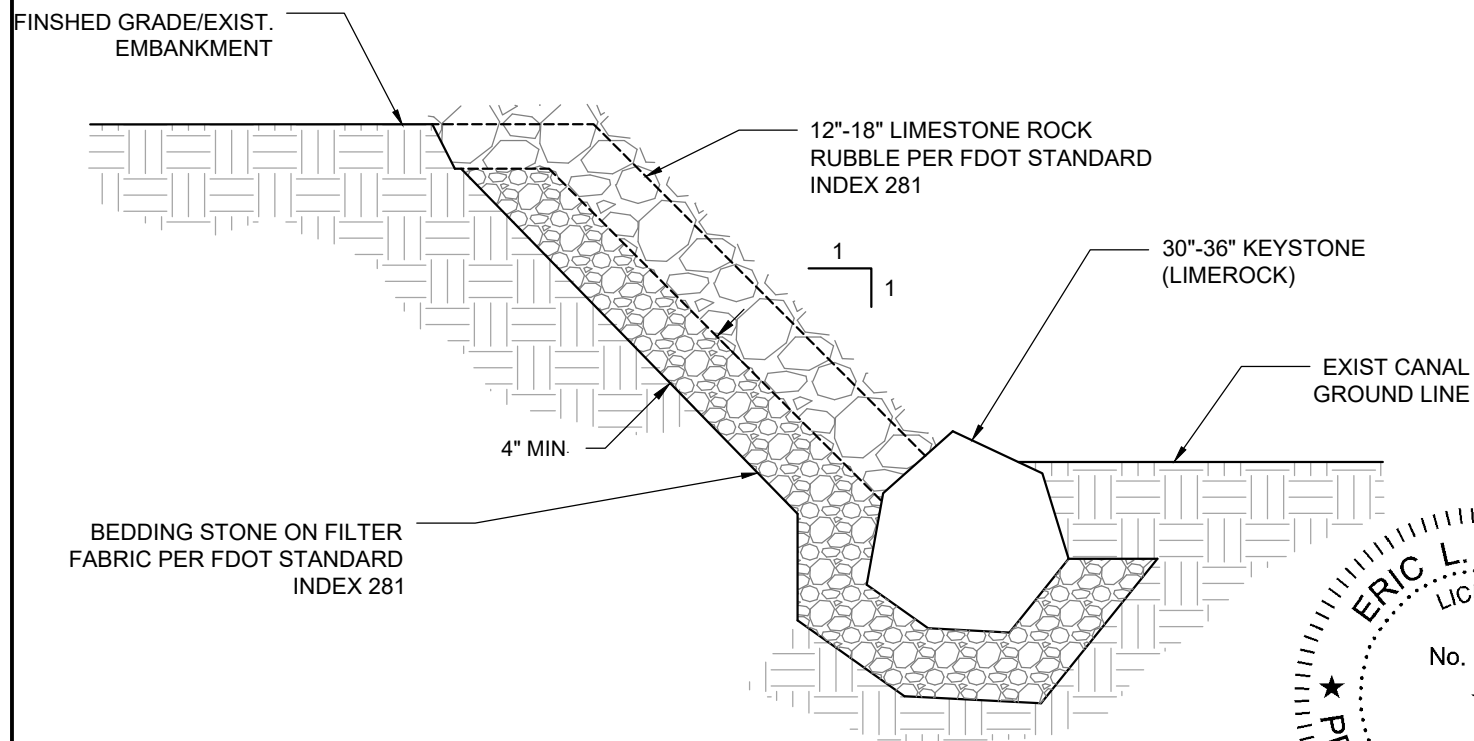
FDR LIMITS AT EXISTING GUARD RAIL

Scale: NTS



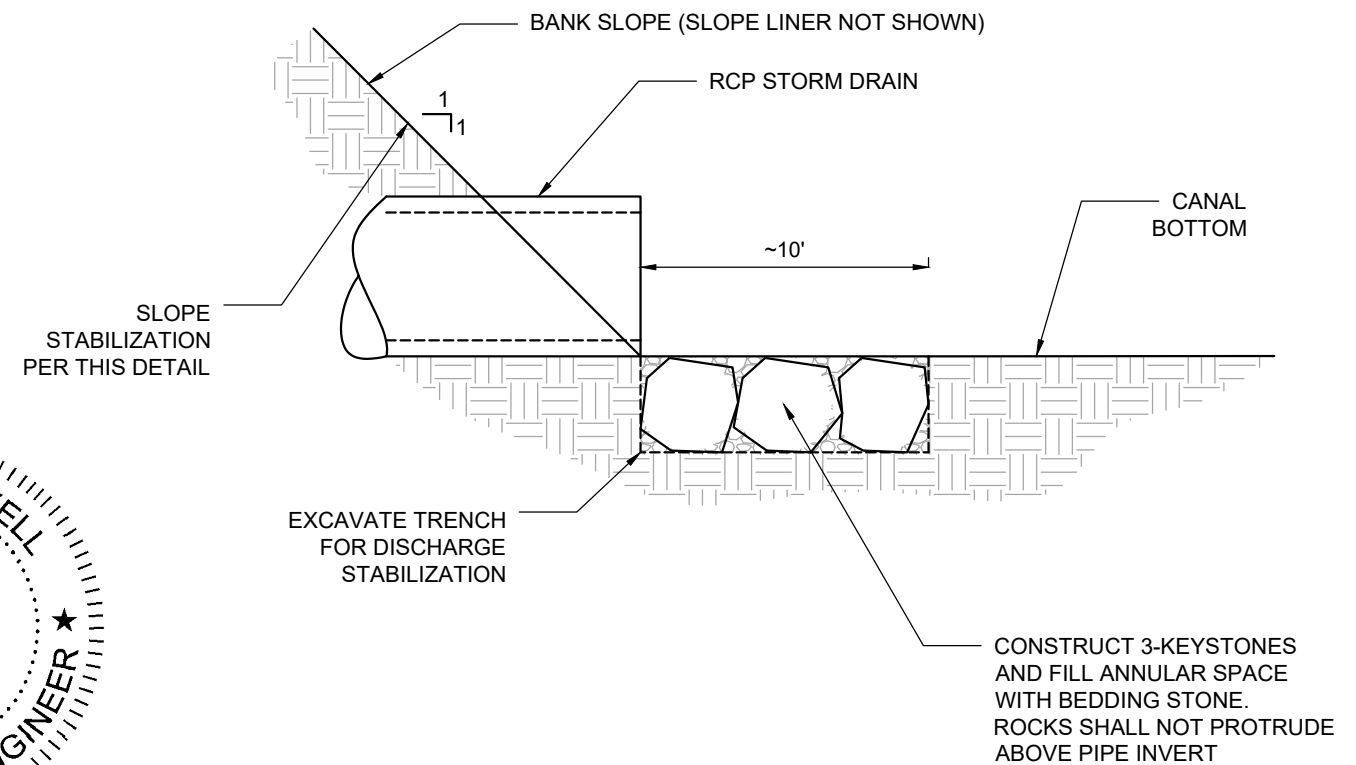
GUARD RAIL AT CANAL DETAIL

Scale: NTS



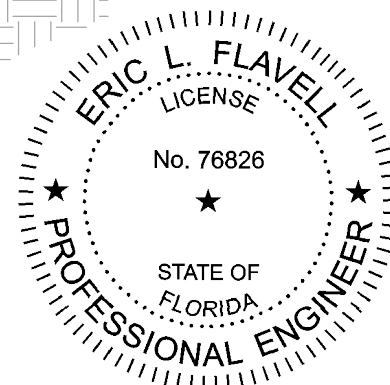
RUBBLE RIP-RAP(SLOPE LINER)

Scale: NTS



RUBBLE RIP-RAP(PIPE DISCHARGE LINER)

Scale: NTS



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DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID.	
----					CR-613 58th AVE	INDIAN RIVER	IRC: 1325 FDOT:436416-1-54-01	10

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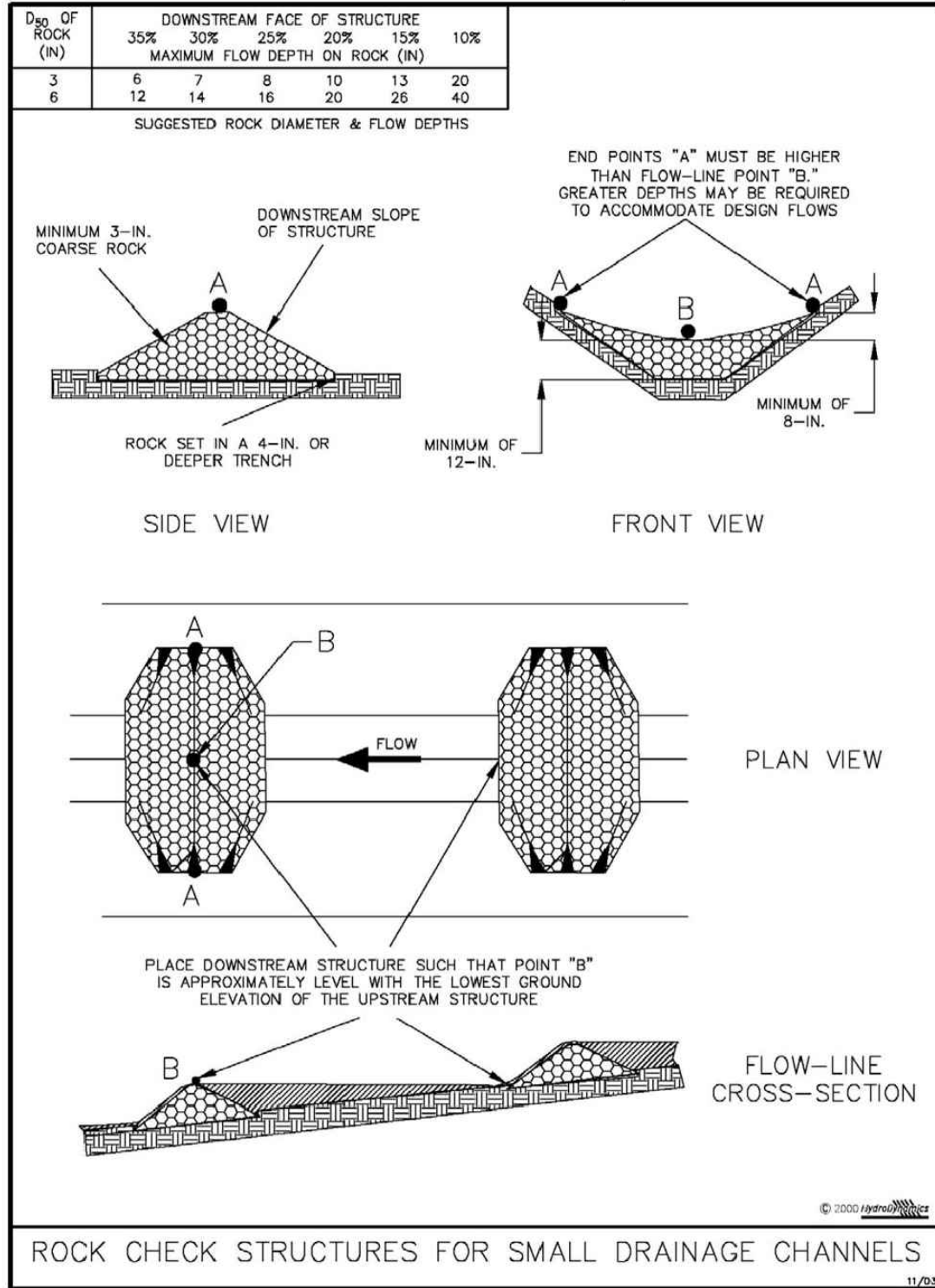


Figure III-11: Rock Check Structures in Small Drainage Channels
 Permission is given by HydroDynamics Incorporated to copy and reproduce this detail

III-33

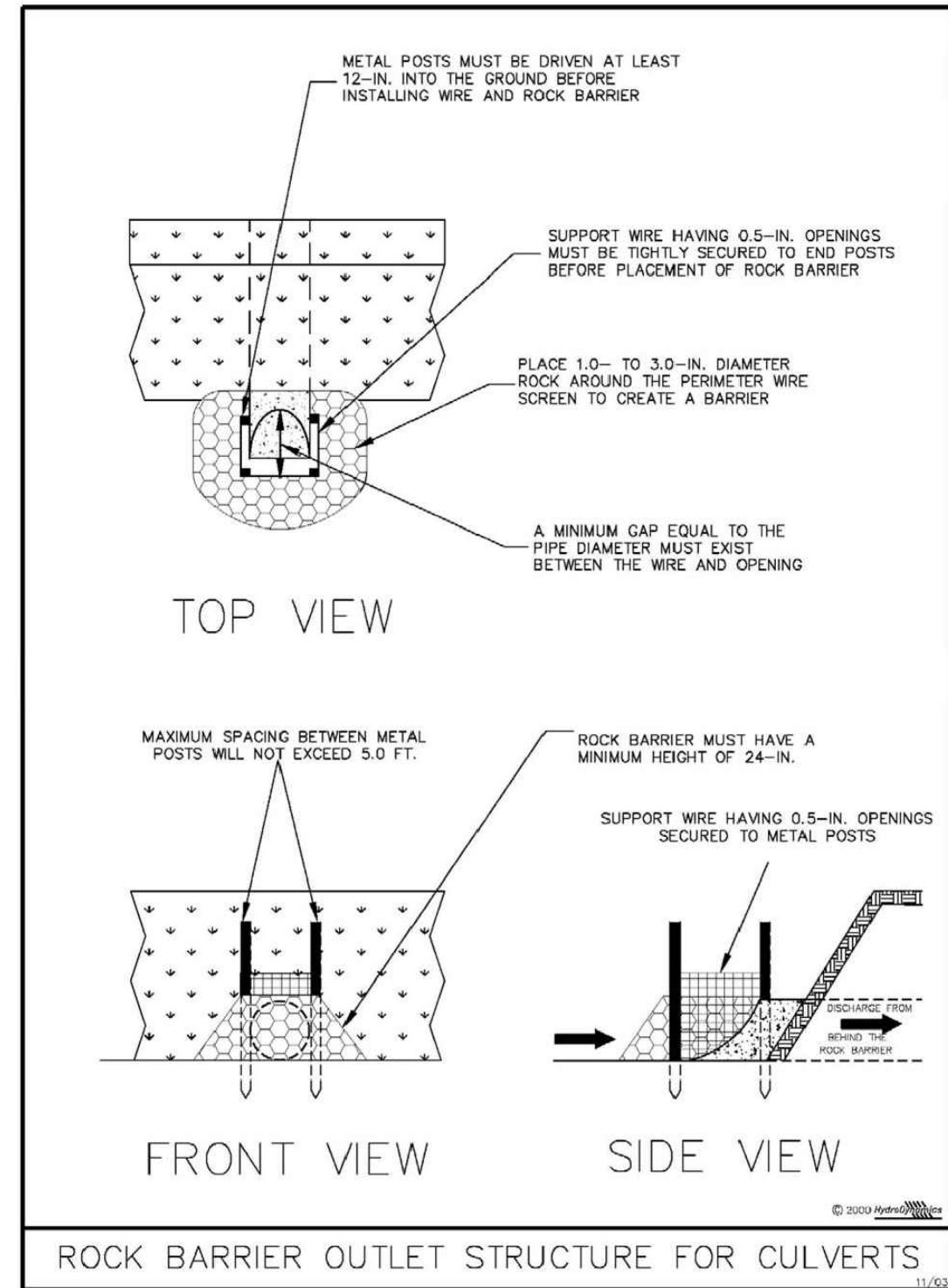


Figure IV-15: Illustration of a Rock Barrier Structure for Culverts

IV-32

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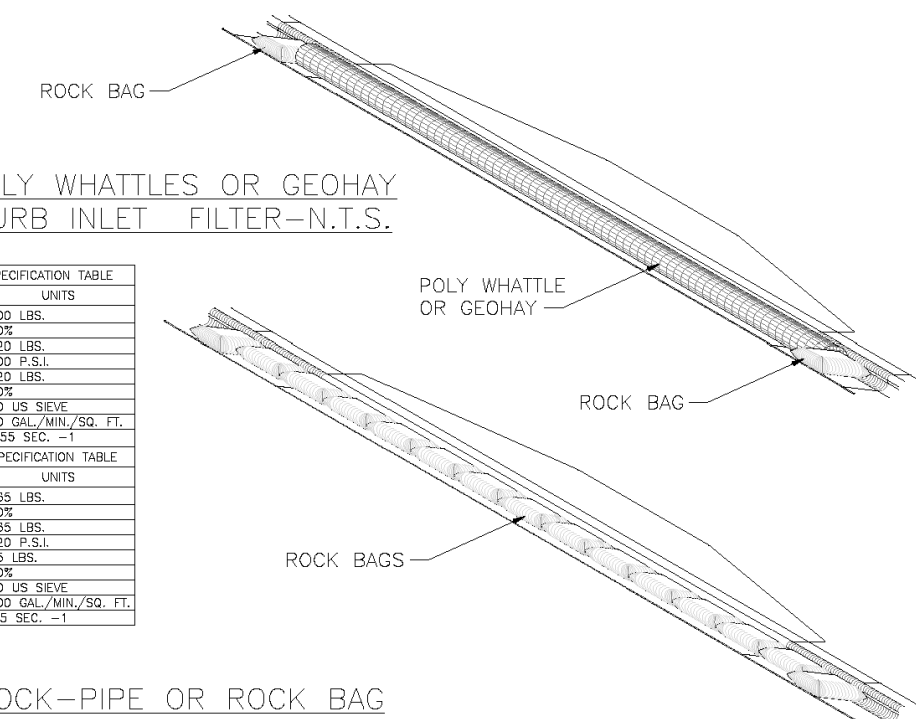
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EROSION CONTROL NOTES

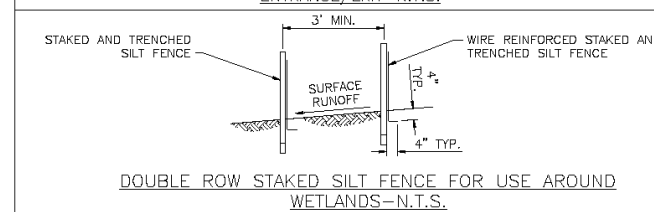
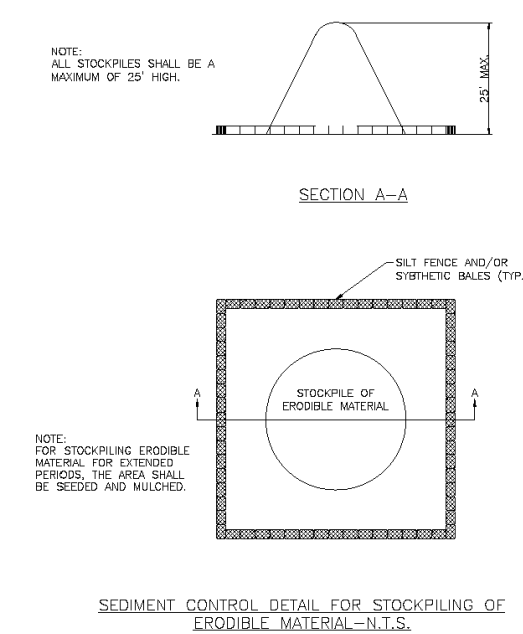
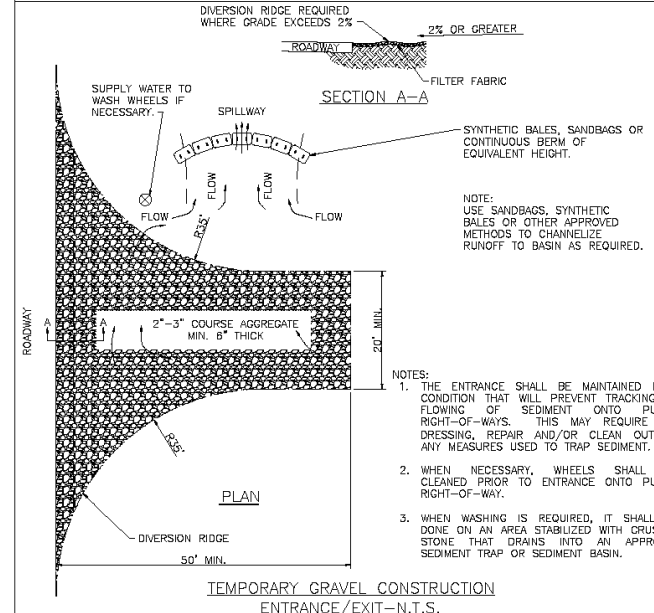
- Sediment basins and traps, perimeter dikes, sediment barriers and other measures intended to trap sediment shall be constructed as a first step in any land disturbing activity and shall be made functional before up-slope land disturbance takes place.
- All sediment control measures are to be adjusted to meet field conditions at the time of construction and be constructed prior to any grading or disturbance of existing surface material on balance of site. Perimeter sediment barriers shall be constructed to prevent sediment or trash from flowing or floating on to adjacent properties.
- Permanent or temporary soil stabilization shall be applied to denuded areas within seven (7) days after final grade is reached on any portion of the site. Temporary soil stabilization shall be applied within seven (7) days to denuded areas that may not be at final grade but will remain undisturbed for longer than 30 days. Permanent stabilization shall be applied to areas that are to be left undisturbed for more than one year.
- During construction of the project, soil stock piles shall be stabilized, covered or contained with sediment trapping measures. The applicant is responsible for the temporary protection and permanent stabilization of all soil stockpiles on site as well as soil intentionally transported from the project site.
- A permanent vegetative cover shall be established on denuded areas not otherwise permanently stabilized.
- After any significant rainfall, sediment control structures will be inspected for integrity. Any damaged devices shall be corrected immediately.
- Concentrated runoff shall not flow down cut or fill slopes unless contained within an adequate temporary or permanent channel, flume, slope drain structure or approved control.
- Sediment will be prevented from entering any storm water system, ditch or channel. All storm water inlets that are made operable during construction shall be protected so that sediment-laden water cannot enter the conveyance system without first being filtered or otherwise treated to remove sediment.
- When work in a live watercourse is performed, precautions shall be taken to minimize encroachment, control sediment transport and stabilize the work area to the greatest extent possible during construction.
- Periodic inspection and maintenance of all sediment control structures must be provided to ensure intended purpose is accomplished. The developer, owner and/or contractor shall be continually responsible for all sediment controls. Sediment control measures shall be in working condition at the end of each working day.
- Where construction vehicle access routes intersect paved public roads, provisions shall be made to minimize the transport of sediment by tracking onto the paved surface. Where sediment is transported onto a public road surface with curbs and gutters, the road shall be cleaned thoroughly at the end of each day. Sediment shall be removed from the roads by shoveling or sweeping and transported to a sediment control disposal area. Street washing shall be allowed only after sediment is removed in this manner. This provision shall apply to individual subdivision lots as well as to larger land disturbing activities.
- All temporary erosion and sediment control measures shall be removed within 30 days after final site stabilization or after the temporary measures are no longer needed.
- Properties and waterways downstream from construction sites shall be protected from sediment deposition and erosion at all times during construction.
- Erosion control design and construction shall follow the Typical Details (SWPPP) provided within this plan set.
- Contractor is responsible for all surface water discharges, rainfall run off or dewatering activities.
- Contractor must incorporate all BMP's necessary to meet or exceed state water quality and SWPPP requirements.
- The Pollution Prevention Plan is a minimum guideline only. Additional BMP's may be necessary at contractor's expense.
- NOI to be posted on site.
- Dewatering activities:
 - A - Discharge must not exceed state water quality standards.
 - B - Contractor must have a transferable SJRWMD Consumptive Use Permit known as a "Noticed General Permit For Short Term Construction De-Watering".
 - C - No hydraulic pumps may be used for dewatering unless approved by the water management district for that area.
 - D - No turbid discharge. Turbidity readings are required once a week and must be reported to the project engineer.

LOW TO MODERATE FLOW GEOTEXTILE FABRIC SPECIFICATION TABLE		
PROPERTIES	TEST METHOD	UNITS
GRAB TENSILE STRENGTH	ASTM D-4632	300 LBS.
GRAB TENSILE ELONGATION	ASTM D-4632	20%
PUNCTURE	ASTM D-4833	120 LBS.
MULLEN BURST	ASTM D-3786	800 P.S.I.
TRAPEZOID TEAR	ASTM D-4533	120 LBS.
UV RESISTANCE	ASTM D-4355	80%
APPARENT OPENING SIZE	ASTM D-4751	40 US SIEVE
FLOW RATE	ASTM D-4491	40 GAL./MIN./SQ. FT.
PERMITTIVITY	ASTM D-4491	0.55 SEC. -1
MODERATE TO HIGH FLOW GEOTEXTILE FABRIC SPECIFICATION TABLE		
PROPERTIES	TEST METHOD	UNITS
GRAB TENSILE STRENGTH	ASTM D-4632	265 LBS.
GRAB TENSILE ELONGATION	ASTM D-4632	20%
PUNCTURE	ASTM D-4833	135 LBS.
MULLEN BURST	ASTM D-3786	420 P.S.I.
TRAPEZOID TEAR	ASTM D-4533	45 LBS.
UV RESISTANCE	ASTM D-4355	90%
APPARENT OPENING SIZE	ASTM D-4751	20 US SIEVE
FLOW RATE	ASTM D-4491	200 GAL./MIN./SQ. FT.
PERMITTIVITY	ASTM D-4491	1.5 SEC. -1

POLY WHATTLES OR GEOHAY CURB INLET FILTER-N.T.S.



SOCK-PIPE OR ROCK BAG INLET FILTER-N.T.S.



NO.	REVISION	DATE	BY
1			

INDIAN RIVER COUNTY
1801 27TH STREET
VERO BEACH, FL 32960
(772) 567-8000



DEPARTMENT OF PUBLIC WORKS
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DRAWN BY: -	TOWNSHIP: -	PAGE: -	PROJECT NUMBER: -
APPROVED BY: -	RANGE: -		

SWPPP DETAILS

SHEET	-
OF	-

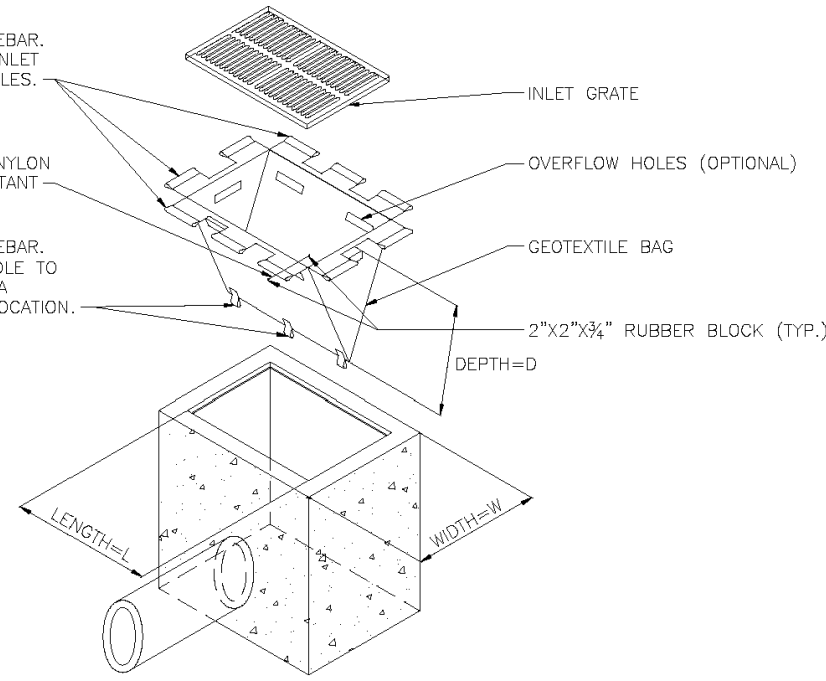
REVISIONS				ERIC L. FLAVELL, P.E. P.E. LICENSE NUMBER 76826 BOWMAN CONSULTING GROUP 4450 W. EAU GALLIE BLVD. MELBOURNE, FL 32934 CERTIFICATE OF AUTHORIZATION 30462	INDIAN RIVER COUNTY DEPARTMENT OF PUBLIC WORKS/ENGINEERING DIVISION			DETAILS
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID.	
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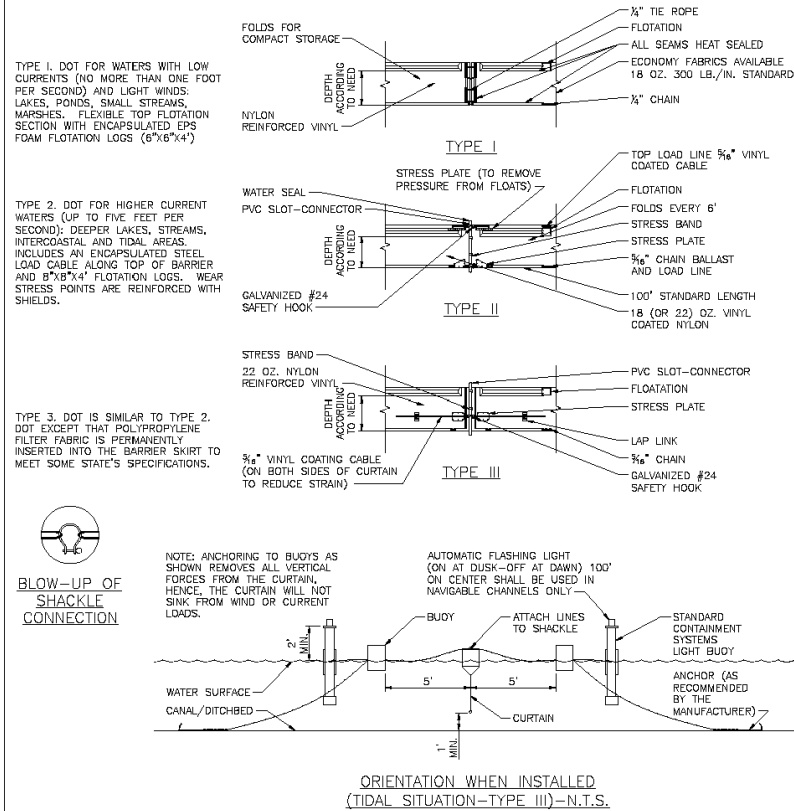
LOOPS SIZED FOR 1" REBAR.
LIFT FILTER BAG FROM INLET
USING REBAR FOR HANDLES.

1/4" BRIGHTLY COLORED NYLON
ROPE, EXPANSION RESISTANT

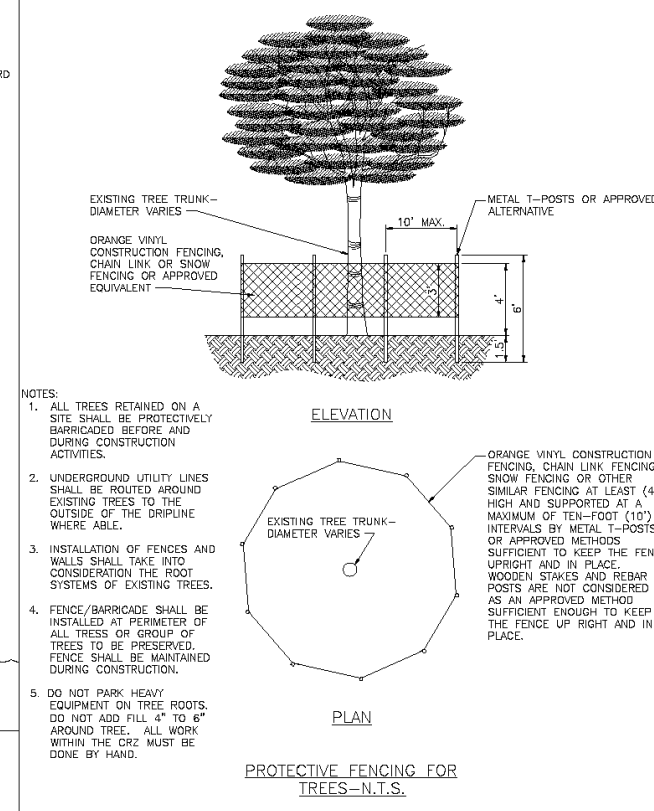
LOOPS SIZED FOR 1" REBAR.
USE REBAR FOR A HANDLE TO
EMPTY FILTER SACK AT A
SEDIMENT COLLECTION LOCATION.



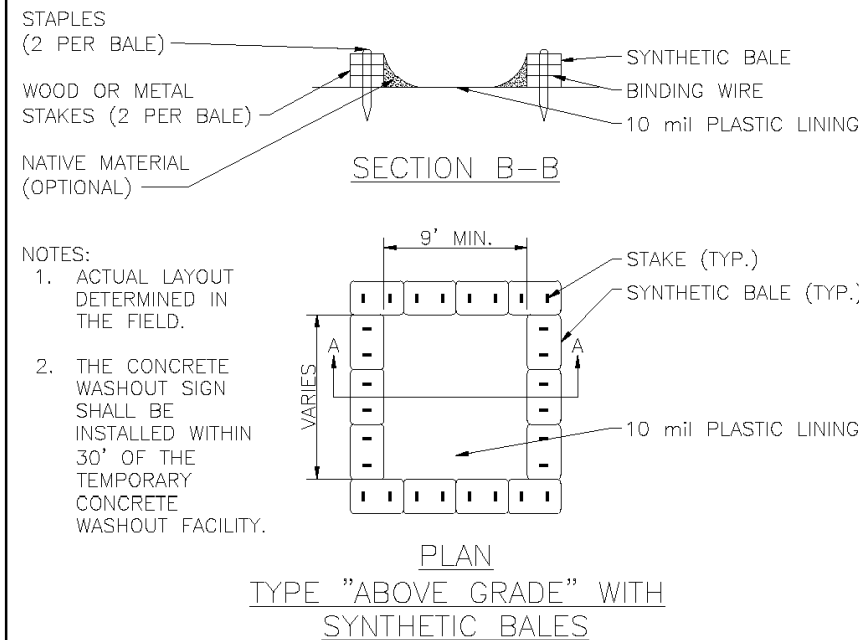
FILTER SACKS FOR GRATED INLETS
AND STABILIZED ROADWAYS-N.T.S.



ORIENTATION WHEN INSTALLED
(TIDAL SITUATION-TYPE III)-N.T.S.

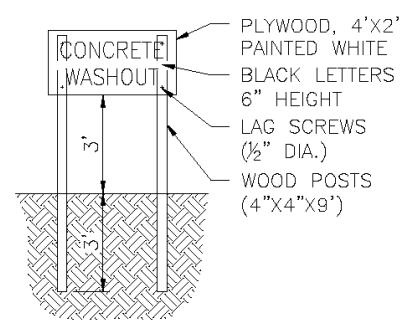


PROTECTIVE FENCING FOR
TREES-N.T.S.

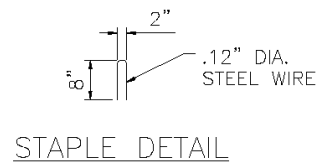


PLAN
TYPE "ABOVE GRADE" WITH
SYNTHETIC BALES

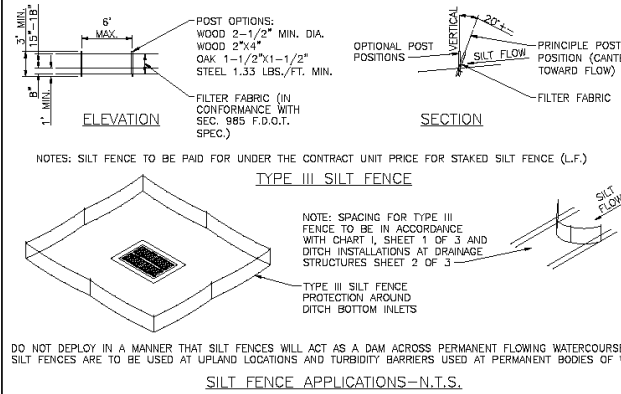
CONCRETE & STUCCO WASTE MANAGEMENT-N.T.S.



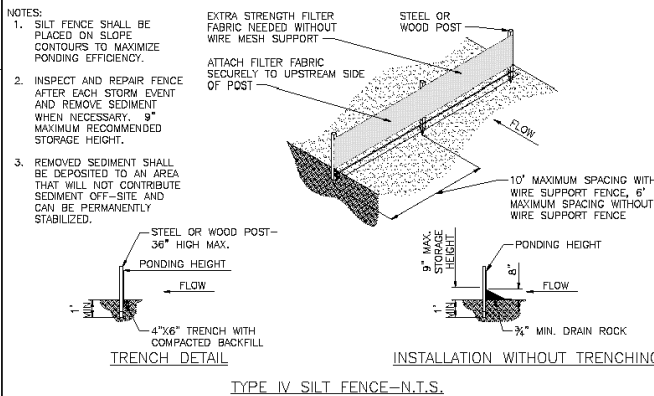
CONCRETE WASHOUT SIGN
DETAIL (OR EQUIVALENT)



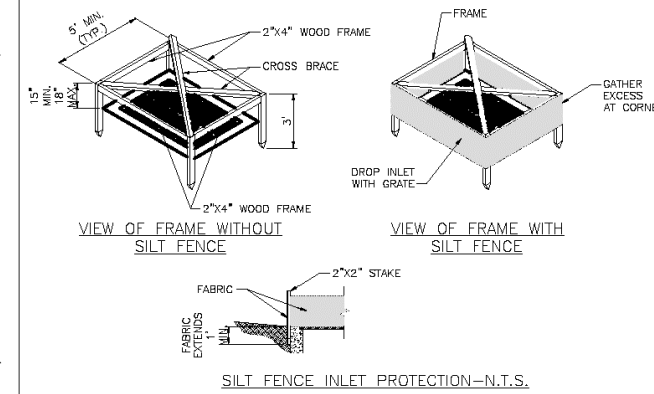
STAPLE DETAIL



SILT FENCE APPLICATIONS-N.T.S.



TYPE IV SILT FENCE-N.T.S.



SILT FENCE INLET PROTECTION-N.T.S.

NO.	REVISION	DATE	BY
1			



INDIAN RIVER COUNTY
1801 27TH STREET
VERO BEACH, FL 32960
(772) 567-8000

DEPARTMENT OF PUBLIC WORKS
ENGINEERING DIVISION

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APPROVED BY: —	RANGE: —		

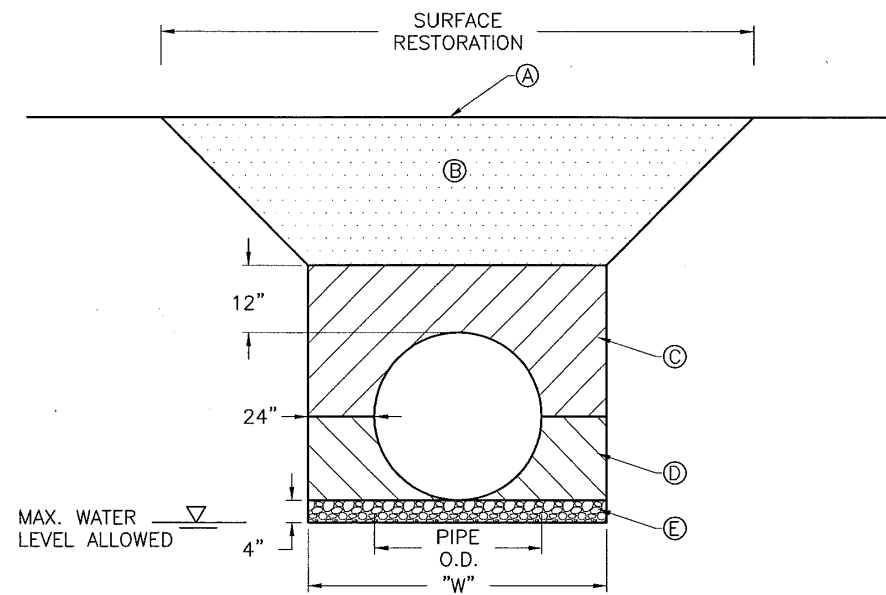
SWPPP DETAILS

SHEET	—
OF	—

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**STORMWATER/UTILITY PIPE
INSTALLATION**

NOTES:

1. UTILITY CONSTRUCTION WITHIN THE RIGHT-OF-WAY SHALL COMPLY WITH COUNTY CODE CHAPTER 312.
2. WHERE SOIL CONDITIONS CANNOT BE MAINTAINED AS SHOWN ABOVE, PROVIDE METHOD OF CONSTRUCTION FOR APPROVAL BY COUNTY ENGINEER OR DESIGNEE PRIOR TO INSTALLATION.
3. SHORING MAY BE REQUIRED IN ACCORDANCE WITH ALL INDUSTRY STANDARDS.
4. MINIMUM TRENCH WIDTH "W" = PIPE O.D. PLUS 2'-0" ON EACH SIDE.

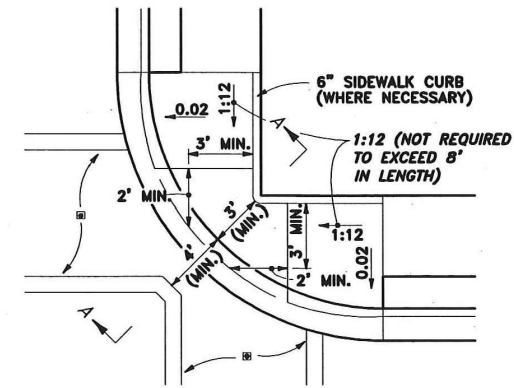
- (A) MATCH EXISTING GROUND WITH SMOOTH, LEVEL TRANSITION.
- (B) UNPAVED ROADS IN ROW SHALL CONSIST OF 8" LIMEROCK BASE OR COQUINA SHELL IN A MINIMUM OF (2) 4" LIFTS WITH A MINIMUM LBR OF 100 COMPACTED TO 98% MAXIMUM DENSITY PER A.A.S.H.T.O. T-180. WHEN INSTALLATION IS NOT LOCATED IN A TRAVEL LANE, RESTORATION SHALL BE ACCORDING TO (C) BELOW WITH SOD LAID WITHIN THREE DAYS OF FINAL GRADING.
- (C) A.A.S.H.T.O. TYPE A-3 MATERIAL IN MAXIMUM 6" LIFTS COMPACTED AT 98% A.A.S.H.T.O. T-180.
- (D) A.A.S.H.T.O. TYPE A-3 MATERIAL IN MAXIMUM 4" LIFTS COMPACTED AT 98% A.A.S.H.T.O. T-180. EXCAVATABLE FLOWABLE FILL IS ALLOWED WITH PRIOR APPROVAL OF PROPOSED MATERIAL STRENGTH BY COUNTY ENGINEER OR DESIGNEE.
- (E) 3/4" DIAMETER, WASHED BEDDING ROCK OR PEA ROCK WHERE UNSUITABLE BEDDING MATERIAL EXISTS OR DEWATERING IS REQUIRED. SUITABLE MATERIAL IS DEFINED AS STABLE GRANULAR MATERIAL FREE OF ROCK FORMATION, OTHER FOREIGN FORMATIONS AND CONSTRUCTED TO UNIFORM GRADE AND LINE.

INDIAN RIVER COUNTY
1801 27TH STREET
VERO BEACH, FL 32960
(772) 226-1283



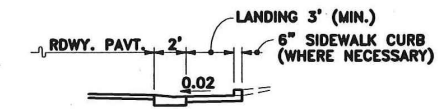
DEPARTMENT OF PUBLIC WORKS
ENGINEERING DIVISION

TRENCH
(UNPAVED AREAS)



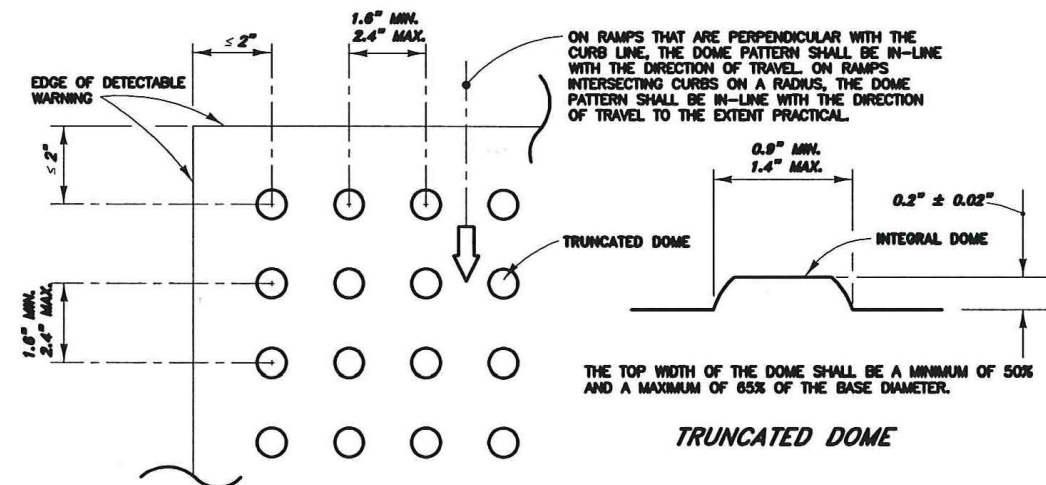
CROSSWALK WIDTH AND CONFIGURATION VARY; MUST CONFORM TO INDEX NO. 17344 AND 17346.

PLAN



CR 26

**DIMENSIONAL FEATURES FOR
PUBLIC SIDEWALK COMBINED CORNER
RAMPS UNDER CONDITIONS OF INFEASIBILITY**



BASE-TO-BASE SPACING SHALL BE 0.65" MINIMUM BETWEEN DOMES.

PLAN VIEW

TRUNCATED DOME

DETECTABLE WARNING
SHALL BE FEDERAL YELLOW

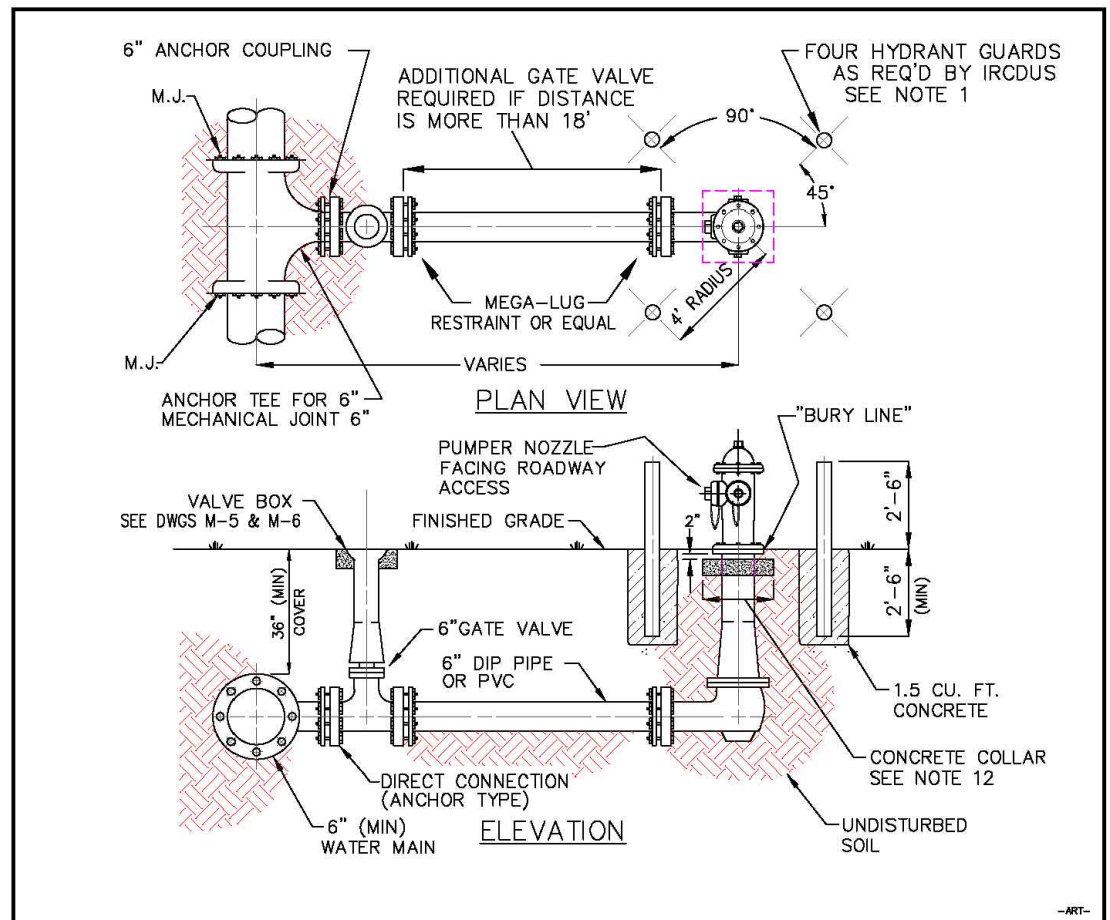
ALL SIDEWALK CURB RAMPS SHALL HAVE DETECTABLE WARNING SURFACES THAT EXTEND THE FULL WIDTH OF THE RAMP AND IN THE DIRECTION OF TRAVEL 24" (310mm) FROM THE BACK OF CURB.

**CURB RAMP DETECTABLE WARNING DETAIL
FDOT INDEX #304**

REVISIONS				ERIC L. FLAVELL, P.E. P.E. LICENSE NUMBER 76826 BOWMAN CONSULTING GROUP 4450 W. EAU GALLIE BLVD. MELBOURNE, FL 32934 CERTIFICATE OF AUTHORIZATION 30462	INDIAN RIVER COUNTY DEPARTMENT OF PUBLIC WORKS/ENGINEERING DIVISION			DETAILS
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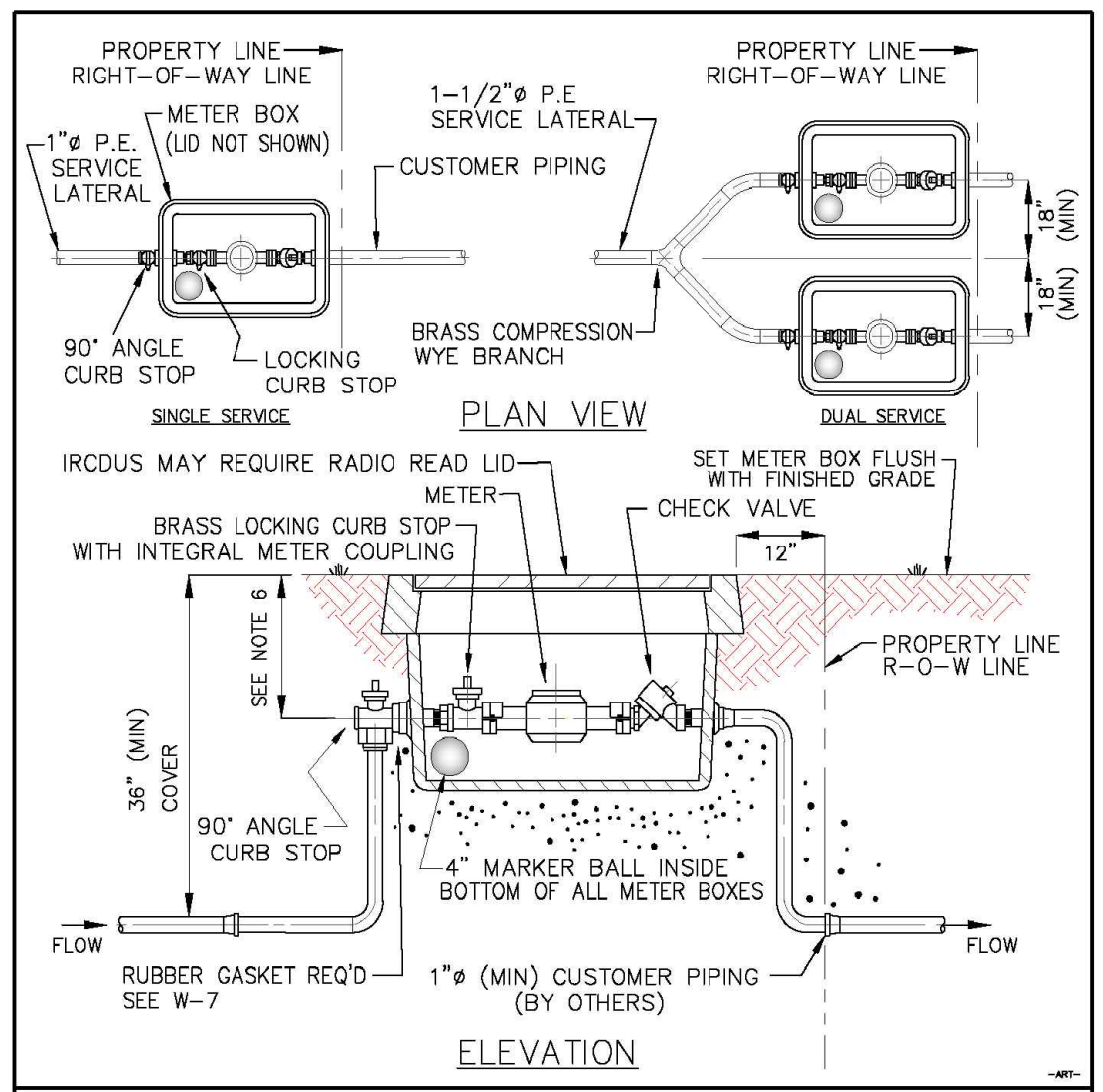
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- NOTES**
1. HYDRANT GUARDS TO BE 4" DIAMETER GALVANIZED STEEL OR DUCTILE IRON PIPE FILLED WITH CONCRETE WHEN REQUIRED BY IRCUDS. GUARDS TO BE PAINTED RED SAME AS HYDRANT AND VALVE COVER.
 2. THE HYDRANT SHOULD BE SET SUCH THAT THE "BURY LINE" ON THE HYDRANT BARREL IS SET AT FINISHED GRADE OR THAT THE OPERATING NUT OF THE PUMPER NOZZLE HYDRANT IS A MINIMUM OF 18" ABOVE FINISHED GRADE.
 3. ALL HYDRANTS SHALL BE TRAFFIC BREAKAWAY TYPE.
 4. COMPLETE ANCHORED FIRE HYDRANT ASSEMBLY MAY BE UTILIZED IN LIEU OF ABOVE.
 5. FIRE HYDRANT SHOULD BE LOCATED A MAXIMUM OF 12' FROM EDGE OF PAVEMENT WHERE POSSIBLE.
 6. ALL MATERIALS ARE TO BE PER IRCUDS APPROVED MANUFACTURERS' PRODUCT LIST.
 7. TRACE WIRE TO BE INSTALLED AS PER DETAIL M-13. (TRACE WIRE NOT SHOWN IN DRAWING ABOVE.)
 8. MAINTAIN 7'-6" RADIUS OF HYDRANT PERPENDICULAR TO ROADWAY OR CURB FACE (EXAMPLE MUST BE CLEAR OF SIGNS, TREES, SHRUBS, TRANSFORMERS, UTILITY POLES, ETC.)
 9. HYDRANTS AND PROTECTION DEVICES SHALL HAVE CLEARANCES OF 7'-6" IN FRONT AND TO THE SIDES OF THE FIRE HYDRANT, WITH A 4' CLEARANCE TO THE REAR OF THE HYDRANT UNLESS THE AHJ (AUTHORITY HAVING JURISDICTION) REQUIRES A LARGER CLEAR ZONE.
 10. REFERENCE DRAWINGS M-5, VALVE AND BOX & M-6, VALVE BOX PAD.
 11. CONCRETE COLLAR IS REQUIRED. COLLAR SHALL BE 6" THICK x 2'x2' SQUARE AND LOCATED A MINIMUM 2" BELOW BREAKAWAY FLANGES.

INDIAN RIVER COUNTY DEPARTMENT OF UTILITY SERVICES		FIRE HYDRANT DETAILS	DRAWING NO. W-2
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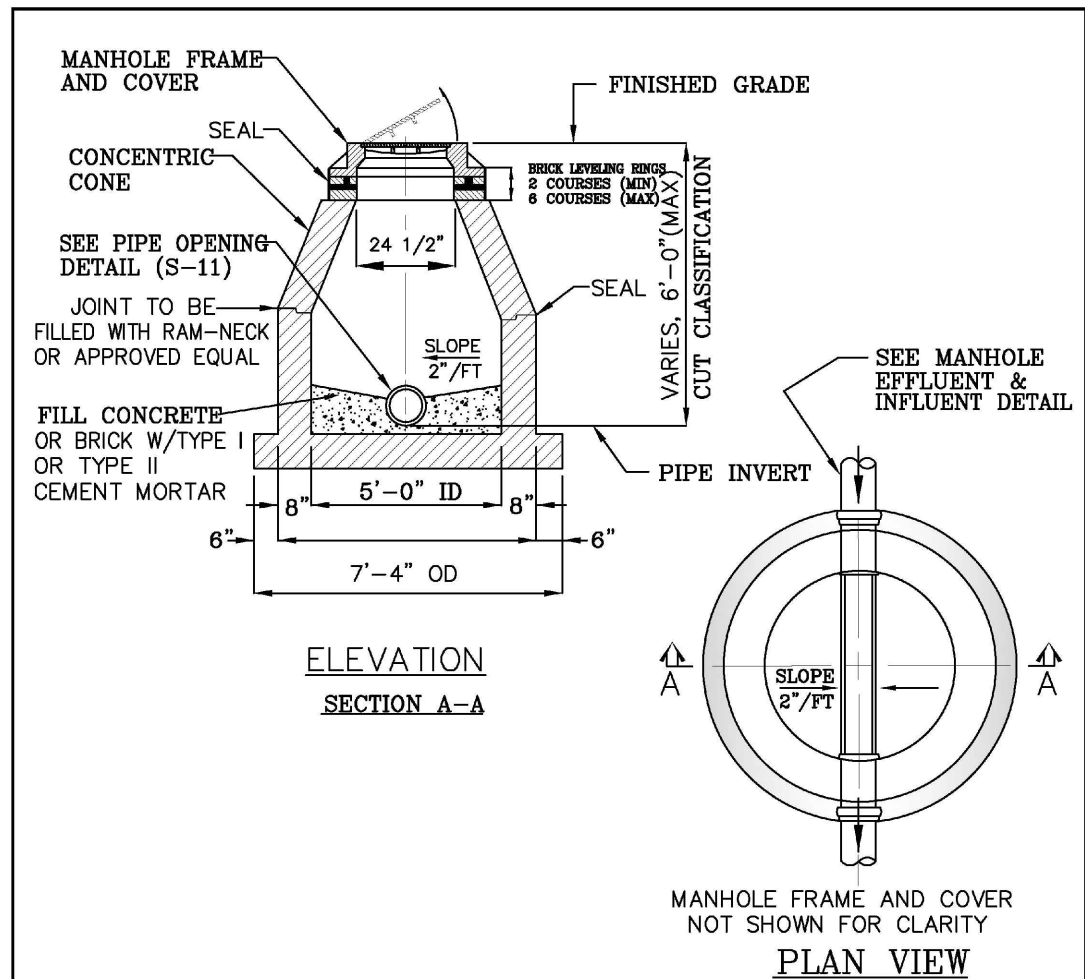


- NOTES**
1. METERS OVER 2"Ø MUST BE APPROVED BY IRCUDS AND SHALL BE SUPPLIED AND INSTALLED BY THE DEVELOPER/PROPERTY OWNER.
 2. ALL METERS 2"Ø AND SMALLER WILL BE SUPPLIED AND INSTALLED BY IRCUDS.
 3. MINIMUM SIZE OF METER BOXES: 1"Ø SERVICE (12" X 18"); 1-1/2"Ø AND 2"Ø SERVICE (17" X 28").
 4. TRACE WIRE (NOT SHOWN) TO BE INSTALLED AS PER DETAIL M-13.
 5. PLACE A 4" ELECTRONIC MARKER BALL IN THE INSIDE BOTTOM OF ALL METER BOXES.
 6. ALL METER BOXES SHALL BE PER IRCUDS APPROVED MANUFACTURERS' PRODUCT LIST.

INDIAN RIVER COUNTY DEPARTMENT OF UTILITY SERVICES		METER BOX	DRAWING NO. W-6
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----	----				CR-613 58th AVE	INDIAN RIVER	IRC: 1325 FDOT:436416-1-54-01	16

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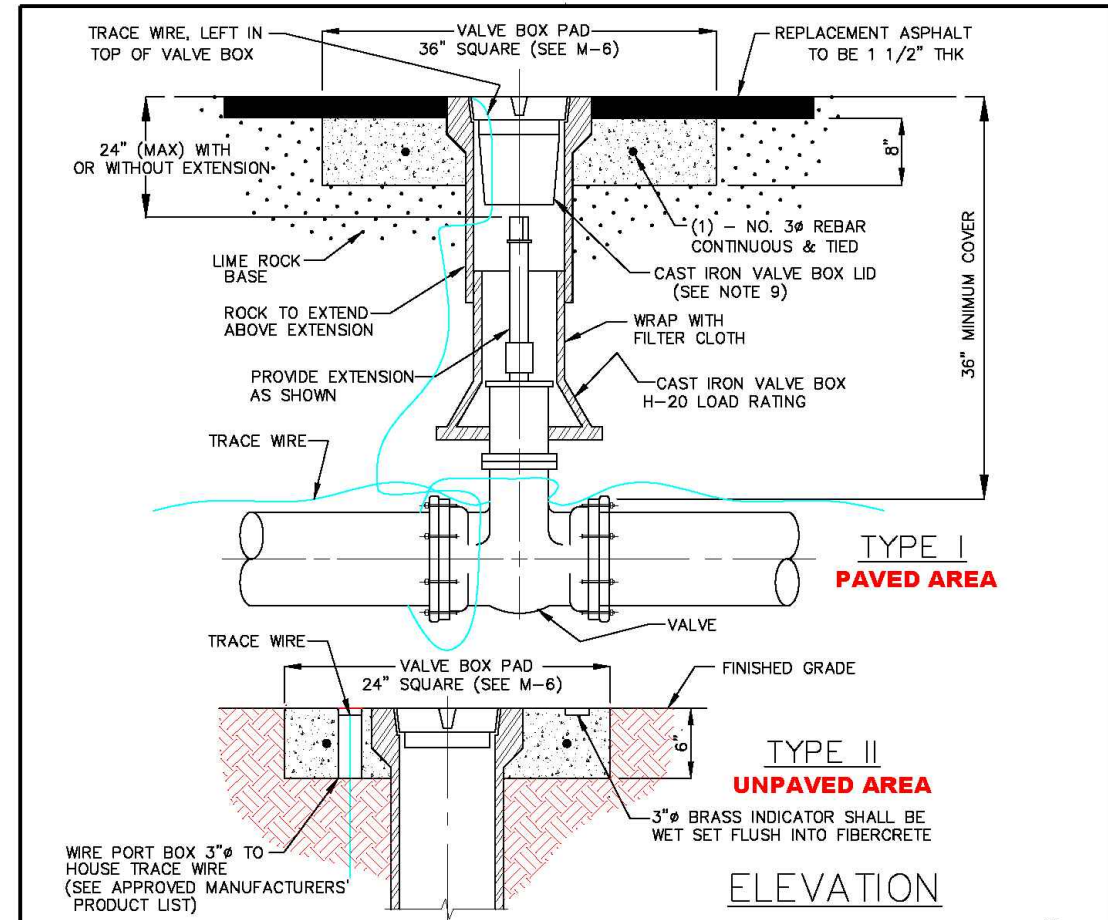


TO BE USED WHEN CUT CLASSIFICATION IS 6'-0" OR LE

NOTES

1. SEE MANHOLE NOTES DRAWING NO. S-5
2. SEE STANDARD MANHOLE CASTING DRAWING NO. S-4
3. SEE PIPE OPENING DETAIL DRAWING NO. S-11
4. SEE MANHOLE EFFLUENT & INFLUENT DETAIL DRAWING NO. S-12
5. SEAL SHALL BE USED AT ALL JOINTS. SEE DRAWING S-5, NOTE 20.

INDIAN RIVER COUNTY DEPARTMENT OF UTILITY SERVICES		MANHOLE STANDARD-SHALLOW MARCH 2018	DRAWING NO. S-6
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NOTES

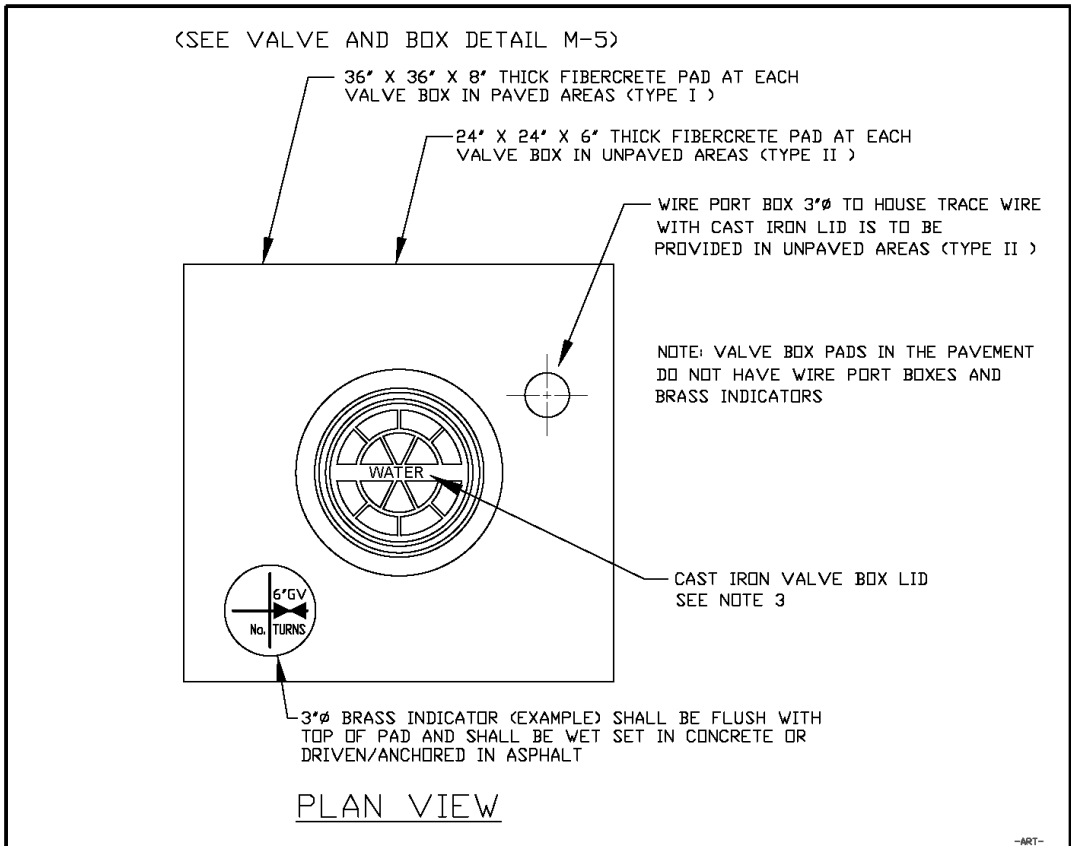
1. VALVE BOXES SHALL BE CONSTRUCTED PER MANUFACTURERS' SPECIFICATION.
2. THE USE OF A PVC RISER IS NOT ACCEPTABLE.
3. ALL VALVE BOXES SHALL BE SHAFT/SCREW TYPE OR SHAFT/SLIP TYPE AND CANNOT REST ON THE VALVE.
4. ALL VALVE BOLTS SHALL BE STAINLESS STEEL WITH BRASS NUTS.
5. PERMANENT LAND MARKERS ARE TO BE INSTALLED ADJACENT TO ALL VALVES IN UNPAVED AREAS AS DIRECTED BY IRCUDS. (SEE PERMANENT LAND MARKER DETAIL M-9)
6. ALL VALVES REQUIRE STATE PLANE COORDINATES.
7. TRACE WIRE IS REQUIRED. (SEE TRACE WIRE DETAIL M-13)
8. REFLECTIVE MARKERS ARE TO BE LOCATED IN ROADWAY FOR ALL VALVES. (DETAIL W-1)
9. REFLECTIVE MARKERS FOR:
FIRE HYDRANT - BLUE
WATER MAIN VALVE - WHITE
FORCE MAIN VALVE - GREEN
REUSE MAIN VALVE - PURPLE
BRINE - BROWN
10. REFLECTIVE MARKERS SHALL NOT BE PLACED IN BIKE LANES.
11. VALVE BOX LID LOCATED IN PAVEMENT SHALL BE A MINIMUM 24 LBS. WITH A MINIMUM 6" LONG THROAT.
12. VALVE BOX SHALL COMPLY WITH FDOT STANDARDS AS APPLICABLE.
13. VALVE EXTENSIONS OVER 36" REQUIRE IRCUDS ENGINEERING APPROVAL.
14. VALVE SPACING ON WATER MAINS SHALL NOT EXCEED 1,000' MAXIMUM.

INDIAN RIVER COUNTY DEPARTMENT OF UTILITY SERVICES		VALVE AND BOX MARCH 2018	DRAWING NO. M-5
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REVISIONS		DESCRIPTION		INDIAN RIVER COUNTY		DEPARTMENT OF PUBLIC WORKS/ENGINEERING DIVISION		DETAILS	
DATE	DESCRIPTION	DATE	DESCRIPTION	ROAD NO.	COUNTY	FINANCIAL PROJECT ID			
----	----			CR-613	INDIAN RIVER	IRC: 1325			
				58th AVE		FDOT:436416-1-54-01			

FOR BIDDING PURPOSES ONLY

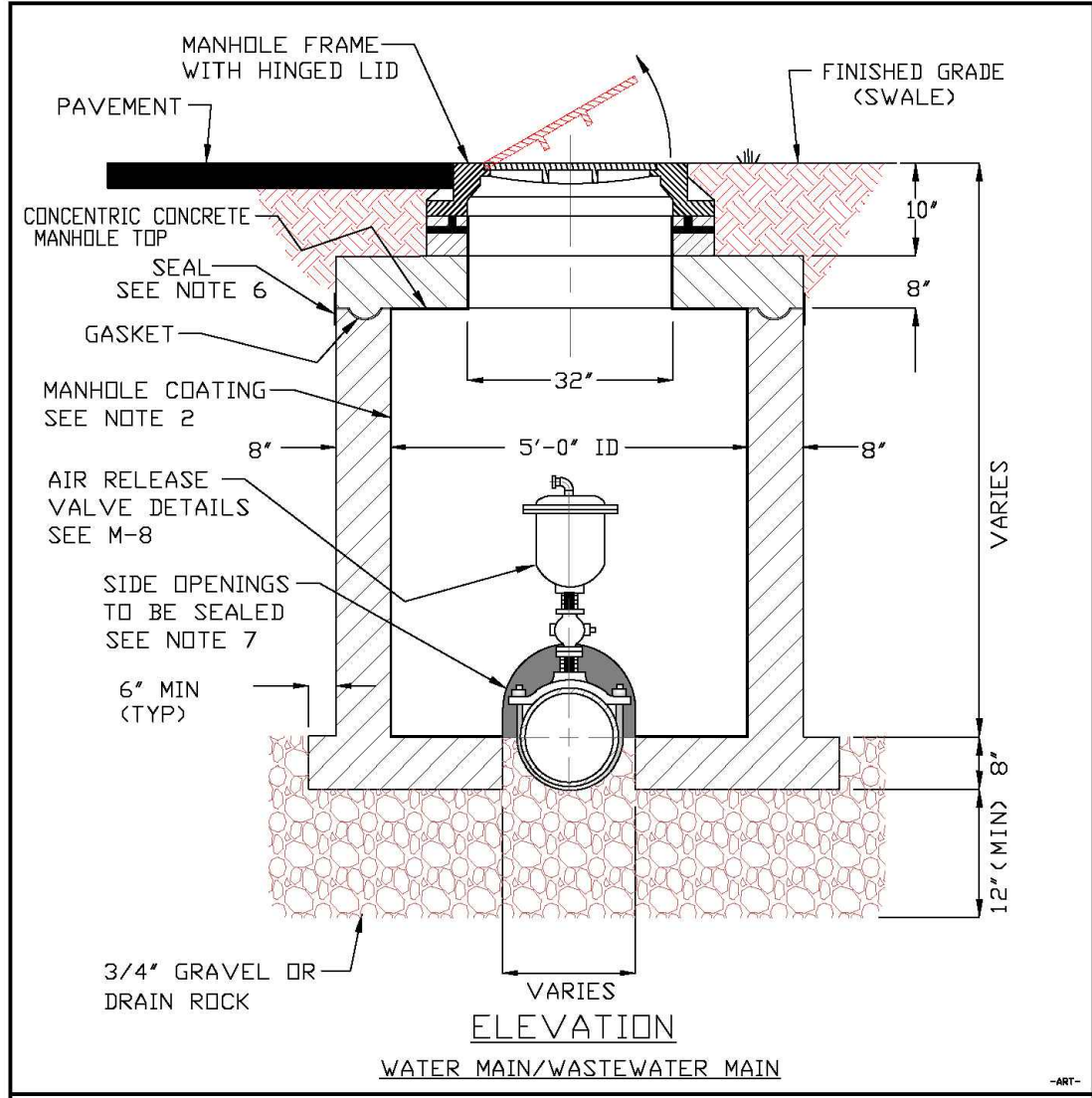
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- NOTES**
- VALVE BOX LIDS SHALL BE PAINTED:
 - BLUE - WATER
 - RED - FIRE HYDRANTS
 - GREEN - FORCE MAINS
 - PURPLE - REUSE MAINS
 - BROWN - BRINE
 - IN UNPAVED AREAS (SEE M-5, TYPE II) A BRASS VALVE INDICATOR IS TO BE PROVIDED. WITH ENGRAVED DIAGRAM OF VALVE LOCATION AND DESCRIPTION. (SEE EXAMPLE ABOVE) INDICATOR SHALL BE FLUSH WITH VALVE PAD.
 - VALVE BOX LID LOCATED IN PAVEMENT SHALL BE A CAST IRON, STAY-PUT COVER, MINIMUM 24 LBS. WITH A MINIMUM 6" LONG THROAT AND SHALL BE MARKED WITH RAISED LETTERS: "WATER", "SEWER", "BRINE", OR "REUSE WATER" AS APPLICABLE.
 - VALVE BOX SHALL COMPLY WITH FDOT STANDARDS AS APPLICABLE.
 - NO VALVE RINGS ARE TO BE USED.
 - IN TYPE I, PAVED AREAS, THE VALVE BOX PAD TOP ELEVATION SHALL BE EVEN WITH THE ROCK GRADE TO ALLOW BOTH LAYERS OF ASPHALT TO COVER THE VALVE BOX PAD WITH THE FINAL ASPHALT LAYER FLUSH WITH THE TOP OF THE VALVE BOX. (SEE VALVE AND BOX DETAIL M-5)

INDIAN RIVER COUNTY DEPARTMENT OF UTILITY SERVICES		VALVE BOX PAD	DRAWING NO. M-6
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MARCH 2018



- NOTES**
- AIR RELEASE VALVE IS TO BE LOCATED INSIDE A CONCRETE MANHOLE WITH HINGED LID. ALL MATERIALS PER IRC/DUS APPROVED MANUFACTURER'S LIST
 - MANHOLES FOR SEWER FORCE MAINS SHALL BE COATED. ALL COATING MATERIAL SHALL BE PER IRC/DUS APPROVED MANUFACTURERS' PRODUCT LIST.
 - SEE AIR RELEASE DETAIL M-18.
 - SEE TRACER WIRE DETAIL M-13.
 - WASTEWATER LIDS SHALL BE VENTED.
 - SEAL SHALL BE USED AT ALL JOINTS. SEE MANHOLE NOTES, S-5, NOTE 20.
 - OPENING AT BOTH SIDES OF THE MANHOLE TO BE SEALED WITH MATERIALS PER IRC/DUS APPROVED MANUFACTURERS' PRODUCT LIST.

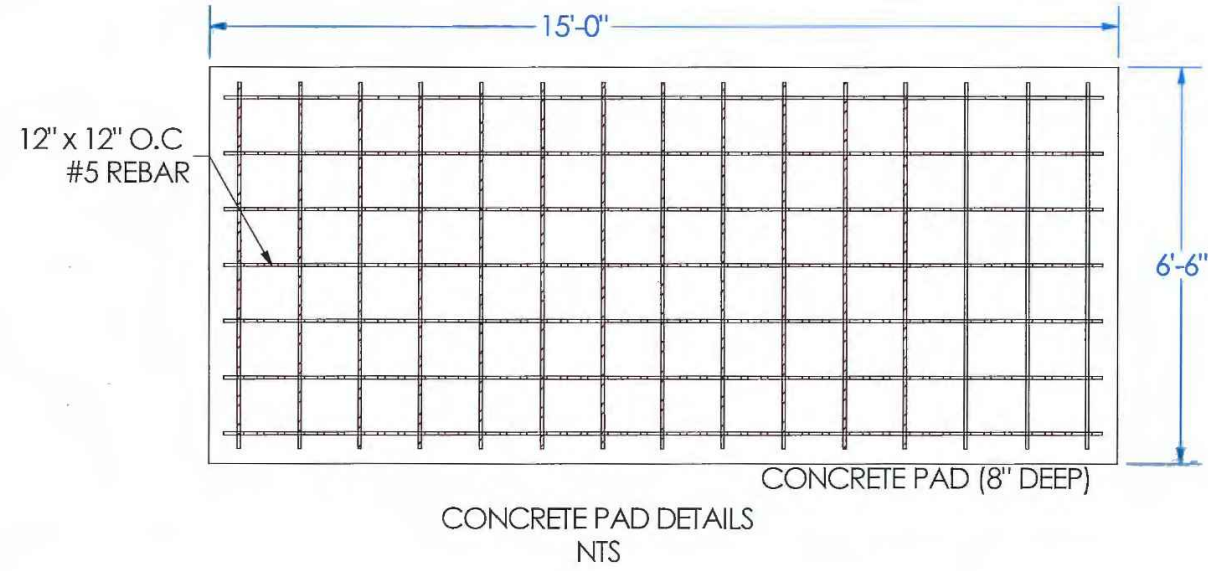
INDIAN RIVER COUNTY DEPARTMENT OF UTILITY SERVICES		AIR RELEASE VALVE MANHOLE BELOW GROUND (AUTOMATIC - WATER/WASTEWATER)	DRAWING NO. M-7
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MARCH 2018

REVISIONS		ERIC L. FLAVELL, P.E. P.E. LICENSE NUMBER 76826 BOWMAN CONSULTING GROUP 4450 W. EAU GALLIE BLVD. MELBOURNE, FL 32934 CERTIFICATE OF AUTHORIZATION 30462		INDIAN RIVER COUNTY DEPARTMENT OF PUBLIC WORKS/ENGINEERING DIVISION		FINANCIAL PROJECT ID		DETAILS	
DATE	DESCRIPTION	DATE	DESCRIPTION	ROAD NO.	COUNTY	FINANCIAL PROJECT ID			
----				CR-613 58th AVE	INDIAN RIVER	IRC: 1325 FDOT:436416-1-54-01			18

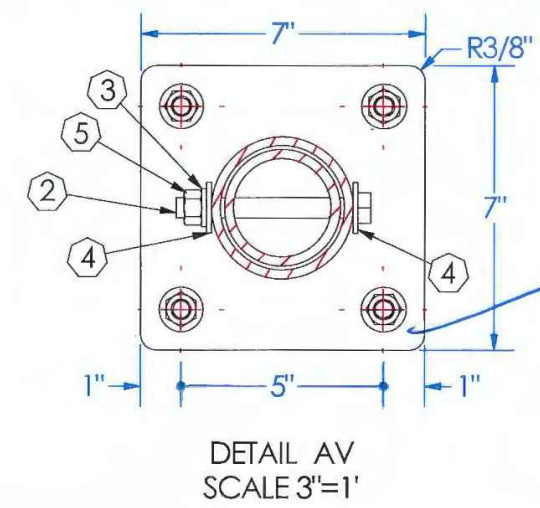
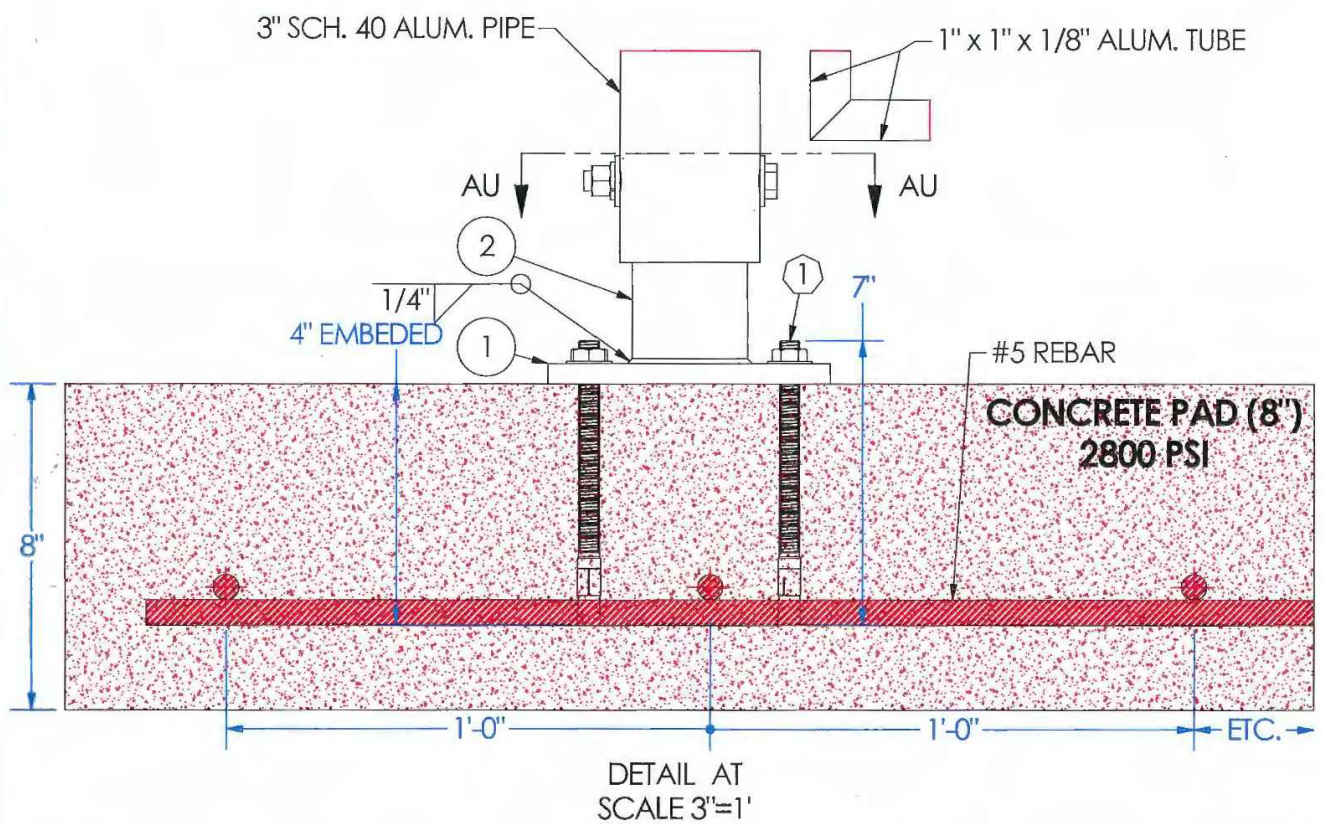
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SUB-ASSEMBLY		
ITEM	QTY	DESCRIPTION
①	1	1/2" ALUM. PLATE
②	1	2 1/2" STD. ALUM. PIPE

HARDWARE NEEDED		
ITEM	QTY	DESCRIPTION
①	16	1/2"-13 x 7" LONG WEDGE ANCHOR BOLT, 3 1/2" THREAD
②	4	1/2" BOLT, 4 1/2" LENGTH
③	4	1/2" LOCK WASHER
④	24	1/2" WASHER
⑤	20	1/2" NUT



Project Name: Vero Beach		Base Plate (Version 2)	
Address:			
City / State: Vero Beach, FL	Project #:	Checked by: William	
Sales Person:	File Name: VB_13x4.5	Approved by: Scott	
Drawn by: Carlos J. Galdamez	Scale: Noted	Date: 5/1/2019	

LNI
Custom Manufacturing.

12538 CHADRON AVENUE
HAWTHORNE, CA. 90250
TEL. 310 978 2000
800 338 3387
FAX. 310 978 4000

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△	Date	Revision Description	Sheet
R1	2/13/2019	More options for anchoring.	6

REVISIONS				ERIC L. FLAVELL, P.E. P.E. LICENSE NUMBER 76826 BOWMAN CONSULTING GROUP 4450 W. EAU GALLIE BLVD. MELBOURNE, FL 32934 CERTIFICATE OF AUTHORIZATION 30462	INDIAN RIVER COUNTY DEPARTMENT OF PUBLIC WORKS/ENGINEERING DIVISION			DETAILS
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID.	
----	----	----	----	FOR BIDDING PURPOSES ONLY	CR-613	INDIAN RIVER	JRC: 1325 FDOT:436416-1-54-01	19
					58th AVE			

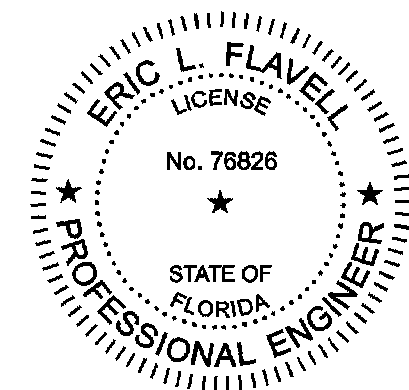
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GENERAL NOTES:

1. CLEARING AND GRUBBING - WITHIN THE LIMITS OF CONSTRUCTION, ALL ITEMS CALLED FOR TO BE REMOVED SHALL BE CLEARED AND DISPOSED OF INCLUDING ALL VEGETATION AND ROOT MATERIAL. ALL VEGETATION, DEBRIS, A.C., CONCRETE OR OTHER UNSUITABLE MATERIAL SHALL BE DISPOSED OF OFF-SITE IN AN AREA PROVIDED BY THE CONTRACTOR.
2. NOT USED
3. NOT USED
4. SOD PLACEMENT SHALL BE AS PER F.D.O.T. INDEX #570 SOD TYPE SHALL MATCH EXISTING GRASS FOR EACH PROPERTY.
5. UTILITIES - THE LOCATION OF THE EXISTING UTILITIES SHOWN IN THE PLANS ARE APPROXIMATE ONLY. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE EXACT LOCATION OF ALL UNDERGROUND UTILITIES, WHETHER SHOWN ON THE PLANS OR NOT, PRIOR TO CONSTRUCTION. IN ADDITION, THE CONTRACTOR SHALL BE RESPONSIBLE AT NO ADDITIONAL COST, TO VERIFY IF OTHER UTILITIES ARE NOT SHOWN ON THE PLANS OR EXIST WITHIN THE AREA OF CONSTRUCTION. SHOULD THERE BE UTILITY COST, TO VERIFY IF OTHER UTILITIES ARE NOT SHOWN ON THE PLANS OR EXIST WITHIN THE AREA OF CONSTRUCTION. SHOULD THERE BE UTILITY CONFLICTS, THE CONTRACTOR SHALL INFORM THE ENGINEER AND NOTIFY THE RESPECTIVE UTILITY OWNERS TO RESOLVE UTILITY CONFLICTS AND UTILITY ADJUSTMENTS, AS REQUIRED.
6. ANY EXISTING ROADWAY AND/OR UTILITY THAT IS DAMAGED BY THE CONTRACTOR SHALL BE CORRECTED AT THE CONTRACTOR'S EXPENSE.
7. EXISTING DRAINAGE STRUCTURES AND PIPES WITHIN THE CONSTRUCTION LIMITS SHALL BE PROTECTED AND REMAIN UNLESS OTHERWISE NOTED.
8. TACK COAT-BITUMINOUS TACK COAT SHALL CONFORM TO THE REQUIREMENTS OF THE F.D.O.T. STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, 2017 EDITION, SECTION 300 AND SHALL BE APPLIED AT THE RATE OF 0.08 GALLONS PER SQUARE YARD, UNLESS A DIFFERENT RATE IS DIRECTED BY THE ENGINEER. COST INCLUDED IN THE UNIT PRICE FOR ASPHALTIC CONCRETE.
9. SURFACE COURSE - TYPE F.C. 9.5 AND STRUCTURAL COURSE-TYPE S.P. 12.5 SHALL CONFORM TO THE REQUIREMENTS OF THE F.D.O.T. SPECIFICATIONS, 2017 EDITION, SECTION 334, THE MINIMUM COMPACTED THICKNESS TO BE AS NOTED.
10. MAIL BOXES TO BE RELOCATED TO 5' FROM EDGE OF PAVEMENT (TYP).
11. PRIOR TO COMMENCEMENT OF ANY EXCAVATION, THE CONTRACTOR SHALL COMPLY WITH FLORIDA STATUTE 553.851 FOR THE PROTECTION OF UNDERGROUND GAS PIPELINES.
12. THE CONTRACTOR SHALL PREPARE AND MAINTAIN PROPER TRAFFIC CONTROL AT ALL TIMES DURING CONSTRUCTION AND SHALL BE REQUIRED TO PROVIDE ALL BARRICADES LIGHTING, SIGNAGE AND FLAG MEN AS NECESSARY TO PROVIDE FOR THE SAFETY OF THE PUBLIC IN THE AREA OF WORK. THE ROADWAY SHALL REMAIN CLOSED DURING THE CONSTRUCTION OF THE ROADWAY PORTION OF THE PROJECT. THE ROADWAY SHALL BE REOPENED TO TRAFFIC AS SOON AS PRACTICAL. MAINTENANCE OF TRAFFIC SHALL BE IN ACCORDANCE WITH CURRENT FLORIDA D.O.T. STANDARDS AND THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES. CONTRACTOR SHALL PAY ALL COSTS FOR PREPARING AND MODIFYING MOT PLANS DURING THE COURSE OF THE PROJECT. CONTRACTOR IS REQUIRED TO PROVIDE ALL MAINTENANCE OF TRAFFIC (MOT) FOR THE PROJECT AND ADJUSTING IT AS REQUIRED FOR EACH PHASE OF OR CHANGE IN THE WORK. CONTRACTOR SHALL OBTAIN ALL PERMITS AND APPROVALS ASSOCIATED WITH IMPLEMENTING MOT DURING CONSTRUCTION. CONTRACTOR IS RESPONSIBLE FOR HAVING MOT PLANS PREPARED BY AN ENGINEER REGISTERED IN THE STATE OF FLORIDA AND QUALIFIED TO DO THE WORK. MOT SHALL BE IN PLACE AND MAINTAINED THROUGH THE COURSE OF THE ENTIRE PROJECT ON A 24 HOUR BASIS AS NEEDED.
13. THERE SHALL BE NO EXCAVATIONS LEFT OPEN AFTER END OF SHIFT, UNLESS POSITIVELY SHIELDED.

14. ALL CONSTRUCTION EQUIPMENT AND MATERIALS SHALL BE STORED A MINIMUM OF 15' FROM THE EDGE OF PAVEMENT AND SHALL BE PROTECTED BY BARRICADES WITH FLASHING YELLOW LIGHTS.
15. THE CONTRACTOR SHALL NOTIFY TRAFFIC ENGINEERING AT (772) 226-1547, 72 HOURS PRIOR TO BEGINNING CONSTRUCTION.
16. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO CONTACT SUNSHINE STATE ONE CALL SYSTEM AT 1-800-432-4770 FOR LOCATIONS OF UNDERGROUND FACILITIES AT LEAST 72 HOURS PRIOR TO ANY EXCAVATION.
17. FOR FURTHER UTILITY COORDINATION CONTACT:
AT&T, LUKE FOLKERTS, (407) 496-6041
FLORIDA CITY GAS, RON MULLER, (321) 638-3424
FLORIDA POWER & LIGHT CO. - DISTRIBUTION, ROBERT MORRIS, (772) 226-1821
FLORIDA POWER & LIGHT CO. - TRANSMISSION, TRACIA D'ANNUNZIO, (561) 940-3560
FLORIDA PUBLIC UTILITIES, DALE BUTCHER, (561) 602-3702
INDIAN RIVER COUNTY TELECOMMUNICATIONS, MANNY CABO, (772) 226-1318
INDIAN RIVER COUNTY UTILITIES, ARJUNA WERAGODA, P.E., (772) 940-9310
INDIAN RIVER COUNTY TRAFFIC, JANIE HOLLINGSWORTH, P.E., (772) 266-1568
18. CONCRETE - ALL CONCRETE SHALL DEVELOP 3000 P.S.I. (MINIMUM) 28 DAY COMPRESSIVE STRENGTH OR GREATER. SEE ADDITIONAL REQUIREMENTS FOR CONCRETE CULVERT. CLASS II CONCRETE SHALL CONFORM TO THE FLORIDA D.O.T. SPECIFICATIONS, 2017 EDITION. SECTION 346.
19. ALL STRUCTURE LENGTHS AND CENTERLINE SLOPE LENGTHS SHOWN ON THESE DRAWINGS ARE SCALED DISTANCES. ENDWALL LENGTHS ARE TAKEN OUTSIDE OF WALL TO OUTSIDE OF WALL. THE CONTRACTOR SHALL CONFIRM ALL MEASUREMENTS IN THE FIELD AND NOTIFY THE ENGINEER IN WRITING OF ANY DISCREPANCIES WITH THE DRAWINGS PRIOR TO PERFORMING THE WORK. ALL QUANTITIES SHALL BE PAID ON THE BASIS OF FIELD MEASUREMENTS OF COMPLETED WORK, EXCEPT PAYMENTS DESIGNATED AS FINAL IN THE BID DESCRIPTIONS.
20. ALL CONCRETE, PAVING, DRAINAGE AND UTILITY WORK SHALL BE CONSTRUCTED IN FULL ACCORDANCE WITH THE APPLICABLE F.D.O.T. AND INDIAN RIVER COUNTY STANDARDS.
21. THE ELEVATIONS SHOWN HEREON ARE BASED UPON THE INDIAN RIVER COUNTY VERTICAL CONTROL NETWORK (I.R.C.V.C.N.) AND ARE RELATIVE TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (N.A.V.D. 88). ALL BENCHMARKS IN THE I.R.C.V.C.N. MEET OR EXCEED THE ACCURACY REQUIRED PER CHAPTER 5J-17, FLORIDA ADMINISTRATIVE CODE.
22. THE TOPOGRAPHY SHOWN HEREON WAS PROVIDED BY INDIAN RIVER COUNTY.
23. ANY N.G.V.D. 1929 MONUMENT, N.A.V.D. 1988 MONUMENT, GOVERNMENTAL LAND CORNER OR SURVEY MONUMENTATION WITHIN LIMITS OF CONSTRUCTION IS TO BE PROTECTED. IF IN DANGER OF DAMAGE, THE CONTRACTOR SHALL NOTIFY:
DAVID W. SCHRUYVER, PSM
INDIAN RIVER COUNTY SURVEYOR
722-226-1386
24. ALL EXISTING SURVEY AND PROPERTY CORNER MONUMENTS LOCATED WITHIN THE AREA OF PROPOSED CONSTRUCTION ARE TO BE REFERENCE PRIOR TO CONSTRUCTION AND RESET AFTER CONSTRUCTION BY A FLORIDA LICENSED PROFESSIONAL LAND SURVEYOR.
25. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR, BUT NOT LIMITED TO ALL PIPE, DRAINAGE STRUCTURES, ASPHALT & CONCRETE MIX DESIGN, STRIPING MATERIAL, ASPHALT EMULSION MIX DESIGN, WATER PIPE RELOCATION AND DIRECTIONAL DRILL.
26. ALL CHANGES SHALL BE APPROVED IN WRITING BY INDIAN RIVER COUNTY AND THE ENGINEER OF RECORD.

27. ALL WORK SHALL BE DONE IN A WORKMANLIKE MANNER AND SHALL CONFORM TO ALL APPLICABLE CITY, COUNTY, STATE OR FEDERAL REGULATIONS AND/OR CODES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS AND LICENSES REQUIRED PRIOR TO INITIATING WORK.
28. ATTENTION IS DIRECTED TO THE FACT THAT THESE PLANS MAY HAVE BEEN CHANGED IN SIZE BY REPRODUCTION. THIS MUST BE CONSIDERED WHEN OBTAINING SCALED DATA.
29. CONTRACTOR SHALL UTILIZE CONSTRUCTION METHODS AND DEVICES SUCH AS TURBIDITY BARRIERS, SYNTHETIC BALES AND FLOATING SILT BARRIERS WHERE NECESSARY TO COMPLY WITH ALL LOCAL, STATE AND FEDERAL WATER QUALITY STANDARDS.
30. CONTRACTOR SHALL PROTECT OR RELOCATE ALL MAIL BOXES WITHIN LIMITS OF CONSTRUCTION. CONTRACTOR IS RESPONSIBLE FOR COORDINATING WITH THE MAIL SERVICE TO INSURE UNINTERRUPTED DELIVERY.
31. CONTRACTOR SHALL LOWER ALL VALVES, MANHOLE RISERS AND COVERS TO BELOW THE FDR AND EXCAVATION DEPTH. UPON COMPLETION OF THE WORK, VALVES AND MANHOLE RISERS AND COVERS SHALL BE ADJUSTED TO FINISH GRADE.
32. VALVE, MANHOLE AND VAULT ADJUSTMENT SHALL INCLUDE ALL IRC UTILITIES ADMINISTRATION REQUIREMENTS INCLUDING CONCRETE PAD, BRASS ID TABS AND WIRE PORTS.
33. DRIVEWAYS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE DETAILS. DRIVEWAYS THAT HAVE EXISTING CONCRETE OR A.C. SHALL HAVE THAT MATERIAL SAW CUT AND REMOVED BEFORE CONSTRUCTING THE DRIVEWAY. EXISTING EARTH DRIVEWAYS THAT ARE TO RECEIVE A.C. DRIVEWAYS SHALL BE GRADED AND COMPACTED TO ACCOMMODATE CONSTRUCTION OF THE DRIVEWAY. ALL DRIVEWAYS SHALL BE CONSTRUCTED WITH A SMOOTH TRANSITION BETWEEN THE ROAD AND THE EXISTING DRIVEWAY.
34. A NUMBER OF POLES ARE REQUIRED TO BE RELOCATED ALONG 69TH STREET TO MEET CLEARANCE SETBACKS. CONTRACTOR SHALL COORDINATE WITH FPL TO HAVE THE POLE RELOCATED AND EXISTING POLES REMOVED. SOME POLES ARE WITH IN THE WORK AREA.
35. FIBER OPTIC CONDUIT SHALL CONSIST OF 2-2" HDPE CONDUITS IN PARALELL WITH PULL BOXES. CONTRACTOR SHALL FIELD ADJUST CONDUITS AS NECESSARY TO AVOID EXISTING INFRASTRUCTURE AND OBSTRUCTIONS. ALL DRIVEWAYS AND STREET CROSSING SHALL BE DIRECTIONAL DRILLED. PULL BOXES SHALL BE CONSTRUCTED PER FDOT INDEX 17700. CONTRACTOR TO OBTAIN LOCATES OF EXISTING FIBER OPTIC CABLE FROM INDIAN RIVER COUNTY. CONTRACTOR TO FIELD VERIFY LOCATION OF UTILITIES AND SUBSTRUCTURES TO VERIFY CLEARANCE. FIBER OPTIC TO MAINTAIN 36" MINIMUM COVER AND A MINIMUM OF 12" VERTICAL AND 3' HORIZONTAL SEPARATION AT ALL CONFLICTS OR CROSSINGS.
36. CONTRACTOR TO COORDINATE WITH INDIAN RIVER COUNTY TELECOMMUNICATIONS, MANNY CABO, (772)226-1318 FOR FINAL PULL BOX LOCATIONS PRIOR TO CONSTRUCTION.



REVISIONS		DESCRIPTION		INDIAN RIVER COUNTY			SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION	ROAD NO.	COUNTY	FINANCIAL PROJECT ID	
2/19/20	RESPONSE TO COUNTY COMMENTS			CR-613	INDIAN RIVER	IRC: 1325	20
				58th AVE		FDOT:436416-1-54-01	

FOR BIDDING PURPOSES ONLY

GENERAL NOTES

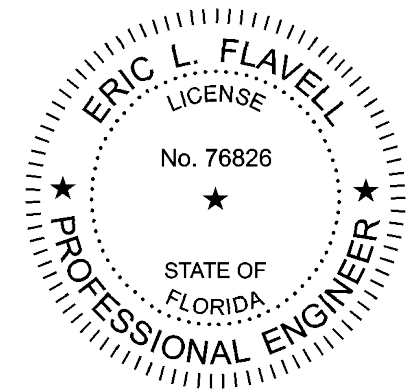
PHASING CONSTRUCTION NOTES:

1. CONSTRUCTION OF 69TH STREET, INCLUDING SIGNALIZATION, IS A PRIORITY TO THE COUNTY. CONTRACTOR TO PROVIDE A SCHEDULE DEMONSTRATION WORK SEQUENCING TO COMPLETE 69TH STREET AS EARLY AS POSSIBLE.
2. CONTRACTOR SHALL PREPARE AND PROVIDE MOT AND DETOURS FOR EACH PHASE OF WORK. PLANS SHALL BE PREPARED BY AN ENGINEER REGISTERED IN THE STATE OF FLORIDA. MOT AND DETOURS HAVE TO BE APPROVED IN ADVANCE OF STARTING WORK ON EACH PHASE.
3. ROAD CONSTRUCTION SHOULD PROCEED AS SHOWN ON THE PHASING PLAN.
4. THE CONTRACTOR WILL HAVE 8 WORK DAYS TO COMPLETE EACH WORK PHASE. TIME WILL BE EXTENDED FOR INCLEMENT WEATHER WHEN DETERMINED JUSTIFIED BY THE ENGINEER. CONTRACTOR SHOULD STOP WORK ON THE FDR IF THE WEATHER IS HEAVY FOG, RAINING, OR RAIN IS IMMINENT.
5. CONTRACTOR CAN RECOVER 3" OF BLENDED FDR MATERIAL AND PLACE IT IN ROAD WIDENING AREAS AS BASE. IN LOCATIONS OF MIXED BLENDED MATERIAL FROM DIFFERENT AREAS OF THE PROJECT, THE HIGHER PROPORTIONS OF ASPHALT EMULSION AND CEMENT SHALL BE USED.
6. WORK WILL START ON 58TH AVENUE AT THE NORTH END (85TH STREET) AND PROCEED SOUTH.
7. THE INTENT IS TO CONSTRUCT FULL WIDTH ROAD IN INCREMENTS, FINISHING ONE PHASE UP TO STRUCTURAL COURSE PAVEMENT WITH TEMPORARY STRIPING AND DELINEATION, BEFORE THE NEXT PHASE IS STARTED.
8. ONCE ALL PHASES ARE COMPLETED TO STRUCTURAL COURSE PAVEMENT AND ACCEPTED BY THE ENGINEER, THE CONTRACTOR SHALL COMPLETE THE FINAL 1" FRICTION COURSE.
9. CONTRACTOR SHALL PROVIDE ASPHALT TRANSITION WEDGES AT LOCATIONS WHERE PAVEMENT SURFACE ELEVATIONS DIFFER BY GRATER THAN ONE - INCH

WORK RESTRICTIONS:

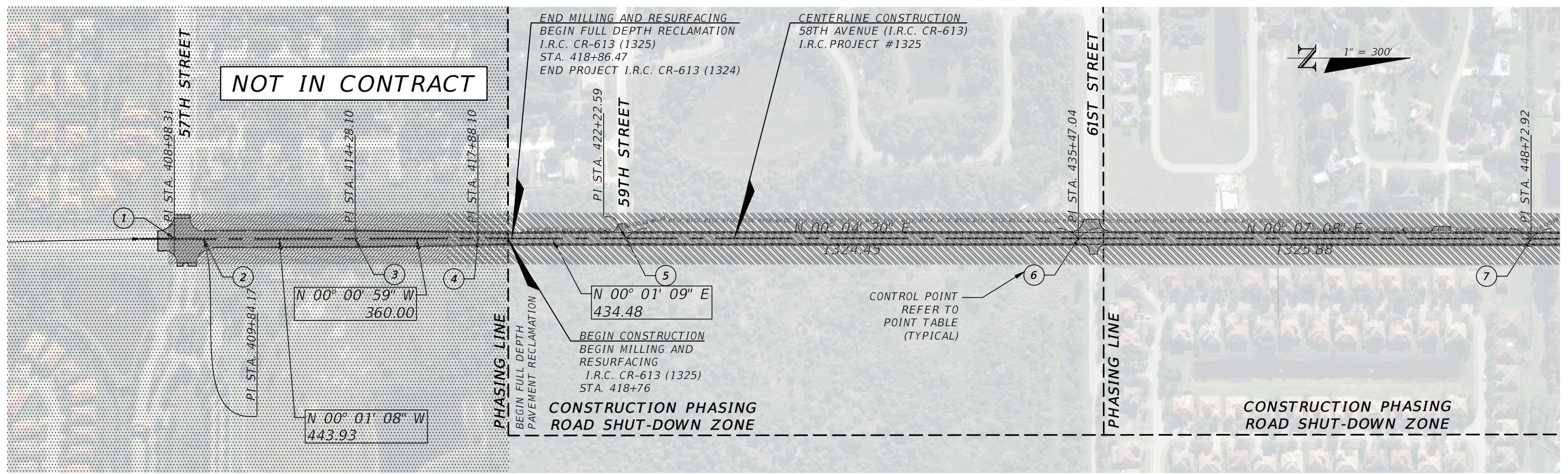
1. EACH PHASE OF WORK SHALL BE AS SHOWN ON THE PHASING PLAN. THE CONTRACTOR CAN REQUEST CHANGES TO THE PLAN IN ADVANCE OF STARTING THE WORK. CONTRACTOR SHALL PREPARE PHASING PLAN DRAWINGS FOR REVIEW AND ANY

- CHANGES SHALL BE APPROVED BY THE ENGINEER BEFORE STARTING WORK.
2. EMERGENCY VEHICLES SHALL HAVE ACCESS THROUGH THE WORK SITE AT ALL TIMES.
 3. ACCESS TO GOLF COURSES MUST BE MAINTAINED DURING GOLF COURSE WORKING HOURS. CONTRACTOR IS RESPONSIBLE FOR CONTACTING EACH GOLF COURSE MANAGER TO DEVELOP AN ACCEPTED METHOD PROVIDING ACCESS TO THEIR PATRONS. CONTRACTOR SHALL DELIVER TO THE ENGINEER WRITTEN PROOF OF ACCEPTANCE BY THE GOLF COURSE MANAGER PRIOR TO START OF WORK ON THAT PHASE.
 4. MOTORISTS THAT LIVE WITHIN A PHASE OF ROAD WORK SHALL HAVE ACCESS TO THEIR PROPERTY ON A 24 HOUR PER DAY BASIS. UNLESS OTHERWISE APPROVED IN WRITING, BY THE PROPERTY OWNER AND COUNTY
 5. BEFORE EACH INCREMENT IS PLACED INTO OPERATION, TEMPORARY PAINTED STRIPING AND SIGNAGE SHALL BE IN PLACE. STRIPING SHALL BE MAINTAINED BY THE CONTRACTOR DURING THE COURSE OF THE WORK, UNTIL FINISH STRIPING IS PLACED. STRIPING TAPE MAY BE USED FOR TEMPORARY STRIPING THAT IS INTENDED FOR USE FOR UP TO THREE WEEKS OR LESS.
 6. THE CONTRACTOR CAN EXCAVATE THE NORTH SIDE OF 69TH STREET AND KEEP OPEN THE SOUTH LANE FOR LOCAL TRAFFIC WITH APPROPRIATE MOT TO PROVIDE A LOCATION TO PLACE MATERIAL REMOVED FROM 58TH AVENUE. TRAFFIC WAIT TIMES SHALL NOT EXCEED 3 MINUTES ON 69TH STREET.



FDR EXISTING MATERIAL TYPE	
SAND CLAY BASE	= STATION 408+98 TO 417+00 (R-1 AND L-1)
LIMEROCK BASE	= STATION 417+00 TO 485+00 (R-1 AND L-1)
SAND CLAY BASE	= STATION 485+00 TO 553+00 (R-1 AND L-1)
LIMEROCK BASE	= STATION 553+00 TO 595+25 (L-1)
SAND CLAY BASE	= STATION 553+00 TO 595+25 (R-1)
LIMEROCK BASE	= 69TH AVENUE EAST OF 58TH STREET
SAND CLAY BASE	= 69TH AVENUE WEST OF 58TH STREET

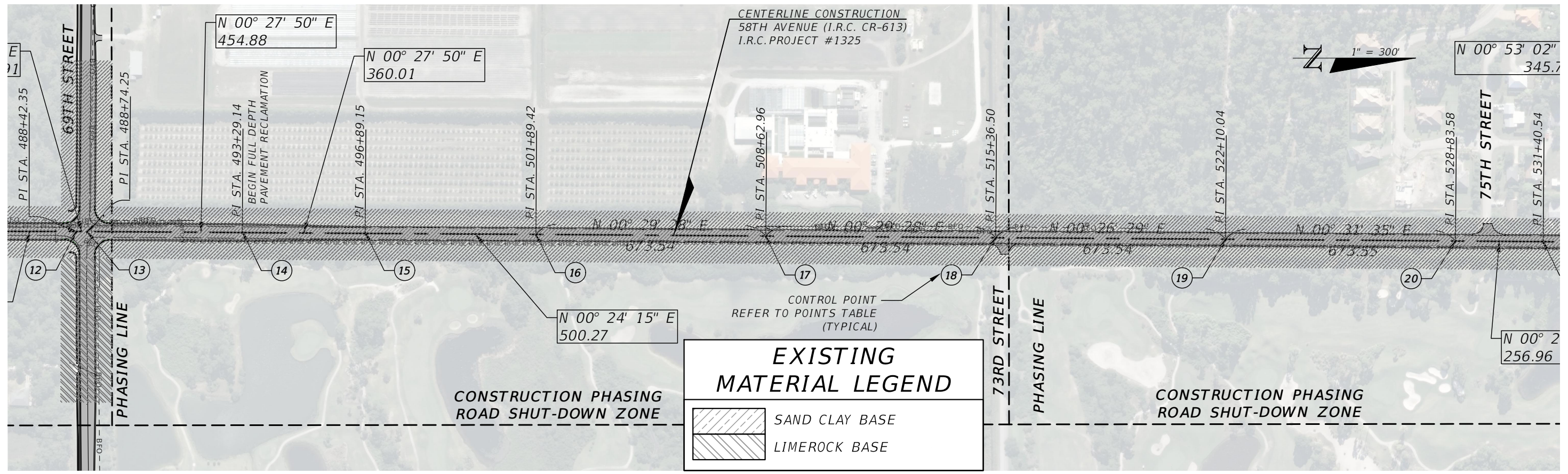
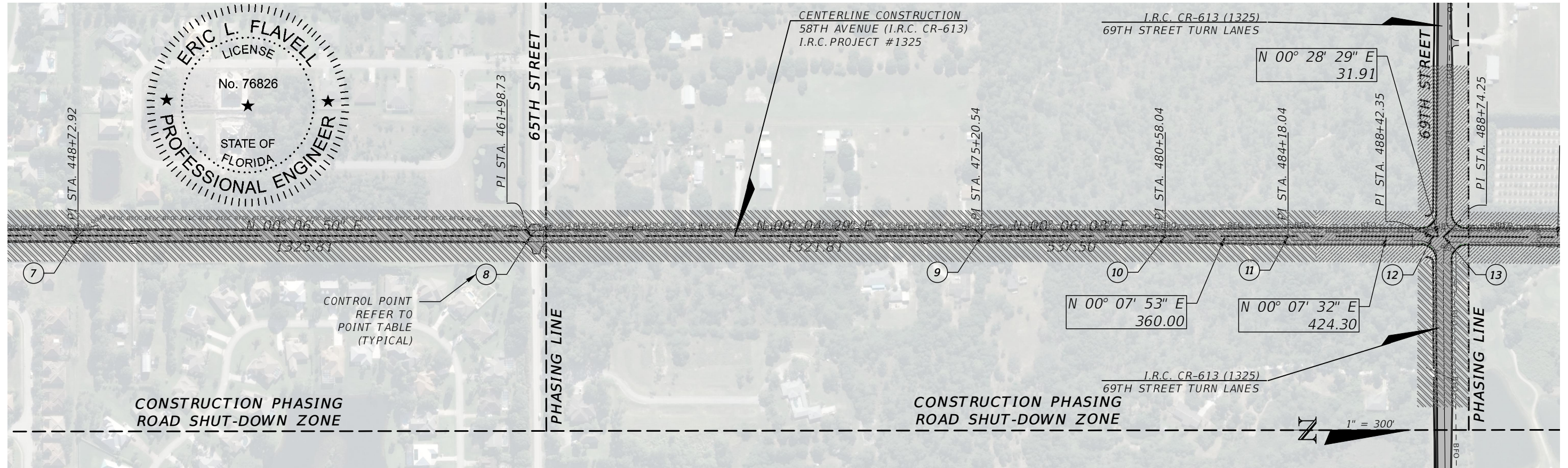
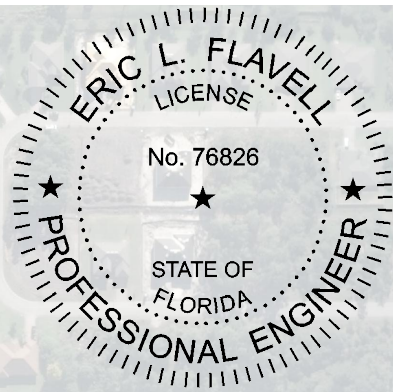
EXISTING MATERIAL LEGEND	
	SAND CLAY BASE
	LIMEROCK BASE



REVISIONS				ERIC L. FLAVELL, P.E. P.E. LICENSE NUMBER 76826 BOWMAN CONSULTING GROUP 4450 W. EAU GALLIE BLVD. MELBOURNE, FL 32934 CERTIFICATE OF AUTHORIZATION 30462	INDIAN RIVER COUNTY DEPARTMENT OF PUBLIC WORKS/ENGINEERING DIVISION ROAD NO. COUNTY FINANCIAL PROJECT ID CR-613 INDIAN RIVER IRC: 1325 58th AVE FD01.436416-1-54-01	PROJECT LAYOUT PLAN 58TH AVENUE	SHEET NO. 21
DATE	DESCRIPTION	DATE	DESCRIPTION				

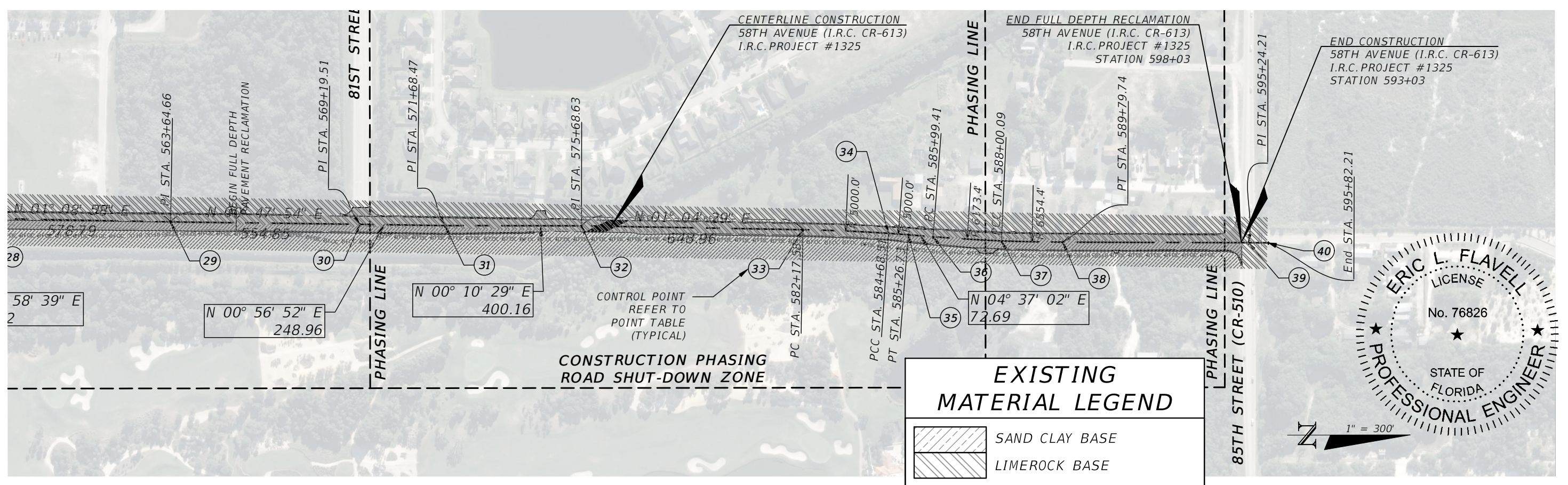
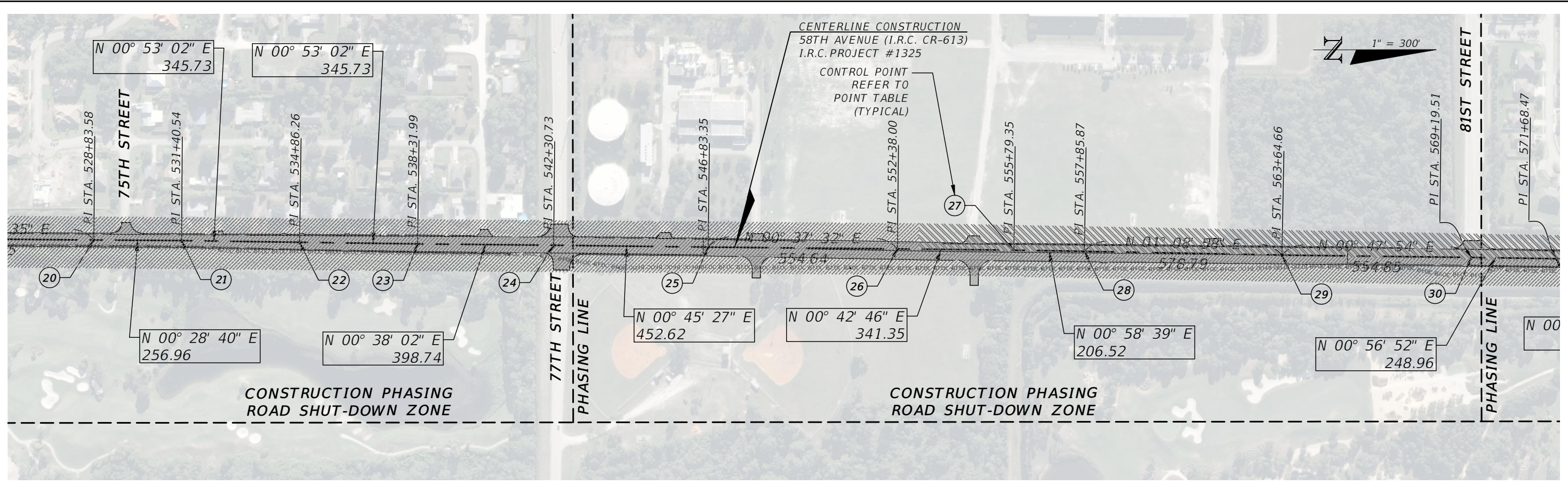
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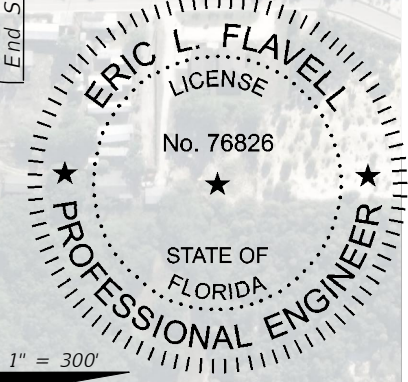
REVISIONS		DESCRIPTION	ERIC L. FLAVELL, P.E. P.E. LICENSE NUMBER 76826 BOWMAN CONSULTING GROUP 4450 W. EAU GALLIE BLVD. MELBOURNE, FL 32934 CERTIFICATE OF AUTHORIZATION 30462	INDIAN RIVER COUNTY DEPARTMENT OF PUBLIC WORKS/ENGINEERING DIVISION		PROJECT LAYOUT PLAN 58TH AVENUE	SHEET NO. 22
DATE	DESCRIPTION			ROAD NO. CR-613 58th AVE	COUNTY INDIAN RIVER		

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EXISTING MATERIAL LEGEND

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REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

ERIC L. FLAVELL, P.E.
 P.E. LICENSE NUMBER 76826
 BOWMAN CONSULTING GROUP
 4450 W. EAU GALLIE BLVD.
 MELBOURNE, FL 32934
 CERTIFICATE OF AUTHORIZATION 30462

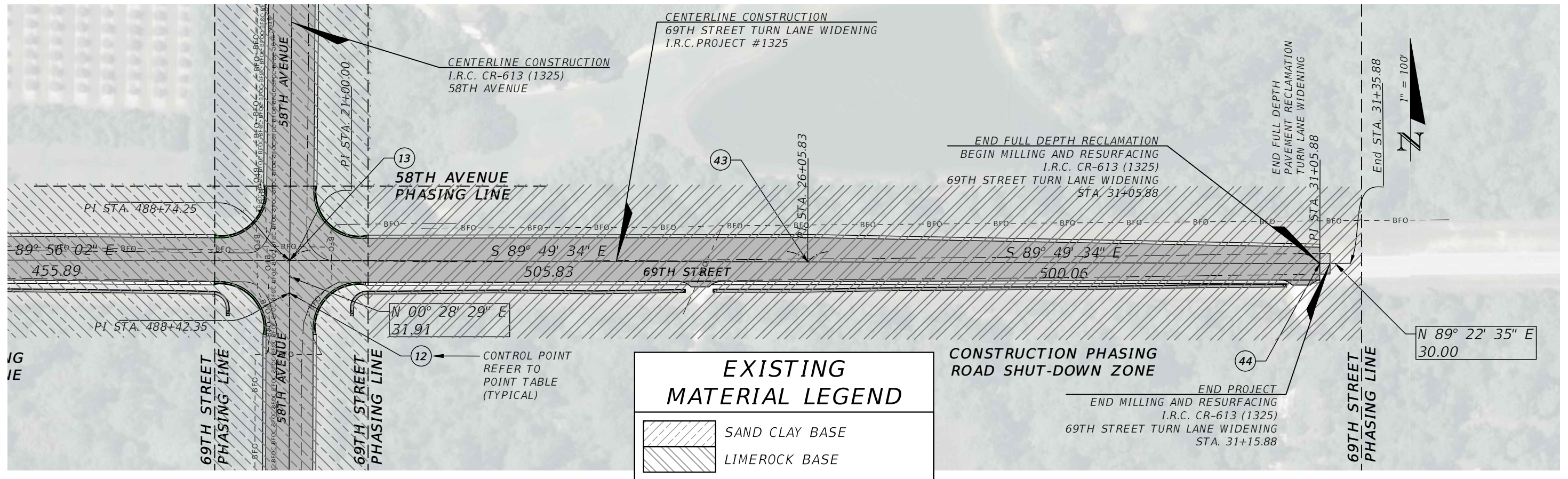
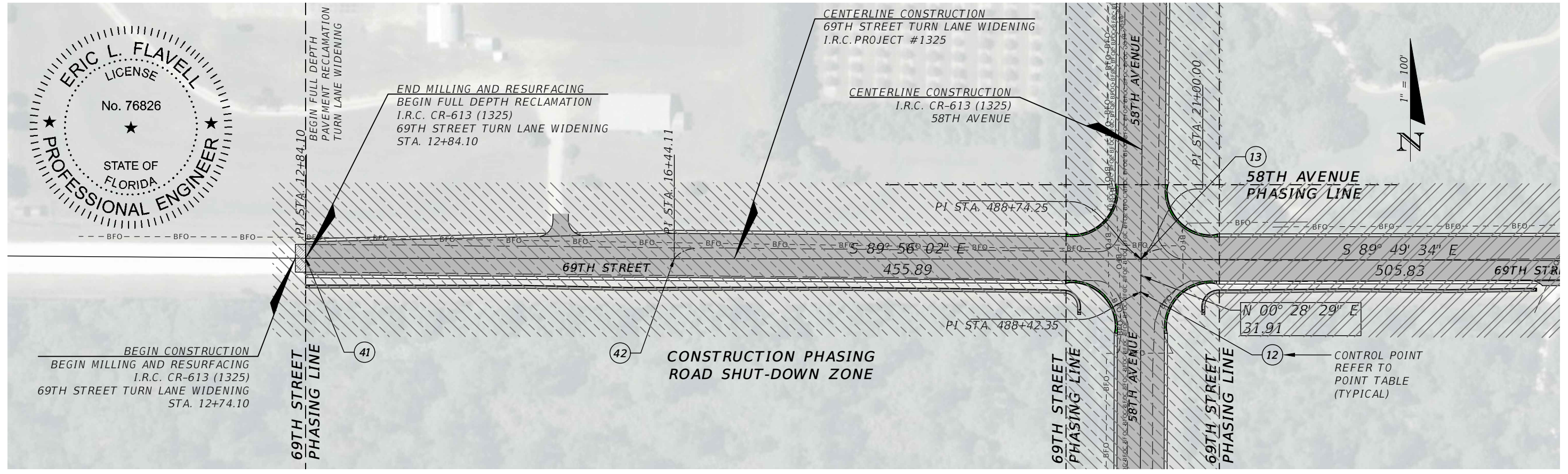
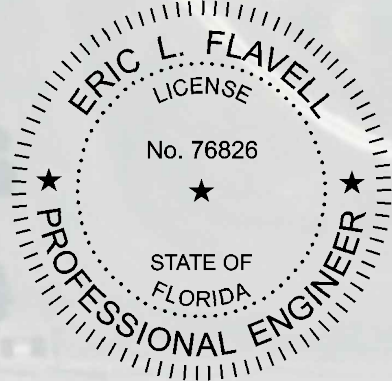
INDIAN RIVER COUNTY
 DEPARTMENT OF PUBLIC WORKS/ENGINEERING DIVISION
 ROAD NO. COUNTY FINANCIAL PROJECT ID
 CR-613 INDIAN RIVER IRC: 1325
 58th AVE FD01:436416-1-54-01

PROJECT LAYOUT PLAN
58TH AVENUE

SHEET NO.
 23

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EXISTING MATERIAL LEGEND	
	SAND CLAY BASE
	LIMEROCK BASE

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

ERIC L. FLAVELL, P.E.
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 MELBOURNE, FL 32934
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INDIAN RIVER COUNTY
 DEPARTMENT OF PUBLIC WORKS/ENGINEERING DIVISION
 ROAD NO. COUNTY FINANCIAL PROJECT ID
 CR-613 INDIAN RIVER IRC: 1325
 58th AVE FD01:436416-1-54-01

PROJECT LAYOUT PLAN
69TH STREET

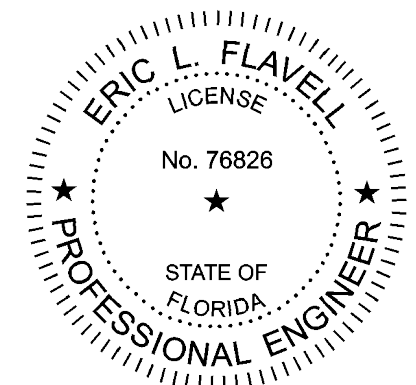
SHEET NO.
 24

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Point Table				
	(X) EASTING	(Y) NORTHING	LATITUDE	LONGITUDE
1	835402.09	1223003.873	027° 41' 49.726"	-080° 26' 45.975"
2	835402.63	1223088.062	027° 41' 50.559"	-080° 26' 45.965"
3	835402.48	1223531.992	027° 41' 54.955"	-080° 26' 45.944"
4	835402.38	1223891.993	027° 41' 58.520"	-080° 26' 45.927"
5	835402.53	1224326.478	027° 42' 02.822"	-080° 26' 45.904"
6	835404.19	1225650.929	027° 42' 15.937"	-080° 26' 45.819"
7	835406.94	1226976.803	027° 42' 29.066"	-080° 26' 45.722"
8	835409.58	1228302.614	027° 42' 42.194"	-080° 26' 45.627"
9	835411.30	1229624.420	027° 42' 55.282"	-080° 26' 45.541"
10	835412.25	1230161.923	027° 43' 00.605"	-080° 26' 45.504"
11	835413.07	1230521.922	027° 43' 04.169"	-080° 26' 45.477"
12	835414.00	1230946.224	027° 43' 08.371"	-080° 26' 45.445"
13	835414.27	1230978.132	027° 43' 08.687"	-080° 26' 45.441"
14	835417.95	1231433.000	027° 43' 13.191"	-080° 26' 45.377"
15	835420.87	1231792.996	027° 43' 16.755"	-080° 26' 45.326"
16	835424.39	1232293.255	027° 43' 21.709"	-080° 26' 45.262"
17	835430.17	1232966.772	027° 43' 28.378"	-080° 26' 45.164"
18	835435.94	1233640.288	027° 43' 35.047"	-080° 26' 45.066"
19	835441.12	1234313.805	027° 43' 41.716"	-080° 26' 44.975"
20	835447.31	1234987.322	027° 43' 48.384"	-080° 26' 44.872"
21	835449.46	1235244.270	027° 43' 50.929"	-080° 26' 44.835"
22	835454.79	1235589.953	027° 43' 54.351"	-080° 26' 44.759"
23	835460.12	1235935.637	027° 43' 57.774"	-080° 26' 44.682"
24	835464.54	1236334.354	027° 44' 01.722"	-080° 26' 44.613"
25	835470.52	1236786.937	027° 44' 06.203"	-080° 26' 44.524"

Point Table				
	(X) EASTING	(Y) NORTHING	LATITUDE	LONGITUDE
26	835476.57	1237341.549	027° 44' 11.695"	-080° 26' 44.429"
27	835480.82	1237682.873	027° 44' 15.074"	-080° 26' 44.364"
28	835484.34	1237889.364	027° 44' 17.119"	-080° 26' 44.315"
29	835495.95	1238468.043	027° 44' 22.848"	-080° 26' 44.156"
30	835503.69	1239022.838	027° 44' 28.342"	-080° 26' 44.043"
31	835507.80	1239271.762	027° 44' 30.806"	-080° 26' 43.984"
32	835509.02	1239671.917	027° 44' 34.769"	-080° 26' 43.951"
33	835521.19	1240320.758	027° 44' 41.193"	-080° 26' 43.783"
34	835532.19	1240571.414	027° 44' 43.674"	-080° 26' 43.648"
35	835536.54	1240629.471	027° 44' 44.249"	-080° 26' 43.596"
36	835542.39	1240701.922	027° 44' 44.966"	-080° 26' 43.528"
37	835554.91	1240902.199	027° 44' 46.949"	-080° 26' 43.378"
38	835558.56	1241081.811	027° 44' 48.727"	-080° 26' 43.328"
39	835561.03	1241626.276	027° 44' 54.118"	-080° 26' 43.274"
40	835561.29	1241684.267	027° 44' 54.693"	-080° 26' 43.268"
41	834598.37	1230979.073	027° 43' 08.732"	-080° 26' 54.519"
42	834958.38	1230978.657	027° 43' 08.712"	-080° 26' 50.513"
43	835920.09	1230976.597	027° 43' 08.649"	-080° 26' 39.812"
44	836420.15	1230975.079	027° 43' 08.612"	-080° 26' 34.248"



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DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
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