

INDEX OF SIGNALIZATION PLANS

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SIGNALIZATION PLANS
FINANCIAL PROJECT ID 441781-1-58-01
HARTWOOD MARSH ROAD - PHASE 1
FROM SR 25 (US 27) TO MAJESTIC ISLE DR

**SIGNALIZATION PLANS
ENGINEER OF RECORD:**

Q. AMIN AHMED, P.E.
 P.E. NO.: 52564
 STANLEY CONSULTANTS, INC.
 80 SPRING VISTA DRIVE
 DEBARY, FL 32713

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

GOVERNING STANDARD PLANS:

Florida Department of Transportation, FY 2025-26 Standard Plans for Road and Bridge Construction and applicable Interim Revisions (IRs).

Standard Plans for Road Construction and associated IRs are available at the following website: <http://www.fdot.gov/design/standardplans>

GOVERNING STANDARD SPECIFICATIONS:

Florida Department of Transportation, FY 2025-26 Standard Specifications for Road and Bridge Construction at the following website: <http://www.fdot.gov/programmanagement/Implemented/SpecBooks>

CONSTRUCTION CONTRACT NO.	FISCAL YEAR	SHEET NO.
	26	T-1

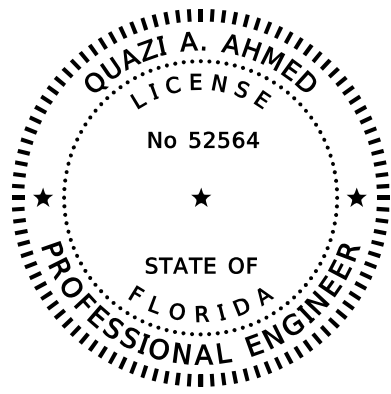
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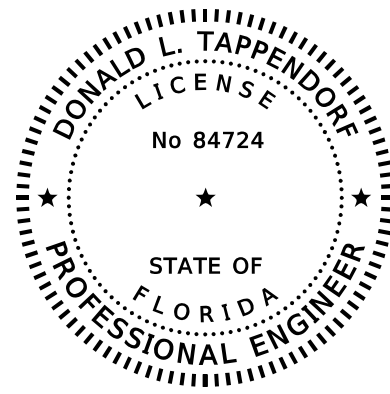
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STANLEY CONSULTANTS, INC.
80 SPRING VISTA DRIVE
DEBARY, FLORIDA 32713
Q. AMIN AHMED, P.E. 52564

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

<u>SHEET NO.</u>	<u>SHEET DESCRIPTION</u>
T-1	KEY SHEET
T-2	SIGNATURE SHEET
T-3 - T-4	TABULATION OF QUANTITIES
T-5	GENERAL NOTES
T-6 - T-14	SIGNALIZATION PLAN SHEET
T-23	GUIDE SIGN WORKSHEET
T-24	MAST ARM TABULATION
T-26	DETECTION SYSTEM WIRING DIAGRAM
T-27	DETECTION SYSTEM INSTALLATION DETAIL



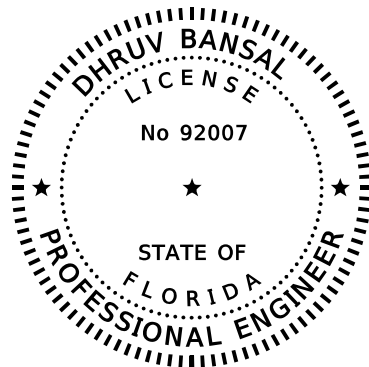
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STANLEY CONSULTANTS, INC.
80 SPRING VISTA DRIVE
DEBARY, FLORIDA 32713
DONALD L. TAPPENDORF, P.E. 84724

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<u>SHEET NO.</u>	<u>SHEET DESCRIPTION</u>
T-2	SIGNATURE SHEET
T-15 - T-21	INTERCONNECTION PLAN SHEET
T-22	SPLICING DIAGRAM



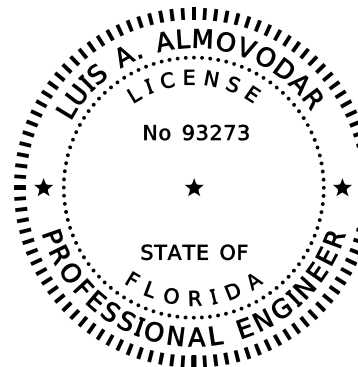
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OM ENGINEERING SERVICES, INC.
621 WASHINGTON ST # 8
ORLANDO, FL 32801
DHRUV BANSAL, P.E. NO. 92007

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

<u>SHEET NO.</u>	<u>SHEET DESCRIPTION</u>
T-2	SIGNATURE SHEET
T-25	MAST ARM ASSEMBLIES DATA TABLE



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TIERRA, INC.
591 SUSAN B. BRITT COURT
WINTER GARDEN, FLORIDA 34787
LUIS A. ALMODOVAR, P.E. NO. 93273

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

<u>SHEET NO.</u>	<u>SHEET DESCRIPTION</u>
T-2	SIGNATURE SHEET
T-28 - T-30	REPORT OF CORE BORINGS

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REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

Q. AMIN AHMED, P.E.
P.E. NO.: 52564
STANLEY CONSULTANTS, INC.
80 SPRING VISTA DRIVE
DEBARY, FL 32713

HARTWOOD MARSH ROAD

ROAD NO.	PROJECT NO.
HARTWOOD MARSH	441781-1-58-01



SIGNATURE SHEET

SHEET NO.
T-2

TABULATION OF QUANTITIES

PAY ITEM NO.	DESCRIPTION	UNIT	SHEET NUMBERS												TOTAL THIS SHEET			
			T-6		T-8		T-9		T-12		T-13		T-15		T-16		PLAN	FINAL
			PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL		
102-14	TRAFFIC CONTROL OFFICER	HR			8				8								16	
611-1-1	ITSFM SUBSURFACE DOCUMENTATION- PROJECT LENGTH	MI																
611-2-1	ITSFM LOCATION DOCUMENTATION- INTERSECTION	EA																
630-2-11	CONDUIT, FURNISH & INSTALL, OPEN TRENCH	LF	72		183				215				233		437		1140	
630-2-12	CONDUIT, FURNISH & INSTALL, DIRECTIONAL BORE	LF	309		567				415						168		1459	
630-2-14	CONDUIT, FURNISH & INSTALL, ABOVEGROUND	LF			24				24								48	
632-7-1	SIGNAL CABLE, NEW OR RECONSTRUCTED INTERSECTION, F&I	PI	1		2				1								4	
633-1-121	FIBER OPTIC CABLE, F&I, UNDERGROUND, 2-12 FIBERS	LF																
633-1-123	FIBER OPTIC CABLE, F&I, UNDERGROUND, 49-96 FIBERS	LF											604		755		1359	
633-2-31	FIBER OPTIC CONNECTION, INSTALL, SPLICE	EA											72				72	
633-3-11	FIBER OPTIC CONNECTION HARDWARE, F&I, SPLICE ENCLOSURE	EA											1				1	
633-3-12	FIBER OPTIC CONNECTION HARDWARE, F&I, SPLICE TRAY	EA											6				6	
633-3-13	FIBER OPTIC CONNECTION HARDWARE, F&I, PRETERMINATED CONNECTOR ASSEMBLY	EA																
633-3-16	FIBER OPTIC CONNECTION HARDWARE, F&I, PATCH PANEL, FIELD TERMINATED	EA																
633-3-17	FIBER OPTIC CONNECTION HARDWARE, F&I, CONNECTOR PANEL	EA																
633-6	FIBER OPTIC CABLE LOCATOR	DA																
635-2-11	PULL & SPLICE BOX, F&I, 13"x24" COVER SIZE	EA	10		23				26								59	
635-2-12	PULL & SPLICE BOX, F&I, 24" X 36" COVER SIZE	EA	1		1				1				2		3		8	
635-2-13	PULL & SPLICE BOX, F&I, 30"x60" ROUND	EA			1				1								2	
639-1-122	ELECTRICAL POWER SERVICE, F&I, UNDERGROUND, METER PURCHASED BY CONTRACTOR	AS			2				1								3	
639-2-1	ELECTRICAL SERVICE WIRE, FURNISH & INSTALL	LF			113				44								157	
639-3-11	ELECTRICAL SERVICE DISCONNECT, F&I, POLE MOUNT	EA			2				1								3	
641-2-12	PRESTRESSED CONCRETE POLE, F&I, TYPE P-11 SERVICE POLE (12' HEIGHT)	EA			2				1								3	
641-2-80	PRESTRESSED CONCRETE POLE, COMPLETE POLE REMOVAL- POLE 30' AND GREATER	EA			2				2								4	
646-1-11	ALUMINUM SIGNALS POLE, PEDESTAL	EA	4		6				8								18	
646-1-60	ALUMINUM SIGNALS POLE, REMOVE	EA	4						3								7	
649-21-9	STEEL MAST ARM ASSEMBLY, FURNISH AND INSTALL, DOUBLE ARM 50'-50'	EA			1												1	
649-21-10	STEEL MAST ARM ASSEMBLY, FURNISH AND INSTALL, SINGLE ARM 60'	EA							1								1	
649-21-13	STEEL MAST ARM ASSEMBLY, FURNISH AND INSTALL, DOUBLE ARM 60'-50'	EA			1												1	
649-21-15	STEEL MAST ARM ASSEMBLY, FURNISH AND INSTALL, SINGLE ARM 70'	EA							1								1	
649-21-18	STEEL MAST ARM ASSEMBLY, FURNISH AND INSTALL, SINGLE ARM 70'-50'	EA			1												1	
649-21-21	STEEL MAST ARM ASSEMBLY, FURNISH AND INSTALL, SINGLE ARM 78'	EA							2								2	
650-1-14	TRAFFIC SIGNAL, F&I, ALUMINUM, 3 SECTION, 1 WAY	AS	1					10					11				22	
650-1-16	TRAFFIC SIGNAL, F&I, ALUMINUM, 4 SECTION, 1 WAY	AS						2					2				4	
653-1-11	PEDESTRIAN DETECTOR, F&I, LED COUNTDOWN, 1 WAY	AS	4					4					8				16	
653-1-12	PEDESTRIAN DETECTOR, F&I, LED COUNTDOWN, 2 WAY	AS						2									2	
660-3-11	VEHICLE DETECTION SYSTEM- MICROWAVE, FURNISH & INSTALL CABINET EQUIPMENT	EA			1				1								2	
660-3-12	VEHICLE DETECTION SYSTEM- RADAR, FURNISH & INSTALL ABOVE GROUND EQUIPMENT	EA						3					4				7	
663-1-111	SIGNAL PRIORITY AND PREEMPTION SYSTEM, F&I, OPTICAL, CABINET EQUIPMENT	EA			2				1								3	
663-1-112	SIGNAL PRIORITY AND PREEMPTION SYSTEM, F&I, OPTICAL, DETECTOR	EA			5				4								9	
665-1-12	PEDESTRIAN DETECTOR, FURNISH & INSTALL, ACCESSIBLE	EA	8		8				8								24	
665-1-60	PEDESTRIAN DETECTOR, REMOVE- POLE/PEDESTAL TO REMAIN	EA	4														4	
670-5-111	TRAFFIC CONTROLLER ASSEMBLY, F&I, NEMA, 1 PREEMPTION	AS							1								1	
670-5-112	TRAFFIC CONTROLLER ASSEMBLY, F&I, NEMA, 2 PREEMPTION	AS			1												1	
670-5-600	TRAFFIC CONTROLLER ASSEMBLY, REMOVE CONTROLLER WITH CABINET	AS							1								1	
684-1-1	MANAGED FIELD ETHERNET SWITCH, FURNISH & INSTALL	EA																
685-1-13	UNINTERRUPTABLE POWER SUPPLY, F&I, LINE INTERACTIVE WITH CABINET	EA			1				1								2	
685-2-1	REMOTE POWER MANAGEMENT UNIT- RPMU, FURNISH AND INSTALL	EA	1														1	
700-3-201	SIGN PANEL, FURNISH & INSTALL OVERHEAD MOUNT, UP TO 12 SF	EA						3									3	
700-5-22	INTERNALLY ILLUMINATED SIGN, F&I, OH MOUNT 12-18 SF	AS						4					4				8	
700-141-360	ENHANCED HIGHWAY SIGN ASSEMBLY, AC POWERED, F&I OVERHEAD MOUNT, BLANK OUT SIGN <12 SF	EA						1									1	

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REVISIONS DATE DESCRIPTION DATE DESCRIPTION				Q. AMIN AHMED, P.E. P.E. NO.: 52564 STANLEY CONSULTANTS, INC. 80 SPRING VISTA DRIVE DEBARY, FL 32713	HARTWOOD MARSH ROAD ROAD NO. PROJECT NO. HARTWOOD MARSH 441781-1-58-01		TABULATION OF QUANTITIES	SHEET NO. T-3
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TABULATION OF QUANTITIES

PAY ITEM NO.	DESCRIPTION	UNIT	SHEET NUMBERS												TOTAL THIS SHEET		GRAND TOTAL	
			T-17		T-18		T-19		T-20		T-21		PLAN	FINAL	PLAN	FINAL		
			PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL						
102-14	TRAFFIC CONTROL OFFICER	HR															16	
611-1-1	ITSFM SUBSURFACE DOCUMENTATION- PROJECT LENGTH	MI															0.75	
611-2-1	ITSFM LOCATION DOCUMENTATION- INTERSECTION	EA															3	
630-2-11	CONDUIT, FURNISH & INSTALL, OPEN TRENCH	LF	473		602		478		342		393					2288	3428	
630-2-12	CONDUIT, FURNISH & INSTALL, DIRECTIONAL BORE	LF	147				125		259							531	1990	
630-2-14	CONDUIT, FURNISH & INSTALL, ABOVEGROUND	LF															48	
632-7-1	SIGNAL CABLE, NEW OR RECONSTRUCTED INTERSECTION, F&I	PI															4	
633-1-121	FIBER OPTIC CABLE, F&I, UNDERGROUND, 2-12 FIBERS	LF	262								310					572	572	
633-1-123	FIBER OPTIC CABLE, F&I, UNDERGROUND, 49-96 FIBERS	LF	920		652		753		701		643					3669	5028	
633-2-31	FIBER OPTIC CONNECTION, INSTALL, SPLICE	EA	24								18					42	114	
633-3-11	FIBER OPTIC CONNECTION HARDWARE, F&I, SPLICE ENCLOSURE	EA	1								1					2	3	
633-3-12	FIBER OPTIC CONNECTION HARDWARE, F&I, SPLICE TRAY	EA	2								2					4	10	
633-3-13	FIBER OPTIC CONNECTION HARDWARE, F&I, PRETERMINATED CONNECTOR ASSEMBLY	EA	12								12					24	24	
633-3-16	FIBER OPTIC CONNECTION HARDWARE, F&I, PATCH PANEL, FIELD TERMINATED	EA	1								1					2	2	
633-3-17	FIBER OPTIC CONNECTION HARDWARE, F&I, CONNECTOR PANEL	EA	1								1					2	2	
633-6	FIBER OPTIC CABLE LOCATOR	DA															250	
635-2-11	PULL & SPLICE BOX, F&I, 13"x24" COVER SIZE	EA															59	
635-2-12	PULL & SPLICE BOX, F&I, 24" X 36" COVER SIZE	EA	2		1		3		2		1					9	17	
635-2-13	PULL & SPLICE BOX, F&I, 30"x60" ROUND	EA															2	
639-1-122	ELECTRICAL POWER SERVICE, F&I, UNDERGROUND, METER PURCHASED BY CONTRACTOR	AS															3	
639-2-1	ELECTRICAL SERVICE WIRE, FURNISH & INSTALL	LF															157	
639-3-11	ELECTRICAL SERVICE DISCONNECT, F&I, POLE MOUNT	EA															3	
641-2-12	PRESTRESSED CONCRETE POLE, F&I, TYPE P-II SERVICE POLE (12' HEIGHT)	EA															3	
641-2-80	PRESTRESSED CONCRETE POLE, COMPLETE POLE REMOVAL- POLE 30' AND GREATER	EA															4	
646-1-11	ALUMINUM SIGNALS POLE, PEDESTAL	EA															18	
646-1-60	ALUMINUM SIGNALS POLE, REMOVE	EA															7	
649-21-9	STEEL MAST ARM ASSEMBLY, FURNISH AND INSTALL, DOUBLE ARM 50'-50'	EA															1	
649-21-10	STEEL MAST ARM ASSEMBLY, FURNISH AND INSTALL, SINGLE ARM 60'	EA															1	
649-21-13	STEEL MAST ARM ASSEMBLY, FURNISH AND INSTALL, DOUBLE ARM 60'-50'	EA															1	
649-21-15	STEEL MAST ARM ASSEMBLY, FURNISH AND INSTALL, SINGLE ARM 70'	EA															1	
649-21-18	STEEL MAST ARM ASSEMBLY, FURNISH AND INSTALL, SINGLE ARM 70'-50'	EA															1	
649-21-21	STEEL MAST ARM ASSEMBLY, FURNISH AND INSTALL, SINGLE ARM 78'	EA															2	
650-1-14	TRAFFIC SIGNAL, F&I, ALUMINUM, 3 SECTION, 1 WAY	AS															22	
650-1-16	TRAFFIC SIGNAL, F&I, ALUMINUM, 4 SECTION, 1 WAY	AS															4	
653-1-11	PEDESTRIAN DETECTOR, F&I, LED COUNTDOWN, 2 WAY	AS															16	
653-1-12	PEDESTRIAN DETECTOR, F&I, LED COUNTDOWN, 1 WAY	AS															2	
660-3-11	VEHICLE DETECTION SYSTEM- MICROWAVE, FURNISH & INSTALL CABINET EQUIPMENT	EA															2	
660-3-12	VEHICLE DETECTION SYSTEM- RADAR, FURNISH & INSTALL ABOVE GROUND EQUIPMENT	EA															7	
663-1-111	SIGNAL PRIORITY AND PREEMPTION SYSTEM, F&I, OPTICAL, CABINET EQUIPMENT	EA															3	
663-1-112	SIGNAL PRIORITY AND PREEMPTION SYSTEM, F&I, OPTICAL, DETECTOR	EA															9	
665-1-12	PEDESTRIAN DETECTOR, FURNISH & INSTALL, ACCESSIBLE	EA															24	
665-1-60	PEDESTRIAN DETECTOR, REMOVE- POLE/PEDESTAL TO REMAIN	EA															4	
670-5-111	TRAFFIC CONTROLLER ASSEMBLY, F&I, NEMA, 1 PREEMPTION	AS															1	
670-5-112	TRAFFIC CONTROLLER ASSEMBLY, F&I, NEMA, 2 PREEMPTION	AS															1	
670-5-600	TRAFFIC CONTROLLER ASSEMBLY, REMOVE CONTROLLER WITH CABINET	AS															1	
684-1-1	MANAGED FIELD ETHERNET SWITCH, FURNISH & INSTALL	EA	1								1					2	2	
685-1-13	UNINTERRUPTABLE POWER SUPPLY, F&I, LINE INTERACTIVE WITH CABINET	EA															2	
685-2-1	REMOTE POWER MANAGEMENT UNIT- RPMU, FURNISH AND INSTALL	EA															1	
700-3-201	SIGN PANEL, F&I, OVERHEAD, SPAN, UP TO 12 SF	EA															3	
700-5-22	INTERNALLY ILLUMINATED SIGN, F&I, OH MOUNT 12-18 SF	EA															8	
700-141-360	ENHANCED HIGHWAY SIGN ASSEMBLY, AC POWERED, F&I OVERHEAD MOUNT, BLANK OUT SIGN <12 SF	EA															1	

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<table border="1"> <thead> <tr> <th colspan="4">REVISIONS</th> </tr> <tr> <th>DATE</th> <th>DESCRIPTION</th> <th>DATE</th> <th>DESCRIPTION</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>				REVISIONS				DATE	DESCRIPTION	DATE	DESCRIPTION					Q. AMIN AHMED, P.E. P.E. NO.: 52564 STANLEY CONSULTANTS, INC. 80 SPRING VISTA DRIVE DEBARY, FL 32713		HARTWOOD MARSH ROAD <hr/> ROAD NO. PROJECT NO. HARTWOOD MARSH 441781-1-58-01				TABULATION OF QUANTITIES		SHEET NO. T-4	
REVISIONS																									
DATE	DESCRIPTION	DATE	DESCRIPTION																						

GENERAL NOTES:

1. A PRE-CONSTRUCTION MEETING SHALL BE SCHEDULED WITH THE LAKE COUNTY TRAFFIC OPERATIONS AT (352) 742-1766, PRIOR TO ANY CONSTRUCTION.
2. IT SHALL BE NOTED THAT NO TEST BORINGS WERE MADE WHERE CONDUIT RUNS ARE TO BE INSTALLED. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO EXAMINE THE JOB SITE CONDITIONS PRIOR TO SUBMITTING BID PROPOSALS.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING LAKE COUNTY TRAFFIC OPERATIONS, AT (352) 742-1766, 48 HOURS IN ADVANCE OF ALL PHASES OF CONSTRUCTION INCLUDING AND NOT LIMITED TO, INSTALLING SIGNAL POLES, GROUND RODS, UNDERGROUND CONDUIT, AND SIGNAL HEAD ASSEMBLIES INSTALLATION.
4. DURING CONSTRUCTION PEDESTRIAN AND VEHICULAR TRAFFIC SHALL BE MAINTAINED IN ACCORDANCE WITH THE FDOT TRAFFIC DESIGN STANDARDS.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ACQUIRING ALL NECESSARY PERMITS INCLUDING THE ELECTRIC PERMIT. THE APPLICATION FOR POWER SHOULD BE COORDINATED WITH LAKE COUNTY TRAFFIC OPERATIONS.
6. THE EXACT LOCATIONS OF ALL UTILITIES IS THE RESPONSIBILITY OF THE CONTRACTOR PRIOR TO BEGINNING OF CONSTRUCTION.
7. THE CONTRACTOR SHALL STAKE ALL POLE LOCATIONS AND HAVE IT APPROVED BY LAKE COUNTY TRAFFIC OPERATIONS.
8. THE CONTRACTOR SHALL NOTIFY THE APPROPRIATE UTILITY DEPARTMENT AT LEAST 48 HOURS HOLES IN ADVANCE OF POLE SETTING OPERATIONS WHERE A CONFLICT WITH OVERHEAD ELECTRICAL CONDUCTORS IS EXPECTED AND WHEN JOINT USE POLES ARE TO BE USED.
9. ALL MATERIALS AND HARDWARE SHALL BE F.D.O.T. APPROVED, AND PRE-APPROVED BY LAKE COUNTY TRAFFIC OPERATIONS.
10. ANY STRIPING/PAVEMENT MARKINGS OR LANDSCAPING DESTROYED BY THE CONTRACTOR DURING CONSTRUCTION SHALL BE RESTORED AT THE CONTRACTOR'S EXPENSE.
11. THE COST FOR THE USE OF "TRAFFIC CONTROL OFFICER" IN THE EVENT OF LANE CLOSURES SHALL BE INCIDENTAL TO THE WORK AND WILL NOT BE PAID SEPARATELY.
12. THE CONTRACTOR SHALL FURNISH LAKE COUNTY TRAFFIC OPERATIONS WITH EMERGENCY CONTACTS AND PHONE NUMBERS AND HAVE AN IMSA LEVEL II CERTIFIED SIGNAL TECHNICIAN ON CALL WITHIN A TWO HOUR MINIMUM RESPONSE TIME.
13. THE NEW TRAFFIC SIGNAL SHALL FLASH NOT LESS THAN 7 DAYS AND NO MORE THAN 14 DAYS PRIOR TO SIGNAL TURN ON INSPECTION. THE CONTRACTOR SHALL NOTIFY LAKE COUNTY TRAFFIC ENGINEERING WHEN THE SIGNAL IS READY FOR INSPECTION. LAKE COUNTY TRAFFIC ENGINEERING WILL COMPLETE THE INSPECTION WITHIN 7 DAYS OF NOTIFICATION WHEN SIGNAL IS DEEMED READY FOR FULL OPERATION BY LAKE COUNTY TRAFFIC ENGINEERING. THE SIGNAL SHALL BE TURNED ON TO FLASH MODE UNTIL THE FINAL ACCEPTANCE. REMOVE THE EXISTING STOP SIGNS (REFER TO S&PM PLANS) ON FINAL ACCEPTANCE DATE.

PULL BOXES:

1. PULL BOX COVERS SHALL BE FDOT APPROVED NON-METALLIC WITH RECESSED COVER LOGO "TRAFFIC SIGNAL" OR "FIBER OPTICS" AS APPROPRIATE.
2. PULL BOXES SHALL BE LOCATED AWAY FROM EDGE OF PAVEMENT, OR BEHIND A CURB WHEN POSSIBLE, ATTEMPTING TO KEEP FROM THE BOTTOM OF A DITCH OR RETENTION AREA, AND WHERE LARGE VEHICLES PARK.
3. MULTIPLE CONDUITS IN THE SAME RUN SHALL BE PAID FOR AS DIRECTIONAL BORED OR JACK AND BORED, INCLUDING THE NUMBER OF THE CONDUIT RUNS AS SHOWN IN THE PLANS. NO ADDITIONAL PAYMENT WILL BE PAID FOR THE CONDUIT RUNS.

SIGNAL/PEDESTRIAN HEADS:

1. SIGNAL HEADS SHALL BE WIRED DIRECTLY TO THE TERMINAL BLOCKS. THE USE OF "JONES" PLUGS IS PROHIBITED.
2. DISCONNECTS SHALL OPEN FROM THE SIGNAL FACE. (NOT FROM THE REAR)
3. SIGNAL HEADS SHALL BE WIRED PER IMSA NEMA PHASING, PHASE 2 AND 6 ARE TYPICALLY ASSIGNED TO MAJOR-STREET WITH PHASE 2 BEING SOUTH OR WEST BOUND THROUGH MOVEMENTS. THE USUAL CONVENTION IS FOR THROUGH PHASES TO BE NUMBERED IN THE CLOCKWISE DIRECTION STARTING WITH PHASE 2, AND THE LEFT-TURN PHASES TO BE NUMBERED IN THE CLOCKWISE DIRECTION, WITH PHASE 1 BEING ACCOMPANYING LEFT-TURN TO PHASE 6.
4. VEHICLE SIGNAL HEAD ASSEMBLIES SHALL BE BLACK, CAST ALUMINUM, WITH TUNNEL VISORS, BACKPLATES, (WITH YELLOW RETROREFLECTIVE BORDER), AND LED'S FOR ALL INDICATIONS, UNLESS OTHERWISE NOTED.

5. ALL PEDESTRIAN SIGNAL HEADS SHALL HAVE LOUVERS AND BE COUNTDOWN LED SIGNALS WITH PROPER COUNTDOWN PEDESTRIAN SIGNAGE. ALL PEDESTRIAN SIGNAL NOT MOUNTED ON SIGNAL POLES OR MAST ARM POLES SHALL BE THE BREAKAWAY TYPE COMMONLY REFERRED TO AS A "T-BASE". T-BASE WILL HAVE AN ACCESS DOOR FOR WIRING AND MAINTENANCE.

CABINET/CONTROLLER:

1. THE CABINET ASSEMBLY TEMPLE MODEL TF5116TFL02-NEMA TS2 ELS1008FLG2 DOUBLE DOOR CABINET, 67" H, FRONT & BACK DOORS TS-2-1 OR TCS MODEL # D684426B2D2PGSD-P CABINET (ZLAKECOUNTY), NEMA, TYPE 6 STRETCH, FRONT/REAR DOOR, PEC, WHITE INSIDE WITH A TS2-1 INTELIGHT-QFREE CONTROLLER XN-1 or XN-2 CONTROLLER ETHERNET ENABLED FOR COUNTY CLOSED LOOP SYSTEM, TO INCLUDE AN ETHERNET SWITCH WITH BYPASS CAPABILITIES, TO INCLUDE A GENERATOR SWITCH BOX PANEL, TYPE 6 CABINET.
2. UNINTERRUPTABLE POWER SUPPLY (UPS) SHALL BE STAND ALONE WITHIN ITS OWN CABINET, INSTALLED ON A CONCRETE PAD ADJACENT TO THE CABINET BASE. THE UPS SHALL BE ON THE FDOT APPROVED PRODUCTS LIST (APL).
3. A GENERATOR PAD, 3'X3'X4" CONCRETE SHALL BE INSTALLED WITH 5/8" EYEBOLT INSTALLED IN THE PAD ADJACENT TO CABINET BASE.
4. THE CABINET CONCRETE BASE SHALL BE A MINIMUM OF 32"X48" TO ACCOMMODATE TYPE 6 CABINETS.
5. THE CABINET DOOR SHALL OPEN AWAY FROM THE INTERSECTION WHEN POSSIBLE.
6. THE MOUNTING OF ELECTRICAL SERVICE TO THE TRAFFIC SIGNAL CABINET SHALL BE PROHIBITED.
7. AN ELECTRICAL SERVICE DISCONNECT WITH A 30 AMP BREAKER FOR THE TRAFFIC SIGNAL AND A 20 AMP BREAKER FOR THE OVERHEAD INTERNALLY ILLUMINATED STREET SIGNS SHALL BE INSTALLED AT THE TRAFFIC SIGNAL CABINET ON A SEPARATE POLE.
8. A MANUAL PUSH BUTTON CORD SHALL BE FURNISHED IN ALL CONTROLLER CABINETS.
9. GROUNDING FOR THE CONTROLLER ASSEMBLY SHALL MEASURE 5 OHMS, OR LESS.
10. THE FIRST BUFFER (BLUE BUFFER) OF SINGLE MODE FIBER SHALL BE TERMINATED IN THE CABINET USING CONNECTORS.

ILLUMINATED STREET SIGNS:

1. INTERNALLY ILLUMINATED STREET NAME SIGNS (LED), SHALL BE INSTALLED ON ARM BRACKETS ATTACHED TO THE UPRIGHTS, SWINGING FREE, POWERED BY A SEPARATE CIRCUIT BREAKER, AND BE DESIGNED AND INSTALLED IN ACCORDANCE WITH LAKE COUNTY PUBLIC WORKS INTERNALLY ILLUMINATED STREET NAME SIGN DETAIL AND SPECIFICATIONS. A PHOTOCCELL SHALL BE INSTALLED NEAR THE ELECTRIC SERVICE WITHIN REACH OF A LIFT TRUCK. CARE TO BE GIVEN TO INSTALL WHERE STREET LIGHTING DOES NOT AFFECT OPERATION.
2. THE CONTRACTOR SHALL FURNISH LAKE COUNTY TRAFFIC OPERATIONS, TWO COMPLETE SETS OF AS-BUILT PLANS THAT INCLUDE CONDUIT AND PULL BOX LOCATIONS, AT FINAL INSPECTION.


OTHER:

1. OPTICOM PREEMPTION OR EQUIVALENT SHALL BE USED WHEN EMERGENCY PREEMPTION IS REQUESTED.
2. A FIBER OPTIC VAULT AND CONDUIT INTO THE CONTROLLER ASSEMBLY SHALL BE INSTALLED.
3. FIBER SHALL BE 72SM FOR MAINLINE INSTALLATION AND 12SM FOR CONNECTION TO THE CABINET.
4. ALL DAMAGED/DESTROYED CONDUIT DURING CONSTRUCTION SHALL BE REPLACED BY CONTRACTOR.

PAY ITEM NOTES:

660-3-11, 660-3-12
 USE THE HYBRID ITERIS VANTAGE NEXT VECTOR SENSORS WITH SHELF MOUNT
 ITERIS VANTAGE NEXT VIDEO PROCESSOR, CAPABLE OF PROCESSING FOUR (4) VIDEO
 STREAMS. SYSTEM SHALL PROVIDE BOTH RADAR AND VIDEO DETECTION CAPABILITIES.

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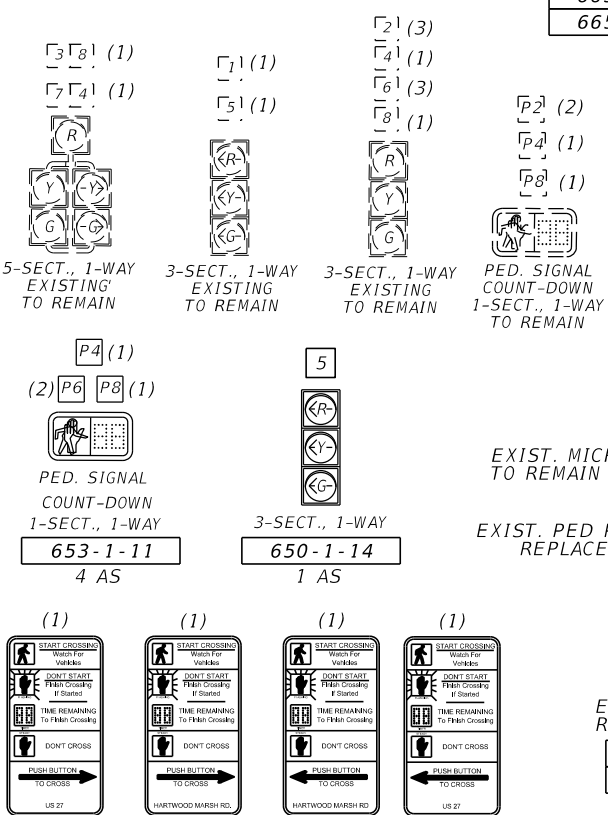
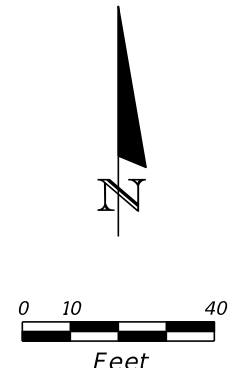
REVISIONS				O. AMIN AHMED, P.E. P.E. NO.: 52564 STANLEY CONSULTANTS, INC. 80 SPRING VISTA DRIVE DEBARY, FL 32713	HARTWOOD MARSH ROAD			GENERAL NOTES	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	PROJECT NO.			T-5
					HARTWOOD MARSH	441781-1-58-01			

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

US 27 & HARTWOOD MARSH ROAD

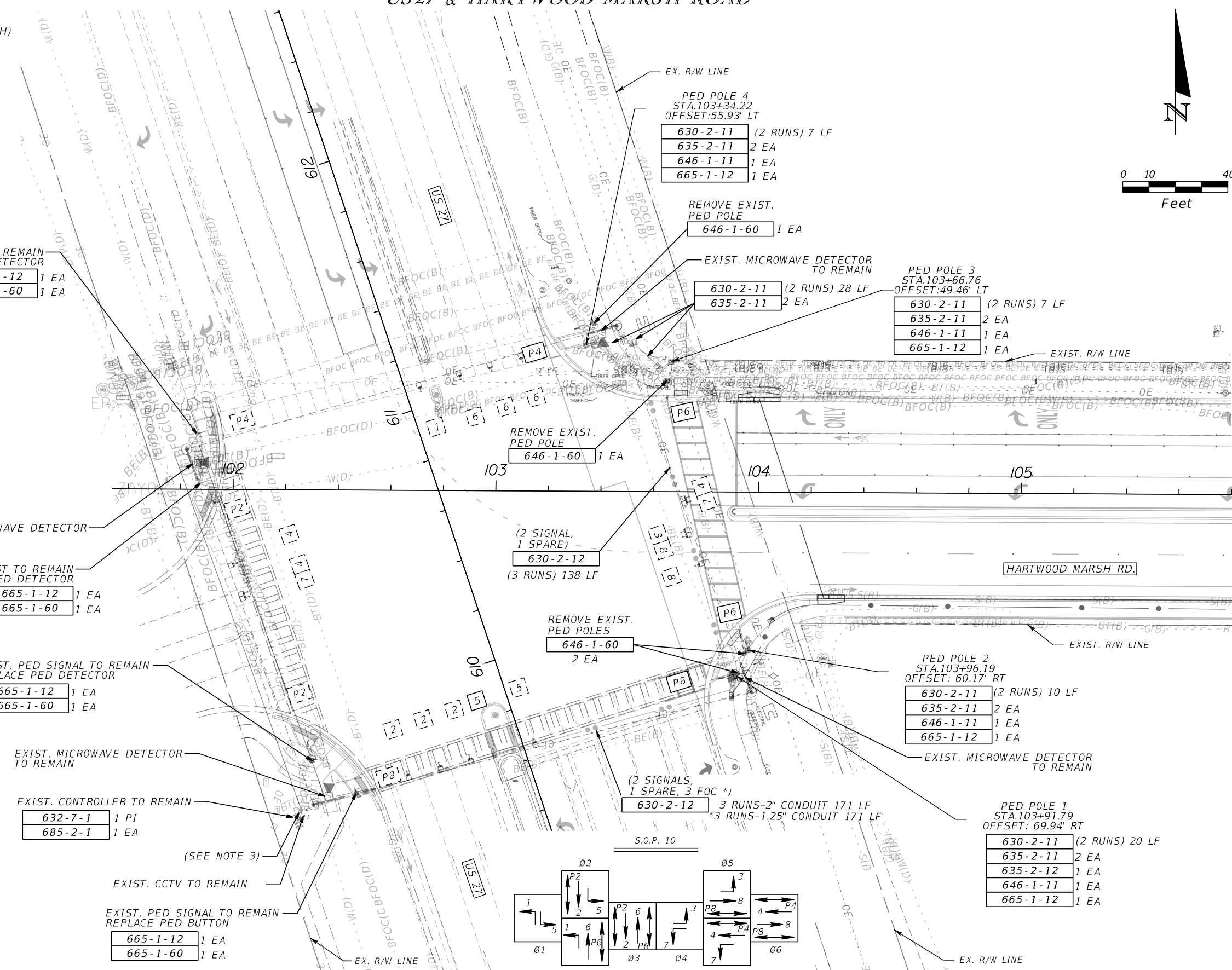
NOTES:

1. THE MAJOR STREET IS US27 (55 MPH)
THE MINOR STREET IS HARTWOOD MARSH ROAD (40 MPH)
2. FLASHING MODE:
YELLOW MOVEMENTS - 2 & 6
RED MOVEMENTS - ALL OTHERS
3. CONTRACTOR TO UTILIZE EXISTING PULL BOXES AT EXISTING CONTROLLER TO CONNECT NEW SIGNAL INTO CONTROLLER.
4. EXISTING MICROWAVE DETECTION TO BE UTILIZED FOR NEW LANES.



CONTROLLER TIMINGS								
TIMING FUNCTION	1	2	3	4	5	6	7	8
MOVEMENT NUMBER	1	2	3	4	5	6	7	8
MINIMUM GREEN								
EXTENSION								
MAXIMUM GREEN 1								
MAXIMUM GREEN 2								
YELLOW CLEARANCE								
ALL RED	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
PEDESTRIAN WALK							8	
PED. CLEARANCE							34	
RECALL								

EXISTING CONTROLLER TIMINGS TO REMAIN UNLESS SHOWN OTHERWISE.



REVISIONS

DATE	DESCRIPTION	DATE	DESCRIPTION

Q. AMIN AHMED, P.E.
P.E. NO.: 52564
STANLEY CONSULTANTS, INC.
80 SPRING VISTA DRIVE
DEBARY, FL 32713

HARTWOOD MARSH ROAD

ROAD NO.	PROJECT NO.
HARTWOOD MARSH	441781-1-58-01

SIGNALIZATION PLAN

SHEET NO.
T-6

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HARTWOOD MARSH & FIRE STATION 2 HARTWOOD MARSH & DANBURY MILL BLVD.

EXISTING CONTROLLER/CABINET TO REMAIN. UTILIZE EXISTING AND PROPOSED CONDUITS AND PULL BOXES

- (2 SIGNAL, 1 SIGN, 2 FOC, 1 OPTICOM, 1 SPARE)
- | | |
|-----------|---------------|
| 630-2-11 | (7 RUNS) 4 LF |
| 632-7-1 | 1 PI |
| 635-2-11 | 3 EA |
| 639-3-11 | 1 EA |
| 663-1-111 | 1 EA |
| 663-1-112 | 2 EA |

- | | | |
|-------|-----------|-------------------|
| 10 LF | 630-2-11 | SERVICE PEDESTAL, |
| 1 AS | 639-1-122 | UTILIZE THE SAME |
| 10 LF | 639-2-1 | POWER RUN TO THE |
| 1 EA | 641-2-12 | SERVICE PEDESTAL |

(PREEMPTION CABLE, 1 SPARE) FROM CABINET TO CABINET

- | | |
|----------|-----------------|
| 630-2-12 | (2 RUNS) 162 LF |
|----------|-----------------|

PED POLE 1
STA.: 115+05.43
OFFSET: 43.75' LT

- | | |
|-------|----------|
| 52 LF | 630-2-11 |
| 24 LF | 630-2-14 |
| 1 EA | 635-2-11 |
| 76 LF | 639-2-1 |

(3 RUNS) 8 LF
1 EA

- | | |
|----------|----------------|
| 630-2-11 | (3 RUNS) 22 LF |
| 639-2-1 | 22 LF |

PED POLE 2
STA.: 115+14.09
OFFSET: 51.22' LT

- | | |
|----------|----------------|
| 630-2-11 | (3 RUNS) 15 LF |
| 635-2-11 | 3 EA |
| 646-1-11 | 1 EA |
| 665-1-12 | 1 EA |

POLE C
STA.: 115+19.94
OFFSET: 60.52' LT
FINAL GROUND
EL. 149.65

- | | |
|-----------|---------------|
| 630-2-11 | (3 RUNS) 8 LF |
| 649-21-13 | 1 EA |

- CONTROLLER/CABINET
- | | |
|-----------|---------------|
| 630-2-11 | (8 RUNS) 5 LF |
| 632-7-1 | 1 PI |
| 635-2-11 | 4 EA |
| 635-2-12 | 1 EA |
| 660-3-11 | 1 EA |
| 663-1-111 | 1 EA |
| 663-1-112 | 3 EA |
| 670-5-112 | 1 AS |
| 685-1-13 | 1 EA |

(2 SIGNAL, 1 SIGN, 1 CAMERA, 1 SPARE)

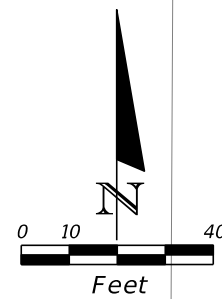
630-2-12	(5 RUNS) 73 LF
----------	----------------

PED POLE 3
STA.: 115+95.77
OFFSET: 45.48' LT

- | | |
|----------|---------------|
| 630-2-11 | (2 RUNS) 3 LF |
| 635-2-11 | 3 EA |
| 646-1-11 | 1 EA |
| 665-1-12 | 1 EA |

PED POLE 4
STA.: 116+05.90
OFFSET: 44.98' LT

- | | |
|----------|----------------|
| 630-2-11 | (2 RUNS) 10 LF |
| 646-1-11 | 1 EA |
| 665-1-12 | 1 EA |



REMOVE EXISTING SIGNAL POLES

2 EA	641-2-80
------	----------

(2 SIGNAL, 1 SIGN, 1 CAMERA, 1 SPARE)

630-2-12	(5 RUN) 119 LF
----------	----------------

(2 SIGNAL, 1 SIGN, 1 CAMERA, 1 SPARE, 3 FOC)

630-2-12	(8 RUN) 115 LF
----------	----------------

POLE A
STA.: 113+33.34
OFFSET: 56.00' RT
FINAL BACK OF
SIDEWALK
EL. 152.30'

- | | |
|----------|---------------|
| 630-2-11 | (3 RUNS) 4 LF |
| 635-2-11 | 3 EA |
| 649-21-9 | 1 EA |

NOTE:
TRAFFIC CONTROL OFFICER SERVICE IS FOR SWITCH OVER FROM EXISTING SIGNALIZATION TO NEW SIGNALIZATION. FOR MOBILIZATION AND MAINTENANCE OF TRAFFIC (MOT) REFER TO THE ROADWAY PLANS.

ALL FOC RUNS ARE 3 - 1.25" CONDUITS

8 HR 102-14

- | | |
|------|----------|
| 3 EA | 635-2-11 |
| 1 EA | 635-2-13 |

PED POLE 6
STA.: 114+93.47
OFFSET: 47.71' RT

- | | |
|----------|---------------|
| 630-2-11 | (2 RUNS) 4 LF |
| 646-1-11 | 1 EA |
| 665-1-12 | 2 EA |

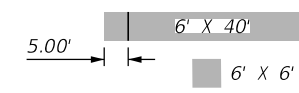
PED POLE 5
STA.: 116+21.25
OFFSET: 47.80' RT

- | | |
|----------|----------------|
| 630-2-11 | (2 RUNS) 20 LF |
| 646-1-11 | 1 EA |
| 665-1-12 | 2 EA |

POLE B
STA.: 116+14.49
OFFSET: 52.90' RT
FINAL BACK OF
SIDEWALK
EL. 145.90'

- | | |
|-----------|---------------|
| 630-2-11 | (3 RUNS) 4 LF |
| 635-2-11 | 3 EA |
| 649-21-18 | 1 EA |

DETECTION ZONES



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REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

Q. AMIN AHMED, P.E.
P.E. NO.: 52564
STANLEY CONSULTANTS, INC.
80 SPRING VISTA DRIVE
DEBARY, FL 32713

HARTWOOD MARSH ROAD	
ROAD NO.	PROJECT NO.
HARTWOOD MARSH	441781-1-58-01

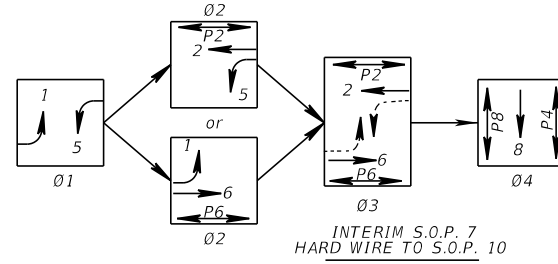
SIGNALIZATION PLAN

SHEET NO.
T-8

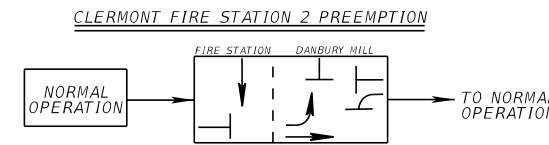
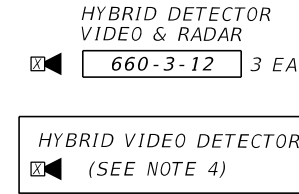
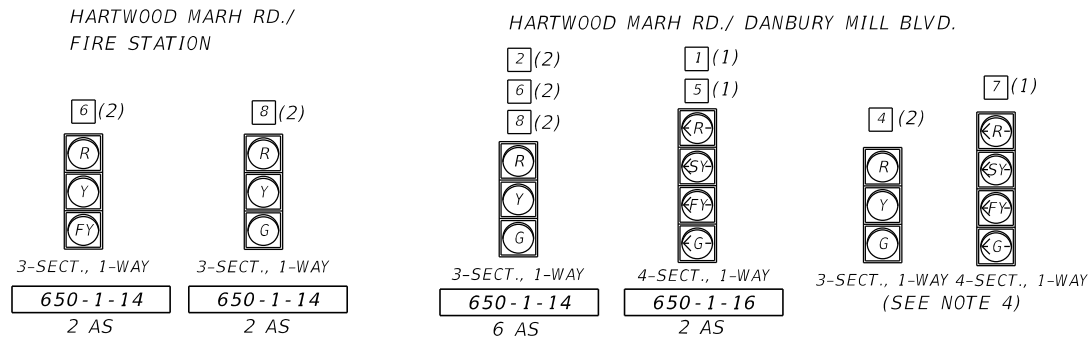
NOTES:

- MAJOR STREET IS HARTWOOD MARSH RD. (40 MPH). MINOR STREET IS DANBURY MILL BLVD. (25 MPH).
- FLASHING MODE:
YELLOW MOVEMENTS - 2 & 6
RED MOVEMENTS - 1, 5, & 8
- CABINET SHALL BE HARD WIRED TO S.O.P. 10
- ALL ITEMS (SIGNAL HEADS, SIGNS, HYBRID SENSOR) ARE SHOWN FOR INFORMATIONAL PURPOSES FOR STRUCTURAL DESIGN OF MAST ARM POLE C. ARM 2 AND ARE NOT TO BE INSTALLED ON THIS PROJECT.

HARTWOOD MARSH & FIRE STATION 2 HARTWOOD MARSH & DANBURY MILL BLVD.



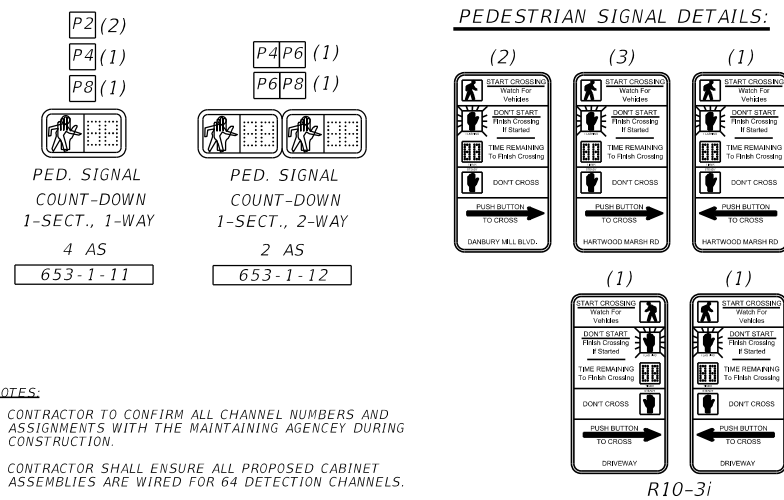
TRAFFIC SIGNAL DETAILS:



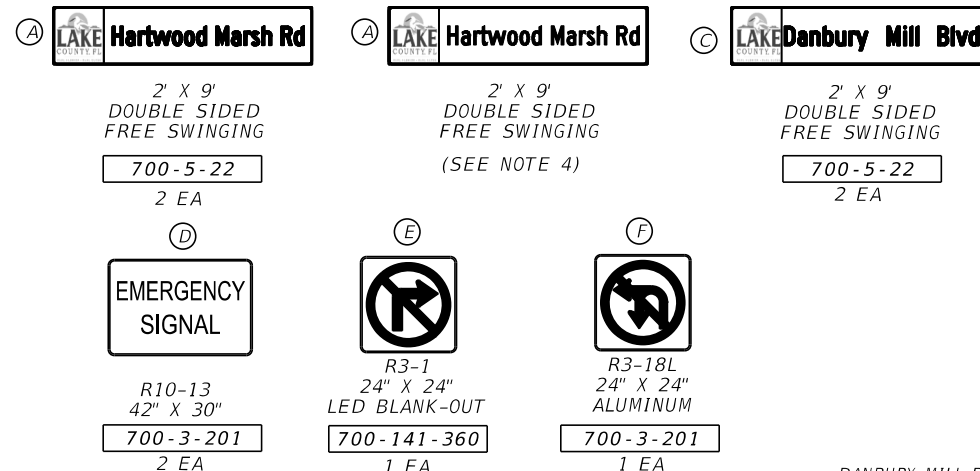
FIRE STATION SIGNAL PREEMPTION 1 PROGRAMMING TABLE

FUNCTION	PREEMPT. 1
DELAY PREEMPTION CALL (SECONDS)	0
MINIMUM GREEN BEFORE PREEMPT (SECONDS)	0
PED WALK BEFORE PREEMPT (SECONDS)	0
PED CLEAR BEFORE PREEMPT (SECONDS)	0
YELLOW CLEARANCE BEFORE PREEMPT (SECONDS)	4.4
ALL RED BEFORE PREEMPT (SECONDS)	5.0
PREEMPTION DWELL TIME (SECONDS)	20.0
YELLOW CLEARANCE AFTER PREEMPT (SECONDS)	0
ALL RED AFTER PREEMPT (SECONDS)	3.0
PRIORITY	HIGH
LOCK INPUT	ON
OVERRIDE AUTOFLASH	ON
OVERRIDE HIGHER NUMBER PREEMPT	OFF
FLASH IN DWELL	OFF

PEDESTRIAN SIGNAL DETAILS:

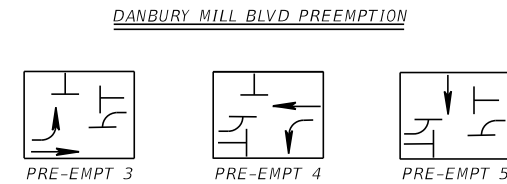


OVERHEAD SIGN DETAILS:



EMERGENCY VEHICLE PREEMPTION 2 TIMINGS

FUNCTION	PRE-EMPT 3	PRE-EMPT 4	PRE-EMPT 5	PRE-EMPT 6
DELAY	0	0	0	-
MAXIMUM PRESENCE	120	120	120	-
MINIMUM GREEN BEFORE PREEMPT	0	0	0	-
MINIMUM WALK BEFORE PREEMPT	0	0	0	-
PED CLEAR BEFORE PREEMPT	0	0	0	-
MINIMUM DWELL	10	10	10	-
LOCK INPUT	OFF	OFF	OFF	-
OVERRIDE AUTOFLASH	ON	ON	ON	-
OVERRIDE HIGHER NUMBER PREEMPT	OFF	OFF	OFF	-
FLASH IN DWELL	OFF	OFF	OFF	-



OUTPUT CONNECTION AND PROGRAMMING TABLE

CONNECT PHASE SELECTOR OUTPUT (HIGH PRIORITY)	TO CONTROLLER PREEMPTION INPUT	CONTROLLER TO DISPLAY GREENS FOR:	PRIORITY VEHICLE DIRECTION AND TURN SIGNAL ACTIVATION
OUTPUT 1	PRE-EMPT 3	PHASES 1 AND 6	EB: NO TURN SIGNAL, RT SIGNAL, OR LT SIGNAL
OUTPUT 2	PRE-EMPT 4	PHASES 2 AND 5	WB: NO TURN SIGNAL, RT SIGNAL, OR LT SIGNAL
OUTPUT 3	PRE-EMPT 5	PHASE 8	SB: NO TURN SIGNAL, RT SIGNAL, OR LT SIGNAL
OUTPUT 4	PRE-EMPT 6	-	-
OUTPUT 5 (A/P OUTPUT 1)	-	-	-
OUTPUT 6 (A/P OUTPUT 2)	-	-	-
LOGIC COMMON	LOGIC COMMON	-	-
A/P OPTO COMMON	LOGIC COMMON	-	-

- NOTES:**
- CONTRACTOR TO CONFIRM ALL CHANNEL NUMBERS AND ASSIGNMENTS WITH THE MAINTAINING AGENCY DURING CONSTRUCTION.
 - CONTRACTOR SHALL ENSURE ALL PROPOSED CABINET ASSEMBLIES ARE WIRED FOR 64 DETECTION CHANNELS.

BIU NO.	CARD NO.	CHANNEL NO.	DETECTOR	DIRECTION	MOVEMENT TYPE	APP. SPEED MPH	PROTECTED PHASE	OVERLAP	DELAY SEC.	CAMERA ID	DETECTOR SYSTEM	DISTANCE TO STOP BAR	DETECTOR TYPE	LANE TYPE	LANE NO.	
1	1	1	DZ1A	EB	L	40	1	-	5	D1	VIDEO	-5	PD	V	*	
		2	DZ1B	EB	L	40	1	-	-	-	D1	RADAR	150	QD	V	*
	2	3	DZ2A	WB	T	40	2	-	-	-	D2	VIDEO	-5	PD	V	*
		4	DZ2B	WB	T	40	2	-	-	-	D2	VIDEO	-5	PD	V	*
	3	5	DZ2C	WB	T	40	2	-	-	-	D2	RADAR	138	AD	V	*
		6	DZ2D	WB	T	40	2	-	-	-	D2	RADAR	138	AD	V	*
	4	7	DZ3A	SB	L	25	8	-	5	5	D3	VIDEO	-5	PD	V	*
		8	DZ3B	SB	L	25	8	-	5	5	D3	VIDEO	-5	PD	V	*
	5	9	DZ5B	WB	L	40	5	-	-	-	D2	RADAR	150	QD	V	*
		10	DZ6A	EB	T	40	6	-	-	-	D1	VIDEO	-5	PD	V	*
	6	11	DZ6B	EB	T	40	6	-	-	-	D1	VIDEO	-5	PD	V	*
		12	DZ6C	EB	T	40	6	-	-	-	D1	RADAR	138	AD	V	*
	7	13	DZ6D	EB	T	40	6	-	-	-	D1	RADAR	138	AD	V	*
		14	DZ6A	SB	R	25	8	-	5	5	D3	VIDEO	-5	PD	V	*
	8	15	DZ6E	EB	T	40	6	-	-	-	D1	RADAR	244	AD	V	*
		16	DZ6B	EB	T	40	6	-	-	-	D1	RADAR	244	AD	V	*
2	1	17	DZ6B	WB	T	40	2	-	-	D2	RADAR	244	AD	V	*	
		18	DZ6B	WB	T	40	2	-	-	-	D2	RADAR	244	AD	V	*
	2	19														
		20														
	3	21														
		22														
	4	23														
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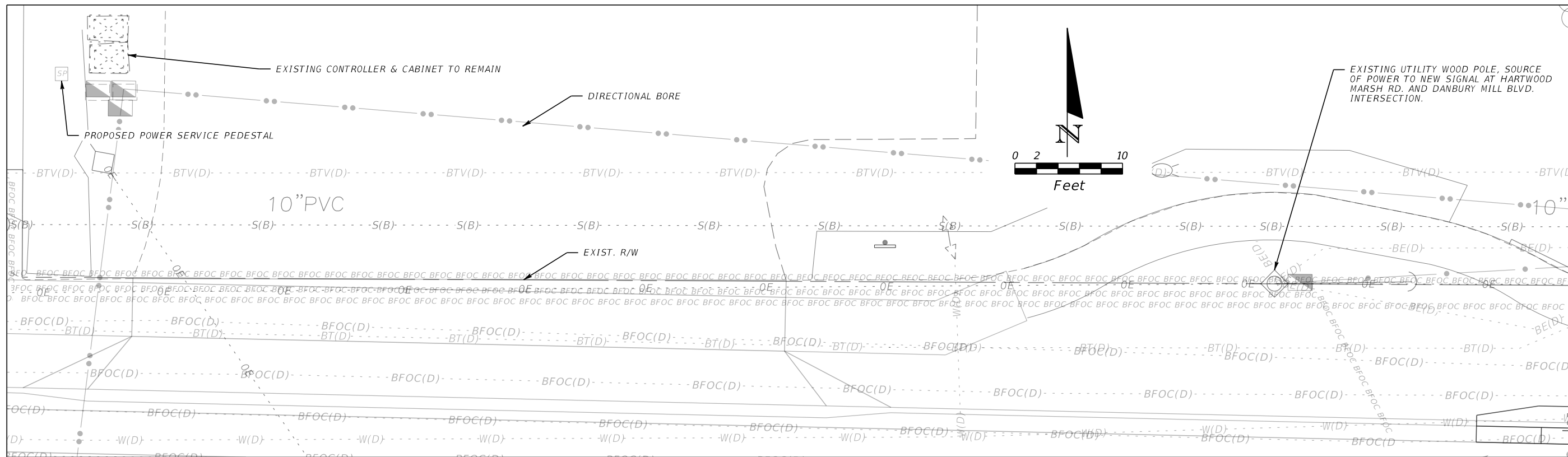
LEGEND:
 PD: PRESENCE DETECTION
 AD: ADVANCE DETECTION
 QD: QUEUE DETECTION
 V: VEHICLE
 B: BIKE
 T: THRU
 L: LEFT
 R: RIGHT
 T/L: THRU-LEFT
 L/T/R: LEFT-THRU-RIGHT

<p>REVISIONS</p> <table border="1"> <thead> <tr> <th>DATE</th> <th>DESCRIPTION</th> <th>DATE</th> <th>DESCRIPTION</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>		DATE	DESCRIPTION	DATE	DESCRIPTION					<p>O. AMIN AHMED, P.E. P.E. NO.: 52564 STANLEY CONSULTANTS, INC. 80 SPRING VISTA DRIVE DEBARY, FL 32713</p>	<p>HARTWOOD MARSH ROAD</p> <table border="1"> <tr> <th>ROAD NO.</th> <th>PROJECT NO.</th> </tr> <tr> <td>HARTWOOD MARSH</td> <td>441781-1-58-01</td> </tr> </table>	ROAD NO.	PROJECT NO.	HARTWOOD MARSH	441781-1-58-01		<p>SIGNALIZATION PLAN</p>	<p>SHEET NO. T-9</p>
DATE	DESCRIPTION	DATE	DESCRIPTION															
ROAD NO.	PROJECT NO.																	
HARTWOOD MARSH	441781-1-58-01																	

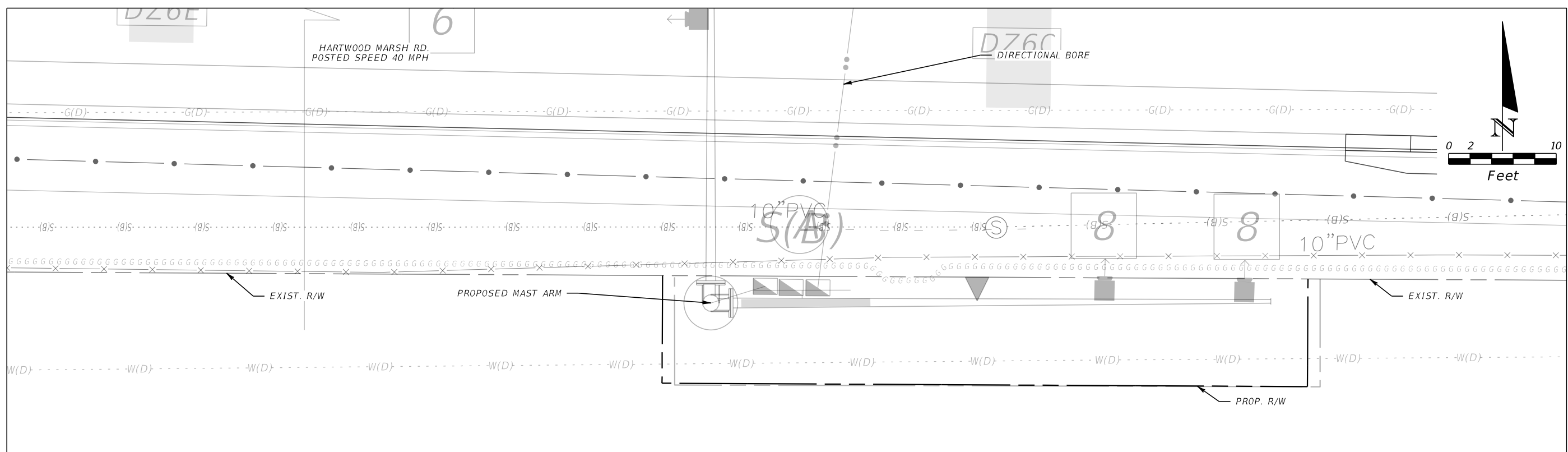
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HARTWOOD MARSH & FIRE STATION 2 NW QUADRANT



SW QUADRANT



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REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

Q. AMIN AHMED P.E.
P.E. NO.: 52564
STANLEY CONSULTANTS, INC.
80 SPRING VISTA DRIVE
DEBARY, FL 32713

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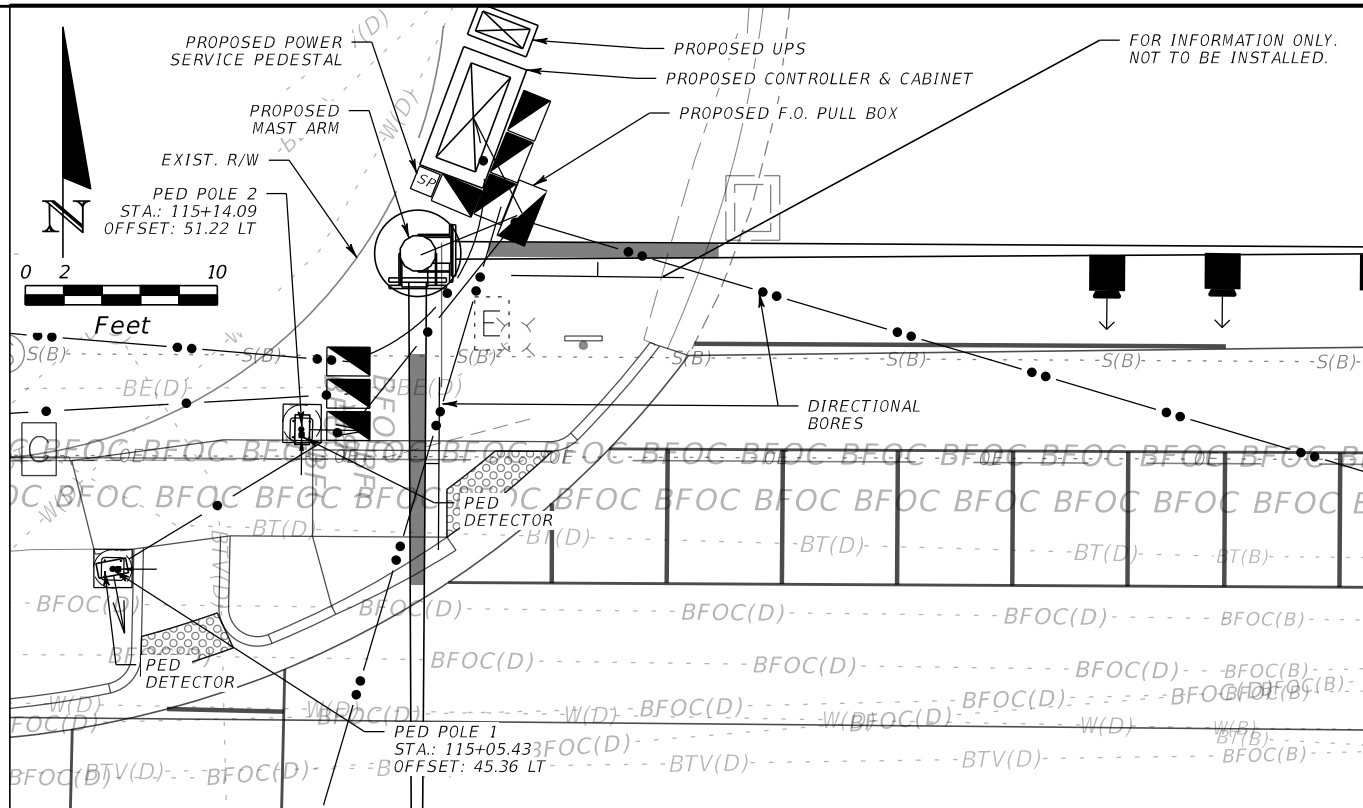
SIGNALIZATION PLAN

SHEET NO.
T-10

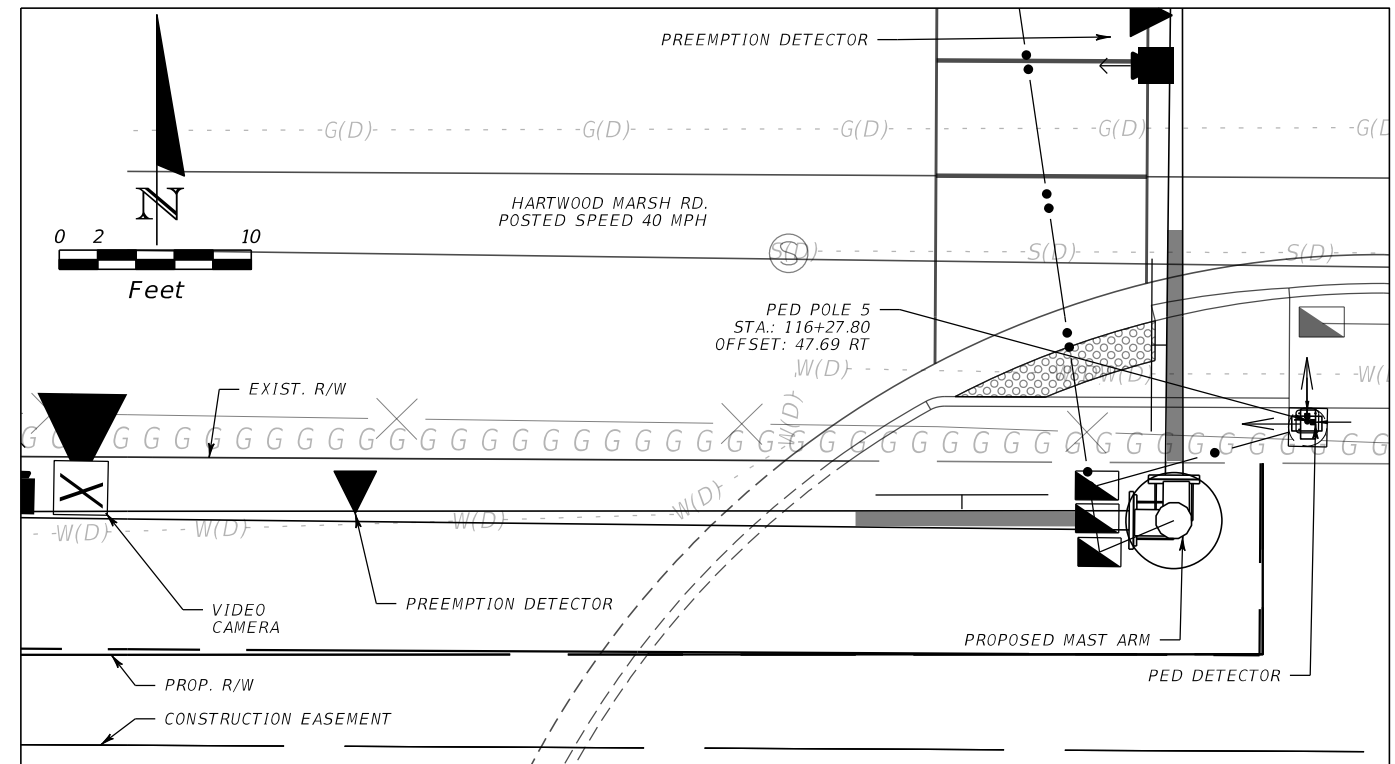
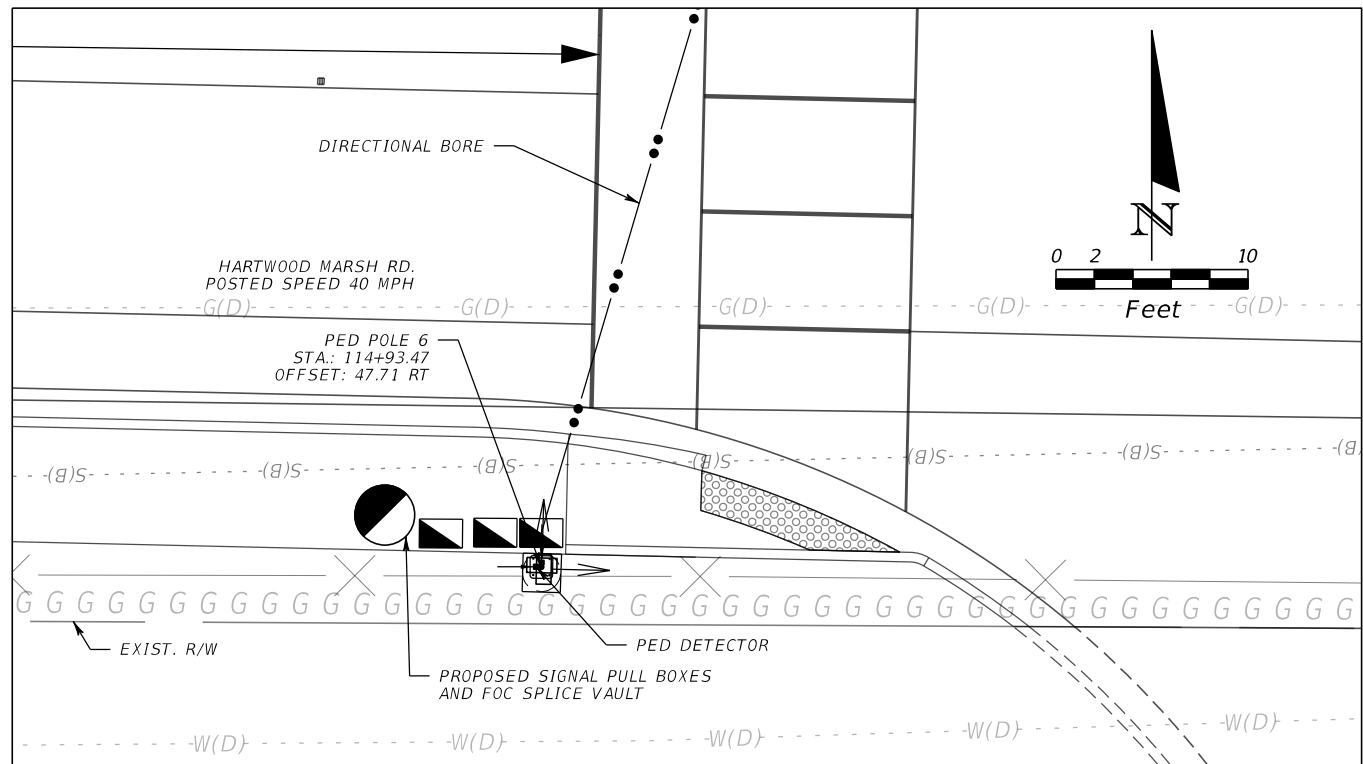
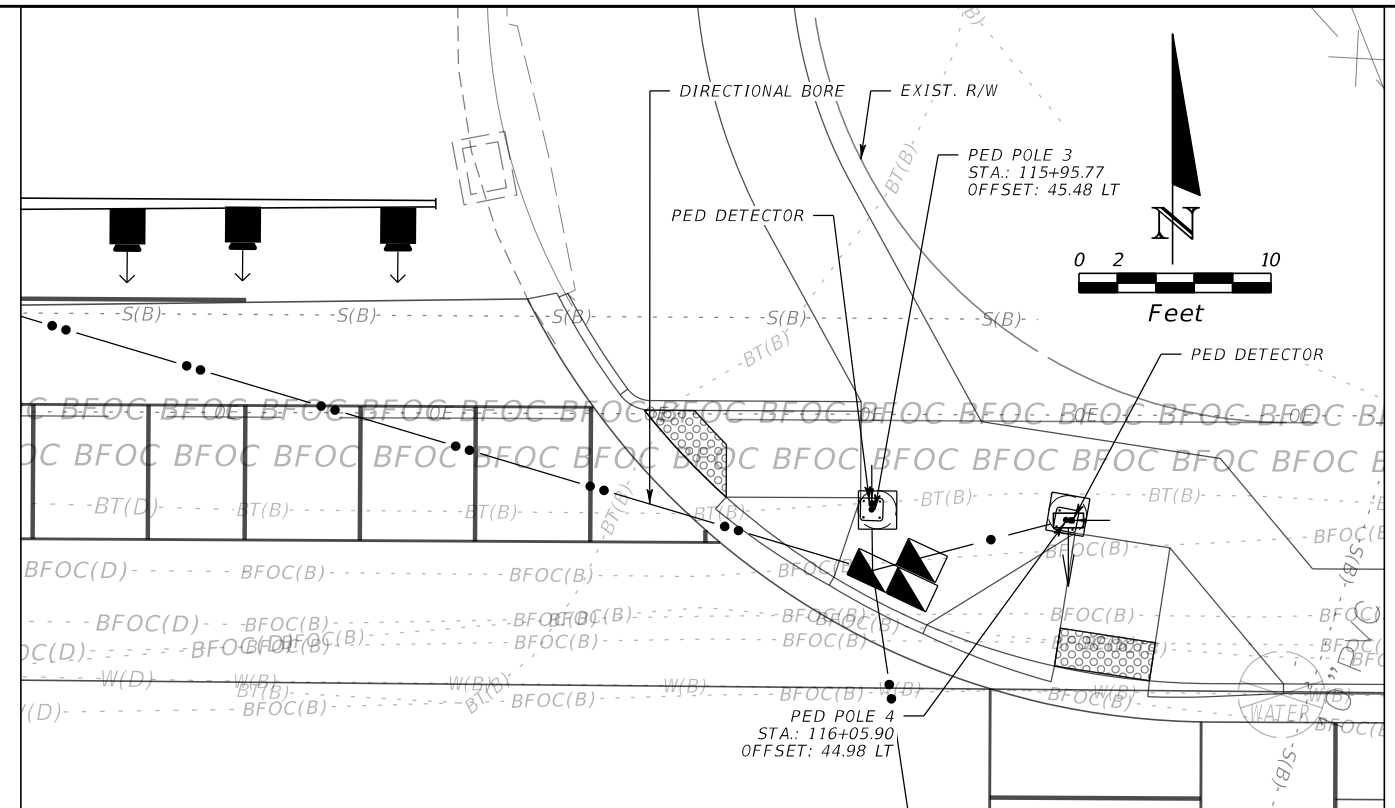
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HARTWOOD MARSH & DANBURY MILL

NORTHWEST QUADRANT



NORTHEAST QUADRANT



SOUTHWEST QUADRANT

SOUTHEAST QUADRANT

1/28/2026 9:56:52 AM c:\projects\datasource-1\common\1176310-SPDT\S604.dgn 10851

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

Q. AMIN AHMED P.E.
 P.E. NO.: 52564
 STANLEY CONSULTANTS, INC.
 80 SPRING VISTA DRIVE
 DEBARY, FL 32713

HARTWOOD MARSH ROAD	
ROAD NO.	PROJECT NO.
HARTWOOD MARSH	441781-1-58-01



SIGNALIZATION PLAN

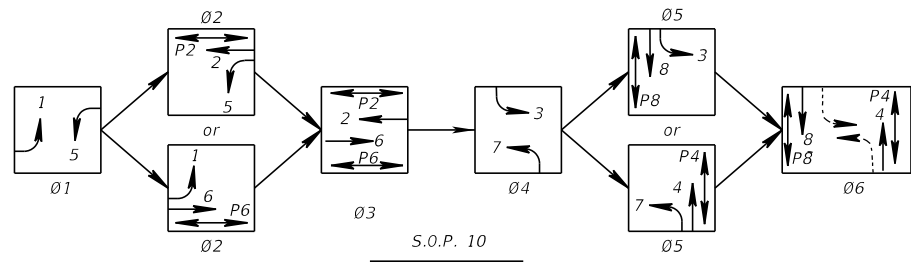
SHEET NO.
T-11

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HARTWOOD MARSH ROAD & HANCOCK ROAD

NOTES:

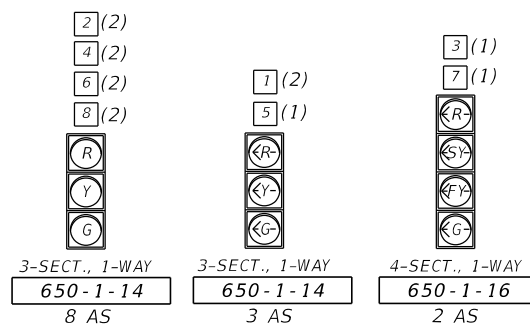
- MAJOR STREET IS HARTWOOD MARSH RD. (40 MPH)
MINOR STREET IS HANCOCK RD. (45 MPH)
- FLASHING MODE:
YELLOW MOVEMENTS - 2 & 6
RED MOVEMENTS - ALL OTHERS
- POWER SERVICE POINT TO BE DETERMINED FOLLOWING A SITE VISIT WITH THE POWER COMPANY REPRESENTATIVE.



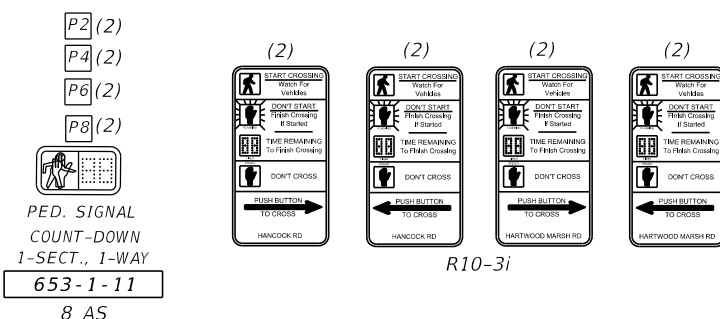
CONTROLLER TIMINGS								
TIMING FUNCTION	1	2	3	4	5	6	7	8
MOVEMENT NUMBER	1	2	3	4	5	6	7	8
MINIMUM GREEN	8	15	8	15	8	15	8	15
EXTENSION	3.5	0.5	3.0	3.0	3.5	0.5	3.0	3.0
MAXIMUM GREEN 1	30	60	30	60	30	60	30	60
MAXIMUM GREEN 2								
YELLOW CLEARANCE	4.4	4.4	4.8	4.8	4.4	4.4	4.8	4.8
ALL RED	2.7	2.0	2.5	2.0	2.6	2.0	2.4	2.0
PEDESTRIAN WALK		7		7		11		7
PED. CLEARANCE		30		38		38		38
RECALL		MIN				MIN		

SIGNAL TIMING ARE INITIAL AND MAY REQUIRE ADJUSTMENT BY THE MAINTAINING AGENCY.

TRAFFIC SIGNAL DETAILS:



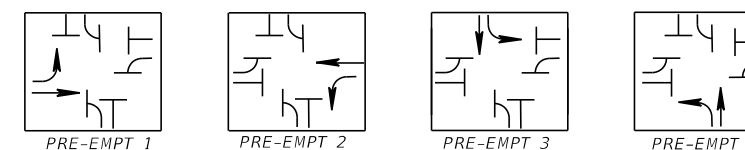
PEDESTRIAN SIGNAL DETAILS:



OVERHEAD SIGN DETAILS:



HANCOCK RD PREEMPTION



EMERGENCY VEHICLE PREEMPTION 1 TIMINGS				
FUNCTION	PRE-EMPT 1	PRE-EMPT 2	PRE-EMPT 3	PRE-EMPT 4
DELAY	0	0	0	0
MAXIMUM PRESENCE	120	120	120	120
MINIMUM GREEN BEFORE PREEMPT	0	0	0	0
MINIMUM WALK BEFORE PREEMPT	0	0	0	0
PED CLEAR BEFORE PREEMPT	0	0	0	0
MINIMUM DWELL	10	10	10	10
LOCK INPUT	OFF	OFF	OFF	OFF
OVERRIDE AUTOFLASH	ON	ON	ON	ON
OVERRIDE HIGHER NUMBER PREEMPT	OFF	OFF	OFF	OFF
FLASH IN DWELL	OFF	OFF	OFF	OFF

HYBRID DETECTOR VIDEO & RADAR
660-3-12 4 EA

LEGEND:
 PD: PRESENCE DETECTION
 AD: ADVANCE DETECTION
 QD: QUEUE DETECTION
 V: VEHICLE
 B: BIKE
 T: THRU
 L: LEFT
 R: RIGHT
 T/L: THRU-LEFT
 L/T/R: LEFT-THRU-RIGHT

NOTES:
 1. CONTRACTOR TO CONFIRM ALL CHANNEL NUMBERS AND ASSIGNMENTS WITH THE MAINTAINING AGENCY DURING CONSTRUCTION.
 2. CONTRACTOR SHALL ENSURE ALL PROPOSED CABINET ASSEMBLIES ARE WIRED FOR 64 DETECTION CHANNELS.

SIGNAL: HARTWOOD MARSH ROAD & HANCOCK ROAD																
BIU NO.	CARD NO.	CHANNEL NO.	DETECTOR	DIRECTION	MOVEMENT TYPE	APP. SPEED MPH	PROTECTED PHASE	OVERLAP	DELAY SEC.	CAMERA ID	DETECTOR SYSTEM	DISTANCE TO STOP BAR	DETECTOR TYPE	LANE TYPE	LANE NO.	
1	1	1	DZ1A	EB	L	40	1	-	-	D1	VIDEO	-5	PD	V	*	
		2	DZ1B	EB	L	40	1	-	-	D1	VIDEO	-5	PD	V	*	
	2	3	DZ1C	EB	L	40	1	-	-	D1	VIDEO	138	AD	V	*	
		4	DZ1D	EB	L	40	1	-	-	D1	VIDEO	138	AD	V	*	
	3	5	DZ2A	WB	R	40	2	-	5	D2	VIDEO	-5	PD	V	*	
		6	DZ2B	WB	T	40	2	-	-	D2	VIDEO	-5	PD	V	*	
	4	7	DZ2C	WB	T	40	2	-	-	D2	VIDEO	-5	PD	V	*	
		8	DZ2D	WB	T	40	2	-	-	D2	RADAR	138	AD	V	*	
	5	9	DZ2E	WB	T	40	2	-	-	D2	RADAR	138	AD	V	*	
		10	DZ2F	WB	T	40	2	-	-	D2	RADAR	138	AD	V	*	
	6	11	DZ3A	SB	L	45	3	-	5	D3	VIDEO	-5	PD	V	*	
		12	DZ4A	NB	R	45	4	-	5	D4	VIDEO	-5	PD	V	*	
	7	13	DZ4B	NB	T	45	4	-	-	D4	VIDEO	-5	PD	V	*	
		14	DZ4C	NB	T	45	4	-	-	D4	VIDEO	-5	PD	V	*	
	8	15	DZ5A	WB	L	40	5	-	-	D2	VIDEO	-5	PD	V	*	
		16	DZ5B	WB	L	40	5	-	-	D2	VIDEO	138	AD	V	*	
2	1	17	DZ6A	EB	R	40	6	-	5	D1	VIDEO	-5	PD	V	*	
		18	DZ6B	EB	T	40	6	-	-	D1	VIDEO	-5	PD	V	*	
	2	19	DZ6C	EB	T	40	6	-	-	D1	VIDEO	-5	PD	V	*	
		20	DZ6D	EB	T	40	6	-	-	D1	RADAR	138	AD	V	*	
	3	21	DZ6E	EB	T	40	6	-	-	D1	RADAR	138	AD	V	*	
		22	DZ6F	EB	T	40	6	-	-	D1	RADAR	138	AD	V	*	
	4	23	DZ7A	NB	L	45	7	-	5	D4	VIDEO	-5	PD	V	*	
		24	DZ8A	SB	R	45	8	-	5	D3	VIDEO	-5	PD	V	*	
	5	25	DZ8B	SB	T	45	8	-	-	D3	VIDEO	-5	PD	V	*	
		26	DZ2G	WB	T	40	6	-	-	D2	RADAR	244	AD	V	*	
	6	27	DZ2H	WB	T	40	6	-	-	D2	RADAR	244	AD	V	*	
		28	DZ6G	EB	T	40	6	-	-	D1	RADAR	244	AD	V	*	
	7	29	DZ6H	EB	T	40	6	-	-	D1	RADAR	244	AD	V	*	
		30														
	8	31														
		32														

OUTPUT CONNECTION AND PROGRAMMING TABLE			
CONNECT PHASE SELECTOR OUTPUT (HIGH PRIORITY)	TO CONTROLLER PREEMPTION INPUT	CONTROLLER TO DISPLAY GREENS FOR:	PRIORITY VEHICLE DIRECTION AND TURN SIGNAL ACTIVATION
OUTPUT 1	PRE-EMPT 1	PHASES 1 AND 6	EB: NO TURN SIGNAL, RT SIGNAL, OR LT SIGNAL
OUTPUT 2	PRE-EMPT 2	PHASES 2 AND 5	WB: NO TURN SIGNAL, RT SIGNAL, OR LT SIGNAL
OUTPUT 3	PRE-EMPT 3	PHASES 3 AND 8	SB: NO TURN SIGNAL, RT SIGNAL, OR LT SIGNAL
OUTPUT 4	PRE-EMPT 4	PHASES 7 AND 4	NB: NO TURN SIGNAL, RT SIGNAL, OR LT SIGNAL
OUTPUT 5 (A/P OUTPUT 1)	-	-	-
OUTPUT 6 (A/P OUTPUT 2)	-	-	-
LOGIC COMMON	LOGIC COMMON	-	-
A/P OPTO COMMON	LOGIC COMMON	-	-

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

O. AMIN AHMED, P.E.
 P.E. NO.: 52564
 STANLEY CONSULTANTS, INC.
 80 SPRING VISTA DRIVE
 DEBARY, FL 32713

HARTWOOD MARSH ROAD	
ROAD NO.	PROJECT NO.
HARTWOOD MARSH	441781-1-58-01

SIGNALIZATION PLAN

SHEET NO.
T-13

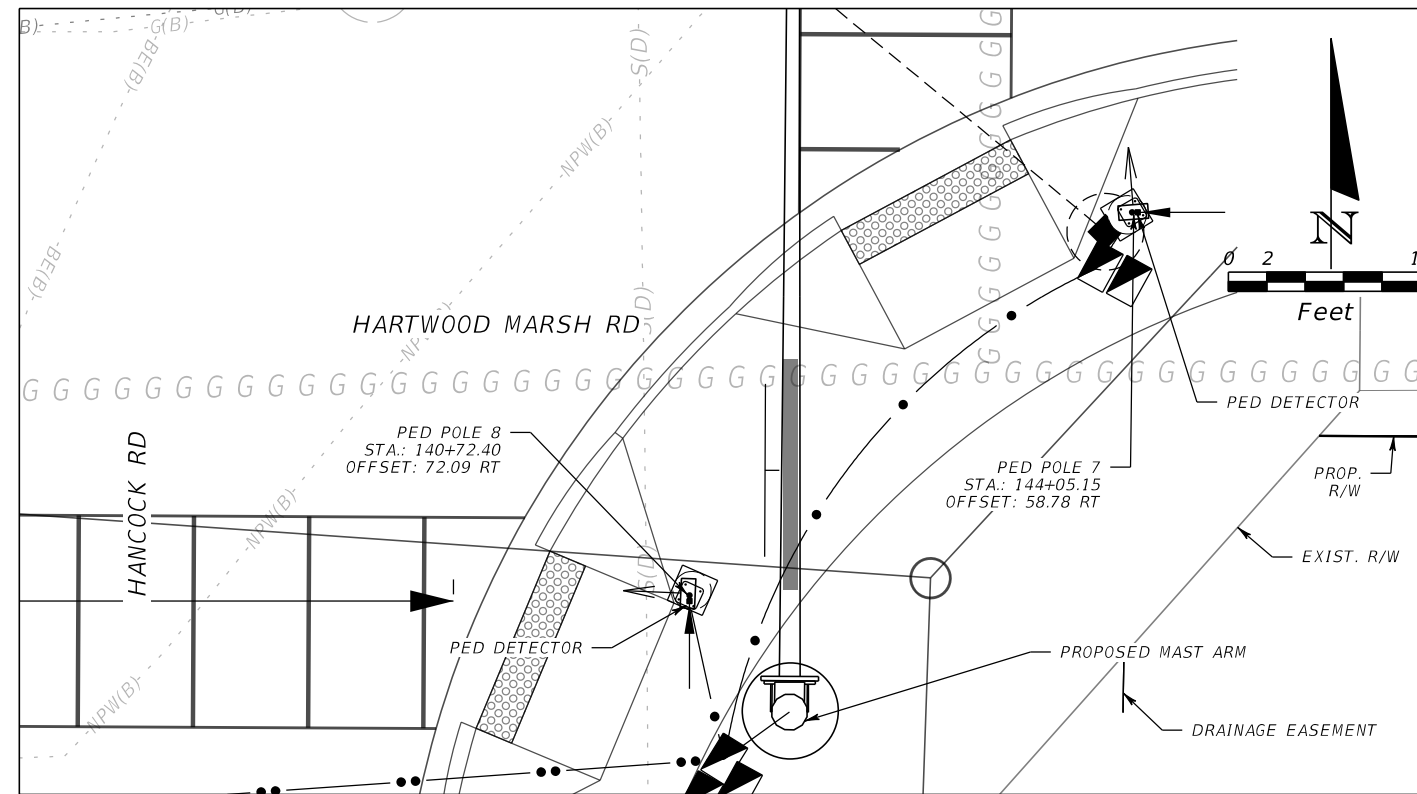
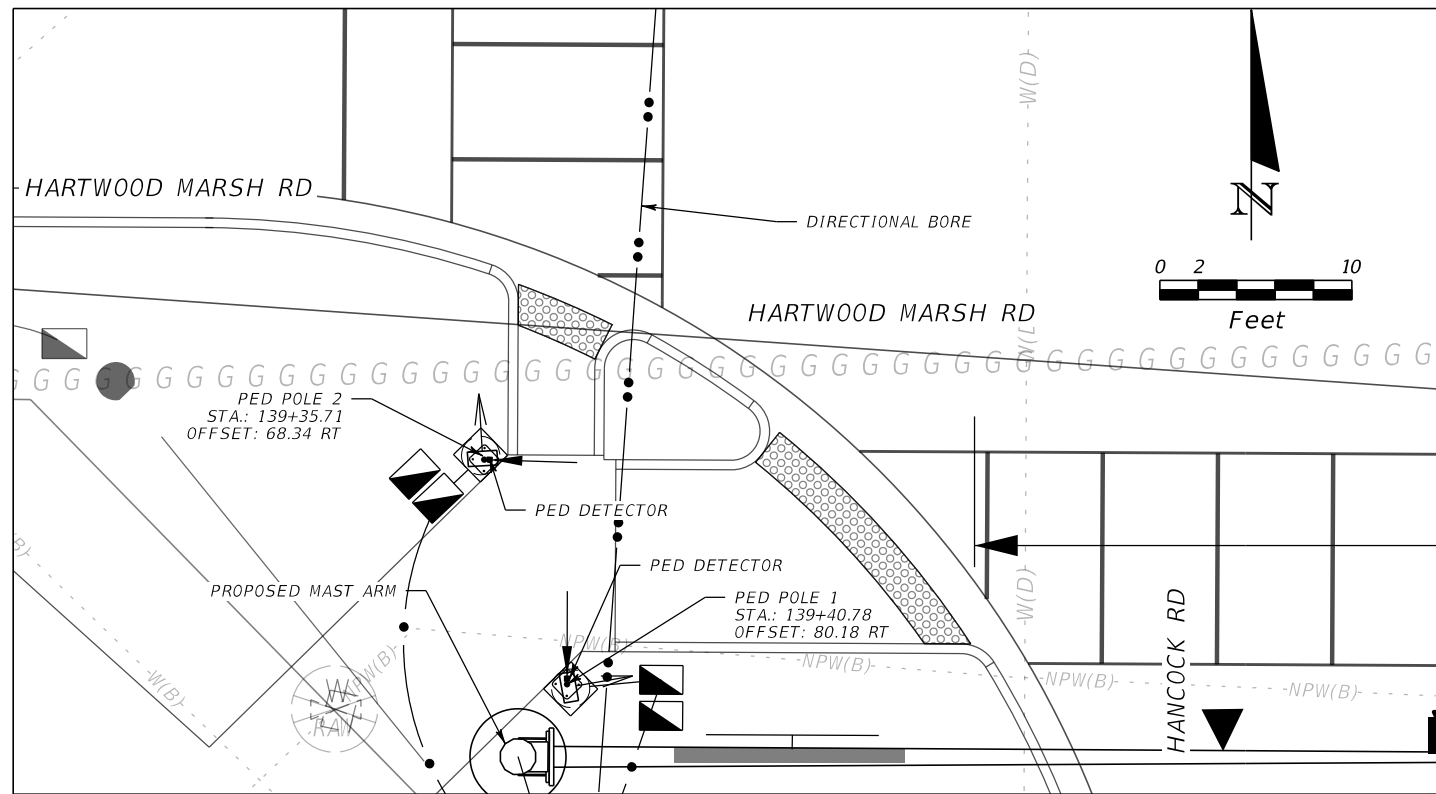
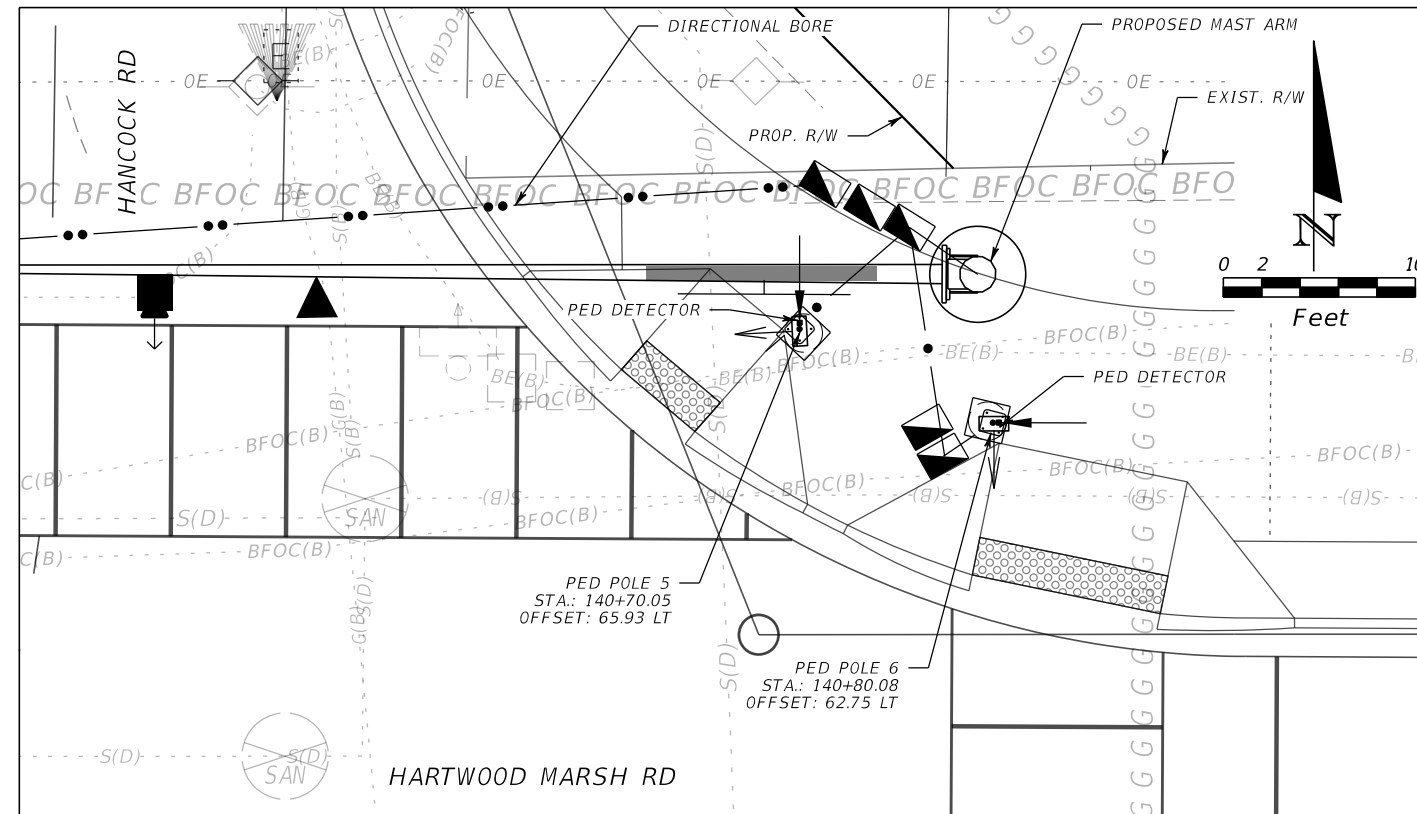
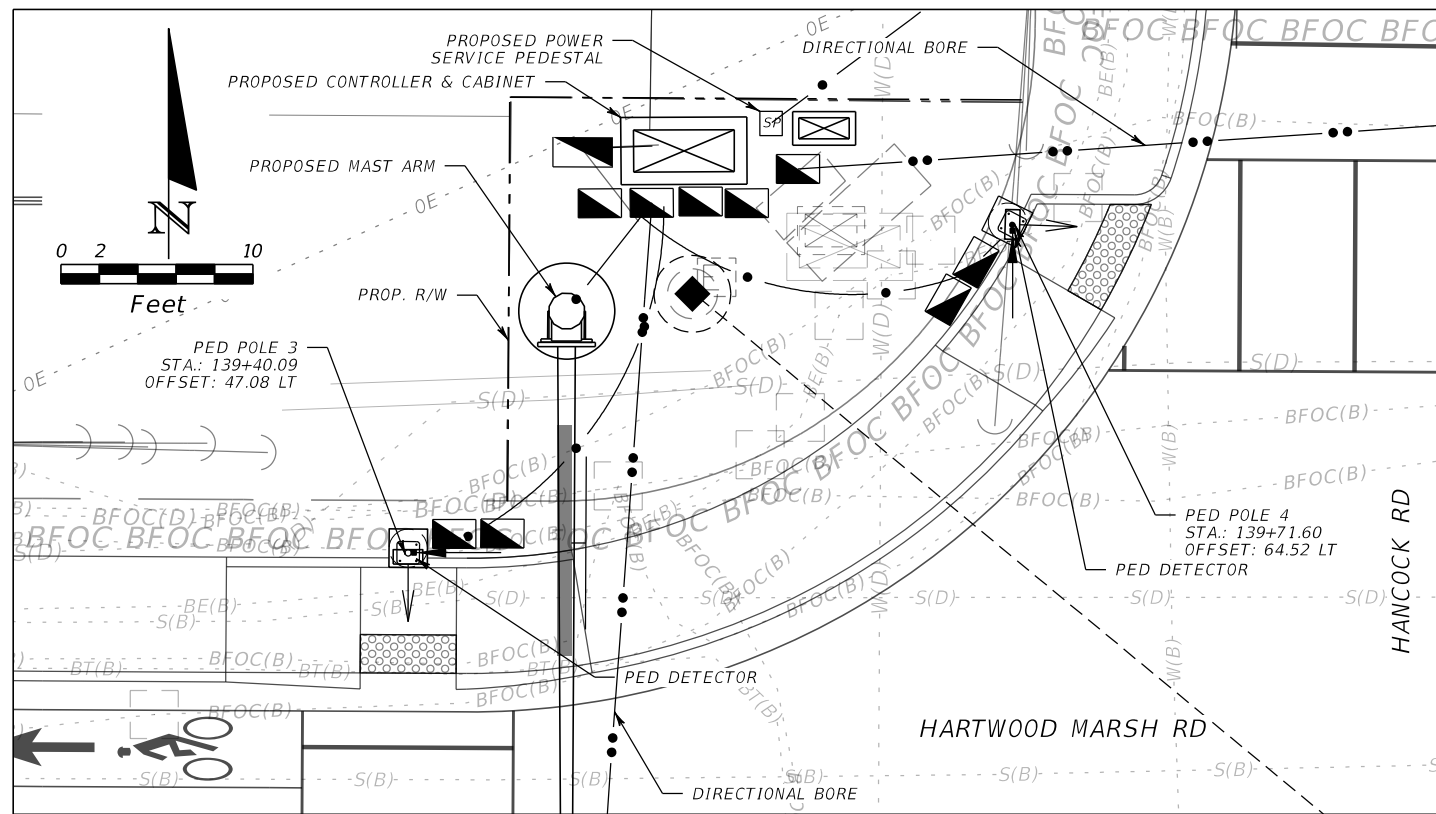
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HARTWOOD MARSH & HANCOCK

NORTHWEST QUADRANT

NORTHEAST QUADRANT



SOUTHWEST QUADRANT

SOUTHEAST QUADRANT

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

Q. AMIN AHMED P.E.
 P.E. NO.: 52564
 STANLEY CONSULTANTS, INC.
 80 SPRING VISTA DRIVE
 DEBARY, FL 32713

HARTWOOD MARSH ROAD	
ROAD NO.	PROJECT NO.
HARTWOOD MARSH	441781-1-58-01

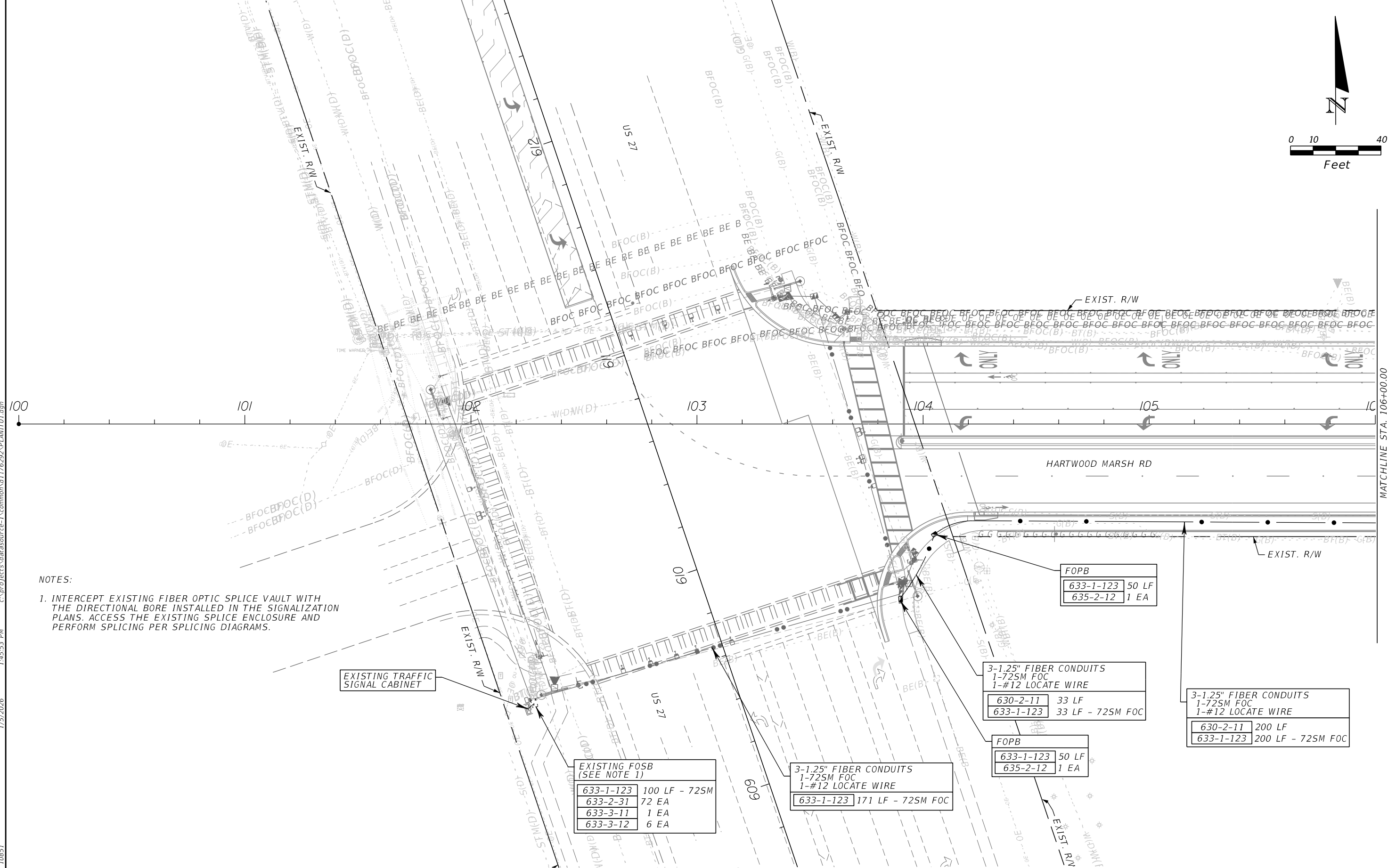
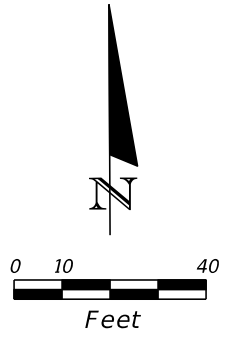


SIGNALIZATION PLAN

SHEET NO.
T-14

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NOTES:
 1. INTERCEPT EXISTING FIBER OPTIC SPLICE VAULT WITH THE DIRECTIONAL BORE INSTALLED IN THE SIGNALIZATION PLANS. ACCESS THE EXISTING SPLICE ENCLOSURE AND PERFORM SPLICING PER SPLICING DIAGRAMS.

EXISTING TRAFFIC SIGNAL CABINET

EXISTING FOSB (SEE NOTE 1)	
633-1-123	100 LF - 72SM
633-2-31	72 EA
633-3-11	1 EA
633-3-12	6 EA

3-1.25" FIBER CONDUITS 1-72SM FOC 1-#12 LOCATE WIRE	
633-1-123	171 LF - 72SM FOC

3-1.25" FIBER CONDUITS 1-72SM FOC 1-#12 LOCATE WIRE	
630-2-11	33 LF
633-1-123	33 LF - 72SM FOC

FOPB	
633-1-123	50 LF
635-2-12	1 EA

3-1.25" FIBER CONDUITS 1-72SM FOC 1-#12 LOCATE WIRE	
630-2-11	200 LF
633-1-123	200 LF - 72SM FOC

FOPB	
633-1-123	50 LF
635-2-12	1 EA

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MATCHLINE STA. 106+00.00

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

DONALD L. TAPPENDORF, P.E.
 P.E. NO.: 84724
 STANLEY CONSULTANTS, INC.
 80 SPRING VISTA DRIVE
 DEBARY, FL 32713

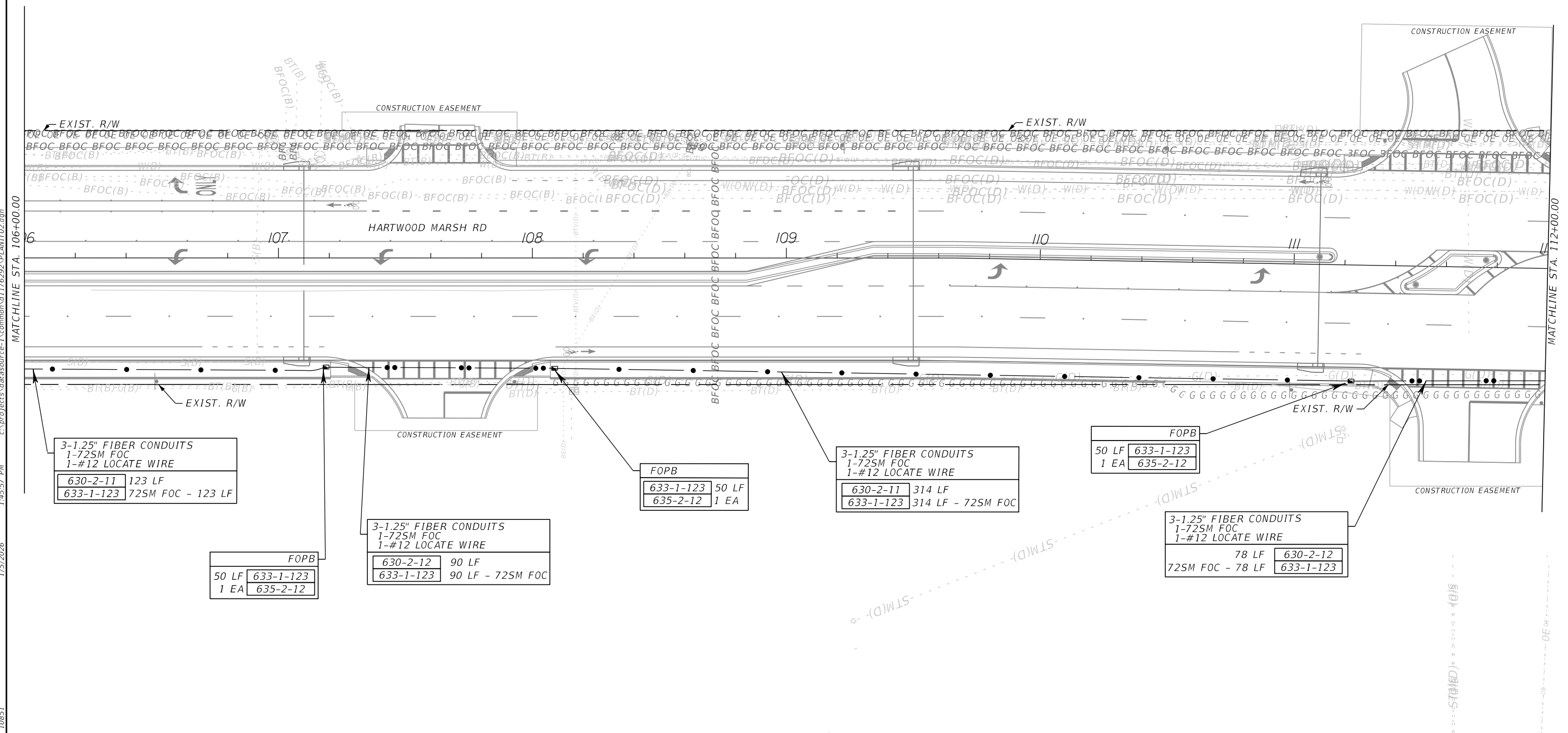
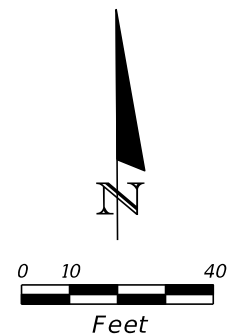
HARTWOOD MARSH ROAD	
ROAD NO.	PROJECT NO.
HARTWOOD MARSH	441781-1-58-01



INTERCONNECT PLAN SHEET

SHEET NO.
 T-15

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REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

DONALD L. TAPPENDORF, P.E.
 P.E. NO.: 84724
 STANLEY CONSULTANTS, INC.
 80 SPRING VISTA DRIVE
 DEBARY, FL 32713

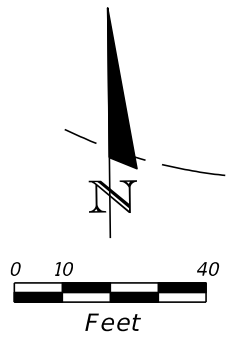
HARTWOOD MARSH ROAD	
ROAD NO.	PROJECT NO.
HARTWOOD MARSH	441781-1-58-01



INTERCONNECT PLAN SHEET

SHEET NO.
T-16

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TRAFFIC SIGNAL CABINET	
12 EA	633-2-31
1 EA	633-3-12
12 EA	633-3-13
1 EA	633-3-16
1 EA	633-3-17
1 EA	684-1-1

3-1.25" FIBER CONDUITS 1-12SM FOC 1-#12 LOCATE WIRE (SEE SIGNALIZATION PLANS)	
12SM FOC - 112 LF	633-1-121

FOPB (SEE SIGNALIZATION PLANS)	
633-1-121	50 LF - 12SM FOC

3-1.25" FIBER CONDUITS 1-72SM FOC 1-#12 LOCATE WIRE	
630-2-11	295 LF
633-1-123	295 LF - 72SM FOC

3-1.25" FIBER CONDUITS 1-72SM FOC 1-#12 LOCATE WIRE	
630-2-12	129 LF
633-1-123	129 LF - 72SM FOC

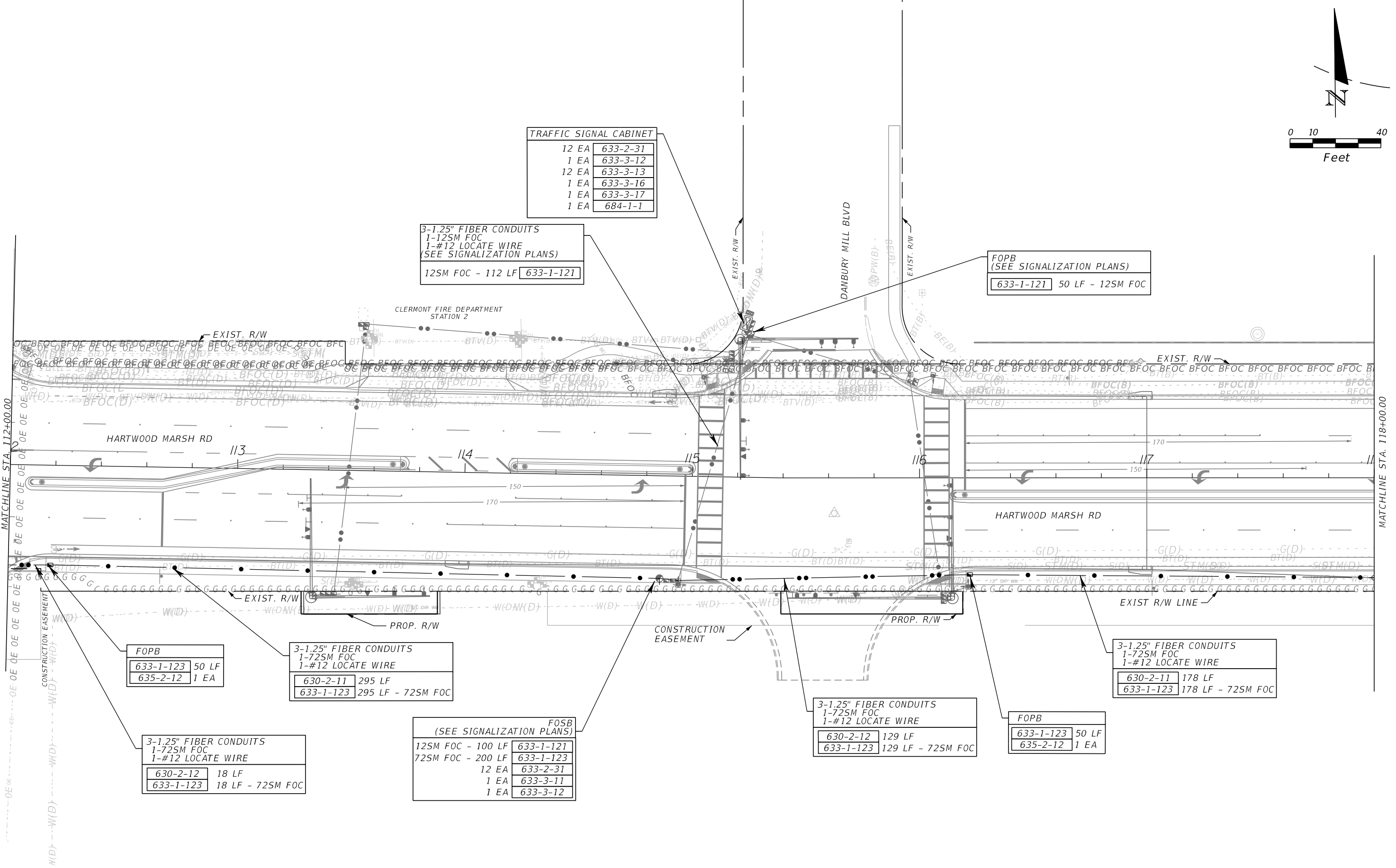
3-1.25" FIBER CONDUITS 1-72SM FOC 1-#12 LOCATE WIRE	
630-2-11	178 LF
633-1-123	178 LF - 72SM FOC

FOPB	
633-1-123	50 LF
635-2-12	1 EA

3-1.25" FIBER CONDUITS 1-72SM FOC 1-#12 LOCATE WIRE	
630-2-12	18 LF
633-1-123	18 LF - 72SM FOC

FOSB (SEE SIGNALIZATION PLANS)	
12SM FOC - 100 LF	633-1-121
72SM FOC - 200 LF	633-1-123
12 EA	633-2-31
1 EA	633-3-11
1 EA	633-3-12

FOPB	
633-1-123	50 LF
635-2-12	1 EA



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MATCHLINE STA. 118+00.00

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

DONALD L. TAPPENDORF, P.E.
 P.E. NO.: 84724
 STANLEY CONSULTANTS, INC.
 80 SPRING VISTA DRIVE
 DEBARY, FL 32713

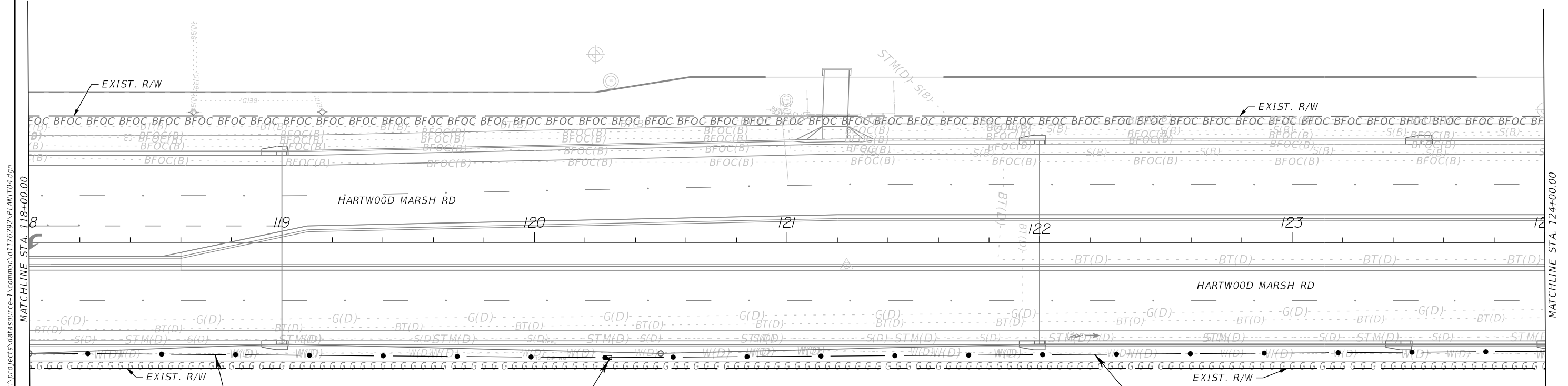
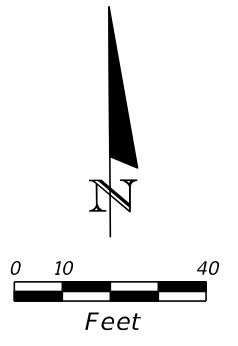
HARTWOOD MARSH ROAD	
ROAD NO.	PROJECT NO.
HARTWOOD MARSH	441781-1-58-01



INTERCONNECT PLAN SHEET

SHEET NO.
T-17

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




3-1.25" FIBER CONDUITS	
1-72SM FOC	
1-#12 LOCATE WIRE	
630-2-11	230 LF
633-1-123	72SM FOC - 230 LF

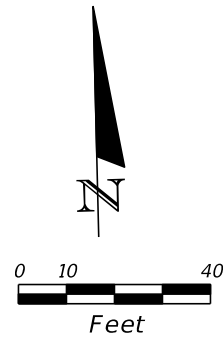
FOPB	
50 LF	633-1-123
1 EA	635-2-12

3-1.25" FIBER CONDUITS	
1-72SM FOC	
1-#12 LOCATE WIRE	
630-2-11	372 LF
633-1-123	372 LF - 72SM FOC

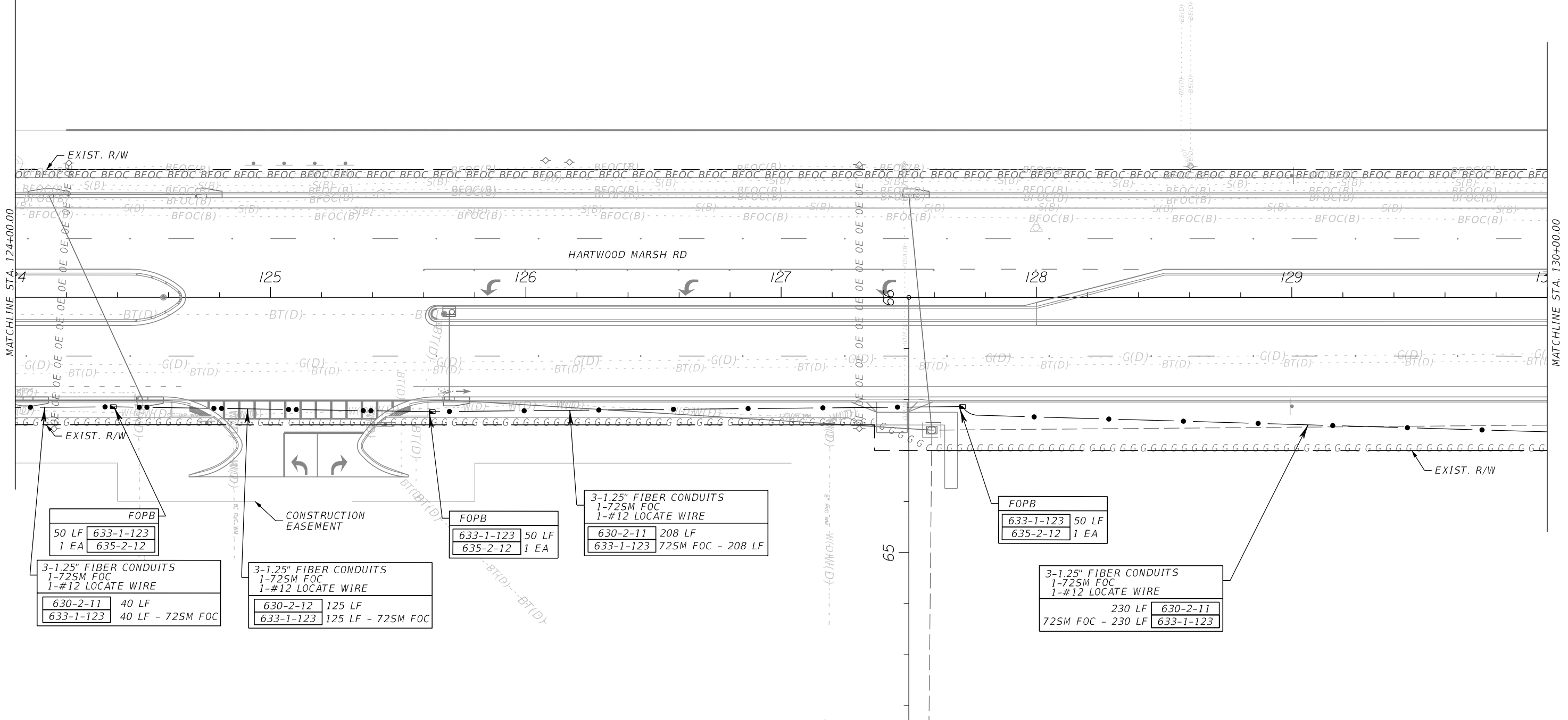
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REVISIONS				DONALD L. TAPPENDORF, P.E. P.E. NO.: 84724 STANLEY CONSULTANTS, INC. 80 SPRING VISTA DRIVE DEBARY, FL 32713	HARTWOOD MARSH ROAD		 LAKE COUNTY, FL REAL FLORIDA - REAL CLOSE	INTERCONNECT PLAN SHEET	SHEET NO. T-18
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	PROJECT NO.			
					HARTWOOD MARSH	441781-1-58-01			



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REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

DONALD L. TAPPENDORF, P.E.
 P.E. NO.: 84724
 STANLEY CONSULTANTS, INC.
 80 SPRING VISTA DRIVE
 DEBARY, FL 32713

HARTWOOD MARSH ROAD

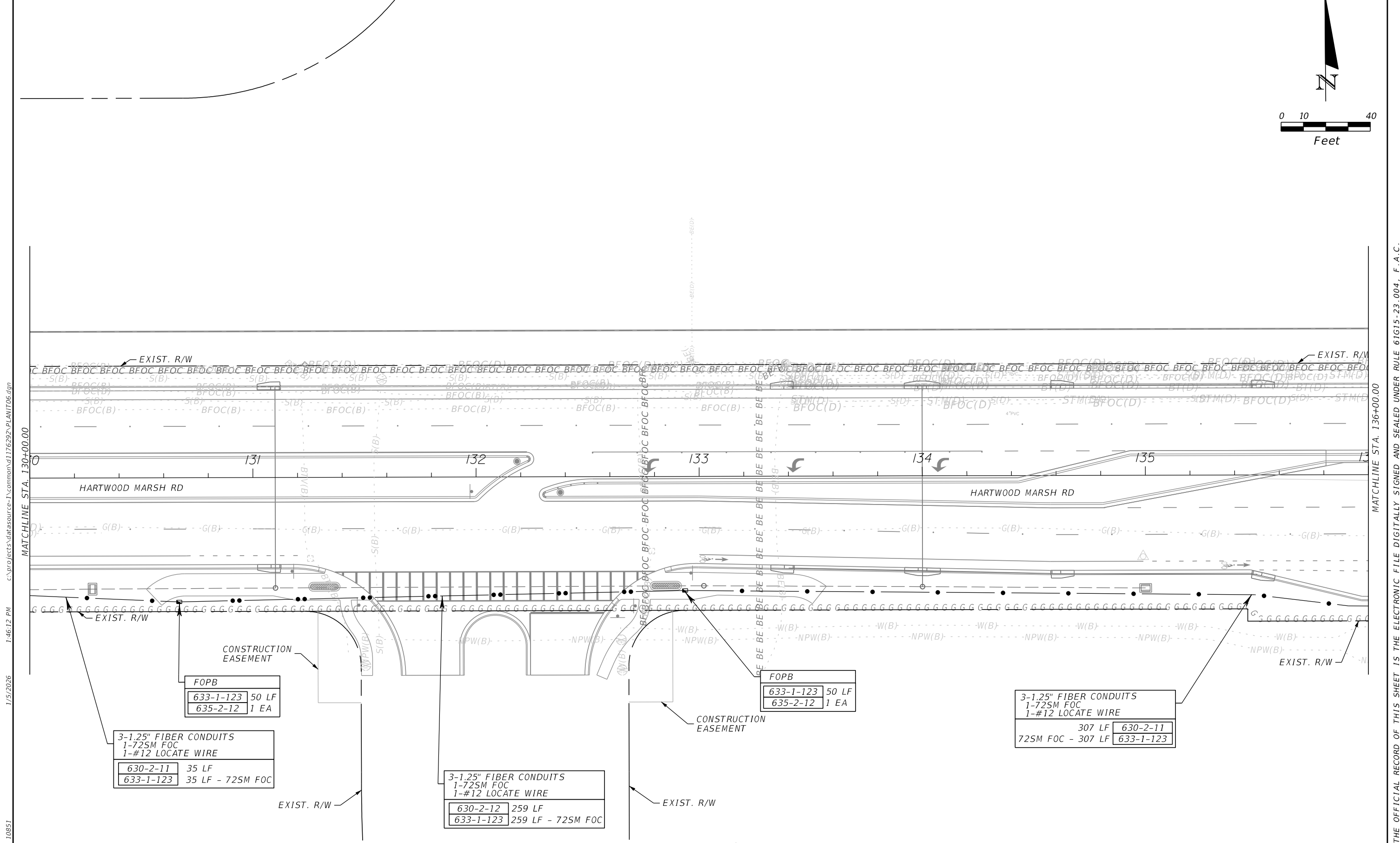
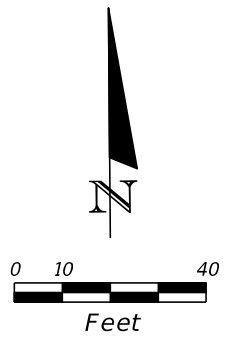
ROAD NO.	PROJECT NO.
HARTWOOD MARSH	441781-1-58-01



INTERCONNECT PLAN SHEET

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.



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REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

DONALD L. TAPPENDORF, P.E.
 P.E. NO.: 84724
 STANLEY CONSULTANTS, INC.
 80 SPRING VISTA DRIVE
 DEBARY, FL 32713

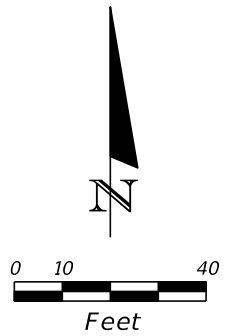
HARTWOOD MARSH ROAD	
ROAD NO.	PROJECT NO.
HARTWOOD MARSH	441781-1-58-01



INTERCONNECT PLAN SHEET

SHEET NO.
T-20

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



TRAFFIC SIGNAL CABINET	
12 EA	633-2-31
1 EA	633-3-12
12 EA	633-3-13
1 EA	633-3-16
1 EA	633-3-17
1 EA	684-1-1

FOPB (SEE SIGNALIZATION PLANS)	
12SM FOC - 50 LF	633-1-121

3-1.25" FIBER CONDUITS (SEE SIGNALIZATION PLANS)	
1-12SM FOC	
1-#12 LOCATE WIRE	
12SM FOC- 160 LF	633-1-121

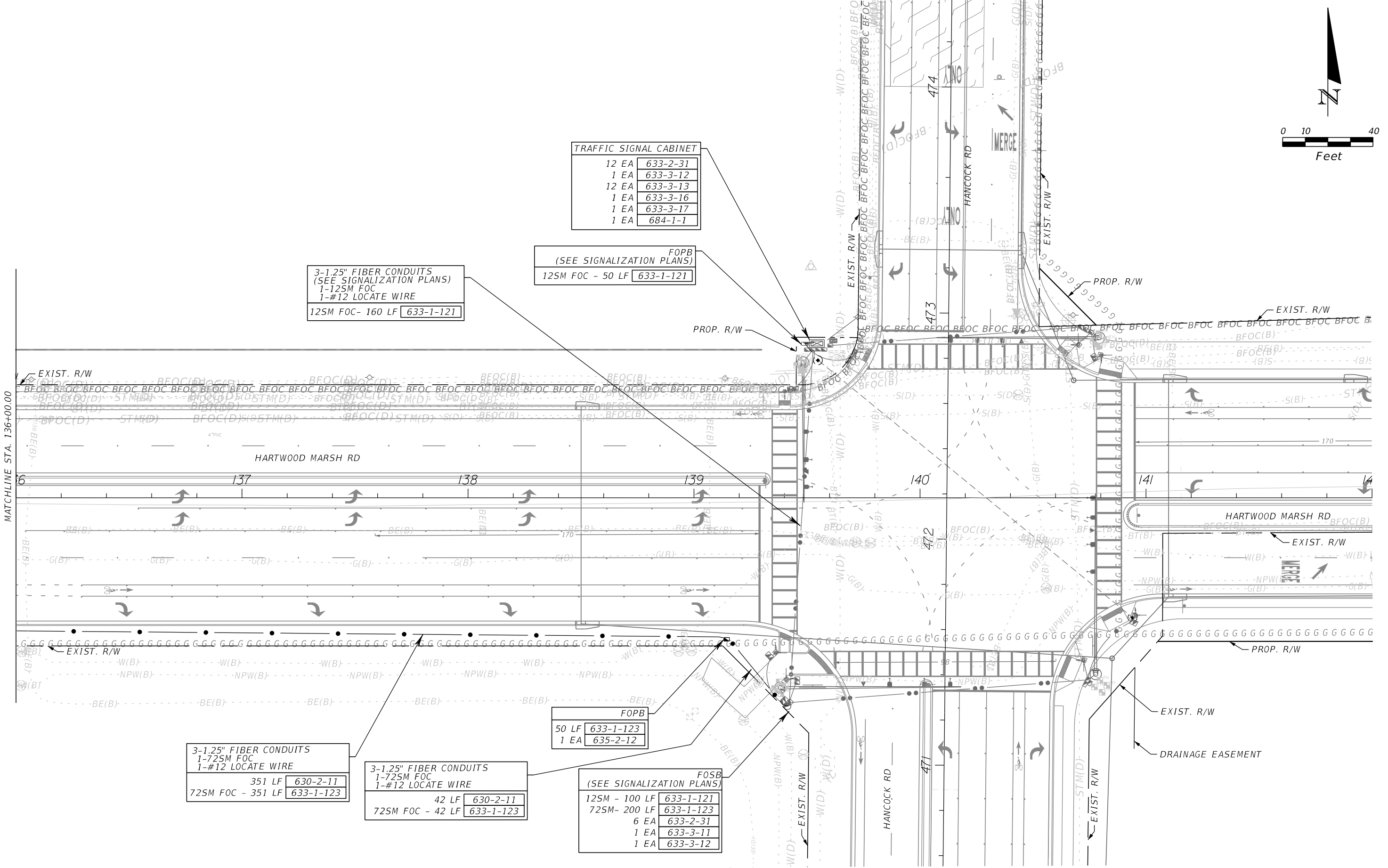
FOPB	
50 LF	633-1-123
1 EA	635-2-12

3-1.25" FIBER CONDUITS	
1-72SM FOC	
1-#12 LOCATE WIRE	
351 LF	630-2-11
72SM FOC - 351 LF	633-1-123

3-1.25" FIBER CONDUITS	
1-72SM FOC	
1-#12 LOCATE WIRE	
42 LF	630-2-11
72SM FOC - 42 LF	633-1-123

FOSB (SEE SIGNALIZATION PLANS)	
12SM - 100 LF	633-1-121
72SM- 200 LF	633-1-123
6 EA	633-2-31
1 EA	633-3-11
1 EA	633-3-12

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REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

DONALD L. TAPPENDORF, P.E.
 P.E. NO.: 84724
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HARTWOOD MARSH ROAD	
ROAD NO.	PROJECT NO.
HARTWOOD MARSH	441781-1-58-01

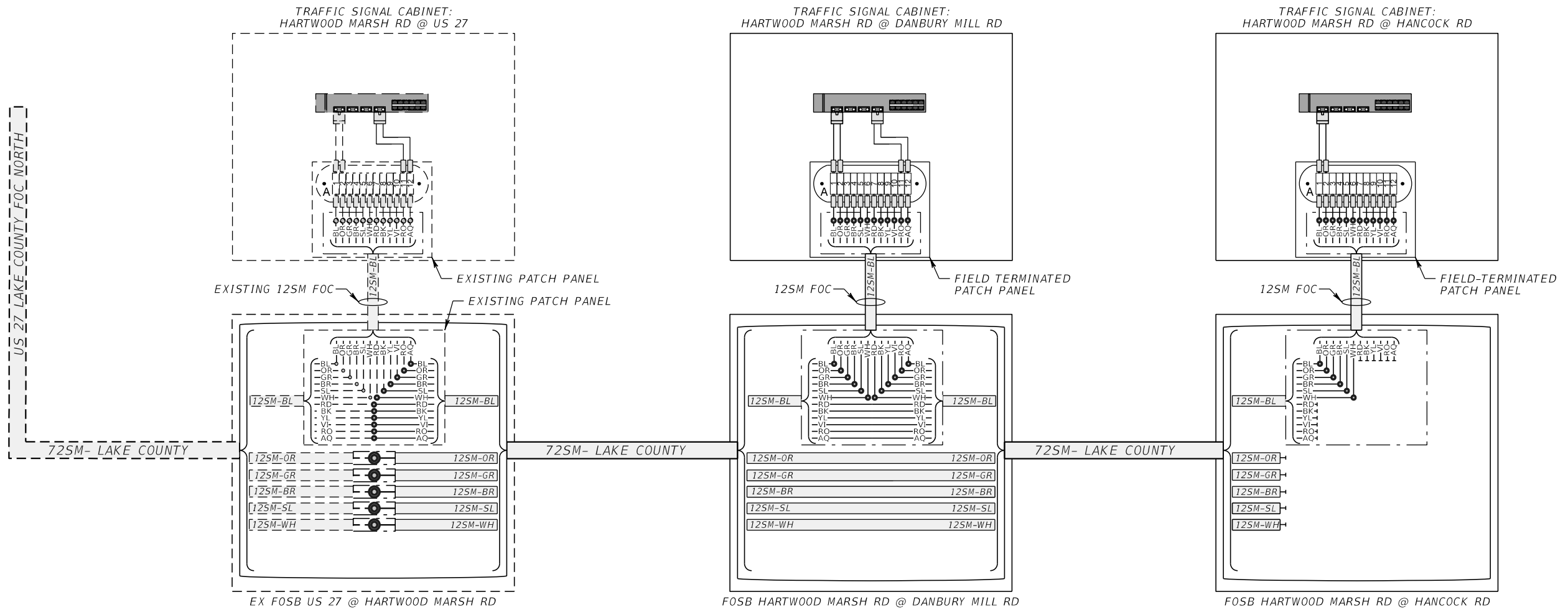


INTERCONNECT PLAN SHEET

SHEET NO.
T-21

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

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SPLICING DIAGRAM LEGEND

- EXISTING ELEMENTS
- EXISTING SPLICE
- SPLICE
- BUFFER TUBE SPLICES (COLOR TO COLOR)
- ⊕ FIBER CABLE BUTT-SPLICE (BUFFER TO BUFFER, COLOR TO COLOR)
- SC CONNECTOR
- LC DUPLEX CONNECTOR
- ##SM FIBER OPTIC CABLE
- 12SM-BL BUFFER TUBE
- FIBER STRAND
- CAPPED AND COILED FIBER
- FIBER JUMPER (CONNECTORS VARY)
- SPLICE TRAY
- CONNECTOR PANEL
- MANAGED ETHERNET SWITCH
- SPlice ENCLOSURE

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

DONALD L. TAPPENDORF, P.E.
P.E. NO.: 84724
STANLEY CONSULTANTS, INC.
80 SPRING VISTA DRIVE
DEBARY, FL 32713

HARTWOOD MARSH ROAD	
ROAD NO.	PROJECT NO.
HARTWOOD MARSH	441781-1-58-01



SPLICING DIAGRAM

SHEET NO.
T-22

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

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)
1	POLE A	32.5	7.45	12	0.25	20.5	11.13	14	0.313	32.5	7.45	12	0.25	20.5	11.13	14	0.313	25	20	18.5	22	0.375	270
1	POLE B	38.0	7.68	13	0.25	35.5	12.03	17	0.375	32.5	7.45	12	0.25	20.5	11.13	14	0.313	25	22	20.5	24	0.5	270
1	POLE C	35.5	7.03	12	0.25	28.0	11.08	15	0.375	25.5	8.43	12	0.25	28.0	11.08	15	0.375	25	20	20.5	24	0.375	90
1	POLE D	39.0	9.54	15	0.25	42.5	14.05	20	0.375									25	22	20.5	24	0.5	
1	POLE E	35.5	7.03	12	0.25	28.0	11.08	15	0.375									25	20	18.5	22	0.375	
1	POLE F	38.0	8.68	14	0.25	35.5	13.03	18	0.375									25	20.5	20.5	24	0.5	
1	POLE G	39.0	7.54	13	0.25	42.5	12.05	18	0.375									25	22	20.5	24	0.5	

NOTES [Notes Date 07-01-13]:
 1. Work with Index 649-031.
 2. Design Wind Speed = 150 mph

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	
POLE A	6	30	36	3	0.75	0.438	23	1.25	2.5	12.5	0.438	6	30	36	3	0.75	0.438	23	1.25	2.5	12.5	0.438	
POLE B	6	30	36	3	0.75	0.625	23	1.5	2.5	12	0.625	6	30	36	3	0.75	0.625	23	1.5	2.5	12	0.625	
POLE C	6	30	36	3	0.75	0.5	23	1.25	2.5	12.5	0.5	6	30	36	3	0.75	0.5	23	1.25	2.5	12.5	0.5	
POLE D	6	30	36	3	0.75	0.625	18	1.5	2.5	12	0.625												
POLE E	6	30	36	3	0.75	0.438	17	1.25	2.5	12.5	0.438												
POLE F	6	30	36	3	0.75	0.625	18	1.5	2.5	12	0.625												
POLE G	6	30	36	3	0.75	0.625	18	1.5	2.5	12	0.625												

FOUNDATION NOTES [Notes Date 01-01-12]:
 1. Design based on Borings taken from Report of Geotechnical Services sealed by:
 Luis A Almodovar (PE License Number 93273)
 Kenneth L Symonds (PE License Number 59518)
 Tierra, Inc.
 591 Susan B. Britt Court,
 Winter Garden, Florida 34787

2. Assumptions and Values used in design:
 A. Poles A, C, G
 Soil Type = Cohesionless
 Soil Layer Thickness = 30 ft.
 Soil Friction Angle = 29 deg.
 Soil Weight = 43 pcf (effective)
 Design Water Table is 0 ft. below surface
 Average N-Value = 7

B. Poles D, E, F
 Soil Type = Cohesionless
 Soil Layer Thickness = 30 ft.
 Soil Friction Angle = 29 deg.
 Soil Weight = 43 pcf (effective)
 Design Water Table is 0 ft. below surface
 Average N-Value = 8

C. Pole B
 Soil Type = Cohesionless
 Soil Layer Thickness = 30 ft.
 Soil Friction Angle = 29 deg.
 Soil Weight = 43 pcf (effective)
 Design Water Table is 0 ft. below surface
 Average N-Value = 6

D. Contractor to verify ground elevations/slope at Poles A & B, which are located inside the Self-Storage property. Design is based on a slope of 1:10 & top of shaft offset of 3.5' (Pole A) & 1.5' (Pole B), based on assumptions of finished grade elevations from the construction plans at the time. Contractor to notify EOR if the field conditions are different prior to construction.

SPECIAL MAST ARM ASSEMBLIES DATA TABLE (CONT.)																							Table Date 07-01-15	
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)	RE	RF(in)	LA(ft)	LB(ft)	LC(in)	LD(in)	LE	LF(ft)	LG(in)	LH(in)	LJ(in)	LK(in)	LL(deg)
POLE A	8	38	2.5	2	40	24.5	4.5	11	15	10	6	10	9											
POLE B	8	40	2.5	2	40	30.0	5	11	19	10	6	10	9											
POLE C	8	40	2.5	2	40	25.5	5	11	19	10	6	10	9											
POLE D	8	40	2.5	2	40	25.0	5	11	19	10	6	10	9											
POLE E	8	38	2.5	2	40	20.5	4.5	11	15	10	8	11												
POLE F	8	40	2.5	2	40	22.5	5	11	19	10	6	10	9											
POLE G	8	40	2.5	2	40	26.0	5	11	19	10	6	10	9											

REVISIONS		
DATE	BY	DESCRIPTION

OM ENGINEERING SERVICES, INC.
 621 E. WASHINGTON ST., STE 8
 ORLANDO, FLORIDA 32801
 PHONE NO. (407) 704-7815
 FAX: (407) 704-7816

ENGINEER OF RECORD: DHRUV BANSAL, P.E.
 P.E. LICENSE NUMBER 92007

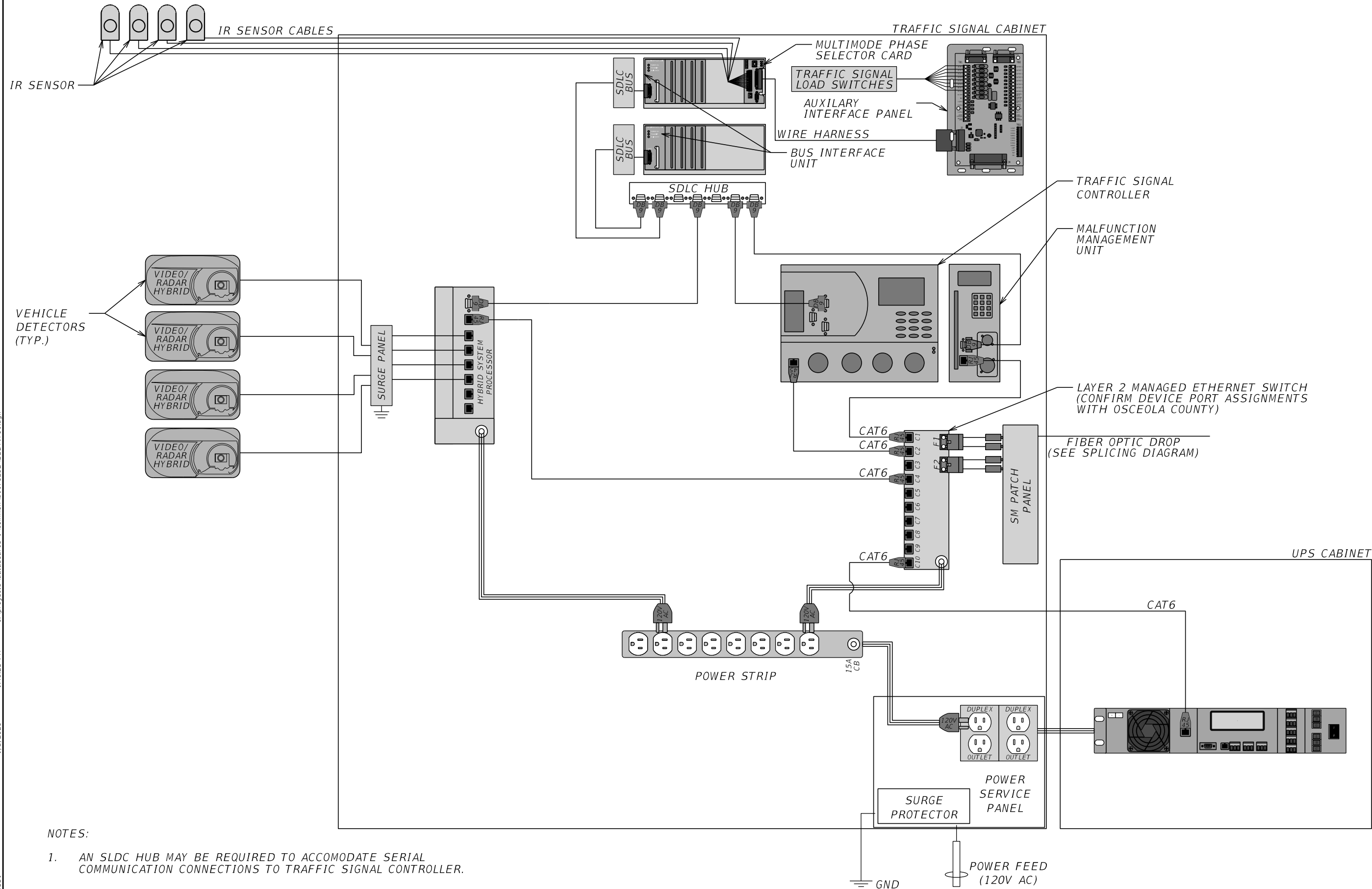


HARTWOOD MARSH
 ROAD - PHASE I

MAST ARM ASSEMBLIES
 DATA TABLE

SHEET NO.
 T-25

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



- NOTES:
1. AN SLDC HUB MAY BE REQUIRED TO ACCOMODATE SERIAL COMMUNICATION CONNECTIONS TO TRAFFIC SIGNAL CONTROLLER.

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REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

Q. AMIN AHMED, P.E.
 P.E. NO.: 52564
 STANLEY CONSULTANTS, INC.
 80 SPRING VISTA DRIVE
 DEBARY, FL 32713

HARTWOOD MARSH ROAD
 ROAD NO. PROJECT NO.
 HARTWOOD MARSH 441781-1-58-01

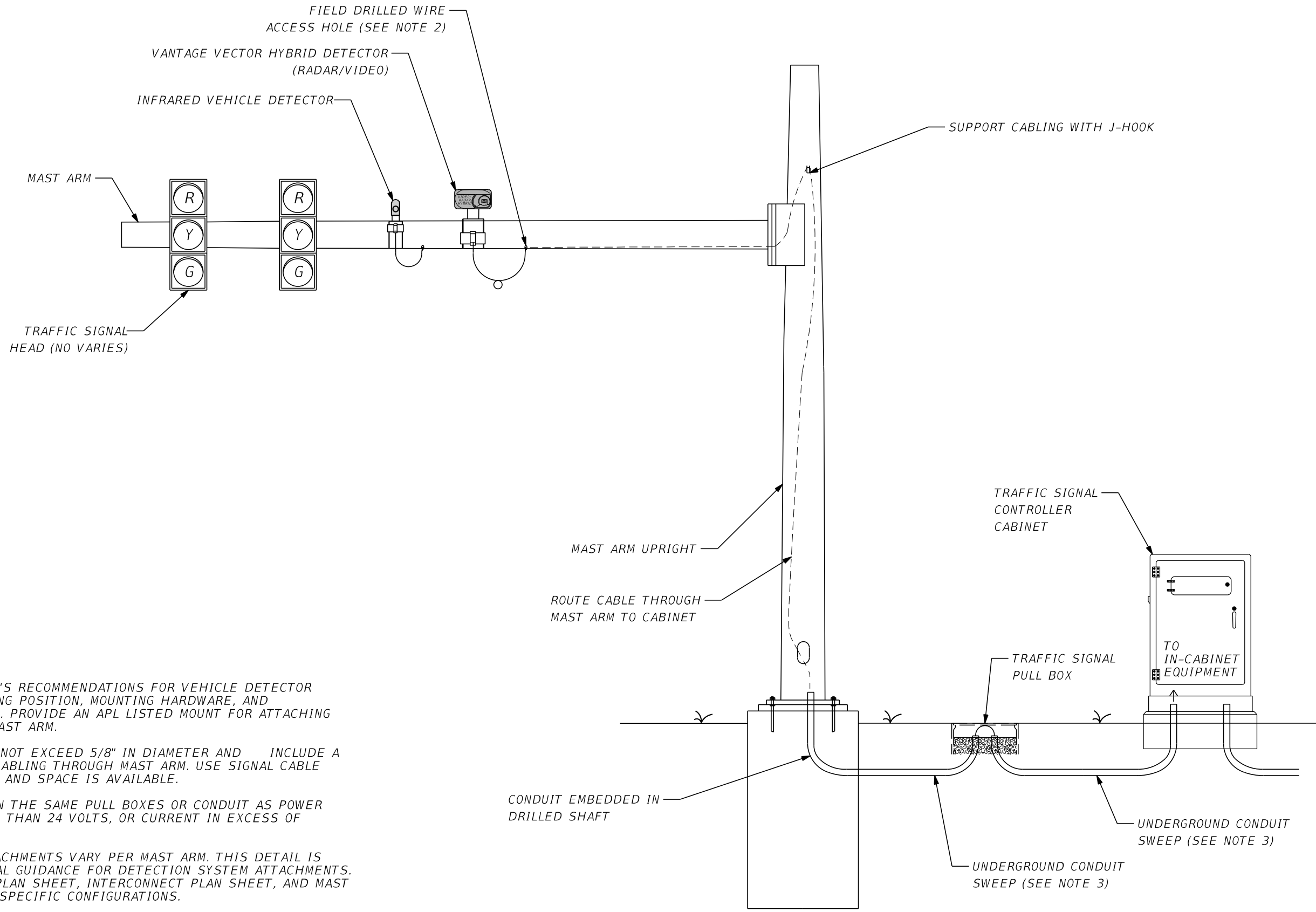


**DETECTION SYSTEM
 WIRING DIAGRAM**

SHEET NO.
 T-26

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

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NOTES:

1. ADHERE TO MANUFACTURER'S RECOMMENDATIONS FOR VEHICLE DETECTOR MOUNTING HEIGHT, MOUNTING POSITION, MOUNTING HARDWARE, AND INSTALLATION PROCEDURES. PROVIDE AN APL LISTED MOUNT FOR ATTACHING THE DETECTORS TO THE MAST ARM.
2. WIRE ACCESS HOLE SHALL NOT EXCEED 5/8" IN DIAMETER AND INCLUDE A RUBBER GROMMET. ROUTE CABLING THROUGH MAST ARM. USE SIGNAL CABLE ACCESS HOLE IF WITHIN 5' AND SPACE IS AVAILABLE.
3. DO NOT INSTALL CABLING IN THE SAME PULL BOXES OR CONDUIT AS POWER CABLES CARRYING GREATER THAN 24 VOLTS, OR CURRENT IN EXCESS OF 1.5 AMPS.
4. NUMBER AND TYPE OF ATTACHMENTS VARY PER MAST ARM. THIS DETAIL IS MEANT TO PROVIDE GENERAL GUIDANCE FOR DETECTION SYSTEM ATTACHMENTS. REFER TO SIGNALIZATION PLAN SHEET, INTERCONNECT PLAN SHEET, AND MAST ARM DATA TABLE FOR ARM-SPECIFIC CONFIGURATIONS.

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

Q. AMIN AHMED, P.E.
P.E. NO.: 52564
STANLEY CONSULTANTS, INC.
80 SPRING VISTA DRIVE
DEBARY, FL 32713

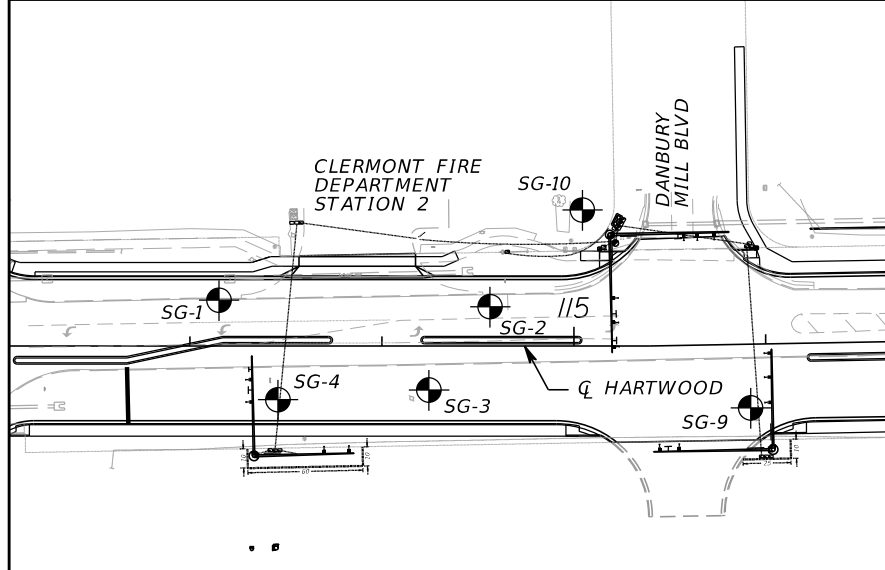
HARTWOOD MARSH ROAD	
ROAD NO.	PROJECT NO.
HARTWOOD MARSH	441781-1-58-01



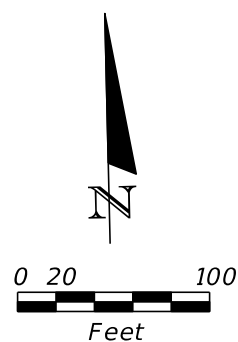
**DETECTION SYSTEM
INSTALLATION DETAIL**

SHEET NO.
T-27

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



LEGEND

- SAND
- PAVEMENT/BASE
- APPROXIMATE SPT BORING LOCATION
- GNA GROUNDWATER NOT APPARENT DUE TO THE INTRODUCTION OF DRILLING FLUID.
- HARTWOOD CENTERLINE OF CONSTRUCTION OF HARTWOOD MARSH ROAD
- SP UNIFIED SOIL CLASSIFICATION SYSTEM (ASTM D 2487) GROUP SYMBOL AS DETERMINED BY VISUAL REVIEW AND LABORATORY TESTING ON SELECTED SAMPLES FOR CONFIRMATION OF VISUAL REVIEW.
- N NUMBERS TO THE LEFT OF BORINGS INDICATE SPT VALUE FOR 12 INCHES OF PENETRATION (UNLESS OTHERWISE NOTED).
- HA HAND AUGERED TO VERIFY UTILITY CLEARANCE
- 200 PERCENT PASSING #200 SIEVE
- NAVD 88 NORTH AMERICAN VERTICAL DATUM OF 1988

AUTOMATIC HAMMER	
GRANULAR MATERIALS-RELATIVE DENSITY	SPT N-VALUE (BLOWS/FT.)
VERY LOOSE	LESS THAN 3
LOOSE	3 to 8
MEDIUM DENSE	8 to 24
DENSE	24 to 40
VERY DENSE	GREATER THAN 40
SILTS AND CLAYS CONSISTENCY	SPT N-VALUE (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

ENVIRONMENTAL CLASSIFICATION:

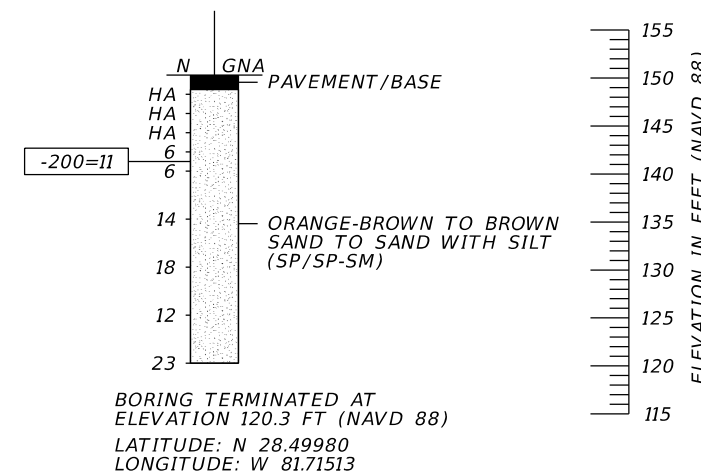
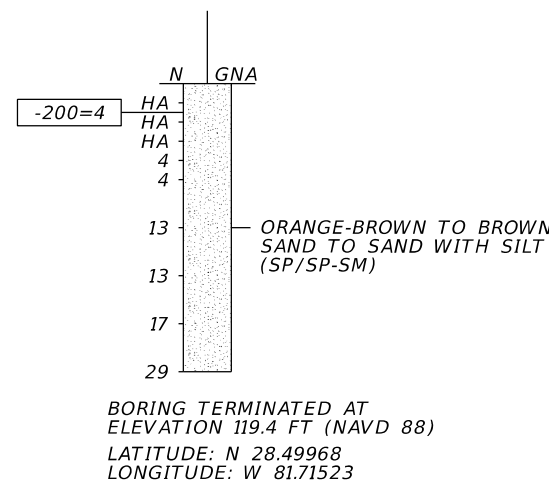
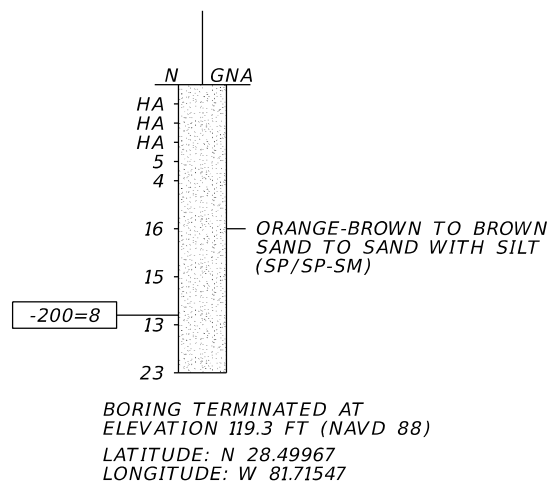
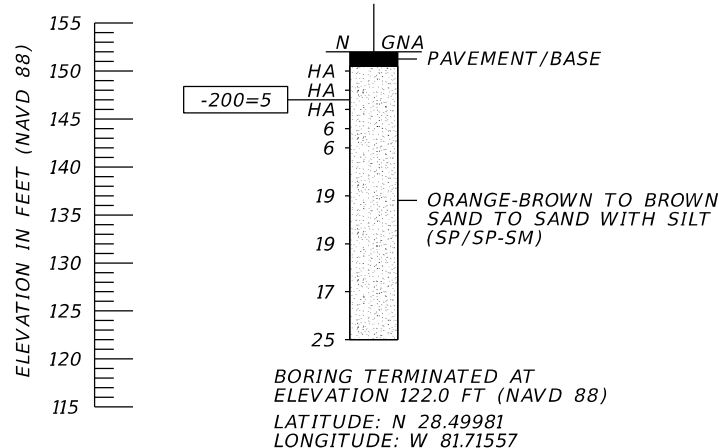
SUBSTRUCTURE CONCRETE: EXTREMELY AGGRESSIVE (ASSUMED)
 SUBSTRUCTURE STEEL: EXTREMELY AGGRESSIVE (ASSUMED)

BOR # SG-1
 STA. 113+15
 REF. ϕ HARTWOOD
 OFF. 24' LT.
 ELEV. 152.0
 DATE 9/26/2022
 DRILLER G.SMITH
 HAMMER AUTOMATIC
 RIG D-25

BOR # SG-4
 STA. 113+46
 REF. ϕ HARTWOOD
 OFF. 28' RT.
 ELEV. 149.3
 DATE 8/25/2022
 DRILLER G.SMITH
 HAMMER AUTOMATIC
 RIG D-25

BOR # SG-3
 STA. 114+24
 REF. ϕ HARTWOOD
 OFF. 23' RT.
 ELEV. 149.4
 DATE 8/25/2022
 DRILLER G.SMITH
 HAMMER AUTOMATIC
 RIG D-25

BOR # SG-2
 STA. 114+56
 REF. ϕ HARTWOOD
 OFF. 20' LT.
 ELEV. 150.3
 DATE 9/26/2022
 DRILLER G.SMITH
 HAMMER AUTOMATIC
 RIG D-25



REVISIONS		
DATE	BY	DESCRIPTION

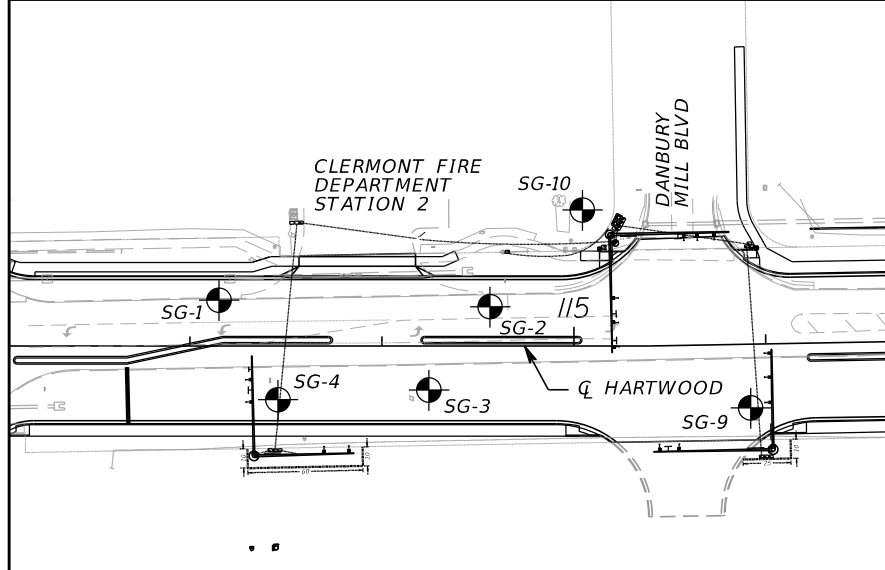
LUIS A. ALMODOVAR, P.E.
 P.E. LICENSE NUMBER 93273
 TIERRA, INC.
 591 SUSAN B. BRITT COURT
 WINTER GARDEN, FLORIDA 34787



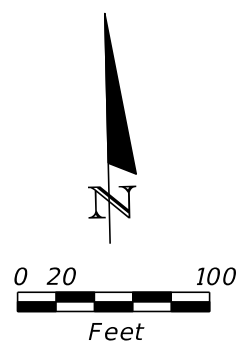
HARTWOOD MARSH ROAD - PHASE I

REPORT OF CORE BORINGS (1)

SHEET NO.
T-28



BORING LOCATION PLAN



LEGEND

- SAND
- PAVEMENT/BASE
- APPROXIMATE SPT BORING LOCATION
- GNA GROUNDWATER NOT APPARENT DUE TO THE INTRODUCTION OF DRILLING FLUID.
- CL HARTWOOD CENTERLINE OF CONSTRUCTION OF HARTWOOD MARSH ROAD
- SP UNIFIED SOIL CLASSIFICATION SYSTEM (ASTM D 2487) GROUP SYMBOL AS DETERMINED BY VISUAL REVIEW AND LABORATORY TESTING ON SELECTED SAMPLES FOR CONFIRMATION OF VISUAL REVIEW.
- N NUMBERS TO THE LEFT OF BORINGS INDICATE SPT VALUE FOR 12 INCHES OF PENETRATION (UNLESS OTHERWISE NOTED).
- HA HAND AUGERED TO VERIFY UTILITY CLEARANCE
- 200 PERCENT PASSING #200 SIEVE
- NAVD 88 NORTH AMERICAN VERTICAL DATUM OF 1988

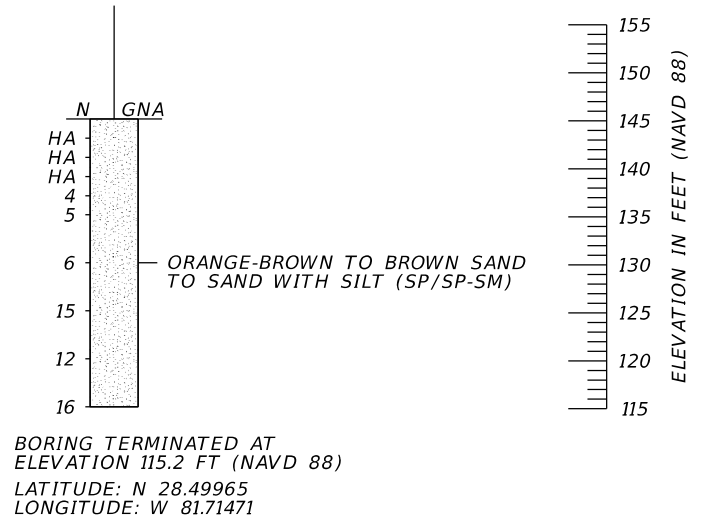
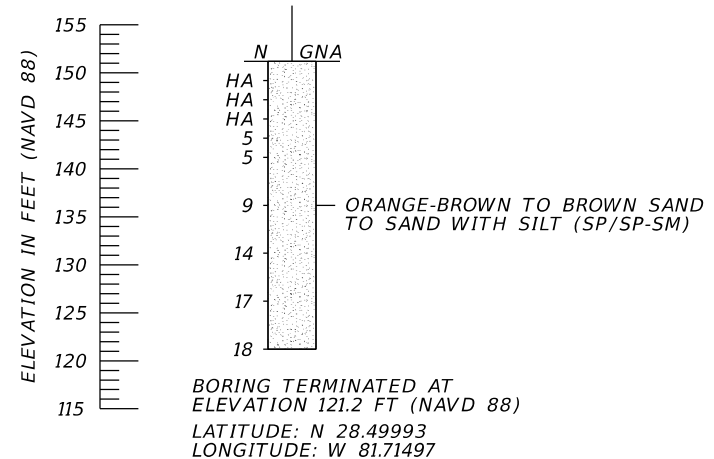
AUTOMATIC HAMMER	
GRANULAR MATERIALS-RELATIVE DENSITY	SPT N-VALUE (BLOWS/FT.)
VERY LOOSE	LESS THAN 3
LOOSE	3 to 8
MEDIUM DENSE	8 to 24
DENSE	24 to 40
VERY DENSE	GREATER THAN 40
SILTS AND CLAYS CONSISTENCY	SPT N-VALUE (BLOWS/FT.)
VERY SOFT	LESS THAN 1
SOFT	1 to 3
FIRM	3 to 6
STIFF	6 to 12
VERY STIFF	12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

ENVIRONMENTAL CLASSIFICATION:

SUBSTRUCTURE CONCRETE: EXTREMELY AGGRESSIVE (ASSUMED)
 SUBSTRUCTURE STEEL: EXTREMELY AGGRESSIVE (ASSUMED)

BOR # SG-10
 STA. 115+04
 REF. CL HARTWOOD
 OFF. 71' LT.
 ELEV. 151.2
 DATE 5/11/2023
 DRILLER G.SMITH
 HAMMER AUTOMATIC
 RIG D-25

BOR # SG-9
 STA. 115+92
 REF. CL HARTWOOD
 OFF. 33' RT.
 ELEV. 145.2
 DATE 5/11/2023
 DRILLER G.SMITH
 HAMMER AUTOMATIC
 RIG D-25



REVISIONS		
DATE	BY	DESCRIPTION

LUIS A. ALMODOVAR, P.E.
 P.E. LICENSE NUMBER 93273
 TIERRA, INC.
 591 SUSAN B. BRITT COURT
 WINTER GARDEN, FLORIDA 34787

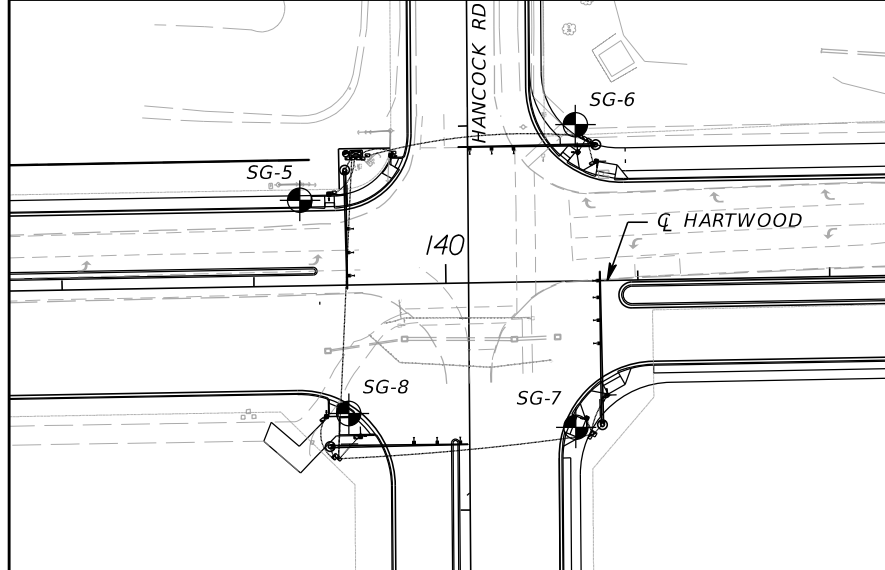


HARTWOOD MARSH ROAD - PHASE I

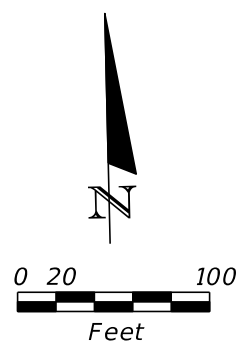
REPORT OF CORE BORINGS (2)

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



LEGEND

- SAND
- PAVEMENT/BASE
- APPROXIMATE SPT BORING LOCATION
- GNA GROUNDWATER NOT APPARENT DUE TO THE INTRODUCTION OF DRILLING FLUID.
- Q HARTWOOD CENTERLINE OF CONSTRUCTION OF HARTWOOD MARSH ROAD
- SP UNIFIED SOIL CLASSIFICATION SYSTEM (ASTM D 2487) GROUP SYMBOL AS DETERMINED BY VISUAL REVIEW AND LABORATORY TESTING ON SELECTED SAMPLES FOR CONFIRMATION OF VISUAL REVIEW.
- N NUMBERS TO THE LEFT OF BORINGS INDICATE SPT VALUE FOR 12 INCHES OF PENETRATION (UNLESS OTHERWISE NOTED).
- HA HAND AUGERED TO VERIFY UTILITY CLEARANCE
- 200 PERCENT PASSING #200 SIEVE
- NAVD 88 NORTH AMERICAN VERTICAL DATUM OF 1988

AUTOMATIC HAMMER	
GRANULAR MATERIALS-RELATIVE DENSITY	SPT N-VALUE (BLOWS/FT.)
VERY LOOSE	LESS THAN 3
LOOSE	3 to 8
MEDIUM DENSE	8 to 24
DENSE	24 to 40
VERY DENSE	GREATER THAN 40
SILTS AND CLAYS CONSISTENCY	SPT N-VALUE (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

ENVIRONMENTAL CLASSIFICATION:

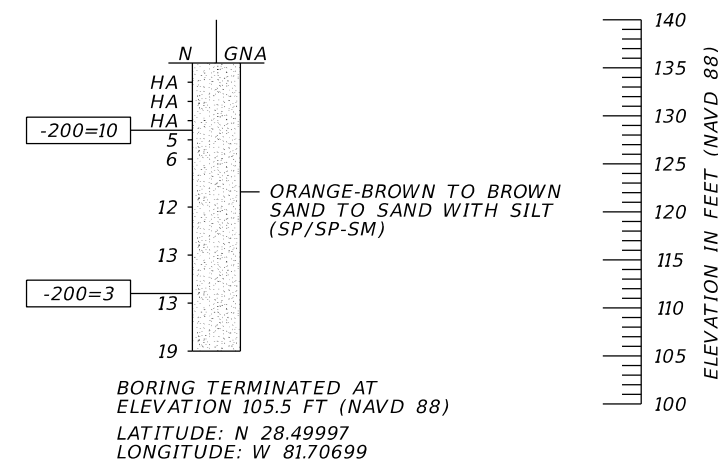
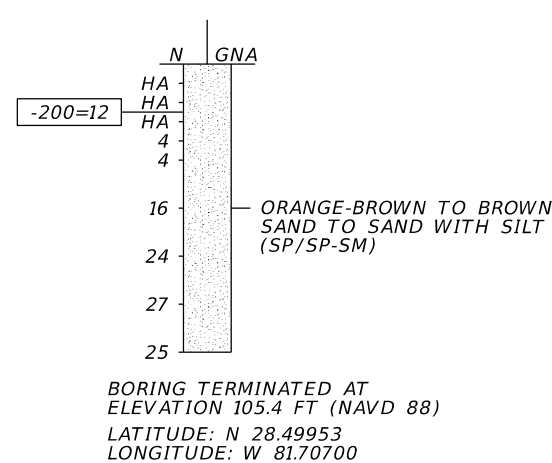
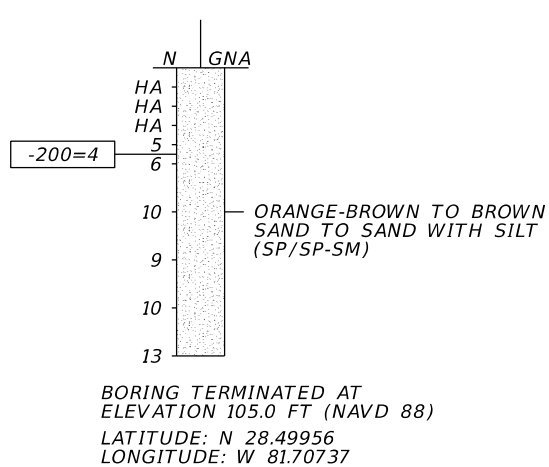
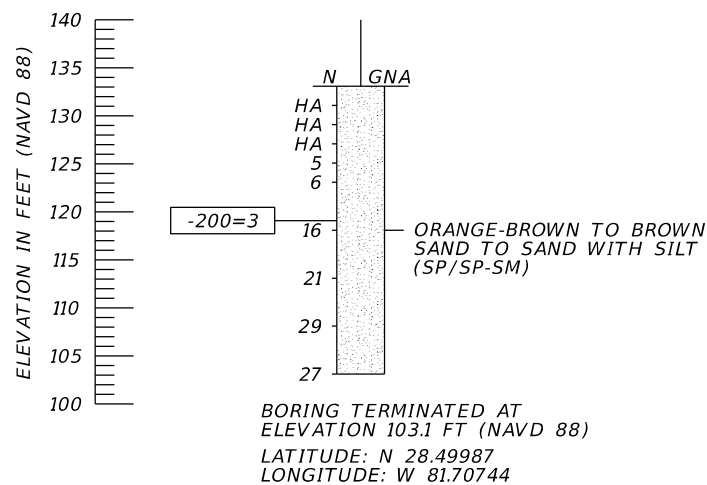
SUBSTRUCTURE CONCRETE: EXTREMELY AGGRESSIVE (ASSUMED)
 SUBSTRUCTURE STEEL: EXTREMELY AGGRESSIVE (ASSUMED)

BOR # SG-5
 STA. 139+25
 REF. Q HARTWOOD
 OFF. 45' LT.
 ELEV. 133.1
 DATE 9/26/2022
 DRILLER G.SMITH
 HAMMER AUTOMATIC
 RIG D-25

BOR # SG-8
 STA. 139+48
 REF. Q HARTWOOD
 OFF. 67' RT
 ELEV. 135.0
 DATE 8/24/2022
 DRILLER G.SMITH
 HAMMER AUTOMATIC
 RIG D-25

BOR # SG-7
 STA. 140+66
 REF. Q HARTWOOD
 OFF. 76' RT.
 ELEV. 135.4
 DATE 8/24/2022
 DRILLER G.SMITH
 HAMMER AUTOMATIC
 RIG D-25

BOR # SG-6
 STA. 140+69
 REF. Q HARTWOOD
 OFF. 81' LT.
 ELEV. 135.5
 DATE 8/26/2022
 DRILLER G.SMITH
 HAMMER AUTOMATIC
 RIG D-25



REVISIONS		
DATE	BY	DESCRIPTION

LUIS A. ALMODOVAR, P.E.
 P.E. LICENSE NUMBER 93273
 TIERRA, INC.
 591 SUSAN B. BRITT COURT
 WINTER GARDEN, FLORIDA 34787



HARTWOOD MARSH ROAD - PHASE I

REPORT OF CORE BORINGS (3)

SHEET NO.
T-30