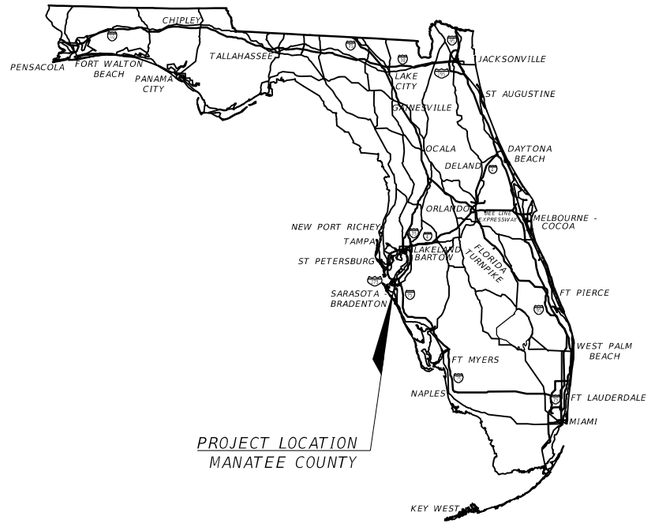
COMPONENTS OF CONTRACT PLANS SET
ROADWAY PLANS

Manatee County
FLORIDA

CONTRACT PLANS

COUNTY PROJECT NO. 6080560
MANATEE COUNTY

HONORE AVE. FROM COOPER CREEK BLVD. TO
UNIVERSITY PKWY.
ADVANCED TRAFFIC MANAGEMENT SYSTEM PLANS



INDEX OF ADVANCED TRAFFIC MANAGEMENT SYSTEM PLANS

SHEET NO.	SHEET DESCRIPTION
T-1	KEY SHEET
T-2	SIGNATURE SHEET
T-3 - T-4	TABULATION OF QUANTITIES
T-5	PROJECT LAYOUT
T-6 - T-7	GENERAL NOTES
T-8 - T-12	SIGNALIZATION PLANS
T-13	STANDARD MAST ARM TABULATION SHEET
T-14	STANDARD MAST ARM ASSEMBLIES DATA TABLE
T-15	GUIDE SIGN WORK SHEET
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T-21 - T-22	SPLICE DIAGRAMS
T-23 - T-24	MOUNTING DETAILS
T-25 - T-27	WIRING DIAGRAM
T-28	CABINET DETAIL
T-29	MANAGED FIELD ETHERNET SWITCH DETAIL
T-30	REPORT OF CORE BORINGS

100% SUBMITTAL
NOVEMBER 2020

PLANS PREPARED BY:

ATKINS NORTH AMERICA, INC.
482 SOUTH KELLER ROAD
ORLANDO, FL 32810
(407) 647-7275

CONTRACT NO. 6096560
VENDOR NO. 45-3031954
CERTIFICATE OF AUTHORIZATION NO. 00029741

ADVANCED TRAFFIC MANAGEMENT
SYSTEM PLANS
ENGINEER OF RECORD:

NATHAN J. MOZELESKI, P.E.
P.E. NO.: 83308

GOVERNING STANDARD PLANS:
Florida Department of Transportation, FY 2020-21 Standard plans for Road and Bridge Construction and applicable Interim Revisions (Irs).
http://www.fdot.gov/design/Standardplans.shtm
Standard Plans for Road Construction and associated Irs are available at the following website:

APPLICABLE IRs: IR546-001-01, IR546-010-01

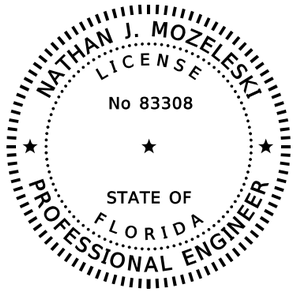
GOVERNING STANDARD SPECIFICATIONS:
Florida Department of Transportation, July, 2020 Standard Specifications for Road and Bridge Construction at the following website:
http://www.fdot.gov/programmanagement/Implemented/SpecBooks

MANATEE COUNTY PROJECT MANAGER: DANIEL GARNER, P.E.

NOTE: THE SCALE OF THESE PLANS MAY HAVE CHANGED DUE TO THE REPRODUCTION.

FISCAL YEAR	SHEET NO.
21	T-1

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.



THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY:

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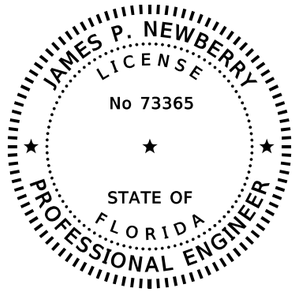
ATKINS NORTH AMERICA, INC.
482 SOUTH KELLER ROAD
ORLANDO, FLORIDA 32810
(407) 647-7275
FBPE CERTIFICATE OF AUTHORIZATION NO. 24
NATHAN J. MOZELESKI, P.E. #83308

THE ABOVE NAMED PROFESSIONAL ENGINEER SHALL BE RESPONSIBLE FOR THE FOLLOWING SHEETS IN ACCORDANCE WITH RULE 61G15-23.004, F.A.C.

ADVANCED TRAFFIC MANAGEMENT SYSTEM PLANS

SHEET NO.	SHEET DESCRIPTION
T-1	KEY SHEET
T-2	SIGNATURE SHEET
T-3 - T-4	TABULATION OF QUANTITIES
T-5	PROJECT LAYOUT
T-6 - T-7	GENERAL NOTES
T-8 - T-12	SIGNALIZATION PLANS
T-13	STANDARD MAST ARM TABULATION SHEET
T-15	GUIDE SIGN WORK SHEET
T-16 - T-20	INTELLIGENT TRANSPORTATION SYSTEMS PLANS
T-21 - T-22	SPLICE DIAGRAMS
T-23 - T-24	MOUNTING DETAILS
T-25 - T-27	WIRING DIAGRAM
T-28	CABINET DETAIL
T-29	MANAGED FIELD ETHERNET SWITCH DETAIL



THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY:

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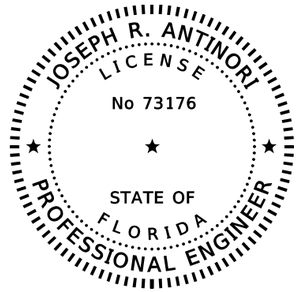
HARDESTY & HANOVER, INC.
5110 EISENHOWER BLVD. SUITE 310
TAMPA, FLORIDA 33634
(813) 514-6832
FBPE CERTIFICATE OF AUTHORIZATION NO. 00029741
STRUCTURE EOR, P.E. #73365

THE ABOVE NAMED PROFESSIONAL ENGINEER SHALL BE RESPONSIBLE FOR THE FOLLOWING SHEETS IN ACCORDANCE WITH RULE 61G15-23.004, F.A.C.

ADVANCED TRAFFIC MANAGEMENT SYSTEM PLANS

SHEET NO.	SHEET DESCRIPTION
T-2	SIGNATURE SHEET
T-14	STANDARD MAST ARM ASSEMBLIES DATA TABLE



THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY:

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

TIERRA
7351 TEMPLEE TERRACE HIGHWAY
TAMPA, FLORIDA 33637
(813) 989-1354
FBPE CERTIFICATE OF AUTHORIZATION NO. 6486
STRUCTURE EOR, P.E. #73176

THE ABOVE NAMED PROFESSIONAL ENGINEER SHALL BE RESPONSIBLE FOR THE FOLLOWING SHEETS IN ACCORDANCE WITH RULE 61G15-23.004, F.A.C.

ADVANCED TRAFFIC MANAGEMENT SYSTEM PLANS

SHEET NO.	SHEET DESCRIPTION
T-2	SIGNATURE SHEET
T-30	REPORT OF CORE BORINGS

NO.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: NJM
DRAWN BY: JR
CHECKED BY: PJM

ATKINS
ATKINS NORTH AMERICA, INC.
482 SOUTH KELLER RD, ORLANDO, FL 32810
(407) 647-7275

DATE: NOVEMBER 18, 2020
PROJECT NO.: 6080560

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

DESIGN ENGINEER: NATHAN J. MOZELESKI, P.E.
FL. LICENSE NO.: 83308

SIGNATURE SHEET

SHEET NO.: T-2

TABULATION OF QUANTITIES

PAY ITEM NO.	DESCRIPTION	UNIT	SHEET NUMBERS												TOTAL THIS SHEET		GRAND TOTAL	
			T-8		T-9		T-10		T-11		T-12							
			PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL			PLAN	FINAL	PLAN	FINAL
110-2-2	SELECTIVE CLEARING AND GRUBBING, AREAS WITH TREES TO REMAIN	AC																
630-2-11	CONDUIT, FURNISH & INSTALL, OPEN TRENCH	LF	92				3								95			
630-2-12	CONDUIT, FURNISH & INSTALL, DIRECTIONAL BORE	LF	289				104								393			
630-2-14	CONDUIT, FURNISH & INSTALL, ABOVEGROUND	LF	10				5								15			
632-7-1	SIGNAL CABLE- NEW OR RECONSTRUCTED INTERSECTION, FURNISH & INSTALL	PI	1												1			
633-1-121	FIBER OPTIC CABLE, F&I, UNDERGROUND,2-12 FIBERS	LF																
633-1-122	FIBER OPTIC CABLE, F&I, UNDERGROUND,13-48 FIBERS	LF																
633-2-31	FIBER OPTIC CONNECTION, INSTALL, SPLICE	EA																
633-2-32	FIBER OPTIC CONNECTION, INSTALL, TERMINATION	EA																
633-3-11	FIBER OPTIC CONNECTION HARDWARE, F&I, SPLICE ENCLOSURE	EA																
633-3-12	FIBER OPTIC CONNECTION HARDWARE, F&I, SPLICE TRAY	EA																
633-3-14	FIBER OPTIC CONNECTION HARDWARE, F&I, BUFFER TUBE FAN OUT KIT	EA																
633-3-16	FIBER OPTIC CONNECTION HARDWARE, F&I, PATCH PANEL- FIELD TERMINATED	EA																
633-3-51	FIBER OPTIC CONNECTION HARDWARE, ADJUST/MODIFY SPLICE ENCLOSURE	EA																
633-3-52	FIBER OPTIC CONNECTION HARDWARE, ADJUST/MODIFY SPLICE TRAY	EA																
633-8-1	MULTI-CONDUCTOR COMMUNICATION CABLE, FURNISH & INSTALL	LF																
635-2-11	PULL & SPLICE BOX, F&I, 13" X 24" COVER SIZE	EA	18												18			
635-2-12	PULL & SPLICE BOX, F&I, 24" X 36" COVER SIZE	EA																
635-2-13	PULL & SPLICE BOX, F&I, 30" X 60" RECTANGULAR OR 36" ROUND COVER SIZE	EA	1												1			
639-1-121	ELECTRICAL POWER SERVICE, F&I, UNDERGROUND, METER FURNISHED BY POWER COMPANY	AS					1								1			
639-2-1	ELECTRICAL SERVICE WIRE, FURNISH & INSTALL	LF	135		576		660								1371			
639-3-11	ELECTRICAL SERVICE DISCONNECT, F&I, POLE MOUNT	EA	1												1			
639-6-1	ELECTRICAL POWER SERVICE- TRANSFORMER FURNISH & INSTALL	EA					1								1			
641-2-12	PRESTRESSED CONCRETE POLE, F&I, TYPE P-II SERVICE POLE	EA	1				1								2			
646-1-11	ALUMINUM SIGNALS POLE, PEDESTAL	EA	3												3			
646-1-60	ALUMINUM SIGNALS POLE, REMOVE	EA	3												3			
646-2-115	ALUMINUM POLE- INDEX 17900/695-001, FURNISH & INSTALL, 15'	EA																
649-21-3	STEEL MAST ARM ASSEMBLY, FURNISH AND INSTALL, SINGLE ARM 40'	EA	1												1			
649-21-13	STEEL MAST ARM ASSEMBLY, FURNISH AND INSTALL, DOUBLE ARM 60'-50'	EA	1												1			
650-1-14	VEHICULAR TRAFFIC SIGNAL, FURNISH & INSTALL ALUMINUM, 3 SECTION, 1 WAY	AS							4						4			
650-1-16	VEHICULAR TRAFFIC SIGNAL, FURNISH & INSTALL ALUMINUM, 4 SECTION, 1 WAY	AS							1						1			
650-1-19	VEHICULAR TRAFFIC SIGNAL, FURNISH & INSTALL ALUMINUM, 5 SECTION CLUSTER, 1 WAY	AS							2						2			
653-1-11	PEDESTRIAN SIGNAL, FURNISH & INSTALL LED COUNTDOWN, 1 WAY	AS							2						2			
653-1-12	PEDESTRIAN SIGNAL, FURNISH & INSTALL LED COUNTDOWN, 2 WAYS	AS							1						1			
660-3-11	VEHICLE DETECTION SYSTEM- MICROWAVE, FURNISH & INSTALL CABINET EQUIPMENT	EA	3												3			
660-3-12	VEHICLE DETECTION SYSTEM- MICROWAVE, FURNISH & INSTALL, ABOVE GROUND EQUIPMENT	EA	5												5			
660-6-121	VEHICLE DETECTION SYSTEM- AVI, BLUETOOTH, FURNISH & INSTALL, CABINET EQUIPMENT	EA	1								1				2			
660-6-122	VEHICLE DETECTION SYSTEM- AVI, BLUETOOTH, FURNISH & INSTALL, ABOVE GROUND EQUIPMENT	EA	1								1				2			
665-1-11	PEDESTRIAN DETECTOR, FURNISH & INSTALL, STANDARD	EA	4												4			
670-5-111	TRAFFIC CONTROLLER ASSEMBLY, F&I, NEMA, 1 PREEMPTION	AS	1												1			
670-5-400	TRAFFIC CONTROLLER ASSEMBLY, MODIFY	AS									1				1			
671-2-11	TRAFFIC CONTROLLER WITHOUT CABINET, F&I IN EXISTING CABINET, NEMA	EA									1				1			
671-2-60	TRAFFIC CONTROLLER, REMOVE- CABINET TO REMAIN	EA									1				1			
676-3-10	SMALL EQUIPMENT ENCLOSURE, FURNISH AND INSTALL, LESS THAN 10"W X 13"H X 11" D	EA																
682-1-113	ITS CCTV CAMERA, F&I, DOME PTZ ENCLOSURE - PRESSURIZED, IP, HIGH DEFINITION	EA	1								1				2			
684-1-1	MANAGED FIELD ETHERNET SWITCH, FURNISH & INSTALL	EA																
684-2-1	DEVICE SERVER, FURNISH & INSTALL	EA																
685-1-13	UNINTERRUPTIBLE POWER SUPPLY, FURNISH AND INSTALL, LINE INTERACTIVE WITH CABINET	EA	1												1			
700-5-22	INTERNALLY ILLUMINATED SIGN, FURNISH & INSTALL, OVERHEAD MOUNT, 12-18 SF	EA	3												3			
715-5-31	LUMINAIRE & BRACKET ARM- ALUMINUM, FURNISH & INSTALL NEW LUMINAIRE AND ARM ON NEW/EXISTING POLE	EA	2												2			

NO.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: NJM
DRAWN BY: JR
CHECKED BY: PJM

ATKINS
ATKINS NORTH AMERICA, INC.
482 SOUTH KELLER RD, ORLANDO, FL 32810
(407) 647-7275

DATE: NOVEMBER 18, 2020
PROJECT NO.: 6080560

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

DESIGN ENGINEER: NATHAN J. MOZELESKI, P.E.
FL. LICENSE NO.: 83308

TABULATION OF QUANTITIES

SHEET NO.: T-3

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

TABULATION OF QUANTITIES

PAY ITEM NO.	DESCRIPTION	UNIT	SHEET NUMBERS										TOTAL THIS SHEET		GRAND TOTAL	
			T-16		T-17		T-18		T-19		T-20					
			PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL
110-2-2	SELECTIVE CLEARING AND GRUBBING, AREAS WITH TREES TO REMAIN	AC	0.034								0.043		0.077		0.077	
630-2-11	CONDUIT, FURNISH & INSTALL, OPEN TRENCH	LF	465		1,720		175		991		895		4246		4341	
630-2-12	CONDUIT, FURNISH & INSTALL, DIRECTIONAL BORE	LF	208		42		78		562		525		1415		1808	
630-2-14	CONDUIT, FURNISH & INSTALL, ABOVEGROUND	LF													15	
632-7-1	SIGNAL CABLE- NEW OR RECONSTRUCTED INTERSECTION, FURNISH & INSTALL	PI													1	
633-1-121	FIBER OPTIC CABLE, F&I, UNDERGROUND,2-12 FIBERS	LF			70						150		220		220	
633-1-122	FIBER OPTIC CABLE, F&I, UNDERGROUND,13-48 FIBERS	LF			1,342				1,699		1,452		4493		4493	
633-2-31	FIBER OPTIC CONNECTION, INSTALL, SPLICE	EA			2						6		8		8	
633-2-32	FIBER OPTIC CONNECTION, INSTALL, TERMINATION	EA			12						1		13		13	
633-3-11	FIBER OPTIC CONNECTION HARDWARE, F&I, SPLICE ENCLOSURE	EA			1						1		2		2	
633-3-12	FIBER OPTIC CONNECTION HARDWARE, F&I, SPLICE TRAY	EA			1						1		2		2	
633-3-14	FIBER OPTIC CONNECTION HARDWARE, F&I, BUFFER TUBE FAN OUT KIT	EA			1						1		2		2	
633-3-16	FIBER OPTIC CONNECTION HARDWARE, F&I, PATCH PANEL- FIELD TERMINATED	EA			1						1		2		2	
633-3-51	FIBER OPTIC CONNECTION HARDWARE, ADJUST/MODIFY SPLICE ENCLOSURE	EA									1		1		1	
633-3-52	FIBER OPTIC CONNECTION HARDWARE, ADJUST/MODIFY SPLICE TRAY	EA									1		1		1	
633-8-1	MULTI-CONDUCTOR COMMUNICATION CABLE, FURNISH & INSTALL	LF	673		748		253		864		602		3140		3140	
635-2-11	PULL & SPLICE BOX, F&I, 13" X 24" COVER SIZE	EA	2		3		2		3		2		12		30	
635-2-12	PULL & SPLICE BOX, F&I, 24" X 36" COVER SIZE	EA							4		1		5		5	
635-2-13	PULL & SPLICE BOX, F&I, 30" X 60" RECTANGULAR OR 36" ROUND COVER SIZE	EA									1		1		2	
639-1-121	ELECTRICAL POWER SERVICE, F&I, UNDERGROUND, METER FURNISHED BY POWER COMPANY	AS													1	
639-2-1	ELECTRICAL SERVICE WIRE, FURNISH & INSTALL	LF													1371	
639-3-11	ELECTRICAL SERVICE DISCONNECT, F&I, POLE MOUNT	EA													1	
639-6-1	ELECTRICAL POWER SERVICE- TRANSFORMER FURNISH & INSTALL	EA													1	
641-2-12	PRESTRESSED CONCRETE POLE, F&I, TYPE P-II SERVICE POLE	EA													2	
646-1-11	ALUMINUM SIGNALS POLE, PEDESTAL	EA													3	
646-1-60	ALUMINUM SIGNALS POLE, REMOVE	EA													3	
646-2-115	ALUMINUM POLE- INDEX 17900/695-001, FURNISH & INSTALL, 15'	EA	1				1		1				3		3	
649-21-3	STEEL MAST ARM ASSEMBLY, FURNISH AND INSTALL, SINGLE ARM 40'	EA													1	
649-21-13	STEEL MAST ARM ASSEMBLY, FURNISH AND INSTALL, DOUBLE ARM 60'-50'	EA													1	
650-1-14	VEHICULAR TRAFFIC SIGNAL, FURNISH & INSTALL ALUMINUM, 3 SECTION, 1 WAY	AS													4	
650-1-16	VEHICULAR TRAFFIC SIGNAL, FURNISH & INSTALL ALUMINUM, 4 SECTION, 1 WAY	AS													1	
650-1-19	VEHICULAR TRAFFIC SIGNAL, FURNISH & INSTALL ALUMINUM, 5 SECTION CLUSTER, 1 WAY	AS													2	
653-1-11	PEDESTRIAN SIGNAL, FURNISH & INSTALL LED COUNTDOWN, 1 WAY	AS													2	
653-1-12	PEDESTRIAN SIGNAL, FURNISH & INSTALL LED COUNTDOWN, 2 WAYS	AS													1	
660-3-11	VEHICLE DETECTION SYSTEM- MICROWAVE, FURNISH & INSTALL CABINET EQUIPMENT	EA			1						1		2		5	
660-3-12	VEHICLE DETECTION SYSTEM- MICROWAVE, FURNISH & INSTALL, ABOVE GROUND EQUIPMENT	EA	1				1		1				3		8	
660-6-121	VEHICLE DETECTION SYSTEM- AVI, BLUETOOTH, FURNISH & INSTALL, CABINET EQUIPMENT	EA													2	
660-6-122	VEHICLE DETECTION SYSTEM- AVI, BLUETOOTH, FURNISH & INSTALL, ABOVE GROUND EQUIPMENT	EA													2	
665-1-11	PEDESTRIAN DETECTOR, FURNISH & INSTALL, STANDARD	EA													4	
670-5-111	TRAFFIC CONTROLLER ASSEMBLY, F&I, NEMA, 1 PREEMPTION	AS													1	
670-5-400	TRAFFIC CONTROLLER ASSEMBLY, MODIFY	AS													1	
671-2-11	TRAFFIC CONTROLLER WITHOUT CABINET, F&I IN EXISTING CABINET, NEMA	EA													1	
671-2-60	TRAFFIC CONTROLLER, REMOVE- CABINET TO REMAIN	EA													1	
676-3-10	SMALL EQUIPMENT ENCLOSURE, FURNISH AND INSTALL, LESS THAN 10"W X 13"H X 11" D	EA	1				1		1				3		3	
682-1-113	ITS CCTV CAMERA, F&I, DOME PTZ ENCLOSURE - PRESSURIZED, IP, HIGH DEFINITION	EA													2	
684-1-1	MANAGED FIELD ETHERNET SWITCH, FURNISH & INSTALL	EA			1						1		2		2	
684-2-1	DEVICE SERVER, FURNISH & INSTALL	EA			1						1		2		2	
685-1-13	UNINTERRUPTIBLE POWER SUPPLY, FURNISH AND INSTALL, LINE INTERACTIVE WITH CABINET	EA													1	
700-5-22	INTERNALLY ILLUMINATED SIGN, FURNISH & INSTALL, OVERHEAD MOUNT, 12-18 SF	EA													3	
715-5-31	LUMINAIRE & BRACKET ARM- ALUMINUM, FURNISH & INSTALL NEW LUMINAIRE AND ARM ON NEW/EXISTING POLE	EA													2	

NO.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: NJM
DRAWN BY: JR
CHECKED BY: PJM

ATKINS
ATKINS NORTH AMERICA, INC.
482 SOUTH KELLER RD, ORLANDO, FL 32810
(407) 647-7275

DATE: NOVEMBER 18, 2020
PROJECT NO.: 6080560

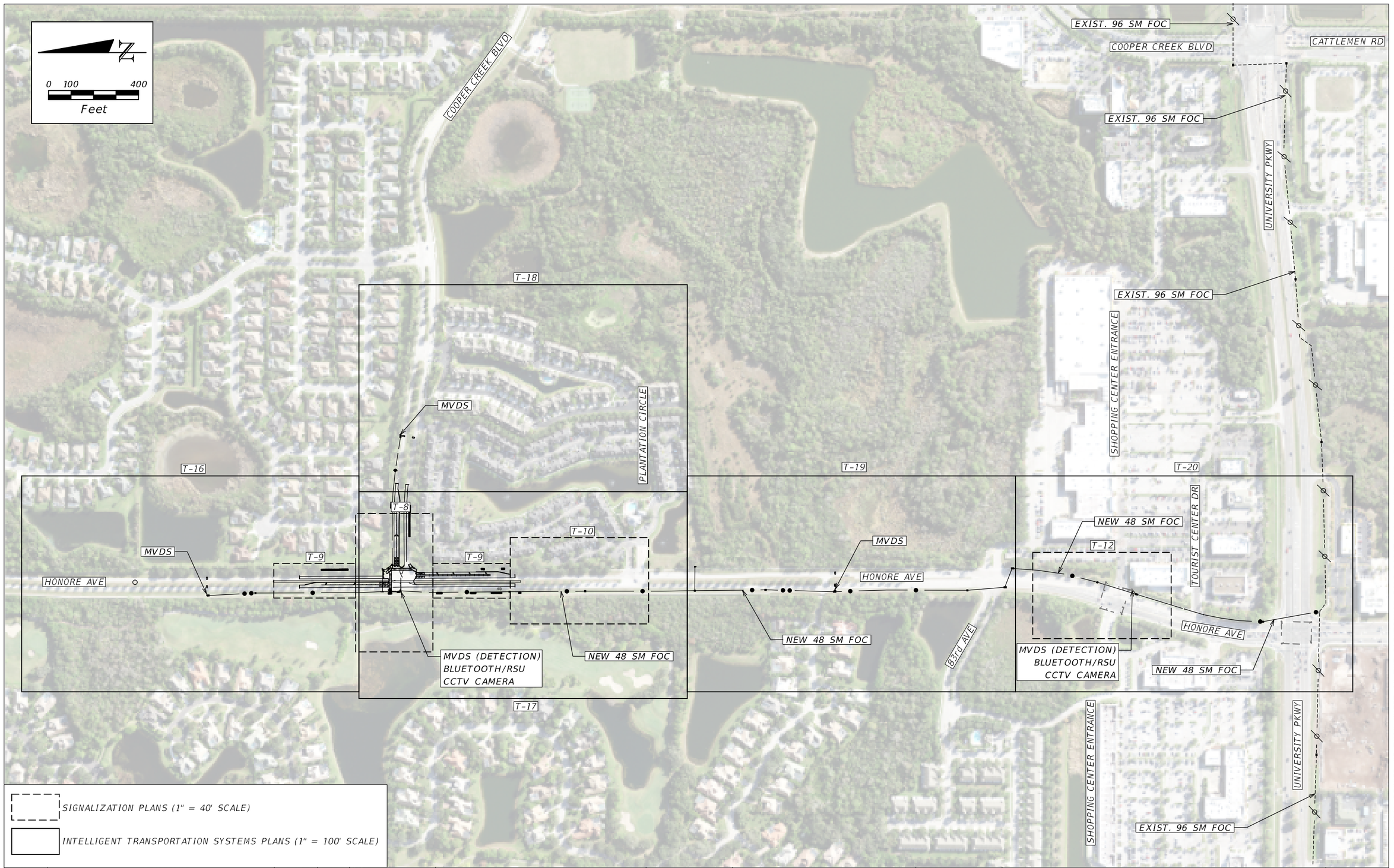
Manatee County FLORIDA
PUBLIC WORKS DEPARTMENT
ENGINEERING SERVICES
1022 26th Avenue East, Bradenton, FL 34208

DESIGN ENGINEER: NATHAN J. MOZELESKI, P.E.
FL. LICENSE NO.: 83308

TABULATION OF QUANTITIES

SHEET NO.: T-4

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.



SIGNALIZATION PLANS (1" = 40' SCALE)

INTELLIGENT TRANSPORTATION SYSTEMS PLANS (1" = 100' SCALE)

NO.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: NJM
DRAWN BY: JR
CHECKED BY: PJM

ATKINS
ATKINS NORTH AMERICA, INC.
482 SOUTH KELLER RD, ORLANDO, FL 32810
(407) 647-7275

DATE: NOVEMBER 18, 2020

PROJECT NO.: 6080560

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

DESIGN ENGINEER: NATHAN J. MOZELESKI, P.E.

FL. LICENSE NO.: 83308

PROJECT LAYOUT

SHEET NO.: T-5

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

GENERAL NOTES:

1. ONE (1) WEEK PRIOR TO THE BEGINNING OF THE TRAFFIC INSTALLATION, LOOP CUTTING, OR TURN ON OF A NEW SIGNAL, THE CONTRACTOR SHALL NOTIFY:

   MANATEE COUNTY PUBLIC WORKS DEPARTMENT
   MANATEE COUNTY PROJECT MANAGEMENT DIVISION
   1026 26TH AVENUE EAST
   BRADENTON, FLORIDA 34208
   PHONE: 941-708-7510

   MANATEE COUNTY PUBLIC WORKS DEPARTMENT
   MANATEE COUNTY TRAFFIC ENGINEERING DIVISION
   2101 47TH TERRACE EAST
   BRADENTON, FLORIDA 34203
   PHONE: 941-749-3502

2. AT LEAST FIVE (5) BUSINESS DAYS PRIOR TO BEGINNING CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE FOLLOWING DEPARTMENTS TO INFORM THEM OF CONSTRUCTION OPERATIONS:

   MANATEE COUNTY TRAFFIC OPERATIONS DIVISION:
   MR. AARON BURKETT 941-708-7509

   MANATEE COUNTY TRAFFIC ENGINEERING DIVISION:
   MR. VISHAL KAKKAD 941-749-3500

3. 48 HOURS PRIOR TO CONTRACT START DATE, THE CONTRACTOR SHALL NOTIFY THE FOLLOWING AGENCIES IN WRITING GIVING THE LOCATION, START DATE AND EMERGENCY NUMBERS FOR AFTER HOURS REPAIRS:

   MANATEE COUNTY SHERIFF'S OFFICE
   515 11TH STREET WEST
   BRADENTON, FLORIDA 34205
   941-747-3011

4. THE CONTRACTOR SHALL PERFORM ALL WORK AS PER LATEST FDOT SPECIFICATIONS AT TIME OF BID, INCLUDING THE 2020-2021 DESIGN STANDARDS AND THE JULY 2020 FLORIDA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS WITH CURRENT SUPPLEMENTAL SPECIFICATIONS WHEN FDOT AND MANATEE COUNTY SPECIFICATIONS DIFFER, THE MORE STRINGENT SPECIFICATIONS WILL TAKE PRECEDENCE. MANATEE COUNTY TRAFFIC SPECIFICATIONS AND THE TRAFFIC SIGNAL DESIGN GUIDE SHALL BE OBTAINED BY THE CONTRACTOR FROM THE PROJECT MANAGEMENT DEPARTMENT.

5. THE CONTRACTOR SHALL OBTAIN A COPY OF MANATEE COUNTY'S LATEST "TRAFFIC INFRASTRUCTURE DESIGN GUIDE" THROUGH THE COUNTY PROJECT MANAGER PRIOR TO ORDERING MATERIALS AND/OR EQUIPMENT. CONTACT THE MANATEE COUNTY TRAFFIC OPERATIONS DIVISION, MR. AARON BURKETT, 941-709-7506 FOR ADDITIONAL INFORMATION.

6. THE CONTRACTOR MUST NOTIFY THE TRAFFIC OPERATIONS DIVISION VIA THE PROJECT MANAGER AT LEAST FIVE (5) BUSINESS DAYS IN ADVANCE TO SCHEDULE THE INITIAL POWER SERVICE CONNECTION AND/OR TRAFFIC SIGNAL INSPECTION.

7. THE PRIME CONTRACTOR SHALL BE RESPONSIBLE FOR THE SIGNAL MAINTENANCE, TIMING AND OPERATION OF ANY AND ALL SIGNALS AND SIGNAGE FROM THE COMMENCEMENT TO THE ACCEPTANCE OF THE PROJECT (I.E.: EXISTING LOOPS CUT, SYSTEM COMMUNICATION TERMINATED, LANE OR PAVEMENT MODIFICATIONS, PEDESTRIAN MODIFICATIONS, TRAFFIC SIGNAL SCHOOL FLASHER, WARNING FLASHER, ROADWAY LIGHTING, COUNT STATIONS, AND ANY OTHER TRAFFIC RELATED DEVICE LOCATED WITHIN THE CONSTRUCTION ZONE). MANATEE COUNTY WILL ASSIST IN PROVIDING EXISTING SYSTEM TIMES WHEN RESPONSIBLE.

8. PRIOR TO ORDERING MATERIALS, THE SIGNAL CONTRACTOR SHALL CONTACT THE TRAFFIC OPERATIONS DIVISION THROUGH THE PROJECT MANAGEMENT DEPARTMENT AND VERIFY CURRENT COLOR CODES TO BE USED FOR SIGNAL CABLE.

9. THE CONTRACTOR SHALL PROVIDE A QUALIFIED TECHNICIAN, TO PERFORM CONSTRUCTION ENGINEERING & INSPECTION SERVICES FOR THE INSTALLATION OF THE TRAFFIC SIGNAL, AND TO CERTIFY THAT ALL WORK HAS BEEN DONE IN ACCORDANCE WITH THE COUNTY'S STANDARDS, SPECIFICATIONS, PERMIT REQUIREMENTS, AND ALL APPLICABLE FEDERAL, STATE AND LOCAL STATUTES, RULES, AND REGULATIONS. IN ADDITION, THE ON-SITE INSPECTOR SHALL BE IMSA LEVEL II CERTIFIED.

10. THE SIGNAL CONTRACTOR SHALL BE AVAILABLE TO RESPOND TO TROUBLE CALLS TWENTY-FOUR HOURS A DAY, SEVEN DAYS A WEEK FOR THE DURATION OF THE PROJECT. THE PRIME CONTRACTOR SHALL PROVIDE CONTACT NUMBERS FOR THE SIGNAL CONTRACTOR TO THE TRAFFIC MANAGEMENT DIVISION AT COMMENCEMENT OF PROJECT. FURTHERMORE, WITHIN TWO HOURS OF NOTIFICATION OR DOCUMENTED ATTEMPTED NOTIFICATIONS, THE SIGNAL CONTRACTOR SHALL BE ON SITE MAKING NEEDED REPAIRS OR MODIFICATIONS. FAILURE TO MEET THE 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 INTERSECTION MUST BE RESTORED WITHIN TWENTY-FOUR (24) HOURS AT NO ADDITIONAL COST TO THE COUNTY.

11. EXISTING SIGNALIZATION SHALL REMAIN IN PLACE TO THE EXTENT POSSIBLE, INCLUDING VEHICLE ACTUATION AND PEDESTRIAN SIGNAL OPERATION, AND SHALL BE USED FOR MAINTENANCE OF TRAFFIC AS REQUIRED. THE CONTRACTOR SHALL INSTALL AND MAINTAIN TEMPORARY VEHICLE DETECTION FOR ALL APPROACHES AND PHASES THROUGHOUT THE CONSTRUCTION PROJECT. THE DETECTION DEVICES SHALL BE PROPERLY INSTALLED, PROGRAMMED AND TUNED TO ENSURE PROPER OPERATION. THE CONTRACTOR SHALL MAKE ALL ADJUSTMENTS AND REPAIRS AS NEEDED TO ENSURE THE DETECTION IS PROPERLY FUNCTIONING THROUGHOUT THE PROJECT OR UNTIL THE PERMANENT DETECTION IS INSTALLED AND UNTIL MANATEE COUNTY ACCEPTS THE PROJECT. ANY DAMAGE TO THE EXISTING DETECTION SYSTEM AT AN INTERSECTION MUST BE RESTORED WITHIN TWENTY-FOUR (24) HOURS AT NO ADDITIONAL COST TO THE COUNTY.

12. THE TYPE OF EQUIPMENT USED IN THE INSTALLATION OF MAST ARMS/FOUNDATIONS, OVERHEAD CANTILEVER SIGNS/FOUNDATIONS, AND THE MOVEMENT/INSTALLATION OF STRAIN POLES SHALL MEET THE FOLLOWING REQUIREMENTS: 1) OVERHEAD LINES SHALL STAY IN PLACE BOTH VERTICALLY AND HORIZONTALLY AND; 2) CONTRACTOR SHALL MEET ALL LATEST APPLICABLE OSHA REQUIREMENTS. ANY COST ASSOCIATED WITH THE TYPE OF EQUIPMENT REQUIRED FOR THIS INSTALLATION IS INCLUDED IN THE RELATED PAY ITEMS.

13. CONTRACTOR SHALL SUPPLY ALL MATERIAL SUBMITTALS TO MANATEE COUNTY TRAFFIC OPERATIONS DIVISION PRIOR TO CONSTRUCTION FOR APPROVAL.

14. WHEN A CONTRACTOR IS WORKING ON A SIGNAL IN AN INTERSECTION (INSTALLING CONDUIT IN THE STREET, REMOVING EXISTING SIGNAL EQUIPMENT, LOOPS, HOMERUNS OR TURNING ON OF NEW SIGNAL) WHERE A LANE IS CLOSED, THE ENGINEER MAY REQUIRE AN OFF-DUTY LAW ENFORCEMENT OFFICER TO DIRECT TRAFFIC. THE HOURLY RATE OF PAY FOR AN OFF-DUTY LAW ENFORCEMENT OFFICER CAN BE OBTAINED FROM THE LOCAL LAW ENFORCEMENT OFFICE. THE COST OF THE OFFICER SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND INCLUDED IN PAY ITEM 102-1-104.

15. 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 GROUND ELEVATION. 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. EQUIPMENT SHALL NOT BE PLACED INTO OPERATIONAL SERVICE UNTIL THE ASSOCIATED GROUNDING SYSTEM HAS BEEN INSPECTED AND APPROVED BY A MEMBER OF THE MANATEE COUNTY TRAFFIC OPERATIONS STAFF.

16. GROUNDING RESISTANCE TESTER, OR OTHER APPROVED MEANS WILL BE USED TO ACQUIRE THE GROUND ROD RESISTANCE. A MEMBER OF THE TRAFFIC OPERATIONS DIVISION STAFF SHALL BE PRESENT DURING THE TEST.

17. NOTIFY AT LEAST THREE (3) FULL BUSINESS DAYS PRIOR TO ANY INSTALLATION THAT IS WITHIN THE CLEAR DISTANCE PER OSHA'S CURRENT REQUIREMENTS OF ENERGIZED ELECTRICAL CONDUCTORS, FLORIDA POWER AND LIGHT, AND ITS OPTIONS, WILL ASSIST THE CONTRACTOR TO COVER UP ENERGIZED CONDUCTORS AT INSTALLATION SITES OR TAKE OTHER SAFETY PRECAUTIONS AS NECESSARY. EXTREME CAUTION SHALL BE EXERCISED AT ALL TIMES IN PERFORMANCE OF WORK AROUND THE PRIMARY HIGH VOLTAGE COMPONENTS.

18. THE LOCATION OF EXISTING UTILITIES ON THE PLANS ARE APPROXIMATE. PRIOR OF DIGGIN, ALLOW THE UAO TO EXPOSE THEIR FACILTIES AT THEIR OWN EXPENSE TO DETERMINE THE EXACT LOCATIONS OF ALL UTILITIES.

19. CONTRACTOR SHALL PROTECT THE EXISTING UTILITIES BY ANY MEANS NECESSARY AND REPAIR ANY DAMAGE MADE TO THE UTILITY AT NO EXPENSE TO THE UTILITY OWNER, MANATEE COUNTY OR FDOT DISTRICT 1.

20. COORDINATE WITH ALL UTILITY OWNERS WHERE CONFLICTS BETWEEN THE CONTRACTOR'S ACTIVITIES AND EXISTING UTILITIES MAY OCCUR. THE CONTRACTOR SHALL FIELD ADJUST THE DESIGN AND INSTALLATION TO AVOID CONFLICT WITH EXISTING UTILITIES. USE DILIGENCE IN PERFORMING SAID CONSTRUCTION ACTIVITY WITH RESPECT TO METHOD OF INSTALLATION TO MINIMIZE THE IMPACT OF SAID INSTALLATION OF CONFLICTING UTILITIES.

21. NO BENCHMARK DATUN USED FOR PARTS OF THIS PROJECT. THE BASE MAPPING DEPICTED ON THE PARTS OF THE SIGNALIZATION PLANS SHEETS AND ITS PLAN SHEETS WERE OBTAINED FROM AERIAL PHOTOGRAPHY. THEREFORE, THE ACCURACY OF THE BASE MAPPING IS NOT THAT OF SURVEYED MAPPING AND SHOULD ONLY BE RELIED UPON FOR ESTABLISHING GENERAL LOCATIONS FOR EXISTING AND PROPOSED FEATURES.

PAY ITEM NOTES

1. 110-2-2

   THIS PAY ITEM SHALL INCLUDE THE COST FOR THE REMOVAL OF TREE BRANCHES AND/OR VEGETATION WITHIN THE AREA NOTED IN THE PLANS TO ENSURE A CLEAR LINE OF SIGHT FOR MVDS LANE DETECTION.

2. 630-2-11

   ALL CONDUIT RUNS SHOWN ON THE PLANS ARE SCHEMATIC AND FIELD ADJUSTMENT MAY BE NECESSARY.

   ALL UNDERGROUND AND UNDER PAVEMENT CONDUITS SHALL BE SCHEDULE 40 PVC WITH A MINIMUM SIZE OF TWO INCHES UNLESS OTHERWISE SPECIFIED IN THE PLANS. COST FOR #14 XHHW PULL WIRE IS INCLUDED UNDER THIS PAY ITEM.

   INTERCONNECT CONDUIT INSTALLED USING TRENCHING METHOD SHALL BE COMPOSED OF TWO 2-INCH HDPE CONDUITS.

3. 630-2-12

   CONDUIT INSTALLED WITH THE DIRECTIONAL BORE METHOD SHALL BE HDPE WITH A MINIMUM SIZE OF TWO-INCHES UNLESS OTHERWISE NOTED IN THE PLANS. COST FOR #14 XHHW PULL WIRE IS INCLUDED UNDER THIS PAY ITEM.

4. 632-7-1

   USE A MINIMUM OF 7 CONDUCTOR SIGNAL CABLE.

5. 635-2-11, 635-2-12

   PULL BOXES ARE TO BE PLACED BEHIND CURB AND GUTTER. IF THERE IS NOT CURB AND GUTTER, PULL BOXES SHALL BE PLACED A MINIMUM OF 7' FROM THE EDGE OF PAVEMENT. USE POLYMER CONCRETE CONSTRUCTION PULL BOXES WITH POLYMER CONCRETE COVERS.

   STANDARD PULL BOXES SHALL BE SIZED TO 17"X30"12". LID LOGOS SHALL BE READ "MANATEE COUNTY TRAFFIC SIGNAL".

   FIBER OPTIC PULL BOXES SHALL BE SIZED TO 24"X36"X36". LID LOGOS SHALL BE READ "MANATEE COUNTY FIBER OPTIC SYSTEM".

6. 646-1-11

   USE BREAKAWAY ALUMINUM SQUARE BASE ASSEMBLIES WITH ALUMINUM DOORS FOR PEDESTRIAN PEDESTALS. INSIDE DIAMETER OF PEDESTALS SHALL BE FOUR INCHES (4").

   USE LOCKING COLLAR WHEN MOUNTING PEDESTRIAN SIGNAL HEADS TO PEDESTRIAN PEDESTALS. USE LOCKING COLLARS WHEN MOUNTING ALUMINUM PEDESTRIAN POLES TO PEDESTRIAN PEDESTAL BASES.

7. 646-1-60

   THIS PAY ITEM SHALL INCLUDE THE COST FOR THE REMOVAL OF THE EXISTING PEDESTRIAN ALUMINUM POLE AND ANY ATTACHMENTS INCLUDING VEHICULAR SIGNAL, PEDESTRIAN DETECTOR AND SIGNS, SOLAR PANEL AND EQUIPMENT.

   THIS PAY ITEM SHALL ALSO INCLUDE THE COST FOR THE EQUIPMENT TO BE SALVAGE AND RETURN TO THE COUNTY AT THE LOCATION DICTATED BY THE COUNTY.

NO.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: NJM
DRAWN BY: JR
CHECKED BY: PJM

ATKINS
ATKINS NORTH AMERICA, INC.
482 SOUTH KELLER RD, ORLANDO, FL 32810
(407) 647-7275

DATE: NOVEMBER 18, 2020
PROJECT NO.: 6080560

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

DESIGN ENGINEER
NATHAN J. MOZELESKI, P.E.
FL. LICENSE NO.
83308

GENERAL NOTES

SHEET NO.
T-6

PAY ITEM NOTES (CONT.):

8. 650-1-14, 650-1-19

USE SIGNAL HEAD SUPPORTING TUBE THAT IS CAPABLE OF ADJUSTING VERTICALLY A MINIMUM OF 1.5 FEET.

THE EXTERNAL COLOR OF SIGNAL HOUSING SHALL BE BLACK. ALL TRAFFIC SIGNAL HEAD INDICATIONS SHALL BE 12 INCH LED. ALL SIGNAL HEADS SHALL HAVE TUNNEL VISORS AND LOUVERED BACK PLATES WITH 2" YELLOW REFLECTORIZED (TYPE III REFLECTORY) OUTER EDGE BORDER. THE COST FOR THE TUNNEL VISORS AND BACK PLATES SHALL BE INCLUDED UNDER THIS PAY ITEM. DO NOT USE PLASTING GARBAGE BAGS AS A COVER FOR CONCEALING SIGNAL HEAD.

9. 660-3-11

THIS PAY ITEM SHALL INCLUDE ALL ABOVE GROUND EQUIPMENT, INCLUDING MOUNTING HARDWARE CABLING, NECESSARY FOR A COMPLETE MICROWAVE VEHICLE DETECTION SYSTEM INSTALLATION, PER THE APPLICATION NOTED IN THE PLANS

STOP BAR DETECTION: WAVETRONIX SMARTSENSOR MATRIX;
ADVANCED DETECTION: WAVETRONIX SMARTSENSOR ADVANCE;
MID-BLOCK DETECTION: WAVETRONIX SMARTSENSOR HD

10. 660-3-11:
THIS PAY ITEM SHALL INCLUDE ALL IN-CABINET EQUIPMENT, INCLUDING POWER SUPPLIES, SURGE PROTECTION AND GROUNDING, NECESSARY FOR A COMPLETE MICROWAVE VEHICLE DETECTION SYSTEM INSTALLATION, PER THE APPLICATION NOTED IN THE PLANS:
STOP BAR / ADVANCED DETECTION: WAVETRONIX CLICK! 656;
MID-BLOCK DETECTION: WAVETRONIX CLICK! 200, WAVETRONIX CLICK! 202

11. 660-6-121:
THIS PAY ITEM SHALL INCLUDE ALL IN-CABINET EQUIPMENT NECESSARY FOR A COMPLETE BLUETOOTH READER / CONNECTED VEHICLE ROADSIDE UNIT (RSU) INSTALLATION, INCLUDING POWER OVER ETHERNET (POE) INJECTOR WITH POWER SUPPLY, SURGE PROTECTION DETECTION AND GROUNDING EQUIPMENT, AND TRAFFICCAST CONNECTED VEHICLE IN-CABINET PROCESSOR UNIT INCLUDING INDUSTRIAL COMPUTER.

12. 660-6-122:
THIS PAY ITEM SHALL INCLUDE ALL ABOVE GROUND EQUIPMENT NECSESARY FOR A COMPLETE BLUETOOTH READER / CONNECTED VEHICLE ROADSIDE UNIT INSTALLATION, INCLUDING TRAFFICCAST BLUETOAD SPECTRA, MOUNTING HARDWARE, AND CABLING.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DEVELOPMENT AND UPLOAD OF ALL SOCIETY OF AUTOMOTIVE ENGINEERS (SAE) STANDARD J2735 COMPLIANT MAP DATA FOR THE SIGNALIZED INTERSECTION.

13. 670-5-400:
THIS PAY ITEM SHALL INCLUDE A FULLY OUTFITTED CUBIC | TRAFFICWARE (FORMERLY NAZTEC) NEMA TS-2, TYPE 1 SIZE VI CABINET WITH FRONT AND REAR DOOR ACCESS. THE PROVIDED CONTROLLER SHALL BE A CUBIC | TRAFFICWARE TS-2, TYPE 1 980 ATC MODEL WITH ADDITIONAL CONNECTED VEHICLE AND SYNCHROGREEN MODULE LICENSES PRELOADED. THIS PAY ITEM SHALL INCLUDE THE REPLACEMENT OF THE EXISTING MMU WITH AN EDI MMU516LE, AS NOTED IN THE PLANS.

COORDINATE WITH MANATEE COUNTY TRAFFIC ENGINEERING DIVISION TO OBTAIN THE LATEST TRAFFIC SIGNAL TIMING INFORMATION AND PLANS FROM THE CENTRAL ATMS. ALL NECESSARY DATABASE CONVERSION AND CONFIGURATION EFFORTS SHALL BE INCLUDED AS PART OF THIS PAY ITEM.

14. 682-1-113:
THIS PAY ITEM SHALL INCLUDE ALL EQUIPMENT NECESSARY FOR A COMPLETE CCTV CAMERA INSTALLATION, INCLUDING A BOSCH ITS 7000 STARLITE SERIES WITH 1080P AND 30X40 ZOOM, "CANDY CANE" MOUNTING ARM WITH BRACKET, POWER OVER ETHERNET (POE+) INJECTOR, SURGE PROTECTION AND GROUNDING EQUIPMENT, AND CABLING.

15.
THIS PAY ITEM SHALL INCLUDE A SIEMENS RUGGEDCOM RSG920P MANAGED FIELD ETHERNET SWITCH (MFES) WITH DIN RAIL MOUNTING KIT, HIGH-VOLTAGE POWER SUPPLY, AND SFP UPLINK PORT OPTIONS (MODEL NO. 6GK6092-0PS23-0BA0-Z A05+B05+C02+D02).

16. 685-1-13:
THIS PAY ITEM SHALL INCLUDE AN ALPHA TECHNOLOGIES FXM 1100 UNINTERRUPTIBLE POWER SUPPLY (UPS) WITH FXM COMMUNICATION MODULE, 12 VOLT BATTERY ARRAY, AND SEPARATE "PIGGYBACK" CABINET ATTACHED TO THE SIDE OF THE TRAFFIC SIGNAL CONTROLLER CABINET.

ABBREVIATIONS

ATC	ADVANCED TRANSPORTATION CONTROLLER
ATMS	ADVANCED TRAFFIC MANAGEMENT SYSTEM
EVP	EMERGENCY VEHICLE PRE-EMPTION
FOC	FIBER OPTIC CABLE
H	HIGH VOLTAGE (CONDUIT)
IMSA	INTERNATIONAL MUNICIPAL SIGNAL ASSOCIATION
L	LOW VOLTAGE (CONDUIT)
LED	LIGHT-EMITTING DIODE
MVDS	MICROWAVE VEHICLE DETECTION SYSTEM
POE	POWER OVER ETHERNET
RSU	ROADSIDE UNIT
SM	SINGLE MODE
SPD	SURGE PROTECTION DEVICE
THHN	THERMOPLASTIC HIGH HEAT-RESISTANT NYLON
VDC	VOLTS, DIRECT CURRENT
VDS	VEHICLE DETECTION SYSTEM

LEGEND

PROPOSED CONDUIT (OPEN TRENCH)
PROPOSED CONDUIT (DIRECTIONAL BORE)
EXISTING CONDUIT
PROPOSED TRAFFIC SIGNAL CABINET
EXISTING TRAFFIC SIGNAL CABINET
PROPOSED PULL BOX
PROPOSED FIBER OPTIC PULL BOX
PROPOSED FIBER OPTIC SPLICE VAULT
EXISTING FIBER OPTIC PULL BOX
EXISTING FIBER OPTIC SPLICE VAULT
PEDESTRIAN SIGNAL HEAD
TRAFFIC SIGNAL HEAD
PROPOSED MAST ARM AND FOUNDATION
EXISTING MAST ARM AND FOUNDATION
PROPOSED CCTV CAMERA
PROPOSED MVDS (WAVETRONIX MATRIX SENSOR AND SMART SENSOR HD)
PROPOSED RSU W/ BLUETOOTH APPLICATION
PROPOSED OVERHEAD STREET NAME SIGN
SENSOR DETECTION ZONE
TREE CLEARING ZONE
- - - - -W(B)- - - - EXISTING WATER MAIN LINE
- - - - -G(B)- - - - EXISTING GAS LINE
- - - - -S(B)- - - - EXISTING SANITARY SEWER LINE
- - - - -BE(B)- - - - EXISTING UNDERGROUND ELECTRICAL LINE
- - - - - OE - - - - - EXISTING OVERHEAD ELECTRICAL LINE
- - - -BFOC(B)- - - EXISTING UNDERGROUND FIBER OPTIC LINE

UTILITY/ AGENCY OWNERS

	Utility Agency Owner	Contact Name	Phone Number
1	AT&T	STEVE HAMER	813-888-8300, EXT: 201
2	AT&T	MICHAEL GAMBOA	813-888-8300, EXT: 201
3	CHARTER COMMUNICATIONS	JAMES L. CRUZAN	727-329-2846
4	BLACK & VEATCH TAMPA 1F	KEN SOULE	913-458-4667
5	COMCAST	LEONARD MAXWELL	754-221-1254
6	FLORIDA POWER & LIGHT	GREG COKER	941-723-4430
7	FRONTIER COMMUNICATIONS	TONI CANNON	813-875-1014
8	MANATEE COUNTY UTILITY OPERATION	KATHY MC MAHON	941-792-8811 EXT: 5002
9	CROWN CASTLE	DANNY HASKETT	786-610-7073
10	TECO - PEOPLES GAS	JOAN DOMNING	813-275-3783
11	SARASOTA COUNTY TRAFFIC	DEAN YOUNG	941-264-8288
12	SARASOTA COUNTY UTILITIES	KARLA SOHAILI	941-861-0525
13	MCI COMMUNICATION		469-886-4091

NO.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: NJM
DRAWN BY: JR
CHECKED BY: PJM

ATKINS
ATKINS NORTH AMERICA, INC.
482 SOUTH KELLER RD, ORLANDO, FL 32810
(407) 647-7275

DATE: NOVEMBER 18, 2020
PROJECT NO.: 6080560

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

DESIGN ENGINEER: NATHAN J. MOZELESKI, P.E.
FL. LICENSE NO.: 83308

GENERAL NOTES

SHEET NO.: T-7

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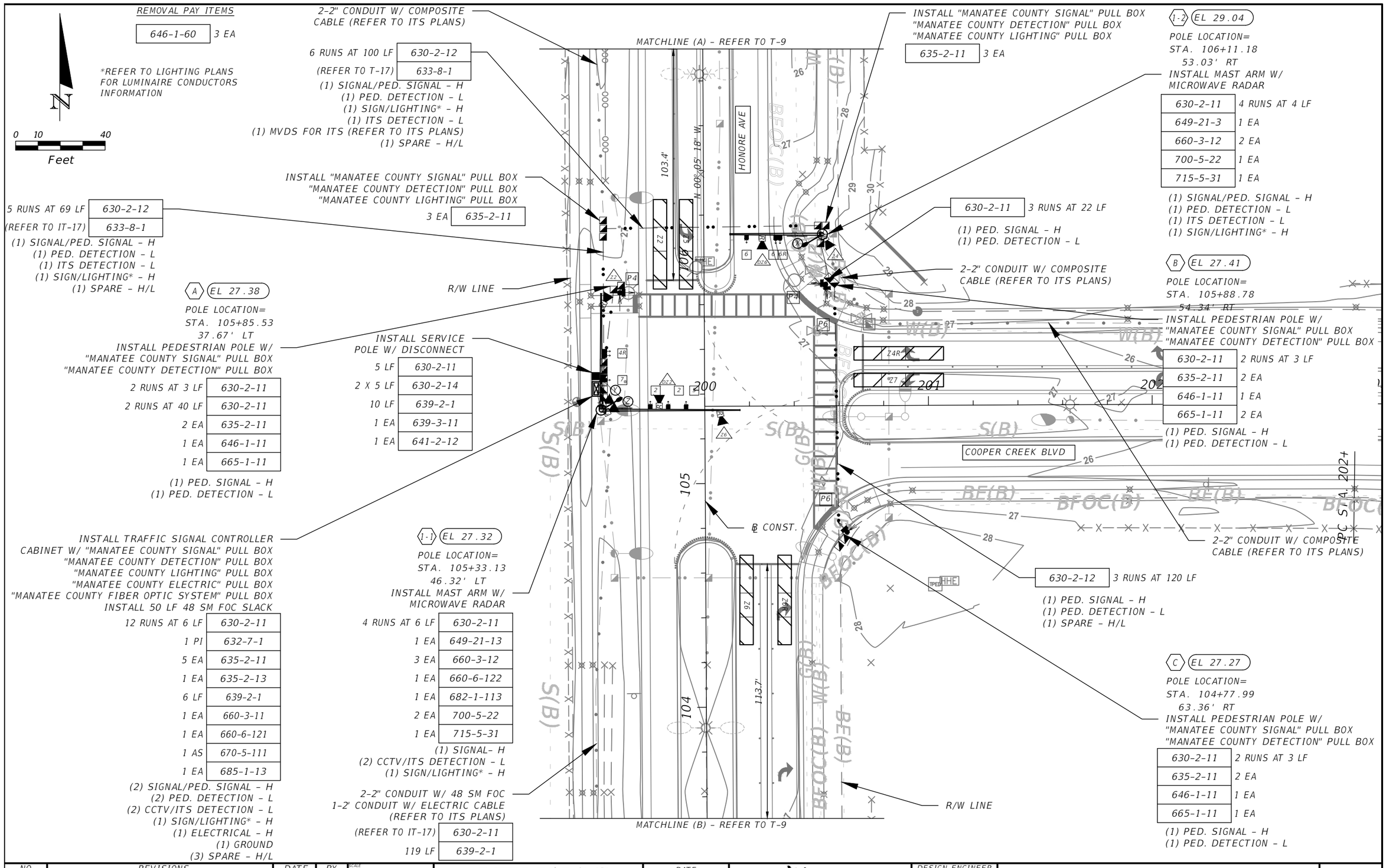

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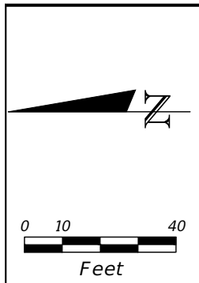
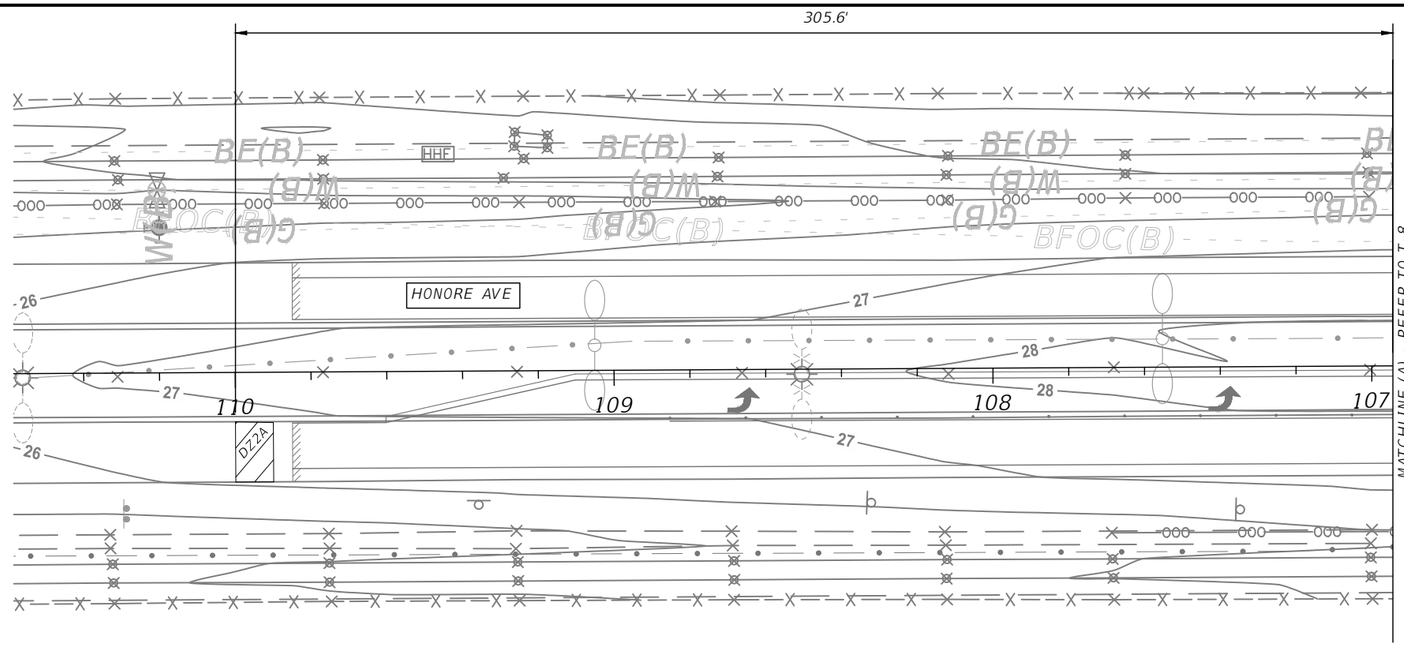
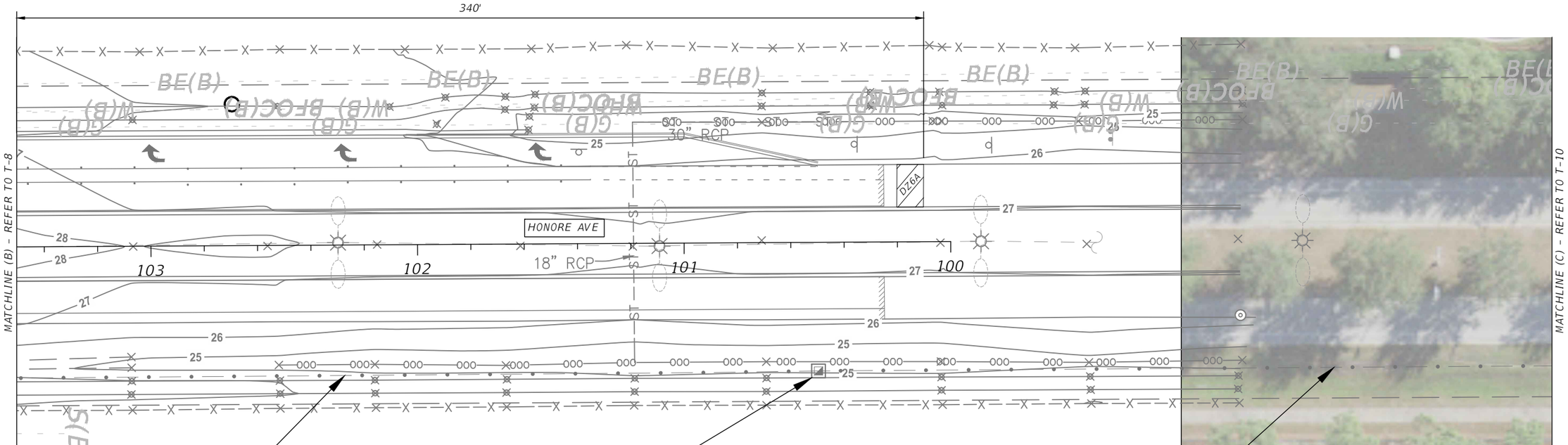
SIGNALIZATION PLANS (1)

SHEET NO. T-8







(REFER TO T-17) 630-2-11
303 LF 639-2-1
(1) ELECTRICAL - H

UTILIZE "MANATEE COUNTY ELECTRIC" PULL BOX (SEE ITS PLAN)

(REFER TO T-17) 630-2-11
273 LF 639-2-1
(1) ELECTRICAL - H

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SIGNALIZATION PLANS (2)

SHEET NO. T-9

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482 SOUTH KELLER RD, ORLANDO, FL 32810
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SIGNALIZATION PLANS (3)

SHEET NO. T-10

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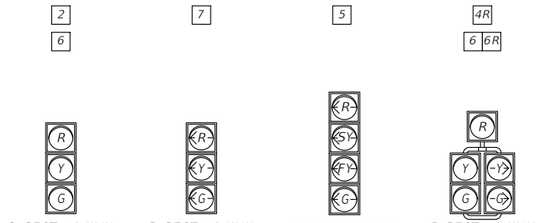
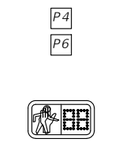
VEHICULAR SIGNALIZATION DETAILS

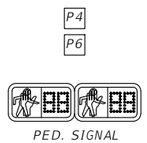


INTERNALLY ILLUMINATED SIGN DETAILS

PEDESTRIAN SIGNALIZATION DETAILS



PED. SIGNAL
COUNT-DOWN
1-SECT., 1-WAY
2 AS
653-1-11



PED. SIGNAL
COUNT-DOWN
1-SECT., 2-WAY
1 AS
653-1-12

FTP-68B-06, 4 REQUIRED
(INCLUDED W/ 665-1-11)

NOTES:

1. WAVETRONIX SMARTSENSORS MATRIX UNITS WILL BE UTILIZED FOR ALL STOP BAR DETECTION, WHEREAS ADVANCED DETECTION FOR SIGNAL PERFORMANCE MEASURES WILL UTILIZE THE WAVETRONIX SMARTSENSOR ADVANCE UNITS.

CONTROLLER TIMINGS

	CONTROLLER PHASE	1	2	3	4	5	6	7	8
	SIGNAL PHASE NUMBER		2		4	5	6	7	
	DIRECTION		SBT		WBR	SBL	NBTR	WBL	
TIMING FUNCTION	MINIMUM GREEN		10		7	5	10	7	
	EXTENSION		2.0		2.0	2.0	2.0	2.0	
	MAXIMUM GREEN 1		40		25	25	40	25	
	MAXIMUM GREEN 2								
	YELLOW CLEARANCE		4.4		3.7	4.4	4.4	3.7	
	ALL RED		2.0		2.9	3.6	2.0	2.9	
	PEDESTRIAN WALK				7		7		
	PED. CLEARANCE				21		21		
	RECALL		MIN				MIN		

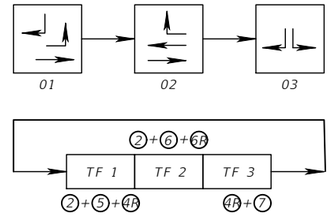
CONTROLLER OPERATIONS NOTES:

1. MAJOR STREET IS HONORE AVE, (MOVEMENTS 2, 5, AND 6), AND MINOR STREET IS COOPER CREEK BLVD, (MOVEMENTS 4 AND 7).

DETECTOR CHART

DETECTOR	DETECTION ZONE	MOVEMENT	PULSE OR PRESENCE	ASSOCIATED PHASE	DELAY IN CONTROLLER (SEC.)	DELAY INHIBIT PHASE	PURPOSE	DETECTION ZONE LENGTH	ZONE LOCATION FROM STOP BAR
DZ2	DZ2A	SB	PULSE	2	-	2	ADV. DETECTION (ATSPM)	10'	409'
DZ6	DZ6A	NB	PULSE	6	-	6	ADV. DETECTION (ATSPM)	10'	454'
Z2	Z5	SB	PULSE	5	-	5	STOP BAR	40'	0'
	Z2	SB	PULSE	2	-	2	STOP BAR	40'	0'
Z4	Z7	WB	PULSE	7	-	2	STOP BAR	40'	0'
	Z4R	WB	PULSE	4	-	4	STOP BAR	40'	0'
Z6	Z6	NB	PULSE	6	-	6	STOP BAR	40'	0'

MODIFIED S0P 12



PEDESTRIAN POLE INFORMATION

PED ID	PHASE	POLE TYPE	STA.	OFFSET	SIDE OF ROADWAY
A	P - 4	PEDESTAL	105+86	37.67'	LT
B	P - 4/6	PEDESTAL	105+89	54.34'	RT
C	P - 6	PEDESTAL	104+78	63.36'	RT

INTERSECTION:
HONORE AVE AT
COOPER CREEK BLVD

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

NO.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: NJM
DRAWN BY: JR
CHECKED BY: PJM

ATKINS
ATKINS NORTH AMERICA, INC.
482 SOUTH KELLER RD, ORLANDO, FL 32810
(407) 647-7275

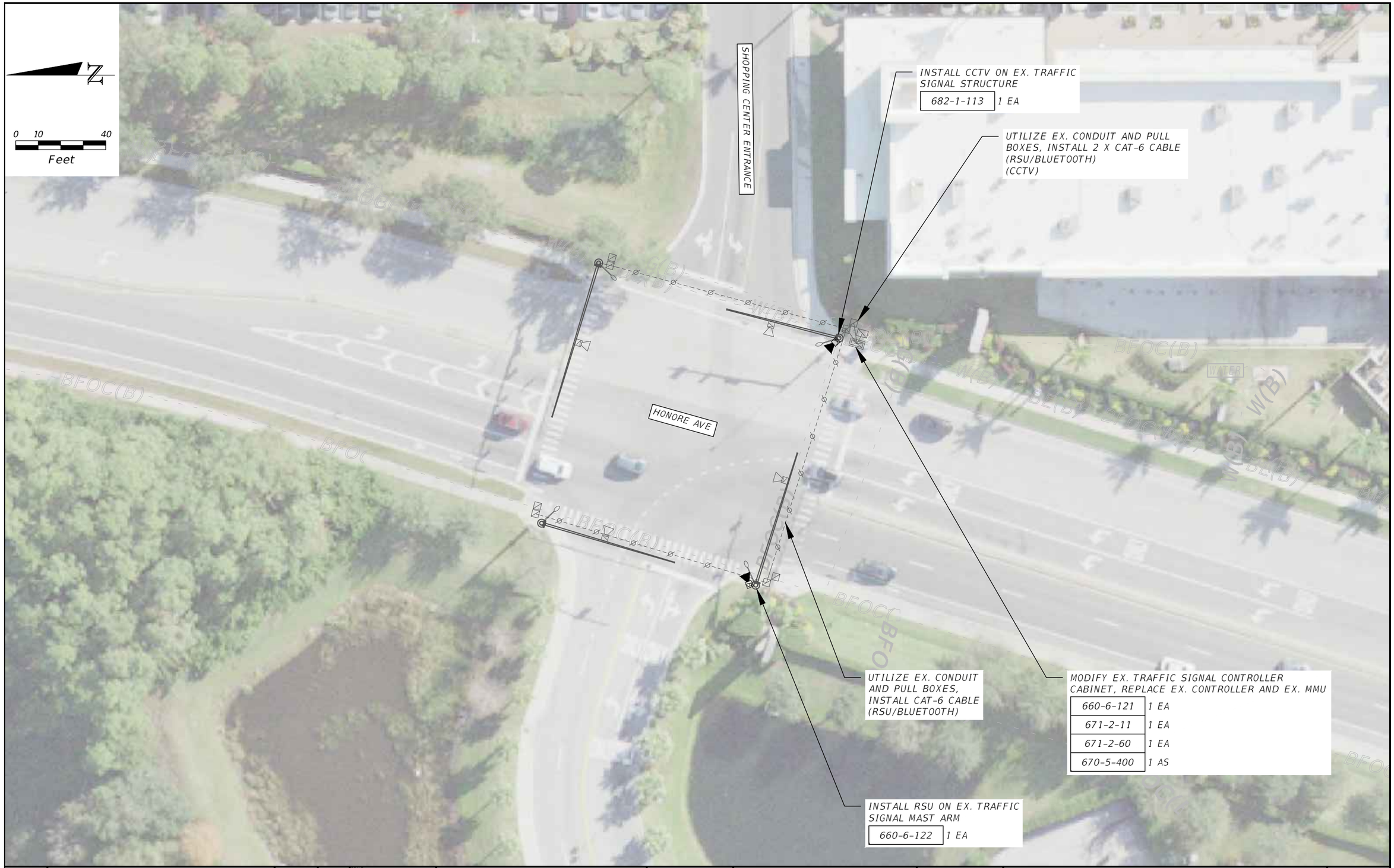
DATE: NOVEMBER 18. 2020
PROJECT NO.: 6080560

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

DESIGN ENGINEER: NATHAN J. MOZELESKI, P.E.
FL. LICENSE NO.: 83308

SIGNALIZATION PLANS (4)

SHEET NO.: T-11



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

DESIGN ENGINEER: NATHAN J. MOZELESKI, P.E.
FL. LICENSE NO.: 83308

SIGNALIZATION PLANS (5)

SHEET NO.: T-12

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

SPECIAL NOTES:

A. EACH POLE AND MAST ARM SHALL BE IDENTIFIED WITH A PERMANENT ONE (1") INCH 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 BETTER ITSELF AND THE POLE SHAFT.

C. FIELD VERIFY ALL ELEVATIONS LISTED HEREIN.

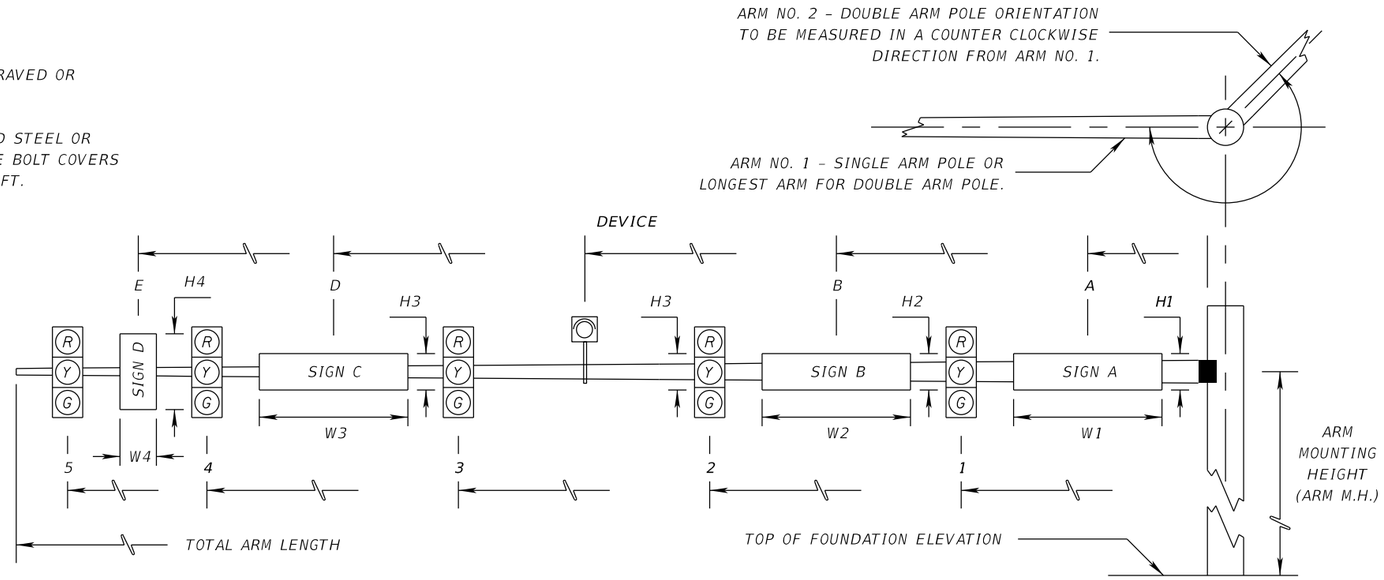
D. INFORMATION BELOW IS FOR DESIGN PURPOSES ONLY, FIELD ADJUSTMENTS MAY BE REQUIRED.

E. SEE APPROPRIATE PLAN SHEET FOR PROPOSED SIGNAL HEAD ALIGNMENTS AND SIGN CONFIGURATION/LOCATION.

F. BACKPLATES WITH REFLECTORIZED BORDERS ARE REQUIRED FOR ALL SIGNAL HEADS.

G. ALL MAST ARM ASSEMBLIES SHALL HAVE A TEMRINAL COMPONENT.

H. ALL PROPOSED SIGNAL AND SIGN DATA ARE MEASURED FROM THE FACE OF EACH SIGNAL POLE UPRIGHT.



INTERNALLY ILLUMINATED SIGN "A" RIDGED MOUNTED ON MAST ARM

* DENOTES NUMBER OF SECTIONS IN SIGNAL HEAD ASSEMBLY

								SIGNAL DATA																SIGN DATA						DEVICE DATA					
											DISTANCE FROM POLE													DISTANCE FROM POLE / HEIGHT AND WIDTH OF SIGN						DISTANCE FROM POLE					
ID NO.	SHEET NO.	LOCATION BY STA.	TOP OF FOUND. ELEVATION	RDWY ARM NO.	CROWN ELEV.	LUMI-NAIRE Y/N	TERM. COMP. Y/N	SIGNAL V/H	BACK PLATES Y/N	PED. SIGNAL Y/N	1	*	2	*	3	*	4	*	5	*	TOTAL ARM LENGTH	ARM M.H.	ANGLE BETWEEN DUAL ARMS 90/270	A	H1	W1	B	H2	W2	VDS1	VDS2	VDS3	VDS4	CCTV	BT
1-1	T-8	105+33.13	27.32	1	27.80	Y		V	Y	N	21.2	3	29.2	3	37.2	4					55	22	90	7.3	2.5	8.0				25.2	52.1			UPRIGHT	UPRIGHT
---	-----	----------	-------	2				V	Y	N	11.4	3	23.3	5							50	22		4.4	2.5	7.0				44.1					
1-2	T-8	106+11.22	29.04	1	27.55	Y		V	Y	N	18.6	3	32.6	5							40	20		10.0	2.5	8.0				UPRIGHT	25.6				
---	-----	----------	-------	2																															
				1																															
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NO.	REVISIONS	DATE	BY

SCALE: AS NOTED
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DRAWN BY: JR
CHECKED BY: PJM

ATKINS
ATKINS NORTH AMERICA, INC.
482 SOUTH KELLER RD, ORLANDO, FL 32810
(407) 647-7275

DATE: NOVEMBER 18, 2020
PROJECT NO.: 6080560

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

DESIGN ENGINEER: NATHAN J. MOZELESKI, P.E.
FL. LICENSE NO.: 83308

STANDARD MAST ARM TABULATION SHEET

SHEET NO.: T-13

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

STANDARD MAST ARM ASSEMBLIES DATA TABLE

STRUCTURE ID NUMBERS	DESIGNATION	FIRST ARM		SECOND ARM		UF (deg)	LL (deg)	POLE			SPECIAL DRILLED SHAFT							
		ARM ID	FAA (ft.)	ARM ID	SAA (ft.)			POLE ID	UAA (ft.)	UB (ft.)	DA (ft.)	DB (ft.)	RA	RB	RC	RD (in.)	RE	RF (in.)
1-1	A60/D-A50/D-P4/D/L	A60/D	30.5	A50/D	-	90	30	P4/D/L	-	22	25.5	4.50	11	15	6	8	-	-
1-2	A40/S-P2/S/L	A40/S	-	-	-	-	30	P2/S/L	-	20	18.5	4.50	11	15	6	8	-	-

NOTES

1. IF AN ENTRY APPEARS IN COLUMN FAA, A SHORTER ARM IS REQUIRED. THIS IS OBTAINED BY REMOVING LENGTH FROM THE ARM TIP AND THE ARM LENGTH SHORTENED FROM FA TO FAA. SAA SIMILAR.

2. IF AN ENTRY APPEARS IN COLUMN UAA, A SHORTER POLE IS REQUIRED. THIS IS OBTAINED BY REMOVING LENGTH FROM THE POLE TIP AND THE POLE HEIGHT SHORTENED FROM UA TO UAA.

3. WORK THIS SHEET WITH THE SIGNAL DESIGNER'S "MAST ARM TABULATION". SEE "MAST ARM TABULATION" FOR SPECIAL INSTRUCTIONS THAT INCLUDE NON-STANDARD HANDHOLE LOCATION, PAINT COLOR, TERMINAL COMPARTMENT REQUIREMENT, AND PEDESTRIAN FEATURES.

4. WORK WITH INDEX 649-030 AND 649-031.

5. DESIGN WIND SPEED = 150 MPH.

SPECIAL DRILLED SHAFT NOTES:

1. DESIGN BASED ON GEOTECHNICAL REPORT AND BORINGS PERFORMED BY TIERRA, INC. THAT ARE SIGNED AND SEALED BY JOSEPH ANTINORI, PE.

2. FOR DESIGN SOIL PARAMETERS, SEE TABLE.

3. DESIGN WATER TABLE IS AT GROUND SURFACE.

DESIGN SOIL PARAMETERS

STRUCTURE ID NUMBERS	SOIL TYPE	SOIL THICKNESS (ft.)	SOIL FRICTION ANGLE (degrees)	UNIT WEIGHT (pcf)	COHESION (psf)
1-1	COHESIONLESS (LOOSE SAND)	30	28	40	-
1-2	COHESIONLESS (LOOSE SAND)	30	29	43	-

NO.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: DJH
DRAWN BY: DJH
CHECKED BY: JPN

HARDESTY & HANOVER, LLC
5110 EISENHOWER BLVD.
SUITE 310
TAMPA, FL 33634
(813)749-0823

DATE: 02/2021
PROJECT NO.: 6080560

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

DESIGN ENGINEER: JAMES P. NEWBERRY, P.E.
FL. LICENSE NO.: 73365

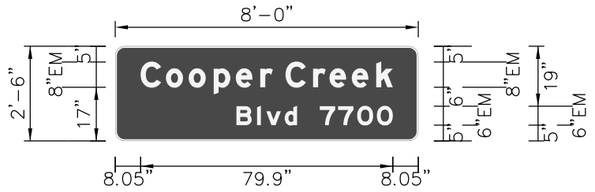
STANDARD MAST ARM ASSEMBLIES DATA TABLE

SHEET NO.: T-14

SIGN NAME	X	QTY	1	SIGN NO.	STATION(S)
PANEL		BORDER			none
WIDTH	8'-0"	WIDTH	0.5"		
HEIGHT	2'-6"	RADII	3"		
LEGEND	White	COLOR	White		
COLOR	Green				

SYMBOL(S)	ANGLE	X	Y	WID	HT

SIGN NO.	NO. OF POSTS	EDGE OF LANE CLEARANCE	COLUMN SIZE	AVERAGE LENGTH



COPY	C	o	o	p	e	r	C	r	e	e	k		L										
SPACE	8	16	23.2	31.2	38.2	46	54	62.7	67.9	74.9	82.7		79.9										
COPY	B	l	v	d		L																	
SPACE	38.4	44.9	47.8	53.7		19.3																	
COPY	7	7	0	0		L																	
SPACE	64.8	70.6	76.7	82.9		23.2																	
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SIGN NAME	Y	QTY	1	SIGN NO.	STATION(S)
PANEL		BORDER			none
WIDTH	7'-0"	WIDTH	0.5"		
HEIGHT	2'-6"	RADII	3"		
LEGEND	White	COLOR	White		
COLOR	Green				

SYMBOL(S)	ANGLE	X	Y	WID	HT

SIGN NO.	NO. OF POSTS	EDGE OF LANE CLEARANCE	COLUMN SIZE	AVERAGE LENGTH

COPY	H	o	n	o	r	e		A	v	e		L											
SPACE	6.6	15.1	23	30.8	38.7	43.9	49.2	55.2	64.3	72.1		70.7											
COPY	8	0	0	0		L																	
SPACE	6.6	12.7	18.9	25.2		23.6																	
COPY	7	9	0	0		L																	
SPACE	54	60	66.1	72.3		23.4																	
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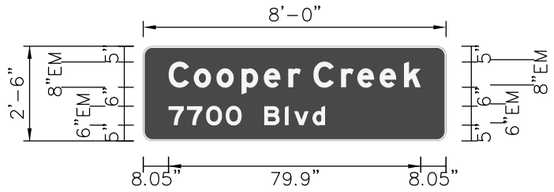
SIGN NAME	Z	QTY	1	SIGN NO.	STATION(S)
PANEL		BORDER			none
WIDTH	8'-0"	WIDTH	0.5"		
HEIGHT	2'-6"	RADII	3"		
LEGEND	White	COLOR	White		
COLOR	Green				

SYMBOL(S)	ANGLE	X	Y	WID	HT

SIGN NO.	NO. OF POSTS	EDGE OF LANE CLEARANCE	COLUMN SIZE	AVERAGE LENGTH



COPY	C	o	o	p	e	r	C	r	e	e	k		L										
SPACE	8	16	23.2	31.2	38.2	46	54	62.7	67.9	74.9	82.7		79.9										
COPY	7	7	0	0		L																	
SPACE	8	13.9	19.9	26.2		23.2																	
COPY	B	l	v	d		L																	
SPACE	38.4	44.9	47.9	53.7		19.3																	
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DESIGNED BY: NJM
DRAWN BY: JR
CHECKED BY: PJM

ATKINS
ATKINS NORTH AMERICA, INC.
482 SOUTH KELLER RD, ORLANDO, FL 32810
(407) 647-7275

DATE: NOVEMBER 18, 2020
PROJECT NO. 6080560

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

DESIGN ENGINEER: NATHAN J. MOZELESKI, P.E.
FL. LICENSE NO. 83308

GUIDE SIGN WORKSHEET

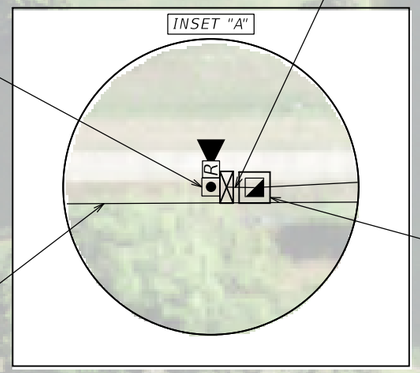
SHEET NO. T-15

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

INSTALL 2-2" CONDUIT W/ MVDS COMPOSITE CABLE (24 VDC, RS-485)

630-2-11	4 LF
633-8-1	4 LF

INSET "A"



INSTALL NEW ENCLOSURE POLE MOUNTED TO 4" ALUMINUM POLE W/ MVDS UNIT

1 EA	646-2-115
1 EA	660-3-12
1 EA	676-3-10

INSTALL "ITS" PULL BOX W/ CONCRETE APRON

635-2-11	1 EA

R/W LINE

FENCE LINE

R/W LINE

R/W LINE

MVDS DETECTION ZONE

HONORE AVE

SELECTIVE TREE CLEARING (SEE NOTE 1)

0.034 AC	110-2-2

SEE INSET "A"

R/W LINE

FENCE LINE

INSTALL 2-2" CONDUIT W/ MVDS COMPOSITE CABLE (24 VDC, RS-485)

208 LF	630-2-12
208 LF	633-8-1

INSTALL "ITS" PULL BOX W/ CONCRETE APRON

1 EA	635-2-11

INSTALL 2-2" CONDUIT W/ MVDS COMPOSITE CABLE (24 VDC, RS-485)

461 LF	630-2-11
461 LF	633-8-1

R/W LINE

0 20 100
Feet

NOTES:
1. AREA NOTED FOR TREE CLEARING SHALL REMOVE TREE BRANCHES AS NECESSARY TO PROVIDE A CLEAR LINE OF SIGHT FOR MVDS LANE DETECTION.

REFER TO T-17

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1022 26th Avenue East, Bradenton, FL 34208

DESIGN ENGINEER: NATHAN J. MOZELESKI, P.E.
FL. LICENSE NO.: 83308

INTELLIGENT TRANSPORTATION SYSTEM PLANS (1)

SHEET NO.: T-16

USER: REGA6848 11/17/2020 9:15:38 AM Default I:_Projects\Manatee County\100071612 - Honore Ave at Cooper Creek\01. Design\a. CAD\[FDOT PROJECT ID NO]\ITS\Microstation\PLANIT01.dgn

REFER TO T-18

REFER TO T-16

REFER TO T-19

R/W LINE

R/W LINE

FENCE LINE

COOPER CREEK BLVD

INSTALL 2-2" CONDUIT W/
MVDS COMPOSITE CABLE
(24 VDC, RS-485)

630-2-11	330 LF
633-8-1	330 LF

UTILIZE "MANATEE COUNTY
DETECTION" PULL BOX
(SEE SIGNALIZATION PLAN)

INSTALL "ITS" PULL BOX
W/ CONCRETE APRON

635-2-11	1 EA

INSTALL 2-2" CONDUIT W/
2 X MVDS COMPOSITE CABLE
(24 VDC, RS-485)

630-2-12	42 LF
633-8-1	2 X 42 LF

(REFER TO SIGNAL PLANS FOR
CONDUIT INSTALLATION)
INSTALL MVDS COMPOSITE
CABLE (24 VDC, RS-485)

630-2-12	(REFER TO T-8)
633-8-1	100 LF

UTILIZE "MANATEE COUNTY
FIBER OPTIC SYSTEM" PULL BOX
(SEE SIGNALIZATION PLAN)
INSTALL 50 LF 12 SM FOC SLACK
INSTALL 50 LF 48 SM FOC SLACK

633-1-121	50 LF
633-1-122	50 LF
633-2-31	2 EA
633-3-11	1 EA
633-3-12	1 EA

PLANTATION CIRCLE

R/W LINE

HONORE AVE

0 20 100
Feet

SEE SIGNALIZATION PLAN ON T-8

UTILIZE TRAFFIC SIGNAL CONDUIT
SWEEP TO ACCESS TRAFFIC SIGNAL
CONTROLLER CABINET
(SEE SIGNALIZATION PLAN)
INSTALL 12 SM FOC
INSTALL 2 X MVDS COMPOSITE CABLE
(24 VDC, RS-485)

633-1-121	20 LF
633-8-1	2 X 20 LF

INSTALL "ELECTRIC" PULL BOX
W/ CONCRETE APRON

635-2-11	1 EA

FENCE LINE

INSTALL 2-2" CONDUIT W/
48 SM FOC
INSTALL 1-2" CONDUIT W/
ELECTRIC CABLE

630-2-11	498 LF
633-1-122	498 LF
639-2-1	(REFER TO T-9)

INSTALL "ELECTRIC" PULL BOX
W/ CONCRETE APRON

635-2-11	1 EA

INSTALL 2-2" CONDUIT W/
48 SM FOC
INSTALL 1-2" CONDUIT W/
ELECTRIC CABLE

630-2-11	340 LF
633-1-122	340 LF
639-2-1	(REFER TO T-10)

R/W LINE

(REFER TO SIGNAL PLANS FOR
CONDUIT INSTALLATION)
INSTALL 2 X MVDS COMPOSITE
CABLE (24 VDC, RS-485)

630-2-12	(REFER TO T-8)
633-8-1	2 X 68 LF

INSTALL FIELD-TERMINATED PATCH PANEL,
MANAGED FIELD ETHERNET SWITCH INSIDE
EXISTING TRAFFIC SIGNAL CONTROLLER CABINET.

633-2-32	12 EA
633-3-14	1 EA
633-3-16	1 EA
660-3-11	1 EA
684-1-1	1 EA
684-2-1	1 EA

INSTALL 2-2" CONDUIT W/
48 SM FOC
INSTALL 1-2" CONDUIT W/
ELECTRIC CABLE

454 LF	630-2-11
454 LF	633-1-122
(REFER TO T-10)	639-2-1

UTILIZE "MANATEE COUNTY
DETECTION" PULL BOX
(SEE SIGNALIZATION PLAN)

INSTALL 2-2" CONDUIT W/
MVDS COMPOSITE CABLE
(24 VDC, RS-485)

630-2-11	98 LF
633-8-1	98 LF

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1022 26th Avenue East, Bradenton, FL 34208

DESIGN ENGINEER: NATHAN J. MOZELESKI, P.E.
FL. LICENSE NO.: 83308

INTELLIGENT TRANSPORTATION SYSTEM PLANS (2)

SHEET NO.: T-17

REFER TO T-17

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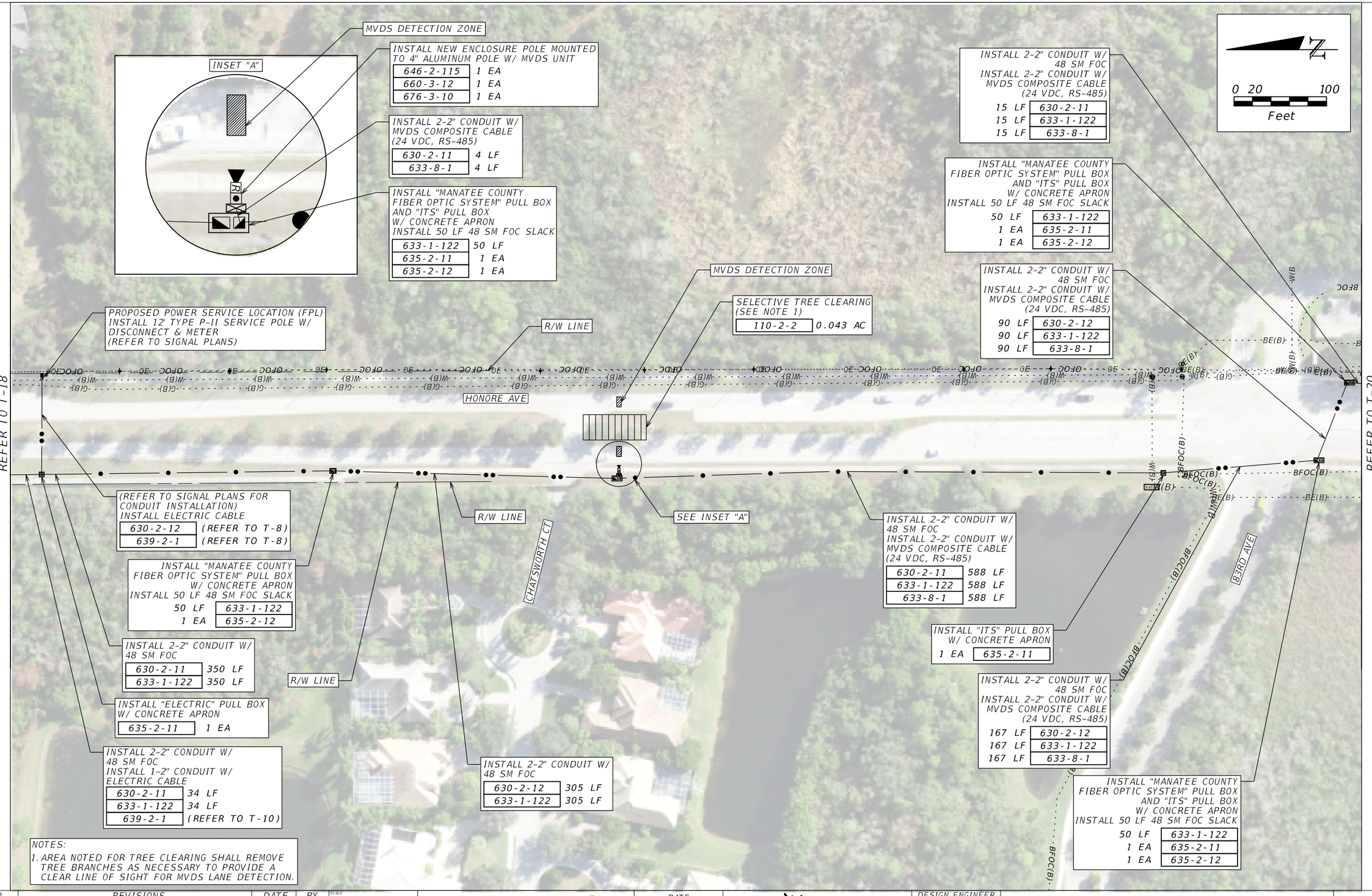
DESIGN ENGINEER: NATHAN J. MOZELESKI, P.E.
FL. LICENSE NO.: 83308

INTELLIGENT TRANSPORTATION SYSTEM PLANS (3)

SHEET NO.: T-18



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1022 26th Avenue East, Bradenton, FL 34208

DESIGN ENGINEER: NATHAN J. MOZELESKI, P.E.
FL. LICENSE NO.: 83308

INTELLIGENT TRANSPORTATION SYSTEM PLANS (4)

SHEET NO.: T-19

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

0 20 100
Feet

UTILIZE EXIST. CONDUIT SWEEP TO ACCESS TRAFFIC SIGNAL CONTROLLER CABINET
INSTALL 12 SM FOC
INSTALL MVDS COMPOSITE CABLE (24 VDC, RS-485)

20 LF	633-1-121
20 LF	633-8-1

INSTALL 2-2" CONDUIT W/ 48 SM FOC
INSTALL 2-2" CONDUIT W/ MVDS COMPOSITE CABLE (24 VDC, RS-485)

182 LF	630-2-12
182 LF	633-1-122
182 LF	633-8-1

INSTALL 2-2" CONDUIT W/ 48 SM FOC
INSTALL 2-2" CONDUIT W/ MVDS COMPOSITE CABLE (24 VDC, RS-485)

630-2-11	370 LF
633-1-122	370 LF
633-8-1	370 LF

INSTALL "ITS" PULL BOX W/ CONCRETE APRON

1 EA	635-2-11

SEE SIGNALIZATION PLAN ON T-12

UTILIZE EXIST. "COMMUNICATIONS" PULL BOX
INSTALL 50 LF 12 SM FOC SLACK

633-1-121	50 LF

INSTALL FIELD-TERMINATED PATCH PANEL, MANAGED FIELD ETHERNET SWITCH INSIDE EXISTING TRAFFIC SIGNAL CONTROLLER CABINET.

633-2-32	12 EA
633-3-14	1 EA
633-3-16	1 EA
660-3-11	1 EA
684-1-1	1 EA
684-2-1	1 EA

INSTALL 2-2" CONDUIT W/ 12 SM FOC
INSTALL 2-2" CONDUIT W/ MVDS COMPOSITE CABLE (24 VDC, RS-485)

630-2-11	30 LF
633-1-121	30 LF
633-8-1	30 LF

INSTALL "MANATEE COUNTY FIBER OPTIC SYSTEM" PULL BOX AND "ITS" PULL BOX W/ CONCRETE APRON
INSTALL 50 LF 12 SM FOC SLACK
INSTALL 50 LF 48 SM FOC SLACK

633-1-121	50 LF
633-1-122	50 LF
633-2-31	4 EA
633-3-11	1 EA
633-3-12	1 EA
635-2-11	1 EA
635-2-13	1 EA

INSTALL 2-2" CONDUIT W/ 48 SM FOC

630-2-11	225 LF
633-1-122	225 LF

COUPLE CONDUIT

COUPLE CONDUIT

INSTALL "MANATEE COUNTY FIBER OPTIC SYSTEM" PULL BOX W/ CONCRETE APRON
INSTALL 50 LF 48 SM FOC SLACK

50 LF	633-1-122
1 EA	635-2-12

EXIST. SARASOTA COUNTY CONDUIT W/ 96 SM FIBER OPTIC CABLE TO REMAIN

UTILIZE EXIST. SARASOTA COUNTY TRAFFIC SIGNAL FIBER OPTIC SPLICE VAULT, TIE-IN PROPOSED CONDUIT AND EXIST. SPLICE ENCLOSURE
INSTALL 50 LF 48 SM FOC SLACK

50 LF	633-1-122
2 EA	633-2-31
1 EA	633-3-51
1 EA	633-3-52

INSTALL 2-2" CONDUIT W/ 48 SM FOC

630-2-12	88 LF
633-1-122	88 LF

INSTALL 2-2" CONDUIT W/ 48 SM FOC

630-2-11	270 LF
633-1-122	270 LF

INSTALL 2-2" CONDUIT W/ 48 SM FOC

255 LF	630-2-12
255 LF	633-1-122

EXIST. TRAFFIC SIGNAL CABINET TO REMAIN

EXIST. SARASOTA COUNTY CONDUIT W/ 96 SM FIBER OPTIC CABLE TO REMAIN

REFER TO T-19

HONORE AVE

SHOPPING CENTER ENTRANCE

UNIVERSITY PKWY

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NO.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: NJM
DRAWN BY: JR
CHECKED BY: PJM

ATKINS
ATKINS NORTH AMERICA, INC.
482 SOUTH KELLER RD, ORLANDO, FL 32810
(407) 647-7275

DATE: NOVEMBER 18, 2020
PROJECT NO.: 6080560

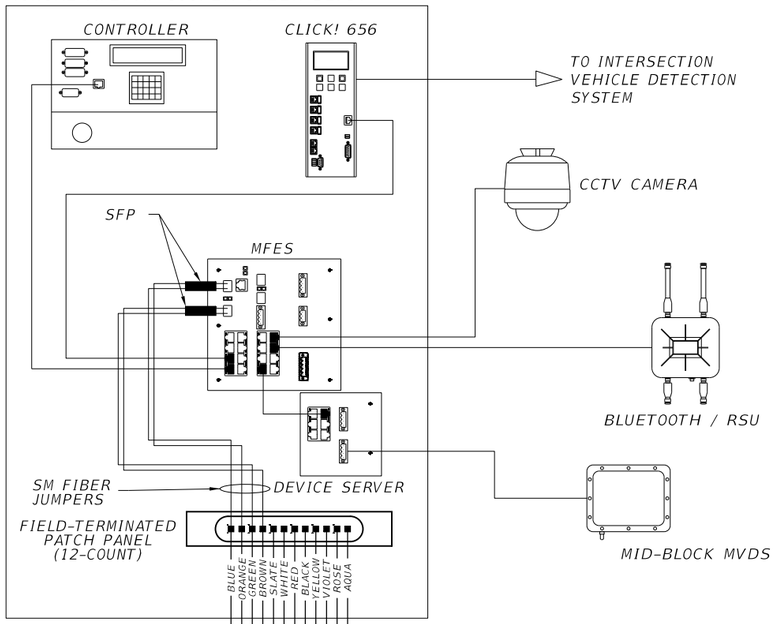
Manatee County FLORIDA
PUBLIC WORKS DEPARTMENT
ENGINEERING SERVICES
1022 26th Avenue East, Bradenton, FL 34208

DESIGN ENGINEER: NATHAN J. MOZELESKI, P.E.
FL. LICENSE NO.: 83308

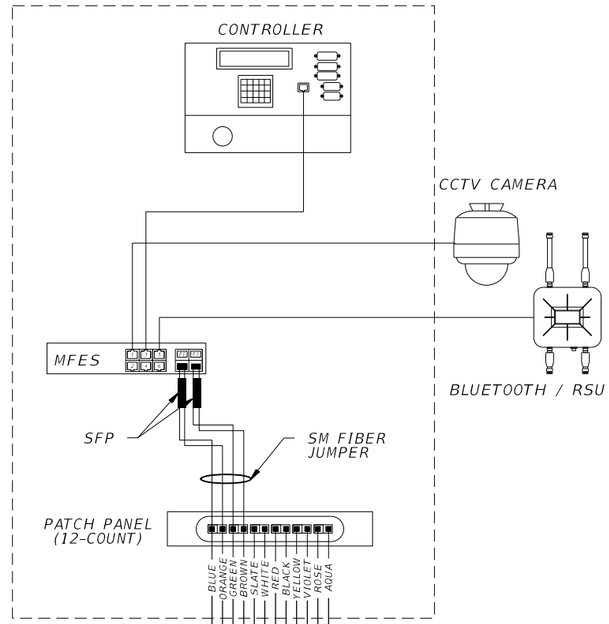
INTELLIGENT TRANSPORTATION SYSTEM PLANS (5)

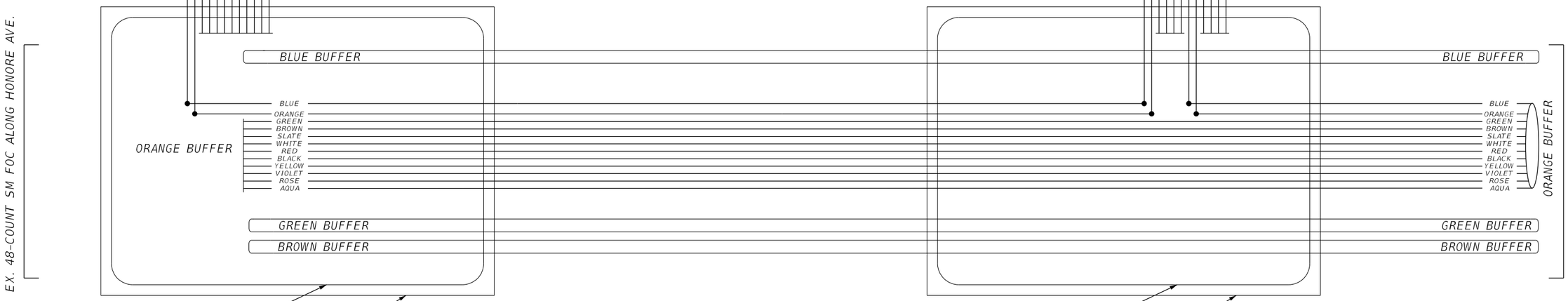
SHEET NO.: T-20

PROPOSED CONTROLLER CABINET
HONORE AVE. AT COOPER CREEK BLVD.



EXISTING CONTROLLER CABINET
HONORE AVE. AT SHOPPING CENTER ENTRANCE





EXISTING SPLICE CONNECTION
PROPOSED SPLICE CONNECTION
EXISTING
PROPOSED

NO.	REVISIONS	DATE	BY

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

DESIGN ENGINEER: NATHAN J. MOZELESKI, P.E.
FL. LICENSE NO.: 83308

SPLICE DIAGRAM (1)

SHEET NO.: T-21

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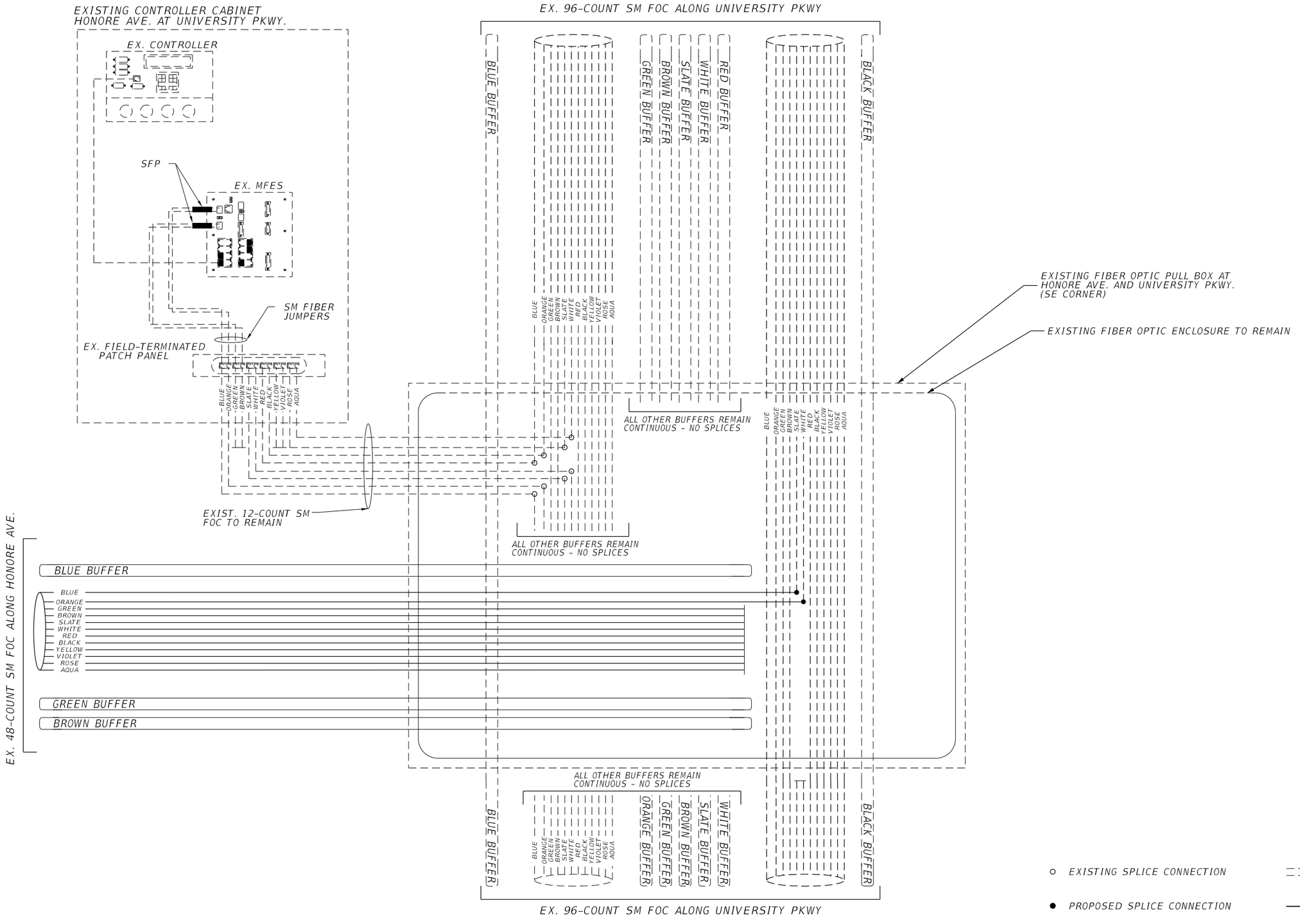

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PUBLIC WORKS DEPARTMENT
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1022 26th Avenue East, Bradenton, FL 34208

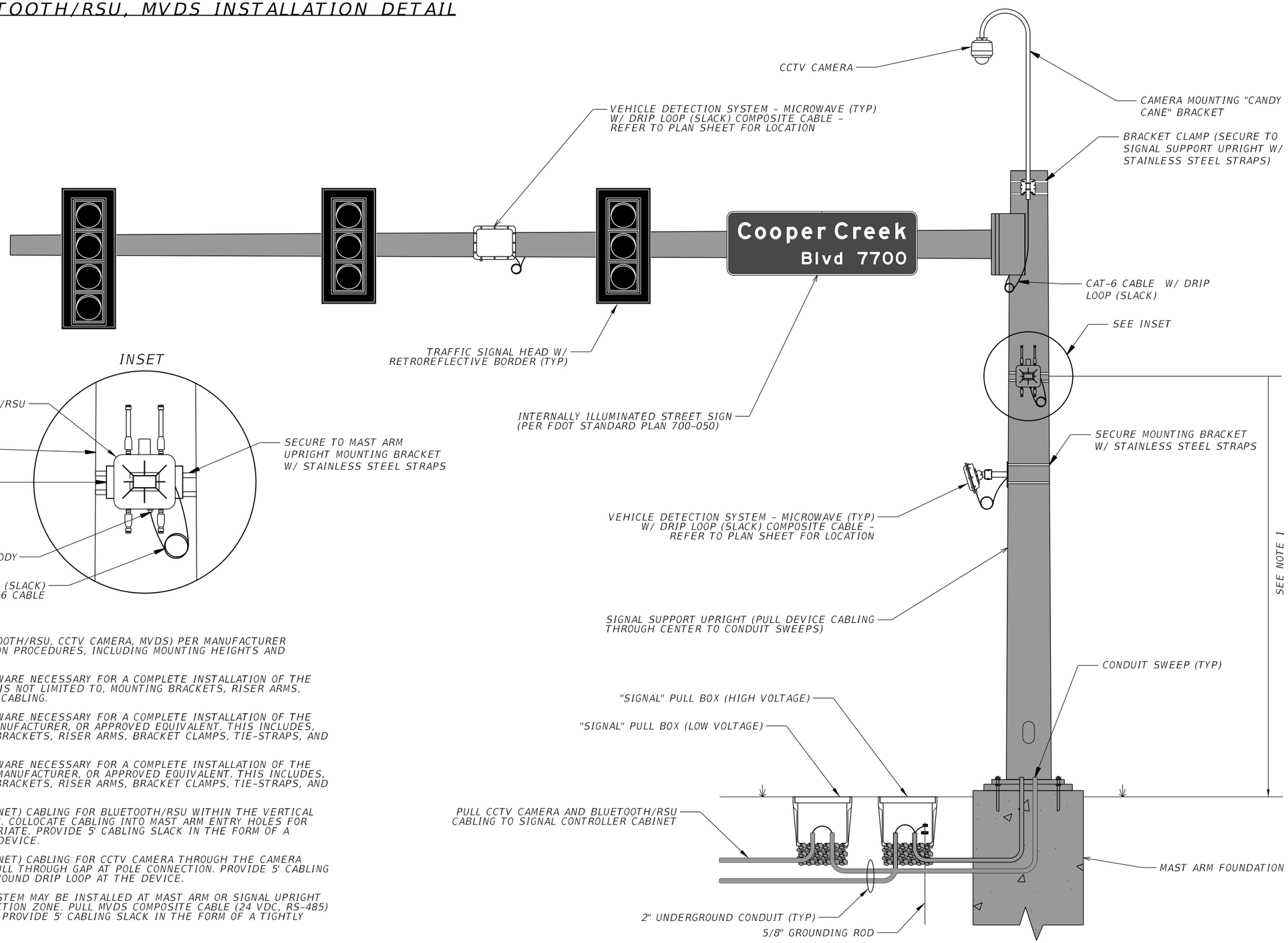
DESIGN ENGINEER: NATHAN J. MOZELESKI, P.E.
FL. LICENSE NO.: 83308

SPLICE DIAGRAM (2)

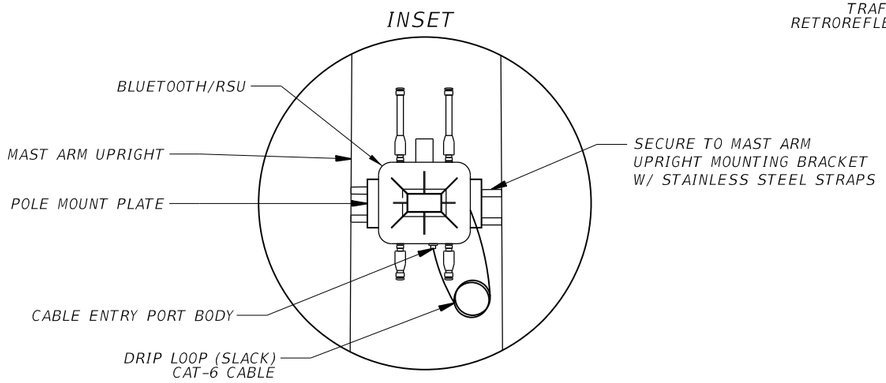
SHEET NO.: T-22

CCTV CAMERA, BLUETOOTH/RSU, MVDS INSTALLATION DETAIL

(NOT TO SCALE)



INSET



NOTES:

1. INSTALL FIELD DEVICES (I.E. BLUETOOTH/RSU, CCTV CAMERA, MVDS) PER MANUFACTURER RECOMMENDATIONS AND INSTALLATION PROCEDURES, INCLUDING MOUNTING HEIGHTS AND DEVICE ALIGNMENT.
2. PROVIDE ALL EQUIPMENT AND HARDWARE NECESSARY FOR A COMPLETE INSTALLATION OF THE CCTV CAMERA. THIS INCLUDES, BUT IS NOT LIMITED TO, MOUNTING BRACKETS, RISER ARMS, BRACKET CLAMPS, TIE-STRAPS, AND CABLING.
3. PROVIDE ALL EQUIPMENT AND HARDWARE NECESSARY FOR A COMPLETE INSTALLATION OF THE BLUETOOTH/RSU FROM THE SAME MANUFACTURER, OR APPROVED EQUIVALENT. THIS INCLUDES, BUT IS NOT LIMITED TO, MOUNTING BRACKETS, RISER ARMS, BRACKET CLAMPS, TIE-STRAPS, AND CABLING.
4. PROVIDE ALL EQUIPMENT AND HARDWARE NECESSARY FOR A COMPLETE INSTALLATION OF THE MVDS FURNISHED FROM THE SAME MANUFACTURER, OR APPROVED EQUIVALENT. THIS INCLUDES, BUT IS NOT LIMITED TO, MOUNTING BRACKETS, RISER ARMS, BRACKET CLAMPS, TIE-STRAPS, AND CABLING.
5. INSTALL CAT-6 (POWER OVER ETHERNET) CABLING FOR BLUETOOTH/RSU WITHIN THE VERTICAL RISER ARM AND INTO THE MAST ARM. COLLOCATE CABLING INTO MAST ARM ENTRY HOLES FOR TRAFFIC SIGNAL HEADS, AS APPROPRIATE. PROVIDE 5' CABLING SLACK IN THE FORM OF A TIGHTLY WOUND DRIP LOOP AT THE DEVICE.
6. INSTALL CAT-6 (POWER OVER ETHERNET) CABLING FOR CCTV CAMERA THROUGH THE CAMERA MOUNTING "CANDY CANE" ARM AND PULL THROUGH GAP AT POLE CONNECTION. PROVIDE 5' CABLING SLACK IN THE FORM OF A TIGHTLY WOUND DRIP LOOP AT THE DEVICE.
7. MICROWAVE VEHICLE DETECTION SYSTEM MAY BE INSTALLED AT MAST ARM OR SIGNAL UPRIGHT LOCATIONS, DEPENDENT UPON DETECTION ZONE. PULL MVDS COMPOSITE CABLE (24 VDC, RS-485) THROUGH GAP AT POLE CONNECTION. PROVIDE 5' CABLING SLACK IN THE FORM OF A TIGHTLY WOUND DRIP LOOP AT THE DEVICE.

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

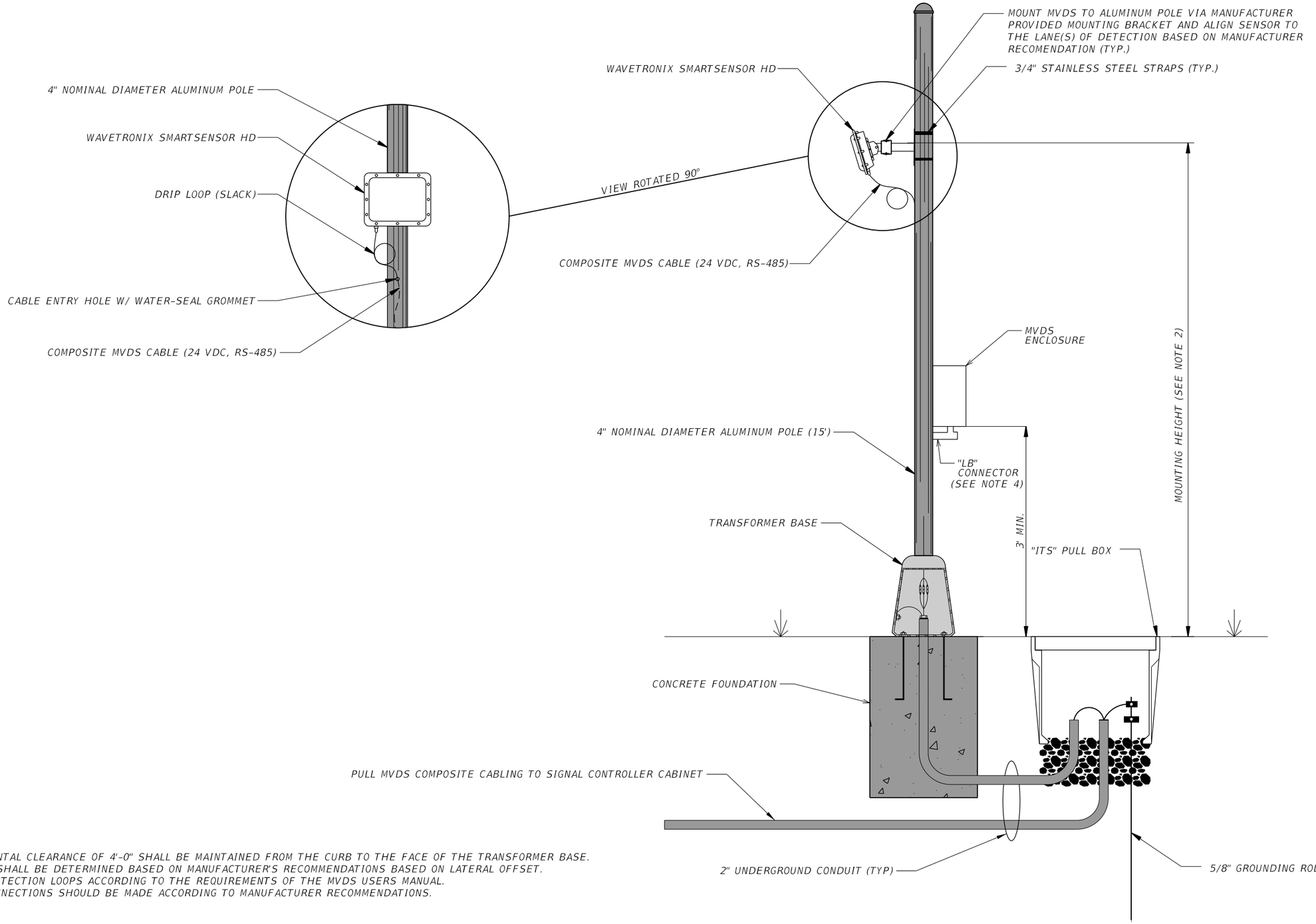
DESIGN ENGINEER: NATHAN J. MOZELESKI, P.E.
FL. LICENSE NO.: 83308

MOUNTING DETAILS (1)

SHEET NO.: T-23

MID-BLOCK MVDS INSTALLATION DETAIL

(NOT TO SCALE)



NOTES:

1. A MINIMUM HORIZONTAL CLEARANCE OF 4'-0" SHALL BE MAINTAINED FROM THE CURB TO THE FACE OF THE TRANSFORMER BASE.
2. MOUNTING HEIGHT SHALL BE DETERMINED BASED ON MANUFACTURER'S RECOMMENDATIONS BASED ON LATERAL OFFSET.
3. SET UP VIRTUAL DETECTION LOOPS ACCORDING TO THE REQUIREMENTS OF THE MVDS USERS MANUAL.
4. ALL EQUIPMENT CONNECTIONS SHOULD BE MADE ACCORDING TO MANUFACTURER RECOMMENDATIONS.

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

DESIGN ENGINEER: NATHAN J. MOZELESKI, P.E.
FL. LICENSE NO.: 83308

MOUNTING DETAILS (2)

SHEET NO.: T-24

"PIGGY BACK" CABINET

REFER TO IT-27

COMPOSITE (24 VDC, RS-485)

COMPOSITE (24 VDC, RS-485)

MID-BLOCK MVDS (TYP) - QUANTITY AS NOTED IN THE PLANS

COMPOSITE (24 VDC, RS-485)

COMPOSITE (24 VDC, RS-485)

REFER TO IT-27

MID-BLOCK MVDS (TYP) - QUANTITY AS NOTED IN THE PLANS

SPD (MVDS)

PWR (24 VDC)

PWR (24 VDC)

RS-485

RS-485

POWER SUPPLY (VDC)

DEVICE SERVER

PWR (120 VAC)

CAT-6 (10/100)

PWR (24 VDC)

ATC SIGNAL CONTROLLER

MALFUNCTION MANAGEMENT UNIT

VEHICLE DETECTION SYSTEM IN-CABINET EQUIPMENT

CAT-6 (10/100)

CAT-6 (10/100)

CAT-6 (10/100)

PWR (120 VAC)

MANAGED FIELD ETHERNET SWTICH

PWR (120 VAC)

POWER SUPPLY (VDC)

PWR (120 VAC)

ANCILLARY POWER STRIP

BLUETOOTH / RSU

CAT-6 (POE+)

SPD (BT/RSU)

CAT-6 (POE+)

CV PROCESSOR

CAT-6 (10/100)

PWR (120 VAC)

DUPLEX RECEPTACLE (POWER PANEL)

SPD (CCTV)

CAT-6 (POE+)

CAT-6 (POE+)

CCTV CAMERA

NEW NEMA TYPE 6 SIGNAL CABINET
HONORE AVE. AT COOPER CREEK BLVD.

UNINTERRUPTIBLE POWER SUPPLY

PWR (48 VDC)

CAT-6 (10/100)

PWR (120 VAC)

PWR (120 VAC)

TO BATTERY ARRAY

AUTOMATIC TRANSFER SWITCH

TO POWER PANEL IN CONTROLLER CABINET

PWR (120 VAC)

FROM POWER PANEL IN CONTROLLER CABINET

PWR (120 VAC)

NOTES:

1. STANDARD SIGNALIZATION EQUIPMENT INCLUDED AS PART OF THE CONTROLLER CABINET ASSEMBLY (I.E., POWER SUPPLY, PEDESTRIAN AND VEHICLE DETECTION SYSTEMS) ARE NOT DEPICTED AND SHALL BE PROVIDED AS PART OF A COMPLETE ASSEMBLY.

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

DESIGN ENGINEER: NATHAN J. MOZELESKI, P.E.
FL. LICENSE NO.: 83308

WIRING DIAGRAM (1)

SHEET NO.: T-25

REFER TO IT-27

COMPOSITE (24 VDC, RS-485)

COMPOSITE (24 VDC, RS-485)

MID-BLOCK MVDS (TYP) - QUANTITY AS NOTED IN THE PLANS

RS-485 SPD (MVDS)

DC SPD (MVDS)

ATC SIGNAL CONTROLLER

MALFUNCTION MANAGEMENT UNIT

PWR (24 VDC)

RS-485

CAT-6 (10/100)

CAT-6 (10/100)

CAT-6 (10/100)

POWER SUPPLY (VDC)

DEVICE SERVER

MANAGED FIELD ETHERNET SWTICH

PWR (120 VAC)

PWR (120 VAC)

CAT-6 (10/100)

PWR (24 VDC)

ANCILLARY POWER STRIP

BLUETOOTH / RSU

POWER SUPPLY (VDC)

PWR (120 VAC)

SPD (BT/RSU)

CAT-6 (POE+)

CAT-6 (POE+)

CV PROCESSOR

CAT-6 (10/100)

PWR (120 VAC)

DUPLEX RECEPTACLE (POWER PANEL)

SPD (CCTV)

CAT-6 (POE+)

CAT-6 (POE+)

CCTV CAMERA

EXISTING TRAFFIC SIGNAL CABINET
HONORE AVE. AT SHOPPING CENTER ENTRANCE

NOTES:
1. EXISTING STANDARD SIGNALIZATION EQUIPMENT INCLUDED AS PART OF THE CONTROLLER CABINET ASSEMBLY (I.E., POWER SUPPLY, PEDESTRIAN AND VEHICLE DETECTION SYSTEMS) ARE NOT DEPICTED INTENTIONALLY.

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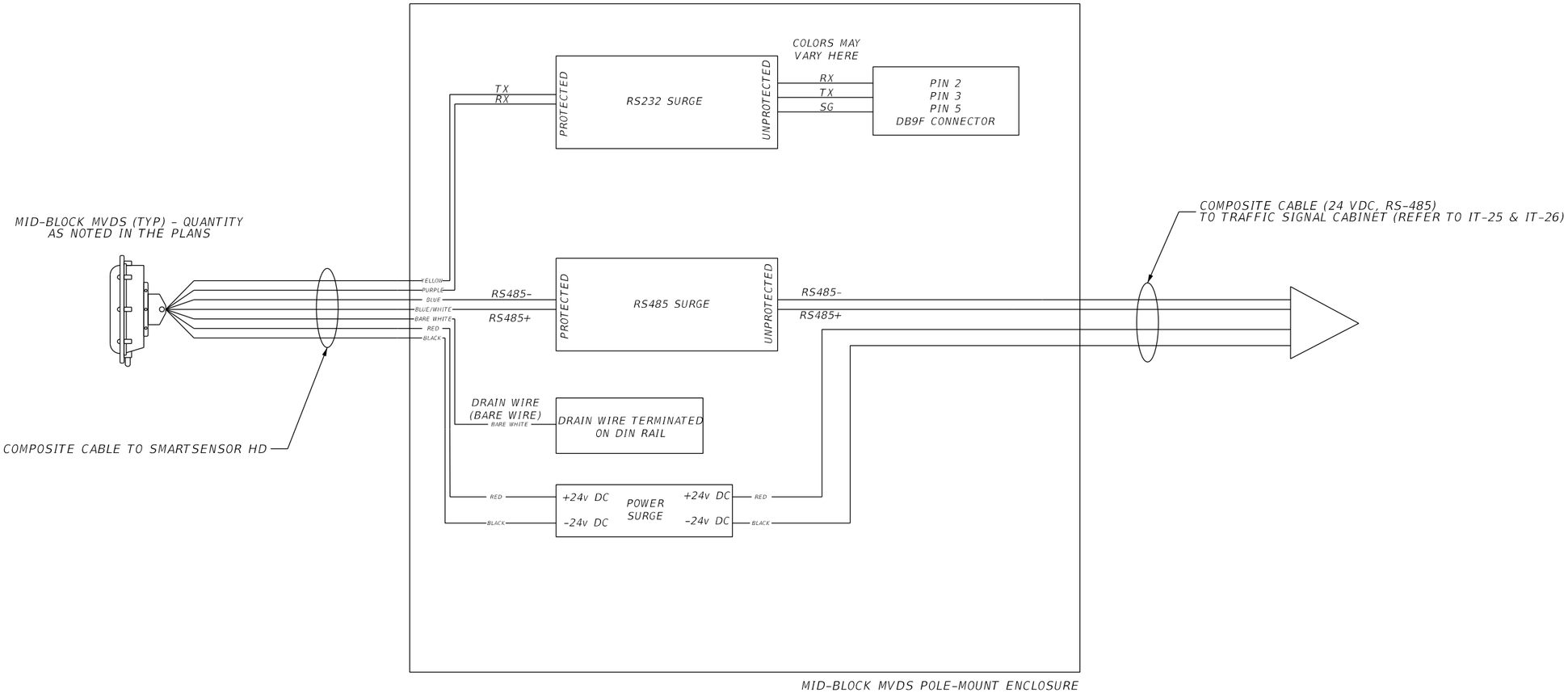
Manatee County
PUBLIC WORKS DEPARTMENT
ENGINEERING SERVICES
1022 26th Avenue East, Bradenton, FL 34208

DESIGN ENGINEER: NATHAN J. MOZELESKI, P.E.
FL. LICENSE NO.: 83308

WIRING DIAGRAM (2)

SHEET NO.: T-26



NOTES:
1. COLOR SCHEME SHOWN SHALL BE COORDINATED AND FINALIZED WITH MVDS MANUFACTURER.

NO.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: NJM
DRAWN BY: JR
CHECKED BY: PJM

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482 SOUTH KELLER RD, ORLANDO, FL 32810
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DATE: NOVEMBER 18, 2020
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Manatee County
PUBLIC WORKS DEPARTMENT
ENGINEERING SERVICES
1022 26th Avenue East, Bradenton, FL 34208

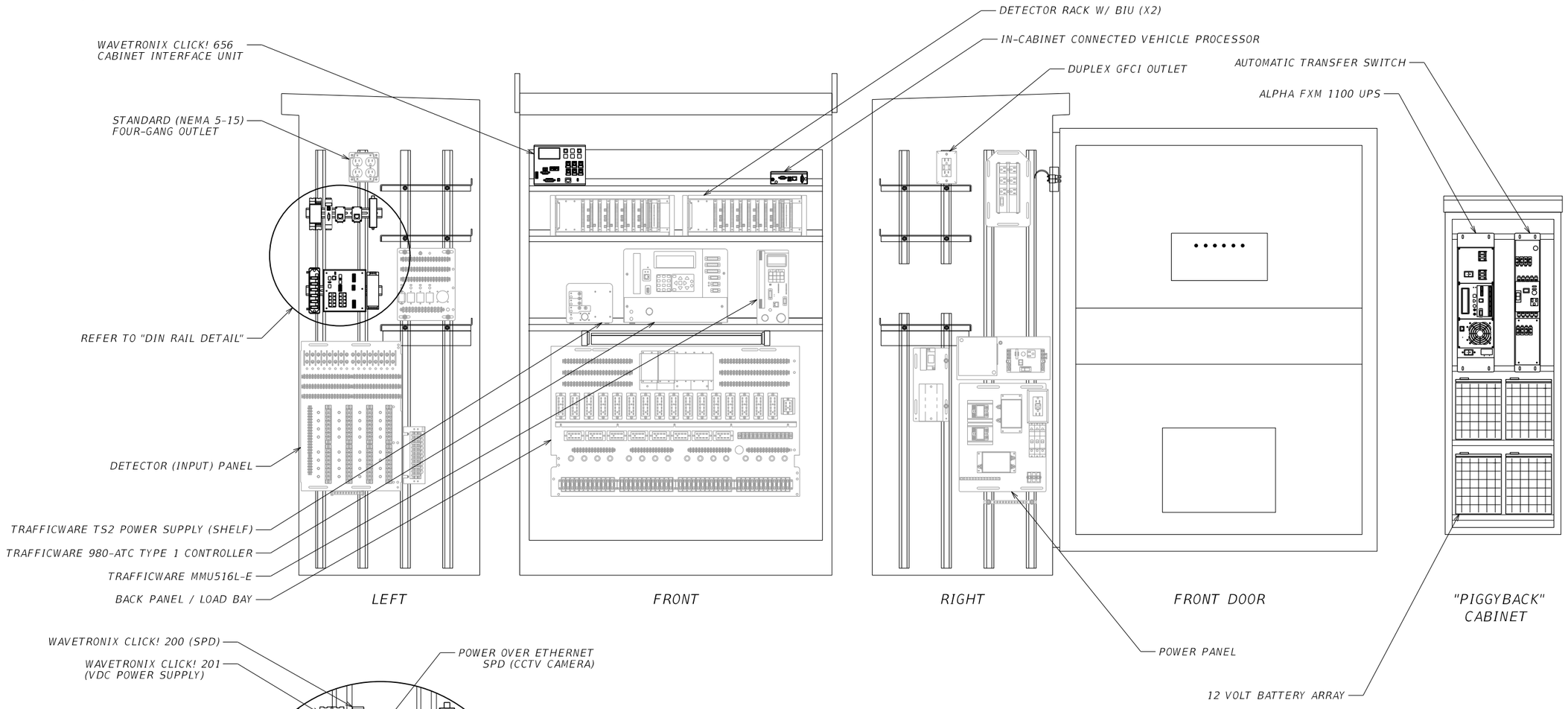
DESIGN ENGINEER: NATHAN J. MOZELESKI, P.E.
FL. LICENSE NO.: 83308

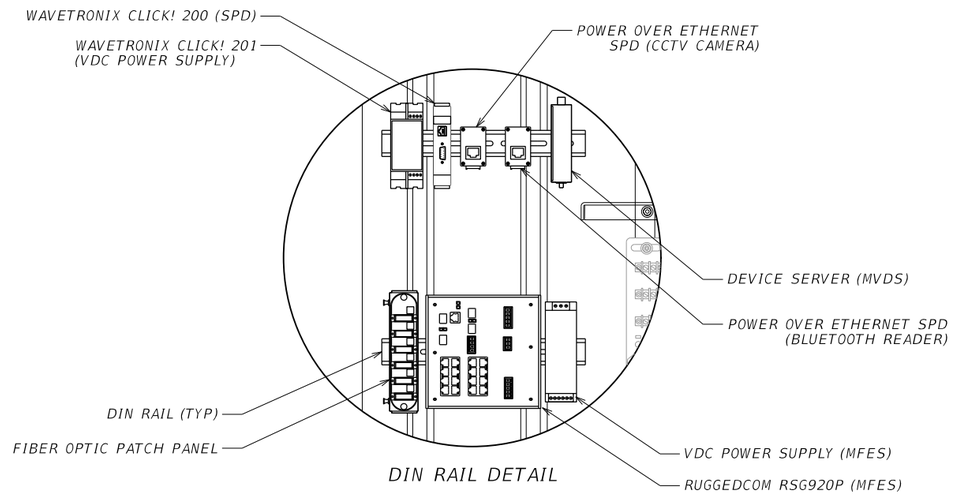
WIRING DIAGRAM (3)

SHEET NO.: T-27

HONORE AVE. AT COOPER CREEK BLVD

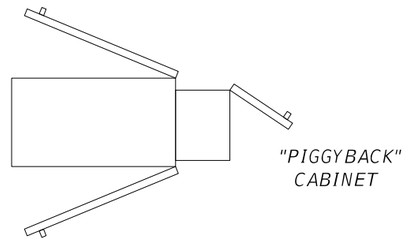
(NOT TO SCALE)





DIN RAIL DETAIL

REAR



FRONT

NOTES:

1. TRAFFIC SIGNAL EQUIPMENT SHOWN SCALED BACK IN GRAY IS FOR REFERENCE ONLY, STANDARD SIGNALIZATION EQUIPMENT INCLUDED AS PART OF THE CONTROLLER CABINET ASSEMBLY (I.E. POWER SUPPLY, PEDESTRIAN AND VEHICLE DETECTION SYSTEMS) SHALL BE PROVIDED AS PART OF A COMPLETE ASSEMBLY.

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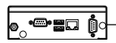
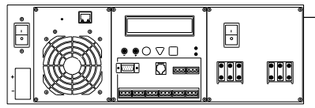
DESIGN ENGINEER: NATHAN J. MOZELESKI, P.E.
FL. LICENSE NO.: 83308

CABINET DETAIL

SHEET NO.: T-28

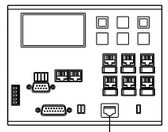
CONNECTED VEHICLE IN-CABINET PROCCESSOR





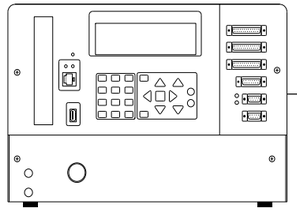
UNINTERRUPTIBLE POWER SUPPLY
(ALPHA TECHNOLOGIES FXM 1100)

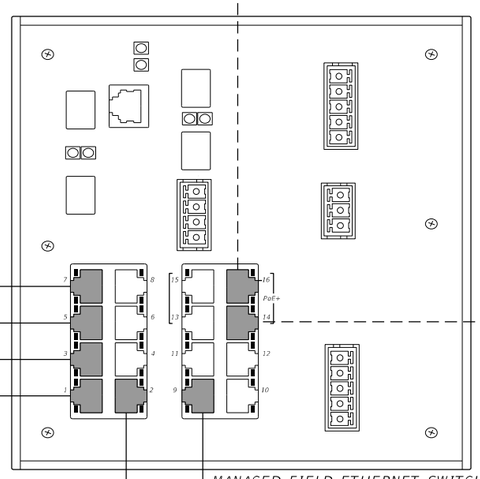
IN-CABINET DETECTION INTERFACE UNIT
(WAVETRONIX CLICK! 656)



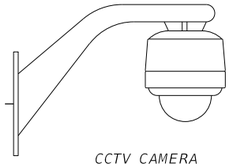
MALFUNCTION MANAGEMENT UNIT
(TRAFFICWARE MMU516L-E)

TRAFFIC SIGNAL CONTROLLER
(TRAFFICWARE 980-ATC, TS-2, TYPE 1)

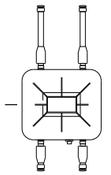




MANAGED FIELD ETHERNET SWITCH
(RUGGEDCOM RSG920P)

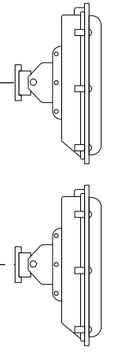


CCTV CAMERA
(BOSCH AUTODOME STARLIGHT 7000 IP)



BLUETOOTH READER / ROADSIDE UNIT
(TRAFFICCAST BLUETOAD SPECTRA RSU)

MICROWAVE VEHICLE DETECTION SYSTEM
(WAVETRONIX SMART SENSOR HD)
(NUMBER OF DEVICES VARIES)



DEVICE SERVER

LEGEND:

- CAT-6 (STANDARD)
- CAT-6 (POWER-OVER ETHERNET)
- COMPOSITE CABLE
- RJ-45 PORT (OCCUPIED)
- RJ-45 PORT (UNOCCUPIED / SPARE)

NO.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: NJM
DRAWN BY: JR
CHECKED BY: PJM

ATKINS
ATKINS NORTH AMERICA, INC.
482 SOUTH KELLER RD, ORLANDO, FL 32810
(407) 647-7275

DATE: NOVEMBER 18, 2020
PROJECT NO.: 6080560

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

DESIGN ENGINEER: NATHAN J. MOZELESKI, P.E.
FL. LICENSE NO.: 83308

MANAGED FIELD ETHERNET SWITCH DETAIL

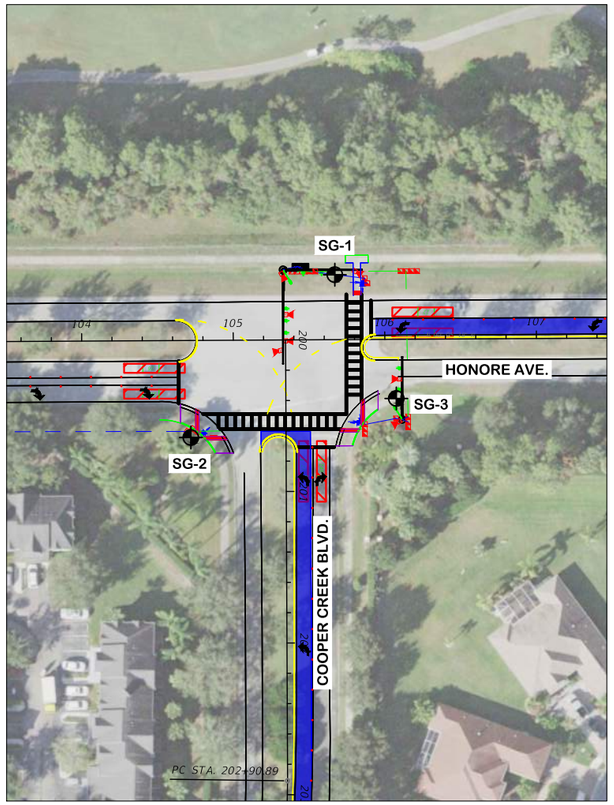
SHEET NO.: T-29

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

BORING LOCATION PLAN

0 100'

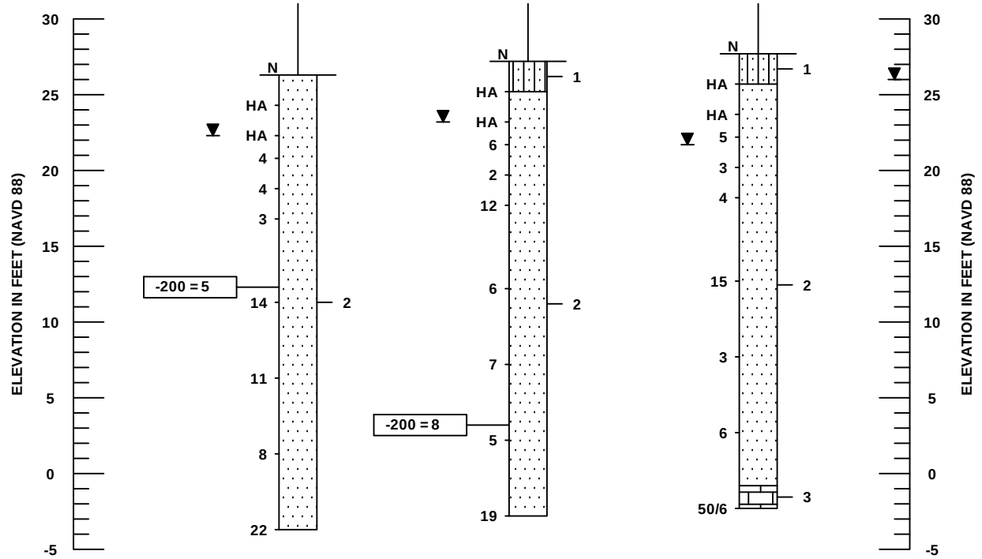
PLAN SCALE



NOTE: DESIGN FILES PROVIDED BY HARDESTY & HANOVER

SOIL PROFILES

	SG-1*	SG-2*	SG-3
BOR #			
EASTING	505863	505968	505942
NORTHING	1114593	1114498	1114634
ELEV.	26.3	27.2	27.7
DATE	7/16/2020	7/16/2020	10/21/2020
DRILLER	B. CRAIG	B. CRAIG	B. CRAIG
HAMMER	AUTOMATIC	AUTOMATIC	AUTOMATIC
RIG	D-25	D-25	D-25



RECOMMENDED SOIL PARAMETERS

BORING NUMBER	DEPTH (FT)	N	SOIL CLASSIFICATION	SOIL UNIT WEIGHT (PCF)		SOIL ANGLE OF FRICTION (DEGREES)	COHESION (PSF)
				ϒ SAT	ϒ SUB		
SG-1	0 TO 13.5 13.5 TO 30	HA TO 4 8 TO 22	SP/SP-SM SP/SP-SM	102 112	40 50	28 30	0 0
SG-2	0 TO 28.5 28.5 TO 30	HA TO 12 19	SP/SP-SM/SM SP/SP-SM	105 115	43 53	29 32	0 0
SG-3	0 TO 28.5 28.5 TO 30	HA TO 15 50/6	SP/SP-SM/SM SP/SP-SM	105 120	43 58	29 33	0 0

ENVIRONMENTAL CLASSIFICATION:
SUBSTRUCTURE CONCRETE: MODERATELY AGGRESSIVE
(pH = 5.9, RESISTIVITY = 590 OHM-CM, SULFATES = 1380 PPM)
SUBSTRUCTURE STEEL: EXTREMELY AGGRESSIVE
(pH = 5.9, RESISTIVITY = 590 OHM-CM)

SOIL TEST RESULTS:

RESISTIVITY	590 TO 2,300 OHM-CM
CHLORIDES	15 PPM
SULFATES	510 TO 1,380 PPM
pH	5.9 TO 6.4

LEGEND

1 GRAY TO BROWN SAND TO SAND WITH SILT FREQUENTLY WITH CLAY NODULES, LIMEROCK FRAGMENTS AND/OR SHELL (SP/SP-SM/SM) [FILL]

2 GRAY TO BROWN SAND TO SAND WITH SILT, OCCASIONALLY WITH SHELL (SP/SP-SM)

3 GRAY CEMENTED SAND/SHELL (SP/SP-SM)

APPROXIMATE LOCATION OF SPT BORING

SP UNIFIED SOIL CLASSIFICATION SYSTEM (ASTM D 2488) GROUP SYMBOL AS DETERMINED BY VISUAL REVIEW AND LABORATORY TESTING ON SELECTED SAMPLES FOR CONFIRMATION OF VISUAL REVIEW

N SPT N-VALUE IN BLOWS/FOOT FOR 12 INCHES OF PENETRATION (UNLESS OTHERWISE NOTED)

GROUNDWATER LEVEL ENCOUNTERED DURING INVESTIGATION

50/4 NUMBER OF BLOWS FOR 4 INCHES OF PENETRATION

HA HAND AUGERED TO VERIFY UTILITY CLEARANCES

-200 PERCENT PASSING #200 SIEVE

NAVD 88 NORTH AMERICAN VERTICAL DATUM OF 1988

GNA GROUNDWATER NOT APPARENT DUE TO DRILLING METHOD USED

NOTES:

1. LOCATIONS AND ELEVATIONS OF THE BORINGS DENOTED WITH AN ASTERISK (*) WERE SURVEYED BY THE PROJECT SURVEYOR. THE LOCATIONS AND ELEVATIONS OF THE REMAINING BORINGS WERE ESTIMATED USING GPS COORDINATES OBTAINED IN THE FIELD WITH A HAND-HELD, NON-SURVEY GRADE GARMIN ETREX DEVICE IN CONJUNCTION WITH PROJECT DESIGN FILES AND SHOULD BE CONSIDERED APPROXIMATE.

2. BASED ON A REVIEW OF THE "POTENTIOMETRIC SURFACE ELEVATION OF THE UPPER FLORIDAN AQUIFER, WEST-CENTRAL FLORIDA" MAP PUBLISHED BY THE USGS, THE POTENTIOMETRIC SURFACE ELEVATION OF THE UPPER FLORIDAN AQUIFER IN THE PROJECT VICINITY IS REPORTED UP TO APPROXIMATELY +25 FEET, NGVD 29. ARTESIAN FLOW CONDITIONS WERE NOT ENCOUNTERED DURING OUR FIELD EXPLORATION; HOWEVER, THE CONSTRUCTION EQUIPMENT AND METHODS SHOULD BE CAPABLE OF HANDLING A POTENTIOMETRIC LEVEL UP TO +25 FEET, NGVD 29 AT NO ADDITIONAL COST TO THE OWNER.

3. DUE TO THE VERY LOOSE CONDITIONS OF THE SOILS ENCOUNTERED IN THE BORINGS, CONCRETE VOLUME OVERRUNS MAY OCCUR DURING THE SHAFT INSTALLATION PROCESS .

4. TEMPORARY CASING METHODS FOR SHAFT INSTALLATION MAY BE REQUIRED IN ORDER TO PREVENT THE COLLAPSE OF THE LOOSE SANDY SOILS AND/OR GROUNDWATER INTRUSION DURING SHAFT CONSTRUCTION.

AUTOMATIC HAMMER	
GRANULAR MATERIALS-RELATIVE DENSITY	SPT (BLOWS/FT.)
VERY LOOSE	LESS THAN 3
LOOSE	3 TO 8
MEDIUM	8 TO 24
DENSE	24 TO 40
VERY DENSE	GREATER THAN 40
SILTS AND CLAYS CONSISTENCY	SPT (BLOWS/FT.)
VERY SOFT	LESS THAN 1
SOFT	1 TO 3
FIRM	3 TO 6
STIFF	6 TO 12
VERY STIFF	12 TO 24
HARD	GREATER THAN 24

NO.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: SW
DRAWN BY: SW
CHECKED BY: DN

TIERRA
7351 Temple Terrace Highway
Tampa, Florida 33637
Phone: 813-989-1354 Fax: 813-989-1355
FL Cert. No.: 6486

DATE: OCT. 2020
PROJECT NO.: 6080560

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

DESIGN ENGINEER: JOSEPH R. ANTINORI, P.E.
FL. LICENSE NO.: 73176

HONORE AVENUE AT COOPER CREEK BOULEVARD
REPORT OF CORE BORINGS

SHEET NO.: T-30