



CONTRACT DRAWINGS

US 301 (SR 43) AND FT. HAMER ROAD

SIGNALIZATION PLANS

FOR

MANATEE COUNTY, FLORIDA

COUNTY PROJECT NUMBER: 6061960

GOVERNING STANDARDS AND SPECIFICATIONS

- A. FLORIDA DEPARTMENT OF TRANSPORTATION 2015 DESIGN STANDARDS FOR CONSTRUCTION OPERATIONS ON THE STATE HIGHWAY SYSTEM (2015) AND REVISED INDEX DRAWINGS, AS APPENDED HEREIN, AND DIVISIONS II AND III OF THE JANUARY 2015 STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, AS AMENDED BY CONTRACT DOCUMENTS.
- FOR DESIGN STANDARDS CLICK ON THE "DESIGN STANDARDS" LINK AT THE FOLLOWING WEB SITE: [HTTP://WWW.DOT.STATE.FL.US/RDDSIGN/](http://www.dot.state.fl.us/rddesign/)
- FOR THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION CLICK ON THE "SPECIFICATIONS" LINK AT THE FOLLOWING WEB SITE: [HTTP://WWW.DOT.STATE.FL.US/SPECIFICATIONSOFFICE](http://www.dot.state.fl.us/specificationsoffice)
- B. MANUAL OF UNIFORM MINIMUM STANDARDS FOR DESIGN, CONSTRUCTION, AND MAINTENANCE FOR STREETS AND HIGHWAYS, FLORIDA DEPARTMENT OF TRANSPORTATION, (FLORIDA GREEN BOOK), (2011).
- C. AASHTO, GUIDE FOR PLANNING, DESIGN, AND OPERATION OF PEDESTRIAN FACILITIES, (2004).
- D. FHWA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, (MUTCD), (2009).
- E. CHAPTER 14-96 AND 14-97, FLORIDA ADMINISTRATIVE CODE RULE FOR FDOT CONNECTION PERMIT.
- F. SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT ENVIRONMENTAL RESOURCE PERMITTING (ERP) INFORMATION MANUAL, LATEST EDITION
- G. 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.
THIS MUST BE CONSIDERED WHEN OBTAINING SCALED DATA.

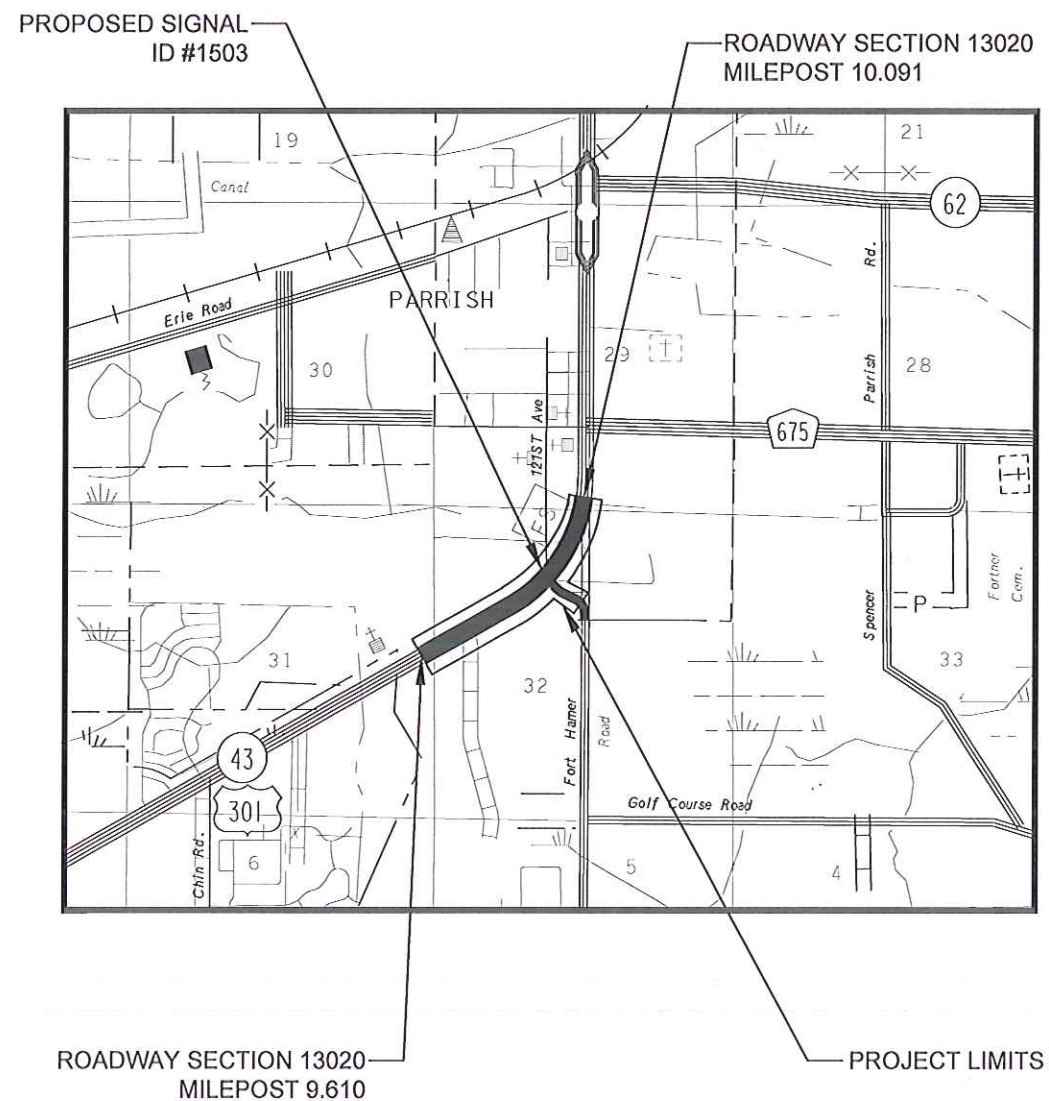
UTILITY WARNING NOTE

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 656, FLORIDA STATUTES.



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

SUMMARY OF REVISIONS	
DATE	DESCRIPTION



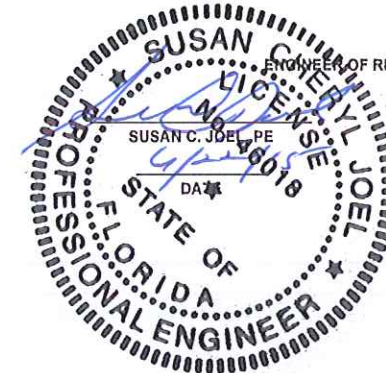
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PLANS PREPARED BY:



3905 Crescent Park Drive, Riverview, Florida, 33578
www.cardno.com - 813.221.0048
Certificate of Authorization No. 29915



ENGINEER OF RECORD
SUSAN C. JOELLE
FL. LICENSE NO. 46018

MANATEE COUNTY PROJECT MANAGER: KENT D. BONTRAGER, P.E.

DATE: 6-22-2015

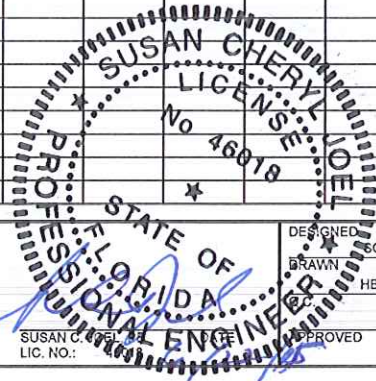
SHEET: T-1

TABULATION OF QUANTITIES

PAY ITEM NO.	DESCRIPTION	UNIT	SHEET NUMBERS																				TOTAL THIS SHEET		GRAND TOTAL		REF. SHEET
			T-8		T-9		T-10		T-11		T-12		T-13		T-14												
			PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	
101-1	MOBILIZATION	LS																									
102-1	MAINTENANCE OF TRAFFIC	LS																									
102-99	PORTABLE CHANGEABLE MESSAGE SIGN-TEMPORARY	ED																									
520-1-10	CONCRETE CURB & GUTTER, TYPE F	LF									140												140				
522-1	CONCRETE SIDEWALK, 4" THICK	SY			16						200												216				
527-2	DETECTABLE WARNING	SF									80												80				
570-1-2	PERFORMANCE TURF, SOD	SY									185												185				
630-2-11	CONDUIT (F&I) (OPEN TRENCH)	LF	230		625																		855				
630-2-12	CONDUIT (F&I) (DIRECTIONAL BORE)	LF	360																				360				
630-2-14	CONDUIT (F&I) (ABOVE GROUND)	LF	20																				20				
632-7-1	SIGNAL CABLE (F&I) (NEW OR RECONSTRUCTED INT)	PI	1																				1				
633-1-122	ITS FIBER OPTIC CABLE (F&I) (UG) 48 FIBER	LF	170					1170		280													1620				
633-2-31	FO CONNECTION, INSTALL SPLICE	EA	2																				2				
633-3-11	FO CONNECTION HARDWARE (F&I) SPLICE ENCLOSURE	EA	1						1														2				
633-3-12	FO CONNECTION HARDWARE (F&I) SPLICE TRAY	EA	1																				1				
633-3-15	FO CONNECTION HARDWARE (F&I) PRETERM PATCH PANEL	EA	1																				1				
633-8-1	MULTI-CONDUCTOR COMM CABLE (CAT6 ETHERNET)	LF	140																				140				
635-2-11	PULL AND SPLICE BOX (F&I) (17" X 30")	EA	16		4																		20				
635-2-12	PULL AND SPLICE BOX (F&I) (24" X 36")	EA	1																				1				
639-1-122	POWER SERVICE (UG) (METER PURCH BY CONTRACTOR)	AS	1																				1				
639-2-1	ELECTRICAL SERVICE WIRE (F&I)	LF	300																				300				
639-3-11	ELECTRICAL SERVICE DISCONNECT (F&I) (POLE MOUNT)	EA	2																				2				
641-2-12	CONCRETE POLE (F&I) (TYPE P-II SERVICE, 12')	EA	2																				2				
641-3-263	CONCRETE CCTV POLE (F&I)(W/O LOWERING DEVICE)(56')	EA	1																				1				
646-1-11	ALUMINUM SIGNALS POLE (F&I) (PEDESTAL)	EA	8																				8				
649-31-299	MAST ARM (F&I) (130 MPH) (CUSTOM)	EA	3																				3				
650-1-311	TRAFFIC SIGNAL, 12" (F&I) (3 SECT, 1 WAY) (ALUM) (LED)	AS	12																				12				
650-1-411	TRAFFIC SIGNAL, 12" (F&I) (4 SECT, 1 WAY) (ALUM) (LED)	AS	1																				1				
650-1-511	TRAFFIC SIGNAL, 12" (F&I) (5 SECT, 1 WAY) (ALUM) (LED)	AS	1																				1				
653-1-11	PED SIGNALS (F&I) (LED COUNTDOWN) (1 WAY)	AS	8																				8				
660-1-109	LOOP DETECTOR, INDUCTIVE (F&I)(TYPE 9, 2 CH, SS, RM)	EA	4																				4				
660-2-102	LOOP ASSEMBLY (F&I) (F&I) (TYPE B)	EA			8																		8				
660-4-11	VEH DETECTION SYS (F&I)(VIDEO)(CABINET EQUIPMENT)	EA	4																				4				
660-4-12	VEH DETECTION SYS (F&I)(VIDEO)(ABOVE GROUND EQUIP)	EA	4																				4				
665-1-11	PEDESTRIAN DETECTOR (F&I) (STANDARD)	EA	8																				8				
670-5-110	TRAFFIC CONTROLLER ASSY (F&I) (NEMA)	AS	1																				1				
676-2-122	ITS CABINET (F&I) (POLE MT TYPE 336S W/SUNSHIELDS)	EA	1																				1				
682-1-11	ITS CCTV CAMERA (F&I) (DOME ENCL - PRESSURIZED)	EA	1																				1				
684-1-1	MANAGED FIELD ETHERNET SWITCH (F&I)	EA	1																				1				
685-106	SYSTEM AUXILIARIES (F&I) (UPS)	EA	2																				2				
700-1-11	SINGLE POST SIGN (F&I GROUND MOUNT) (UP TO 12 SF)	AS													3								3				
700-1-12	SINGLE POST SIGN (F&I GROUND MOUNT) (12-20 SF)	AS													1								1				
700-1-13	SINGLE POST SIGN (F&I GROUND MOUNT) (21-30 SF)	AS													1								1				
700-1-60	SINGLE POST SIGN (REMOVE)	AS											1										1				
700-2-12	MULTI-POST SIGN (F&I)(GROUND MOUNT)(12-20 SF)	AS													1								1				
700-2-15	MULTI-POST SIGN (F&I)(GROUND MOUNT)(51-100 SF)	AS													2								2				
700-3-601	SIGN PANEL (REMOVE) (UP TO 12 SF)	EA											2										2				
700-5-21	INTERNALLY ILLUMINATED SIGN (F&I OVHD)(UP TO 12 SF)	EA	7																				7				
700-5-22	INTERNALLY ILLUMINATED SIGN (F&I OVHD)(SPECIAL)	EA	4																				4				
700-12-22	SIGN BEACON (F&I GROUND, SOLAR) (2 BEACONS)	AS													3								3				
711-11-123	THERMOPLASTIC (STD) (SOLID) (WHITE) (12")	LF											633										633				
711-11-125	THERMOPLASTIC (STD) (SOLID) (WHITE) (24")	LF											147										147				
711-11-151	THERMOPLASTIC (STD) (2'-4' SKIP) (WHITE) (6")	LF											325										325				
711-11-251	THERMOPLASTIC (STD) (2'-4' SKIP) (YELLOW) (6")	LF											332										332				
711-15-111	THERMOPLASTIC (STD) (SOLID) (WHITE) (6")	NM											0.038										0.038				
711-17	REMOVE THERMOPLASTIC	SF											195										195				
715-1-12	LIGHTING-CONDUCTORS (F&I) (NO. 6)	LF	855																				855				
715-4-129	LIGHT POLE COMPLETE (F&I) (130 MPH) (CUSTOM HT 30')	EA	1																				1				
715-500-1	LIGHT POLE CABLE DISTRIBUTION SYSTEM (CONV)	EA	1																				1				

SUSAN CHERY
LICENSE
No 46818
PRO

JOEL



MANATEE COUNTY

US 301 AND FT HAMER ROAD
SIGNALIZATION PLANS



TABULATION OF QUANTITIES

PROJECT NO:
00193.010.03
DATE:
6-22-2015
SHEET NO:
T-2

GENERAL NOTES

1. AT LEAST FIVE (5) WORKING DAYS PRIOR TO BEGINNING CONSTRUCTION, THE CONTRACTOR SHALL CONTACT MANATEE COUNTY TRAFFIC DESIGN DIVISION:

MR. PAUL VILLALUZ, P.E., PTOE
MANATEE COUNTY PUBLIC WORKS DEPARTMENT
TRAFFIC DESIGN DIVISION
2101 47TH TERRACE EAST
BRADENTON, FL 34203

2. AT LEAST TWO (2) FULL BUSINESS DAYS PRIOR TO BEGINNING THE TRAFFIC SIGNAL INSTALLATION THE CONTRACTOR SHALL CONTACT THE TRAFFIC SIGNAL INSPECTOR/LIAISON:

MS. TANYA MERKLE
FLORIDA DEPARTMENT OF TRANSPORTATION
SARASOTA OPERATIONS CENTER
1840 61ST STREET
SARASOTA, FL 34243
PH. 941-359-7371

3. THE CONTRACTOR MUST NOTIFY THE TRAFFIC ENGINEERING DIVISION (MR. VISHAL S. KAKKAD, (941) 749-3502) AT LEAST TWO (2) BUSINESS DAYS IN ADVANCE TO SCHEDULE THE FINAL INSPECTION. WHEN CONSTRUCTION IS COMPLETE, DELIVER THREE (3) HARD-COPY SETS OF AS-BUILT RECORD DRAWINGS, TWO SETS OF IMSA INSPECTION FORMS, AND ONE COMPACT DISC OF RECORD DRAWINGS IN ADOBE ADOBE (.PDF) AND AUTOCAD (.DWG) FORMAT TO:

MANATEE COUNTY TRAFFIC DESIGN DIVISION
ATTN: MR. VISHAL S. KAKKAD, P.E., PTOE
2101 47TH TERRACE EAST
BRADENTON, FL 34203

RECORD DRAWINGS AND INSPECTION FORMS MUST BE DELIVERED TO THE COUNTY AT LEAST TWO (2) BUSINESS DAYS PRIOR TO SCHEDULING THE FINAL INSPECTION.

4. WHEN CONSTRUCTION IS COMPLETE PROVIDE A SET OF "AS-BUILT" PLANS IN ELECTRONIC FORMAT (PDF) TO:

FDOT TRAFFIC OPERATIONS
RENJAN JOSEPH, P.E., TRAFFIC SIGNAL SYSTEM MANAGER
801 N. BROADWAY AVE
P.O. BOX 1249
BARTOW, FL 33830-1249
EMAIL: RENJAN.JOSEPH@DOT.STATE.FL.US
PHONE: 863-519-2746

5. MAINTAINING AGENCY:

MANATEE COUNTY
TRAFFIC OPERATIONS DIVISION
2904 12TH STREET COURT EAST
BRADENTON, FLORIDA 34208

6. THE CONTRACTOR SHALL PERFORM ALL WORK AS PER LATEST FLORIDA DEPARTMENT OF TRANSPORTATION (FDOT) SPECIFICATIONS AT TIME OF BID, WITH CURRENT SUPPLEMENTAL SPECIFICATIONS THERETO. WHEN FDOT AND MANATEE COUNTY SPECIFICATIONS DIFFER, THE MORE STRINGENT SPECIFICATION WILL TAKE PRECEDENCE. MANATEE COUNTY TRAFFIC SPECIFICATIONS SHALL BE OBTAINED BY THE CONTRACTOR FROM THE PROJECT MANAGEMENT DIVISION.

7. THE CONTRACTOR SHALL HAVE AN I.M.S.A. CERTIFIED LEVEL II (ELECTRONICS OR ELECTRICAL TECHNICIAN) ON THE JOB SITE AT ALL TIMES WHILE WORK IS BEING PERFORMED. ALL SIGNAL INSTALLATION TECHNICIANS SHALL HAVE A MINIMUM I.M.S.A. LEVEL I CERTIFICATION. CERTIFICATION OF ALL TECHNICIANS SHALL BE PROVIDED TO THE COUNTY PRIOR TO BEGINNING WORK.

8. THE CONTRACTOR SHALL SUBMIT CONCRETE COMPRESSIVE STRENGTH TEST RESULTS FOR MAST ARM POLE FOUNDATIONS TO THE FDOT FOR REVIEW AND APPROVAL. THE TESTING LAB SHALL BE CURRENTLY APPROVED BY THE FDOT.

9. RESULTS OF FIELD TESTS SHALL BE MADE AVAILABLE TO THE COUNTY TRAFFIC ENGINEER, FDOT, AND PROJECT INSPECTOR IN WRITTEN FORM. A QUALIFIED CONTRACTOR'S REPRESENTATIVE SHALL BE PRESENT AT THE CONDITIONAL ACCEPTANCE INSPECTION OF THE CONTROLLER ASSEMBLY. THE QUALIFICATIONS OF THE REPRESENTATIVE SHALL INCLUDE:

A) COMPLETE FAMILIARITY WITH ALL SYSTEMS ELEMENTS INCLUDING CONTROLLERS, COORDINATING UNITS, SYSTEM CLOCKS AND SYSTEM COMMUNICATIONS ELEMENTS. THE REPRESENTATIVE SHALL BE QUALIFIED TO INPUT AND RECALL ALL CONTROLLER AND SYSTEM TIMING FUNCTIONS.

10. LOCATIONS, ELEVATIONS AND DIMENSIONS OF EXISTING UTILITIES, STRUCTURES, AND OTHER FEATURES ARE SHOWN ACCORDING TO THE BEST INFORMATION AVAILABLE AT THE TIME THESE DRAWINGS WERE PREPARED, BUT DO NOT PURPORT TO BE ABSOLUTELY CORRECT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE EXACT SIZE, LOCATION, DEPTH, HEIGHT, ELEVATION, DIMENSION, AND EXTENT OF ALL UNDERGROUND AND OVERHEAD FACILITIES AND OTHER FEATURES AFFECTING HIS WORK PRIOR TO PROCEEDING WITH ANY CONSTRUCTION ACTIVITY THAT MAY AFFECT SUCH FACILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE CAUSED BY FAILURE TO COMPLY WITH THESE INSTRUCTIONS.

5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COMPLETE COORDINATION OF CONSTRUCTION SCHEDULING BETWEEN THE CONTRACTOR AND ALL UTILITY AGENCIES.

NOTE: THIS INCLUDES MEETING WITH UTILITY AGENCIES PRIOR TO THE PRE-CONSTRUCTION CONFERENCE TO ADJUST THEIR SCHEDULES TO COINCIDE WITH THE CONTRACTORS CONSTRUCTION SCHEDULE.

6. THE CONTRACTOR SHALL ARRANGE HIS SCHEDULE TO ALLOW UTILITY OWNERS TIME FOR THE NECESSARY RELOCATION AND ADJUSTMENT OF UTILITIES AND RELATED STRUCTURES. THE FOLLOWING UTILITIES MAY HAVE LINES AND FACILITIES WITHIN THE PROJECT AREA:

- | | |
|-------------------------------------------|---------------------------------------|
| 1) TECO/PEOPLES GAS | 941.342.4026 (DAN SHANAHAN) |
| 2) FLORIDA POWER AND LIGHT TRANSMISSION | 941.316.6288 (MARK BYERS) |
| 3) FLORIDA POWER AND LIGHT DISTRIBUTION | 941.723.4430 (GREG COKER) |
| 4) VERIZON OF FLORIDA INC. | 941.906.6722 (DENISE HUTTON) |
| 5) MANATEE COUNTY UTILITY OPERATIONS | 941.792.8811 EXT 5002 (KATHY McMAHON) |
| 6) BRIGHTHOUSE NETWORKS, LLC | 941.748.3816 EXT 24051 (ALEX FLEMING) |
| 7) PEACE RIVER ELECTRIC COOPERATIVE, INC. | 863.677.4602 EXT 4602 (JERRY TWIGGS) |

7. THE CONTRACTOR SHALL NOTIFY BRIGHTHOUSE NETWORKS A MINIMUM OF 45 DAYS IN ADVANCE TO RELOCATE THE ABOVE GROUND CATV PEDESTAL ON THE NW CORNER.

8. THE CONTRACTOR SHALL PROVIDE FLORIDA POWER AND LIGHT (FP&L) AT LEAST THIRTY (30) DAYS ADVANCE NOTICE AND ANOTHER 14 DAYS OF ONSITE TIME TO DE-ENERGIZE THE OVERHEAD ELECTRIC LINES ALONG THE NORTH SIDE OF US 301 & WEST OF 121ST AVE E FOR THE INSTALLATION OF MAST ARM 1-4 FOUNDATION AND ABOVE GROUND COMPONENTS. THE DURATION OF THIS DE-ENERGIZING WILL BE APPROXIMATELY 10 DAYS DEPENDING ON SITE CONDITIONS AT THE TIME THE WORK IS PERFORMED. APPROPRIATE CONSTRUCTION EQUIPMENT AND TECHNIQUES SHALL BE USED FOR INSTALLATION OF ALL MAST ARM COMPONENTS WHEN IN CLOSE PROXIMITY TO OVERHEAD ELECTRIC LINES. IF SPECIAL EQUIPMENT IS REQUIRED ALL COSTS SHALL BE INCLUDED IN THE MAST ARM POLE BID ITEMS. THE CONTRACTOR SHALL COORDINATE ALL MAST ARM POLE INSTALLATIONS WITH FP&L AS APPROPRIATE. FP&L MAY ADJUST EXISTING OVERHEAD CONDUCTORS (PERMANENTLY DE-ENERGIZED) TO ACCOMMODATE THE HORIZONTAL ARM FOR POLE 1-3.

FOR OVERHEAD FACILITIES THAT ARE TO REMAIN ENERGIZED AND IN PLACE DURING CONSTRUCTION ACTIVITIES: TABLE A MINIMUM CLEARANCE DISTANCES SPECIFIED IN SUBPART CC OF OSHA RULE 1926 (AS THEY PERTAIN TO CRANE/DERRICK OPERATIONS), AND/OR THOSE MINIMUM DISTANCES SPECIFIED IN 29 CFR 1910.333(c)(3)(i)(A) and (iii)(A) FOR WORK IN PROXIMITY TO POWER LINES NOT COVERED BY THIS SUBPART CC, ARE TO BE MAINTAINED.

9. THE CONTRACTOR SHALL NOTIFY UTILITY OWNERS OF ANY EXCAVATION OR DEMOLITION ACTIVITY THROUGH SUNSHINE ONE CALL OF FLORIDA INC. (1-800-432-4770) AND SHALL ALSO NOTIFY THOSE UTILITY OWNERS/AGENCIES LISTED WITHIN OR IMPACTED BY WORK WITHIN THESE PLANS NOT LESS THAN TWO (2) FULL BUSINESS DAYS IN ADVANCE OF BEGINNING CONSTRUCTION.

10. THE CONTRACTOR IS RESPONSIBLE TO CONTACT MR. PAUL VILLALUZ WITH REGARDS TO POWER SERVICE CONNECTION. SEE NOTE 1 FOR CONTACT INFORMATION.

11. EXTREME CARE SHALL BE TAKEN TO ENSURE THAT ALL SIGNAL EQUIPMENT IS INSTALLED AS SHOWN IN THE PLANS WITHIN EXISTING RIGHT-OF-WAY.

12. IN THE EVENT THAT R/W OR IRRESOLVABLE UTILITY CONFLICTS PROHIBIT POLE PLACEMENT ACCORDING TO THE PLANS, THE CONTRACTOR SHALL CONTACT TRAFFIC OPERATIONS ENGINEER AND ENGINEER OF RECORD (EOR) TO OBTAIN A DESIGN VARIATION.

13. THE CONTRACTOR SHALL HAND DIG THE FIRST 48 INCHES (4 FEET) OF THE HOLE FOR THE POLE FOUNDATION OR CONDUIT RUN WHERE UTILITIES ARE IN CLOSE PROXIMITY.

14. IT SHOULD BE NOTED THAT NO TEST BORINGS WERE MADE WHERE CONDUIT RUNS ARE TO BE INSTALLED.

15. THE CONTRACTOR SHALL FIELD VERIFY ALL CRITICAL ELEVATIONS PRIOR TO ORDERING MAST ARM POLES.

16. THIS SIGNAL SHALL BE SET TO FLASH FOR A MINIMUM OF TWO (2) FULL BUSINESS DAYS BEFORE BEING PLACED INTO FULL OPERATION. FLASHING OPERATION SHALL START ON A MONDAY, TUESDAY, OR WEDNESDAY. HOWEVER, THE FLASHING OPERATION SHALL NOT START ON THE DAY PRECEDING HOLIDAY.

17. THE CONTRACTOR SHALL COORDINATE WITH MANATEE COUNTY FOR THE ACCEPTABLE VIDEO DETECTION SYSTEM TO INSTALL PRIOR TO SHOP DRAWING SUBMITTAL. INSTALL THE ITERIS VANTAGE RZ4 ADVANCED WIDE DYNAMIC RANGE COLOR CAMERA MOUNTED ON PELCO MAST ARM CAMERA BRACKET. INSTALL THE DETECTION SYSTEM IN STRICT ACCORDANCE WITH THE VIDEO DETECTION SYSTEM'S INSTALLATION MANUALS. THE CONTRACTOR SHALL ONLY USE MANUFACTURER APPROVED CABLING CONNECTORS AND COMPONENTS FOR THE VIDEO DETECTION SYSTEM. THE SIGNAL CONTRACTOR SHALL CONSULT WITH THE MANUFACTURER'S TECHNICAL REPRESENTATIVES PRIOR TO INSTALLATION. THE CONTRACTOR SHALL REQUEST A SYSTEM CRITIQUE FROM THE VIDEO DETECTION EQUIPMENT SUPPLY MANUFACTURER WHEN INSTALLATION IS COMPLETE. THE RESULTS OF THE SYSTEM CRITIQUE SHALL BE PROVIDED IN WRITING TO MANATEE COUNTY TRAFFIC ENGINEERING DIVISION PRIOR TO SCHEDULING THE FINAL INSPECTION.

18. UPON PROJECT COMMENCEMENT, THE SIGNAL CONTRACTOR SHALL BE AVAILABLE TO RESPOND TO ALL SIGNAL RELATED MALFUNCTIONS AND POWER OUTAGES. THE CONTRACTOR SHALL MAINTAIN AN ADEQUATE REPAIR INVENTORY OF EQUIPMENT TO CORRECT ALL TRAFFIC SIGNAL MALFUNCTIONS, NOT RELATED PHASING AND TIMING ISSUES FOR THE DURATION OF THE PROJECT. THE CONTRACTOR SHALL PROVIDE A QUALIFIED SIGNAL TECHNICIAN WHO CAN RESPOND WITHIN A MAXIMUM OF TWO HOURS, WITH AVAILABILITY 24 HOURS A DAY, 7 DAYS A WEEK. FAILURE TO MEET TIME REQUIREMENTS SHALL GIVE THE COUNTY, AT ITS DISCRETION, THE RIGHT TO REQUEST ASSISTANCE FROM THE MANATEE COUNTY SHERIFF'S DEPARTMENT TO CONTROL TRAFFIC FOR THE PERIOD OF TIME UNTIL THE CONTRACTOR RESPONDS AND MAKES THE NEEDED REPAIRS. THE COST FOR THE MANATEE COUNTY SHERIFF'S OFFICE SHALL BE THE CONTRACTOR'S RESPONSIBILITY.

19. GROUNDING: ALL GROUND ROD EQUIPMENT SHALL BE BONDED TOGETHER TO FORM AN INTEGRATED GROUNDING SYSTEM USING #6 AWG THHN COPPER WIRE. THE UPPER END OF ALL GROUND RODS SHALL BE 18 INCHES BELOW GRADE. MARK GROUND ROD LOCATIONS WITH PERMANENT MARKER SUCH AS AN EPOXY STICKER LOCATED ON THE NEAREST CURB AND PROVIDE AS-BUILT DRAWINGS WITH THE LOCATION OF GROUND RODS MARKED. GROUNDING CONDUCTOR SHALL BE #6 OR LARGER INSULATED COPPER. EQUIPMENT SHALL NOT BE PLACED INTO SERVICE UNTIL THE ASSOCIATED GROUNDING SYSTEM HAS BEEN INSPECTED AND APPROVED BY A MEMBER OF THE MANATEE COUNTY TRAFFIC OPERATIONS STAFF.

20. THE CONTRACTOR SHALL SUBMIT CONCRETE MIX DESIGN, STRUCTURAL AND SHOP DRAWINGS OF ALL EQUIPMENT TO MANATEE COUNTY FOR REVIEW AND APPROVAL PRIOR TO ORDERING EQUIPMENT:

MR. KENT D. BONTRAGER, P.E.
PROJECT MANAGER
MANATEE COUNTY PUBLIC WORKS
1022 26TH AVENUE EAST
BRADENTON, FL 34208-3916
PH. 941-708-7450 EXT. 7331

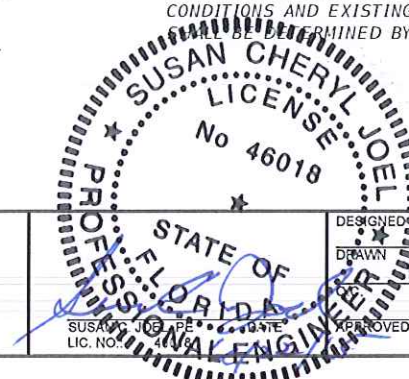
21. UPON PASSING THE FINAL INSPECTION, THE CONTRACTOR SHALL SEND A WRITTEN REQUEST TO MANATEE COUNTY REQUESTING TO TRANSFER MAINTENANCE FROM THE CONTRACTOR TO MANATEE COUNTY. MANATEE COUNTY WILL RESPOND WITHIN 5 WORKING DAYS TO ESTABLISH A TIME TABLE FOR THE TRANSFER OF MAINTENANCE RESPONSIBILITY.

MANATEE COUNTY TRAFFIC OPERATIONS DIVISION
ATTN: MR. AARON BURKETT
2904 12TH STREET COURT EAST
BRADENTON, FL 34208

22. SPARE CONDUIT AT PAVEMENT CROSSINGS SHALL BE CAPPED AT BOTH ENDS.

23. PRIOR TO ANY EQUIPMENT ORDER, THE CONTRACTOR SHALL SUBMIT FOR APPROVAL EQUIPMENT SPECIFICATIONS OR DESIGN DATA FOR ALL MATERIAL PROPOSED FOR THE PROJECT. SHOP DRAWINGS AND DESIGN DATA FOR ROADWAY LIGHTING EQUIPMENT SHALL BE SUBMITTED TO THE ENGINEER OF RECORD IN ACCORDANCE WITH THE SPECIFICATIONS.

24. THE LOCATION OF THE LIGHT POLE, CONDUCTORS, CONDUITS AND JUNCTION BOXES ARE DIAGRAMMATIC ONLY AND MAY BE SHIFTED BY THE CONTRACTOR TO ACCOMMODATE LOCAL CONDITIONS AND EXISTING UTILITY LOCATIONS. THE POLE WITH PULL BOX SLAB ORIENTATION SHALL BE DETERMINED BY THE CONTRACTOR PER INDIVIDUAL POLE LOCATION.

[illegible]

GENERAL NOTES (CONT.)

25. ALUMINUM POLES, LUMINAIRES, AND BASES SHALL BE FABRICATED IN ACCORDANCE WITH AASHTO'S "STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES, AND TRAFFIC SIGNALS", AND SHALL HAVE BEEN TESTED BY FHWA APPROVED METHODS (LATEST EDITION). CERTIFICATION FOR TESTS SHALL BE SUBMITTED WITH THE SHOP DRAWINGS.
26. ALL ELECTRICAL WORK SHALL MEET ALL REQUIREMENTS OF THE LATEST EDITIONS OF THE NATIONAL ELECTRICAL CODE (NEC), THE NATIONAL ELECTRICAL SAFETY CODE AND THE STATE OF FLORIDA, DEPARTMENT OF TRANSPORTATION, STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION. ALL COMPONENTS SHALL BE PROPERLY GROUNDED AND BONDED PER THE NATIONAL ELECTRICAL CODE REQUIREMENTS.
27. IN ACCORDANCE WITH NEC, IDENTIFY ALL CIRCUITS AND EQUIPMENT WITH "LAMACOID TAGS". INSTALL SIMILAR TAGS OF STAINLESS STEEL IDENTIFYING CIRCUIT FOR EACH LUMINAIRE AT ACCESS HANDHOLE FOR EACH POLE.
28. WIRE PULLING INSTRUCTIONS: CONNECT PULLING DEVICES TO COPPER WIRE AND NOT TO JACKET AND MEET MANUFACTURER'S REQUIREMENTS. USE PULLING COMPOUND PER MANUFACTURER'S REQUIREMENTS. ALL BENDS SHALL NOT BE LESS THAN RECOMMENDED BY THE NATIONAL ELECTRICAL CODE OR NATIONAL ELECTRICAL SAFETY CODE FOR CABLE USED.
29. THE CONTRACTOR SHALL STAKE ALL POLE LOCATIONS AND REQUEST UTILITY COMPANIES TO LOCATE AND STAKE UNDERGROUND UTILITIES PRIOR TO EXCAVATING.
30. THE CONTRACTOR SHALL USE THE CONCRETE FOUNDATION ON INDEX 17515 UNLESS SPECIFIED OTHERWISE IN THE PLANS.
31. DIRECTIONAL BORE OPERATIONS, IF USED, SHALL MEET THE REQUIREMENTS OF FDOT'S UTILITY ACCOMMODATION MANUAL (LATEST EDITION).
32. AT LOCATIONS WHERE UNDERGROUND UTILITIES ARE WITHIN TWO FEET OF THE LIGHT POLE FOUNDATIONS OR CONDUIT RUN, AS DETERMINED BY THE CONTRACTOR AND/OR ENGINEER, THE CONTRACTOR WILL HAND DIG THE FIRST 4 FEET OF THE HOLE FOR THE POLE FOUNDATION AND CONDUIT RUN.
33. ALL LIGHT POLES SHALL HAVE A PULL BOX INSTALLED BY THE POLE FOUNDATION PER STANDARD INDEX 17500, SHEET 3 OF 3.
34. THE CONTRACTOR'S ATTENTION IS DIRECTED TO THE PROVISIONS THAT REQUIRES THE PREPARATION AND APPROVAL OF AN EROSION CONTROL PLAN THAT ADDRESSES PREVENTION, CONTROL AND ABATEMENT OF WATER POLLUTION.
35. ALL CONDUIT TRENCHES SHALL BE BACKFILLED COMPLETELY TO PROVIDE SAFE CROSSING BY THE END OF EACH WORKING DAY OR WHENEVER THE WORK ZONE BECOMES INACTIVE. THE CONTRACTOR SHALL NOT OPEN ANY AREA THAT CAN NOT BE BACKFILLED IN THE SAME WORK PERIOD.
36. THE LIGHTING CONDUIT SHALL ONLY ENTER PULL BOXES DESIGNATED FOR STREET LIGHTING AND BYPASS ALL OTHER PULL BOXES. THE COMMUNICATIONS CONDUIT SHALL ENTER ONLY THE PULL BOXES DESIGNATED FOR FIBER OPTIC AND SHALL BYPASS ALL OTHER PULL BOXES.
37. THE LIGHTING SYSTEM WILL BE MAINTAINED BY MANATEE COUNTY UPON FINAL ACCEPTANCE. THE CONTRACTOR SHALL SUBMIT THE AS-BUILT PLANS TO THE ENGINEER, PRIOR TO FINAL ACCEPTANCE. THE AS-BUILT PLANS SHALL FOLLOW THE REQUIREMENTS SET UP IN RECORD DRAWINGS DEVELOPED BY THE MANATEE COUNTY TRAFFIC ENGINEERING DIVISION.
38. HANDHOLE COVERS FOR POLES SHALL BE LOCATED OPPOSITE APPROACHING TRAFFIC.
39. THE WIRES AT THE POLE HANDHOLES AND PULL BOXES SHALL BE LOOPED IN THE POLE AND PULL BOXES WITH SUFFICIENT LENGTH TO COMPLETELY REMOVE CONNECTORS AND SPLICES ONE FOOT OUTSIDE OF THE HANDHOLE AND PULL BOXES TO MAKE CONNECTIONS AND SPLICES ACCESSIBLE FOR CHANGING FUSES AND TROUBLE SHOOTING THE SYSTEM.
40. CONDUIT LOCATION AS SHOWN ON THE PLANS IS DIAGRAMMATIC. CONDUIT SHALL BE PLACED WITHIN THE RIGHT-OF-WAY BUT CAN BE ADJUSTED TO FIT AROUND EXISTING AND PROPOSED UTILITIES. THE CONTRACTOR SHALL ALSO AVOID THE PROPOSED MAST ARM FOUNDATIONS.
41. THE CONTRACTOR SHALL CONTACT THE TRAFFIC ENGINEERING DIVISION PRIOR TO BIDDING TO VERIFY DESIRED LUMINAIRE LAMP TYPE. THE LUMINAIRE SHALL BE A 150 WATT HIGH PRESSURE SODIUM CLEAR FLAT GLASS COBRA HEAD TYPE AND DESIGNED FOR FULL CUTOFF TYPE III DISTRIBUTION. THE PHOTOMETRIC CURVE NUMBER IS GE 450387 OR EQUIVALENT. IF THE CONTRACTOR PROPOSES A DIFFERENT LAMP OR LUMINAIRE IT MUST MATCH THE SPECIFIED LUMEN INTENSITY AND PHOTOMETRIC CURVE. THIS ALLOWS THE POLE SPACING TO REMAIN AS SHOWN IN THE PLANS.

42. ALL COMMUNICATIONS COMPONENTS, INCLUDING CONDUIT, PULL BOXES AND SPLICE BOXES, SHALL FOLLOW THE CRITERIA FOR ITS COMPONENTS IN THE FDOT DESIGN STANDARDS AND SPECIFICATIONS.
43. DUE TO CLOSE PROXIMITY OF OVERHEAD ELECTRIC, A "LOW PROFILE" DRILL SHAFT RIG SHALL BE REQUIRED TO DRILL THE FOUNDATION FOR LIGHT POLE.
44. THE CONTRACTOR SHALL PROVIDE AND MAINTAIN TWO PORTABLE 4' X 8' CHANGEABLE MESSAGE SIGNS (PCMS) FOR A PERIOD OF TWO WEEKS. THE PCMS WILL BE LOCATED AT AN APPROPRIATE DISTANCE IN ADVANCE OF THE NORTH AND SOUTH APPROACHES TO THE NEW SIGNALIZED INTERSECTION AS SPECIFIED BY THE MAINTAINING AGENCY'S ENGINEER. THE PCMS WILL BE PROVIDED (1) WEEK PRIOR TO THE SCHEDULED ACTIVATION TO FULL COLOR OPERATION AND SHALL REMAIN IN PLACE FOR ONE (1) WEEK FOLLOWING ACTIVATION. COST OF FURNISHING PCMS TO BE INCLUDED UNDER PAY ITEM NO. 102-99 - PORTABLE CHANGEABLE MESSAGE SIGN - TEMPORARY.

PRIOR TO ACTIVATION, THE VMS SIGN SHALL BE:

(PANEL ONE - LINE 1) "TRAFFIC"
(PANEL ONE - LINE 2) "SIGNAL"
(PANEL ONE - LINE 3) "WILL BE"

(PANEL TWO - LINE 1) "ACTIVATED"
(PANEL TWO - LINE 2) "ON DAY"
(PANEL TWO - LINE 3) "MONTH XX"

SUBSTITUTION FOR THE WORD "DAY" SHALL BE AS FOLLOWS:
SUNDAY AS "SUN"
MONDAY AS "MON"
TUESDAY AS "TUE"
WEDNESDAY AS "WED"
THURSDAY AS "THU"
FRIDAY AS "FRI"
SATURDAY AS "SAT"



SUBSTITUTION FOR THE WORD "MONTH" SHALL BE AS FOLLOWS:
JANUARY AS "JAN"
FEBRUARY AS "FEB"
MARCH AS "MAR"
APRIL AS "APR"
MAY AS "MAY"
JUNE AS "JUN"
JULY AS "JUL"
AUGUST AS "AUG"
SEPTEMBER AS "SEP"
OCTOBER AS "OCT"
NOVEMBER AS "NOV"
DECEMBER AS "DEC"

SUBSTITUTION FOR THE WORD "XX" SHALL BE AS FOLLOWS:
THE NUMERICAL DAY OF THE MONTH, FROM ONE (1) TO THIRTY-ONE (31). DATES LESS THAN TEN (10) SHALL BE PRECEDED BY A ZERO (0); EXAMPLE: "JAN 03" FOR JANUARY 3RD.
AFTER THE TURN-ON, THE VMS SHALL BE CHANGED TO
(PANEL ONE - LINE 1) "TRAFFIC"
(PANEL ONE - LINE 2) "SIGNAL"
(PANEL TWO - LINE 1) "NOW"
(PANEL TWO - LINE 2) "ACTIVATED"

PANEL TWO, LINE 1 AND LINE 2, SHALL FLASH THREE (3) TIMES BEFORE REVERTING TO PANEL ONE.

CONDUIT LEGEND
LV = SIGNAL LOW VOLTAGE CONDUIT
HV = SIGNAL HIGH VOLTAGE CONDUIT
SL = STREET LIGHTING CONDUIT
SP = SPARE CONDUIT
FO = FIBER OPTIC CONDUIT
PS = POWER SERVICE CONDUIT

SYMBOL	DESCRIPTION
	PROPOSED CONDUIT UNDERGROUND
	PROPOSED CONDUIT DIRECTIONAL BORE
	EXISTING CONDUIT
	PROPOSED BASE MOUNT CABINET
	PROPOSED CCTV CABINET (POLE MOUNT)
	PROPOSED TRAFFIC PULL BOX
	PROPOSED FIBER OPTIC PULL BOX
	PROPOSED VIDEO DETECTOR
	PROPOSED CCTV CAMERA
WGU	WIRE GROUNDING UNIT LOCATION
ERM	ELECTRONIC ROUTE MARKER LOCATION
	PROPOSED MAST ARM POLE
DZ-3	VIDEO VEHICLE DETECTION ZONE
	PROPOSED PEDESTRIAN SIGNAL WITH PEDESTAL
	PROPOSED CONCRETE SERVICE PEDESTAL

				MANATEE COUNTY		US 301 AND FT HAMER ROAD SIGNALIZATION PLANS		 3905 Crescent Park Drive, Riverview, Florida, 33578 www.cardno.com - 813.221.0048 Certificate of Authorization No. 29915				DESIGNED SCJ DRAWN HBH CHECKED C.C. APPROVED 5		GENERAL NOTES (2)		PROJECT NO: 00193.010.03 DATE: 6-22-2015 SHEET NO: T-4	

PAY ITEM NOTES

1. 630-2-11:
USE A MINIMUM 2" DIAMETER SCHEDULE 40 PVC CONDUIT FOR ALL SIGNAL, PEDESTRIAN, AND DETECTION FUNCTIONS. INSTALL CONDUIT UNDER PROPOSED ROADWAY AND/OR SIDEWALK PRIOR TO INSTALLATION OF ROADWAY BASE AND SURFACE OR CONCRETE. MEASUREMENT IS FOR STRAIGHT LINE HORIZONTAL DISTANCE BETWEEN 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 WITHIN A TRENCH. MULTIPLE RUNS ARE LABELED ON THE PLANS.
- POLYESTER MEASURING PULL TAPE SHALL BE INSTALLED IN ALL CONDUITS. AT LEAST 2 FEET OF PULL TAPE SHALL BE ACCESSIBLE.
- A SEPARATE 2" PVC CONDUIT SHALL BE INSTALLED FOR THE STREET LIGHTING.
2. 630-2-12:
SECTION 630-5 OF THE FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION DEFINES THE FOLLOWING, "PAYMENT FOR CONDUIT PLACED UNDER EXISTING PAVEMENT (ROADWAY, DRIVEWAYS, OR SIDEWALK) WILL BE MADE AS DIRECTIONAL BORE. IF CONDUIT IS BEING PLACED UNDER BOTH EXISTING TURF AND EXISTING PAVEMENT BETWEEN TWO PULL BOXES, PAYMENT FOR THE TOTAL PULL BOX-TO-PULL BOX LENGTH WILL BE MADE AS DIRECTIONAL BORE. THESE PLANS ARE DEVELOPED PER THIS LANGUAGE. THE CONTRACTOR MAY INSTALL CONDUIT USING THE OPEN TRENCH METHOD AT THEIR DISCRETION WITH THE EXCEPTION OF UNDER PAVEMENT AND/OR SIDEWALK INSTALLATIONS.
- POLYESTER MEASURING PULL TAPE SHALL BE INSTALLED IN ALL CONDUITS. AT LEAST 2 FEET OF PULL WIRE SHALL BE ACCESSIBLE.
- USE A MINIMUM 2" DIAMETER HDPE SDR 11 CONDUIT FOR ALL SIGNAL, PEDESTRIAN, LIGHTING AND DETECTION FUNCTIONS. MEASUREMENT IS FOR STRAIGHT LINE HORIZONTAL DISTANCE BETWEEN 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 WITHIN A BORE. MULTIPLE RUNS ARE LABELED ON THE PLANS.
3. 632-7-1:
THE CONTRACTOR SHALL VERIFY THE SIGNAL CABLE COLOR CODE WITH MANATEE COUNTY PRIOR TO ORDERING. ALL WIRING SHALL ADHERE TO MANATEE COUNTY SPECIFICATIONS. USE A MINIMUM OF 7 CONDUCTOR SIGNAL CABLE FOR SIGNAL HEADS AND PEDESTRIAN HEADS.
4. 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 WITH TYPE SC CONNECTORS OF ADEQUATE LENGTH TO CONNECT ALL EQUIPMENT.
5. 633-1-122:
THE PROPOSED FIBER OPTIC CABLE SHALL BE 48 COUNT SINGLE MODE.
6. 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.
7. 635-2-11:
USE POLYMER CONCRETE CONSTRUCTION PULL BOXES WITH POLYMER CONCRETE COVER. 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. IF IN OR ADJACENT TO SIDEWALK, PULL BOXES SHALL BE FLUSH WITH SIDEWALKS OR OTHER CONCRETE, OTHERWISE 1.5 INCHES ABOVE EXISTING GRADE. THE TOP OF THE LID SHALL HAVE THE FOLLOWING IDENTIFICATION PERMANENTLY CAST INTO THEIR 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 FIBER OPTIC CABLE ITS APPLICATIONS;
"ELECTRICAL" FOR OTHER ELECTRICAL APPLICATIONS;
"LIGHTING" FOR LIGHTING APPLICATIONS;
"TRAFFIC MONITORING" FOR TRAFFIC MONITORING APPLICATIONS.
- APPROPRIATELY SIZE EACH PULL BOX SO THE FIBER COMMUNICATION AND/OR INTERCONNECT CABLE DOES NOT EXCEED MANUFACTURER'S RECOMMENDED BENDING RADIUS. STANDARD PULL BOX DIMENSION SHALL BE 17"x30"x12". FIBER OPTIC PULL BOX DIMENSION SHALL BE 24"x36"x36". FIBER OPTIC SPLICE BOX DIMENSIONS SHALL BE 30"x60"x48".

- ALL FIBER OPTIC PULL BOXES SHALL BE MARKED WITH A 3" X 72" OR ELECTRONIC ROUTE MARKER WITH ORANGE POLYDOME LABELED "WARNING, BURIED FIBER OPTIC CABLE". THE INSTALLATION HEIGHT SHALL BE 4'-6" ABOVE GRADE TO TOP OF POST. ROUTE MARKERS SHALL BE INSTALLED AT ALL PULL BOX LOCATIONS ENTERED BY PROPOSED CONDUIT AS PART OF THE LOCATE SYSTEM. PULL BOX LOCATIONS DESIGNATED AS "ERM" SHALL HAVE AN ELECTRONIC ROUTE MARKER INSTALLED. STANDARD ROUTE MARKERS SHALL BE INSTALLED AT ALL OTHER FIBER OPTIC PULL BOX LOCATIONS. PAYMENT FOR ROUTE MARKERS ARE INCIDENTAL TO PAY ITEM 635-2-12. PULL BOX LOCATIONS DESIGNATED AS "WGU" SHALL HAVE A WIRE GROUNDING UNIT INSTALLED.
8. 635-2-12:
THIS PAY ITEM INCLUDES THE COST OF THE CONCRETE APRON AS SHOWN IN THE FDOT DESIGN STANDARDS INDEX 17700. THE REMOVAL AND DISPOSAL OF THE EXISTING FIBER OPTIC PULL BOX AND CONCRETE APRON IS ALSO INCLUDED UNDER THIS PAY ITEM.
9. 639-1-122, 639-3-11:
ALL SERVICE BREAKERS SHALL BE CLEARLY LABELED. THE TRAFFIC SIGNAL ELECTRICAL SERVICE DISCONNECT SHALL BE 100 AMP COMPRISED OF A EIGHT (8) CIRCUIT DISCONNECT BOX WITH SIX CIRCUIT BREAKERS - ONE 40 AMP/120 VOLT FOR THE CONTROLLER CABINET, ONE 15 AMP/120 V FOR INTERNALLY ILLUMINATED STREET NAME SIGNS (IISNS) AND STREET LIGHT CONTROL, ONE 15 AMP FOR THE IISNS (LOAD SIDE), ONE 15 AMP FOR THE STREET LIGHT (LOAD SIDE), ONE 20 AMP FOR THE CCTV AND ONE 15 AMP/120 VOLT FOR FOR FUTURE USE. THE ELECTRICAL POWER SERVICE LOCATED NEAR THE POWER SOURCE SHALL CONTAIN ONE 50 AMP/120 V BREAKER.
- USE ALUMINUM RIGID ABOVE GROUND CONDUIT FOR ELECTRICAL POWER SERVICE AND DISCONNECT.
- THIS PAY ITEM INCLUDES EQUIPMENT AND MISCELLANEOUS HARDWARE FOR THE IISNS AND STREET LIGHT CONTROL. INSTALL ONE PHOTOELECTRIC CELL TO CONTROL THE IISNS AND STREET LIGHT ON THE TRAFFIC SIGNAL ELECTRIC SERVICE DISCONNECT POLE. PROVIDE SEPARATE CONDUCTORS FROM THE LIGHTING CONTROL TO THE IISNS AND STREET LIGHT.
- THE CONTRACTOR SHALL RUN CONDUCTORS FROM THE PROPOSED POWER SERVICE PEDESTAL TO THE FP&L SOURCE POLE AND INSTALL A 20 FT CONDUIT RISER WITH WEATHER HEAD AND A 20 FT COIL OF SERVICE WIRE FOR FP&L CONNECTION.
10. 639-2-1:
PAYMENT SHALL BE BASED ON THE LENGTH OF WIRE (ALL CONDUCTORS INCLUDED). USE A BONDING WIRE FROM ELECTRICAL SERVICE POINT TO CONTROLLER.
11. 646-1-11:
USE BREAKAWAY ALUMINUM SQUARE BASE ASSEMBLIES WITH ALUMINUM DOORS FOR PEDESTRIAN PEDESTALS. INSIDE DIAMETER OF PEDESTALS SHALL BE FOUR INCHES (4").
12. 649-31-299:
USE THREE 2" AND ONE 3/4" CONDUITS STUBBED OUT THROUGH THE MAST ARM POLE FOUNDATION AND TEMPORARILY SEAL.
- THE CONTRACTOR IS RESPONSIBLE FOR COMPLETING THE VARIOUS LOGS ASSOCIATED WITH THE DRILLED SHAFT INSTALLATION. THE CONTRACTOR IS ALSO RESPONSIBLE FOR PROVIDING TESTING FOR THE CONCRETE USED. PAYMENT FOR THE CONCRETE COMPRESSIVE STRENGTH TEST SHALL BE INCLUDED IN THIS PAY ITEM.
13. 650-1-311, 650-1-411, AND 650-1-511:
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. THIS PAY ITEM INCLUDES THE COST OF TUNNEL VISORS AND BACK PLATES. USE LOUVERED ALUMINUM SIGNAL HEAD BACK PLATES WITH A 2 INCH (2") YELLOW REFLECTORIZED (TYPE III REFLECTIVITY) OUTER EDGE BORDER.
14. 653-1-11:
PEDESTRIAN SIGNAL HEADS SHALL BE 16" INTERNATIONAL SYMBOL, FDOT APPROVED LED COUNTDOWN TYPE.
15. 660-4-11:
SHALL INCLUDE ALL CABINET EQUIPMENT INCLUDING, BUT NOT LIMITED TO VIDEO PROCESSORS, SUPPLEMENTAL INTERFACE HARDWARE, CABLING AND OTHER COMPONENTS TO THE VIDEO PROCESSORS FOR A COMPLETE ASSEMBLY FOR THE VIDEO DETECTION SYSTEM FOR THE INTERSECTION.

10. 660-4-12:
INSTALL SYSTEM IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS. USE A 72" LONG GUSSET TUBE FOR VIDEO DETECTION CAMERA ATTACHMENT BRACKET. VIDEO DETECTION SHALL BE COMPATIBLE WITH MAINTAINING AGENCY'S EXISTING VIDEO DETECTION SYSTEM. THE CAMERA SHALL BE ITERIS VANTAGE R24 ADVANCED WIDE DYNAMIC RANGE COLOR CAMERA OR EQUIVALENT FOR THE SIDE STREET APPROACHES AND ITERIS VANTAGE VECTOR HYBRID OR EQUIVALENT FOR THE MAIN STREET APPROACHES. IN ADDITION TO THE CAMERAS AND OTHER RELATED EQUIPMENT, THE VIDEO DETECTION SYSTEM MUST INCLUDE THE FOLLOWING: ITERIS VANTAGE EDGE 2 PROCESSOR, ITERIS EDGE CONNECT MODULE, ITERIS VANTAGE EDGE 2 TS2 I/O MODULE. THIS PAY ITEM SHALL INCLUDE THE LABOR AND MATERIALS TO INSTALL THE CAMERAS ON THE MAST ARMS. MOUNTING HARDWARE AND CABLING IS CONSIDERED INCIDENTAL TO THE VIDEO DETECTION SYSTEM.
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.
17. 665-1-11:
USE PEDESTRIAN BUTTON SIGN FTP-68B-06. STREET NAME SHALL BE IN ACCORDANCE WITH THE STREET NAMES SHOWN ON THE SIGNALIZATION PLAN SHEETS.
18. 670-5-110:
THE TOP OF CONTROLLER CABINET FOUNDATION SHALL BE THE SAME ELEVATION AS THE CROWN OF ROADWAY OR GREATER.

USE NEMA TS2 TYPE 1 CONTROLLER IN A SIZE VI ENCLOSURE COMPATIBLE WITH THE EXISTING SIGNAL SYSTEM. THE SIGNAL CONTROLLER CABINET SHALL HAVE A FRONT AND BACK ACCESS DOOR. THE CONTROLLER ASSEMBLY SHALL COME FULLY EQUIPPED WITH TWO DETECTOR RACKS AND ALL RELAYS, LOAD SWITCHES, WIRING ETC. FOR SOP 10 OPERATION. 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 980 ATC CONTROLLER SHALL COME EQUIPPED WITH 4 SERIAL PORTS AND ONE ETHERNET PORT. THE CONTROLLER SHALL BE FULLY CONFIGURED WITH ALL THE NECESSARY SYSTEM COMPONENTS FOR INTEGRATION INTO MANATEE COUNTY'S ETHERNET-BASED FIBER OPTIC NETWORK. CONTACT MANATEE COUNTY PRIOR TO ORDERING CONTROLLER ASSEMBLY TO CONFIRM EQUIPMENT COMPATIBILITY.

THIS ITEM SHALL INCLUDE THE INSTALLATION OF CONCRETE BASES FOR THE CONTROLLER ASSEMBLY AND FOR MOUNTING OF AN EMERGENCY GENERATOR CABINET. THE CONTROLLER ASSEMBLY FOUNDATION 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.

THE EMERGENCY GENERATOR CABINET (EGC) FOUNDATION SHALL HAVE DIMENSIONS OF 48" X 36" FOR CABINET MOUNTING WITH A FDOT STANDARD TECHNICIAN PAD OR STEPS. IT SHALL BE LOCATED ADJACENT TO THE CONTROLLER BASE WITH (2) - 2" CONDUITS AND (1) - 1/4" CONDUITS INSTALLED DIRECTLY TO THE CONTROLLER BASE. MANATEE COUNTY WILL FURNISH THE GENERATOR CABINET TO THE CONTRACTOR. THE CONTRACTOR SHALL COORDINATE WITH MANATEE COUNTY TO PICK UP AND INSTALL THE GENERATOR CABINET ON THE NEW FOUNDATION.

ALL COSTS OF LABOR, CONCRETE AND OTHER MATERIALS FOR THE CONTROLLER ASSEMBLY AND EGC BASES, TECHNICIAN PADS, STEPS AS REQUIRED, AND INSTALLATION OF THE GENERATOR CABINET ARE INCLUDED IN THIS ITEM. THE CONTROLLER AND EGC BASES SHALL BE AT LEAST 2' HIGH OR THE SAME ELEVATION AS THE CROWN OF THE ROADWAY, WHICHEVER IS GREATER. THE MAXIMUM DISTANCE FROM THE TECHNICIAN PAD OR STEP TO THE FOUNDATION TOP IS 24". THE CABINET DOORS SHALL OPEN TOWARDS OR PARALLEL TO THE RIGHT-OF-WAY LINE AND AWAY FROM TRAFFIC.
19. 676-2-122:
THE CCTV CABINET SHALL BE TYPE 3365 WITH SUNSHIELDS. CONTACT MANATEE COUNTY PRIOR TO ORDERING CABINET ASSEMBLY TO CONFIRM EQUIPMENT LAYOUT AND COMPATIBILITY.
20. 682-1-11:
THE PROPOSED CCTV SHALL BE BOSCH VG5-836-ECEV OUTDOOR 20X AUTODOME 800 SERIES HD CAMERA WITH IVA, CLEAR BUBBLE, 50/60 HZ 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.

- THE MANAGED ETHERNET SWITCH SHALL BE A RUGGEDCOM MODEL NUMBER RS3000-0-C2-C2-00. THE SWITCH SHALL BE FURNISHED WITH ALL NECESSARY SYSTEM COMPONENTS FOR INTEGRATION INTO THE MANATEE COUNTY ETHERNET-BASED FIBER OPTIC

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PAY ITEM NOTES (CONT.)

22. 685-106:

THE UNINTERRUPTED POWER SUPPLY (UPS) SHALL BE THE ALPHA FXM 1100. THE UPS 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.

THE UPS SHALL BE CAPABLE OF AN 8 HOUR RUN TIME AT 450 WATTS. THE UPS SHALL HAVE A NOMINAL OPERATING RANGE OF 850W TO 110W WITH A STANDARD RS232 ETHERNET PORT. ATTACH THE UPS CABINET TO THE OUTSIDE OF THE CONTROLLER CABINET AND INSTALL IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS. FURNISH AND INSTALL A COMPLETE UPS ASSEMBLY TO INCLUDE CABINET AND BATTERIES THAT MEET MANATEE COUNTY SPECIFICATIONS AS DEFINED.

23. 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.

24. 715-1-12:

THIS PAY ITEM SHALL INCLUDE CONDUCTORS AS INDICATED IN THE PLANS AND THE STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION DESIGN STANDARDS. PAYMENT SHALL BE MADE BASED ON LINEAR FOOT OF SINGLE CONDUCTOR. THE CONDUCTORS SHALL MEET THE FDOT SPECIFICATIONS SECTION 992.

25. 715-4-129:

THIS PAY ITEM SHALL INCLUDE THE POLE, LUMINAIRE WITH LAMP, ANCHOR BOLTS WITH LOCK NUTS AND WASHERS, VIBRATION DAMPENING DEVICE, FRANGIBLE TRANSFORMER TYPE BASE, AND FOUNDATION AS INDICATED IN THE STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION DESIGN STANDARDS. THE COST OF BREAK-AWAY WATERTIGHT, IN-LINE FUSE HOLDERS, THE STRAIN RELIEF, AND THE SURGE ARRESTOR PER DESIGN STANDARDS INDEX 17500, SHALL BE PAID FOR UNDER PAY ITEM 715-500-1.

THE POLE SHALL HAVE AN 8-FOOT BRACKET ARM AND A LUMINAIRE MOUNTING HEIGHT OF 30 FEET.

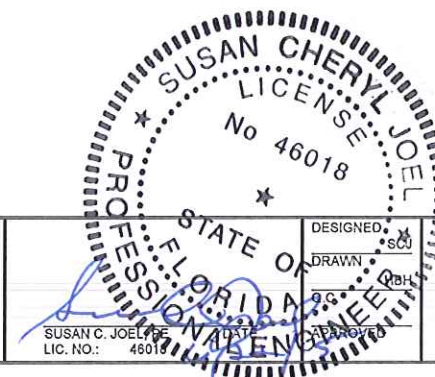
THE LUMINAIRE SHALL BE A 150 WATT HIGH PRESSURE SODIUM CLEAR FLAT GLASS COBRA HEAD TYPE AND DESIGNED FOR FULL CUTOFF TYPE III DISTRIBUTION. THE PHOTOMETRIC CURVE NUMBER IS GE 450387 OR EQUIVALENT.

THIS PAY ITEM INCLUDES THE COST OF 0.71 CUBIC YARDS OF CONCRETE PER SLAB AROUND POLE FOUNDATION AND PULL BOX. THE COST FOR ALL REINFORCING STEEL AND TIES SHALL BE INCLUDED UNDER THIS PAY ITEM. FOR MORE INFORMATION, REFER TO THE STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION DESIGN STANDARDS INDEX 17500 FOR SLAB DETAILS. THE LAYOUT OF THE SLAB ON THE PLANS IS SCHEMATIC AND THE ORIENTATION MAY BE MODIFIED AS APPROVED BY THE ENGINEER. PULL BOX TO BE PAID FOR UNDER 635-2-11.

26. 715-500-1:

THIS PAY ITEM SHALL INCLUDE THE COST OF BREAK-AWAY WATERTIGHT, IN-LINE FUSE HOLDERS, STRAIN RELIEF, AND SURGE ARRESTOR PER STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION DESIGN STANDARDS INDEX 17500.

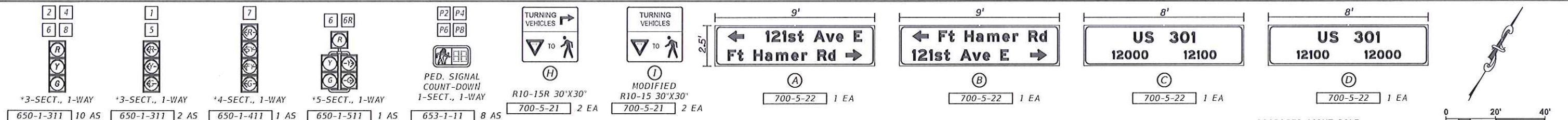
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TRAFFIC CONTROL GENERAL NOTES

- 1. CONFLICTING EXISTING PAVEMENT MARKINGS AND ALL PAVEMENT MARKINGS TO BE REMOVED, SHALL BE REMOVED USING AN EDCO TLR-7 GRINDER OR EQUAL. NO SCAR RESULTING FROM THE MARKING REMOVAL SHALL BE DEEPER THAN 1/4" AS MEASURED FROM THE SURROUNDING SURFACE TO THE LOWEST POINT IN THE REMOVED AREA. ALL EXISTING PAVEMENT MARKINGS WHICH ARE ALTERED SHALL BE REPLACED UPON COMPLETION OF THE PROJECT. THE REPLACEMENT OF MARKINGS SHALL BE PAID UNDER THE APPROPRIATE BID ITEM.
- 2. THE CONTRACTOR SHALL NOTIFY THE FDOT AND COUNTY PROJECT MANAGER A MINIMUM OF TWO WEEKS IN ADVANCE OF ANY REQUESTED LANE CLOSURE. UPON APPROVAL OF THE LANE CLOSURE, THE CONTRACTOR WILL IMMEDIATELY NOTIFY THE LOCAL LAW ENFORCEMENT, EMERGENCY MEDICAL SERVICE, AND FIRE DEPARTMENT OF THE LANE CLOSURE.
- 3. THE CONTRACTOR SHALL MAINTAIN PEDESTRIAN TRAFFIC AT ALL TIMES DURING THE CONSTRUCTION PROCESS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING THAT A SAFE AND UNOBSTRUCTED ROUTE EXISTS FOR PEDESTRIANS. REFER TO STANDARD INDEX 660.
- 4. IF APPLICABLE, TEMPORARY RAISED REFLECTIVE PAVEMENT MARKERS SHALL BE INSTALLED WITH TEMPORARY LANE LINES IN ACCORDANCE WITH INDEX NO. 600. THE COST OF INSTALLATION AND REMOVAL OF TEMPORARY RAISED REFLECTIVE MARKERS SHALL BE INCLUDED IN PAY ITEM NO. 711-11. THE CONTRACTOR SHALL NOT USE LOW PROFILE RAISED PAVEMENT MARKER.
- 5. DURING PAVEMENT MARKING OPERATIONS FOR THE PROJECT, THE CONTRACTOR SHALL UTILIZE STANDARD INDEX NO. 619, AS APPLICABLE.
- 6. THE CONTRACTOR SHALL IMMEDIATELY REPAIR ALL POTHOLES THAT DEVELOP WITHIN THE PROJECT LIMITS.
- 7. THE CONTRACTOR SHALL NOT EXCAVATE ANY AREAS WITHIN THE ROADWAY THAT CANNOT BE SAFELY REOPENED TO TRAFFIC WITHIN THE SAME WORK PERIOD.
- 8. ALL TRAFFIC CONTROL DEVICES WILL BE INSTALLED PRIOR TO COMMENCEMENT OF CONSTRUCTION AND PROPERLY MAINTAINED AND OPERATED THROUGHOUT THE PERIOD OF EACH PHASE / STAGE CONSTRUCTION. ALL TEMPORARY SIGNS, PAVEMENT MARKINGS, WARNING DEVICES, WARNING LIGHTS, ETC. NECESSARY FOR THE MAINTENANCE OF TRAFFIC SHALL CONFORM TO INDEX 600 AND THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (LATEST EDITION).
- 9. THE REGULATORY SPEED LIMIT FOR US 301 SHALL BE THE EXISTING POSTED SPEED LIMIT OF 45 MPH.
- 10. ALL LANE CLOSURES SHALL CONFORM TO THE REQUIREMENTS OF THE PLANS AND STANDARD INDICES 600, 611, 612, 613, 615, 616, AND 618, AS APPLICABLE.
- 11. PAY ITEM NO. 102-1, MAINTENANCE OF TRAFFIC, LUMP SUM INCLUDES BUT IS NOT LIMITED TO THE FOLLOWING ITEMS: MAINTAINING/RELOCATION OF EXISTING SIGNS, PROJECT INFORMATION SIGNS, SHOULDER TREATMENT, AND TEMPORARY ASPHALT WEDGES AT MANHOLES TOPS AS NECESSARY FOR THE MAINTENANCE OF TRAFFIC.
- 12. CHANGEABLE (VARIABLE) MESSAGE SIGNS SHALL BE UTILIZED FOR NIGHTTIME WORK THAT TAKES PLACE WITHIN 4' OF THE TRAVELED WAY.
- 13. THE CONTRACTOR SHALL MAINTAIN PROPER DRAINAGE FOR ALL PHASES OF CONSTRUCTION.
- 14. NO LANE CLOSURES WILL BE ALLOWED BETWEEN 6:00 A.M. AND 9:00 P.M.
- 15. LANE CLOSURES OR DETOURS WILL NOT BE PERFORMED DURING HOLIDAY PERIOD INCLUDING THE WEDNESDAY PRIOR TO THANKSGIVING DAY. IN ADDITION TO THESE AND PREVIOUSLY SPECIFIED LIMITATIONS ON LANE CLOSURES AND DETOURS, THE FDOT AND/OR MANATEE COUNTY MAY DIRECT DAYS WHEN NO LANE CLOSURES OR DETOURS WILL BE PERMITTED. THE CONTRACTOR WILL BE PROVIDED NO LESS THAN 14 DAYS NOTICE OF THESE EVENTS AND THEY SHALL BE AT NO ADDITIONAL COSTS OR TIME TO THE DEPARTMENT.
- 16. THE CONTRACTOR SHALL, AT THE DISCRETION OF THE ENGINEER, OPEN ANY TEMPORARY LANE CLOSURE CAUSING EXTENDED TRAFFIC CONGESTION (5 MINUTE DELAY) UNTIL TRAFFIC HAS RETURNED TO AN ACCEPTABLE FLOW AS DETERMINED BY THE ENGINEER.
- 17. THE CONTRACTOR SHALL NOT CLOSE ANY TWO CONSECUTIVE SIDE STREETS OR MEDIAN OPENINGS IN ANY GIVEN PHASE.
- 18. THE CONTRACTOR IS TO MAINTAIN AND KEEP STREET NAME SIGNS VISIBLE DURING CONSTRUCTION OPERATIONS, IN ORDER TO FACILITATE EMERGENCY VEHICLE TRAFFIC.

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NOTES:

1. THE EXISTING SPEED LIMIT FOR US 301 AND FORT HAMER ROAD IS 45 MPH. THE EXISTING SPEED LIMIT FOR 121ST AVE IS 30 MPH. US 301 IS CONSIDERED E/W IN TIMING CHART.

CONTROLLER NOTES:

1. MAJOR STREET IS US 301 (SR 43) (MOVEMENTS 1, 2, 5 & 6). MINOR STREET IS FT. HAMER RD/121ST AVE (MOVEMENTS 4, 7, & 8).

2. THE CONTROLLER CABINET SHALL BE WIRED FOR SOP 10. THE CONTROLLER SHALL OPERATE THE SPECIAL SOP AS INDICATED.

3. FLASHING OPERATION IS YELLOW FOR MOVEMENTS 2, 6, & 6R AND RED FOR ALL OTHER MOVEMENTS.

4. PROGRAM MOVEMENT 6R, AS OVERLAP A TO COME UP WITH MOVEMENT 7 WITH 4.8 SECONDS OF YELLOW AND 3.0 SECONDS OF ALL RED INTERVAL.

5. CONCURRENT/ ACTUATED PEDESTRIAN TIMING FOR MOVEMENTS P2, P4, P6, & P8.

6. EACH PHASE/ MOVEMENT SHALL BE WIRED FROM THE SIGNAL DISPLAY TO THE CONTROLLER AS A SEPARATE PHASE/ MOVEMENT. THIS INCLUDES LEFT TURN MOVEMENTS. EACH LEFT TURN MOVEMENT SHALL HAVE CONDUCTORS AVAILABLE FOR PROTECTED AND PERMISSIVE OPERATION.

7. AT LEAST THREE (3) WEEKS PRIOR TO TIMING IMPLEMENTATION AND PROGRAMMING OF THE CONTROLLER, REQUEST UPDATED SIGNAL TIMINGS (BASIC CONTROLLER AS WELL AS COORDINATION) FROM FDOT TRAFFIC SIGNAL SYSTEM MANAGER (863-519-2746). PROVIDE FDOT WITH ALL 'AS-BUILT' INFORMATION NECESSARY TO DEVELOP THE BASIC SIGNAL TIMING PARAMETERS. PROGRAM THE CONTROLLER AS PER THE TIMINGS PROVIDED BY FDOT.

CONTROLLER TIMINGS								
MOVEMENT #	1	2	3	4	5	6	7	8
DIRECTION	EBL	WB		NB	WBL	EB	NBL	SB
TURN TYPE	PROT				PROT		PROT/PERM	
MIN GREEN	5	18		10	5	18	5	7
EXT	3	2		3	3	2	3	3
YELLOW	4.8	4.8		4.8	4.8	4.8	4.8	4.8
ALL RED	3.0	2.0		3.0	3.0	2.0	3.0	3.0
MAX I	20	60		30	20	60	15	30
MAX II								
MAX LIMIT	30	90			30	90		
ADJUST BY	5	10			5	10		
WALK		7			7		7	
FLASHING DON'T WALK		16			37		21	
DETECTOR MEMORY								
DET. CROSS SWITCH.							YES	
DUAL ENTRY		ON		ON		ON		ON
RECALL		MIN				MIN		

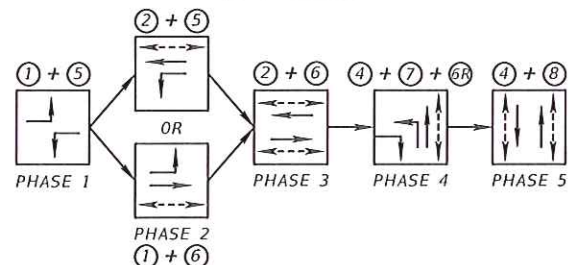
TIMINGS ARE INITIAL AND MAY REQUIRE FIELD ADJUSTING AS DIRECTED BY THE ENGINEER.

DETECTORS FOR LOOPS				
LOOP	NO. OF LOOPS	NO. OF NEW DETS.	CHANNEL NO.	DELAY TIME (SEC)
L-2A	2	1	1&2	0
L-2B	2	1	1&2	0
L-6A	2	1	1&2	0
L-6B	2	1	1&2	0

SEE SHEET T-9 FOR LOOP LOCATIONS.

VIDEO DETECTOR ZONES			
ZONE LOCATION NO.	VIDEO CAMERA NO.	NO. OF DETECTION ZONES	DELAY TIME (SEC)
DZ-1	2	1	0
DZ-4	1	1	8
DZ-5	4	1	0
DZ-6D	2	1	8
DZ-7	1	1	3
DZ-8	3	1	8

DELAY TIME IS INITIAL AND MAY REQUIRE FIELD ADJUSTING AS DIRECTED BY THE ENGINEER.



(1-HV, 1-PS, 1-SL, 1-LV, 2-SP)
(6 RUNS @ 140')
(3 CONDUCTORS) 140 LF
(3-#6 AWG) 420 LF

(2 RUNS @ 10')
1 EA 630-2-11
1 EA 646-1-11
1 EA 665-1-11

POLE LOCATION= STA. 195+05.95
78.03' RT
GROUND EL = 47.7'
FOUND. EL = 47.7'

1 EA 649-31-299
1 EA 660-4-12

1 PI 632-7-1
1 EA 633-3-15
4 EA 660-1-109
4 EA 660-4-11
1 AS 670-5-110
1 EA 684-1-1
1 EA 685-106

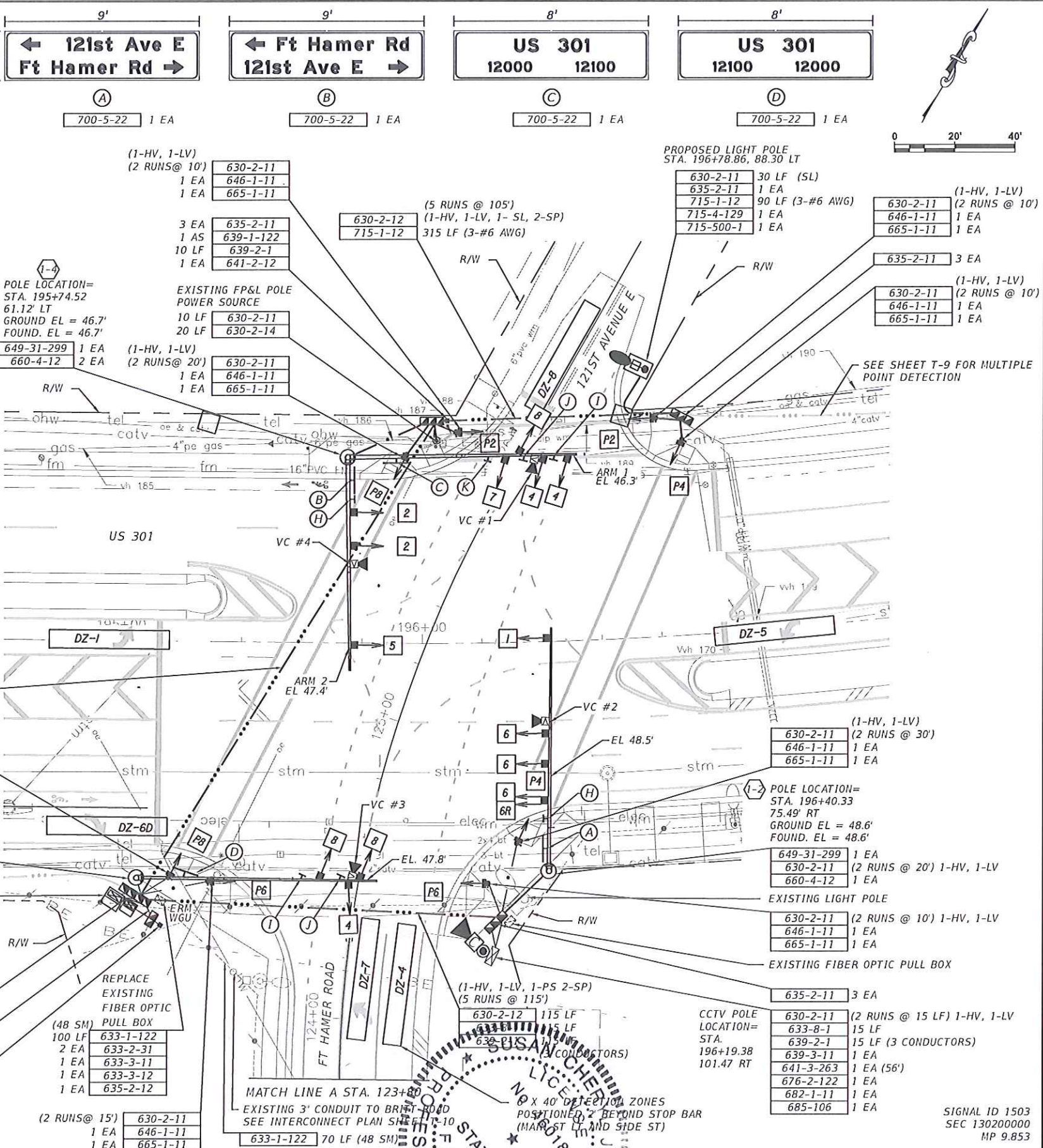
(3-HV, 2-LV, 1-F0, 2-SP)
(8 RUNS @ 10')
10 LF 630-2-11
4 EA 633-8-1
4 EA 635-2-11

(SL) 10 LF 630-2-11
(3-#6 AWG) 30 LF 715-1-12

(2-PS) 20 LF 630-2-11
2 EA 635-2-11
1 EA 639-3-11
20 LF 639-2-1
(12') 1 EA 641-2-12

(3 CONDUCTORS) 20 LF 639-2-1
(12') 1 EA 641-2-12

SERVICE DISCONNECT



MANATEE COUNTY

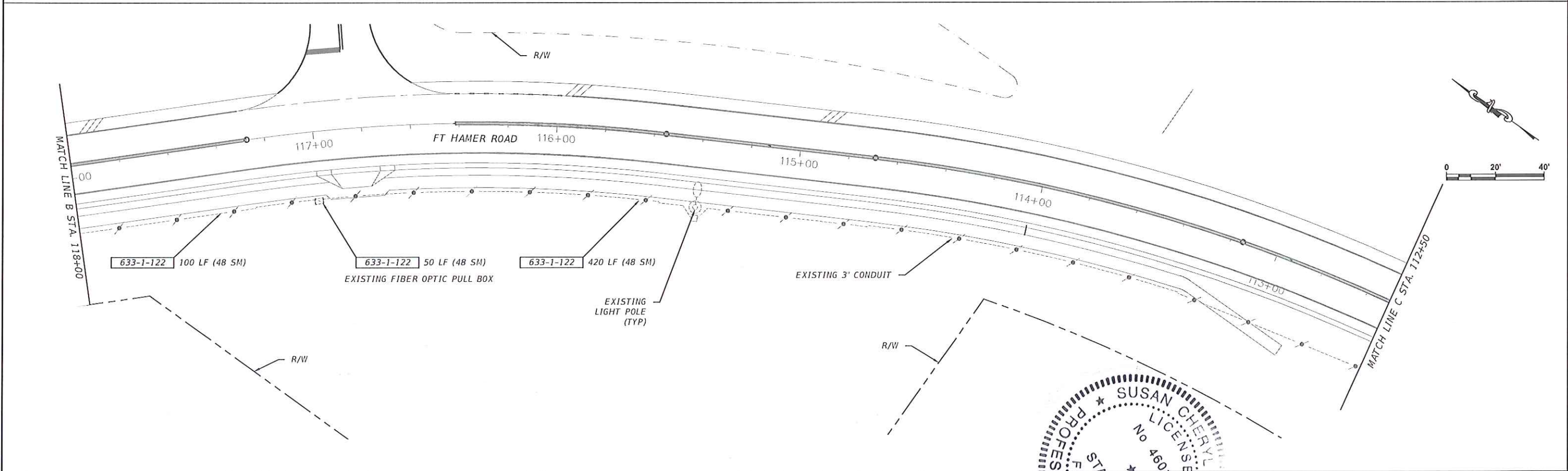
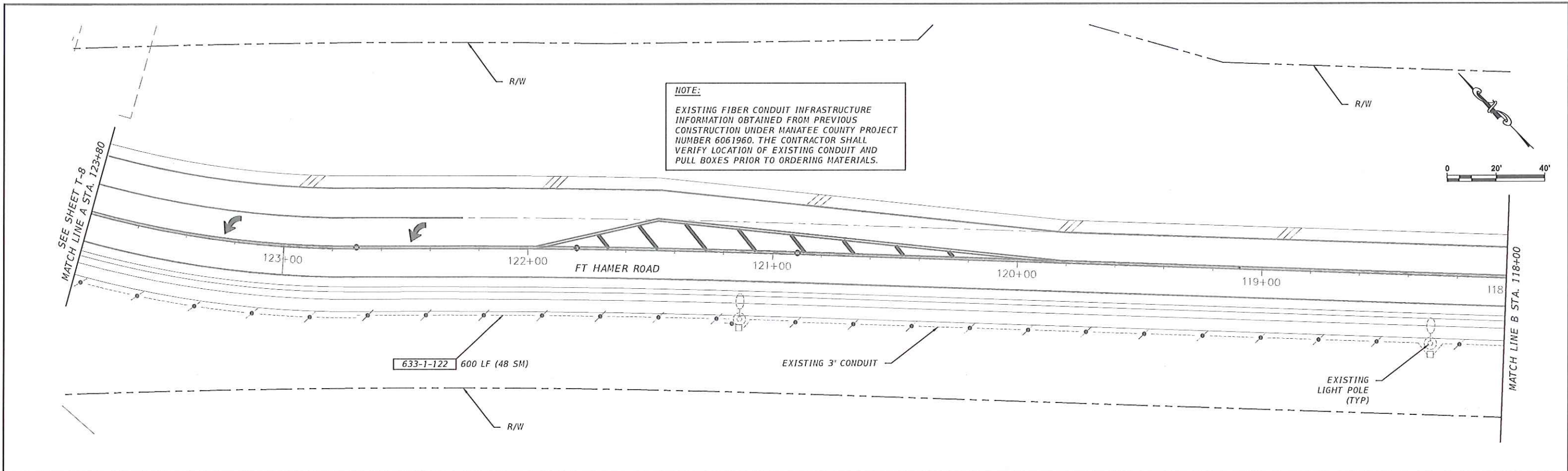
US 301 AND FT HAMER ROAD
SIGNALIZATION PLANS

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Certificate of Authorization No. 29915

SUSAN C. SUTHERLAND
PROFESSIONAL ENGINEER
LIC. NO. 1503
DESIGNED BY
DRAWN BY
CHECKED BY
APPROVED BY

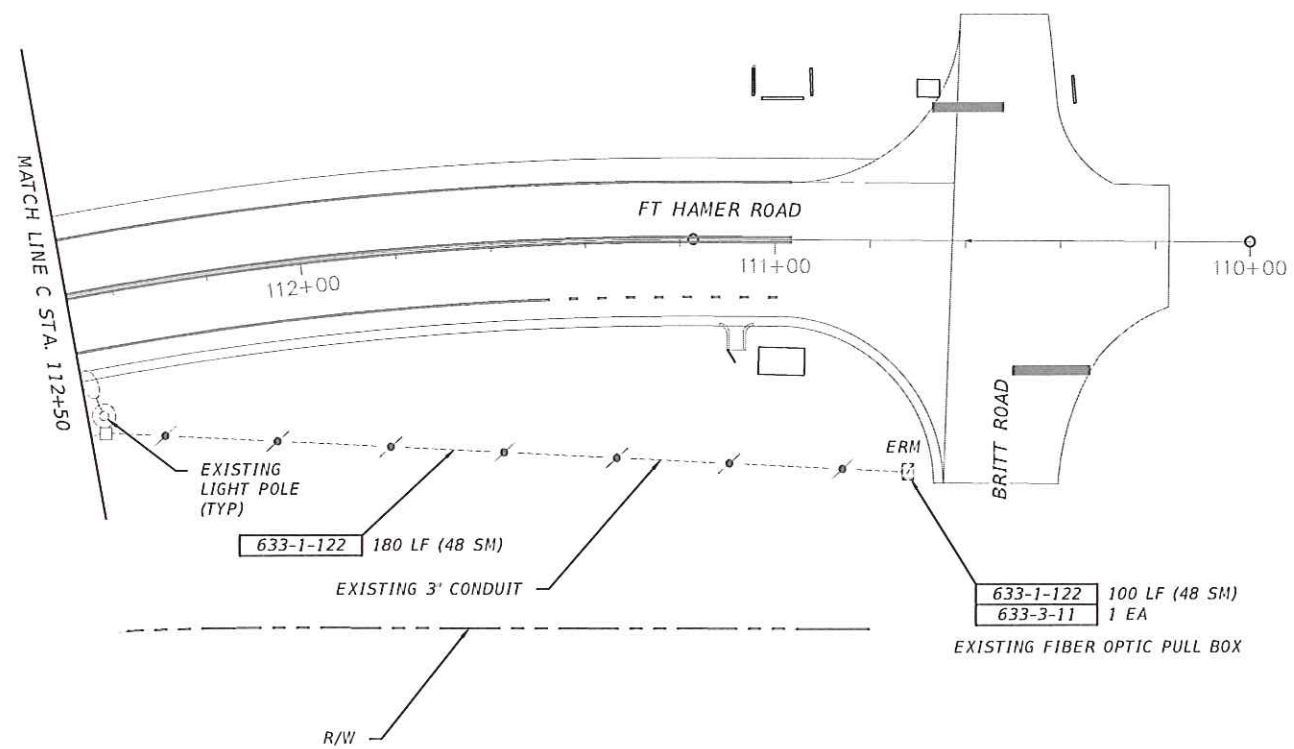
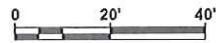
SIGNALIZATION PLAN (1)

PROJECT NO:
00193.010.03
DATE:
6-22-2015
SHEET NO:
T-8



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NOTE:
EXISTING FIBER CONDUIT INFRASTRUCTURE
INFORMATION OBTAINED FROM PREVIOUS
CONSTRUCTION UNDER MANATEE COUNTY PROJECT
NUMBER 6061960. THE CONTRACTOR SHALL
VERIFY LOCATION OF EXISTING CONDUIT AND
PULL BOXES PRIOR TO ORDERING MATERIALS.



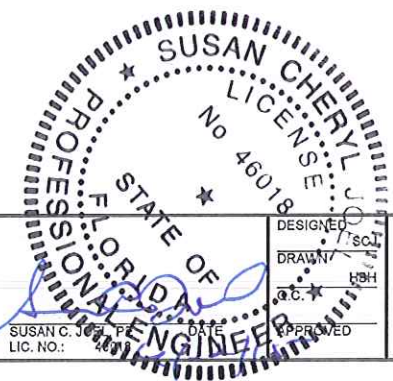
NO.	DESCRIPTION	BY	DATE

MANATEE COUNTY

US 301 AND FT HAMER ROAD
SIGNALIZATION PLANS



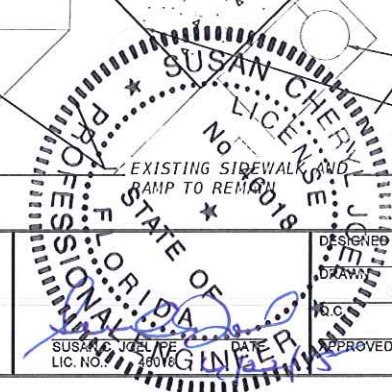
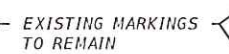
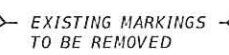
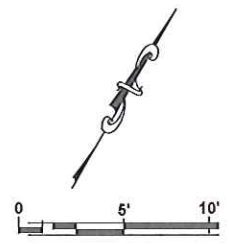
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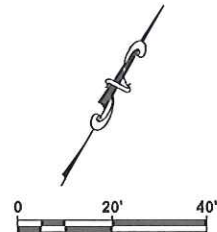


DESIGNED: [Signature]
DRAWN: [Signature]
CHECKED: [Signature]
APPROVED: [Signature]
DATE: 6-22-2015
LIC. NO.: 46018

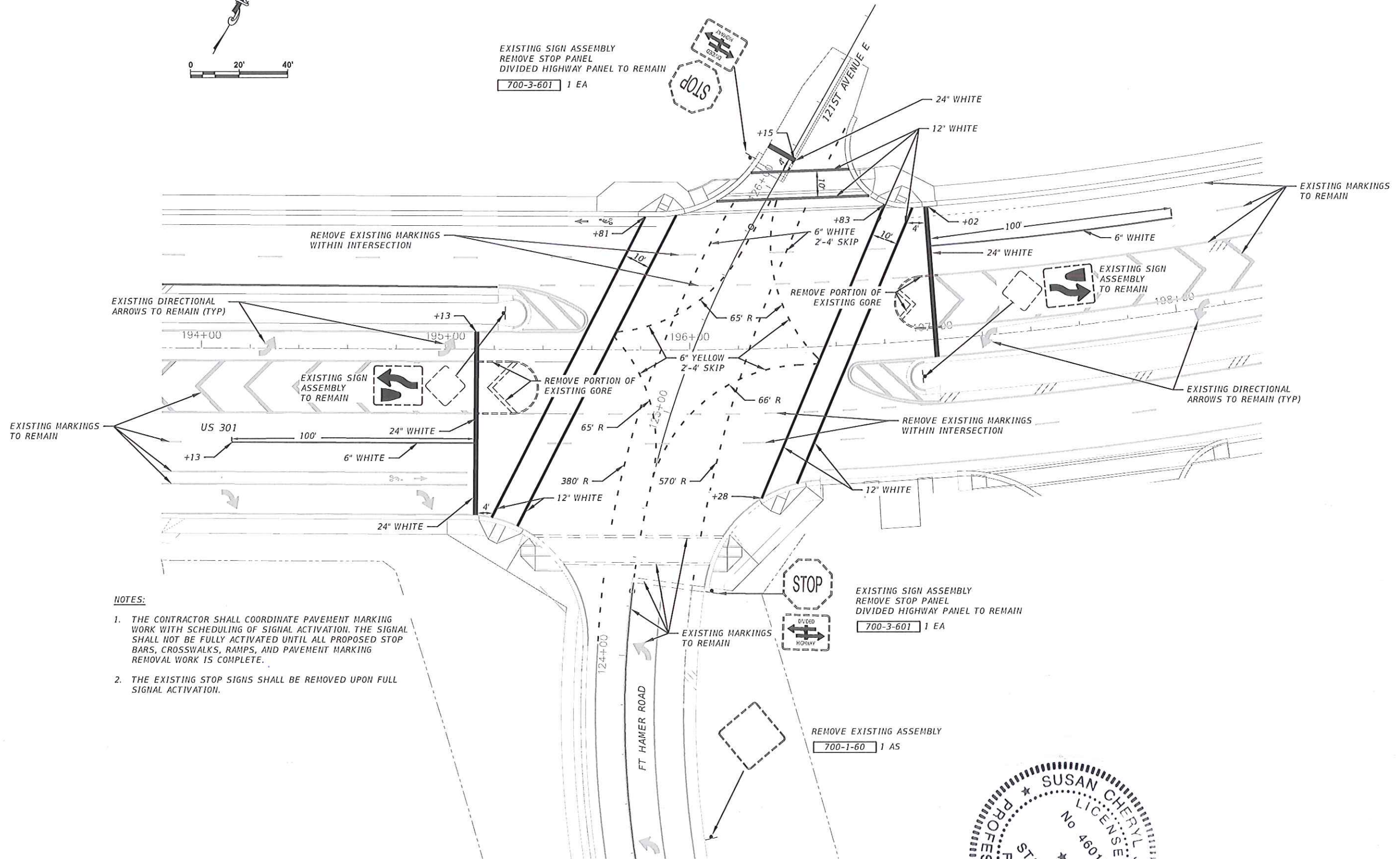
INTERCONNECT PLAN (2)

PROJECT NO:	00193.010.03
DATE:	6-22-2015
SHEET NO:	T-11

[illegible]



EXISTING SIGN ASSEMBLY
REMOVE STOP PANEL
DIVIDED HIGHWAY PANEL TO REMAIN
700-3-601 1 EA



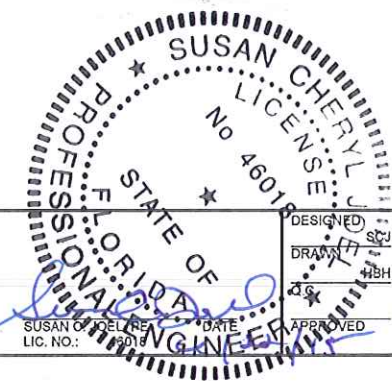
NOTES:

1. THE CONTRACTOR SHALL COORDINATE PAVEMENT MARKING WORK WITH SCHEDULING OF SIGNAL ACTIVATION. THE SIGNAL SHALL NOT BE FULLY ACTIVATED UNTIL ALL PROPOSED STOP BARS, CROSSWALKS, RAMPS, AND PAVEMENT MARKING REMOVAL WORK IS COMPLETE.
2. THE EXISTING STOP SIGNS SHALL BE REMOVED UPON FULL SIGNAL ACTIVATION.

MANATEE COUNTY

US 301 AND FT HAMER ROAD
SIGNALIZATION PLANS

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**SIGNING AND PAVEMENT
MARKINGS PLAN (1)**

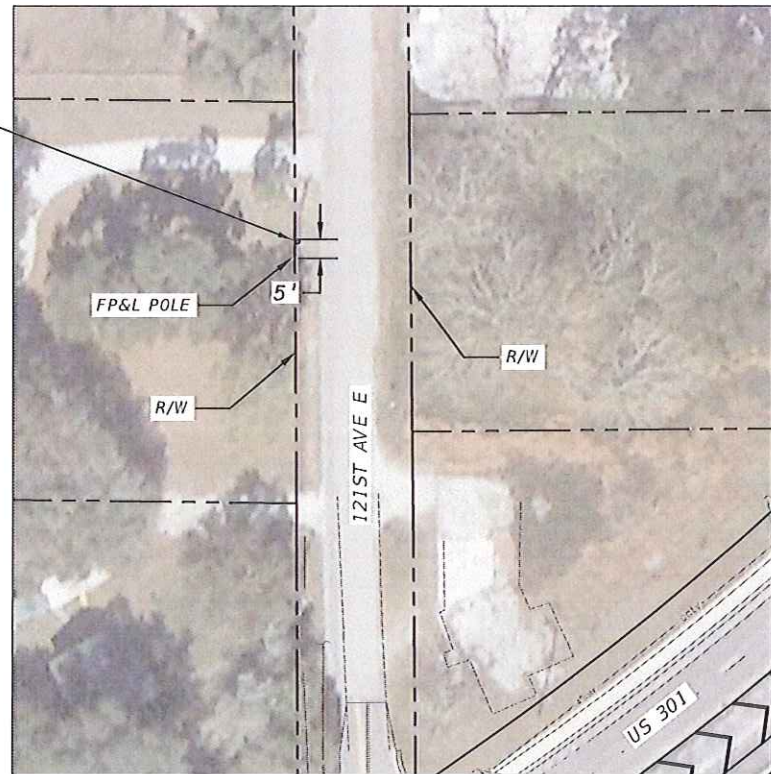
PROJECT NO:
00193.010.03
DATE:
6-22-2015
SHEET NO:
T-13

SIGN PANEL H
18" X 48"

W3-3
48" X 48"

10E SN

700-1-13 1 AS



700-1-12 1 AS
700-12-22 1 AS

FLASHING BEACON ASSEMBLY
W3-3
48" X 48"
STA. 208+30

700-2-15 1 AS

SIGN F
60" X 150"
STA. 204+78

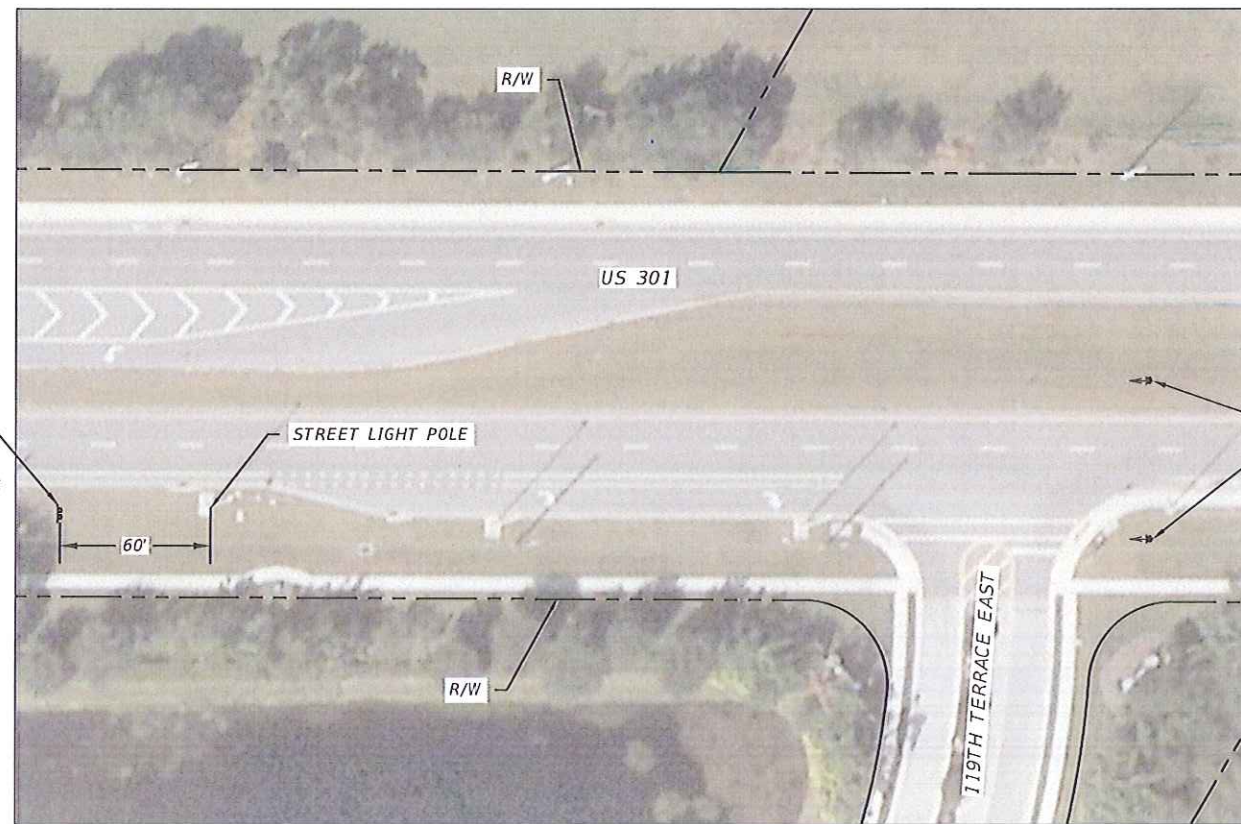
121st Ave E
NEXT SIGNAL
Ft Hamer Rd



700-2-15 1 AS

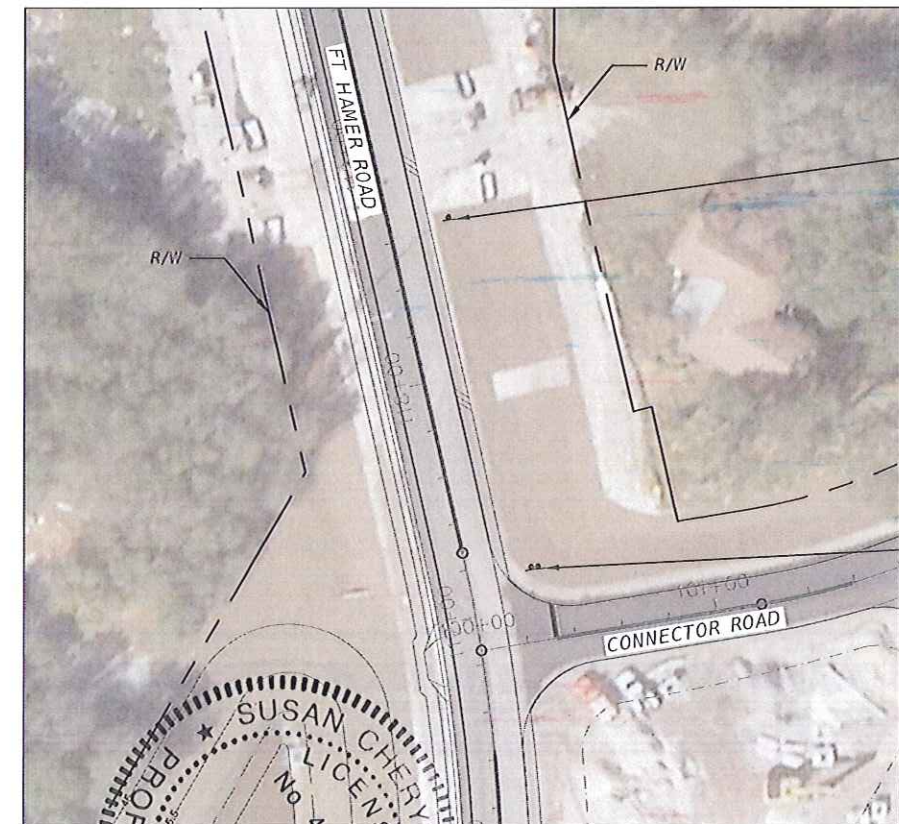
SIGN E
60" X 150"
APPROX. STA. 183+20

121st Ave E
Ft Hamer Rd
NEXT SIGNAL



700-1-11 2 AS
700-12-22 2 AS

FLASHING BEACON ASSEMBLY
W3-3
36" X 36"
APPROX. STA. 187+80



700-1-11 1 AS

W3-3
36" X 36"
STA. 118+65

700-2-12 1 AS

SIGN G
30" X 72"
STA. 117+15

US 301
NEXT SIGNAL

MANATEE COUNTY

US 301 AND FT HAMER ROAD
SIGNALIZATION PLANS

Cardno

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Certificate of Authorization No. 29915

SUSAN CHERY
PROFESSIONAL ENGINEER
STATE OF FLORIDA
LIC. NO. 46018

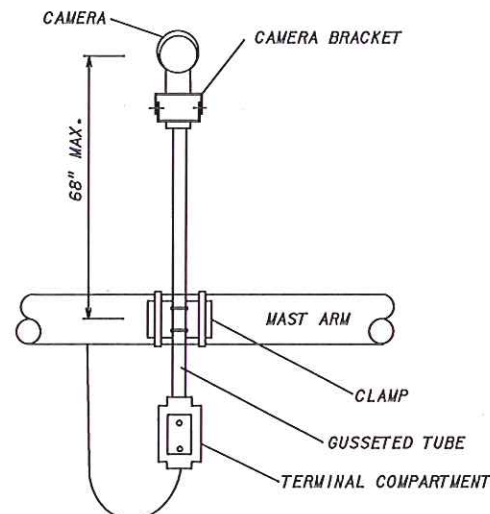
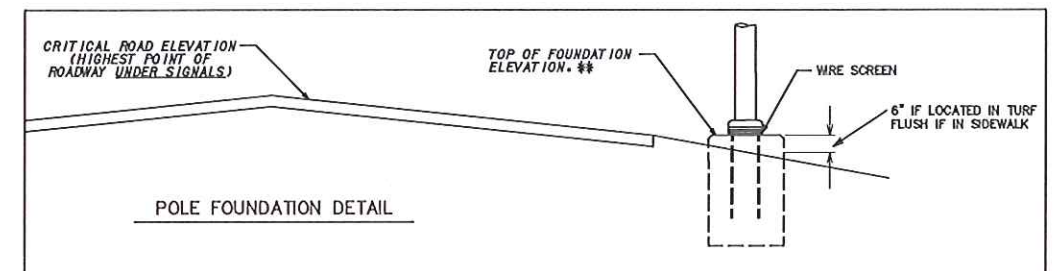
**SIGNING AND PAVEMENT
MARKINGS PLAN (2)**

PROJECT NO:
00193.010.03

DATE:
6-22-2015

SHEET NO:
T-14

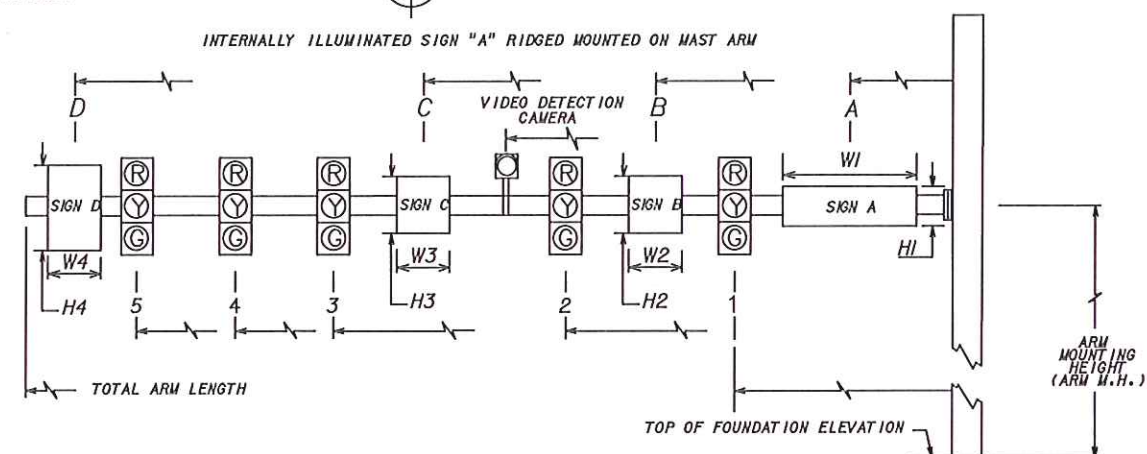
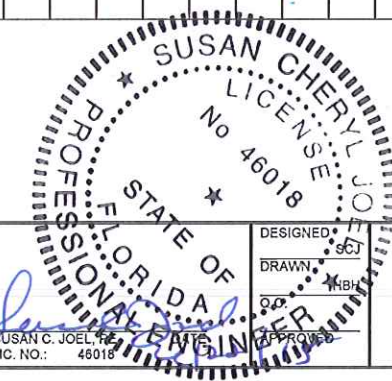
- A. EACH POLE AND MAST ARM SHALL BE IDENTIFIED WITH A PERMANENT ONE INCH (1") HIGH ENGRAVED OR IMPRESSED MARK WHICH BEARS THE POLE IDENTIFICATION NUMBER SHOWN ON THE PLANS.
- B. ANCHOR BOLT COVERS (ORNAMENTAL, NON-ORNAMENTAL, AND/OR PAINTED) SHALL BE GALVANIZED STEEL OR CAST ALUMINUM AND SHALL BE SECURED BY A MINIMUM OF TWO (2) THREADED FASTENERS. THE BOLT COVERS SHALL BE OF SUFFICIENT SIZE SO THAT THERE IS NO GAP BETWEEN ITSELF AND THE POLE SHAFT.
- C. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO FIELD VERIFY ALL ELEVATIONS LISTED HEREIN.
- D. THE CONTRACTOR SHALL COORDINATE WITH MANATEE COUNTY FOR AN ACCEPTABLE AND COMPATIBLE VIDEO DETECTION BRACKET TO USE.
- E. ALL MAST ARM POLES SHALL BE GALVANIZED NON-PAINTED.



CAMERA MOUNTING DETAIL
(CONTACT MAINTAINING AGENCY
FOR MOUNTING PREFERENCES.)

[illegible]

ARM # 1-SINGLE ARM OR LONGER
ARM FOR DOUBLE ARM POLE

[illegible]

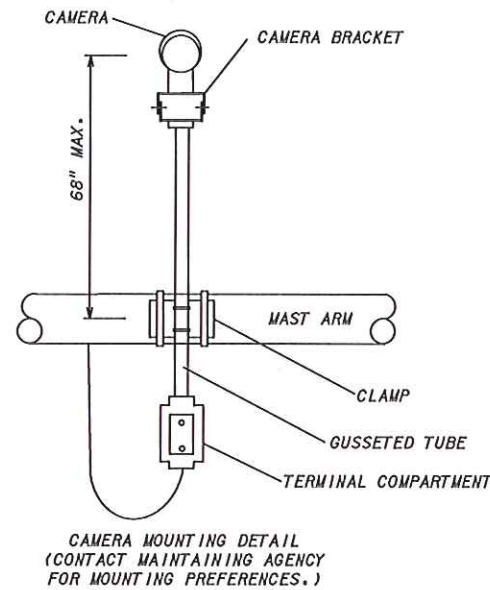
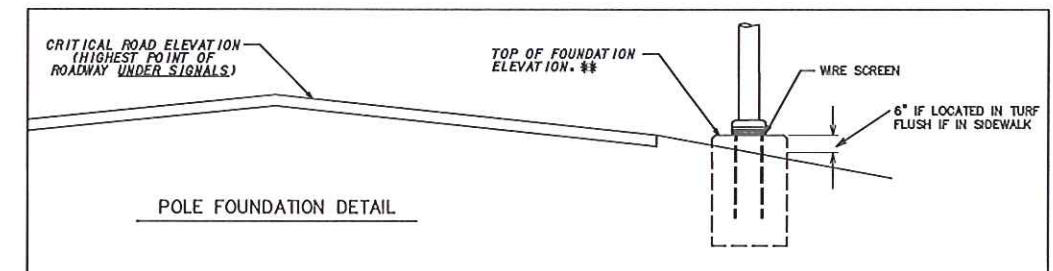
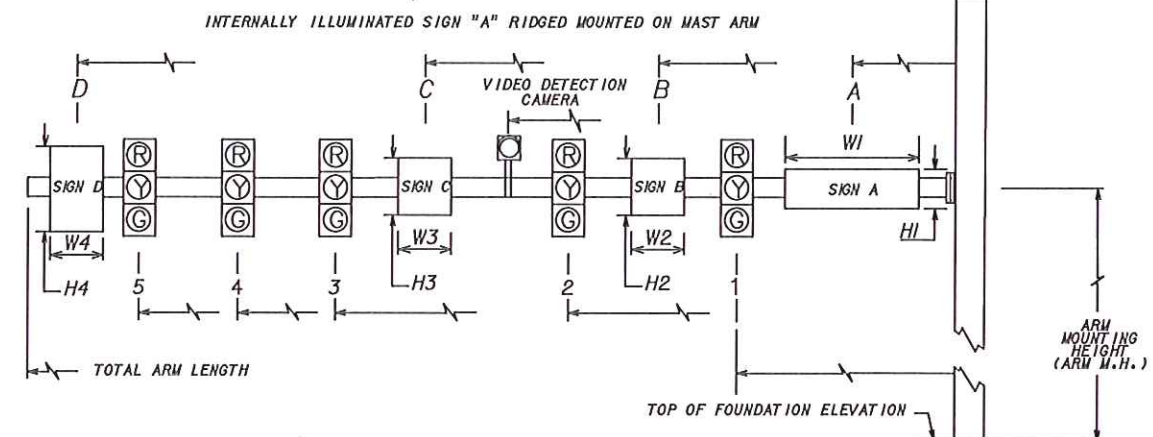
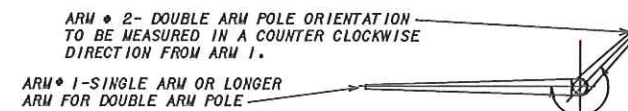
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C. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO FIELD VERIFY ALL ELEVATIONS LISTED HEREIN.

D. THE CONTRACTOR SHALL COORDINATE WITH MANATEE COUNTY FOR AN ACCEPTABLE AND COMPATIBLE VIDEO DETECTION BRACKET TO USE.

E. ALL MAST ARM POLES SHALL BE GALVANIZED NON-PAINTED.

[illegible]

* DENOTES NUMBER OF SECTIONS IN SIGNAL HEAD ASSEMBLY

[illegible]

**** THIS SHEET IS FOR DESIGN PURPOSES ONLY! THE CONTRACTOR SHALL NOT USE THIS SHEET IN PLACEMENT OF THE SIGNALS AND/OR SEE THE "MAST ARM TABULATION" SHEET FOR ACTUAL SIGNAL INSTALLATION.

[illegible]

SPECIAL MAST ARM ASSEMBLIES DATA TABLE																							Table Date 01-01-12		
NUMBER OF LOCATIONS	STRUCTURE NUMBER	FIRST ARM				FIRST ARM EXTENSION				SECOND ARM				SECOND ARM EXTENSION				POLE							
		FA(ft)	FB(in)	FC(in)	FD(in)	FE(ft)	FF(in)	FG(in)	FH(in)	SA(ft)	SB(in)	SC(in)	SD(in)	SE(ft)	SF(in)	SG(in)	SH(in)	UA(ft)	UB(ft)	UC(in)	UD(in)	UE(in)	UF(deg)	UG(ft)	
1	1-2	40	10.6	16.2	0.239	40	15.4	21	0.375	0	0	0	0	0	0	0	0	23	20	22.8	26	0.375	0	0	
1	1-3	40	10.6	16.2	0.239	40	15.4	21	0.375	0	0	0	0	0	0	0	0	24	21	22.6	26	0.375	0	0	
1	1-4	36	11.4	16.4	0.179	40	15.8	21.4	0.375	36.6	9.88	15	0.179	33.4	14.4	19	0.375	23.25	20.25	23.7	27	0.5	270	0	

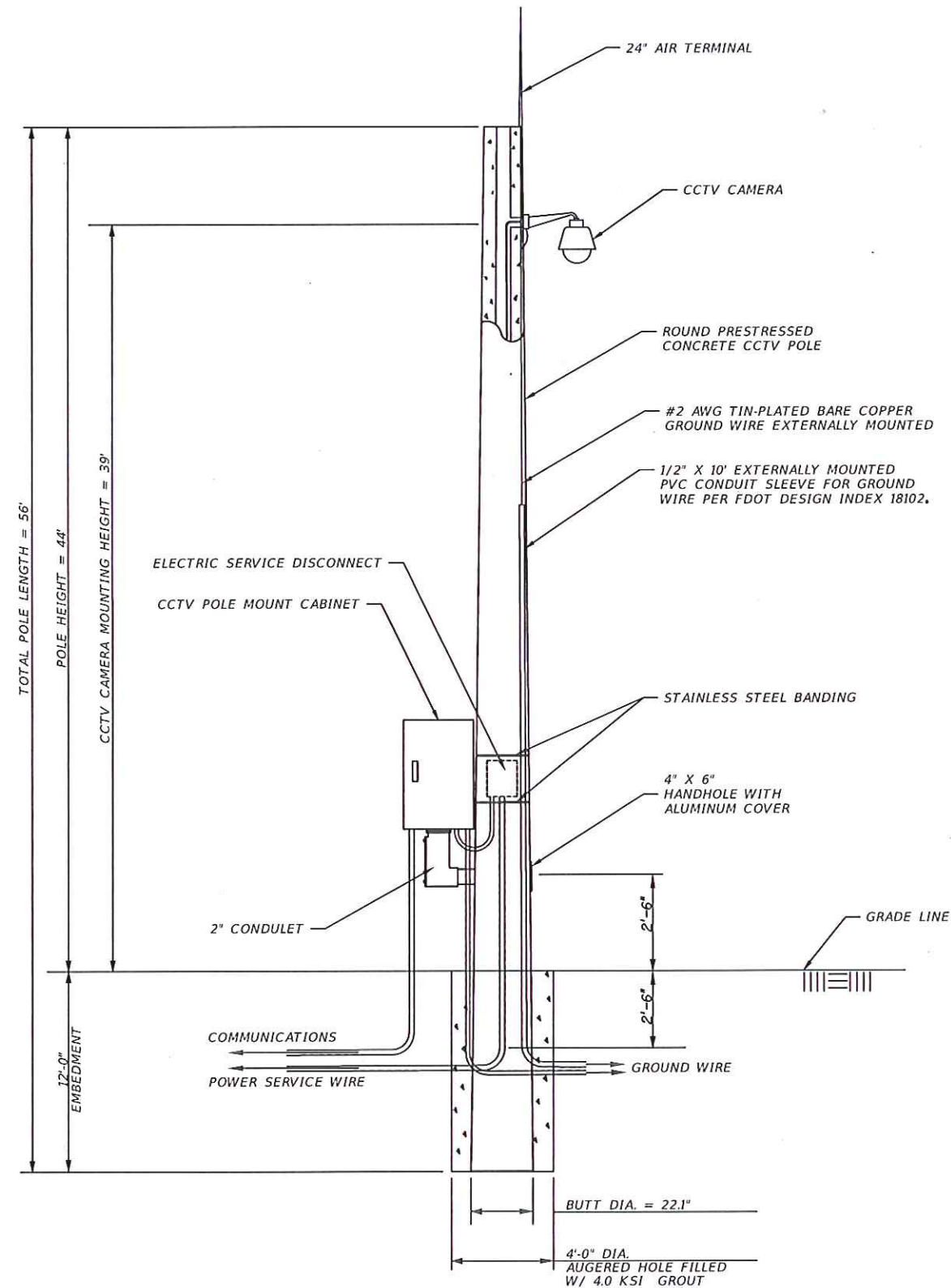
SPECIAL MAST ARM ASSEMBLIES DATA TABLE (CONT.)																						Table Date 01-01-12
STRUCTURE NUMBER	FIRST ARM CONNECTION (in)					First Arm Camber Angle = 2 Degrees						SECOND ARM CONNECTION (in)					Second Arm Camber Angle = 2 Degrees					
	#Bolts	HT	FJ	FK	FL	FN	FO	FP	FR	FS	FT	#Bolts	HT	SJ	SK	SL	SN	SO	SP	SR	SS	ST
1-2	6	30	37	3	0.75	0.563	17.0	1.5	2.25	12	0.563	0	0	0	0	0	0	0	0	0	0	0
1-3	6	30	37	3	0.75	0.563	17.0	1.5	2.25	12	0.563	0	0	0	0	0	0	0	0	0	0	0
1-4	6	30	38	3.25	0.75	0.563	24	1.5	2.25	12	0.563	6	30	38	3.25	0.75	0.438	24	1.5	2.25	12	0.438

SPECIAL MAST ARM ASSEMBLIES DATA TABLE (CONT.)																						Table Date 01-01-12
STRUCTURE NUMBER	POLE BASE CONNECTION (in)					SHAFT AND REINF.						LUMINAIRE AND LUMINAIRE CONNECTION										
	#Bolts	BA	BB	BC	BF	DA(ft)	DB(ft)	RA	RB	RC	RD(In)	LA(ft)	LB(ft)	LC(In)	LD(In)	LE	LF(ft)	LG(In)	LH(In)	LJ(In)	LK(In)	LL(deg)
1-2	6	44	2.5	2.25	45	27	5	11	19	27	8	0	0	0	0	0	0	0	0	0	0	0
1-3	6	44	2.5	2.25	45	27	5	11	19	27	8	0	0	0	0	0	0	0	0	0	0	0
1-4	8	45	2.5	2.25	45	31	5	11	19	48	6	0	0	0	0	0	0	0	0	0	0	0

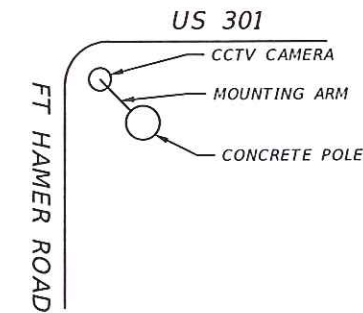
- NOTES:
1. Work with Index 17745.
 2. Design Wind Speed = 130 mph
 3. Contractor shall coordinate anchor bolt requirements with fabricator.
 4. Contractor shall identify Structures Numbers and submit detailed shop drawings.
 5. Work this sheet with the Signal Designer's "Mast Arm Tabulation." See "Mast Arm Tabulation" for special instructions that may include non- standard handhole location, paint color, terminal compartment requirements, and/or pedestrian features.
 6. The contractor shall anticipate the need to adjust the signal heights as needed to maintain the 17'-6" minimum and 19'-0" maximum FDOT vertical clearances, and shall provide mounting hardware as required to accomplish this task.
 7. The contractor may increase the drilled shaft tie spacing from RD=6" at the location of the cover spacers on Mast Arm 1-4. Cutting the ties or removing the spacers in the field will not be allowed.

- FOUNDATION NOTES:
1. Design based on the Report of Core Borings by Professional Services Industries, Inc. (PSI), dated September 2010. Responsible Engineer is Martin E. Millburg, PE No. 36584.
 2. Assumptions and Values used in design:
Soil Type = Cohesionless (Fine Sand)
Soil Layer Thickness = Shaft Length
Soil Friction Angle = 29 deg.
Soil Weight = 42.6 pcf (assumed submerged)
Design Water Table is at the ground surface

MANATEE COUNTY				US 301 AND FT HAMER ROAD SIGNALIZATION PLANS				 3905 Crescent Park Drive, Riverview, Florida, 33578 www.cardno.com - 813.221.0048 Certificate of Authorization No. 29915								DESIGNED SCJ	SPECIAL MAST ARM ASSEMBLIES				PROJECT NO: 00193.010.03
																DRAWN HBH					DATE: 6-22-2015
																C.C. DJH					SHEET NO: T-17
																APPROVED					



56' CONCRETE CCTV POLE DETAILS
N.T.S



CCTV ORIENTATION DETAIL


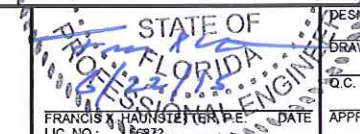
SPECIAL ROUND POLE DESIGN TABLE											
POLE LENGTH (ft)	POLE HEIGHT (ft)	BURIAL DEPTH (ft)	DESIGN OPTION	TOTAL TAPER (in/ft)	VOID TAPER (in/ft)	MIN. WALL THICKNESS AT TIP (in)	MIN. WALL THICKNESS AT BUTT END (in)	TIP DIAMETER (in)	BUTT DIAMETER (in)	STRAND PATTERN	STRAND DIAMETER (in)
56	44	12	2	0.18	0.172	3	3.5	12	22.1	4	0.5

* TOTAL TAPER APPLIES TO POLE, STRANDS AND REINFORCING.

CCTV POLE DESIGN NOTES:

1. WORK THIS SHEET WITH FDOT 2015 DESIGN STANDARD INDEX NOS. 18100, 18101, 18102, 18104, 18105, 18108, 18110, AND 18113.



				MANATEE COUNTY		US 301 AND FT HAMER ROAD SIGNALIZATION PLANS		 3905 Crescent Park Drive, Riverview, Florida, 33578 www.cardno.com • 813 221.0048 Certificate of Authorization No. 29915				DESIGNED SCJ DRAWN HBH C.C. DJH APPROVED		PROJECT NO: 00193.010.03 DATE: 6-22-2015 SHEET NO: T-18		
												CCTV POLE DETAIL				
NO	DESCRIPTION			BY	DATE											

2'-6"

4.5"

8"EM

5"

8"EM

4.5"

4.5"

8"

5"

8"EM

4.5"

9'-0"

← 121st Ave E

Ft Hamer Rd →

5"

98"

5"

BORDER
R=3"
TH=0.5"
IN=1"

NO. OF LIGHT FIXTURES	FIXTURE SPACING	PHOTOMETRIC CURVE	WATT	VOLTAGE

[illegible]

Technical drawing of a rectangular label with dimensions and text. The label is oriented horizontally. The overall dimensions are 8'-0" in width and 2'-6" in height. The label features the text "US 301" in a large, bold, sans-serif font, with "12000" and "12100" in a smaller, bold, sans-serif font below it. The label is surrounded by a border. The dimensions of the border are specified as: 5" on the top and bottom, 8" on the left and right, 6" on the top and bottom, and 5" on the left and right. The dimensions of the label itself are 78" in width and 9" in height. The text "BORDER R=3" TH=0.5" IN=1" is located below the label.

8'-0"

2'-6"

5"

8"EM

6"

6"EM

5"

5"

8"EM

6"

6"EM

5"

US 301

12000 12100

9"

78"

9"

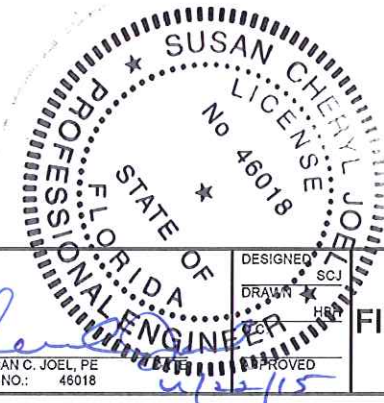
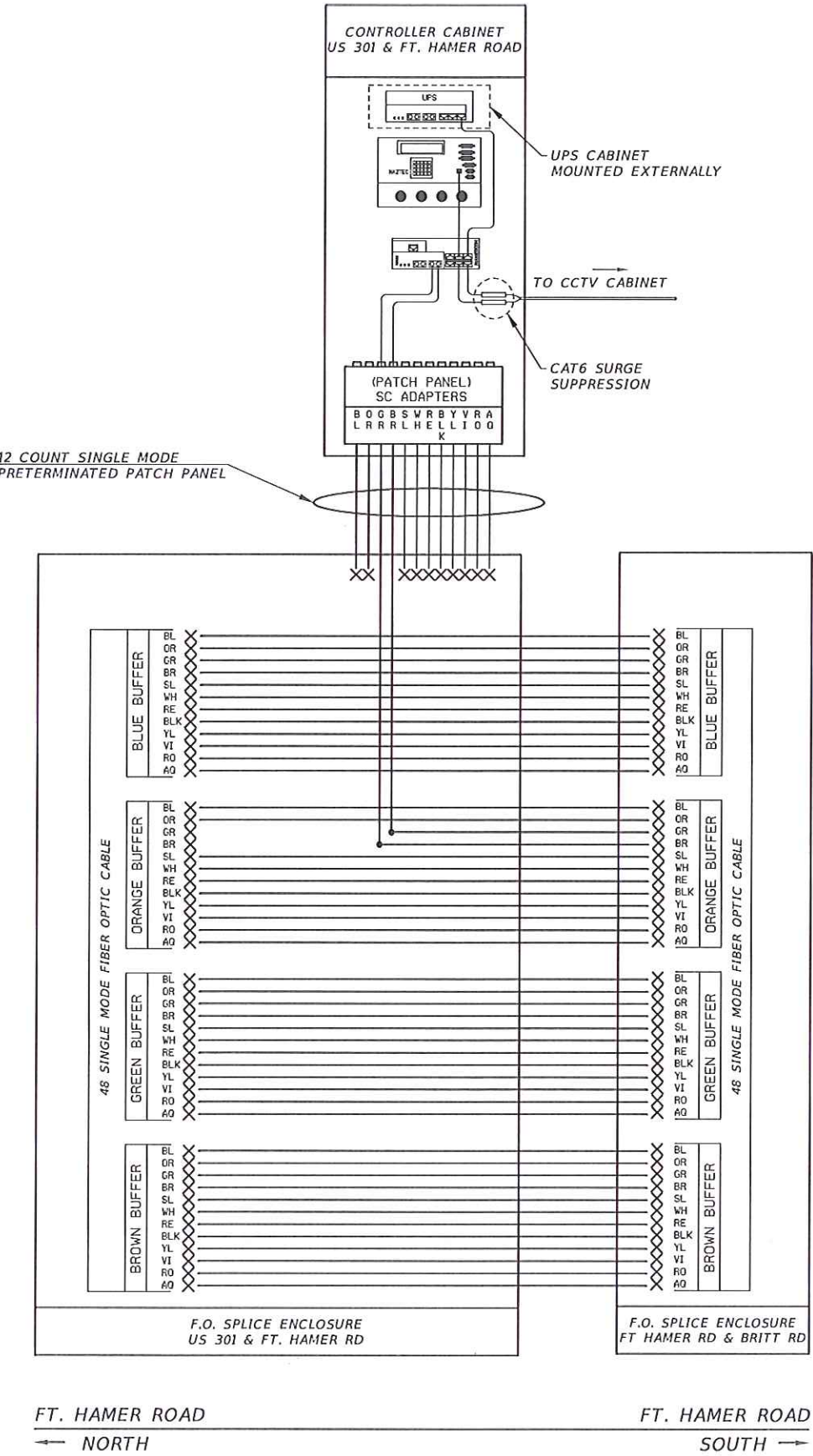
BORDER
R=3"
TH=0.5"
IN=1"

[illegible][illegible]

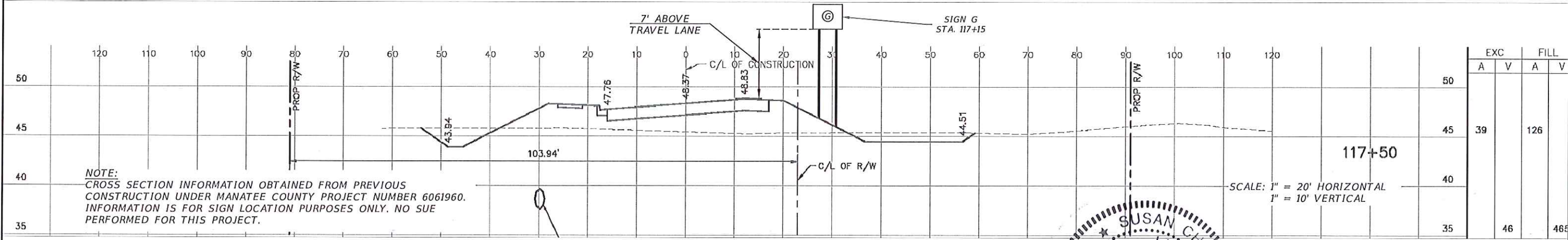
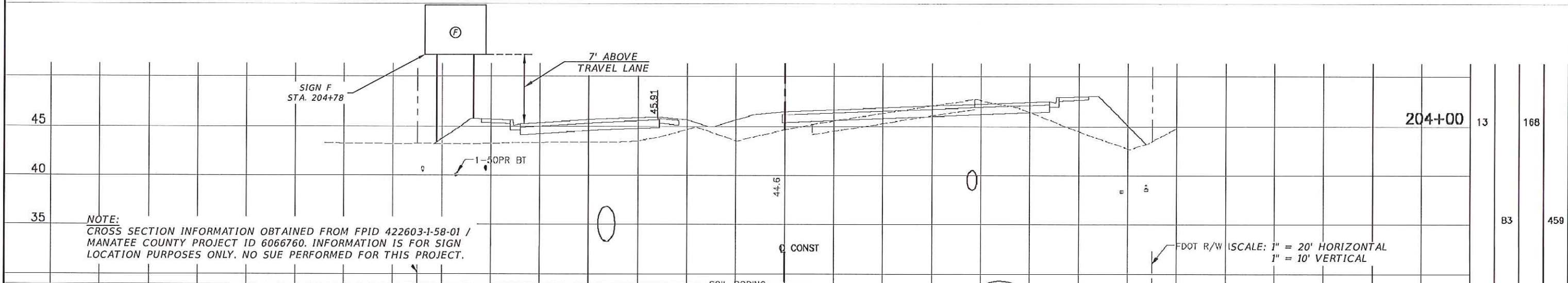
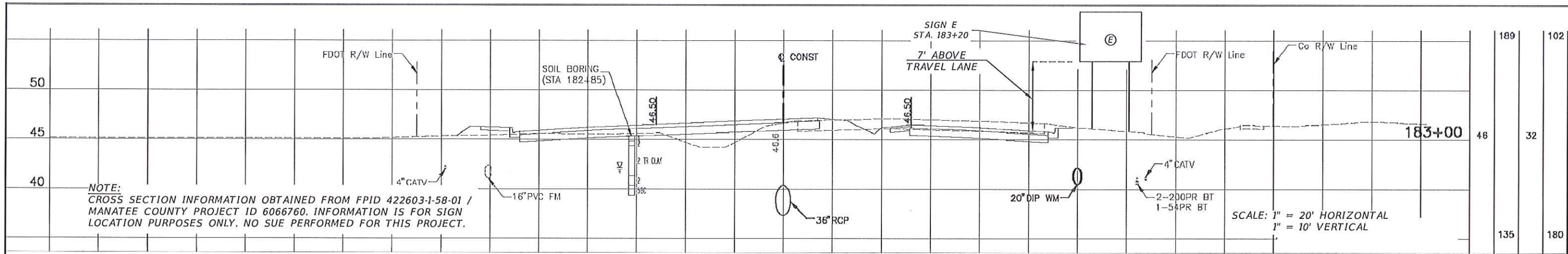
[illegible][illegible][illegible][illegible]

LEGEND

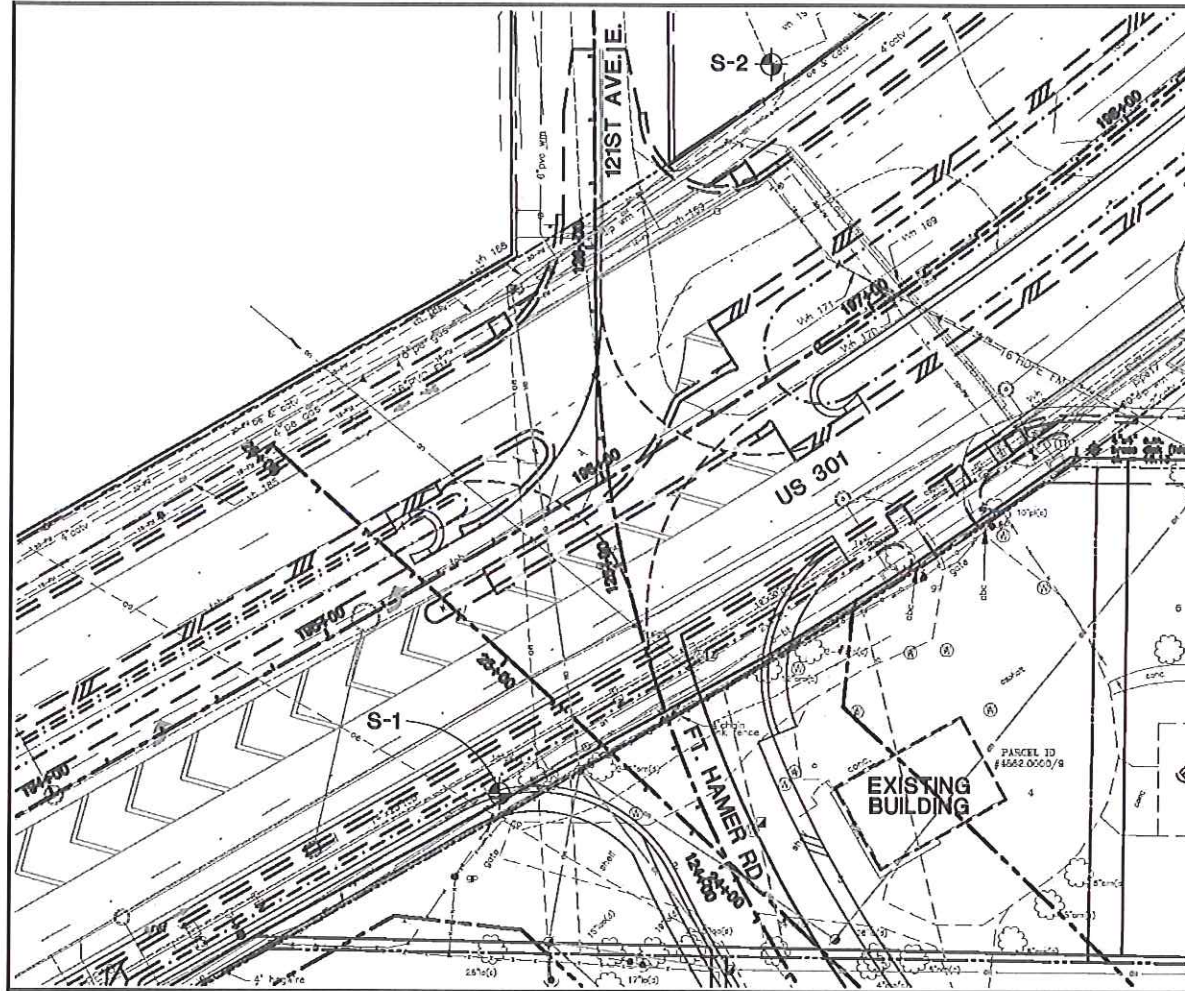
- FUSION SPLICE
- X NO CONNECTION



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MANATEE COUNTY				US 301 AND FT HAMER ROAD SIGNALIZATION PLANS				SIGN CROSS SECTIONS			
DESIGNED				DRAWN				PROJECT NO:			
CHECKED				DATE				00193.010.03			
APPROVED				DATE				6-22-2015			
DATE				SHEET NO:				T-22			
LIC. NO.				DATE							
LIC. NO.				DATE							



BORING LOCATION PLAN

0 30'
PLAN SCALE

SOIL PARAMETERS

Station	Offset	Boring No.	Approximate Depth (ft)	Soil Description	Soil Type	Average SPT-N	Unit Weight (pcf)		Cohesion (psf)	Friction Angle (degree)	Coefficient of Lateral Pressure		
							Total	Submerge			Ka	Kp	Ko
195+23	69R	S-1	0-6	SP/SP-SM	Cohesionless	18	110	47.6	-	32	0.31	3.20	0.43
			6-10	SC	Cohesionless	47	120	57.6	-	35	0.27	3.69	0.38
			10-25	SP/SP-SM/SC	Cohesionless	10	105	42.6	-	30	0.33	3.00	0.45
197+17	82L	S-2	0-15	SP/SP-SM/SC	Cohesionless	6	105	42.6	-	29	0.34	2.91	0.46
			15-25	SC	Cohesionless	27	115	52.6	-	33	0.29	3.45	0.40

LEGEND

- (SP/SP-SM), GRAY, BROWN, REDDISH BROWN FINE SAND TO SLIGHTLY SILTY FINE SAND
- (SC), GRAY CLAYEY SAND
- (SC), GRAY, BLUE-GREEN, GREENISH GRAY CLAYEY SAND

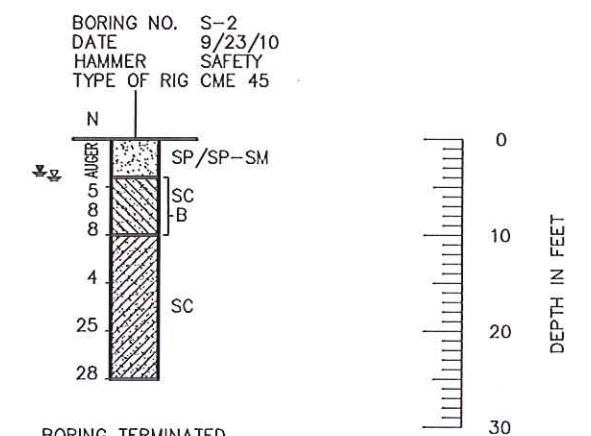
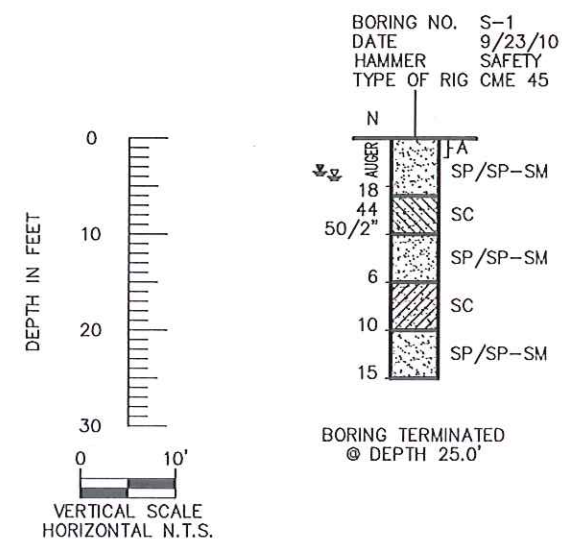
- A CLAY FILL
- B SLIGHTLY CEMENTED

NOTES:

- WATER TABLE
- ESTIMATED SEASONAL HIGH WATER TABLE
- NUMBERS TO THE LEFT OF BORINGS INDICATE SPT VALUE FOR 12" PENETRATION. (UNLESS OTHERWISE NOTED.)
- 50/6" FIFTY BLOWS FOR SIX INCHES
- APPROXIMATE SPT BORING LOCATION

GRANULAR MATERIALS-- RELATIVE DENSITY	SPT (BLOWS/FT.)
VERY LOOSE	LESS THAN 4
LOOSE	4-10
MEDIUM DENSE	10-30
DENSE	30-50
VERY DENSE	GREATER THAN 50

SILTS AND CLAYS CONSISTENCY	SPT (BLOWS/FT.)
VERY SOFT	LESS THAN 2
SOFT	2-4
FIRM	4-8
STIFF	8-15
VERY STIFF	15-30
HARD	GREATER THAN 30



SIGNAL POLES

REVISIONS						Name		Date
Date	By	Description	Date	By	Description	Drawn by	DJG	9/10
						Checked by	JH	9/10
						Designed by		
						Checked by		
						Approved by	MARTIN E. MILLBURG, P.E.	



PROFESSIONAL SERVICE INDUSTRIES, INC.
5801 BENJAMIN CENTER DR., SUITE 112
TAMPA, FL. 33634
(813)-886-1075

MARTIN E. MILLBURG, P.E.
FLORIDA LICENSE No. 36584

FLORIDA ENGINEERING CERTIFICATE
OF AUTHORIZATION No. 3684

MANATEE COUNTY

ROAD NO.	COUNTY PROJECT NO.
US 301	-

SHEET TITLE:	
REPORT OF CORE BORINGS	
PROJECT NAME:	SHEET NO.
US 301 AND FT. HAMER ROAD	T-23