



CONTRACT DRAWINGS
45TH STREET EAST
(FROM SR 70 TO 44TH AVENUE EAST)
FOR
MANATEE COUNTY, FLORIDA
COUNTY PROJECT NUMBER: 6025662

RELATED STANDARDS AND SPECIFICATIONS

DESCRIPTION

- A. FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION (2014).
- B. MANUAL OF UNIFORM MINIMUM STANDARDS FOR DESIGN, CONSTRUCTION, AND MAINTENANCE FOR STREETS AND HIGHWAYS, FLORIDA DEPARTMENT OF TRANSPORTATION, (FLORIDA GREEN BOOK), (2011).
- C. FDOT DESIGN STANDARDS FOR DESIGN, CONSTRUCTION, MAINTENANCE AND UTILITY OPERATIONS ON THE STATE HIGHWAY SYSTEM, (JANUARY 2014).
- D. AASHTO, GUIDE FOR PLANNING, DESIGN, AND OPERATION OF PEDESTRIAN FACILITIES, (2004).
- E. FHWA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, (MUTCD), (2009).
- F. CHAPTER 14-96 AND 14-97, FLORIDA ADMINISTRATIVE CODE RULE FOR FDOT CONNECTION PERMIT.
- G. SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT ENVIRONMENTAL RESOURCE PERMITTING (ERP) INFORMATION MANUAL, LATEST EDITION
- H. MANATEE COUNTY HIGHWAY, TRAFFIC AND STORM WATER STANDARDS, (2007).

ATTENTION IS DIRECTED TO THE FACT THAT THESE PLANS
MAY HAVE BEEN REDUCED IN SIZE BY REPRODUCTION.
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UTILITY WARNING NOTE

ABOVE GROUND AND / OR UNDERGROUND UTILITIES MAY BE IN THE AREA OF THIS PROJECT - PROCEED WITH CAUTION - THE CONTRACTOR SHALL CALL SUNSHINE STATE "ONE CALL" AT 1-800-432-4770 AND THE UTILITY OWNERS IN ADVANCE OF BEGINNING WORK, IN ACCORDANCE WITH CHAPTER 556, FLORIDA STATUTES.

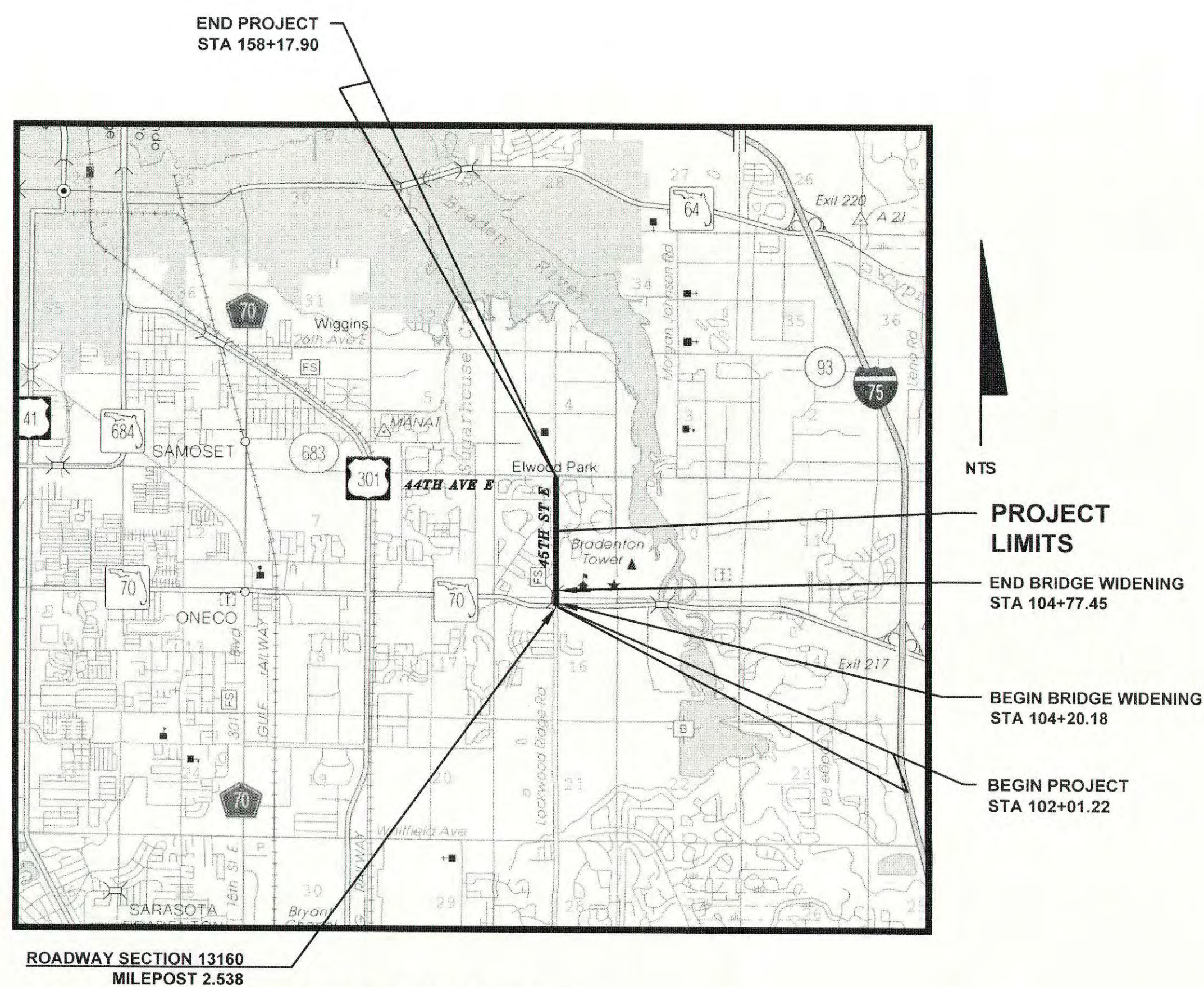
SUMMARY OF REVISIONS	
DATE	DESCRIPTION

For Design Standards Modifications click on
"Design Standards" at the following web site:
<http://www.dot.state.fl.us/rddesign/>

PROJECT LENGTH IS BASED ON E OF CONSTRUCTION

LENGTH OF PROJECT		
	LINEAR FEET	MILES
ROADWAY	5561.41	1.053
BRIDGES	57.27	0.011
NET LENGTH OF PROJECT	5618.68	1.064
EXCEPTIONS	0	0
GROSS LENGTH OF PROJECT	5618.68	1.064

REVISIONS	
DATE	DESCRIPTION
3/15/2017	DJA REVISION 1 - SHEETS T-1 THRU T-3, T-5 THRU T-7, T-9, T-12, T-13, T-16, T-22, T-23, T-28 THRU T-33, L-1, L-4 - L-7
8/7/2017	JYY REVISION 2 - SHEETS 10 & B-1



PLANS PREPARED BY:



380 Park Place Blvd, Suite 300, Clearwater, Florida, 33759
www.cardno.com - 727.531.3505
Certificate of Authorization No. 29915



ENGINEER OF RECORD

62449
FL. LICENSE NO.

COMPONENTS OF CONTRACT PLANS SET

ROADWAY PLANS
SIGNAL PLANS
LIGHTING PLANS
UTILITY RELOCATION PLANS
BRIDGE PLANS

INDEX OF ROADWAY PLANS

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92-100	TRAFFIC CONTROL PHASING
101-110	UTILITY ADJUSTMENT PLAN
111	TEST HOLE DATA
112-121	EXISTING CONDITION SURVEY

SUMMARY OF QUANTITIES

ITEM	PAY ITEM NO	DESCRIPTION	UNIT	BID QUANTITY
1	101-1	Mobilization	LS	1
2	102-1	Maintenance of Traffic	LS	1
3		Wetland Mitigation Planting	LS	1
4	104-10-3	Sediment Barrier	LF	4736
5	104-11	Floating Turbidity Barrier	LF	122
6	104-18	Inlet Protection System	EA	57
7	110-1-1	Clearing and Grubbing	AC	19
8	110-4	Removal of Existing Concrete Pavement	SY	6938
9	120-1	Regular Excavation	CY	36816
10	120-4	Unsuitable Material (Contingency)	CY	500
11	120-6	Embankment	CY	16860
12	145-71	Reinforcement Grid for Soil Stabilization	SY	185
13	160-4	Type B Stabilization	SY	48240
14	285-701	Optional Base, Base Group 1 (Graded Driveway)	SY	128
15	285-709	Optional Base, Base Group 09	SY	42500
16	327-70-6	Milling Exist Asph. Pavt., 1 1/2" Avg., Depth	SY	420
17	334-1-13	Superpave Asphaltic Conc, Traffic C (3" Thick)	TN	6986
18	337-7-43	Asphalt Concrete Friction Course, Traffic C, FC- 12.5 (1.5" Thick)	TN	3494
19	400-0-11	Concrete Class NS, Gravity Wall	CY	305
20	425-1201	Inlets, Curb, Type 9, <10'	EA	1
21	425-1203	Inlets, Curb, Type 9, J Bot, <10' (6'x6')	EA	1
22	425-1331	Inlets, Curb, Type P-3, <10'	EA	1
23	425-1341	Inlets, Curb, Type P-4, <10'	EA	1
24	425-1351	Inlets, Curb, Type P-5, <10'	EA	20
25	425-1361	Inlets, Curb, Type P-6, <10'	EA	6
26	425-1451	Inlets, Curb, Type J-5, <10' (4'x4')	EA	4
27	425-1451	Inlets, Curb, Type J-5, <10' (4'x5')	EA	2
28	425-1451	Inlets, Curb, Type J-5, <10' (4'x7')	EA	2
29	425-1461	Inlets, Curb, Type J-6, <10' (4'x4')	EA	2
30	425-1461	Inlets, Curb, Type J-6, <10' (4'x5')	EA	2
31	425-1521	Inlet, Ditch Bottom, Type C, <10'	EA	2
32	425-1531	Inlet, Ditch Bottom, Type C Modified- Back of Sidewalk, <10'	EA	1
33	425-1533	Inlet, Ditch Bottom, Type C Modified- Back of Sidewalk, J Bot, <10' (4'x8')	EA	2
34	425-1535	Inlets, Ditch Bottom Type C Modified- back of Sidewalk, Partial	EA	2
35	425-1541	Inlets, Ditch Bottom, Type D, <10'	EA	2
36	425-1711	Inlets, Gutter, Type V, <10'	EA	1
37	425-2-41	Manholes, P-7, <10'	EA	1
38	425-2-61	Manholes, P-8, <10'	EA	5
39	425-2-63	Manholes, P-8, Partial	EA	1
40	425-2-71	Manholes, J-7, <10' (8'x8')	EA	1
41	425-2-71	Manholes, J-7, <10' (7'x14')	EA	1
42	425-2-91	Manholes, J-8, <10' (4'x5')	EA	2
43	425-2-91	Manholes, J-8, <10' (5' Dia)	EA	1
44	425-2-91	Manholes, J-8, <10' (4'x8')	EA	1
45	425-2-92	Manhole, J-8, <10' (4'x6') (Conflict Structure)	EA	1
46	425-5	Manhole, Adjust	EA	1
47	430-984-141	Mitered End Section, Optional Round, 48" SD	EA	1

SUMMARY OF QUANTITIES

ITEM	PAY ITEM NO	DESCRIPTION	UNIT	BID QUANTITY
48	430-984-623	Mitered End Section, Optional Other - Ellip/Arch, 15" SD	EA	1
49	430-984-633	Mitered End Section, Optional Other - Ellip/Arch, 30" SD	EA	2
50	430-175-118	Pipe Culvert, RCP, Round, 18" S/CD	LF	406
51	430-175-124	Pipe Culvert, RCP, Round, 24" S/CD	LF	287
52	430-175-130	Pipe Culvert, RCP, Round, 30" S/CD	LF	831
53	430-175-136	Pipe Culvert, RCP, Round, 36" S/CD	LF	1559
54	430-175-142	Pipe Culvert, RCP, Round, 42" S/CD	LF	1143
55	430-175-148	Pipe Culvert, RCP, Round, 48" S/CD	LF	550
56	430-175-215	Pipe Culvert, RCP, Other Shape - Ellip/Arch, 15" S/CD (12"x18")	LF	1420
57	430-175-218	Pipe Culvert, RCP, Other Shape - Ellip/Arch, 18" S/CD (14"x23")	LF	422
58	430-175-224	Pipe Culvert, RCP, Other Shape - Ellip/Arch, 24" S/CD (19"x30")	LF	90
59	430-175-230	Pipe Culvert, RCP, Other Shape - Ellip/Arch, 30" S/CD (24"x38")	LF	235
60	430-175-236	Pipe Culvert, RCP, Other Shape - Ellip/Arch, 36" S/CD (29"x45")	LF	112
61	430-175-248	Pipe Culvert, RCP, Other-Elip/Arch, 48" S/CD (38"x60")	LF	370
62	430-175-254	Pipe Culvert, RCP, Other Shape - Ellip/Arch, 54" S/CD (43"x68")	LF	3974
63	515-2311	Pedestrian / Bicycle Railing, Aluminum, 42" Type 1	LF	569
64	520-1-10	Concrete Curb & Gutter, Type F	LF	18767
65	520-5-11	Traffic Separator Concrete - Type I, 4' Wide	LF	2026
66	522-1	Concrete Sidewalk and Driveways, 4" Thick	SY	6432
67	522-2	Conc Sidewalk and Driveways, 6" Thick	SY	614
68	527-2	Detectable Warnings	SF	385
69	530-3-4	Riprap, Rubble, F&I, Ditch Lining	TN	9
70	570-1-2	Performance Turf, Sod	SY	21141
71	700-1-11	Single Post Sign, F&I Ground Mount, Up to 12 SF	AS	34
72	700-1-12	Single Post Sign, F&I Ground Mount, 12-20 SF	AS	5
73	700-1-50	Single Post Sign, Relocate	AS	8
74	700-1-60	Single Post Sign, Remove	AS	17
75	700-2-13	Multi-post Sign, F&I Ground Mount, 21-30 SF	AS	1
76	700-2-14	Multi-post Sign, F&I Ground Mount, 31-50 SF	AS	1
77	706-3	Retro-reflective Pavement Markers	EA	470
78	710-11-290	Painted Pavement Markings, Standard, Yellow, Island Nose	SF	105
79	711-11-123	Thermoplastic, Standard, White, Solid, 12"	LF	1250
80	711-11-124	Thermoplastic, Standard, White, Solid, 18"	LF	7
81	711-11-125	Thermoplastic, Standard, White, Solid, 24"	LF	420
82	711-11-151	Thermoplastic, Standard, White, Dotted/Guideline/ 6-10 Gap Extension, 6"	LF	685
83	711-11-224	Thermoplastic, Standard, Yellow, Solid, 18"	LF	110
84	711-11-251	Thermoplastic, Standard, Yellow, Dotted/Guideline/ 6-10 Gap Extension, 6"	LF	1190
85	711-14-160	Thermoplastic, Preformed, White, Message (Bike Symbol)	EA	24
86	711-14-160	Thermoplastic, Preformed, White, Message	EA	9
87	711-14-170	Thermoplastic, Preformed, White, Arrows (Bike)	EA	24
88	711-14-170	Thermoplastic, Preformed, White, Arrows	EA	40
89	711-14-560	Thermoplastic, Preformed, White with Black Contrast, Message	EA	1
90	711-11-133	Thermoplastic, Standard, White, Skip, 12", 3-9 Lane Drop	LF	180
91	711-16-111	Thermoplastic, Standard-Other Surfaces, White, Solid, 6"	NM	2.76
92	711-16-131	Thermoplastic, Other Surfaces, White, Skip, 6", 10-30 Skip	GM	1.9
93	711-16-211	Thermoplastic, Standard-Other Surfaces, Yellow, Solid, 6"	NM	1.98

△	UPDATED QUANTITIES	JYY	8/7/17
NO.	DESCRIPTION	BY	DATE

MANATEE COUNTY

45TH STREET EAST
ROADWAY IMPROVEMENTS



380 Park Place Blvd, Suite 300, Clearwater, Florida, 33759
www.cardno.com - 727.531.3505
Certificate of Authorization No. 29915



JASON Y. YIM
LICENSE
No. 62449
STATE OF FLORIDA
PROFESSIONAL ENGINEER
LIC. NO. 62449

DESIGNED	JYY
DRAWN	JJH
Q.C.	
APPROVED	

SUMMARY OF QUANTITIES

PROJECT NO:	00193008.25
DATE:	10-2016
SHEET NO:	10



CONTRACT DRAWINGS

45TH STREET EAST (FROM SR 70 TO 44TH AVENUE EAST)

FOR

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SIGNALIZATION PLANS

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SUMMARY OF REVISIONS	
DATE	DESCRIPTION
3/15/17	DELETE COVER SHEET TABLES: REVISED LUMINAIRE TYPE
3/15/17	ADD CCTV AND MVDS: CHANGE PRE-TERM TO FIELD TERM
3/15/17	PATCH PANELS: CHANGE SR 70 VID DETECTION
3/15/17	SHEETS T-1 THRU T-3, T-5 THRU T-7, T-9, T-12, T-13, T-16, T-22, T-23, T-28 THRU T-33
8/9/17	REVISE PAY ITEM NOTES SHEET T-6

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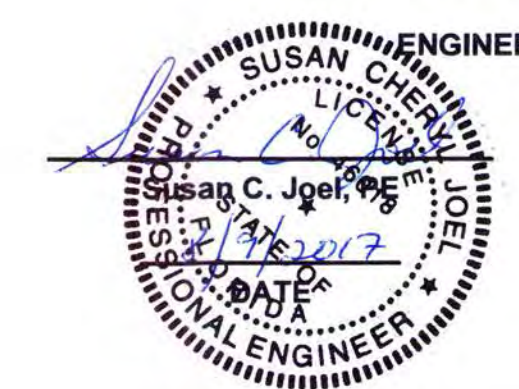


48 HOURS BEFORE DIGGING
"CALL SUNSHINE"
1-800-432-4770

PLANS PREPARED BY:

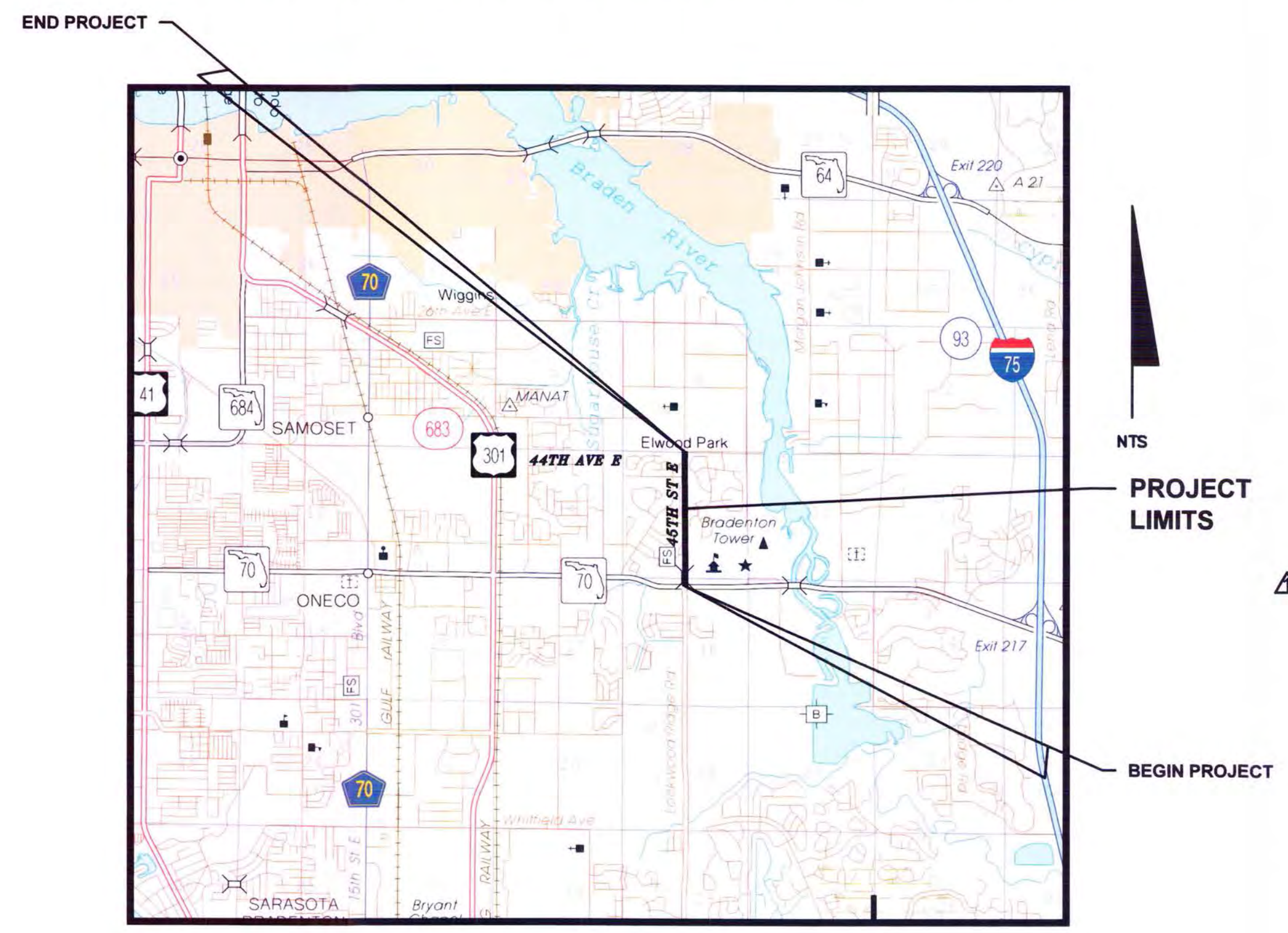


3905 Crescent Park Drive, Riverview, FL 33578
www.cardno.com - 813.664.4500
Certificate of Authorization No. 29915



ENGINEER OF RECORD

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FL. LICENSE NO.



INDEX OF SIGNALIZATION PLANS

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T-6	SIGNALIZATION PAY ITEM NOTES
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T-8	SR 70 AND 45TH STREET E (PEDESTRIAN DETAIL)
T-9	45TH STREET E. AND FIRE STATION
T-10	FIRESTATION PREEMPTION DETECTOR PLAN
T-11	PREEMPTION PLAN
T-12	45TH STREET E AND 44TH AVENUE E
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T-16	CCTV AND INTERCONNECT PLAN
T-17 THRU T-22	INTERCONNECT PLAN
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T-24	MAST ARM TABULATION
T-25	MAST ARM TABULATION (DESIGN CALCULATION)
T-26 THRU T-27	MAST ARM TABLE OF VARIABLES
T-28	CCTV DETAIL
T-29 THRU T-30	GUIDE SIGN WORK SHEET
T-31 THRU T-33	REPORT OF CORE BORINGS

△ (DELETE TABLES)

PAY ITEM NOTES

1. 630-2-11:
USE 2" CONDUIT FOR ALL SIGNAL, PEDESTRIAN, DETECTION, AND COMMUNICATION FUNCTIONS. CONDUIT FOR POWER SERVICE WIRE INTO THE CONTROLLER ASSEMBLY SHALL BE 2" SCHEDULE 40 PVC. POLYESTER MEASURING PULL TAPE SHALL BE INSTALLED IN ALL SPARE CONDUITS. AT LEAST 2 FEET OF PULL TAPE SHALL BE ACCESSIBLE. PAYMENT FOR CONDUIT WILL BE BASED ON THE HORIZONTAL LENGTH OF THE TRENCH MEASURED IN A STRAIGHT LINE BETWEEN THE CENTERS OF PULL BOXES, CABINETS, POLES, ETC., IN LINEAR FEET REGARDLESS OF THE LENGTH OR NUMBER OF CONDUITS IN THE SAME TRENCH. NO ADDITIONAL PAYMENT WILL BE MADE FOR MULTIPLE RUNS OF CONDUIT.
- ALL FIBER OPTIC CABLE CONDUIT INSTALLED BY TRENCHING METHOD SHALL HAVE WARNING TAPE INSTALLED IN THE TRENCHLINE ONE FOOT BELOW FINISH GRADE DIRECTLY OVER ANY INSTALLED CABLE AND CONDUIT RUN. THE WARNING TAPE SHALL COMPLY WITH SECTION 630-2 OF THE FDOT STANDARD SPECIFICATIONS. COLOR SHALL BE ORANGE AS REQUIRED BY AMERICAN PUBLIC WORKS ASSOCIATION (APWA) UNIFORM COLOR CODE, AND HAVE "CAUTION: FIBER OPTIC CABLE BURIED BELOW" PERMANENTLY PRINTED ON THE TAPE'S SURFACE.
- USE ABOVE GROUND ROUTE MARKERS FOR FIBER OPTIC CONDUIT RUNS.
- THIS PAY ITEM INCLUDES A LOCATE WIRE SYSTEM FOR ALL FIBER OPTIC CONDUIT. THE LOCATE WIRE SYSTEM INCLUDES LOCATE WIRE, ROUTE MARKERS, WIRE GROUNDING UNITS (WGU), GROUND RODS, AND ALL MISCELLANEOUS ITEMS NEEDED FOR A COMPLETE AND ACCEPTED LOCATE SYSTEM.
2. 630-2-12:
USE 2" CONDUIT FOR ALL SIGNAL, PEDESTRIAN, DETECTION, AND COMMUNICATION FUNCTIONS. POLYESTER MEASURING PULL TAPE SHALL BE INSTALLED IN ALL SPARE CONDUITS. AT LEAST 2 FEET OF PULL WIRE SHALL BE ACCESSIBLE. PAYMENT FOR CONDUIT WILL BE BASED ON THE HORIZONTAL LENGTH OF THE BORE MEASURED IN A STRAIGHT LINE BETWEEN THE CENTERS OF PULL BOXES, CABINETS, POLES, ETC., IN LINEAR FEET REGARDLESS OF THE LENGTH OR NUMBER OF CONDUITS INSTALLED. NO ADDITIONAL PAYMENT WILL BE MADE FOR MULTIPLE RUNS OF CONDUIT.
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3. 630-2-14:
INCLUDES THE COST OF WEATHERHEAD. USE ALUMINUM RIGID ABOVE-GROUND CONDUIT FOR ELECTRICAL POWER SERVICE.
4. 630-1-15: BRIDGE MOUNT CONDUIT SHALL BE SCHEDULE 80 PVC.
5. 632-7-1:
VERIFY THE COLOR CODE OF SIGNAL CABLE WITH MANATEE COUNTY PRIOR TO WIRING THE INTERSECTION. USE A MINIMUM OF IMSA CERTIFIED AWG #14, 7 CONDUCTOR STRANDED SIGNAL CABLE FOR SIGNAL HEADS. SIGNAL CABLE SHALL BE INSTALLED AS A CONTINUOUS RUN FROM THE SIGNAL CABINET TO THE VEHICLE SIGNAL HEAD. THE PEDESTRIAN HEAD SHALL USE AWG #14 SHIELDED, 5 CONDUCTOR WIRE FROM THE SIGNAL CABINET TO EACH PEDESTRIAN SIGNAL HEAD AND AWG #14 SHIELDED, 1 PAIR WITH GROUND WIRE FROM THE SIGNAL CABINET TO THE PEDESTRIAN BUTTON.
6. 632-7-2:
THIS PAY ITEM IS FOR THE PROPOSED PREEMPTION DETECTOR CABLE FROM THE CONTROLLER CABINET AT SR 70 TO THE TRAFFIC CONTROLLER CABINET AT THE FIRE STATION. THE CABLE SHALL BE 7 CONDUCTOR #14 AWG SIGNAL CABLE.
7. 633-1-122:
THE PROPOSED FIBER OPTIC CABLE SHALL BE 48 COUNT SINGLE MODE.
8. ~~633-3-15:
IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY LENGTHS OF PRETERMINATED PATCH PANELS PRIOR TO ORDERING. ALL PATCH PANELS SHALL COME WITH TWELVE (12) SINGLE MODE JUMPERS OF ADEQUATE LENGTH TO CONNECT ALL EQUIPMENT.~~
9. 633-8-1:
THE MULTI-CONDUCTOR COMMUNICATION CABLE SHALL BE TYPE OSP FLOODED CORE CAT6 ETHERNET CABLE FOR VIDEO AND UPS DATA FROM THE CCTV CABINET TO THE MANAGED ETHERNET SWITCH IN THE TRAFFIC CABINET. THE CONTRACTOR SHALL TERMINATE THE CABLE UTILIZING PUNCH DOWN BLOCKS. IN-LINE SURGE SUPPRESSION SHALL BE INSTALLED ON THE ETHERNET CABLE IN BOTH CABINETS. THE CONTRACTOR SHALL COORDINATE WITH THE COUNTY FOR ALL MATERIALS AND CABINET EQUIPMENT LAYOUT PRIOR TO ORDERING.
10. 635-2-11, 635-2-12 AND 635-2-13:
ALL PULL BOXES AND LIDS SHALL BE OF TRAFFIC BEARING POLYMER TYPE (QUAZITE OR EQUIVALENT) CONCRETE CONSTRUCTION.
- PULL BOXES ARE TO BE PLACED BEHIND CURB AND GUTTER. IF THERE IS NO CURB AND GUTTER, PULL BOXES SHALL BE PLACED A MINIMUM OF 7 FEET FROM EDGE OF PAVEMENT. THE TOP OF THE LID SHALL HAVE THE FOLLOWING IDENTIFICATION PERMANENTLY CAST INTO THE TOP SURFACE IN STAMPED RAISED LETTERS, ACCORDING TO THE APPLICATION FOR WHICH IT IS TO

- BE USED: "MANATEE COUNTY TRAFFIC SIGNAL" FOR SIGNALIZED INTERSECTION APPLICATIONS; "MANATEE COUNTY FIBEROPTIC SYSTEM" FOR COMMUNICATIONS; "ELECTRICAL" FOR OTHER ELECTRICAL APPLICATIONS.
- STANDARD PULL BOX DIMENSIONS SHALL BE 17"x30"x12". FIBER OPTIC PULL BOX DIMENSIONS SHALL BE 24"x36"x36". FIBER OPTIC SPLICE BOX DIMENSIONS SHALL BE 30"x60"x36".
11. 639-1-122, 639-3-11:
ALL BREAKERS SHALL BE CLEARLY LABELED. THE ELECTRICAL SERVICE DISCONNECT SHALL BE 100 AMP, COMPRISED OF A MINIMUM SIX (6) CIRCUIT DISCONNECT BOX WITH SIX CIRCUIT BREAKERS - ONE 40 AMP/120 VOLT FOR CONTROLLER, ONE 15 AMP/120 VOLT FOR INTERNALLY ILLUMINATED STREET NAME SIGNS (IISNS) AND STREET LIGHTING [LINE SIDE], ONE 15 AMP/120 VOLT FOR IISNS (LOAD SIDE), ONE FOR STREET LIGHTING (LOAD SIDE AT 44TH AVE ONLY), WITH ALL REMAINING AVAILABLE BREAKER POSITIONS FILLED WITH 15 AMP/120 VOLT FOR FUTURE USE. BREAKERS IN THE CONTROLLER SIDE DISCONNECT AT 44TH AVE SHALL BE OF THE SAME CAPACITY AS UPSTREAM.
12. 639-2-1:
PAYMENT SHALL BE BASED ON THE COMPLETE LENGTH OF WIRE RUN (ALL CONDUCTORS INCLUDED). USE A BONDING WIRE FROM THE UTILITY COMPANY SERVICE POINT TO CONTROLLER CABINET.
13. 646-1-11:
USE BREAKAWAY ALUMINUM SQUARE BASE ASSEMBLIES WITH ALUMINUM DOORS FOR PEDESTRIAN PEDESTALS. INSIDE DIAMETER OF PEDESTALS SHALL BE FOUR INCHES (4").
14. 649-31-104, 649-31-207, AND 649-31-999:
ALL SIGNALS SHALL HAVE MAST ARM SUPPORTS; ALL MAST ARM POLES ARE TO BE GALVANIZED NON-PAINTED. MAST ARMS SHALL BE CONSTRUCTED OF ONE CONTINUOUS SECTION UP TO 50 FEET IN LENGTH OR OF A TWO SECTION CONSTRUCTION FROM 50 FEET TO 100 FEET IN LENGTH. USE THREE 2" AND ONE 3/4" CONDUITS STUBBED OUT THROUGH THE MAST ARM POLE FOUNDATION AND TEMPORARILY SEAL. THE 649-31-207 PAY ITEM INCLUDES THE COST OF THE LUMINAIRE AND BRACKET ARM TO BE INCLUDED IN THE SW CORNER MAST ARM ASSEMBLY AT 44TH AVENUE. THE ARM LENGTH SHALL BE 10 FEET LONG AND ORIENTED OVER THE ARM. THE LUMINAIRE SHALL BE THE SAME LUMINAIRE TYPE AS THE PROPOSED LIGHTING ON 45TH STREET. THE LUMINAIRE SHALL BE A FULL CUTOFF TYPE, TYPE III DISTRIBUTION 170 WATT LED AEL AUTOBAHN ATBL LUMINAIRE WITH HOUSE SIDE SHIELD OR APPROVED EQUAL. THE PHOTOMETRIC CURVE ATBL_A_XXXXXR3_3K_HSS.IES. THE LUMINAIRE SHALL BE WIRED FOR 120 VOLTS AND POWERED BY A PHOTOCELL LOCATED AT THE POWER SERVICE. THE LUMINAIRE MOUNTING HEIGHT SHALL BE 40 FEET.
15. 650-1-311, 650-1-411, 650-1-511:
SIGNAL HEADS SHALL BE RIGIDLY MOUNTED TO MAST ARMS. USE SIGNAL HEAD SUPPORTING TUBE THAT IS CAPABLE OF ADJUSTING VERTICALLY A MINIMUM OF 1.5 FEET. DO NOT USE PLASTIC GARBAGE BAGS AS A COVERING FOR CONCEALING SIGNAL HEADS. PAY ITEMS INCLUDE THE COST OF TUNNEL VISORS AND BACK PLATES. BACKPLATES SHALL BE LOUVERED ALUMINUM WITH A 2 INCH YELLOW REFLECTORIZED (TYPE III REFLECTIVITY) OUTER EDGE BORDER.
16. 660-3-11, 660-3-12:
THESE PAY ITEMS INCLUDE ALL SENSOR CABLING, SURGE PROTECTION DEVICES, CLICK CONVERTERS, FIBER OPTIC JUMPERS, ETC. FOR A COMPLETE AND ACCEPTED INSTALLATION. THE PROPOSED MVDS SHALL BE A WAVETRONIX SMARTSENSOR HD UNIT. THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND DEVICES AS PER MANUFACTURERS RECOMMENDATIONS TO ENABLE INTEGRATION OF THE MVDS UNIT INTO MANATEE COUNTY'S EXISTING ATMS.NOW SYSTEM.
17. 660-4-11, 660-4-12:
INSTALL ITERIS VANTAGE VECTOR HYBRID UNITS AT THE SR 70 INTERSECTION. THE CONTRACTOR SHALL COORDINATE WITH MANATEE COUNTY AND SET UP THE UNITS FOR ALL DETECTION ZONES INCLUDING STOP BAR AND ADVANCE/DILEMMA ZONES. INSTALL ITERIS RZ-4 ADVANCED WIDE DYNAMIC RANGE CAMERAS OR EQUIVALENT ON PELCO OR EQUIVALENT MAST ARM CAMERA BRACKETS AT THE 44TH AVENUE INTERSECTION.
- THESE PAY ITEMS SHALL INCLUDE ALL CABINET AND OVERHEAD EQUIPMENT INCLUDING, BUT NOT LIMITED TO CAMERAS, CABLING, MOUNTING HARDWARE, VIDEO PROCESSORS, SUPPLEMENTAL INTERFACE HARDWARE, CABINET CABLING AND OTHER COMPONENTS FOR A COMPLETE AND ACCEPTABLE VIDEO DETECTION SYSTEM. THE CONTRACTOR SHALL COORDINATE WITH MANATEE COUNTY FOR AN ACCEPTABLE VIDEO DETECTION SYSTEM TO INSTALL PRIOR TO SHOP DRAWING SUBMITTAL. INSTALL ALL COMPONENTS OF THE DETECTION SYSTEM IN STRICT ACCORDANCE WITH THE INSTALLATION MANUALS. THE CONTRACTOR SHALL ONLY USE MANUFACTURER APPROVED CABLING, CONNECTORS, AND COMPONENTS FOR THE VIDEO DETECTION SYSTEM. THE CONTRACTOR SHALL CONSULT WITH THE MANUFACTURER'S TECHNICAL REPRESENTATIVES PRIOR TO INSTALLATION.
- USE A 72" LONG GUSSET TUBE FOR VIDEO DETECTION CAMERA ATTACHMENT BRACKET. IN ADDITION TO THE CAMERAS AND OTHER RELATED EQUIPMENT, THE VIDEO DETECTION SYSTEM SHALL INCLUDE THE FOLLOWING: ITERIS VANTAGE EDGE2 PROCESSOR, ITERIS EDGE CONNECT MODULE, AND ITERIS VANTAGE EDGE2 TS2 I/O MODULE.
- THE SYSTEM INSTALLER SHALL LEAVE A MINIMUM OF 30 INCHES OF SPARE CABLE AT EACH CAMERA BRACKET. THE SLACK SHALL BE NEATLY FORMED INTO A LOOP AND SECURED TO THE CAMERA. A MINIMUM OF 10 FEET OF VIDEO CABLE SLACK SHALL BE NEATLY STORED AT EACH PULL BOX LOCATION WITHIN A CONDUIT RUN. A MINIMUM OF 30 FEET OF SLACK SHALL BE AVAILABLE FOR EACH NEW VIDEO DETECTION CABLE RUN.

18. 670-5-110, 670-5-111:
USE NEMA TS2 TYPE 1 CONTROLLER IN A SIZE 6 CABINET COMPATIBLE WITH THE EXISTING SIGNAL SYSTEM. ALL CONTROLLER CABINETS SHALL HAVE FRONT AND BACK ACCESS DOORS. THE CONTROLLER ASSEMBLY SHALL BE EQUIPPED WITH ALL COMPONENTS NECESSARY TO RECONNECT ALL SYSTEM COMPONENTS INCLUDING THE EXISTING CCTV CABINET AT SR 70. ALL CONTROLLER EQUIPMENT SHALL BE COMPATIBLE WITH MANATEE COUNTY'S EXISTING SYSTEM (NAZTEC'S ATMS.NOW). THE CONTROLLER SUPPLIED WITH THE CABINET SHALL BE A NAZTEC 980 ATC. THE NAZTEC CONTROLLER SHALL COME EQUIPPED WITH 4 SERIAL PORTS AND ONE ETHERNET PORT. THE CONTROLLER SHALL COME EQUIPPED WITH ALL NECESSARY SYSTEM COMPONENTS FOR INTEGRATION INTO THE EXISTING ETHERNET-BASED FIBER OPTIC NETWORK. CONTACT MANATEE COUNTY PRIOR TO ORDERING CONTROLLER ASSEMBLY TO CONFIRM EQUIPMENT COMPATIBILITY.
- THIS PAY ITEM SHALL INCLUDE THE COST TO CONSTRUCT THE EMERGENCY GENERATOR CABINET (EGC) FOUNDATIONS. THE EGC FOUNDATIONS SHALL HAVE DIMENSIONS OF 48"x36" FOR CABINET MOUNTING WITH A FDOT STANDARD TECHNICIAN PAD OR STEPS. IT SHALL BE LOCATED ADJACENT TO THE PROPOSED SIDEWALK WITH (2) - 2 INCH CONDUITS AND (1) - 1/2 INCH CONDUIT INSTALLED DIRECTLY TO THE CONTROLLER BASE. THE EXISTING EGC AT SR 70 SHALL BE RELOCATED TO THE PROPOSED EGC BASE. THE CONTRACTOR SHALL COORDINATE WITH THE COUNTY FOR PICKUP OF THE OTHER GENERATOR CABINETS AT THE COUNTY'S FACILITY. THE CONTRACTOR SHALL TRANSPORT THE CABINETS TO THE PROJECT SITE FOR INSTALLATION ON THE PROPOSED EGC BASE.
- ALL COSTS OF LABOR, CONCRETE AND OTHER MATERIALS FOR THE EGC BASE, TECHNICIAN PAD, STEPS AS REQUIRED, AND INSTALLATION OF THE GENERATOR CABINETS ARE INCLUDED IN THIS ITEM. TOP OF CONTROLLER AND EGC BASES SHALL BE THE SAME ELEVATION AS CROWN OF ROADWAY OR GREATER. THE MAXIMUM DISTANCE FROM THE TECHNICIAN PAD OR STEP TO THE FOUNDATION TOP IS 24 INCHES. THE CABINET DOORS SHALL OPEN TOWARD OR PARALLEL TO THE RIGHT-OF-WAY LINE AND AWAY FROM TRAFFIC.
- THE CONTROLLER ASSEMBLY FOUNDATIONS SHALL HAVE A MINIMUM OF (4) - 2" CONDUIT SPARES. TWO OF THE SPARES SHALL BE TERMINATED IN THE NEAREST FIBER OPTIC PULL BOX AND FITTED WITH A WEATHERPROOF CAP. THE OTHER TWO SPARES SHALL BE TERMINATED IN THE SIGNAL CABLE AND LOW VOLTAGE PULL BOXES.
19. 682-1-113:
THE PROPOSED CCTV SHALL BE BOSCH AUTODOME VG5-ITS1080P-30X4 AND BE FULLY COMPATIBLE WITH MANATEE COUNTY'S CURRENT VIDEO MONITORING SYSTEM. THE CONTRACTOR SHALL COORDINATE WITH THE COUNTY TO ENSURE COMPATIBILITY PRIOR TO ORDERING. THIS PAY ITEM INCLUDES A MULTI-CONDUCTOR CAMERA CABLE INSTALLED IN ONE CONTINUOUS RUN FROM THE CCTV TO THE CCTV CABINET. FOLLOW MANUFACTURER'S RECOMMENDATIONS FOR MOUNTING, CABLING, POWER OVER ETHERNET UNIT, AND SURGE PROTECTION.
20. 684-1-1:
THE FIELD MANAGED ETHERNET SWITCH SHALL BE A SIEMENS RUGGEDCOM MODEL NUMBER RSG920P WITH EXTERNAL POWER SUPPLY MODEL RPS1300. THE EXTERNAL POWER SUPPLY SHALL BE STORED IN THE CONTROLLER CABINET FOR FUTURE USE. THE SWITCH AND POWER SUPPLY SHALL BE FURNISHED WITH ALL NECESSARY SYSTEM COMPONENTS FOR INTEGRATION INTO THE MANATEE COUNTY ETHERNET-BASED FIBER OPTIC NETWORK.
21. 685-106:
THE UPS UNITS FOR TRAFFIC SIGNAL BACKUP SHALL BE ALPHA MODEL FXM 1100 WITH GXL 220 BATTERIES. ATTACH THE UPS UNIT TO THE OUTSIDE OF THE CONTROLLER CABINET HOUSED IN A SEPARATE CABINET. INSTALL UPS UNIT IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.
- THE UPS UNITS FOR CCTV BACKUP SHALL BE ALPHA MODEL FXM 650 WITH GXL 85 BATTERIES. THE UPS UNIT SHALL BE RACK MOUNT. INSTALL UPS UNIT IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.
- ALL UPS UNITS SHALL SUPPORT SNMP (PROTOCOL) FOR REMOTE MONITORING AND MANAGEMENT WITH MANATEE COUNTY'S CURRENT ATMS NETWORK. PROVIDE AND CONNECT ALL WIRING, CABLING, INTERFACES, ETC. FOR INTEGRATION INTO THE NETWORK.
22. 690-34-2:
INCLUDES THE COST OF BACKFILL AND RESTORATION.
23. 690-90:
THIS PAY ITEM SHALL INCLUDE REMOVAL OF ALL UNUSED LOOP DETECTOR CONDUCTORS.
24. 690-100:
THIS PAY ITEM SHALL INCLUDE REMOVAL OF ALL UNUSED PULL BOXES.
25. 700-5-21, 700-5-22:
ALL OVERHEAD ILLUMINATED SIGNS SHALL BE FDOT APPROVED EDGE-LIT LED TYPE AND SHALL INCLUDE APPROPRIATE COMPATIBLE ADJUSTABLE HANGERS, BRACKETS, CLAMPS, AND MISCELLANEOUS HARDWARE FOR A COMPLETE AND ACCEPTABLE INSTALLATION.

		REVISED NOTES FOR LUMINAIRE TYPE; ADD	HBH	3/15/17	MANATEE COUNTY	45TH STREET EAST ROADWAY IMPROVEMENTS		3905 Crescent Park Drive, Riverview, FL 33578 www.cardno.com - 813.664.4500 Certificate of Authorization No. 29915		DESIGNED	SCJ	SIGNALIZATION PAY ITEM NOTES	PROJECT NO:
		CCTV AND MVDS; CHANGE SR 70 VID DET	HBH	3/15/17						DRAWN	HBH		00193008.25
		AND CONVERT TO FIELD TERM PATCH	HBH	3/15/17						G.C.			DATE:
		PANELS ALL LOC'S	HBH	3/15/17						APPROVED			8-2017
		REVISE CONDUIT NOTES	HBH	8/9/17									SHEET NO:
NO.	DESCRIPTION		BY	DATE						T-6			

INDEX OF SHEETS

SHEET NO.	TITLE
B-1	INDEX OF SHEETS & QUANTITIES
B-2 THRU B-5	GENERAL NOTES
B-6	PLAN
B-7	TYPICAL SECTION
B-8	MISCELLANEOUS DETAILS
B-9	PRESTRESSED BEAM DETAIL
B-10	PEDESTRIAN BRIDGE ENDBENT DETAILS
B-11	PILE DATA TABLE
B-12	REPORT OF CORE BORINGS
B-13	SLOPE PROTECTION (SHEET 1 OF 2)
B-14	SLOPE PROTECTION (SHEET 2 OF 2)
B-15	REBAR LIST

45TH ST. BRIDGE ESTIMATED QUANTITIES

ITEM NO	ELEMENT / ITEM		Measure
BRIDGE WIDENING			
110-3	REMOVAL OF EXISTING STRUCTURES	315.0	SF
400-2-4	CLASS II CONCRETE (SUPERSTRUCTURE)	37.3	CY
400-2-10	CLASS II CONCRETE (APPROACH SLABS)	118.8	CY
400-147	COMPOSITE NEOPRENE BEARING PADS	0.2	CF
415-1-4	REINFORCING STEEL (SUPERSTRUCTURE)	11468	LB
415-1-9	REINFORCING STEEL (APPROACH SLABS)	23274	LB
450-1-2	PRESTRESSED BEAMS, TYPE III & TYPE III MODIFIED	116.0	LF
455-133	SHEET PILING	800.0	SF
458-1-21	BRIDGE DECK EXPANSION JOINT, REHABILITATION, POURED JOINT WITH BACKER ROD	155	LF
458-2	POLYMER NOSING FOR BRIDGE EXPANSION JOINT	6.4	CF
521-5-2	CONCRETE TRAFFIC RAILING, BRIDGE 42" F-SHAPE	196	LF
524-2	SLOPE PAVEMENT	96.8	SY
530-3-3	RUBBLE RIP RAP, BANK AND SHORE	892	TN
PEDESTRIAN BRIDGES			
400-2-4	CLASS II CONCRETE (SUPERSTRUCTURE)	28.2	CY
400-2-10	CLASS II CONCRETE (APPROACH SLABS)	3.7	CY
400-4-5	CLASS IV CONCRETE (SUBSTRUCTURE)	12.4	CY
400-147	COMPOSITE NEOPRENE BEARING PADS	0.2	CF
415-1-4	REINFORCING STEEL (SUPERSTRUCTURE)	5781	LB
415-1-5	REINFORCING STEEL (SUBSTRUCTURE)	2344	LB
415-1-9	REINFORCING STEEL (APPROACH SLABS)	756	LB
455-34-3	PRESTRESSED CONCRETE PILING (14" SQ.)	150	LF
455-143-3	TEST PILES-PREST CONCRETE (14" SQ.)	70	LF
458-1-11	BRIDGE DECK EXPANSION JOINT	32	LF
9999	PREFABRICATED PED. TRUSS BRIDGE	2	EA

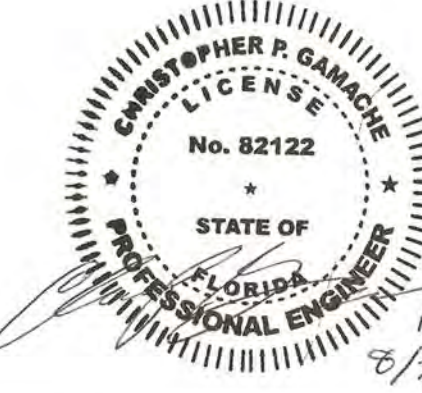
	Quantities Changed	CPG	8/4/17
NO.	DESCRIPTION	BY	DATE

MANATEE COUNTY

45th ST. BRIDGE



22 Sarasota Center Blvd, Sarasota, Florida, 34240
www.cardno.tbe.com - 841.377.9084
Certificate of Authorization No. 3843



For Revision Only
8/7/17

DESIGNED	MAV
DRAWN	MAV
Q.C.	RAH
APPROVED	RAH

INDEX OF SHEETS & QUANTITIES

PROJECT NO:	00193008.25
DATE:	12-06-16
SHEET NO:	B-1