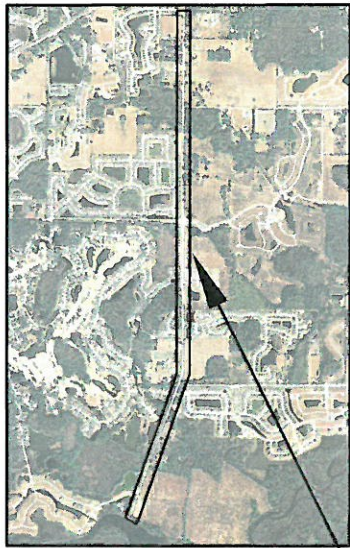


COMPONENTS OF CONTRACT PLANS SET

- ROADWAY PLANS
- UTILITY ADJUSTMENT PLANS
- SIGNING AND PAVEMENT MARKING PLANS
- SIGNALIZATION PLANS
- INTERCONNECT PLANS



MANATEE COUNTY, FL
FORT HAMER ROAD PHASE II
US 301 TO FUTURE FORT HAMER BRIDGE
323-6054764

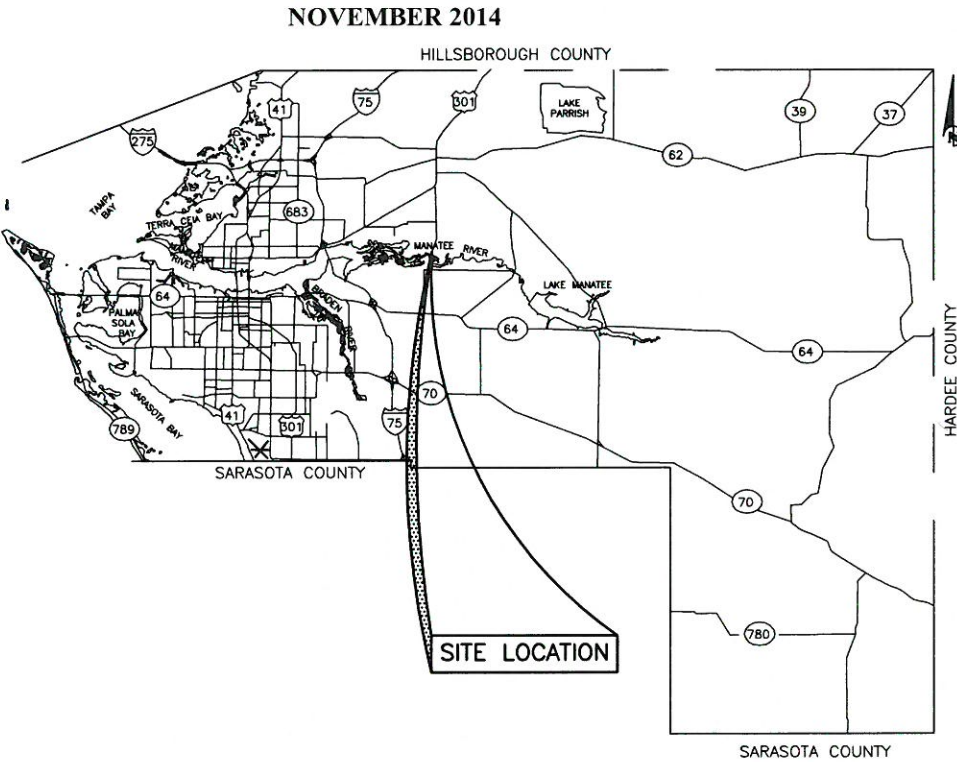


VICINITY MAP
N.T.S.

PROJECT SITE

PROJECT DESCRIPTION

PROJECT CONSISTS OF WIDENING THE EXISTING ROAD FROM 22' TO 24' WITH 4' BIKE LANES AND 4' SHOULDERS, RELOCATING EXISTING ROADSIDE DITCHES, AND ADDING A SIDEWALK ON THE WEST SIDE OF THE ROAD



SITE LOCATION

BID SET

NO.	INDEX OF SHEETS
1	COVER SHEET
2	QUANTITY SHEET
3-4	GENERAL NOTES & LEGEND
5-9	TYPICAL SECTIONS
10-34	PLAN AND PROFILE
35-83	CROSS SECTIONS
84-87	DETAILS
88	EROSION CONTROL DETAILS
BMP1-BMP13	BEST MANAGEMENT PRACTICES
UAS1-UAS13	UTILITY ADJUSTMENT SHEETS

NOTES:
THIS PROJECT TO BE LET TO CONTRACT WITH MANATEE COUNTY PROJECT NUMBER 6035560 & MANATEE COUNTY PROJECT NUMBER 6082660.

THE SCALE OF THESES PLANS MAY HAVE CHANGED DUE TO REPRODUCTION.



Know what's below
Call before you dig



MANATEE COUNTY, FL
US 301 TO FUTURE FORT HAMER
BRIDGE
COVER SHEET

NO.	REVISION DESCRIPTION	DATE
3	EXTENDED 5' GRADY WALL TO EXISTING STA. 111+53.94 RT. PLAN SHEETS CHANGES 1-2,26,70 NEW QUANTITY AND PAY ITEM NUMBER HAS BEEN ADDED TO THE QUANTITY SHEET.	
PROJECT #	323-6054764	
SURVEY #	---	
SEC./TWN./RGE	7/35S/18E	
SCALE	N.T.S.	
DRAWN BY	DATE	
CHECKED	DATE	
DESIGNED	DATE	
SURVEYED	DATE	
CHRIS L. MOWBRAY, P.E.	FLORIDA P.E. # 46777	
STATE OF FLORIDA	ENGINEER	
SHEET		

I:\PMD_Engineering_Short Highway_Engineering\ROADS\Fort Hamer_Road\DWG\FH_C&V & ON APENDUM 3.dwg 2 QUANTITY: 1/5/2015 9:38 AM Aloys Micekostas, 11.11.17

ITEM		EST.	
NO.	DESCRIPTION	QTY	U/M
ROAD WORK			
101-1	MOBILIZATION	1.00	LS
102-1	MAINTENANCE OF TRAFFIC	1.00	LS
104-10-3	SEDIMENT BARRIER	25,139	LF
104-18	INLET PROTECTION SYSTEM	324	EA
110-2-1	CLEARING & GRUBBING	22	AC
110-7-1	MAILBOX, F&I SINGLE	45	EA
120-1	REGULAR EXCAVATION	24,200	CY
120-4	SUBSOIL EXCAVATION	8,500	CY
120-6	EMBANKMENT (REGULAR)	10,680	CY
160-MC	12" TYPE B STABILIZATION (LBR 60)	33,000	SY
285-701	4" OF OPTIONAL BASE GROUP 1	12,300	SY
285-709	10" OF OPTIONAL BASE GROUP 9	15,147	SY
327-70-1	MILLING EXIST ASPH PAVT, 1" AVG DEPTH	42,000	SY
334-1-13	3" SUPER PAVE ASPHALTIC CONCRETE SP-12.5 TRAFFIC C	9,900	TN
337-7-73	1" ASPHALT CONCRETE FRICTION COURSE , FC-9.5 TRAFFIC C	3,310	TN
339-1	MISCELLANEOUS ASPHALT PAVEMENT	42	TN
400-2-2	ENDWALL CLASS II	40.00	CY
400-MC	EPOXY GROUTED DOWELS	1.00	LS
400-MC	CONCRETE CLASS I (UNDER THE SIDEWALK SWALE CROSSING) STEEL INCLUDED	17.00	CY
400-MC	GRAVITY WALL (STEEL INCLUDED)	206	CY
425-MC	GRATE INLET(DBI)	2	EA
425-MC	DROP INLET	1	EA
425-MC	JUNCTION BOX	5	EA
425-MC	TRAFFIC BEARING LID	9	EA
425-2-91	MANHOLE, J-8, <10' (6'x8')	1	EA
425-1201	INLETS,CURB, TYPE 9, <10'	1	EA
425-1521	INLETS, DT BOT, TYPE C, <10'	1	EA
425-1529	INLETS, DT BOT, TYPE C, MODIFY	1	EA
425-1559	INLETS, DT BOT, TYPE E, MODIFY	1	EA
430-174-115	PIPE STORM SEWER CULV(RCP)(15")	96.00	LF
430-174-118	PIPE STORM SEWER CULV(RCP)(18")	363.00	LF
430-174-124	PIPE STORM SEWER CULV(RCP)(24")	1,264.00	LF
430-174-130	PIPE STORM SEWER CULV(A2000)(30")	32	LF
430-174-136	PIPE STORM SEWER CULV(RCP)(36")	48	LF
430-174-215	PIPE STORM SEWER CULV(ERCP) (12"X18")	510	LF
430-174-218	PIPE STORM SEWER CULV(ERCP) (14"X23")	260	LF
430-174-224	PIPE STORM SEWER CULV(ERCP) (19"X30")	439	LF
430-174-230	PIPE STORM SEWER CULV(ERCP) (24"X38")	176	LF
430-174-236	PIPE STORM SEWER CULV(ERCP) (29"X45")	56	LF
430-175-215	PIPE STORM SEWER CULV(ERCP) (12"X18")	88	LF
430-175-248	PIPE STORM SEWER CULV(RCP)(38"X60")	48	LF
430-941-133	MITERED END SECTION-RCP- ROUND/30"	1	EA
430-982-623	MITERED END SECTION- 12"X 18"	2	EA
430-984-125	MITERED END SECTION-RCP- ROUND/18"	14	EA
430-984-129	MITERED END SECTION-RCP- ROUND/24"	1	EA
430-984-623	MITERED END SECTION- 12"X 18"	22	EA
430-984-625	MITERED END SECTION- 14"X 23"	10	EA
430-984-629	MITERED END SECTION- ERCP ROUND 19"X 30"	11	EA
430-984-633	MITERED END SECTION- ERCP ROUND 24"X 38"	7	EA
515-1-2	PIPE HANDRAIL-GUIDERAIL, ALUMINUM	400	LF
515-2-301	PEDESTRIAN /BICYCLE RAILING,ALUMINUM, 42"	100	LF
520-1-10	TYPE F CURB & GUTTER	1,651	LF
520-5-11	TRAFFIC SEPARATOR CONCRETE TYPE I, 4' WIDE	492	LF
522-1	SIDEWALK CONCRETE 4"	3,210.00	SY
522-2	SIDEWALK CONCRETE 6" THICK (CONC. DRIVEWAYS)	1,923	SY
527-2	DETECTABLE WARNINGS	192	SF
530-3-4	RIP RAP-RUBBLE	1,100	TN
536-1-1	GUARDRAIL	1,253	LF
536-6	PIPE RAIL FOR GUARDRAIL	370.00	LF
550-MC	EXISTING FENCE TO BE REMOVED AND RELOCATED	3,182	LF
570-1-2	PERFORMANCE TURF (BAHIA SOD)	72,000.00	SY
571-1-11	PLASTIC EROSION MAT, TURF REINFORCED MAT, TYPE I	39,600.00	SY
UTILITIES RELOCATION			
U-2	RELOCATE 6" TO 10" DI WATER MAIN (CI 350) (WATER)	40	LF
U-3	DI FITTINGS (WATER)	150	LB
U-4	PIPE RESTRAINTS 6"-10" (WATER)	15	EA
U-5	REPLACE WATER SERVICE (SINGLE ,SHORT) (WATER)	2	EA
U-6	REPLACE WATER SERVICE (SINGLE, LONG) (WATER)	2	EA
U-7	ADJUST VALVE BOX OR METER BOX (WATER)	27	EA
U-8	RELOCATE FIRE HYDRANT ASSEMBLY (WATER)	6	EA
U-10	MISCELLANEOUS CONCRETE (WATER)	1	CY
U-11	BFP INCL. VACUUM BREAKERS & EXP. TANK (WATER)	1	EA
U-13	DI FITTINGS (SANITARY)	1,400	LB
U-14	PIPE RESTRAINTS 6"-10" (SANITARY)	30	EA
U-15	GROUT OR REMOVE ABANDONED PIPE (SANITARY)	470	LF
U-16	ADJUST VALVE BOX OR METER BOX (SANITARY)	3	EA
U-17	ARV ASSEMBLY INCL. MANHOLE (SANITARY)	3	EA
U-18	MISCELLANEOUS CONCRETE (SANITARY)	6	CY
U-19	16" PVC DR 18 FORCE MAIN (C905) DIRECT BURY (SANITARY)	240	LF
U-20	8" PVC DR 18 FORCE MAIN (C900) DIRECT BURY (SANITARY)	290	LF
U-21	PIPE RESTRAINTS 16" (SANITARY)	20	EA
U-22	ADJUST MANHOLE LID & COVER (SANITARY)	2	EA
U-23	CONNECT TO EXISTING FORCE MAIN (SANITARY)	8	EA

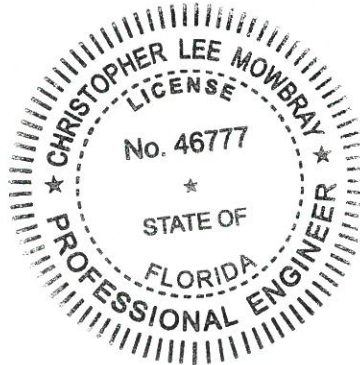
SIGNING AND PAVEMENT MARKING			
0700-1-11	SINGLE POST SIGN, F&I, LESS THAN 12 SF	26	AS
0700-1-50	SINGLE POST SIG, RELOCATE	13	AS
0701-1-60	SINGLE POST SIGN, REMOVE	1	AS
706-3	RETRO-REFLECTIVE PAVEMENT MARKERS, W/R	103	EA
706-3	RETRO-REFLECTIVE PAVEMENT MARKERS, Y/Y	853	EA
0710-11-290	PAINTED PAVEMENT MARKINGS, STANDARD, YELLOW, ISLAND NOSE	343	SF
0711-11-111	THERMOPLASTIC, STANDARD, WHITE SOLID, 6"	6	NM
0711-11-123	THERMOPLASTIC, STANDARD, WHITE SOLID, 12" (CROSSWALK)	938	LF
0711-11-125	THERMOPLASTIC, STANDARD, WHITE SOLID, 24"	470	LF
0711-15-151	THERMOPLASTIC, STANDARD, WHITE SOLID, 2'-4' Skip, 6"	1,337	LF
0711-11-160	THERMOPLASTIC, STANDARD, WHITE SOLID, (MESSAGE) (BIKE SYM)	26	EA
0711-11-160	THERMOPLASTIC, STANDARD, WHITE SOLID, (MESSAGE) (BIKE ARROW)	41	EA
0711-11-160	THERMOPLASTIC, STANDARD, WHITE SOLID, MESSAGE (SCHOOL)	4	EA
0711-11-170	THERMOPLASTIC, STANDARD, WHITE SOLID, ARROW	41	EA
0711-11-211	THERMOPLASTIC, STANDARD, YELLOW SOLID, 6"	5	NM
0711-11-224	THERMOPLASTIC, STANDARD, YELLOW SOLID, 18"	928	LF
0711-11-231	THERMOPLASTIC, STANDARD, YELLOW SOLID, SKIP 6"/10-30 SKIP	0.90	GM



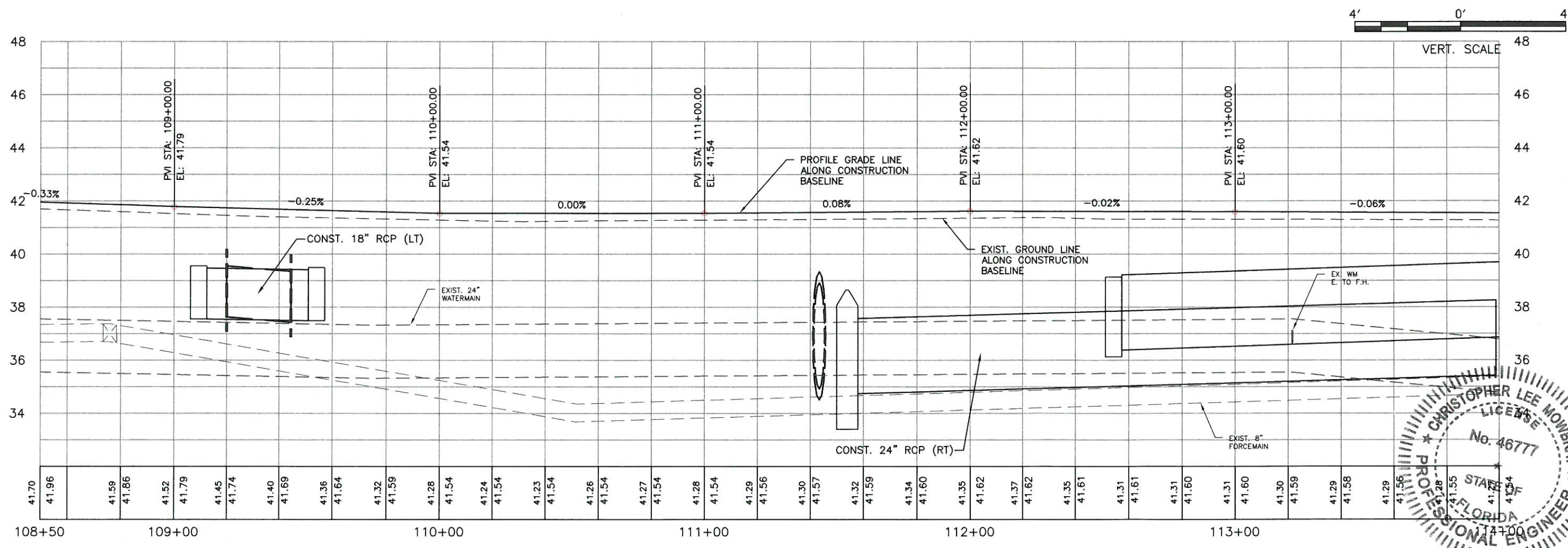
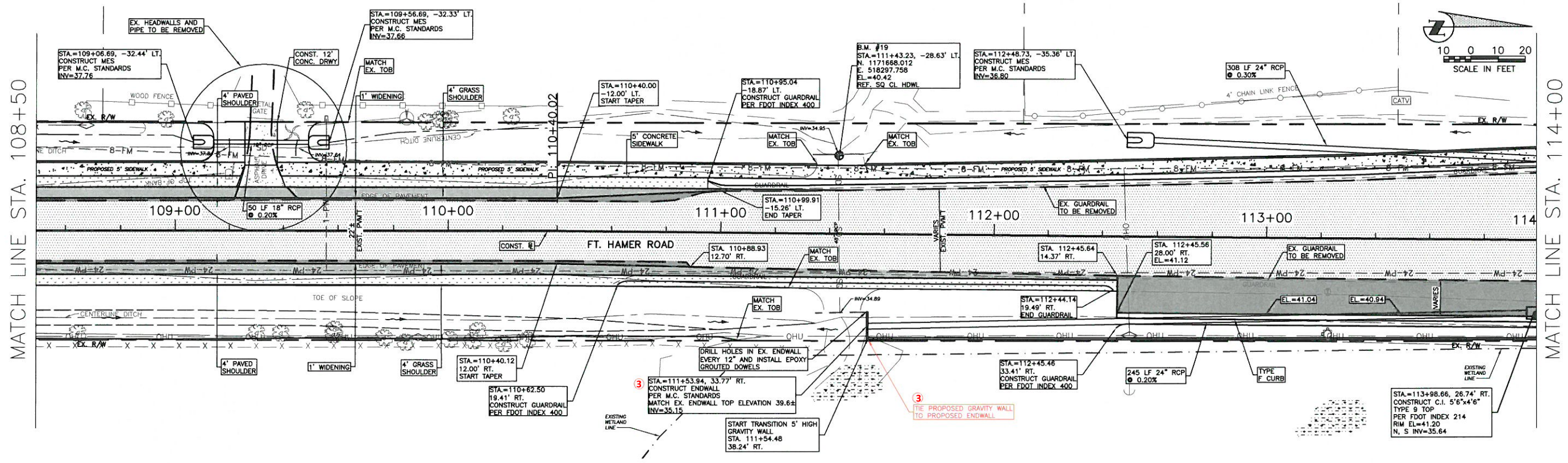
PUBLIC WORKS DEPARTMENT
ENGINEERING SERVICES
1022 26th Avenue East, Bradenton, FL 34208

MANATEE COUNTY, FL
US 301 TO FUTURE FORT HAMER
BRIDGE
QUANTITY SHEET

NO.	3	3							
REVISION	DESCRIPTION	DATE	BY						
	QUANTITIES AND PAY ITEM NUMBERS CHANGES								
	NEW QUANTITY AND PAY ITEM NUMBER HAS BEEN ADDED TO THE QUANTITY SHEET								
PROJECT #	323-6054764								
SURVEY #	---								
SEC./TWN./RGE	7/35S/18E								
SCALE	N.T.S.								
	BY	DATE							
SURVEYED	---	---							
DESIGNED	AAM	---							
DRAWN	TMF/GB	---							
CHECKED	JP/GB	09/2014							
CHRIS L. MOWBRAY, P.E.									
FLORIDA P.E. # 46777									
Signature & Date									
SHEET 2									



FORT HAMER ROAD
US 301 TO FUTURE FORT HAMER
BRIDGE
PLAN & PROFILE STA. 108+50 TO 114+00



CHRISTOPHER LEE MOWBRAY
PROFESSIONAL ENGINEER
No. 46777
STATE OF FLORIDA

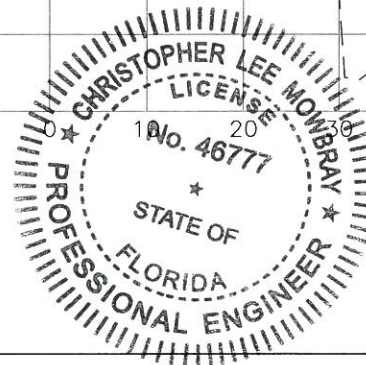
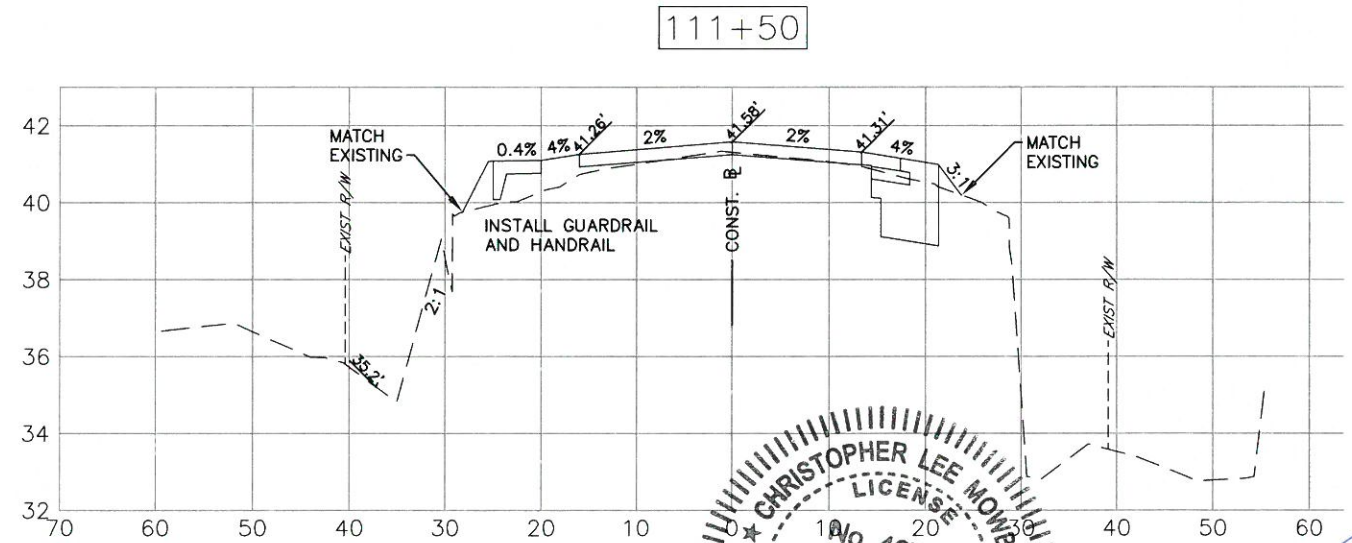
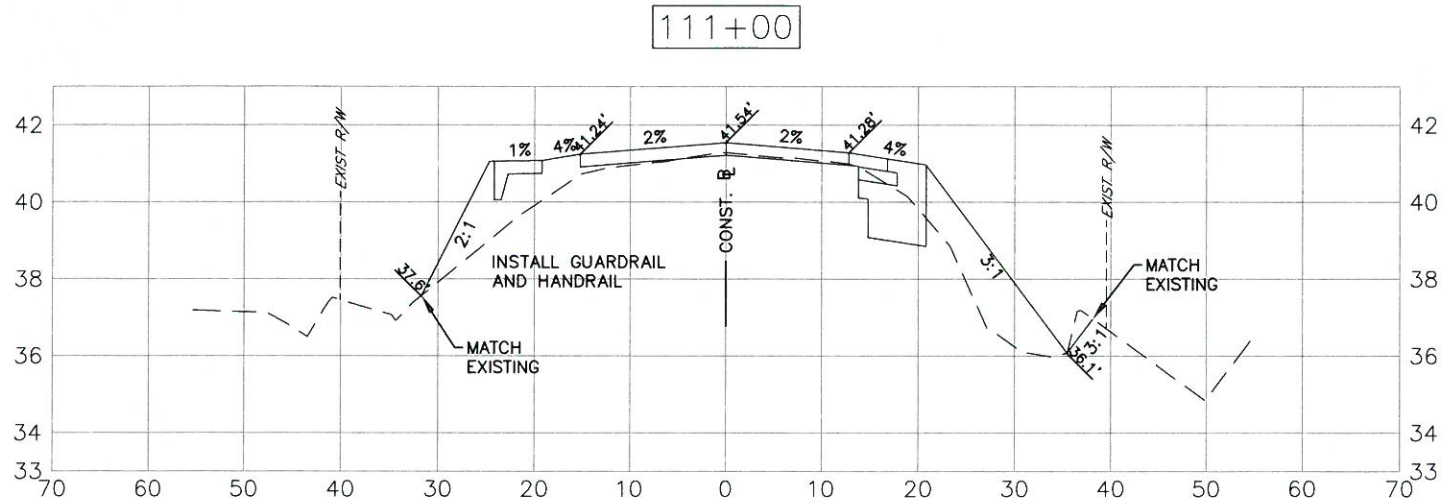
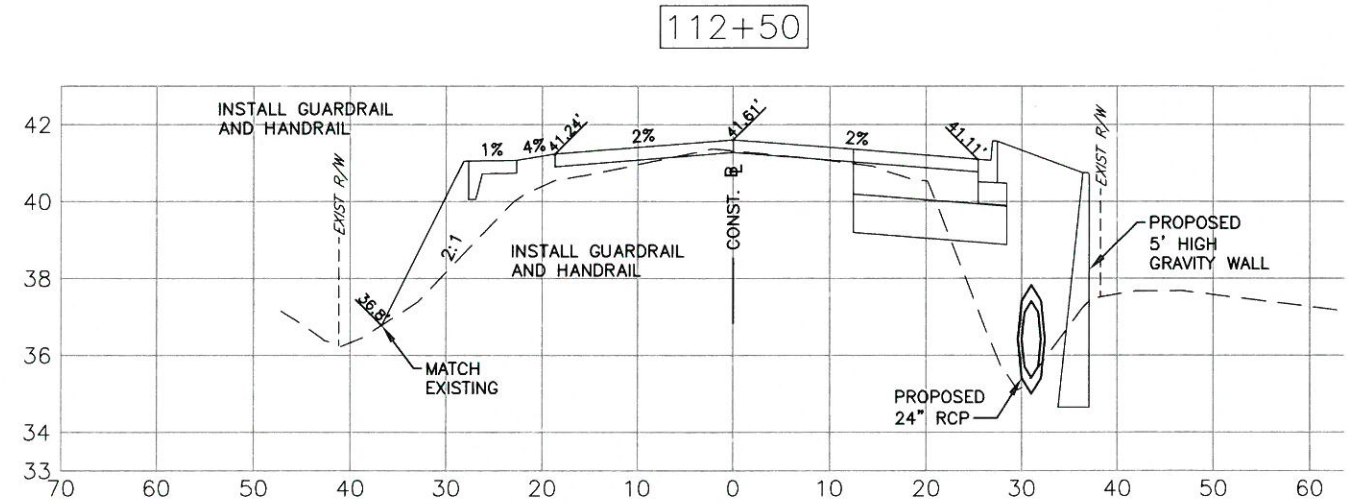
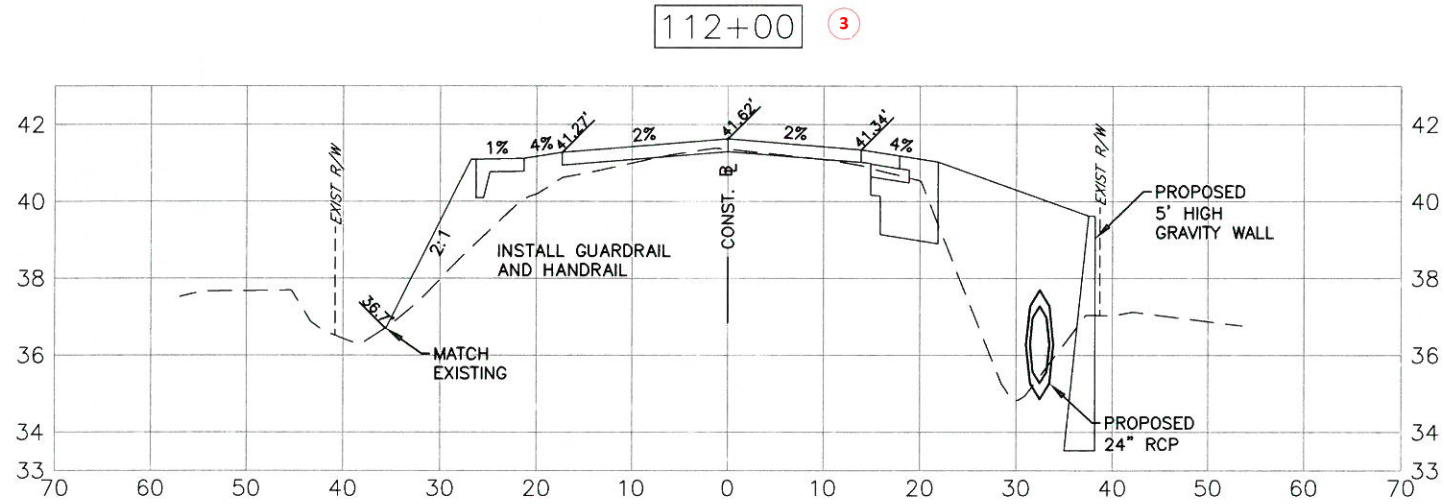
NO.	REVISION DESCRIPTION	BY	DATE
3	EXTENDED 5' GRAVITY WALL TO ENDWALL STA. 111+53.94 RT.		
PROJECT #	323-6054764		
SURVEY #	6982		
SEC./TWN./RGE	7/35S/18E		
SCALE	AS NOTED		
SURVEYED	ZNS	00/00/00	
DESIGNED	AAM	09/2013	
DRAWN	TMF/GB	09/2013	
CHECKED	JP/GB	09/2014	
CHRIS L. MOWBRAY, P.E.			
FLORIDA P.E. # 46777			
Signature & Date			
SHEET	28		



PUBLIC WORKS DEPARTMENT
ENGINEERING SERVICES
1022 26th Avenue East, Bradenton, FL 34208

**FORT HAMER ROAD PHASE II US
301 TO FUTURE FORT HAMER
BRIDGE
CROSS SECTIONS
STA 111+00 TO STA 112+50**

REVISION	DESCRIPTION	BY	DATE
3	EXTENDED 5' GRAVITY WALL TO ENDWALL STA. 111+53.94 RT		
NO.	3		
PROJECT #	323-6054764		
SURVEY #	5303		
SEC./TWN./RGE	7/35S/18E		
SCALE	H=1:20, V=1:5		
SURVEYED	ZNS	BY	DATE
DESIGNED	AAM	01/11/13	
DRAWN	TMF	01/11/13	
CHECKED	JP/GB	09/2014	
CHRIS L. MOWBRAY, P.E. FLORIDA P.E. # 46777			
Signature & Date			
SHEET 70			



Chris L. Mowbray
12/19/14

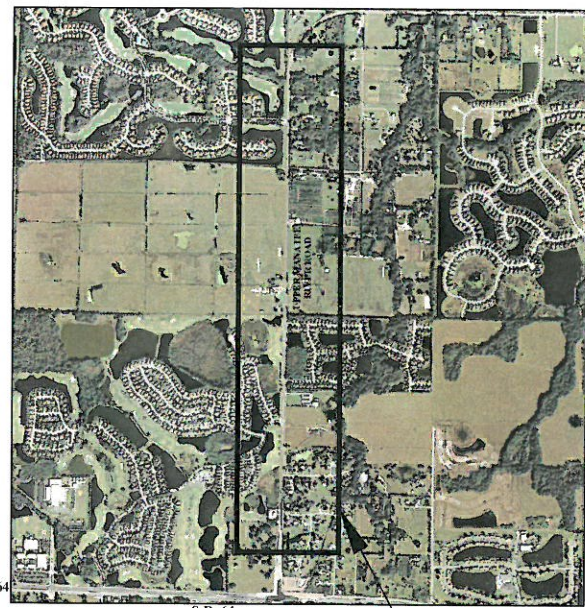


UPPER MANATEE RIVER ROAD ROADWAY FUNCTIONAL IMPROVEMENTS

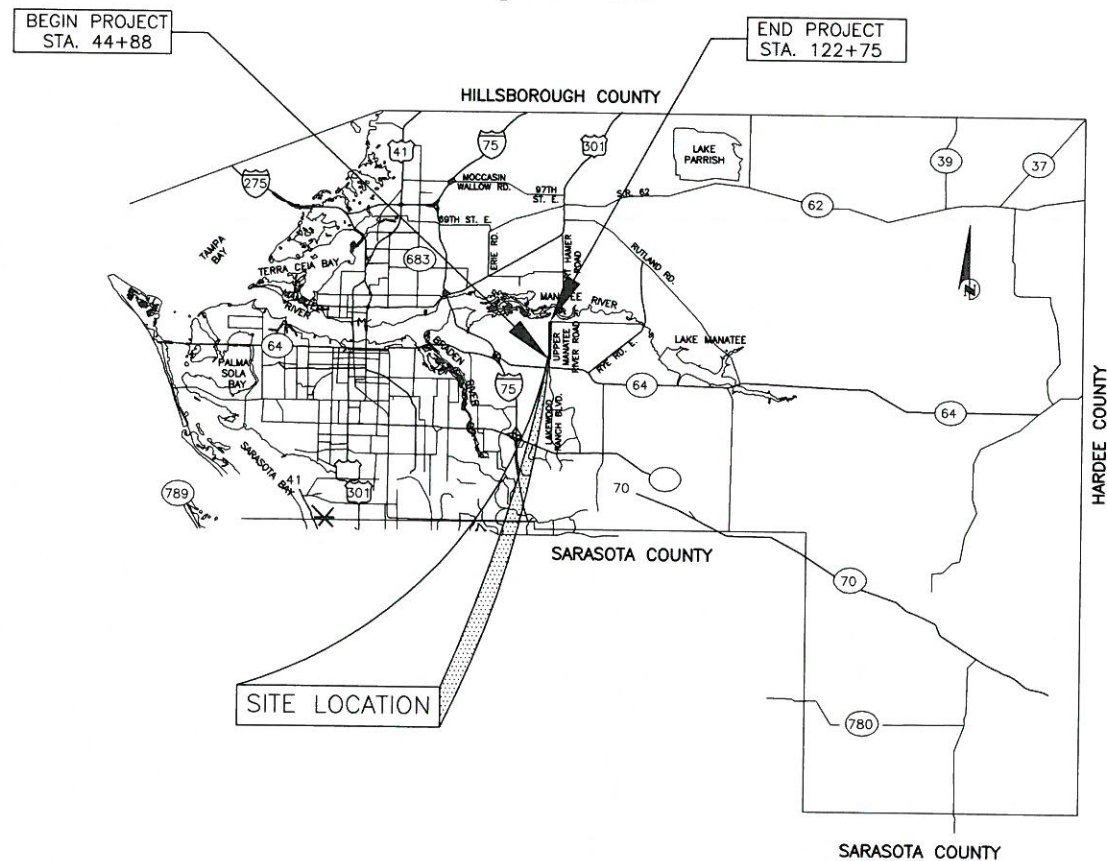
307-6082660

September 2014

BID SET



VICINITY MAP
N.T.S.



SITE LOCATION

PROJECT DESCRIPTION

THIS PROJECT CONSISTS OF WIDENING THE EXISTING SHOULDER TO 8', RELOCATING EXISTING ROADSIDE DITCHES; ADDING AND REPAIRING SIDEWALK ON THE WEST SIDE OF THE ROAD; ADDING RIGHT AND LEFT TURN LANES AT EACH INTERSECTION.

③ ADDENDUM 3

LENGTH OF PROJECT		
	LINEAR FEET	MILES
ROADWAY	7,439	1.40
SIDEWALK	3,604	.68
NET LENGTH OF PROJECT	7,787	1.47
EXCEPTIONS	N/A	N/A
GROSS LENGTH OF PROJECT	7,787	1.47

NO.	INDEX OF SHEETS
1	COVER SHEET
2	GENERAL NOTES
3	EMERGENCY CONTACTS & LEGEND
4	PROJECT LAYOUT SHEET
S1-S3	SURVEY CONTROL SHEETS
5A	SUMMARY OF PAY ITEMS
5B-5C	TYPICAL SECTIONS
6-21	PLAN & PROFILE
21A-21B	STRUCTURE/PIPE SCHEDULE
22-34A	CROSS-SECTIONS
34B	CUT AND FILL TABULATION
35-37A	DETAILS
38	BEST MANAGEMENT PRACTICES DETAILS
38A-38H	BEST MANAGEMENT PRACTICES PLANS
UAS1-UAS8	UTILITY ADJUSTMENT SHEETS

NOTES:

THIS PROJECT TO BE LET TO CONTRACT WITH MANATEE COUNTY PROJECT NUMBER 6035560 & MANATEE COUNTY PROJECT NUMBER 6054764.

THE SCALE OF THESES PLANS MAY HAVE CHANGED DUE TO REPRODUCTION.

UPPER MANATEE RIVER ROAD
ROADWAY FUNCTIONAL
IMPROVEMENTS
COVER SHEET

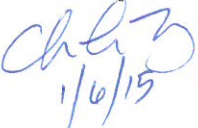
NO.	REVISION DESCRIPTION	BY	DATE
③	CHANGES TO SHEETS 5A, 7, 8, 20, 21B		
PROJECT #	307-6082660		
SURVEY #	FILE 00-42783		
SEC./TWN./RGE	19-20,		
SCALE	29-30,34S/19E		
SCALE	NTS		
SURVEYED BY	DATE		
DESIGNED BY	DATE		
DRAWN	KR/CB	06/20/12	
CHECKED	NO. 46777	09/26/14	
CHRISTOPHER L. MOWBRAY, P.E.	FLORIDA P.E. # 46777		
STATE OF	FLORIDA		
PROFESSIONAL ENGINEER			

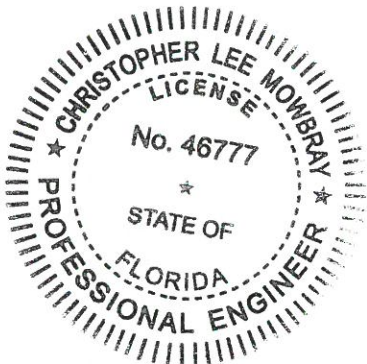
UPPER MANATEE RIVER ROAD: SUMMARY OF PAY ITEMS

ITEM NO.	DESCRIPTION	EST. QTY	U/M
Mobilization & MOT			
0101-1	Mobilization	1.00	LS
0102-1	Maintenance of Traffic (MOT)	1.00	LS
Roadway			
0104-10-3	Sediment Barrier	14,866.00	LF
0104-11	Floating Turbidity Barrier	30.00	LF
0104-18	Inlet Protection System	25.00	EA
0110-1-1	Clearing & Grubbing	8.00	AC
0110-7-1	Mailbox (Furnish & Install), Single	13.00	EA
0120-1	Regular Excavation	6,974.74	CY
0120-4	Subsoil Excavation	1,000.00	CY
0120-6	Embankment (Regular)	4,669.76	CY
0120-MC1	Clean Sand	500.00	CY
0160-4	12" Type B Stabilization (LBR 60)	13,520.21	SY
0285-709	Optional Base Group 9	13,520.21	SY
0327-70-1	Milling Existing Asphalt Pavement (1" Avg. Depth)	25,354.91	SY
0334-1-13	Superpave Asphaltic Concrete, Traffic C	1,271.00	TN
0337-7-42	Asphaltic Concrete, Friction Course, Type C	2,030.00	TN
0339-1	Miscellaneous Asphalt Pavement	5.00	TN
0400-1-2	Concrete Class I, (Endwalls & Pipe Support), Including Reinforcing Steel	2.00	CY
0400-1-2	Concrete Class I, (Misc. Concrete Spillway, Swale Crossing), Including Reinforcing Steel	16.00	CY
0425-MC1	Concrete Block Box 4'3" W/Solid Access Cover	1.00	EA
0425-MC2	Concrete Block Box 4'5" W/Traffic Bearing Access	2.00	EA
0425-MC3	Concrete Block Box 4'5" W/Case Iron Grate	1.00	EA
0425-MC4	Junction Box/Conflict Box	2.00	EA
0425-11	Drainage Structure Modify	3.00	EA
0425-1-MC1	Adjust/Reconstruct Existing Rim Elevation to Grade	3.00	EA
0425-1-MC2	Drop Inlet 4'3" W/ Closed Flume	1.00	EA
0425-1-MC3	Inlets, Curb	1.00	EA
0425-1-351	Inlets, Curb (Type P-5) (<10')	3.00	EA
0425-1-521	Inlet, Ditch Bottom, Type C (<10')	6.00	EA
0425-1-541	Inlet, Ditch Bottom, Type D (<10')	3.00	EA
0425-1-551	Inlet, Ditch Bottom, Type E (<10')	11.00	EA
0430-174-MC1	Pipe Culvert, Optional Material, Round A2000, 10'/SD	36.00	LF
0430-174-115	Pipe Culvert, Optional Material, Round A2000, 15'/SD	658.00	LF
0430-174-118	Pipe Culvert, Optional Material, Round A2000, 18'/SD	675.00	LF
0430-174-118	Pipe Culvert, Optional Material, Round RCP, 18'/SD	400.00	LF
0430-174-121	Pipe Culvert, Optional Material, Round A2000, 21'/SD	858.00	LF
0430-174-124	Pipe Culvert, Optional Material, Round A2000, 24'/SD	761.00	LF
0430-174-130	Pipe Culvert, Optional Material, Round A2000, 30'/SD	181.00	LF
0430-174-130	Pipe Culvert, Optional Material, (RCP) 30'/SD	152.00	LF
0430-174-215	Pipe Culvert, Optional Material, (ERCP) 12"x18"/SD	104.00	LF
0430-174-218	Pipe Culvert, Optional Material, (ERCP) 14"x23"/SD	311.00	LF
0430-174-224	Pipe Culvert, Optional Material, (ERCP) 19"x30"/SD	30.00	LF
0430-174-230	Pipe Culvert, Optional Material, (ERCP) 24"x38"/SD	44.00	LF
0430-175-118	Pipe Culvert, Optional Material, (RCP) 18"/CD	6.00	LF
0430-175-215	Pipe Culvert, Optional Material, (ERCP) 12"x18"/CD	10.00	LF
0430-175-218	Pipe Culvert, Optional Material, (ERCP) 14"x23"/CD	14.00	LF
0430-175-230	Pipe Culvert, Optional Material, (ERCP) 24"x38"/CD	57.00	LF
0430-175-238	Pipe Culvert, Optional Material, (ERCP) 29"x45"/CD	14.00	LF
0430-830	Pipe Filling and Plugging- Place out of Service	10.90	CY
0430-982-125	MES Optional, (RCP) 18"/CD	0.00	EA
0430-982-623	MES Optional Other, (ERCP) 12" X 18"/CD	0.00	EA
0430-982-625	MES Optional Other, (ERCP) 14" X 23"/CD	0.00	EA
0430-982-633	MES Optional Other, (ERCP) 24" X 38"/CD	2.00	EA
0430-984-123	MES Optional Round A2000 15'/SD	2.00	EA
0430-984-123	MES Optional, (RCP) 15'/SD	2.00	EA
0430-984-125	MES Optional, (RCP) 18'/SD	4.00	EA
0430-984-125	MES Optional Round A2000 18'/SD	4.00	EA
0430-984-129	MES Optional Round A2000 24'/SD	11.00	EA
0430-984-629	MES Optional Other, (ERCP) 19" X 30"/SD	2.00	EA
0430-984-638	MES Optional Other, (ERCP) 29" X 45"/SD	1.00	EA
0515-1-2	Pipe Handrail-Guardrail Aluminum	170.00	LF
0520-1-10	Concrete Curb and Gutter, Type F	1,065.00	LF
0520-1-MC1	Concrete Curb and Gutter, Type AB	60.00	LF
0522-1	Sidewalk Concrete 4" Thick	2,001.00	SY
0522-2	Sidewalk Concrete 6" Thick, Reinforced Driveway	618.00	SY
0524-1-1	Concrete Ditch Pavement, non Reinforced, 3"	5.56	SY
0527-2	Detectable Warnings	180.00	SF
0530-3-4	Rip-Rap, Rubble, F&I, Ditch Lining	18.24	TN
0536-1-1	Guardrail-Roadway	110.00	LF
0536-7	Special Guardrail Post	16.00	EA
0550-10-221	Fence Removal & Relocation(Multiple Types)	1,710.00	LF
0570-1-2	Sodding (Performance Turf, Bahia)(Includes Mowing)	35,439.87	SY

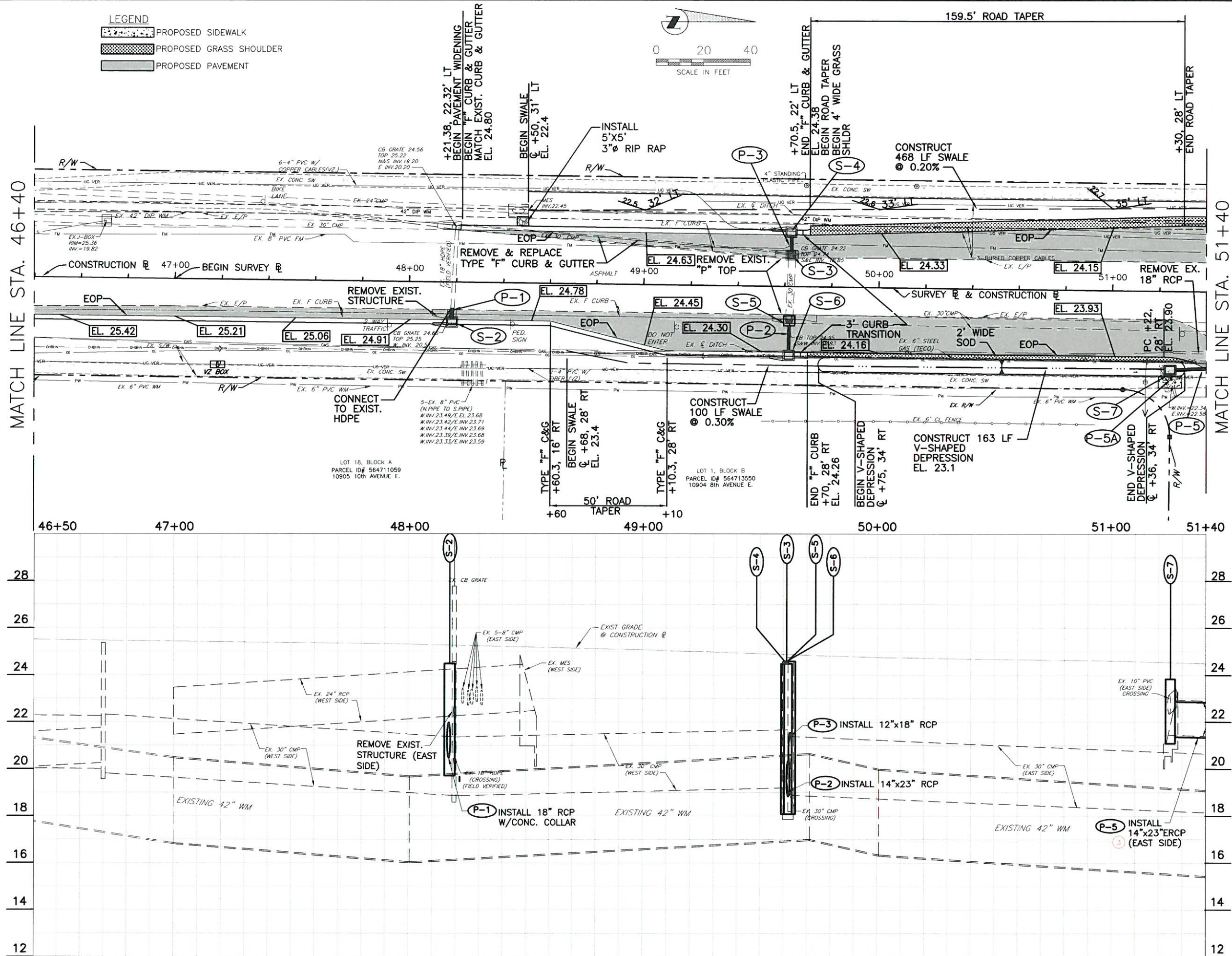
ITEM NO.	DESCRIPTION	EST. QTY	U/M
Signage & Pavement Marking			
0700-1-11	Single Post Sign, F&I, Less than 12 SF	33.00	AS
0700-1-50	Single Post Sign, Relocate	28.00	AS
0706-3	Retro-Reflective Pavement Markers	1,400.00	EA
710-11-290	Painted Pavement Markings, Standard, Yellow, Island Nose	150.00	SF
0711-11-111	Thermoplastic, Standard, White, Solid, 6"	2.40	NM
0711-11-122	Thermoplastic, Standard, White, Solid, 8"	150.00	LF
0711-11-123	Thermoplastic, Standard, White, Solid, 12" (Crosswalk)	1,080.00	LF
0711-11-124	Thermoplastic, Standard, White, Solid, 18"	25.00	LF
0711-11-125	Thermoplastic, Standard, White, Solid, 24"	117.00	LF
0711-15-151	Thermoplastic, Standard, White, 6'-10' Skip, 6"	375.00	LF
0711-15-151	Thermoplastic, Standard, White, 2'-4' Skip, 6"	1,250.00	LF
0711-11-160	Thermoplastic, Standard, White, (Message) (Bike Sym)	19.00	EA
0711-11-160	Thermoplastic, Standard, White, (Message) (Bike Arrow)	19.00	EA
0711-11-160	Thermoplastic, Standard, White, (Message) (School)	2.00	EA
0711-11-170	Thermoplastic, Standard, White, Arrow	39.00	EA
0711-11-211	Thermoplastic, Standard, Yellow, Solid, 6"	2.66	NM
0711-11-224	Thermoplastic, Standard, Yellow, Solid, 18"	1,746.00	LF
0711-11-231	Thermoplastic, Standard, Yellow, Skip 6'/10-30 Skip	0.32	GM
Interconnect			
630-2-11	Conduit, Open Trench (F&I)	7,280	LF
630-2-12	Conduit, Directional Bore (F&I)	1,910	LF
633-1-121	ITS Fiber Optic Cable, SM, UG, 12 Fiber (F&I)	30	LF
633-1-122	ITS Fiber Optic Cable, SM, UG, 48 Fiber (F&I)	10,060	LF
633-2-31	Fiber Optic Connection, Install Splice	50	EA
633-3-11	Fiber Optic Connection Hardware, (F&I), Splice Enclosure	3	EA
633-3-12	Fiber Optic Connection Hardware, (F&I), Splice Tray	8	EA
635-2-12	Pull & Splice Box, (24" x 36"), (F&I)	16	EA
635-2-13	Pull & Splice Box, (30" x 60" x 48"), (F&I)	3	EA
Water			
U1	Relocate 6" to 10" Waterline PVC (C 900) DR 18	25.00	LF
U2	Relocate 6" to 10" DI Water Main (C1 350)	25.00	LF
U3	DI Fittings	200.00	LB
U4	Pipe Restraints 6" to 10"	15.00	EA
U5	Replace Water Service (Single, Short)	1.00	EA
U6	Adjust Valve Box or Meter Box	5.00	EA
U7	Relocate Fire Hydrant Assembly	1.00	EA
U8	8" Gate Valve w /box	1.00	EA
U9	Miscellaneous Concrete	1.00	CY
U10	BFP Incl. Vacuum Breakers & Exp. Tank	1.00	EA
Sanitary			
U11	Relocate 6" to 10" Waterline PVC (C 900) DR 21	75.00	LF
U12	DI Fittings	350.00	LB
U13	Pipe Restraints 6" to 10"	25.00	EA
U14	Adjust Valve Box or Meter Box	4.00	EA
U15	ARV Assembly Inc. Manhole	1.00	EA
U16	Miscellaneous Concrete	4.00	CY
U17	Connect to Existing Force Main	4.00	EA

UPPER MANATEE RIVER ROAD
ROADWAY FUNCTIONAL
IMPROVEMENTS
SUMMARY OF PAY ITEMS

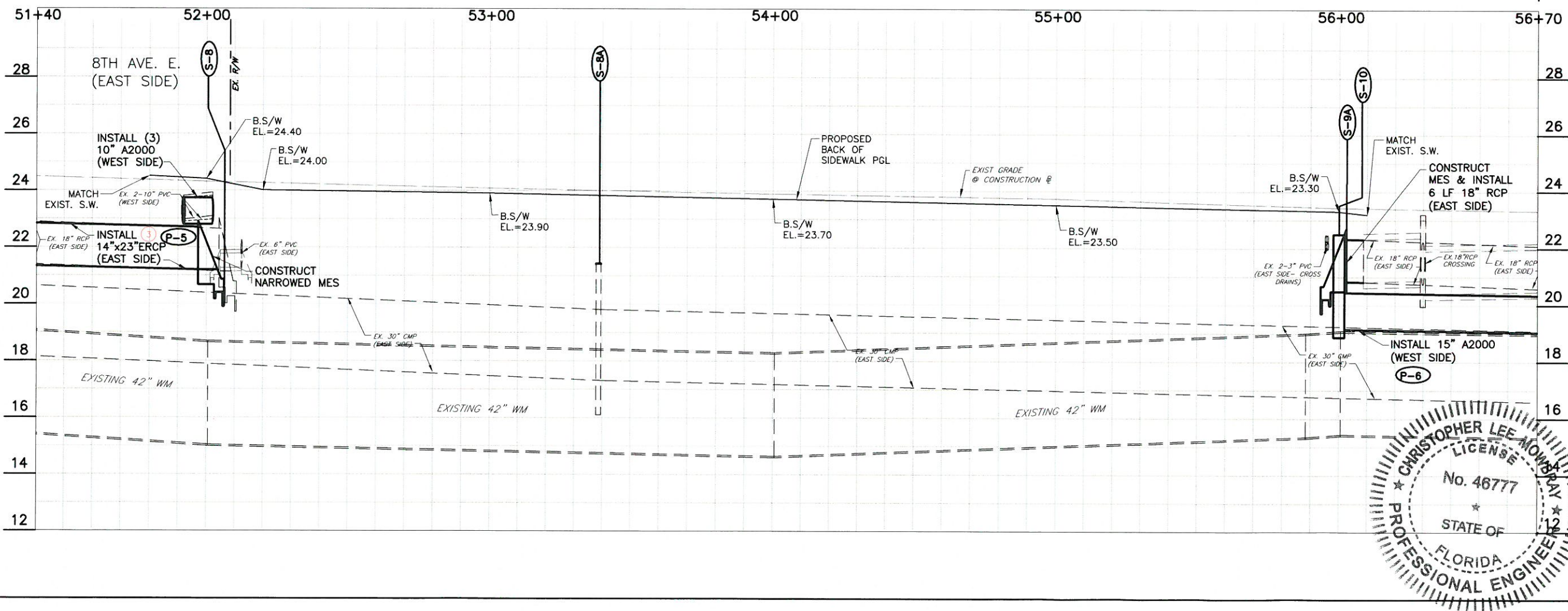
REVISION	DESCRIPTION	DATE
3	CHANGED QUANTITY AND ADDED NEW PAY ITEM NUMBERS	
NO.	3	
PROJECT #	307-6082660	
SURVEY #	FILE 00-42783	
SEC./TWN./RGE	19-20, 29-30,34S/19E	
SCALE	NTS	
	BY	DATE
SURVEYED	ZNS	04/27/12
DESIGNED	JP/PBF	06/20/12
DRAWN	KR/CB	06/20/12
CHECKED	JP/PBF	06/20/12
CHRISTOPHER L. MOWBRAY, P.E. FLORIDA P.E. # 46777		
		
Signature & Date		
SHEET 5A		

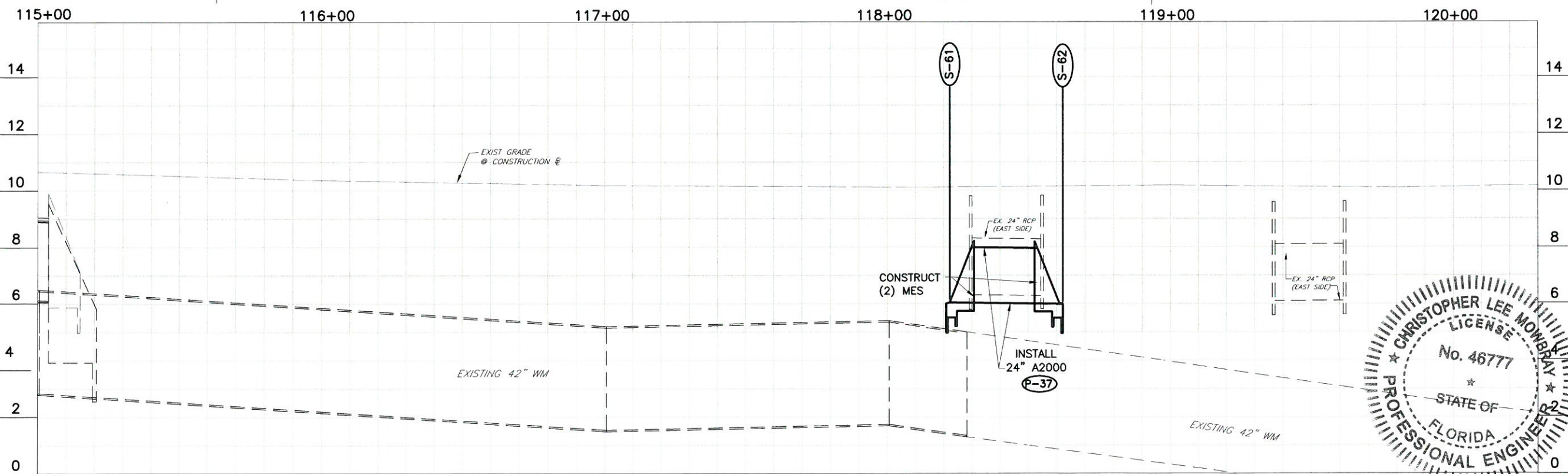


UPPER MANATEE RIVER ROAD
ROADWAY FUNCTIONAL
IMPROVEMENTS
PLAN & PROFILE STA. 46+40 TO 51+40



DATE									
BY									
REVISION DESCRIPTION	CHANGED PIPE TYPE FROM RCP TO ERCP ON P-5								
NO.	3								
PROJECT #	307-6082660								
SURVEY #					FILE 00-42783				
SEC./TWN./RGE					19-20, 29-30,34S/19E				
SCALE					1"=40' HORIZ. 1"=4' VERT.				
				BY	DATE				
SURVEYED	ZNS		P4/27/12						
DESIGNED	JG/PBF		06/20/12						
DRAWN	RR/06		06/20/12						
CHECKED	JP/PBF		06/20/12						
CHRISTOPHER L. MOWERS, P.E. FLORIDA P.E. # 46777									
Signature _____ Date _____									
SHEET 17									

[illegible]



**UPPER MANATEE RIVER ROAD
ROADWAY FUNCTIONAL
IMPROVEMENTS
PLAN & PROFILE
STA. 115+00 TO STA. 120+30**

[illegible]

STR. # STATION.OFFSET			STRUCTURE SCHEDULE	TOP/RIM ELEVATION	INVERT ELEVATION	
S-51	STA. 107+45, 37' RT.		REMOVE EXIST. HEADWALL AND CONSTRUCT NARROWED MITERED END SECTION PER M.C. 103.0 (MODIFIED) DETAIL AND INSTALL (P-33) TO THE NORTH	N/A	INV. EL. 8.75 (N)	
S-52	STA. 107+87, 37' RT.		REMOVE EXIST. HEADWALL AND CONSTRUCT NARROWED MITERED END SECTION PER M.C. 103.0 (MODIFIED) DETAIL AND CONNECT TO (P-33) FROM THE SOUTH	N/A	INV. EL. 8.70 (S)	
S-53	STA. 110+21, 34' RT.		REMOVE EXIST. HEADWALL AND EXIST. PIPE AND CONSTRUCT MITERED END SECTION PER M.C. STD. 103.0 AND INSTALL (P-33A) TO THE NORTH	N/A	INV. EL. 8.16 (N)	
S-54	STA. 110+65, 34' RT.		REMOVE EXIST. HEADWALL AND CONSTRUCT MITERED END SECTION PER M.C. STD. 103.0 AND CONNECT TO (P-33A) FROM THE SOUTH	N/A	INV. EL. 8.14 (S)	
S-55	STA. 111+98, 37' RT.		REMOVE EXIST. HEADWALL & EXIST. PIPE AND CONSTRUCT MITERED END SECTION PER M.C. STD. 103.0 AND INSTALL (P-34) TO THE NORTH	N/A	INV. EL. 7.80 (N)	
S-56	STA. 112+37, 37' RT.		REMOVE EXIST. HEADWALL AND CONSTRUCT MITERED END SECTION PER M.C. STD. 103.0 AND CONNECT TO (P-34) FROM THE SOUTH	N/A	INV. EL. 7.75 (S)	
S-57	STA. 112+49, 36' RT.		REMOVE EXIST. MES AND PIPE AND CONSTRUCT MITERED END SECTION PER M.C. STD. 103.0 AND INSTALL (P-35) TO THE NORTH	N/A	INV. EL. 7.70 (N)	
S-58	STA. 112+87, 36' RT.		REMOVE EXIST. MES AND CONSTRUCT MITERED END SECTION PER M.C. STD. 103.0 AND CONNECT TO (P-35) FROM THE SOUTH	N/A	INV. EL. 7.60 (S)	
S-59	STA. 114+17, 36' RT.		REMOVE EXIST. HEADWALL & EXIST. 24 IN. RCP AND CONSTRUCT MITERED END SECTION PER M.C. STD. 103.0 AND INSTALL (P-36) TO THE NORTH	N/A	INV. EL. 7.20 (N)	
S-60	STA. 114+53, 36' RT.		REMOVE EXIST. HEADWALL AND CONSTRUCT MITERED END SECTION PER M.C. STD. 103.0 AND CONNECT TO (P-36) FROM THE SOUTH	N/A	INV. EL. 7.15 (S)	
S-61	STA. 118+21, 38' RT.		REMOVE EXIST. HEADWALL & EXIST. 24 IN. RCP AND CONSTRUCT MITERED END SECTION PER M.C. STD. 103.0 AND INSTALL (P-37) TO THE NORTH	N/A	INV. EL. 5.65 (N)	
S-62	STA. 118+63, 38' RT.		REMOVE EXIST. HEADWALL AND CONSTRUCT MITERED END SECTION PER M.C. STD. 103.0 AND CONNECT TO (P-37) FROM THE SOUTH	N/A	INV. EL. 5.60 (S)	
PIPE #STATION.OFFSET			PIPE SCHEDULE	INVERT ELEVATION		
P-1	STA. 48+18.23, 17.25' RT. STA. 48+18, 11' RT.		INSTALL 6 LF OF 18" RCP @ 0.66% FROM CURB INLET (S-2) AND CONNECT TO EXIST. 18 IN. HDPE TO THE WEST	INV. EL. 20.55 (E) & INV. EL. 20.51 (W)		
P-2	STA. 49+62.4, 23.27' LT.- STA. 49+63, 14' LT.		INSTALL 9 LF 14"x23" ERCP @ 0.20% FROM CURB INLET (S-4) TO THE EAST AND CONNECT TO RECONSTRUCTED INLET (S-3)	INV. EL. 18.86 (E) & INV. EL. 18.83 (W)		
P-3	STA. 49+62.4, 23.27' LT.- STA. 49+62.8, 13.15' LT.		INSTALL 10 LF OF 12"x18" ERCP @ 0.62% FROM CURB INLET (S-6) TO THE WEST AND CONNECT TO RECONSTRUCTED INLET (S-5)	INV. EL. 21.7 (W) & INV. EL. 21.65 (E)		
P-4	STA. 51+92 - 52+02 33' LT, 35' LT, 37' LT		INSTALL (3) 10 LF SECTIONS OF 10 IN. A2000 UNDER SIDEWALK	INV. EL. 22.80 (S&N)		
P-5	STA. 51+24.8, 33.5' RT. - STA. 52+09, 29' RT.		INSTALL 77 LF OF 14"x23" ERCP @ 0.20% FROM (S-7) TO THE SOUTH AND CONNECT TO MES (S-8) ③	INV. EL. 21.25 (S) & INV. EL. 21.10 (N)		
P-5A	STA. 51+24.8, 35' RT. - STA. 52+09, 29' RT.		INSTALL 6 LF OF 10" PVC @ 10.0% FROM DITCH BOTTOM INLET (S-7) TO THE WEST AND CONNECT TO EXIST. 10" PVC W/PVC FITTINGS	INV. EL. 22.34 (E) & INV. EL. 21.75 (W)		
P-6	STA. 56+00, 36.7' LT.- STA. 59+00, 36.2' LT.		INSTALL 297 LF OF 15 IN. A2000 @ 0.15% DITCH BOTTOM INLET (S-10) TO THE NORTH AND CONNECT TO DITCH BOTTOM INLET (S-13)	INV. EL. 19.15 (S) & INV. EL. 18.70 (N)		
P-7	STA. 59+00, 36.2' LT.- STA. 61+25, 37.9' LT.		INSTALL 225 LF OF 18 IN. RCP @ 0.15% FROM DITCH BOTTOM INLET (S-13) TO THE NORTH AND CONNECT TO CONC. BLOCK BOX (S-13A)	INV. EL. 18.45 (S) & INV. EL. 18.12 (N)		
P-7A	STA. 61+25, 37.9' LT. - STA. 63+00, 40.5' LT.		INSTALL 175 LF OF 18 IN. RCP @ 0.67% FROM CONC. BLOCK BOX (S-13A) TO THE NORTH AND CONNECT TO CURB INLET (S-14) ③	INV. EL. 18.12 (S) & INV. EL. 16.95 (N)		
P-8	STA. 63+00, 40.5' LT. - STA. 66+00, 36.4' LT.		INSTALL 300 LF OF 18 IN. A2000 @ 0.15% FROM CURB INLET (S-14) TO THE NORTH AND CONNECT TO DITCH BOTTOM INLET (S-16)	INV. EL. 16.30 (S) & INV. EL. 15.85 (N)		
P-9	STA. 66+00, 36.4' LT.- STA. 67+40, 37.6' LT.		INSTALL 140 LF OF 21 IN. A2000 @ 0.15% FROM DITCH BOTTOM INLET (S-16) TO THE NORTH AND CONNECT TO DITCH BOTTOM INLET (S-18)	INV. EL. 15.41 (S) & INV. EL. 15.20 (N)		
P-10	STA. 64+60, 28' RT. - STA. 67+71, 32' RT.		INSTALL 311 LF OF 15 IN. A2000 @ 0.66% FROM MES (S-15) TO THE NORTH AND CONNECT TO DITCH BOTTOM INLET (S-17)	INV. EL. 19.10 (S) & INV. EL. 16.00 (N)		
P-11	STA. 67+40, 37.6' LT.- STA. 70+40, 36.0' LT.		INSTALL 300 LF OF 21 IN. A2000 @ 0.10% FROM DITCH BOTTOM INLET (S-18) TO THE NORTH AND CONNECT TO DITCH BOTTOM INLET (S-19)	INV. EL. 15.20 (S) & INV. EL. 14.90 (N)		
P-12	STA. 70+40, 36.0' LT.- STA. 73+40, 36.7' LT.		INSTALL 300 LF OF 21 IN. A2000 @ 0.10% FROM DITCH BOTTOM INLET (S-19) TO THE NORTH AND CONNECT TO DITCH BOTTOM INLET (S-20)	INV. EL. 14.90 (S) & INV. EL. 14.60 (N)		
P-13	STA. 73+40, 36.7' LT. - STA. 76+40, 36.9' LT.		INSTALL 300 LF OF 24 IN. A2000 @ 0.10% FROM DITCH BOTTOM INLET (S-20) TO THE NORTH AND CONNECT TO DITCH BOTTOM INLET (S-21)	INV. EL. 14.60 (S) & INV. EL. 14.30 (N)		
P-14	STA. 76+40, 36.9' LT.- STA. 79+78, 36.9' LT.		INSTALL 338 LF OF 24 IN. A2000 @ 0.10% FROM DITCH BOTTOM INLET (S-21) TO THE NORTH AND CONNECT TO DITCH BOTTOM INLET (S-25)	INV. EL. 14.30 (S) & INV. EL. 13.96 (N)		
P-15	STA. 77+63, 25.1' RT. - STA. 77+63, 33.5' RT.		INSTALL 8 LF OF 15 IN. A2000 @ 0.63% FROM DITCH BOTTOM INLET (S-24) TO THE EAST TO AND CONNECT TO RECONSTRUCTED INLET S-23)	INV. EL. 15.50 (E) & INV. EL. 15.45 (W)		
P-16	STA. 79+89, 25' RT. - STA. 80+09, 24' RT.		REMOVE EXIST. MES, INSTALL 20 LF OF 14x23 RCP @ 0.40% AND CONNECT TO EXIST 14"x23" RCP TO THE SOUTH AND CONNECT TO CONC. BLOCK BOX (S-28)	EX. INV. EL. 14.78 (S) & INV. EL. 14.7 (N)		
P-17	STA. 80+09, 24' RT. - STA. 80+09, 38' RT.		INSTALL 14 LF OF 29"x45" ERCP @ 0.14% FROM CONC. BLOCK BOX (S-28) TO THE NORTH TO CONC. BLOCK BOX (S-27)	INV. EL. 13.60 (E) & INV. EL. 13.62 (W)		
P-17A	STA. 81+59, 22' RT. - STA. 80+09, 24' RT.		INSTALL 150 LF OF 30 IN. RCP @ 0.09% FROM CONC. BLOCK BOX (S-26) TO THE NORTH TO CONC. BLOCK BOX (S-28)	INV. EL. 13.74 (N) & INV. EL. 13.62 (S)		
P-18	STA. 79+78, 36.9' LT.- STA. 81+59, 34' LT.		INSTALL 181 LF OF 30 IN. A2000 @ 0.09% FROM CONC. BLOCK BOX (S-25) TO THE NORTH TO CURB INLET (S-30)	INV. EL. 13.96 (S) & INV. EL. 13.80 (N)		
P-20	STA. 81+59, 34' LT. - STA. 81+59, 22' RT.		INSTALL 57 LF OF 24"x38" RCP @ 0.10% FROM CURB INLET (S-30) TO THE EAST TO CONC. BLOCK BOX (S-26)	INV. EL. 13.80 (W) & INV. EL. 13.74 (E)		
P-21	STA. 84+38, 29' LT. - STA. 85+50, 27' LT.		INSTALL 112 LF OF 12"x18" ERCP @ 0.10% FROM DITCH BOTTOM INLET (S-31) TO THE NORTH TO MES (S-34)	INV. EL. 15.60 (S) & INV. EL. 15.50 (N)		
P-22	STA. 95+30, 31' RT. - STA. 95+70, 31' RT.		INSTALL 40 LF OF 18 IN. A2000 FROM MES (S-35) TO THE NORTH TO MES (S-36)	INV. EL. 13.00 (S) & INV. EL. 13.00 (N)		
P-22A	STA. 97+48, 32' RT. - STA. 97+88, 32' RT.		INSTALL 40 LF OF 18 IN. A2000 FROM MES (S-37) TO THE NORTH TO MES (S-38)	INV. EL. 12.60 (S) & INV. EL. 12.50 (N)		
P-23	STA. 101+80, 30' LT. - STA. 104+75, 29.7' LT.		INSTALL 295 LF OF 18 IN. A2000 @ 0.14% FROM DITCH BOTTOM INLET (S-39) TO THE NORTH TO BACK OF SIDEWALK INLET (S-41)	INV. EL. 10.30 (S) & INV. EL. 9.90 (N)		
P-24	STA. 102+94, 31' RT. - STA. 104+10, 37' RT.		INSTALL 116 LF OF 14"x23" RCP @ 0.15% FROM DITCH BOTTOM INLET (S-40) TO THE NORTH TO DITCH BOTTOM INLET (S-42)	INV. EL. 9.40 (S) & INV. EL. 9.23 (N)		
P-25	STA. 104+10, 37' RT. - STA. 105+28, 37' RT.		INSTALL 118 LF OF 14"x23" RCP @ 0.15% FROM CONC. BLOCK BOX (S-42) TO THE NORTH TO DITCH BOTTOM INLET (S-45)	INV. EL. 9.23 (S) & INV. EL. 9.05 (N)		
P-26	STA. 105+28, 37' RT. - STA. 105+62, 37' RT.		INSTALL 34 LF OF 21 IN. A2000 @ 0.10% FROM DITCH BOTTOM INLET (S-45) TO THE NORTH TO CONCRETE BLOCOK BOX (S-46)	INV. EL. 9.05 (S) & INV. EL. 9.02 (N)		
P-27	STA. 105+62, 37' RT. - STA. 105+59, 69' RT.		INSTALL 32 LF OF 15 IN. A2000 @ 4.0% FROM CONCRETE BLOCK BOX (S-46) TO THE EAST TO MES (S-47)	INV. EL. 9.30 (W) & INV. EL. 10.60 (E)		
P-28	STA. 104+75, 29.7' LT.- STA. 105+53, 30.0' LT.		INSTALL 78 LF OF 21 IN. A2000 @ 0.13% FROM DITCH BOTTOM INLET (S-41) TO THE NORTH TO DITCH BOTTOM INLET INLET (S-43)	INV. EL. 9.90 (S) & INV. EL. 9.80 (N)		
P-29	STA. 105+62, 37' RT. - STA. 106+00, 37' RT.		REMOVE EXIST. 19"x30" ERCP AND INSTALL 38 LF OF 24"x38" ERCP @ 0.10% FROM CONCRETRE BLOCK BOX (S-46) TO THE NORTH TO CONCRETE BLOCK BOX (S-49)	INV. EL. 9.02 (S) & INV. EL. 8.98 (N)		
P-30	STA. 106+00, 37' RT. - STA. 106+02.4, 62.2' RT.		INSTALL 26 LF OF 15 IN. A2000 @ 2.3% FROM CONCRETE BLOCK BOX (S-49) TO THE EAST TO MES (S-48)	INV. EL. 10.00 (W) & INV. EL. 10.60 (E)		
P-31	STA. 106+00, 37' RT. - STA. 106+15, 37' RT.		INSTALL 15 LF OF 24 IN. A2000 @ 0.13% FROM CONCRETE BLOCK BOX (S-49) TO THE NORTH TO MES (S-50)	INV. EL. 8.98 (S) & INV. EL. 8.96 (N)		
P-32	STA. 105+53, 30.0' LT.- STA. 105+53, 39' LT.		INSTALL 6 LF OF 21 IN. A2000 @ 0.62% FROM DITCH BOTTOM INLET (S-43) TO THE EAST AND ENDWALL (S-44) TO THE WEST	INV. EL. 9.80 (E) & INV. EL. 9.75 (W)		
P-33	STA. 107+45, 37' RT. - STA. 107+87, 37' RT.		INSTALL 42 LF OF 24 IN. A2000 @ 0.12% FROM MES (S-51) TO THE NORTH TO MES (S-52)	INV. EL. 8.75 (S) & INV. EL. 8.70 (N)		
P-34	STA. 111+98, 37' RT. - STA. 112+37, 37' RT.		INSTALL 39 LF OF 24 IN. A2000 @ 0.13% FROM MES (S-55) TO THE NORTH TO MES (S-56)	INV. EL. 7.80 (S) & INV. EL. 7.75 (N)		
P-34A	STA. 110+29, 34' RT. - STA. 110+59, 34' RT.		INSTALL 38 LF OF 19"x30" ERCP @ 0.26% FROM MES (S-57) TO THE NORTH TO MES (S-58)	INV. EL. 7.70 (S) & INV. EL. 7.60 (N)		
P-35	STA. 112+49, 38' RT. - STA. 112+87, 36' RT.		INSTALL 38 LF OF 24 IN. A2000 @ 0.26% FROM MES (S-53) TO THE NORTH TO MES (S-54)	INV. EL. 7.70 (S) & INV. EL. 7.60 (N)		
P-36	STA. 114+17, 36' RT. - STA. 114+53, 36' RT.		INSTALL 38 LF OF 24 IN. A2000 @ 0.13% FROM MES (S-59) TO THE NORTH TO MES (S-60)	INV. EL. 7.20 (S) & INV. EL. 7.15 (N)		
P-37	STA. 118+21, 38' RT. - STA. 118+63, 38' RT.		INSTALL 39 LF OF 24 IN. A2000 @ 0.13% FROM MES (S-61) TO THE NORTH TO MES (S-62)	INV. EL. 5.65 (S) & INV. EL. 5.60 (N)		

Manatee County
FLORIDA

PUBLIC WORKS DEPARTMENT
ENGINEERING SERVICES
1022 26th Avenue East, Bradenton, FL 34208

UPPER MANATEE RIVER ROAD
ROADWAY FUNCTIONAL
IMPROVEMENTS
STRUCTURE & PIPE SCHEDULE

DATE						
BY						
REVISION DESCRIPTION	CHANGED PIPE TYPE ON P-5 FROM RCP TO ERCP & P-7A FROM A2000 TO RCP					
NO.	③					
PROJECT #	307-6082660					
SURVEY #	FILE 00-42783					
SEC./TWN./RGE	19-20, 29-30 34S/19E					
SCALE	1"=40' HORIZ. 1"=4' VERT					
	BY	DATE				
SURVEYED	ZNS	04/27/12				
DESIGNED	JP/PBF	06/20/12				
DRAWN	KR/CB	06/20/12				
CHECKED	JP/PBF	06/20/12				
REGISTERED PROFESSIONAL ENGINEER	CHRISTOPHER L. MOWBRAY, P.E. FLORIDA P.E. # 46777					
	Signature & Date					

Copyright 2010 Manatee County Government | S:\PMD_Engineering\Share\Highway Engineering\ROADS\Upper Manatee River Road\DWG\UMRR Active 0314.dwg(21B, 1/6/2015 9:42 AM Korda Riley, 12, 11x17)

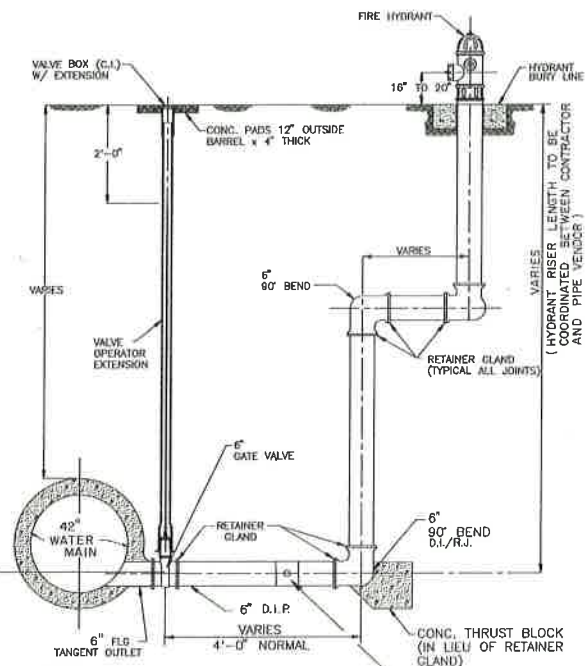


PUBLIC WORKS
DEPARTMENT

DETAILS
42" WATER TRANSMISSION MAIN
WTP TO S.R. 64

DELETE NOTE NO. 4 ON F.H. BLD. ASSY.	6/94	△
RESTR. JOINT VALVE	9/93	△
RESTR. PIPE LATH	9/93	△
REVISION	DATE	NO.
SURVEYED	BY	DATE
DESIGNED	A. DILLARD	2/93
DRAWN	P.H.	2-93
CHECKED	R.T. HALL	8/93
FILE NO.		
PROJECT NO.	425-8407-535	
VERTICAL SCALE:	N.T.S.	
HORIZONTAL SCALE:	N.T.S.	
SEAL		

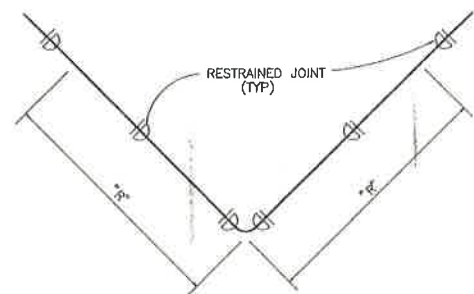
SHEET 73 OF 75



- NOTE:
1. ALL PIPE AND FOOTINGS TO BE DUCTILE IRON, CLASS 52 MIN.
 2. ALL BOLTED FITTINGS SHALL BE WRAPPED WITH POLYETHYLENE
 3. ALL CONC. TO BE A MIN OF 2500 P.S.I.

FIRE HYDRANT BLOW-OFF ASSEMBLY

DELETED
AT PRE-CONST.
MEETING ON
6/14/94

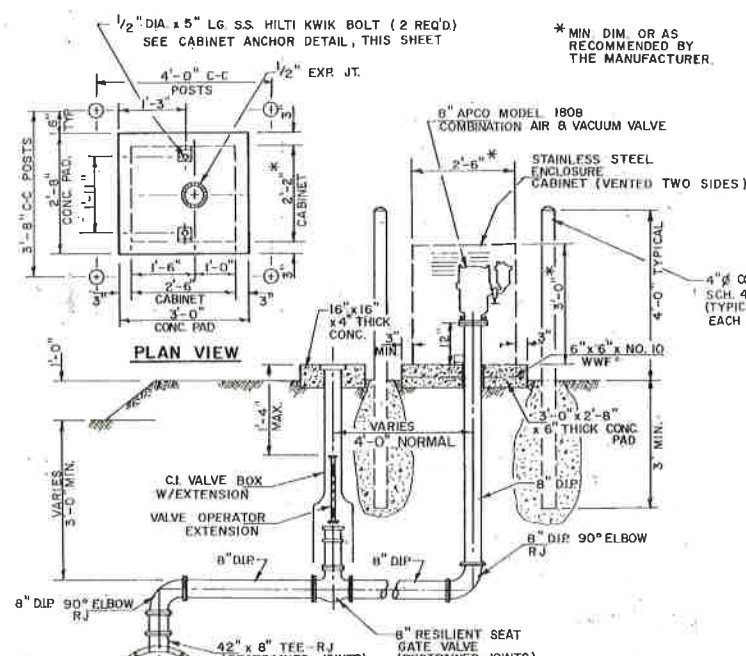


D.I.P. P.C.C.P.

SIZE	TYPE FITTING	RESTRAINED LENGTH (FT.)	"R"
42"	90-DEGREE	340	320
42"	58-DEGREE	190	180
42"	45-DEGREE	140	140
42"	22.5-DEGREE	70	70
42"	11.25-DEGREE	40	40
42" x 24"	TEE (BRANCH)	200	100
42" x 16"	TEE (BRANCH)	100	70
42" x 8"	TEE (BRANCH)	50	30
42"	DEAD END	340	320
54"	90-DEGREE	410	350

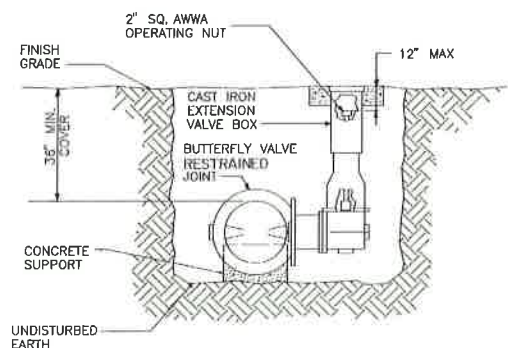
RESTRAINED JOINT DETAIL

- NOTES:
- N.T.S.
1. ALL RESTRAINED JOINT PIPE SHALL BE RESTRAINED TO THE NEXT JOINT AFTER DISTANCE "R".
 2. IF RUN OF PIPE IS LESS THAN "R", THEN THRUST BLOCKS SHALL BE PROVIDED IN ADDITION TO RESTRAINING AVAILABLE LENGTH.
 3. NO SEPARATE PAYMENT WILL BE MADE FOR RESTRAINED JOINT.

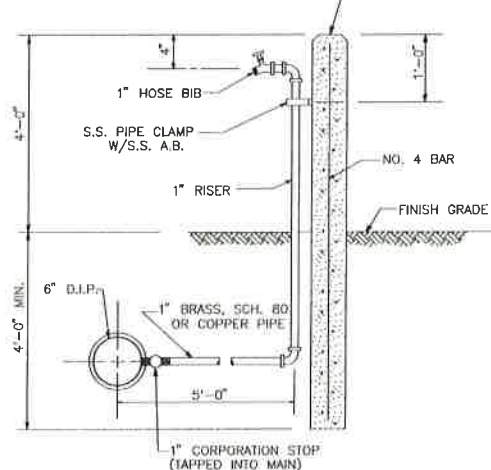


CUSTOM COMBINATION AIR & VACUUM VALVE

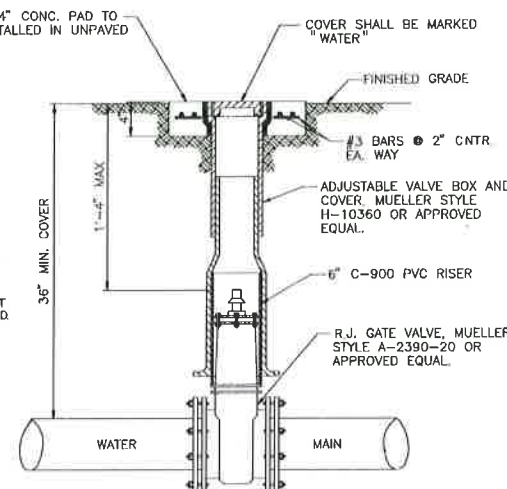
LOCATION
RT. STA. 7+50
RT. STA. 294+00



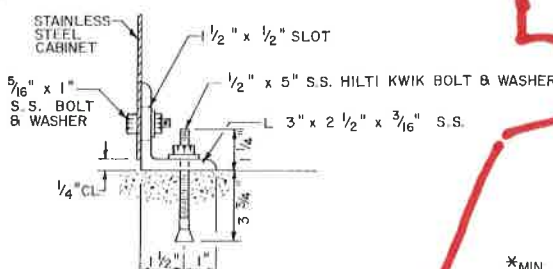
BUTTERFLY VALVE



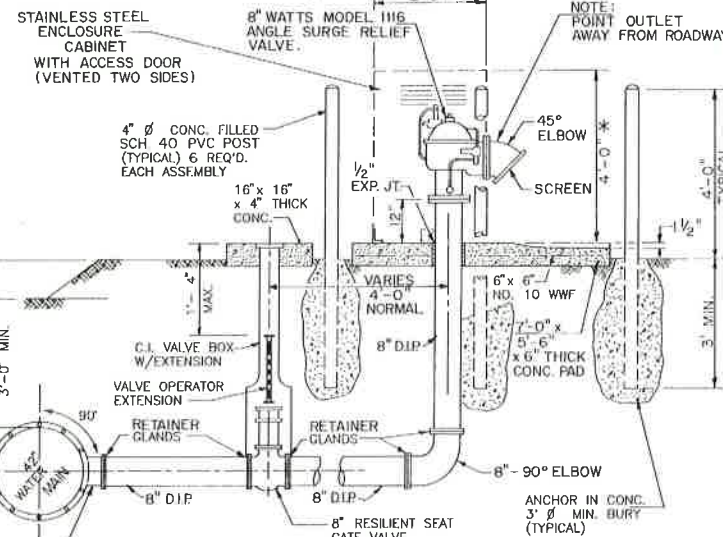
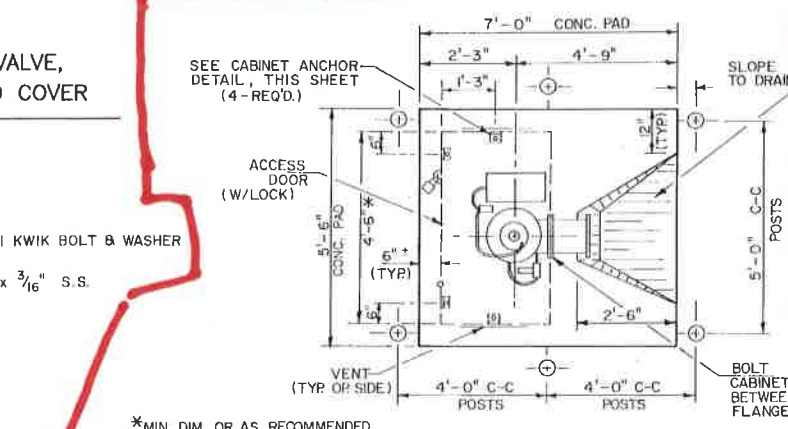
HOSE BIB DETAIL
(FOR TEST PURPOSES ONLY)



GATE VALVE,
BOX AND COVER



CABINET ANCHOR DETAIL



ELEVATION

SURGE RELIEF VALVE

NOTE:
RESTRAIN ALL JOINTS