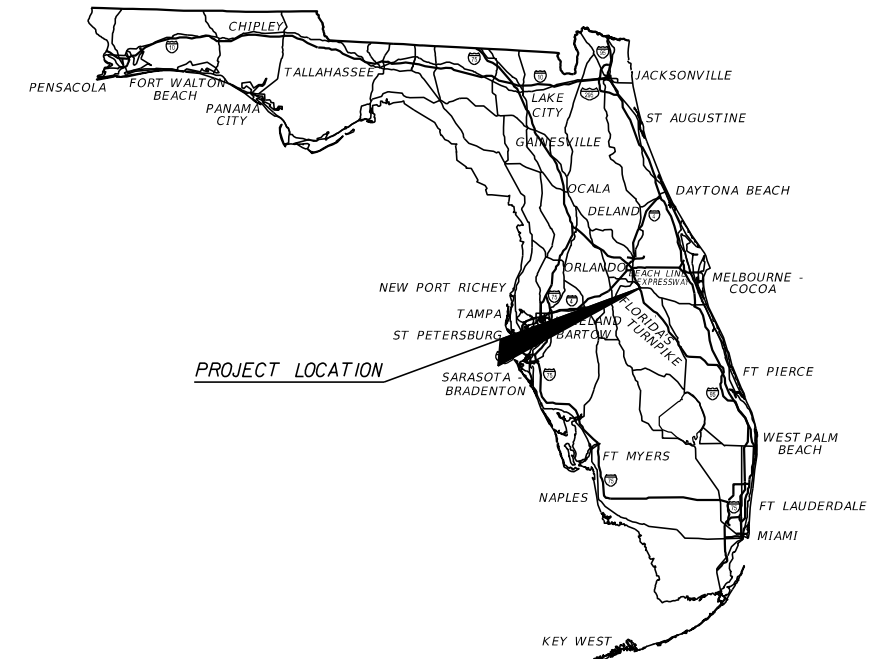


STATE OF FLORIDA
OSCEOLA COUNTY, FLORIDA

CONTRACT PLANS

FINANCIAL PROJECT ID 445415-2-58-01
 (FEDERAL FUNDS: FAN D522 091B)
 OSCEOLA COUNTY (92550000) (92540000)
 CR525 (NEPTUNE ROAD)
 NEPTUNE ROAD WIDENING FROM
 SOUTH OF KINGS CREST ROAD TO US 192

SIGNALIZATION PLANS



INDEX OF SIGNALIZATION PLANS

SHEET NO.	SHEET DESCRIPTION
T-1	KEY SHEET
T-2	SIGNATURE SHEET
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T-5 - T-7	GENERAL NOTES
T-8 - T-16	SIGNALIZATION PLAN
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T-19 - T-20	SIGNALIZATION DETAILS
T-21 - T-24	PED LOCATION DETAILS
T-25 - T-26	GUIDESIGN WORKSHEET
T-27 - T-28	REPORT OF SPT BORINGS FOR MAST ARM SIGNAL POLES



**SIGNALIZATION PLANS
 ENGINEER OF RECORD:**

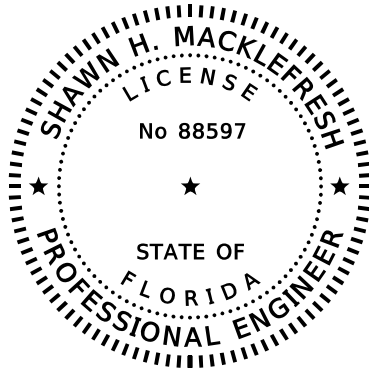
SHAWN H. MACKLEFRESH, P.E. NO.: 88597
 GAI CONSULTANTS, INC.
 12574 FLAGLER CENTER BLVD, SUITE 202
 JACKSONVILLE, FL 32258
 (904) 363-1110
 CONSULTANT VENDOR ID No. 251260999-003

COUNTY PROJECT MANAGER:

KYLE DORRIS, PE

CONSTRUCTION CONTRACT NO.	FISCAL YEAR	SHEET NO.
N/A	23	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:

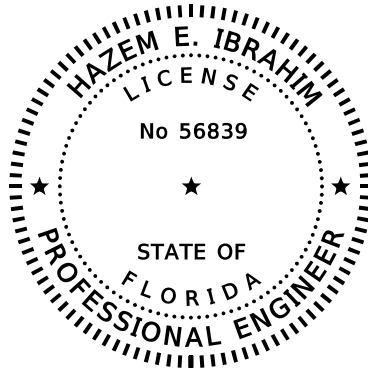
ON THE DATE ADJACENT TO THE SEAL.

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GAI CONSULTANTS, INC.
12574 FLAGLER CENTER BLVD - SUITE 202
JACKSONVILLE, FL 32258
SHAWN H. MACKLEFRESH, P.E. NO. 88597

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 - T-7	GENERAL NOTES
T-8 - T-16	SIGNALIZATION PLAN
T-17	MAST ARM TABULATION
T-19 - T-20	SIGNALIZATION DETAILS
T-21 - T-24	PED LOCATION DETAILS
T-25 - T-26	GUIDESIGN WORKSHEET



THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY:

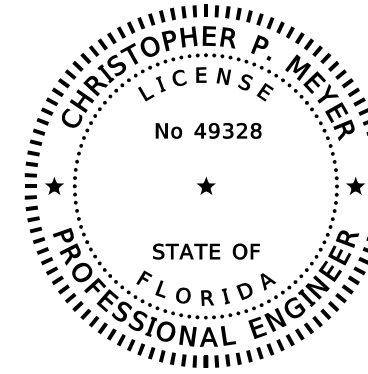
ON THE DATE ADJACENT TO THE SEAL.

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GAI CONSULTANTS, INC.
618 E. SOUTH STREET - SUITE 700
ORLANDO, FL 32807
HAZEM E. IBRAHIM, P.E. NO. 56839

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-18	MAST ARM DATA TABLE



THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY:

ON THE DATE ADJACENT TO THE SEAL.

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GEOTECHNICAL AND ENVIRONMENTAL CONSULTANTS, INC.
2510 MICHIGAN AVENUE
KISSIMMEE, FL 34744-1993
CHRISTOPHER P. MEYER, P.E. NO. 49328

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-27 - T-28	REPORT OF SPT BORINGS FOR MAST ARM SIGNAL POLES

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

SHAWN H. MACKLEFRESH, P.E.
P.E. LICENSE NUMBER 88597
GAI CONSULTANTS, INC.
12574 FLAGLER CENTER BLVD-SUITE 202
JACKSONVILLE, FL 32258

 OSCEOLA COUNTY TRANSIT AND TRANSPORTATION
1 COURTHOUSE SQUARE, SUITE 3100
KISSIMMEE, FLORIDA 34741-5488
PHONE:(407) 742-0662 FAX:(407) 742-0600

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		T-13		T-14		PLAN	FINAL	PLAN	FINAL
			PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL						
0630 2 11	CONDUIT, FURNISH & INSTALL, OPEN TRENCH	LF	384				284				270				411		1349			
0630 2 12	CONDUIT, FURNISH & INSTALL, DIRECTIONAL BORE	LF	316				395				203				414		1328			
0632 7 1	SIGNAL CABLE- NEW OR RECONSTRUCTED INTERSECTION, FURNISH & INSTALL	PI	1				1				1				1		4			
0635 2 11	PULL & SPLICE BOX, F&I, 13" x 24" COVER SIZE	EA	14				19				14				11		58			
0639 1122	ELECTRICAL POWER SERVICE, F&I, UNDERGROUND, METER PURCHASED BY CONTRACTOR	AS	1				1				1				1		4			
0639 2 1	ELECTRICAL SERVICE WIRE, FURNISH & INSTALL	LF	50				50				50				200		350			
0641 2 12	PRESTRESSED CONCRETE POLE, F&I, TYPE P-II SERVICE POLE	EA	1				1				1				1		4			
0641 2 60	PRESTRESSED CONCRETE POLE, COMPLETE POLE REMOVAL- PEDESTAL/SERVICE POLE	EA					1								1		2			
0646 1 11	ALUMINUM SIGNALS POLE, PEDESTAL	EA	4				8				6				7		25			
0646 1 60	ALUMINUM SIGNALS POLE, REMOVE	EA					8								2		10			
0649 21 3	STEEL MAST ARM ASSEMBLY, FURNISH AND INSTALL, SINGLE ARM 40'	EA	3														3			
0649 21 6	STEEL MAST ARM ASSEMBLY, FURNISH AND INSTALL, SINGLE ARM 50'	EA	1								1				1		3			
0649 21 10	STEEL MAST ARM ASSEMBLY, FURNISH AND INSTALL, SINGLE ARM 60'	EA					3								2		5			
0649 21 13	STEEL MAST ARM ASSEMBLY, FURNISH AND INSTALL, DOUBLE ARM 60'-50'	EA									1						1			
0649 21 15	STEEL MAST ARM ASSEMBLY, FURNISH AND INSTALL, SINGLE ARM 70'	EA													1		1			
0649 21 21	STEEL MAST ARM ASSEMBLY, FURNISH AND INSTALL, SINGLE ARM 78'	EA					1										1			
0649 26 3	STEEL MAST ARM ASSEMBLY, REMOVE SHALLOW FOUNDATION- BOLT ON ATTACHMENT	EA					4								4		8			
0650 1 14	VEHICULAR TRAFFIC SIGNAL, FURNISH & INSTALL ALUMINUM, 3 SECTION, 1 WAY	AS					8				9				8		25			
0650 1 16	VEHICULAR TRAFFIC SIGNAL, FURNISH & INSTALL ALUMINUM, 4 SECTION, 1 WAY	AS					2				2						4			
0650 1 60	VEHICULAR TRAFFIC SIGNAL, REMOVE- POLES TO REMAIN	AS																		
0653 1 11	PEDESTRIAN SIGNAL, FURNISH & INSTALL LED COUNTDOWN, 1 WAY	AS	4				8				6				8		26			
0660 3 51	VEHICLE DETECTION SYSTEM- MICROWAVE, ADJUST & MODIFY, CABINET EQUIPMENT	EA																		
0660 3 52	VEHICLE DETECTION SYSTEM - MICROWAVE, ADJUST & MODIFY, ABOVE GROUND EQUIPMENT	EA																		
0660 4 11	VEHICLE DETECTION SYSTEM- VIDEO, FURNISH & INSTALL CABINET EQUIPMENT	EA	1				1				1				1		4			
0660 4 12	VEHICLE DETECTION SYSTEM- VIDEO, FURNISH & INSTALL ABOVE GROUND EQUIPMENT	EA	4				4				3				4		15			
0663 1121	SIGNAL PRIORITY AND PREEMPTION SYSTEM, FURNISH AND INSTALL, GPS, CABINET ELECTRONICS	EA	1				1				1				1		4			
0663 1122	SIGNAL PRIORITY AND PREEMPTION SYSTEM, FURNISH AND INSTALL, GPS, DETECTOR	EA	1				1				1				1		4			
0665 1 11	PEDESTRIAN DETECTOR, FURNISH & INSTALL, STANDARD	EA	4				8				6				8		26			
0670 5111	TRAFFIC CONTROLLER ASSEMBLY, F&I, NEMA, 1 PREEMPTION	AS	1				1				1				1		4			
0670 5600	TRAFFIC CONTROLLER ASSEMBLY, REMOVE CONTROLLER WITH CABINET	AS					1								1		2			
0685 1 13	UNINTERRUPTIBLE POWER SUPPLY, FURNISH AND INSTALL, LINE INTERACTIVE WITH CABINET	EA	1				1				1				1		4			
0685 2 1	REMOTE POWER MANAGEMENT UNIT- RPMU, FURNISH AND INSTALL	EA	1				1				1				1		4			
0700 3201	SIGN PANEL, FURNISH & INSTALL, OVERHEAD MOUNT, 12-20 SF	EA					3				1						4			
0700 3601	SIGN PANEL, REMOVE, UP TO 12 SF	AS																		
0700 5 22	INTERNALLY ILLUMINATED SIGN, FURNISH & INSTALL, OVERHEAD MOUNT, 12-18 SF	EA					4				4				3		11			
0700 11391	ELECTRONIC DISPLAY SIGN, FURNISH & INSTALL OVERHEAD MOUNT- AC POWERED, BLANK OUT SIGN, UP TO 12 SF	EA									4						4			

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

SHAWN H. MACKLEFRESH, P.E.
P.E. LICENSE NUMBER 88597
GAI CONSULTANTS, INC.
12574 FLAGLER CENTER BLVD-SUITE 202
JACKSONVILLE, FL 32258



OSCEOLA COUNTY TRANSIT AND TRANSPORTATION
1 COURTHOUSE SQUARE, SUITE 3100
KISSIMMEE, FLORIDA 34741-5488
PHONE:(407) 742-0662 FAX:(407) 742-0600

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-15		T-16												PLAN	FINAL	PLAN	FINAL
			PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL						
0630 2 11	CONDUIT, FURNISH & INSTALL, OPEN TRENCH	LF																	1349	
0630 2 12	CONDUIT, FURNISH & INSTALL, DIRECTIONAL BORE	LF																	1328	
0632 7 1	SIGNAL CABLE- NEW OR RECONSTRUCTED INTERSECTION, FURNISH & INSTALL	PI																	4	
0635 2 11	PULL & SPLICE BOX, F&I, 13" x 24" COVER SIZE	EA																	58	
0639 1122	ELECTRICAL POWER SERVICE, F&I, UNDERGROUND, METER PURCHASED BY CONTRACTOR	AS																	4	
0639 2 1	ELECTRICAL SERVICE WIRE, FURNISH & INSTALL	LF																	350	
0641 2 12	PRESTRESSED CONCRETE POLE, F&I, TYPE P-II SERVICE POLE	EA																	4	
0641 2 60	PRESTRESSED CONCRETE POLE, COMPLETE POLE REMOVAL- PEDESTAL/SERVICE POLE	EA																	2	
0646 1 11	ALUMINUM SIGNALS POLE, PEDESTAL	EA																	25	
0646 1 60	ALUMINUM SIGNALS POLE, REMOVE	EA																	10	
0649 21 3	STEEL MAST ARM ASSEMBLY, FURNISH AND INSTALL, SINGLE ARM 40'	EA																	3	
0649 21 6	STEEL MAST ARM ASSEMBLY, FURNISH AND INSTALL, SINGLE ARM 50'	EA																	3	
0649 21 10	STEEL MAST ARM ASSEMBLY, FURNISH AND INSTALL, SINGLE ARM 60'	EA																	5	
0649 21 13	STEEL MAST ARM ASSEMBLY, FURNISH AND INSTALL, DOUBLE ARM 60'-50'	EA																	1	
0649 21 15	STEEL MAST ARM ASSEMBLY, FURNISH AND INSTALL, SINGLE ARM 70'	EA																	1	
0649 21 21	STEEL MAST ARM ASSEMBLY, FURNISH AND INSTALL, SINGLE ARM 78'	EA																	1	
0649 26 3	STEEL MAST ARM ASSEMBLY, REMOVE SHALLOW FOUNDATION- BOLT ON ATTACHMENT	EA																	8	
0650 1 14	VEHICULAR TRAFFIC SIGNAL, FURNISH & INSTALL ALUMINUM, 3 SECTION, 1 WAY	AS	10		2												12		37	
0650 1 16	VEHICULAR TRAFFIC SIGNAL, FURNISH & INSTALL ALUMINUM, 4 SECTION, 1 WAY	AS	3														3		7	
0650 1 60	VEHICULAR TRAFFIC SIGNAL, REMOVE- POLES TO REMAIN	AS			1												1		1	
0653 1 11	PEDESTRIAN SIGNAL, FURNISH & INSTALL LED COUNTDOWN, 1 WAY	AS																	26	
0660 3 51	VEHICLE DETECTION SYSTEM- MICROWAVE, ADJUST & MODIFY, CABINET EQUIPMENT	EA			1												1		1	
0660 3 52	VEHICLE DETECTION SYSTEM - MICROWAVE, ADJUST & MODIFY, ABOVE GROUND EQUIPMENT	EA			1												1		1	
0660 4 11	VEHICLE DETECTION SYSTEM- VIDEO, FURNISH & INSTALL CABINET EQUIPMENT	EA																	4	
0660 4 12	VEHICLE DETECTION SYSTEM- VIDEO, FURNISH & INSTALL ABOVE GROUND EQUIPMENT	EA																	15	
0663 1121	SIGNAL PRIORITY AND PREEMPTION SYSTEM, FURNISH AND INSTALL, GPS, CABINET ELECTRONICS	EA																	4	
0663 1122	SIGNAL PRIORITY AND PREEMPTION SYSTEM, FURNISH AND INSTALL, GPS, DETECTOR	EA																	4	
0665 1 11	PEDESTRIAN DETECTOR, FURNISH & INSTALL, STANDARD	EA																	26	
0670 5111	TRAFFIC CONTROLLER ASSEMBLY, F&I, NEMA, 1 PREEMPTION	AS																	4	
0670 5600	TRAFFIC CONTROLLER ASSEMBLY, REMOVE CONTROLLER WITH CABINET	AS																	2	
0685 1 13	UNINTERRUPTIBLE POWER SUPPLY, FURNISH AND INSTALL, LINE INTERACTIVE WITH CABINET	EA																	4	
0685 2 1	REMOTE POWER MANAGEMENT UNIT- RPMU, FURNISH AND INSTALL	EA																	4	
0700 3201	SIGN PANEL, FURNISH & INSTALL, OVERHEAD MOUNT, 12-20 SF	EA	3														3		7	
0700 3601	SIGN PANEL, REMOVE, UP TO 12 SF	AS			1												1		1	
0700 5 22	INTERNALLY ILLUMINATED SIGN, FURNISH & INSTALL, OVERHEAD MOUNT, 12-18 SF	EA	4														4		15	
0700 11391	ELECTRONIC DISPLAY SIGN, FURNISH & INSTALL OVERHEAD MOUNT- AC POWERED, BLANK OUT SIGN, UP TO 12 SF	EA																	4	

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

SHAWN H. MACKLEFRESH, P.E.
P.E. LICENSE NUMBER 88597
GAI CONSULTANTS, INC.
12574 FLAGLER CENTER BLVD-SUITE 202
JACKSONVILLE, FL 32258



OSCEOLA COUNTY TRANSIT AND TRANSPORTATION
1 COURTHOUSE SQUARE, SUITE 3100
KISSIMMEE, FLORIDA 34741-5488
PHONE:(407) 742-0662 FAX:(407) 742-0600

TABULATION OF QUANTITIES

SHEET NO.
T-4

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GENERAL

1. THE SIGNALIZATION PLANS HAVE BEEN PREPARED IN ACCORDANCE WITH THE FLORIDA DEPARTMENT OF TRANSPORTATION'S STANDARD PLANS, LATEST EDITION. GOVERNING SPECIFICATIONS ARE THE STATE OF FLORIDA, LATEST EDITION OF STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, APPLICABLE AGENCY SPECIFICATIONS, AND SUPPLEMENTS THERETO IF NOTED IN THE SPECIAL PROVISIONS FOR THIS PROJECT.
2. THESE PLANS REFLECT CONDITIONS KNOWN DURING PLAN DEVELOPMENT. IN THE EVENT ACTUAL PHYSICAL CONDITIONS PREVENT THE APPLICATION OR THE PROGRESSION OF ANY WORK SPECIFIED, NOTIFY THE CEI ENGINEER IMMEDIATELY.
3. JUST PRIOR TO THE FINAL WALKTHROUGH OF THE PROJECT, FURNISH THE MAINTAINING AGENCY AND CEI ENGINEER EACH ONE(1) COPY OF EQUIPMENT WARRANTY DOCUMENTS, ONE(1) HARD COPY AND ONE(1) ELECTRONIC(PDF) COPY OF MAINTENANCE MANUALS, AND THREE(3) COMPLETE SETS OF AS-BUILT PLANS. ONE SET MUST BE LEFT IN THE CABINET. IN ADDITION, FURNISH A COMPLETED TRACEABILITY MATRIX FOR ANY ATMS/ITS EQUIPMENT.
4. HAVE AN IMSA LEVEL 2 CERTIFIED TECHNICIAN ON CALL WITH A MAXIMUM OF TWO(2) HOURS RESPONSE TIME. PROVIDE A 24-HOUR TELEPHONE NUMBER TO THE SIGNAL MAINTAINING AGENCY AND CEI ENGINEER PRIOR TO ANY SIGNAL CONSTRUCTION. ONCE NOTIFIED OF AN EMERGENCY SIGNAL TROUBLE CALL, AND THE TECHNICIAN HAS NOT RESPONDED WITHIN THE SPECIFIED TWO(2) HOURS, THE MAINTAINING AGENCY RESERVES THE RIGHT TO RESPOND TO THE CALL. IF THE MAINTAINING AGENCY RESPONDS TO AN EMERGENCY SIGNAL TROUBLE CALL DUE TO LACK OF RESPONSE BY THE CONTRACTOR WITHIN THE SPECIFIED TIME PERIOD, THE PRIME CONTRACTOR OF THE PROJECT COULD BE BACK CHARGED ACCORDING TO THE MAINTAINING AGENCY'S POLICY.
5. NOTIFY THE CEI ENGINEER, THE MAINTAINING AGENCY, AND IF APPLICABLE FDOT, AT LEAST 72 HOURS BEFORE BEGINNING ANY RELATED TRAFFIC SIGNAL WORK. OBTAIN ALL CONSTRUCTION PERMITS REQUIRED FOR ALL APPLICABLE CITIES, COUNTIES, AGENCIES, AND FDOT. APPROVAL OF PLANS BY ANY MAINTAINING AGENCY DOES NOT CONSTITUTE A PERMIT. EQUIPMENT WARRANTY MUST BE ONE YEAR, MANUFACTURER'S PROVIDED OR PER FDOT STANDARD SPECIFICATIONS (LATEST EDITION), WHICHEVER IS GREATER.
6. PROVIDE THE CEI ENGINEER AN UPDATED CONSTRUCTION SCHEDULE IN THE FORM OF A TWO WEEK LOOK AHEAD ON A WEEKLY BASIS.
7. ALL EXISTING SIGNALIZATION EQUIPMENT THAT IS TO REMAIN THROUGHOUT CONSTRUCTION IS ASSUMED TO BE IN GOOD WORKING ORDER AT PROJECT KICKOFF UNLESS FDOT AND THE MAINTAINING AGENCY ARE NOTIFIED IN WRITING PRIOR TO THE START OF CONSTRUCTION. ANY DAMAGE TO THE SIGNAL EQUIPMENT AFTER BEGINNING CONSTRUCTION MUST BE REPAIRED AT THE CONTRACTOR'S EXPENSE. USE EXISTING SIGNALIZATION FOR THE MAINTENANCE OF TRAFFIC AS REQUIRED. THE CONTRACTOR IS RESPONSIBLE FOR THE MAINTENANCE OF SIGNALS, INCLUDING LOCATING AND PROTECTING TRAFFIC COMMUNICATIONS INFRASTRUCTURE, FROM THE NOTICE TO PROCEED DATE UNTIL THE MAINTAINING AGENCY ISSUES CONDITIONAL ACCEPTANCE AT FINAL INSPECTION.
8. UNLESS OTHERWISE NOTED, ALL REMOVED EQUIPMENT EXCEPT CONCRETE POLES MUST BE DELIVERED TO THE MAINTAINING AGENCY. COORDINATE WITH THE CEI ENGINEER FOR THE APPROPRIATE MAINTAINING AGENCY:

OSCEOLA COUNTY ROAD AND BRIDGE OFFICE
3850 OLD CANOE CREEK RD
ST. CLOUD, FL 34769
(407) 742-7500

CITY OF ORLANDO TRANSPORTATION DEPARTMENT
TRANSPORTATION ENGINEERING DIVISION, TRAFFIC SIGNAL SECTION
1214 S. WESTMORELAND DR
ORLANDO, FL 32805
(407) 246-2617 (MAIN)
(407) 246-3699 (FAX)
ORLANDO_TRAFFIC_SIGNAL_CONSTRUCTION@CITYOFORLANDO.NET

LAKE COUNTY TRAFFIC OPERATIONS
28127 C.R. 561
TAVARES, FL
(352) 742-1766

ORANGE COUNTY TRAFFIC OPERATIONS
4200 SOUTH JOHN YOUNG PARKWAY
ORLANDO, FLORIDA 32839-9205
(407) 836-7890

OSCEOLA COUNTY TRANSPORTATION AND TRANSIT
AARON TORRES
(407) 738-9405
AARON.TORRES@OSCEOLA.ORG
9. OTHER PROJECTS MAY BE UNDER CONSTRUCTION WITHIN OR ADJACENT TO THIS PROJECT'S LIMITS AND COORDINATION OF CONSTRUCTION ACTIVITIES AND TRAFFIC CONTROL PHASES WITH ANY CONTRACTOR WITHIN OR ADJACENT TO THE PROJECT LIMITS IS REQUIRED.
10. NOTHING IN THE GENERAL NOTES OR SPECIAL PROVISIONS WILL RELIEVE THE CONTRACTOR FROM THEIR RESPONSIBILITIES TOWARD THE SAFETY OF THE GENERAL PUBLIC.
11. THE LOCATION OF ALL PROPOSED EQUIPMENT TO BE INSTALLED MUST BE CONSIDERED APPROXIMATE. OFFSETS TO CABINETS, PULL BOXES, POLES, FOUNDATIONS AND OTHER TRAFFIC ELEMENTS ARE TO THE CLOSEST EDGE OF THOSE ITEMS, UNLESS OTHERWISE NOTED. PROPOSED LOCATIONS AND CLEARANCES MUST BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO BEGINNING CONSTRUCTION. FIELD ADJUSTMENT OF ALL PROPOSED EQUIPMENT MUST BE APPROVED BY THE CEI ENGINEER AND THE MAINTAINING AGENCY IN WRITING.

INSPECTIONS

1. ALL INSPECTIONS AND REQUIRED TESTING ARE TO BE SCHEDULED IN ACCORDANCE WITH CONTRACT DOCUMENTS. THE CEI ENGINEER, FDOT AND THE MAINTAINING AGENCY MUST BE CONTACTED FOURTEEN DAYS BEFORE INSPECTIONS ARE TO BE PERFORMED SO THEY MAY BE PRESENT. IF RE-INSPECTIONS ARE REQUIRED DUE TO CONTRACTOR'S LACK OF PREPAREDNESS, THE CONTRACTOR WILL BE BACK CHARGED FOR THE RE-INSPECTION FEES. A TURN-ON INSPECTION IS REQUIRED, AND THE CONTRACTOR MUST NOTIFY THE MAINTAINING AGENCY AT LEAST 72 HOURS IN ADVANCE. PROVIDE ALL NECESSARY EQUIPMENT INCLUDING A TWO-MAN BUCKET TRUCK OR PLATFORM LIFT TRUCK FOR USE BY THE CEI ENGINEER AND MAINTENANCE.

SUBMITTALS

1. APPROVED SHOP DRAWINGS MUST BE AVAILABLE AT THE PROJECT SITE AT ALL TIMES AND STORED WITHIN THE TRAFFIC SIGNAL CABINET ONCE INSTALLED.

SURVEY

1. THERE MAY BE ADDITIONAL EASEMENTS, RIGHT-OF-WAY, OR OTHER RESTRICTIONS THAT ARE NOT SHOWN ON THIS SURVEY THAT MAY BE FOUND IN THE PUBLIC RECORDS OF THE MAINTAINING AGENCY.
2. SCHEDULE A MEETING WITH FDOT, THE CEI ENGINEER, MAINTAINING AGENCY AND ANY OTHER STAKEHOLDERS AT LEAST TWO WEEKS PRIOR TO THE CONSTRUCTION OF FOUNDATIONS, PEDESTAL POLES, A.D.A. RAMPS, SIGNAL CABINETS AND ALL OTHER RELEVANT TRAFFIC SIGNAL INFRASTRUCTURE TO CONFIRM THEIR ASSOCIATED STAKEOUT LOCATIONS.

UTILITIES

1. NOTIFY UTILITY OWNERS THROUGH SUNSHINE ONE CALL OF FLORIDA, INC., (800) 432-4770, AND UTILITY OWNERS LISTED BELOW TWO BUSINESS DAYS IN ADVANCE OF BEGINNING CONSTRUCTION ON THE JOB SITE. A CONTRACTOR'S REPRESENTATIVE MUST BE PRESENT WHEN THE UTILITY COMPANY LOCATES THEIR FACILITIES. THE LOCATION OF EXISTING UTILITIES MUST BE DETERMINED BY THE CONTRACTOR AND THE UTILITY REPRESENTATIVE WHEN NECESSARY DURING CONSTRUCTION.


UTILITY CONTACTS:

CENTURYLINK LOCAL	RON PRARIO	(407) 754-0116
CENTURYLINK NATIONAL	RON PRARIO	(407) 754-0116
CHARTER (BRIGHHOUSE NETWORKS)	MICHAEL KIKER	(863) 333-4765
COMCAST	DAVID McELROY	
DUKE ENERGY DISTRIBUTION	ROBB BROWN	(352) 459-4671
DUKE ENERGY FIBER	MARK HURST	(727) 820-5208/(727) 512-6288
DUKE ENERGY TRANSMISSION	JENNIFER WILLIAMS	(813) 909-1210
FLORIDA PUBLIC UTILITIES	JOHNNY HILL	(386) 668-9842
FLORIDA SOUTHEAST CONNECTION	SEGUN OJETAYO	(713) 951-5379/(941) 729-5766
FRONTIER	FRED VALDES	(863) 688-9714/(863) 255-9648
GULFSTREAM NATURAL GAS	SHAWN DEUTSHER	(941) 723-7191
KINDER MORGAN	MARK CLARK	(813) 781-1718
VERIZON	THOMAS CLARK	(918) 590-9903
POLK COUNTY UTILITIES		
TOHO WATER AUTHORITY	ROBERT PELHAM	(407) 944-5132

2. NOTIFY ALL UTILITIES AT LEAST 48 HOURS IN ADVANCE OF ANY OPERATION THAT MAY CONFLICT WITH OVERHEAD OR UNDERGROUND UTILITIES, INCLUDING POLE SETTING OPERATIONS WHERE A CONFLICT WITH OVERHEAD ELECTRICAL CONDUCTORS IS EXPECTED, AND IN ANY CIRCUMSTANCES WHERE JOINT USE POLES ARE IMPACTED.
3. THE PRESENCE OF OVERHEAD AND UNDERGROUND ELECTRIC UTILITY LINES NEAR THE LOCATIONS OF THE PROPOSED SIGNAL EQUIPMENT MAY LIMIT THE TYPE OF EQUIPMENT THAT CAN BE USED IN CONSTRUCTION. COORDINATE WITH POWER COMPANY TO DEACTIVATE OR PROTECT LINES IF NECESSARY.
4. USE EXTREME CAUTION WHEN EXCAVATING, INSTALLING, BACKFILLING AND COMPACTING AROUND EXISTING UTILITIES.
5. USE SOFT DIGGING METHODS WHEN WORKING NEAR EXISTING UTILITIES. THE FIRST FOUR FEET OF FOUNDATIONS, OR WHERE SPECIFIED ON THE PLANS. THIS WORK IS INCIDENTAL TO THE ASSOCIATED PAY ITEM.

MAINTENANCE OF TRAFFIC SIGNAL EQUIPMENT

1. WORK REQUIRING A LANE CLOSURE MUST HAVE AN OFF-DUTY LAW ENFORCEMENT OFFICER PRESENT. THE COST OF THE OFF-DUTY LAW ENFORCEMENT OFFICER MUST BE INCIDENTAL TO THE WORK AND WILL NOT BE PAID SEPARATELY.
2. DURING THE TIME THE CONTRACTOR IS RESTORING ALL MALFUNCTIONING TRAFFIC SIGNAL EQUIPMENT, THE CONTRACTOR MUST PROVIDE, AT THEIR EXPENSE, TEMPORARY TRAFFIC CONTROL DEVICES, FLAGGER PERSONNEL, AND LAW ENFORCEMENT PERSONNEL, AS REQUIRED BY THE TEMPORARY TRAFFIC CONTROL PLANS AND FDOT STANDARD PLANS, TO MAINTAIN A SAFE AND EFFICIENT FLOW OF TRAFFIC.
3. EXISTING COMMUNICATIONS, DETECTION AND OPERATIONS MUST BE MAINTAINED AT ALL LOCATIONS DURING CONSTRUCTION. THIS INCLUDES RAILROAD FLASHING BEACONS, RAILROAD PREEMPTION, FIRE PREEMPTION, SCHOOL ZONE FLASHERS, ILLUMINATED STREET NAME SIGNS. PROVIDE TEMPORARY LINES AND CONNECTIONS AS NECESSARY. THIS COST OF MAINTAINING THE SIGNAL AND ITS COMMUNICATION, INCLUDING TEMPORARY LINES AND CONNECTIONS, MUST BE INCIDENTAL TO THE MAINTENANCE OF TRAFFIC PAY ITEM NUMBER. ALL REPORTED MALFUNCTIONS OF THE COMMUNICATIONS SYSTEM MUST BE RESPONDED TO BY THE CONTRACTOR WITHIN TWO HOURS, MUST BE REPAIRED WITHIN 24 HOURS, AND MUST BE DOCUMENTED VIA EMAIL AND THE CEI MUST BE INCLUDED.
4. NOTIFY FDOT, THE CEI ENGINEER, MAINTAINING AGENCY, ANY OTHER IMPACTED AGENCIES AND THE D5 REGIONAL TRAFFIC MANAGEMENT CENTER (RTMC) AT LEAST 48 HOURS PRIOR TO ANY PLANNED COMMUNICATIONS DISRUPTION TO THE TRAFFIC SIGNAL(S). ALL COMMUNICATIONS CUTOVERS MUST BE PRE-APPROVED BY FDOT, THE MAINTAINING AGENCY AND ANY OTHER IMPACTED AGENCIES, PERFORMED DURING OFF-PEAK HOURS, AND COMPLETED IN AN EXPEDIENT MANNER.

REVISIONS				SHAWN H. MACKLEFRESH, P.E. P.E. LICENSE NUMBER 88597 GAI CONSULTANTS, INC. 12574 FLAGLER CENTER BLVD-SUITE 202 JACKSONVILLE, FL 32258	 OSCEOLA COUNTY TRANSIT AND TRANSPORTATION 1 COURTHOUSE SQUARE, SUITE 3100 KISSIMMEE, FLORIDA 34741-5488 PHONE:(407) 742-0662 FAX:(407) 742-0600	SHEET NO. T-5
DATE	DESCRIPTION	DATE	DESCRIPTION			

GENERAL NOTES

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

CONDUIT

1. ALL COMMUNICATION CONDUIT MUST BE PVC SCHEDULE 40 OR HDPE SDR11, 2 INCH DIA. MINIMUM, AND ALL ABOVE GROUND CONDUIT MUST BE GALVANIZED STEEL UNLESS OTHERWISE SPECIFIED IN PLANS. PLACE AT A MINIMUM DEPTH OF THREE FEET BELOW FINISHED GRADE.

PULL BOXES

1. PULL BOX COVERS MUST BE NON-METALLIC, ON THE APL, AND HAVE THEIR SHOP DRAWINGS SUBMITTED FOR REVIEW. COORDINATE WITH FDOT, CEI ENGINEER AND THE MAINTAINING AGENCY FOR APPROPRIATE COVER MARKINGS BEFORE SUBMITTAL OF SHOP DRAWINGS.
2. DO NOT PLACE PULL BOXES IN SIDEWALK UNLESS CONDITIONS WILL NOT PERMIT OTHERWISE. UNDER NO CIRCUMSTANCES ARE PULLBOXES PERMITTED TO BE INSTALLED WITHIN A.D.A RAMP AND DETECTABLE WARNING SURFACES.

TRAFFIC SIGNAL CABINETS

1. ALL TRAFFIC SIGNAL CABINETS MUST HAVE A TOP OF FOUNDATION AND CONCRETE ACCESS PAD ELEVATIONS GREATER THAN OR FLUSH WITH THE TOP OF THE NEAREST CURB IN ROADWAY SECTIONS WITH CURB AND GUTTER. FOR ROADWAY SECTIONS WITHOUT CURB AND GUTTER, THE TOP OF TRAFFIC SIGNAL CABINET FOUNDATION AND CONCRETE ACCESS PAD MUST HAVE AN ELEVATION GREATER THAN OR FLUSH WITH THE ADJACENT HIGH POINT OF PAVEMENT OF THE EXISTING/PROPOSED ROADWAY CROSS SECTION.

CABLE

1. DO NOT PLACE ENERGIZED CABLE, INCLUDING LIGHTING CONDUCTORS, IN THE SAME CONDUIT OR PULL BOX AS DETECTION CABLES, LOW VOLTAGE CABLES, OR FIBER OPTIC CABLES.
2. PULLING INSTRUCTIONS FOR POWER CONDUCTORS: CONNECT PULLING DEVICES TO COPPER WIRE AND NOT TO JACKET AND MEET MANUFACTURERS REQUIREMENTS. USE PULLING COMPOUND PER MANUFACTURES REQUIREMENTS. ALL BENDS SHALL NOT BE LESS THAN RECOMMENDED BY N.E.C. OR N.E.S.C. FOR CABLE USED.
3. THE FIBER OPTIC CABLE INSTALLATION TECHNIQUES AND PROCEDURES MUST BE AS SPECIFIED BY THE CABLE MANUFACTURER & INDUSTRY STANDARDS AND MUST BE SUCH THAT THE OPTICAL AND MECHANICAL CHARACTERISTICS OF THE CABLES ARE NOT DEGRADED AT THE TIME OF INSTALLATION. THE CENTRAL STRENGTH MEMBER AND ARAMID YARN MUST BE ATTACHED DIRECTLY TO THE PULLING EYE DURING CABLE PULLING. "BASKET GRIP" OR "CHINESE FINGER" TYPE ATTACHMENTS TO THE CABLE MUST NOT EXCEED THE CABLES OUTSIDE TENSILE RATING ON ALL PULLS.
4. VERIFY COLOR CODES FOR BOTH SIGNAL AND INTERCONNECT CABLE WITH MAINTAINING AGENCY AND CEI ENGINEER BEFORE ORDERING. WIRING DIAGRAMS MUST BE APPROVED BY THE MAINTAINING AGENCY.
5. ALL FIELD WIRING MUST BE NEATLY BUNDLED AND CLEARLY IDENTIFIED WITH PERMANENT LEGIBLE, WEATHERPROOF TAGS SECURELY ATTACHED TO EACH CABLE. FIELD WIRING IDENTIFICATION MUST BE INCLUDED WITHIN ALL PULL BOXES, MAST ARM HAND HOLES, CABINETS, ETC.
6. WHERE TERMINAL BLOCKS ARE USED, SIX FEET OF ADDITIONAL SIGNAL CABLE SLACK MUST BE PROVIDED WITHIN THE UPRIGHT SUCH THAT THE TERMINAL BLOCK CAN BE REMOVED FROM THE UPRIGHT TO ALLOW FOR TROUBLE SHOOTING.
7. SPARE CONDUCTORS WITHIN TRAFFIC SIGNAL AND PEDESTRIAN SIGNAL HEADS MUST BE CAPPED. NO SPARE CONDUCTORS ARE PERMITTED TO BE TAPED.
8. NEATLY WIND AND ZIPTIE ALL CABLE SLACK IN A MANNER THAT STILL ALLOWS THE SIGNAL HEAD TO BE OPENED AND MAINTAINED.

VEHICULAR SIGNAL HEADS

1. DURING TRAFFIC SIGNAL FLASHING OPERATION, THE RED ARROW INDICATION OF ALL 3-SECTION LEFT TURN HEADS MUST FLASH.
2. ALL DARK INSTALLED SIGNAL INDICATIONS NOT IN OPERATION MUST BE COVERED, TO INCLUDE REFLECTORIZED BACK-PLATES.

PEDESTRIAN SIGNAL HEADS

1. ENSURE THAT THE INSTALLED PEDESTRIAN SIGNAL HEAD ASSEMBLY IS SEALED TO EXCLUDE DUST AND MOISTURE. DRILL TWO, 1/4 INCH DRAIN HOLES IN THE BOTTOM OF THE INSTALLED SIGNAL HEAD ASSEMBLY.

SPAN WIRES


1. NOT USED

PREEMPTION

1. SIGNAL PRE-EMPTION EQUIPMENT USED MUST BE LISTED IN THE APPLICABLE LOCAL JURISDICTION'S QUALIFIED/APPROVED PRODUCTS LIST, SPECIFICATIONS, AND/OR SPECIAL PROVISIONS. ALL INSTALLATIONS MUST BE COMPATIBLE WITH THE RESPONSIBLE AGENCIES' FIRE DEPARTMENT STANDARDS AND APPLICABLE LOCAL OPTICOM CENTRAL MANAGEMENT SYSTEMS THROUGH AN ETHERNET CONNECTION AND INTERFACE MODULE. THE COST MUST INCLUDE ALL COMPONENTS, ACTIVATION AND TESTING TO MAKE A FULLY OPERATIONAL SYSTEM.

OSCEOLA COUNTY

1. THE APPLICATION OF THE FOLLOWING MATERIALS TO VARIOUS TRAFFIC SIGNAL COMPONENTS MUST BE PERFORMED DURING ASSEMBLY:
 - A. THREADED HARDWARE: ALL NON-ELECTRICAL THREADED HARDWARE (I.E. ASTRO BRACKET HARDWARE, POLE HARDWARE, OR ANY THEADED SURFACE) MUST BE COATED WITH AN ANTI-SEIZE LUBRICANT APPROVED BY THE ENGINEER. NO SPRAY ON ANTI-SEIZE COMPOUND WILL BE ACCEPTED.
 - B. GASKETING SURFACES: ALL SURFACES MUST BE LIGHTLY COATED WITH COUNTY APPROVED SILICONE GREASE.
 - C. ELECTRICAL CONNECTIONS: ALL MECHANICAL/ELECTRICAL CONNECTIONS MUST HAVE THE VARIOUS COMPONENTS OF THE SPLICE OR TERMINATION COATED WITH A COUNTY APPROVED OXIDE INHIBITOR.
 - D. GALVANIZED SURFACES: ALL SCRATCHES AND FIELD-DRILLED HOLES MUST BE TREATED IN ACCORDANCE WITH THE "SPECIAL PROVISION FOR INSTALLATION OF PAINT-OVER-GALVANIZED STEEL MAST-ARM ASSEMBLIES".
 - E. WEATHERPROOFING: IRREGULAR MATING SURFACES MUST BE RENDERED WEATHERPROOF BY APPLYING AN APPROPRIATE BEAD OF CLEAR SILICONE CAULK. THESE AREAS INCLUDE SERRATED SIGNAL COUPLINGS, CONTROLLER CABINET FOUNDATION, PEDESTRIAN PUSH BUTTONS, AND ANY OTHER AREAS TYPICALLY PRONE TO MOISTURE INFILTRATION.
2. SIGNAL CABLE MUST BE SPLICED TO A SEPARATE 7 CONDUCTOR CABLE FOR EACH SIGNAL AND 7 CONDUCTOR CABLE FOR EACH PEDESTRIAN HEAD. THESE SPLICES MUST BE INSTALLED IN EITHER THE HAND-HOLE OF THE STEEL POLE/CONCRETE STRAIN POLE OR WITHIN THE TRANSFORMER BASE A PEDESTRIAN PEDESTAL. A PERMANENT TAG MUST BE PLACED AT BOTH WIRE TERMINATIONS DESIGNATING THE PHASE USED. ALL UNUSED SIGNAL WIRES MUST BE BONDED TO THE POLE GROUND. EACH DETECTOR PUSH BUTTON MUST BE FED WITH AN INDIVIDUAL TWO CONDUCTOR BELDEN CABLE, WITH THE SHIELD WIRE BONDED TO THE POLE GROUND. THE OUTSIDE INSULATION JACKET OF ALL SIGNAL CABLES MUST REMAIN INTACT FROM THE SIGNAL HEADS TO THE FIELD TERMINATION POINTS. NO UN-JACKETED INDIVIDUAL CONDUCTORS MUST REST IN ANY FIELD DRILLED STRUCTURES OR ASSEMBLIES.
3. SOLID CONDUCTORS MUST BE USED FOR MAIN ROADWAY PHASES AND TRACERS USED FOR SIDE STREET PHASES.
4. ANY FIBER INTERCONNECT CABLE THAT IS CUT OR DAMAGED DURING CONSTRUCTION MUST BE REPLACED AS AN ENTIRE RUN AND MUST BE RE-SPLICED WITHIN THE SPLICE CLOSURE AT THE END OF THE RUN. SPLICING OF FIBER INTERCONNECT CABLE BETWEEN SLICE CLOSURES IS NOT PERMITTED. THE CONTRACTOR MUST BEAR ALL EXPENSES ASSOCIATED WITH THE INSTALLATION OF THE NEW INTERCONNECT CABLE.
5. ANY MATERIAL FURNISHED FOR THE PURPOSES OF: NEW INSTALLATION, REPLACEMENT, OR REPAIR OF THE EXISTING COMMUNICATIONS INFRASTRUCTURE MUST MEET THE STANDARDS AND SPECIFICATIONS OF OSCEOLA COUNTY TRANSPORTATION AND TRANSIT. ANY SUPPLIED CONTROLLER CABINET, CONTROLLER, TELEMETRY UNIT, COMMUNICATIONS CABLE, PULL BOX, CONDUIT, TERMINATION DEVICE, JUNCTION BOX, AND COMMUNICATIONS INTERFACE PANEL MUST COMPLY WITH THE LATEST REQUIREMENTS AS STATED BY OSCEOLA COUNTY.
6. IF THERE IS FIBER CABLE WITHIN 1500 FEET OF PROJECT LIMITS, CONTACT LINDSEY.GIOVINAZZO@OSCEOLA.ORG, (407) 742-9166 OR AARON TORRES AT (407) 738-9405.
7. DO NOT USE LB CONDUITS IN EXISTING OR NEW CABINET INSTALLS.
8. MAKE ALL DETECTORS INSTALLED AS PART OF THE PROJECT FULLY OPERATIONAL IN ACCORDANCE WITH THEIR ASSOCIATED ISOLATED INTERSECTION SIGNAL TIMING CHART WITHIN 24 HOURS OF THEIR INSTALLATION.
9. ALL NEW CCTV CAMERAS MUST BE MOUNTED TO HAVE THE ABILITY TO VIEW 360-DEGREE ANGLE BY PLACING THE CAMERA ON THE MAST ARM USING A CANDY CANE SUPPORT RISER.
10. CONTACT THE SIGNAL PROJECT MANAGER, AARON TORRES, AT (407) 738-9405 AT LEAST 48 HOURS PRIOR TO DELIVERY. WRITTEN ACKNOWLEDGEMENT OF EQUIPMENT RECEIPT MUST BE OBTAINED FROM AARON TORRES IN THE FORM OF A SIGNED RECEIPT BEARING THE CONTRACTOR'S LETTERHEAD. THIS ITEMIZED RECEIPT MUST STATE ALL EQUIPMENT REMOVED FROM EACH LOCATION WAS RETURNED TO OSCEOLA COUNTY TRANSPORTATION AND TRANSIT IN GOOD CONDITION. PRESENT THE RECEIPT TO AARON TORRES AT THE TIME OF SIGNAL INSPECTION. ABSENCE OF SUCH RECEIPT MUST BE RECORDED ON THE PUNCH LIST AS AN ITEM TO BE CORRECTED PRIOR TO FINAL APPROVAL OF THE INSTALLATION.
11. PAINT MAST ARMS "MIDNIGHT NEUTRAL" (SHERWIN WILLIAMS J4-55-34), APPLIED ACCORDING TO FDOT STANDARD SPECIFICATIONS 560 (CODES Z-C AND B-8 FOR PRIME AND INTERMEDIATE COATS). THIS INCLUDES ANY LUMINAIRES INSTALLED ON THE MAST ARM.

REVISIONS				SHAWN H. MACKLEFRESH, P.E. P.E. LICENSE NUMBER 88597 GAI CONSULTANTS, INC. 12574 FLAGLER CENTER BLVD-SUITE 202 JACKSONVILLE, FL 32258	 OSCEOLA COUNTY TRANSIT AND TRANSPORTATION 1 COURTHOUSE SQUARE, SUITE 3100 KISSIMMEE, FLORIDA 34741-5488 PHONE:(407) 742-0662 FAX:(407) 742-0600	SHEET NO. T-6
DATE	DESCRIPTION	DATE	DESCRIPTION			
						GENERAL NOTES

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OSCEOLA COUNTY

630-2-11: ALL CONDUIT MATERIALS MUST MEET THE MINIMUM REQUIREMENTS OF SECTION A630-2 OF THE CURRENT MINIMUM SPECIFICATIONS FOR TRAFFIC CONTROL SIGNAL DEVICES (MSTCSD). ALL CONDUIT INSTALLED MUST BE INSTALLED AS PER THE LATEST FDOT SPECIFICATIONS. A #10 AWG TRACE WIRE MUST BE INSTALLED WITHIN ANY UNUSED CONDUIT AND SPLICED WITHIN THE PULL BOX TO PROVIDE ELECTRICAL CONTINUITY. IF CONFLICTS ARISE BETWEEN SPECIFICATIONS, THE MOST STRINGENT WILL APPLY.

639-1-122: INCLUDES THE COST OF PROVIDING CONCRETE SERVICES POLE TO MOUNT SIGNAL DISCONNECT WHEN NOT PERMITTED TO BE MOUNTED ON POWER COMPANY POLE. SERVICE POLE MUST BE EXPOSED 12' ABOVE GRADE WITH DISCONNECT MOUNTED AT 8' TO BOTTOM. DISCONNECT MUST USE BREAKERS, NO FUSES OR EXTERNAL SWITCHES PERMITTED. WIRE SURGE ARRESTOR MUST BE ON THE LOAD SIDE OF THE DISCONNECT.

649-21-XX: THE COUNTY WILL HIRE A CERTIFIED DRILLED SHAFT CTQP LEVEL I CONSTRUCTION ENGINEERING AND INSPECTION (CSI) FIRM, AND A CONCRETE TESTING LABORATORY FOR THE PURPOSE OF INSPECTING ALL DRILLED SHAFT INSTALLATIONS PER FDOT STANDARDS. THE FIRM MUST THEN SUBMIT A SIGNED AND SEALED REPORT VERIFIED BY THE PE IN RESPONSIBLE CHARGE OF THE DRILLED SHAFT INSPECTOR TO THE DEPARTMENT FOR APPROVAL. FAILURE TO OBTAIN THESE SERVICES PRIOR TO THE CONSTRUCTION OF THE DRILLED SHAFT(S) MUST RESULT IN THE REJECTION OF THE DRILLED SHAFT(S).

650-1-1X: ALL TRAFFIC SIGNAL HEADS MUST BE STANDARD, NOT LIGHTWEIGHT. PROVIDE AN ARTICULATED ASTRO-BRACKET UNDER THIS PAY ITEM IF NEEDED FOR PROPER ORIENTATION OF HORIZONTAL SIGNAL HEAD ON A SKEWED ARM OR APPROACH. ANY FOUR SECTION SIGNAL HEADS WITH THE FLASHING YELLOW ARROW MUST HAVE THE FTP-85-13 SIGN INSTALLED ADJACENT TO THE HEAD ASSEMBLY TO THE RIGHT.

653-1-11: LED PEDESTRIAN SIGNALS ARE TO BE SINGLE SECTION AND PROVIDED WITH INTERNATIONAL STYLE LENSES AND COUNTDOWN FEATURES.

660-4-11: VIDEO DETECTORS MUST MEET OSCEOLA COUNTY'S FUNCTIONALITY REQUIREMENTS. PROVIDE SUNSHIELDS ON EACH VIDEO CAMERA AND A MENU-DRIVEN INTERFACE REQUIRING NO SEPARATE COMPUTER FOR SET-UP OR MAINTENANCE. VIDEO CAMERAS MUST BE COLOR AND SEALED PRESSURIZED HOUSING. THIS PAY ITEM ALSO INCLUDES LIGHTNING AND SURGE PROTECTION CONSISTING OF POINT DISCHARGE DISSIPATION TERMINALS ON EACH CAMERA, COAXIAL LINE PROTECTORS AND CAMERA PROTECTORS. PROPER GROUNDING MUST BE PROVIDED INCLUDING A BOND WIRE ATTACHED TO THE CAMERA ASSEMBLY RUNNING TO THE POLE GROUND. THIS ITEM INCLUDES EXTERIOR USE CABLING, AND MOUNTING BRACKETS NECESSARY TO MEET THE PERFORMANCE EXPECTATIONS OF THE SYSTEM AS DESCRIBED IN THE SIGNAL GENERAL NOTES. PAYMENT INCLUDES ALL LABOR (MAN-HOURS) AND EQUIPMENT NECESSARY TO DEVELOP AN ACCEPTANCE TESTING PLAN AND TO COMPLETE A SUCCESSFUL VIDEO DETECTION ACCURACY TEST A.K.A. FIELD ACCEPTANCE TEST OF THE VIDEO DETECTION SYSTEM.

665-1-11: CONTACT THE ENGINEER BEFORE PROCEEDING IF ALL A.D.A. REQUIREMENTS CANNOT BE MET REGARDING THE PLACEMENT AND ACCESSIBILITY OF THE BUTTONS.

670-5-112: THE CONTROLLER ASSEMBLY MUST CONSIST OF AN ECONOLITE COBALT CONTROLLER AND A TS2 TYPE 1 SHELF MOUNTED WITHIN A TYPE VI CONTROLLER CABINET MINIMUM HEIGHT OF 68" OR R77 IF CABINET IS AN ECONOLITE WITH 3 SHELVES. (SPECIAL NOTE: IF THERE IS LIMITED SIDEWALK A.D.A. CLEARANCE, A REDUCED DEPTH TYPE VI CABINET CAN BE USED WITH PRIOR APPROVAL FROM OSCEOLA COUNTY TRANSPORTATION AND TRANSIT.) THE ECONOLITE COBALT CONTROLLER MUST PROVIDE TOTAL UTILITY AND INTEROPERABILITY WITH OSCEOLA COUNTY TRANSPORTATION AND TRANSIT'S "CENTRACS" COMPUTER SYSTEM. THE CABINET MUST INCLUDE A MINIMUM OF FOURTEEN (14) LOAD SWITCH BAYS AND ACCOMMODATIONS FOR THE VIDEO DETECTION SYSTEM. THE CABINET AIR FILTER MUST BE OF THE REUSABLE WASHABLE ALUMINUM TYPE. THE TOP OF THE CONTROLLER PAD MUST BE AT LEAST SIX INCHES ABOVE THE ROADWAY ELEVATION. THIS PAY ITEM ALSO INCLUDES COMPLETE REINTEGRATION OF THE EXISTING GPS PRIORITY CONTROL PREEMPTION EQUIPMENT, AND RELOCATION TO/FROM THE EXISTING CABINET. INCLUDE A FLUSH MOUNTED AUTOMATIC POWER TRANSFER SWITCH ON THE CABINET. PROVIDE A TECHNICIAN SERVICE PAD 30" IN WIDTH. WHENEVER POSSIBLE, THE CABINET IS TO BE PLACED SO THAT THE DOOR OPENS AWAY FROM THE INTERSECTION AND OPENS FULLY WITHIN THE RIGHT OF WAY. THE PAY ITEM INCLUDES THE COST OF THE CONCRETE FOR THE CONTROLLER PAD AND THE SERVICE PAD. NOTE- REFER TO OSCEOLA COUNTY TRAFFIC SIGNAL CABINET AND CONTROLLER SPECIFICATIONS 5/2016 FOR MORE DETAILED SPECIFICATIONS.


682-1-133: NOT USED

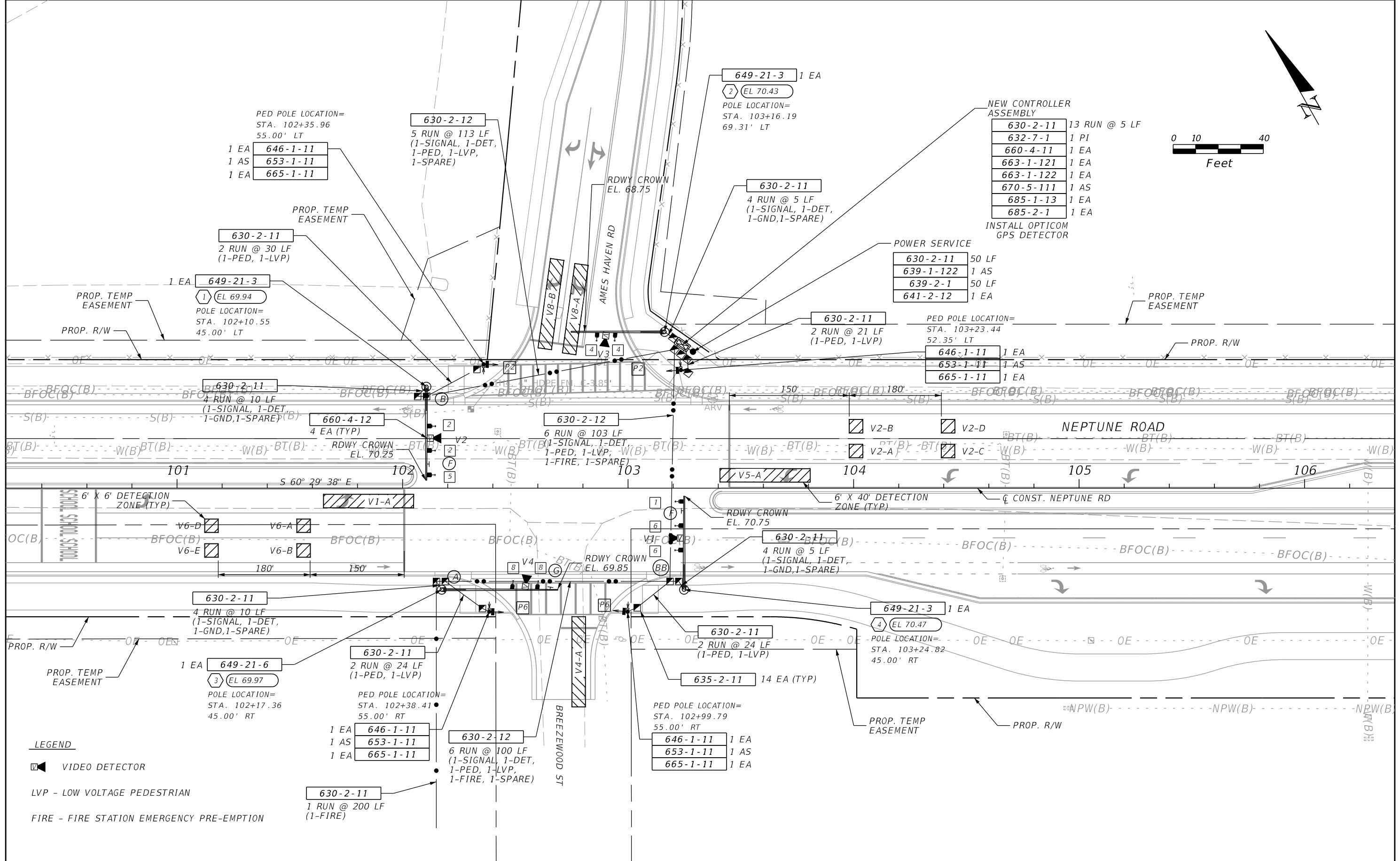
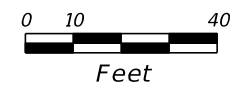
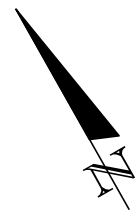
684-1-1: INCLUDE THE COST FOR ALL FIBER OPTIC JUMPER CABLES TO ENSURE FULL CONNECTIVITY TO FIBER OPTIC PATCH PANEL. PROVIDE TWO ADDITIONAL FIBER OPTIC JUMPER CABLES AT LEAST 5 FEET IN LENGTH TO BE LEFT IN THE CABINET TRAY.

685-1-14: NOT USED

700-5-22: ILLUMINATED STREET SIGNS MUST PRODUCE A MINIMUM OF 50 LUMENS PER WATT. SIGNS MUST BE DOUBLE-SIDED AND MOUNTED TO SEPARATE CANTILEVER ARMS BELOW THE MAST ARMS. INTERNALLY ILLUMINATED STREET NAME SIGNS MUST HAVE A 24" VIEWING HEIGHT THAT DOES NOT INCLUDE THE HEIGHT OF THE SIGN ASSEMBLY. INTERNALLY ILLUMINATED STREET NAME SIGNS MUST BE BURNED IN FOR 60 DAYS BEFORE FINAL ACCEPTANCE. THE SIGNS MUST USE A BREAKER SEPARATELY FROM THE SIGNAL CABINET AND MUST BE CONTROLLED BY ONE MASTER PHOTOCCELL INSTALLED IN CABINET.

715-5-31: LUMINAIRE MUST BE L.E.D. COBRA HEAD TYPE 3, FURNISHED TO MATCH THE MAST ARM WITH 14' ARMS. USE A 278W L.E.D. LUMINAIRE.

REVISIONS				SHAWN H. MACKLEFRESH, P.E. P.E. LICENSE NUMBER 88597 GAI CONSULTANTS, INC. 12574 FLAGLER CENTER BLVD-SUITE 202 JACKSONVILLE, FL 32258	 OSCEOLA COUNTY TRANSIT AND TRANSPORTATION 1 COURTHOUSE SQUARE, SUITE 3100 KISSIMMEE, FLORIDA 34741-5488 PHONE:(407) 742-0662 FAX:(407) 742-0600	SHEET NO. T-7
DATE	DESCRIPTION	DATE	DESCRIPTION			
					GENERAL NOTES	



- LEGEND**
- VIDEO DETECTOR
 - LVP - LOW VOLTAGE PEDESTRIAN
 - FIRE - FIRE STATION EMERGENCY PRE-EMPTION

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

SHAWN H. MACKLEFRESH, P.E.
 P.E. LICENSE NUMBER 88597
 GAI CONSULTANTS, INC.
 12574 FLAGLER CENTER BLVD-SUITE 202
 JACKSONVILLE, FL 32258



OSCEOLA COUNTY TRANSIT
 AND TRANSPORTATION

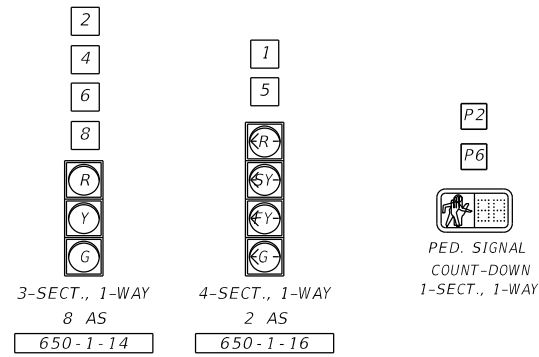
1 COURTHOUSE SQUARE, SUITE 3100
 KISSIMMEE, FLORIDA 34741-5488
 PHONE:(407) 742-0662 FAX:(407) 742-0600

SIGNALIZATION PLAN

SHEET NO.
T-8

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DETAILS OF SIGNAL HEADS



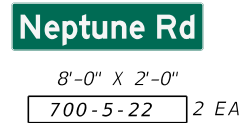
ITEM 650-1-XX TO INCLUDE BACKPLATE WITH RETRO-REFLECTIVE BORDER.

NOTE:

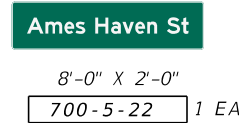
1. MAJOR STREET IS NEPTUNE RD (MOVEMENTS 1, 2, 5, AND 6), AND MINOR STREETS ARE AMES HAVEN RD (MOVEMENT 8) AND BREEZEWOOD ST (MOVEMENT 4).
2. DURING EMERGENCY OPERATIONS YELLOW FLASHING MODE SHALL BE FOR MOVEMENTS 2 & 6. ALL OTHER MOVEMENTS SHALL BE RED.
3. SPEED LIMIT FOR NEPTUNE RD IS 45 MPH, AND 30 FOR AMES HAVEN RD.

MAST ARM MOUNTED SIGNS

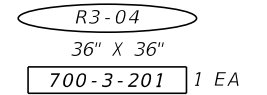
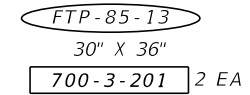
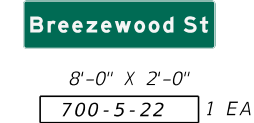
SIGN (A)
LED (EDGE LIT) INTERNALLY
ILLUMINATED SIGN DOUBLE FACED



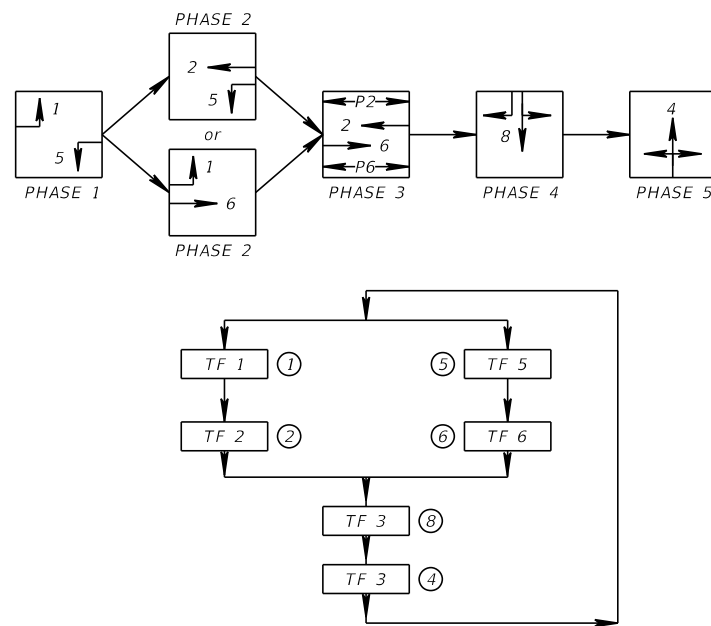
SIGN (B)
LED (EDGE LIT) INTERNALLY
ILLUMINATED SIGN



SIGN (BB)
LED (EDGE LIT) INTERNALLY
ILLUMINATED SIGN



SPECIAL S.O.P.



CONTROLLER TIMINGS								
TIMING FUNCTION								
MOVEMENT NUMBER	1	2	3	4	5	6	7	8
MINIMUM GREEN	5	15		6	5	15		6
EXTENSION	3	3		3	3	3		3
MAXIMUM GREEN 1	13	104		12	13	104		25
MAXIMUM GREEN 2								
YELLOW CLEARANCE	4.8	4.8		3.7	4.8	4.8		3.7
ALL RED	2.3	2.4		3.5	2.3	2.4		3.6
PEDESTRIAN WALK		7.0				7.0		
PED. CLEARANCE		22				19		
RECALL		MIN				MIN		

VIDEO DETECTOR ASSIGN.

DETECTOR NO.	MOVEMENT NO.	DELAY TIME (SEC)
V1	V1 - A	0
	V6 - A	0
	V6 - B	0
	V6 - C	5
V2	V6 - D	5
	V2 - A	0
	V2 - B	0
	V2 - C	0
V3	V2 - D	0
	V5 - A	0
V4	V4 - A	0
	V8 - A	0
	V8 - B	5

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

REVISIONS			
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GAI CONSULTANTS, INC.
12574 FLAGLER CENTER BLVD-SUITE 202
JACKSONVILLE, FL 32258

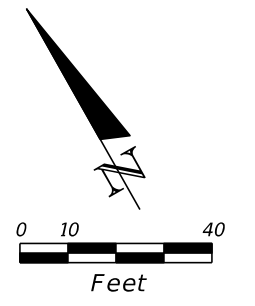


OSCEOLA COUNTY TRANSIT AND TRANSPORTATION
1 COURTHOUSE SQUARE, SUITE 3100
KISSIMMEE, FLORIDA 34741-5488
PHONE:(407) 742-0662 FAX:(407) 742-0600

SIGNALIZATION PLAN

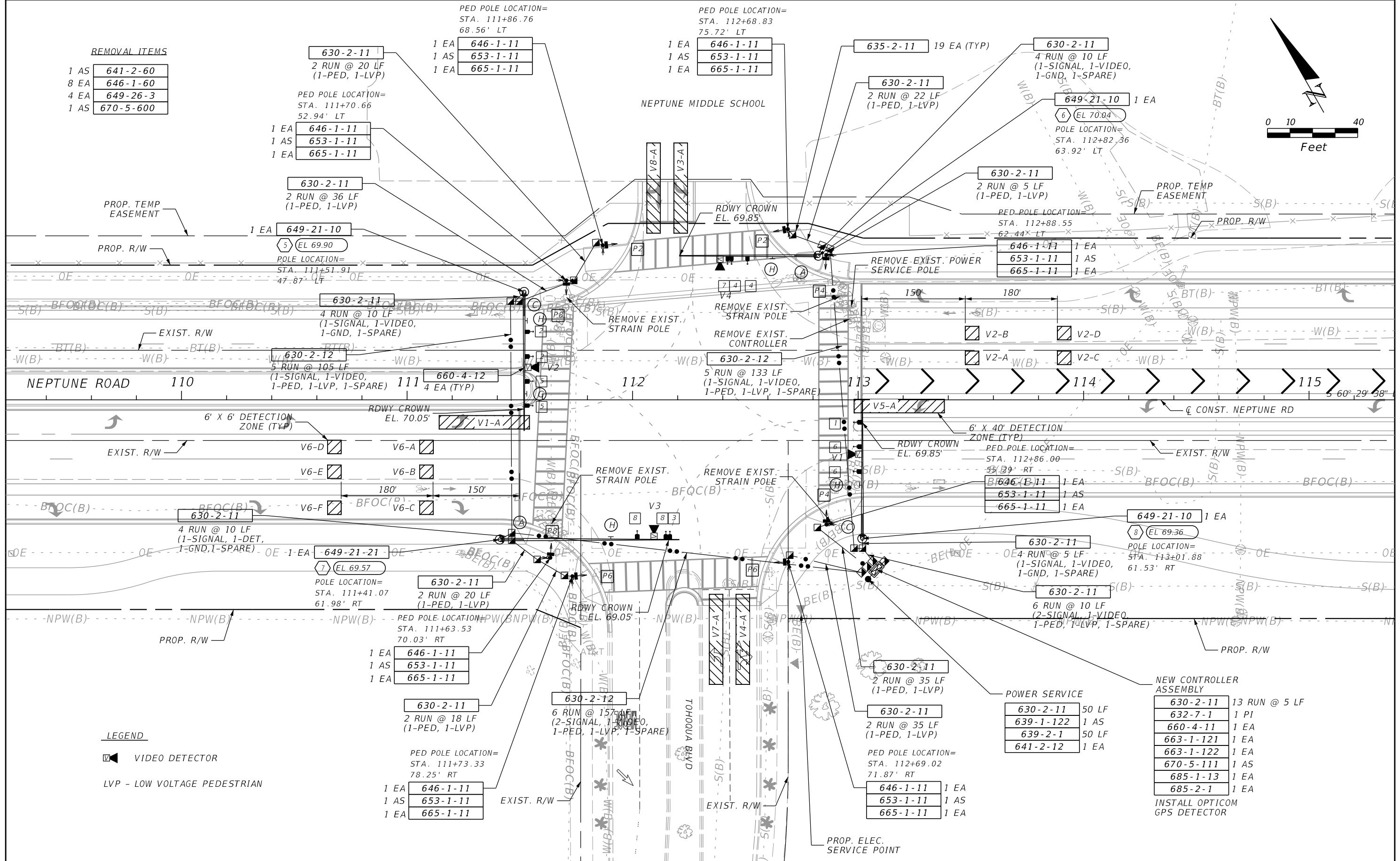
SHEET NO.

T-9



REMOVAL ITEMS

1 AS	641-2-60
8 EA	646-1-60
4 EA	649-26-3
1 AS	670-5-600



PROP. TEMP EASEMENT

PROP. R/W

6' X 6' DETECTION ZONE (TYP)

6' X 40' DETECTION ZONE (TYP)

PROP. TEMP EASEMENT

PROP. R/W

PROP. R/W

PROP. ELEC. SERVICE POINT

LEGEND

- VIDEO DETECTOR
- LVP - LOW VOLTAGE PEDESTRIAN

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

SHAWN H. MACKLEFRESH, P.E.
 P.E. LICENSE NUMBER 88597
 GAI CONSULTANTS, INC.
 12574 FLAGLER CENTER BLVD-SUITE 202
 JACKSONVILLE, FL 32258



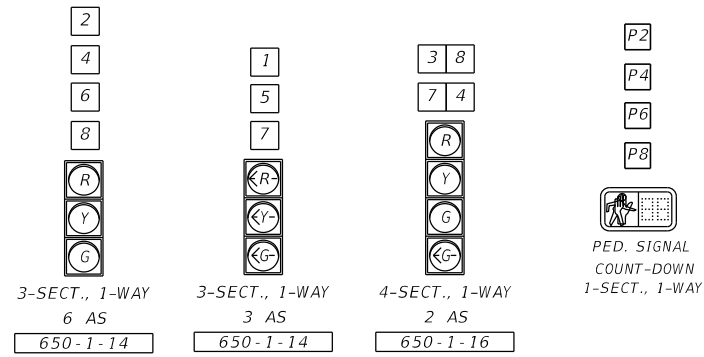
OSCEOLA COUNTY TRANSIT AND TRANSPORTATION
 1 COURTHOUSE SQUARE, SUITE 3100
 KISSIMMEE, FLORIDA 34741-5488
 PHONE:(407) 742-0662 FAX:(407) 742-0600

SIGNALIZATION PLAN

SHEET NO.
 T-10

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

DETAILS OF SIGNAL HEADS



ITEM 650-1-XX TO INCLUDE BACKPLATE WITH RETRO-REFLECTIVE BORDER.

NOTE:

1. MAJOR STREET IS NEPTUNE RD (MOVEMENTS 1, 2, 5, AND 6), AND MINOR STREET IS TAHOQUA BLVD (MOVEMENTS 3, 4, 7, AND 8).
2. DURING EMERGENCY OPERATIONS YELLOW FLASHING MODE SHALL BE FOR MOVEMENTS 2 & 6. ALL OTHER MOVEMENTS SHALL BE RED.
3. SIGN (H) IS TO BE ACTIVATED WHEN PEDESTRIAN PUSH BUTTON IS PRESSED FOR SCHOOL SAFETY.
4. THE NEPTUNE RD SPEED LIMIT IS 45 MPH, AND 30 MPH FOR TAHOQUA BLVD.

MAST ARM MOUNTED SIGNS

SIGN (A)
LED (EDGE LIT) INTERNALLY
ILLUMINATED SIGN DOUBLE FACED

Neptune Rd

8'-0" X 2'-0"
700-5-22 2 EA

SIGN (C)
LED (EDGE LIT) INTERNALLY
ILLUMINATED SIGN

Tohoqua Bv

8'-0" X 2'-0"
700-5-22 2 EA

SIGN (G)



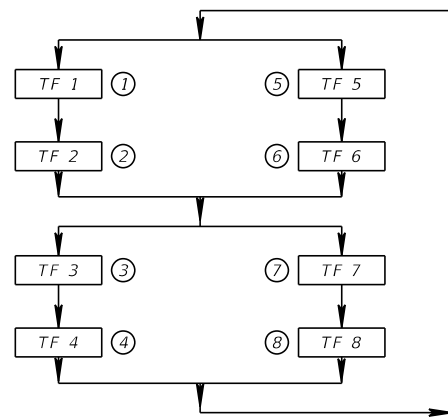
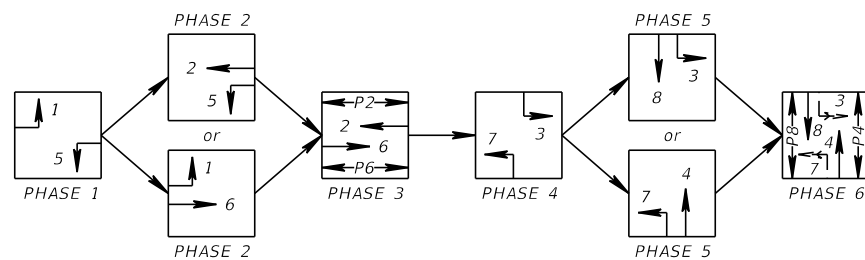
R3-04
36" X 36"
700-3-201 1 EA

SIGN (H)



R3-01
36" X 36"
700-11-391 4 EA

S.O.P. 10



CONTROLLER TIMINGS								
TIMING FUNCTION								
MOVEMENT NUMBER	1	2	3	4	5	6	7	8
MINIMUM GREEN	5	15	6	6	5	15	6	6
EXTENSION	3	3	3	3	3	3	3	3
MAXIMUM GREEN 1	13	104	15	25	13	104	15	25
MAXIMUM GREEN 2								
YELLOW CLEARANCE	4.8	4.8	3.7	3.7	4.8	4.8	3.7	3.7
ALL RED	2.3	2.5	3.7	4.2	2.6	2.5	4.1	4.1
PEDESTRIAN WALK		7.0		7.0		7.0		7.0
PED. CLEARANCE		22		29		23		30
RECALL		MIN				MIN		

VIDEO DETECTOR ASSIGN.

DETECTOR NO.	MOVEMENT NO.	DELAY TIME (SEC)
V1	V1-A	0
	V6-A	0
	V6-B	0
	V6-C	0
	V6-D	0
	V6-E	5
V2	V6-F	5
	V2-A	0
	V2-B	0
	V2-C	0
	V2-D	0
V3	V5-A	0
	V3-A	0
V4	V8-A	5
	V4-A	0
	V7-A	0

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

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

SHAWN H. MACKLEFRESH, P.E.
P.E. LICENSE NUMBER 88597
GAI CONSULTANTS, INC.
12574 FLAGLER CENTER BLVD-SUITE 202
JACKSONVILLE, FL 32258

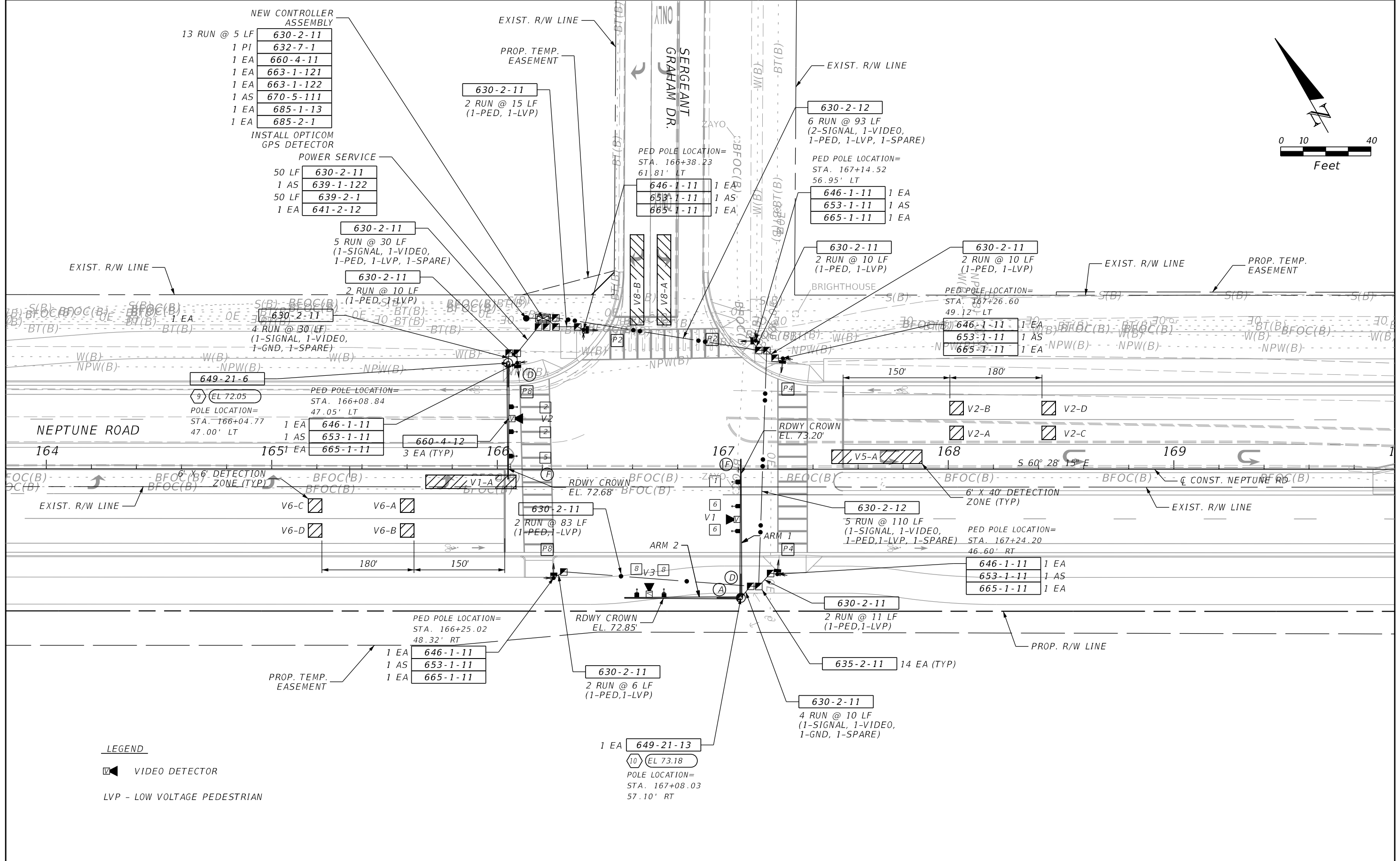
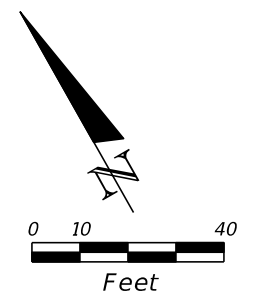


OSCEOLA COUNTY TRANSIT AND TRANSPORTATION
1 COURTHOUSE SQUARE, SUITE 3100
KISSIMMEE, FLORIDA 34741-5488
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SIGNALIZATION PLAN

SHEET NO.

T-11



- NEW CONTROLLER ASSEMBLY
- 13 RUN @ 5 LF 630-2-11
 - 1 PI 632-7-1
 - 1 EA 660-4-11
 - 1 EA 663-1-121
 - 1 EA 663-1-122
 - 1 AS 670-5-111
 - 1 EA 685-1-13
 - 1 EA 685-2-1

- INSTALL OPTICOM GPS DETECTOR
- POWER SERVICE
- 50 LF 630-2-11
 - 1 AS 639-1-122
 - 50 LF 639-2-1
 - 1 EA 641-2-12

- 630-2-11
- 2 RUN @ 15 LF (1-PED, 1-LVP)

- 630-2-12
- 6 RUN @ 93 LF (2-SIGNAL, 1-VIDEO, 1-PED, 1-LVP, 1-SPARE)

- 646-1-11 1 EA
- 653-1-11 1 AS
- 665-1-11 1 EA

- 630-2-11
- 2 RUN @ 10 LF (1-PED, 1-LVP)

- 630-2-11
- 2 RUN @ 10 LF (1-PED, 1-LVP)

- 649-21-6
- 9 EL 72.05
- POLE LOCATION= STA. 166+04.77 47.00' LT

- 646-1-11 1 EA
- 653-1-11 1 AS

- 660-4-12
- 3 EA (TYP)

- V6-C
- V6-A
- V6-D
- V6-B

- 630-2-11
- 2 RUN @ 83 LF (1-PED, 1-LVP)

- 630-2-12
- 5 RUN @ 110 LF (1-SIGNAL, 1-VIDEO, 1-PED, 1-LVP, 1-SPARE)

- 646-1-11 1 EA
- 653-1-11 1 AS
- 665-1-11 1 EA

- 646-1-11 1 EA
- 653-1-11 1 AS
- 665-1-11 1 EA

- 630-2-11
- 2 RUN @ 6 LF (1-PED, 1-LVP)

- 630-2-11
- 4 RUN @ 10 LF (1-SIGNAL, 1-VIDEO, 1-GND, 1-SPARE)

- 649-21-13
- 10 EL 73.18
- POLE LOCATION= STA. 167+08.03 57.10' RT

LEGEND

- VIDEO DETECTOR
- LVP - LOW VOLTAGE PEDESTRIAN

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

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 GAI CONSULTANTS, INC.
 12574 FLAGLER CENTER BLVD-SUITE 202
 JACKSONVILLE, FL 32258

OSCEOLA COUNTY TRANSIT AND TRANSPORTATION

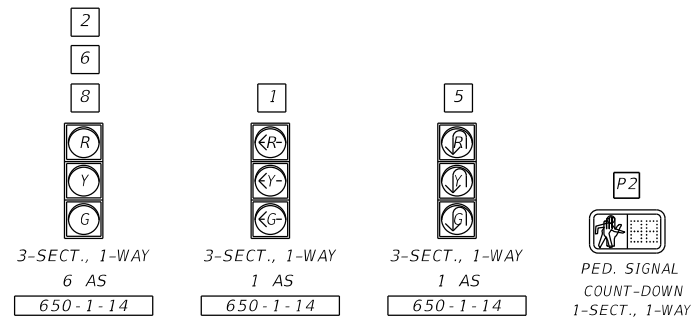
1 COURTHOUSE SQUARE, SUITE 3100
 KISSIMMEE, FLORIDA 34741-5488
 PHONE:(407) 742-0662 FAX:(407) 742-0600

SIGNALIZATION PLAN

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.

DETAILS OF SIGNAL HEADS



ITEM 650-1-XX TO INCLUDE BACKPLATE WITH RETRO-REFLECTIVE BORDER.

NOTE:

1. MAJOR STREET IS NEPTUNE RD (MOVEMENTS 1, 2, 5, AND 6), AND MINOR STREET IS SERGANT GRAHAM DR. (MOVEMENT 8).
2. DURING EMERGENCY OPERATIONS YELLOW FLASHING MODE SHALL BE FOR MOVEMENTS 2 & 6. ALL OTHER MOVEMENTS SHALL BE RED.
4. THE NEPTUNE RD SPEED LIMIT IS 45 MPH, AND 30 MPH FOR SERGANT GRAHAM DR.

MAST ARM MOUNTED SIGNS

SIGN (A)
LED (EDGE LIT) INTERNALLY
ILLUMINATED SIGN DOUBLE FACED

SIGN (D)
LED (EDGE LIT) INTERNALLY
ILLUMINATED SIGN

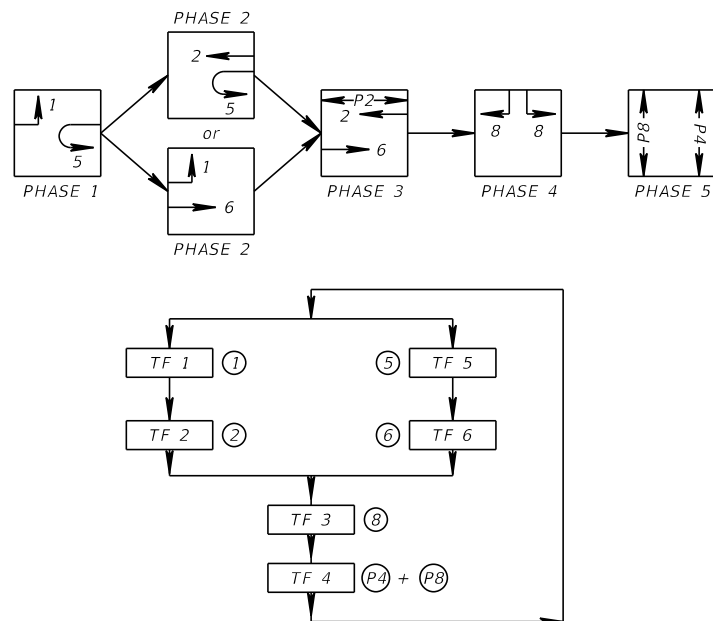
Neptune Rd

8'-0" X 2'-0"
700-5-22 1 EA

Sgt. Graham Dr

8'-0" X 2'-0"
700-5-22 2 EA

S.O.P. 7 (MODIFIED)



CONTROLLER TIMINGS

CONTROLLER TIMINGS								
TIMING FUNCTION	1	2	3	4	5	6	7	8
MINIMUM GREEN	6	15			6	15		8
EXTENSION	3	3			3	3		3
MAXIMUM GREEN 1	10	54			10	54		14
MAXIMUM GREEN 2								
YELLOW CLEARANCE	4.8	4.8			4.8	4.8		3.7
ALL RED	2.3	2.5			2.3	2.6		3.9
PEDESTRIAN WALK		7.0		7.0				7.0
PED. CLEARANCE		19		23				23
RECALL								

VIDEO DETECTOR ASSIGN.

DETECTOR NO.	MOVEMENT NO.	DELAY TIME (SEC)
V1	V1-A	0
	V6-A	0
	V6-B	0
	V6-C	0
V2	V6-D	0
	V2-A	0
	V2-B	0
	V2-C	0
V3	V2-D	0
	V5-A	0
	V8-A	0
	V8-B	5

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

REVISIONS

DATE	DESCRIPTION	DATE	DESCRIPTION

SHAWN H. MACKLEFRESH, P.E.
P.E. LICENSE NUMBER 88597
GAI CONSULTANTS, INC.
12574 FLAGLER CENTER BLVD-SUITE 202
JACKSONVILLE, FL 32258

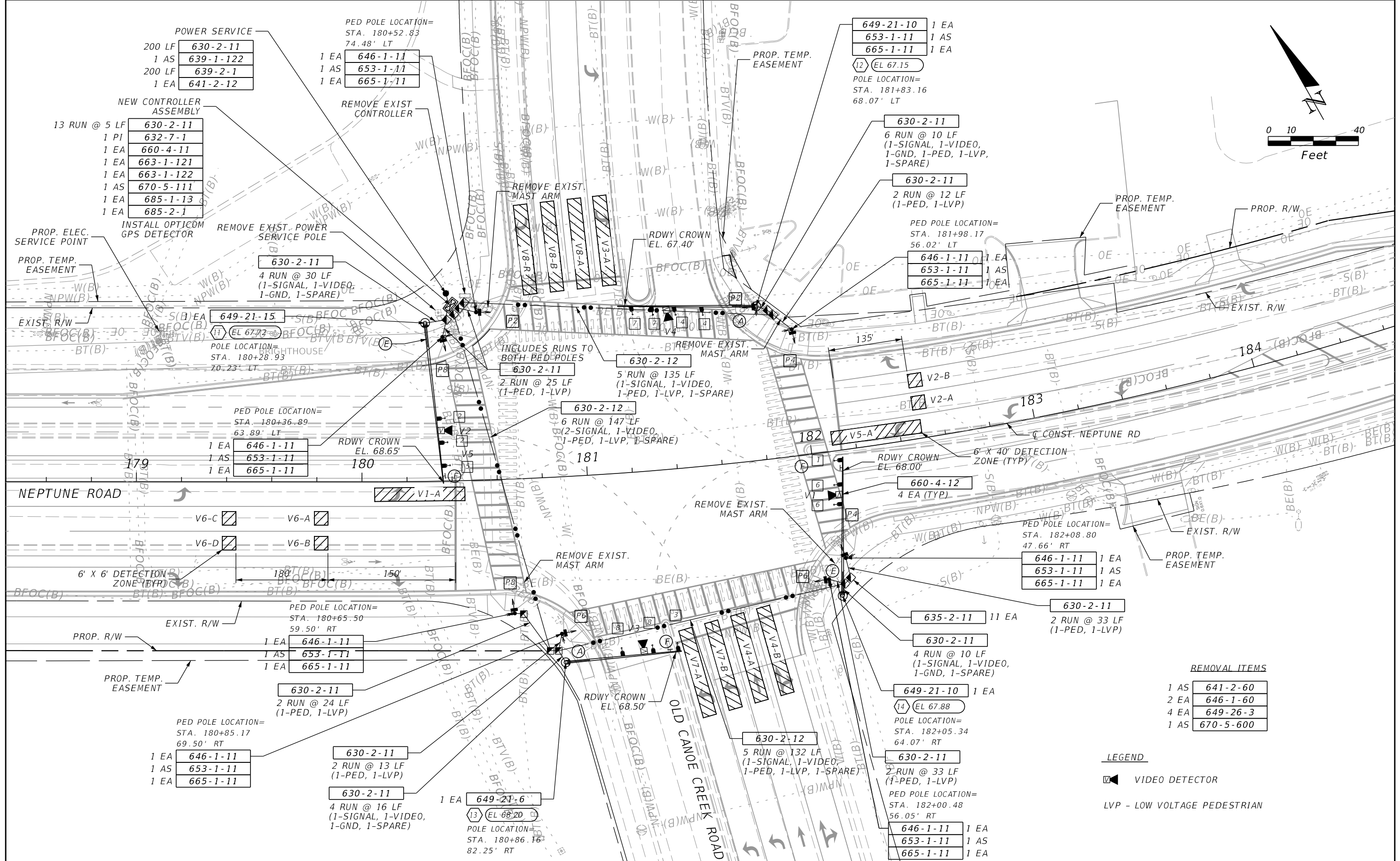


OSCEOLA COUNTY TRANSIT AND TRANSPORTATION
1 COURTHOUSE SQUARE, SUITE 3100
KISSIMMEE, FLORIDA 34741-5488
PHONE:(407) 742-0662 FAX:(407) 742-0600

SIGNALIZATION PLAN

SHEET NO.

T-13



REMOVAL ITEMS

1 AS	641-2-60
2 EA	646-1-60
4 EA	649-26-3
1 AS	670-5-600

LEGEND

▶ VIDEO DETECTOR

LVP - LOW VOLTAGE PEDESTRIAN

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

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 GAI CONSULTANTS, INC.
 12574 FLAGLER CENTER BLVD-SUITE 202
 JACKSONVILLE, FL 32258

OSCEOLA COUNTY TRANSIT AND TRANSPORTATION

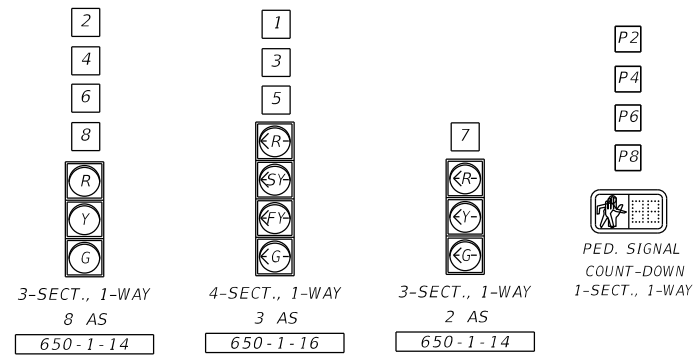
1 COURTHOUSE SQUARE, SUITE 3100
 KISSIMMEE, FLORIDA 34741-5488
 PHONE:(407) 742-0662 FAX:(407) 742-0600

SIGNALIZATION PLAN

SHEET NO.
T-14

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

DETAILS OF SIGNAL HEADS



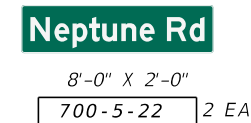
ITEM 650-1-XX TO INCLUDE BACKPLATE WITH RETRO-REFLECTIVE BORDER.

NOTE:

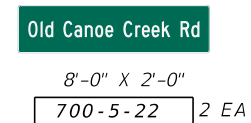
1. MAJOR STREET IS NEPTUNE RD (MOVEMENTS 1, 2, 5, AND 6), AND MINOR STREET IS OLD CANOE CREEK RD (MOVEMENTS 3, 4, 7, AND 8).
2. DURING EMERGENCY OPERATION YELLOW FLASHING MODE SHALL BE FOR MOVEMENTS 2 & 6. ALL OTHER MOVEMENTS SHALL BE RED.
3. NEPTUNE RD EASTBOUND SPEED LIMIT IS 45 MPH, AND WESTBOUND IS 35 MPH. THE SPEED LIMIT FOR OLD CANOE CREEK RD IS 45 MPH.

MAST ARM MOUNTED SIGNS

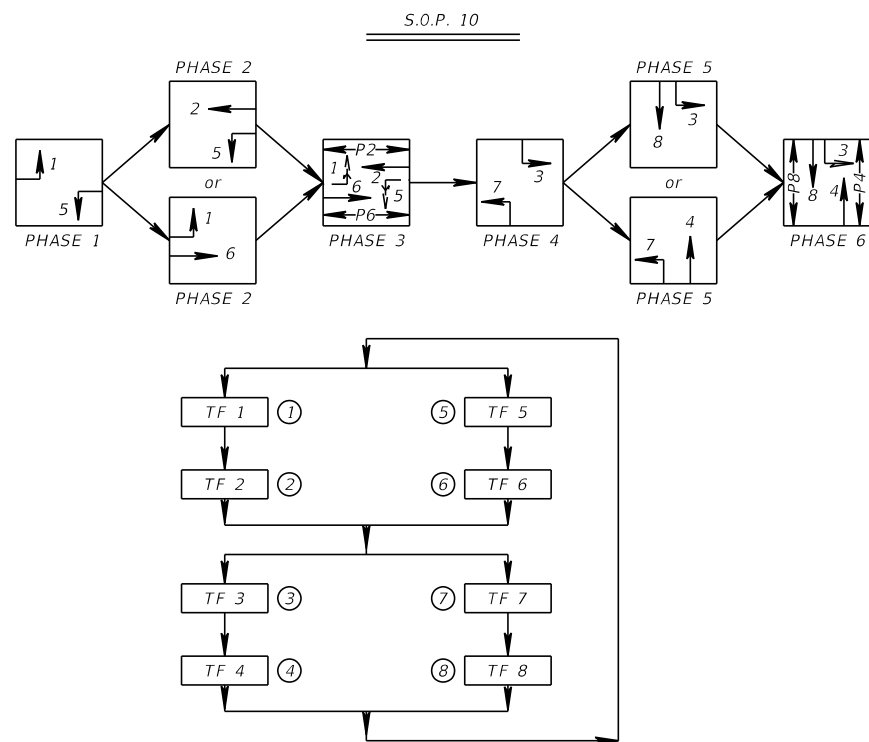
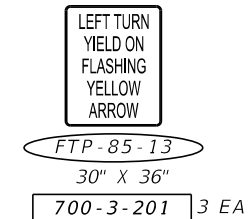
SIGN (A)
LED (EDGE LIT) INTERNALLY
ILLUMINATED SIGN DOUBLE FACED



SIGN (E)
LED (EDGE LIT) INTERNALLY
ILLUMINATED SIGN



SIGN (F)



CONTROLLER TIMINGS

TIMING FUNCTION	1	2	3	4	5	6	7	8
MINIMUM GREEN	8	15	6	8	8	15	6	8
EXTENSION	3	3	3	3	3	3	3	3
MAXIMUM GREEN 1	10	54	23	62	22	33	32	51
MAXIMUM GREEN 2								
YELLOW CLEARANCE	4.8	4.8	3.7	3.7	4.8	4.8	3.7	3.7
ALL RED	2.6	2.9	4.3	3.9	2.6	3.0	4.3	4.0
PEDESTRIAN WALK				7.0			7.0	7.0
PED. CLEARANCE		30		26		32		30
RECALL		MIN				MIN		

VIDEO DETECTOR ASSIGN.

DETECTOR NO.	MOVEMENT NO.	DELAY TIME (SEC)
V1	V1-A	0
	V6-A	0
	V6-B	0
	V6-D	0
V2	V2-A	0
	V2-B	5
V3	V3-A	0
	V8-A	0
	V8-B	5
	V8-R	5
V4	V4-A	0
	V4-B	5
	V7-A	0
	V7-B	0

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

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

SHAWN H. MACKLEFRESH, P.E.
P.E. LICENSE NUMBER 88597
GAI CONSULTANTS, INC.
12574 FLAGLER CENTER BLVD-SUITE 202
JACKSONVILLE, FL 32258



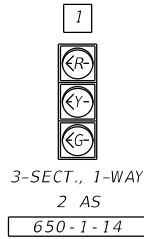
OSCEOLA COUNTY TRANSIT AND TRANSPORTATION
1 COURTHOUSE SQUARE, SUITE 3100
KISSIMMEE, FLORIDA 34741-5488
PHONE:(407) 742-0662 FAX:(407) 742-0600

SIGNALIZATION PLAN

SHEET NO.

T-15

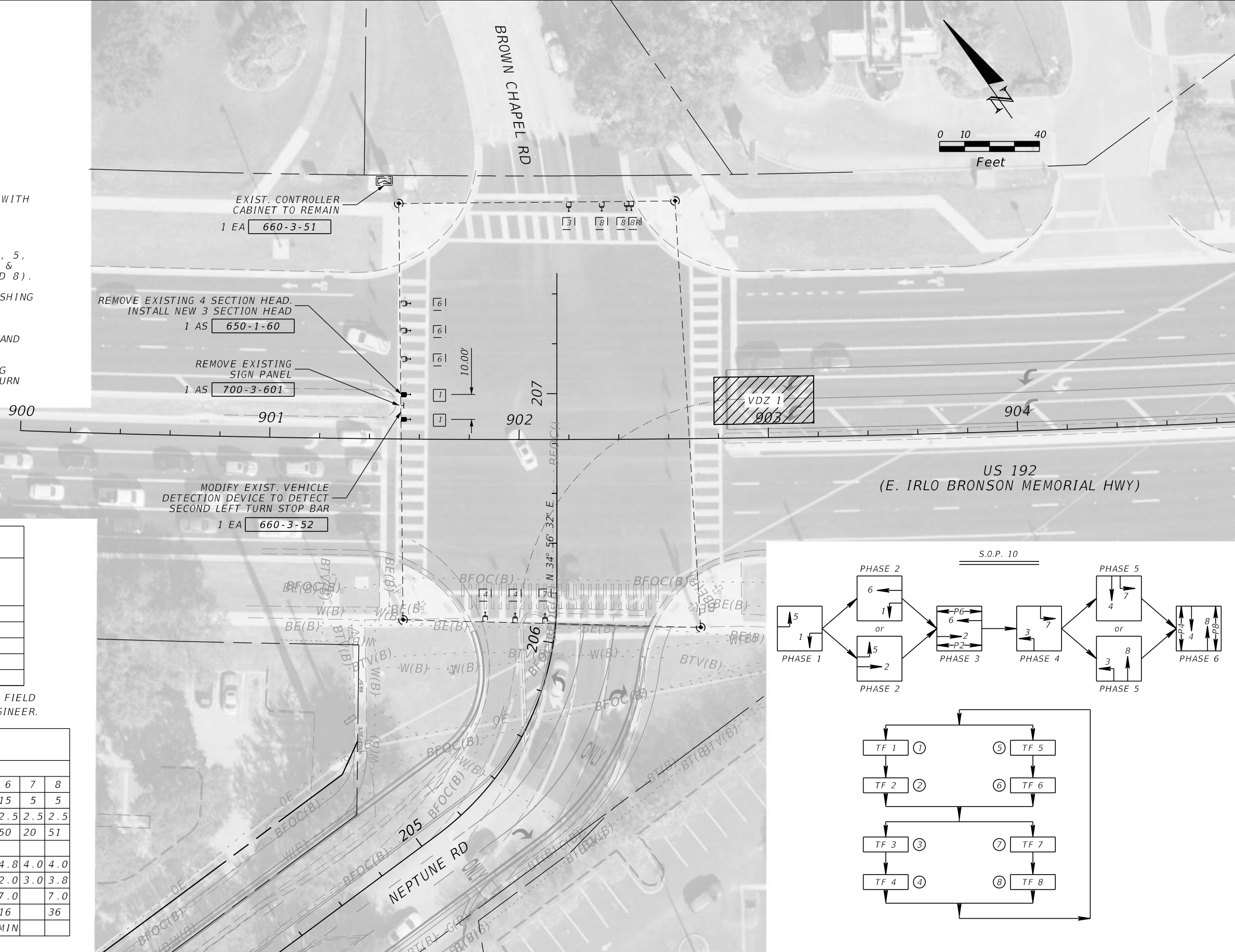
DETAILS OF SIGNAL HEADS



ITEM 650-1-XX TO INCLUDE BACKPLATE WITH RETRO-REFLECTIVE BORDER.

NOTE:

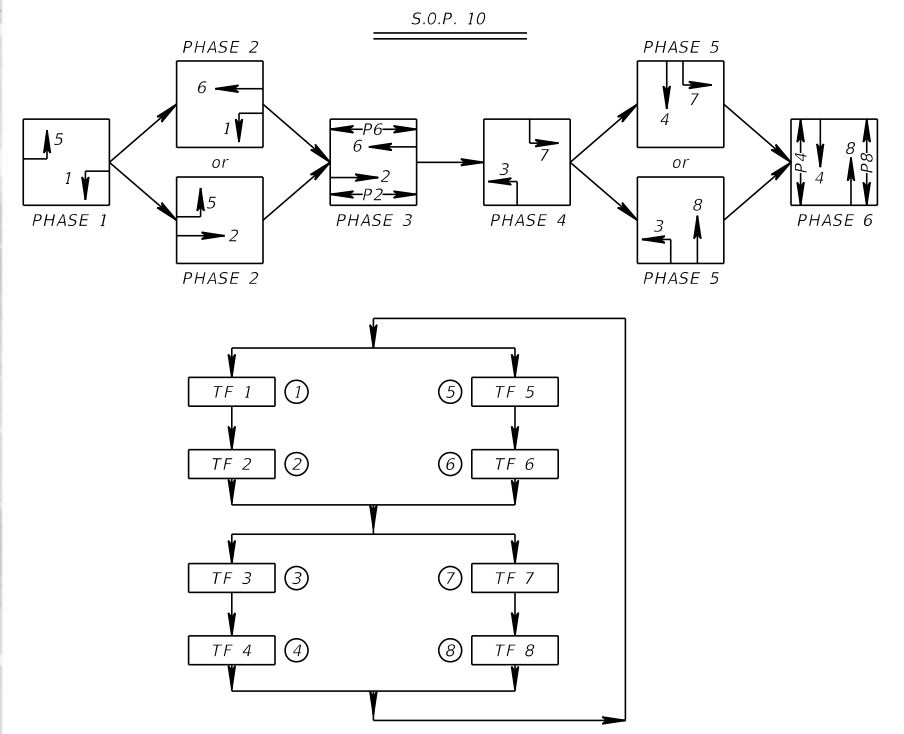
1. MAJOR STREET IS US 192 (MOVEMENTS 1, 2, 5, AND 6), AND MINOR STREET IS NEPTUNE RD & BROWN CHAPEL RD. (MOVEMENTS 3, 4, 7, AND 8).
2. DURING EMERGENCY OPERATIONS YELLOW FLASHING MODE SHALL BE FOR MOVEMENTS 2 & 6. ALL OTHER MOVEMENTS SHALL BE RED.
3. THE NEPTUNE RD SPEED LIMIT IS 45 MPH, AND 45 MPH FOR US 192.
4. PAY ITEM 660-3-52: MODIFY THE EXISTING DETECTION AREA TO INCUDE SECOND LEFT TURN STOP BAR PRESENCE.



VIDEO DETECTOR ASSIGN.		
DETECTOR NO.	MOVEMENT NO.	DELAY TIME (SEC)
CD1	VDZ 6	0
	VDZ 1A	5

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

CONTROLLER TIMINGS								
TIMING FUNCTION								
MOVEMENT NUMBER	1	2	3	4	5	6	7	8
MINIMUM GREEN	5	15	5	5	5	15	5	5
EXTENSION	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
MAXIMUM GREEN 1	20	50	20	49	20	50	20	51
MAXIMUM GREEN 2								
YELLOW CLEARANCE	4.8	4.8	4.0	4.0	4.8	4.8	4.0	4.0
ALL RED	3.3	2.0	3.0	3.8	3.3	2.0	3.0	3.8
PEDESTRIAN WALK	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
PED. CLEARANCE	19	34			16			36
RECALL		MIN				MIN		



REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

SHAWN H. MACKLEFRESH, P.E.
 P.E. LICENSE NUMBER 88597
 GAI CONSULTANTS, INC.
 12574 FLAGLER CENTER BLVD-SUITE 202
 JACKSONVILLE, FL 32258

OSCEOLA COUNTY TRANSIT AND TRANSPORTATION
 1 COURTHOUSE SQUARE, SUITE 3100
 KISSIMMEE, FLORIDA 34741-5488
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SIGNALIZATION PLAN

SHEET NO.
 T-16

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


Table Date 11-01-16

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	A40/S-P2/S-DS/14/4.5	A40/S						P2/S		21	14	4.5	11	15	6	8	5	12
2	A40/S-P2/S-DS/11/4.5	A40/S						P2/S		19	11	4.5	11	15	6	8	8	12
3	A50/S-P3/S-DS/15/4.5	A50/S						P3/S		21	15	4.5	11	15	8	12	4	0
4	A40/S-P2/S-DS/17/4.5	A40/S						P2/S		21	17	4.5	11	15	6	8	5	12
5	A60/S-P4/S-DS/19/4.5	A60/S						P4/S		22	19	4.5	11	15	8	12	8	0
6	A60/S-P4/S-DS/17/4.5	A60/S						P4/S		21	16	4.5	11	15	8	12	5	0
7	A78/S-P6/S-DS/15/5	A78/S						P6/S		21	16	5	11	19	10	8	6	0
8	A60/S-P4/S-DS/13/4.5	A60/S						P4/S		22	13	4.5	11	15	8	12	2	0
9	A50/S-P3/S-DS/18/4.5	A50/S						P3/S		22	18	4.5	11	15	8	12	7	0
10	A60/D-A50/D-P4/D-DS/14/4.5	A60/D		A50/D		90		P4/D		22	14	4.5	11	15	10	8	4	0
11	A70/S/H-P5/S-DS/23.5/5	A70/S/H						P5/S		22	23.5	5	11	19	10	8	14	0
12	A60/S-P4/S-DS/20/4.5	A60/S						P4/S		22	20	4.5	11	15	10	8	10	0
13	A50/S-P3/S-DS/22.5/4.5	A50/S						P3/S		21	22.5	4.5	11	15	8	12	12	0
14	A60/S-P4/S-DS/25.5/4.5	A60/S						P4/S		21	25.5	4.5	11	15	10	8	6	12

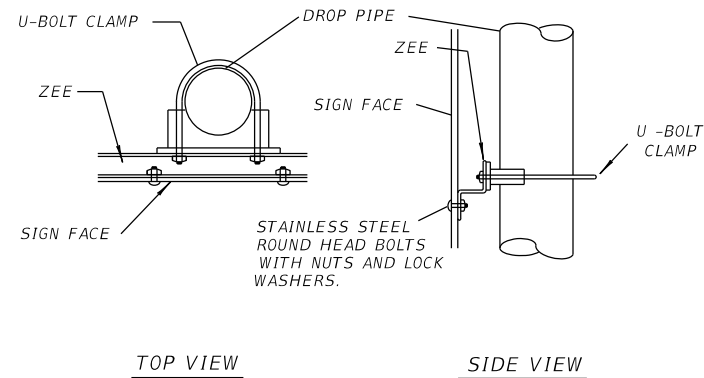
SOIL PROPERTIES					
STRUCTURE ID NUMBERS	SOIL TYPE	FRICITION ANGLE	COHESION	SOIL DENSITY	NO. OF BLOWS
		(DEG.)	(PSF)	(PCF)	
1	SAND	29	N/A	42	9
2	SAND	29	N/A	42	9
3	SAND	29	N/A	42	9
4	SAND	29	N/A	42	6
5	SAND	29	N/A	42	8
6	SAND	29	N/A	42	8
7	SAND	30	N/A	47	12
8	SAND	30	N/A	47	13
9	SAND	29	N/A	42	7
10	SAND	30	N/A	47	15
11	SAND	29	N/A	42	6
12	SAND	29	N/A	42	7
13	SAND	29	N/A	42	5
14	SAND	29	N/A	42	5

NOTES [Notes Date 11-01-16]:

- 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.
- 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.
- Arm mounting height UB must be between 18-22 feet.
- Pole types P2 and larger require a minimum 4.5 foot diameter drilled shaft. Pole types P5 and larger require a minimum 5.0 foot diameter drilled shaft.
- 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.
- Work with Index 649-030 and 649-031.
- Design Wind Speed = 150 mph.

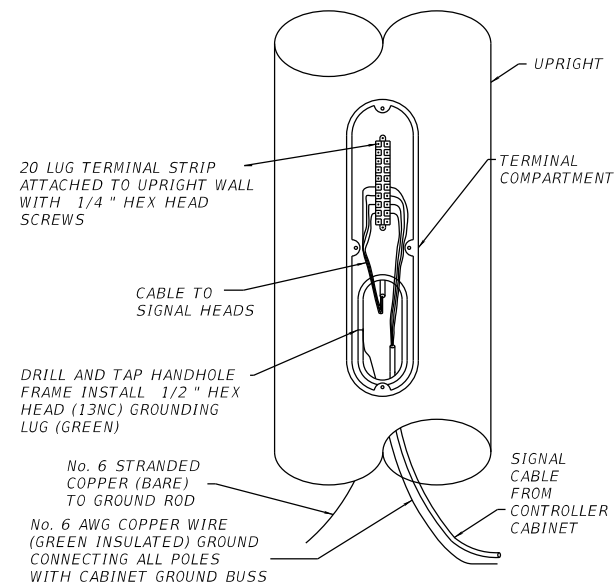
REVISIONS				HAZEM E. IBRAHIM, P.E. P.E. LICENSE NUMBER 56839 GAI CONSULTANTS, INC. 618 E. SOUTH STREET - SUITE 700 ORLANDO, FL 32801	 OSCEOLA COUNTY TRANSIT AND TRANSPORTATION 1 COURTHOUSE SQUARE, SUITE 3100 KISSIMMEE, FLORIDA 34741-5488 PHONE:(407) 742-0662 FAX:(407) 742-0600	MAST ARM DATA TABLE	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION				T-18

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 DESIGNED BY: MEH 09/21
 CHECKED BY: MEH 09/21
 CHECKED BY: NPA 09/22
 CHECKED BY: NPA 09/22
 CHECKED BY: NPA 09/22
 CHECKED BY: HEI 09/22



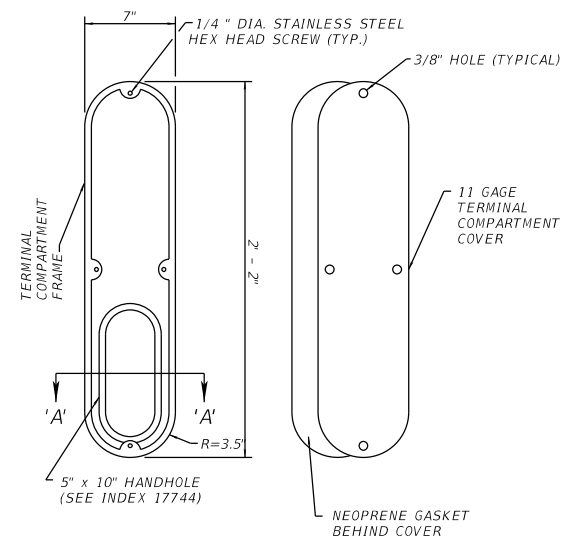
DROP PIPE SIGN DETAIL

N.T.S.



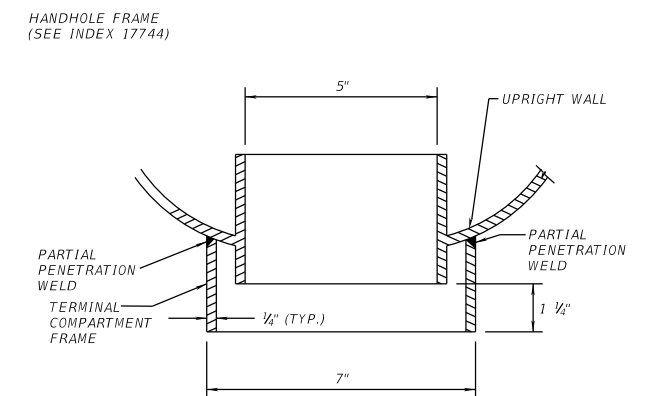
WIRING DETAILS

N.T.S.



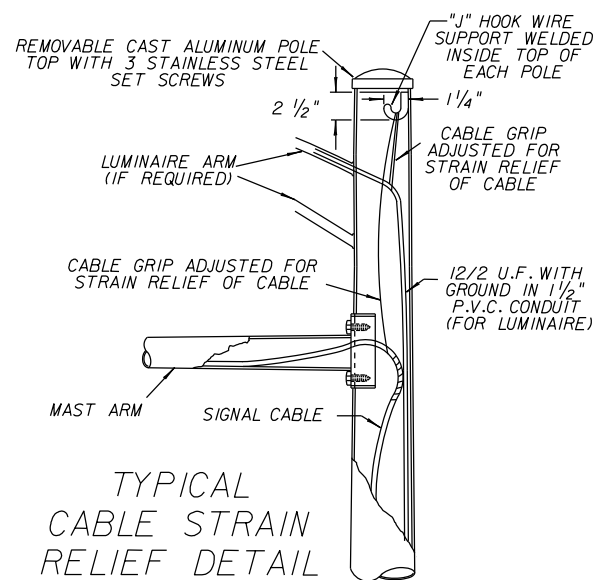
TERMINAL COMPARTMENT FRAME AND COVER DETAIL

N.T.S.



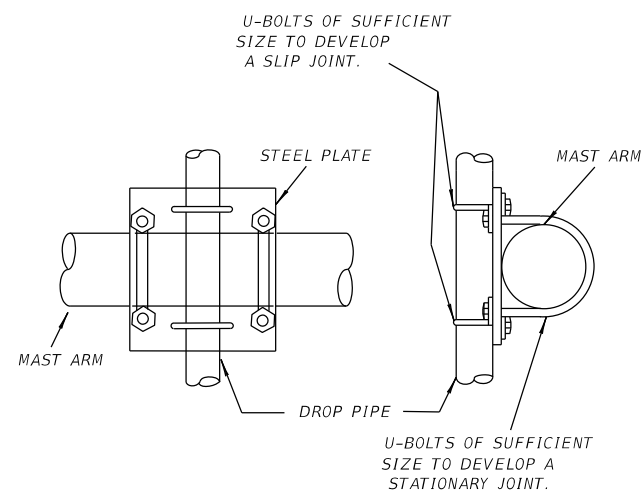
SECTION "A-A"

N.T.S.



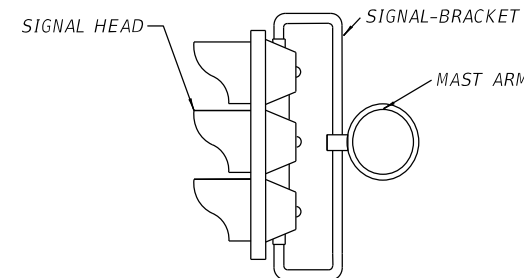
TYPICAL CABLE STRAIN RELIEF DETAIL

NTS



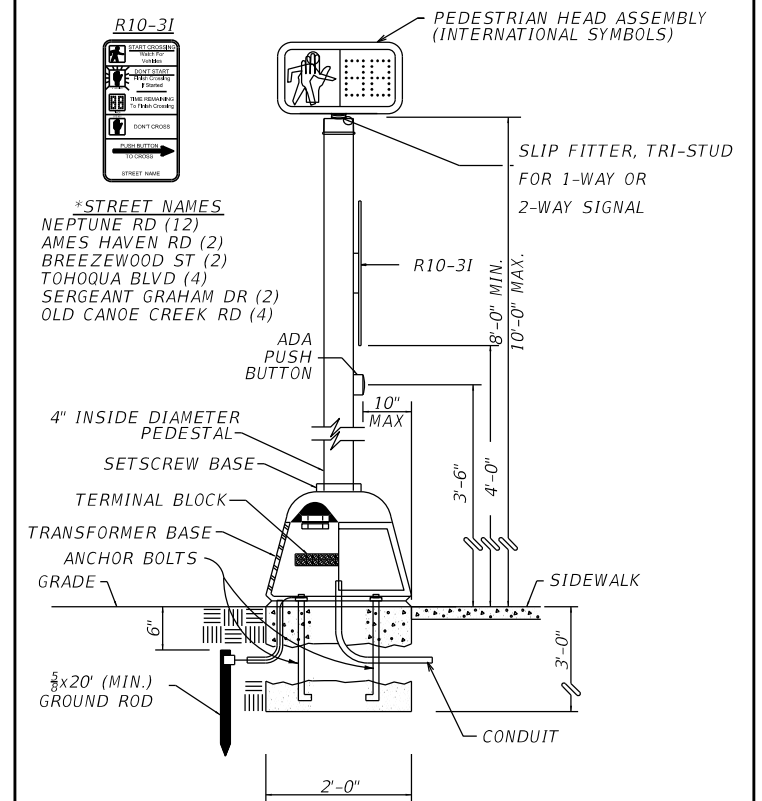
SIGN ARM BRACKET

N.T.S.



SIGNAL HEAD BRACKET ATTACHMENT DETAIL

N.T.S.



PEDESTRIAN SIGNAL PEDESTAL DETAIL

NTS

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

SHAWN H. MACKLEFRESH, P.E.
P.E. LICENSE NUMBER 88597
GAI CONSULTANTS, INC.
12574 FLAGLER CENTER BLVD-SUITE 202
JACKSONVILLE, FL 32258

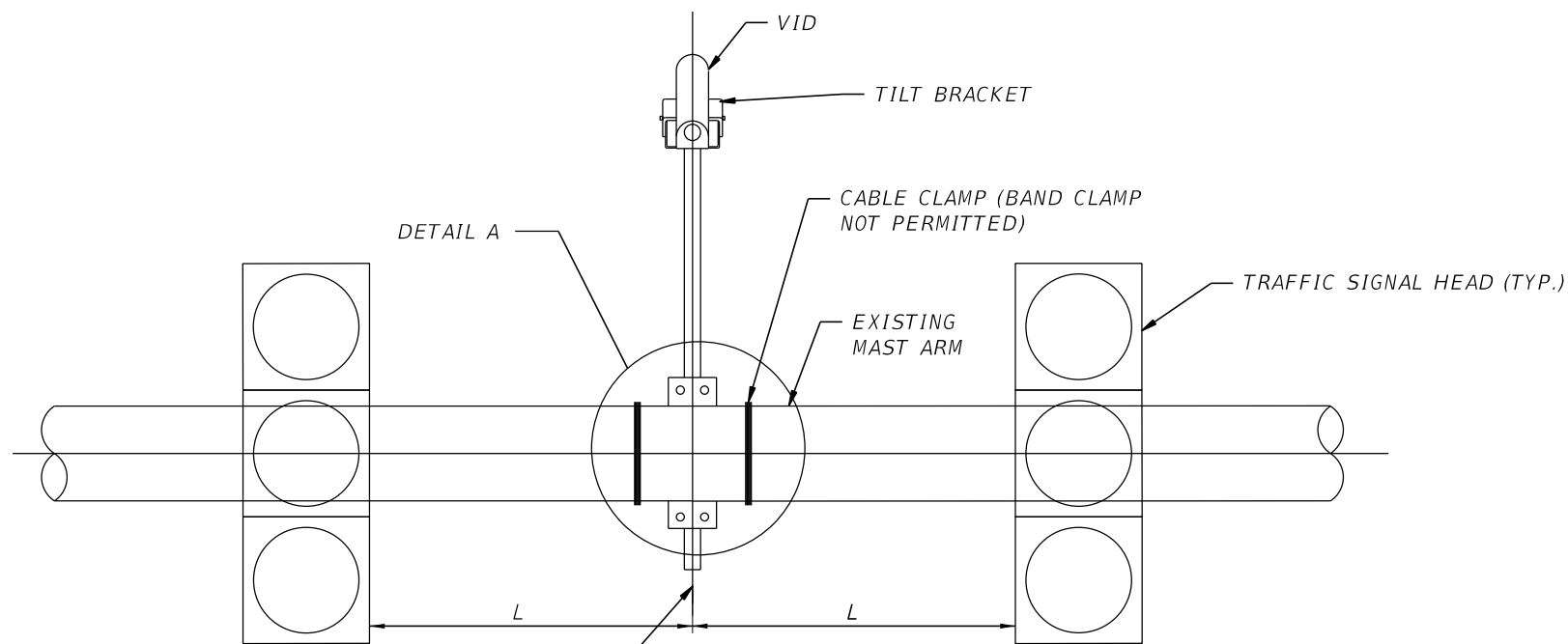


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KISSIMMEE, FLORIDA 34741-5488
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SIGNALIZATION DETAILS

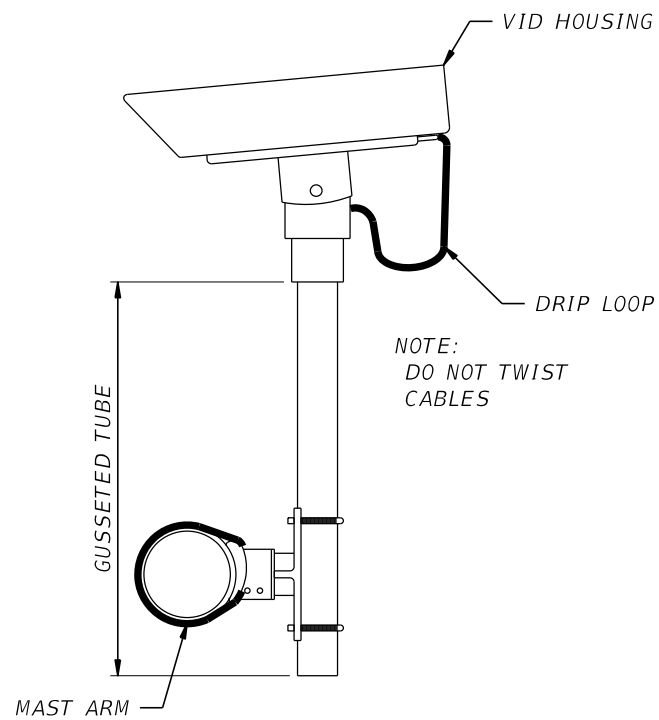
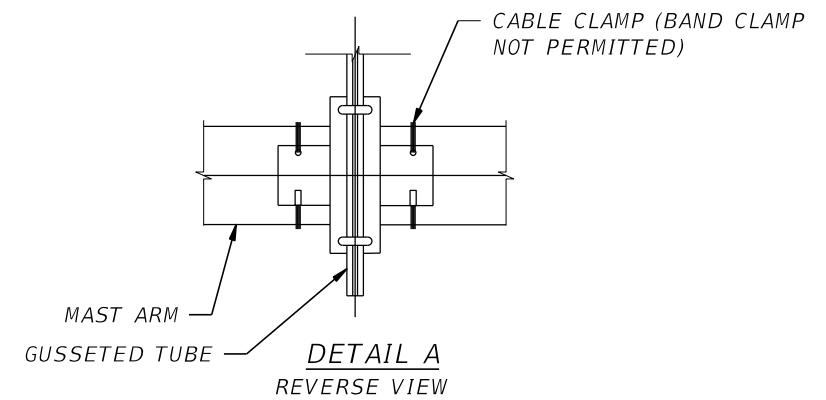
SHEET NO.

T-19



VIDEO DETECTION CAMERA SHALL BE LOCATED ON THE CENTER LINE BETWEEN TRAFFIC SIGNAL HEADS


MAST ARM VIDEO DETECTION CAMERA INSTALLATION DETAIL
(TYP. ALL REQUIRED MAST ARMS)



VID MAST ARM MOUNTING

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

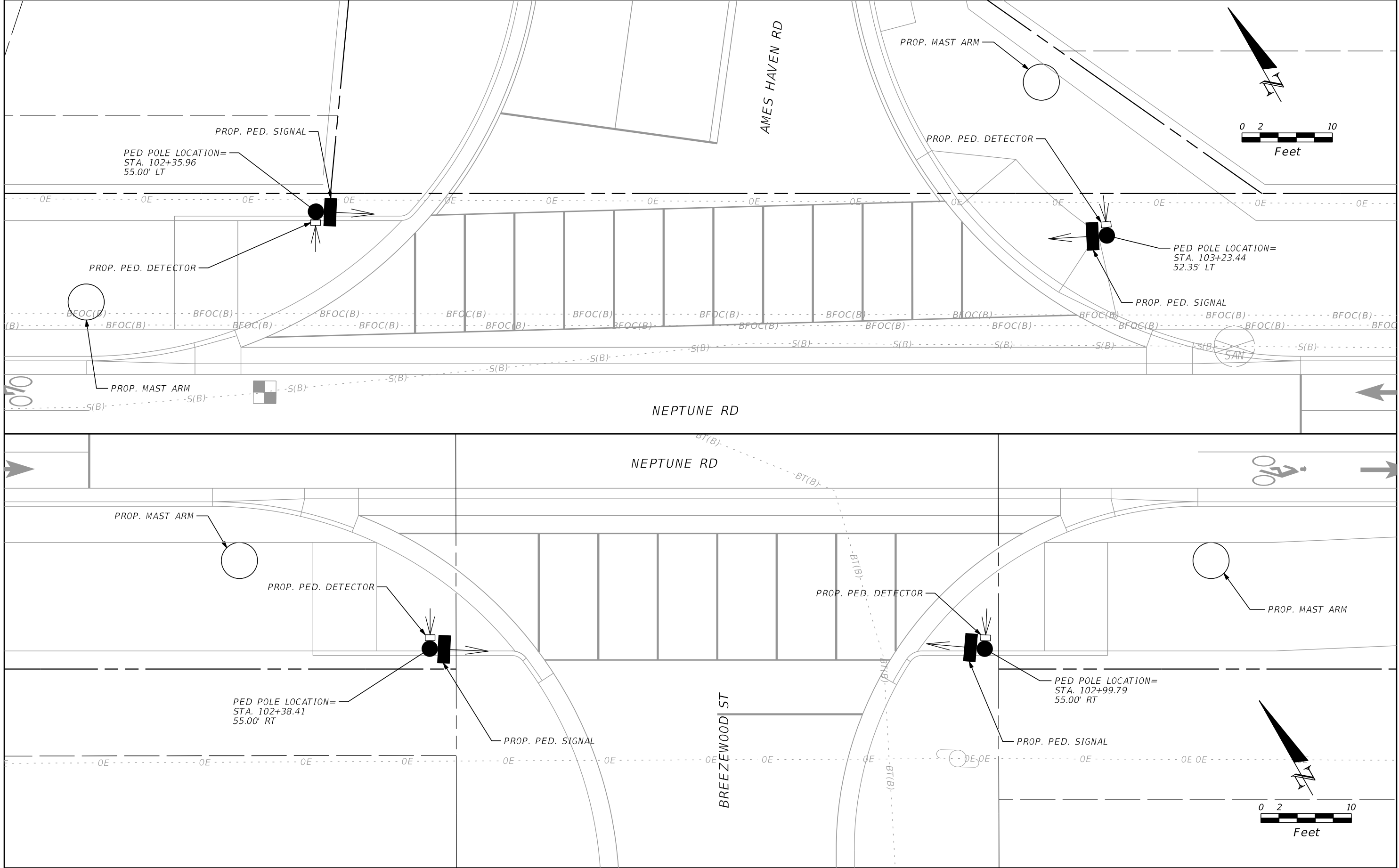
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P.E. LICENSE NUMBER 88597
GAI CONSULTANTS, INC.
12574 FLAGLER CENTER BLVD-SUITE 202
JACKSONVILLE, FL 32258

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SIGNALIZATION DETAILS

SHEET NO.
T-20

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REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

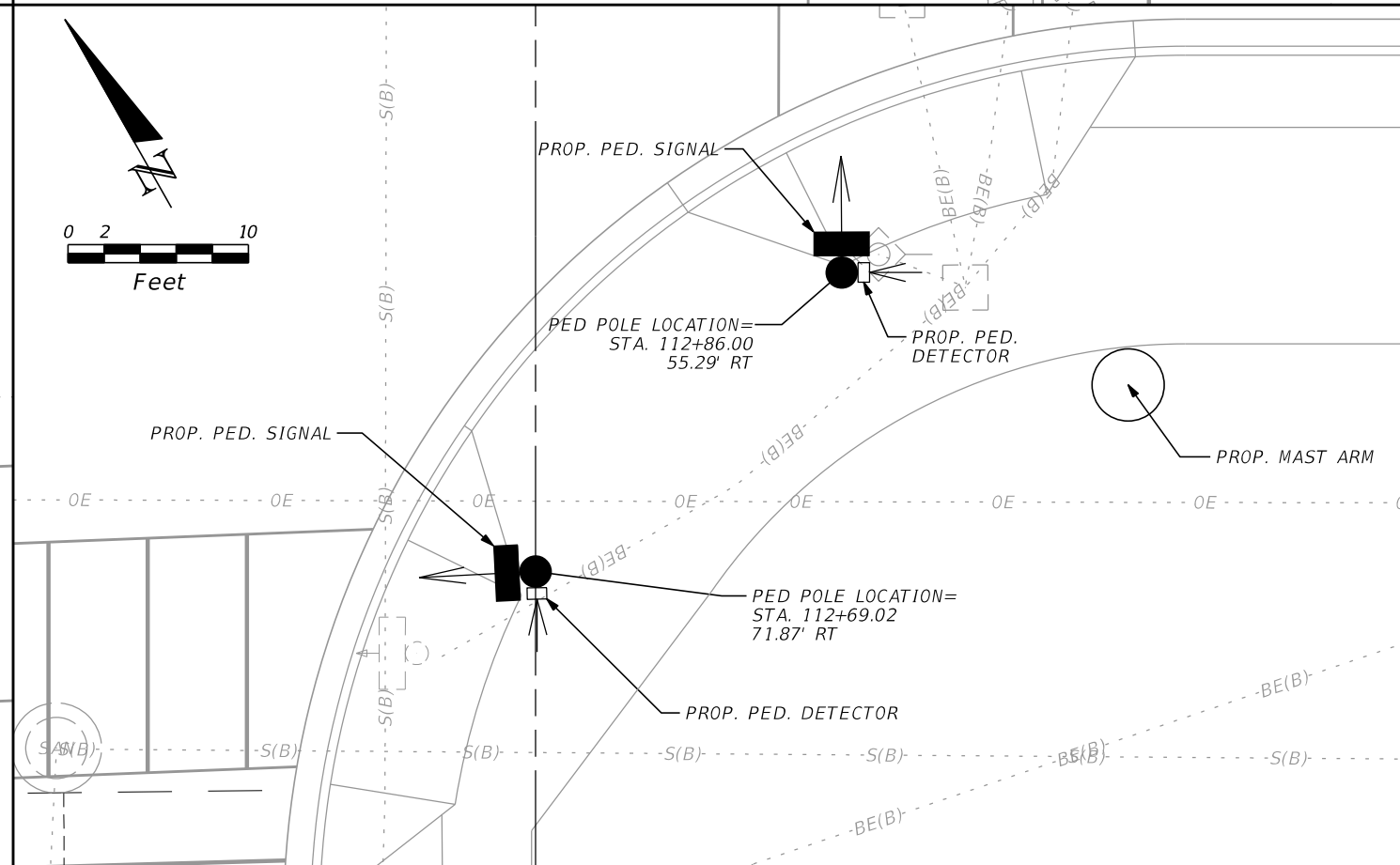
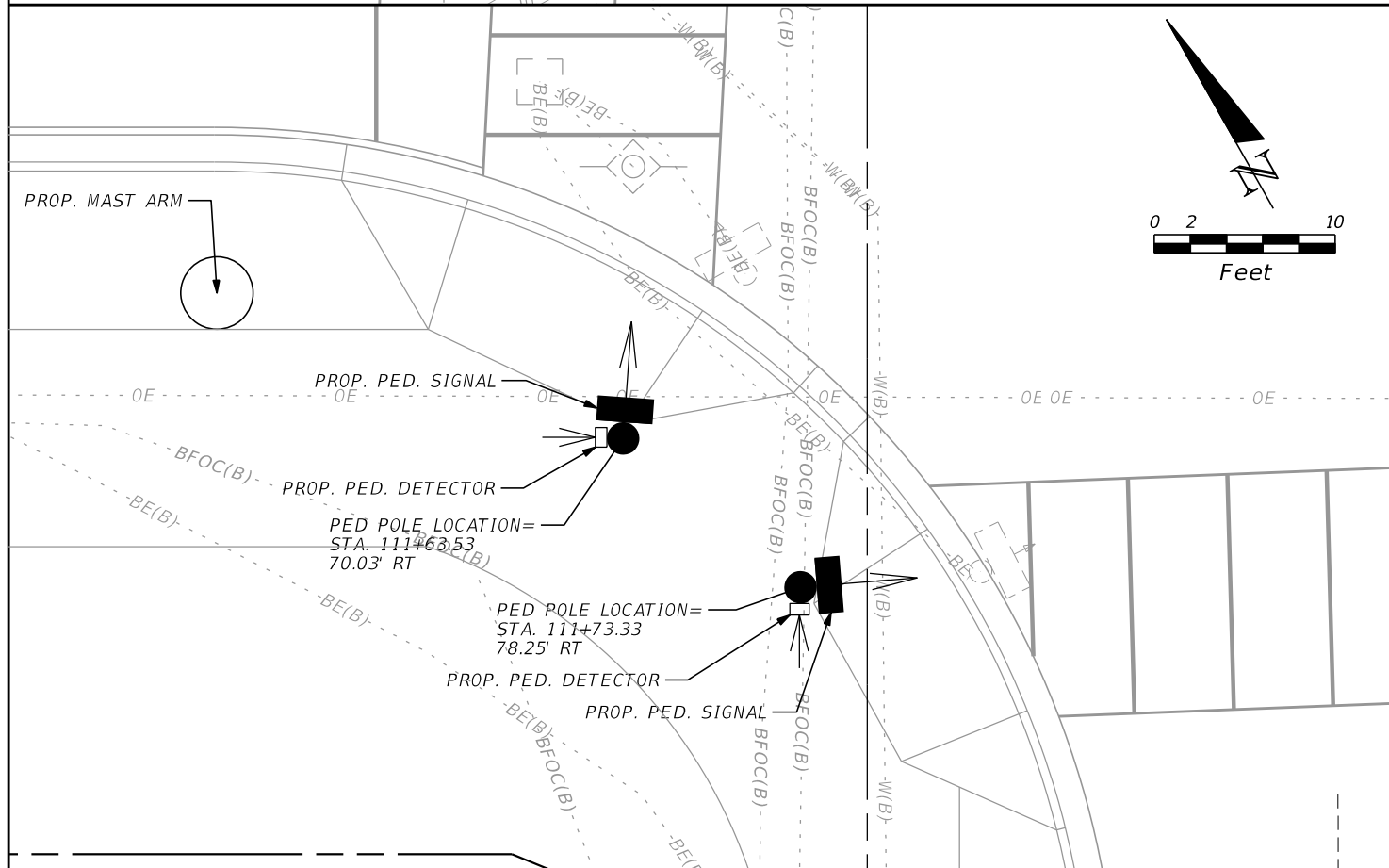
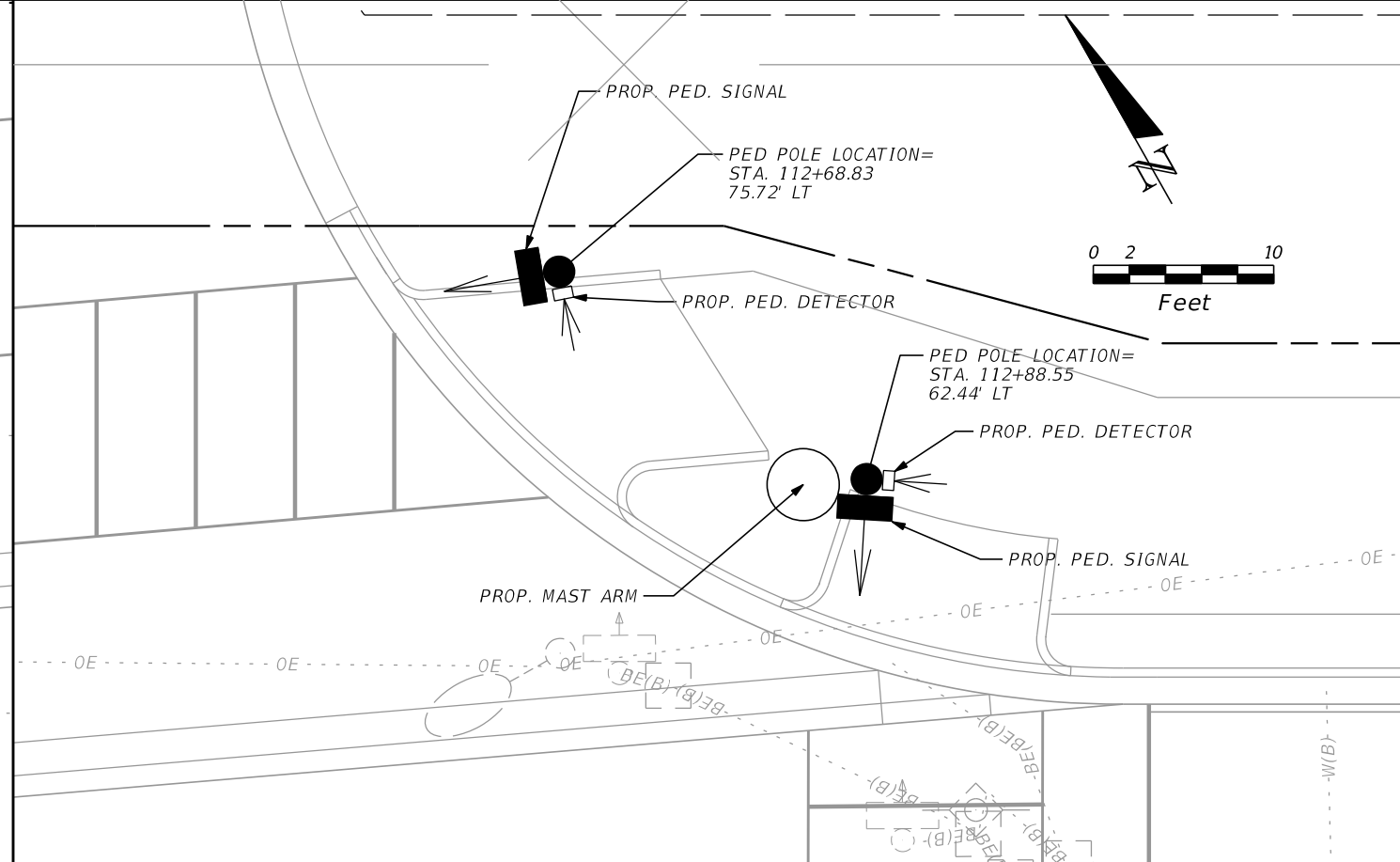
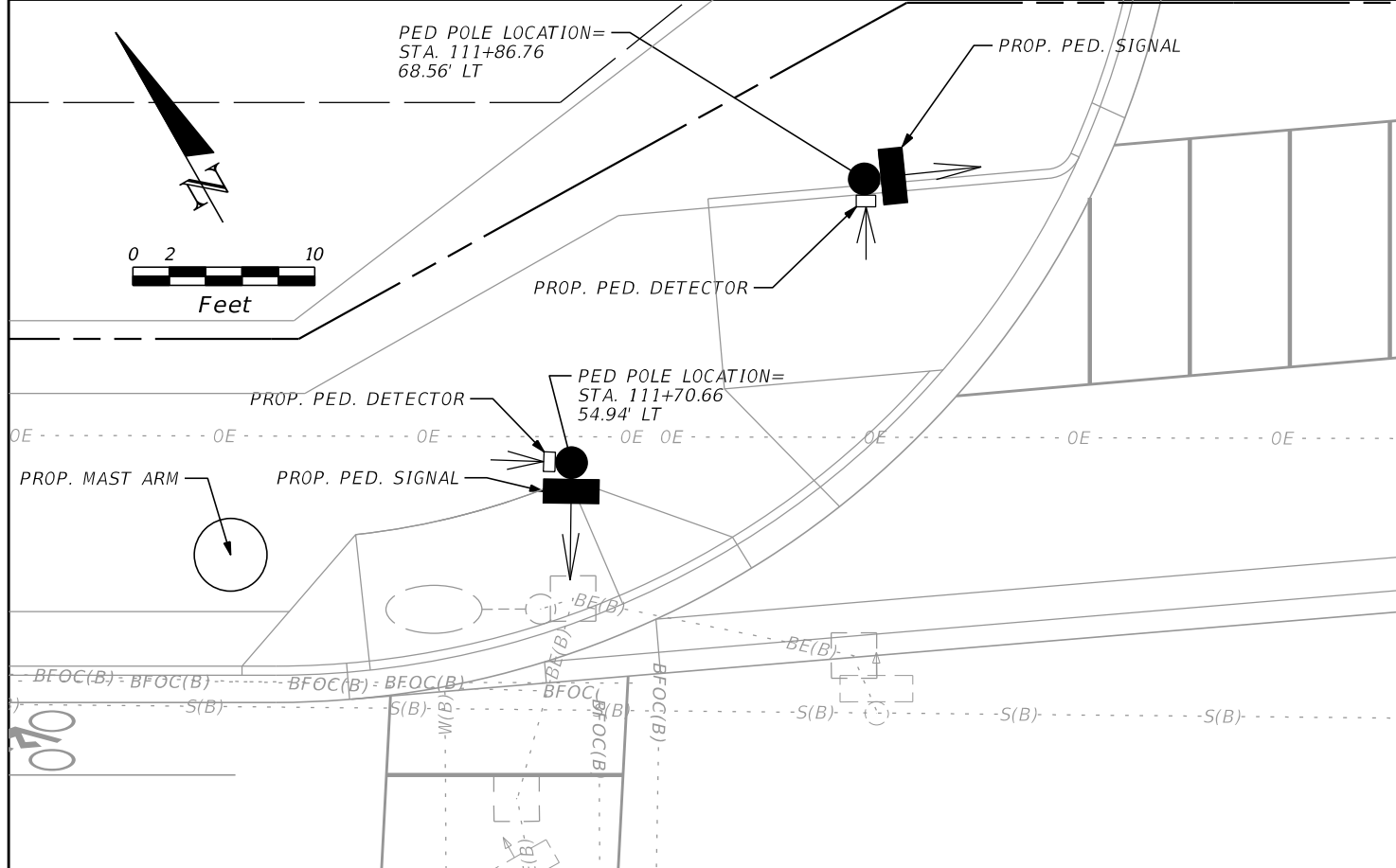
SHAWN H. MACKLEFRESH, P.E.
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PED LOCATION DETAILS

AMES HAVEN RD

SHEET NO.
T-21



REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

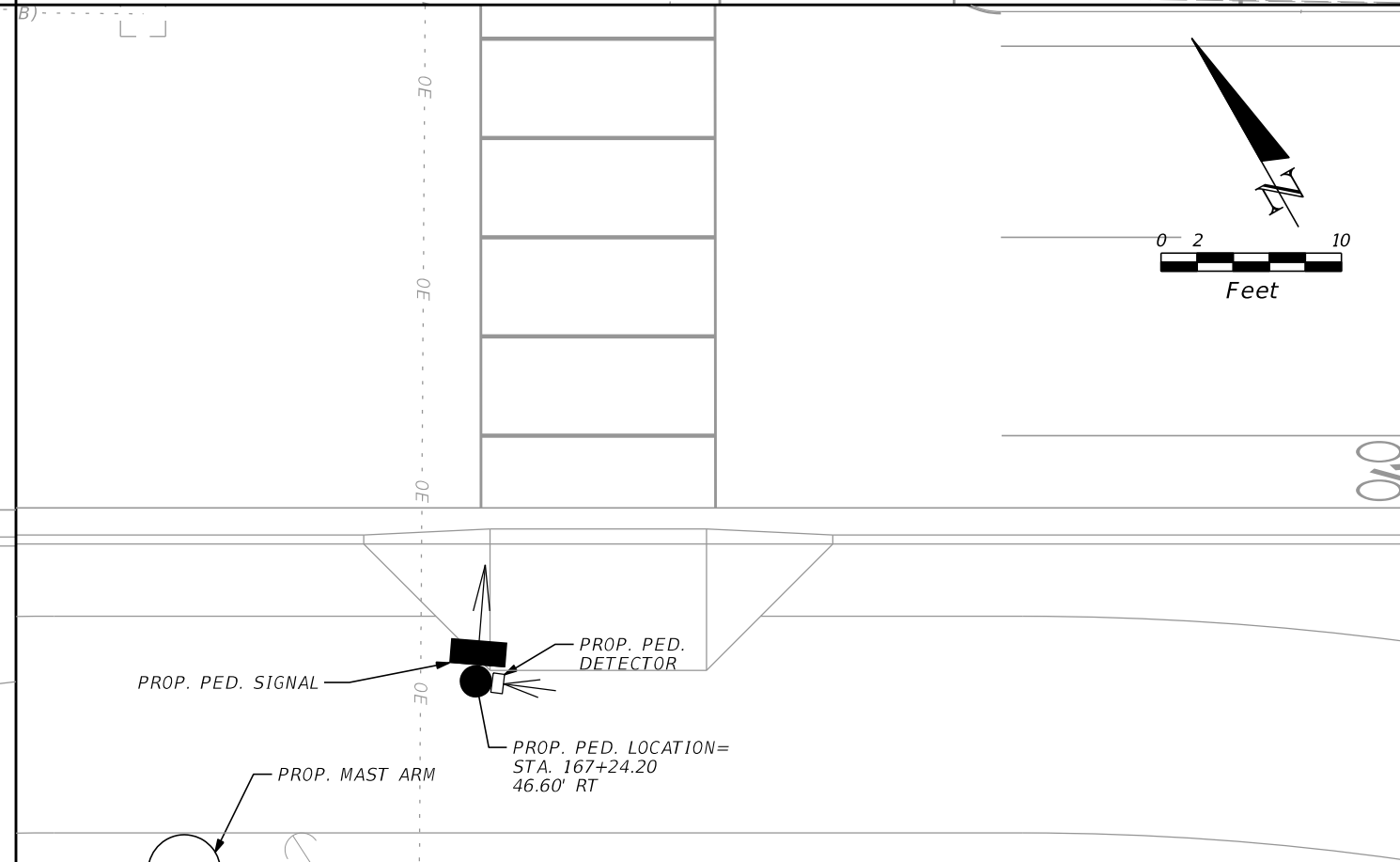
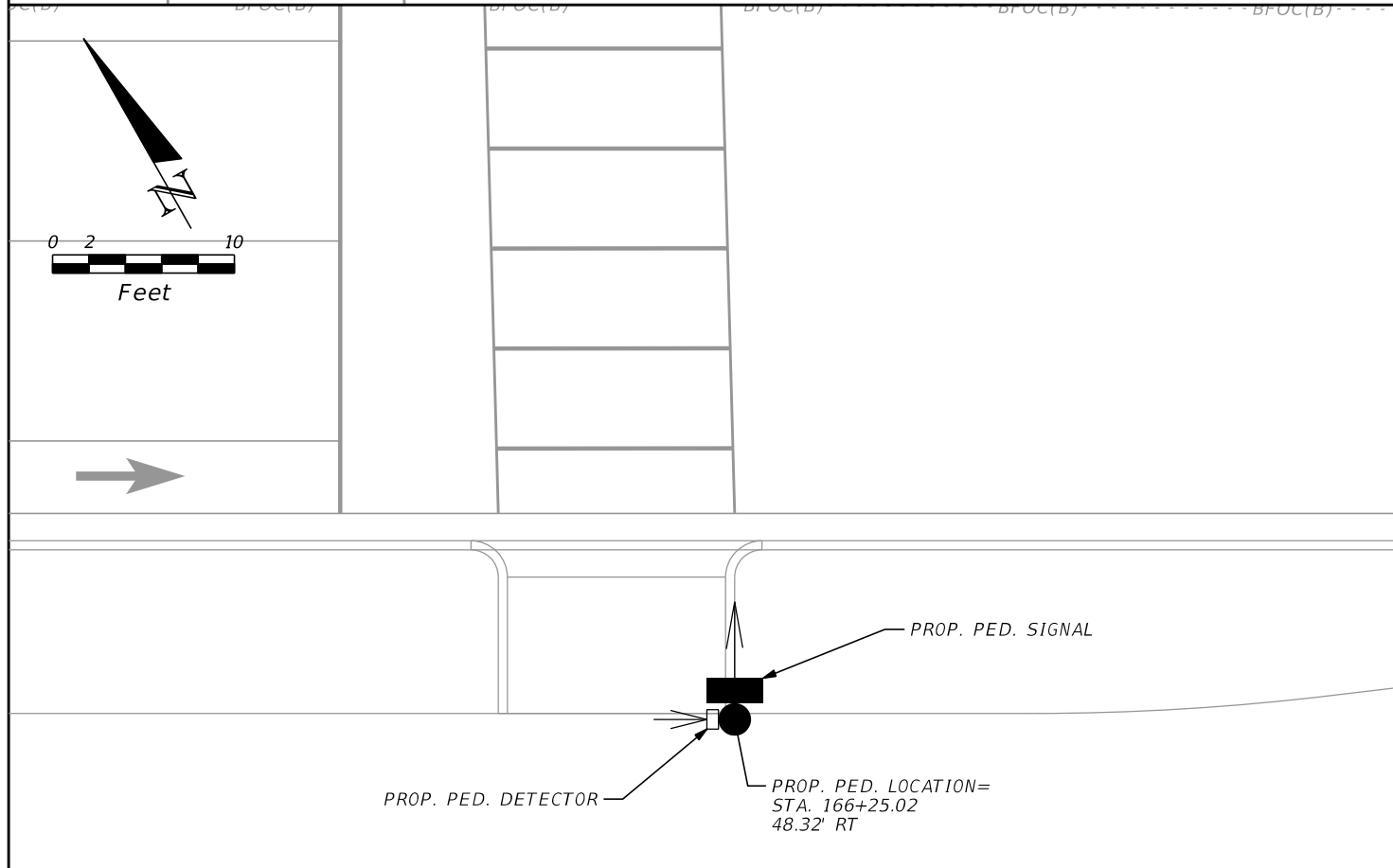
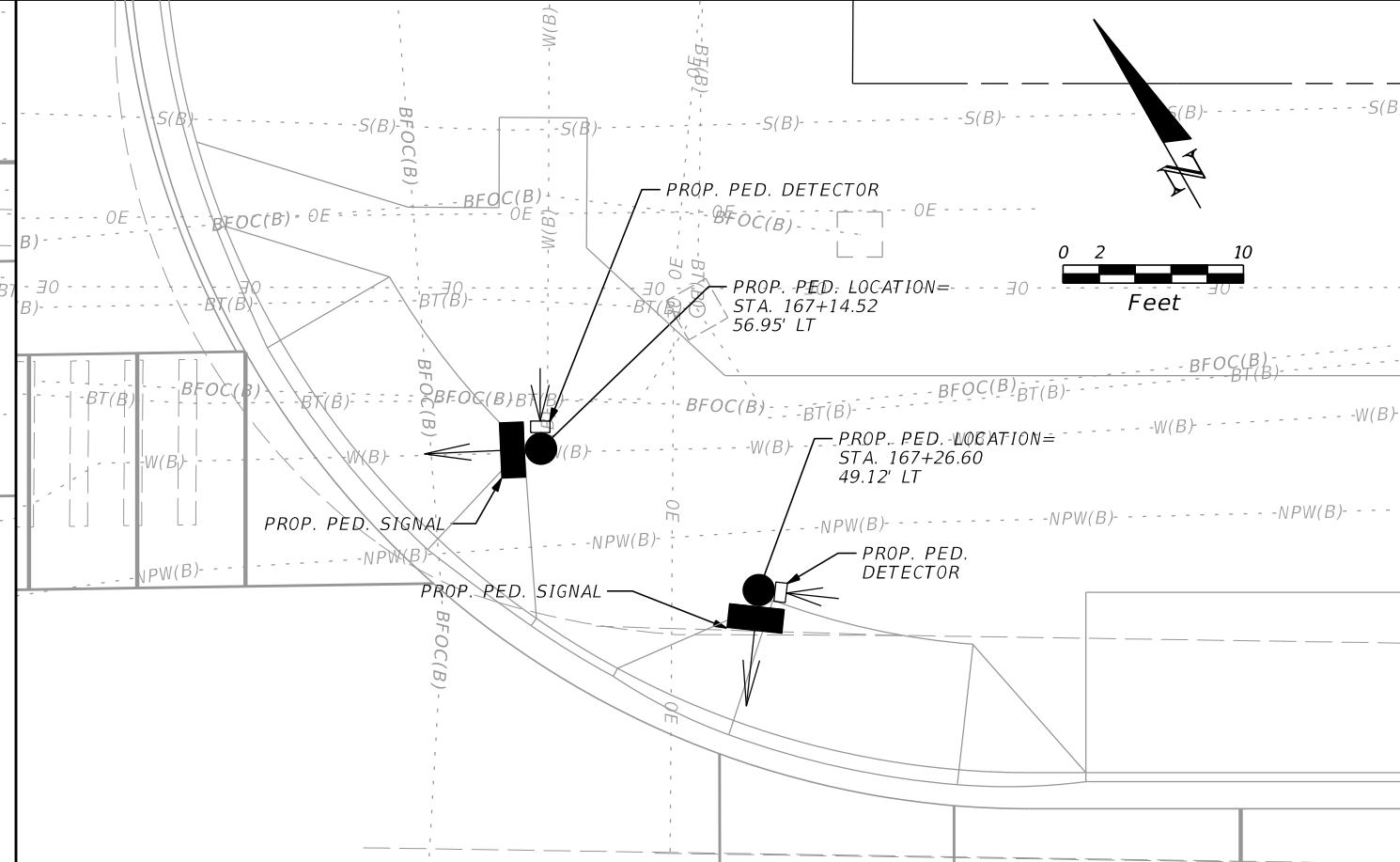
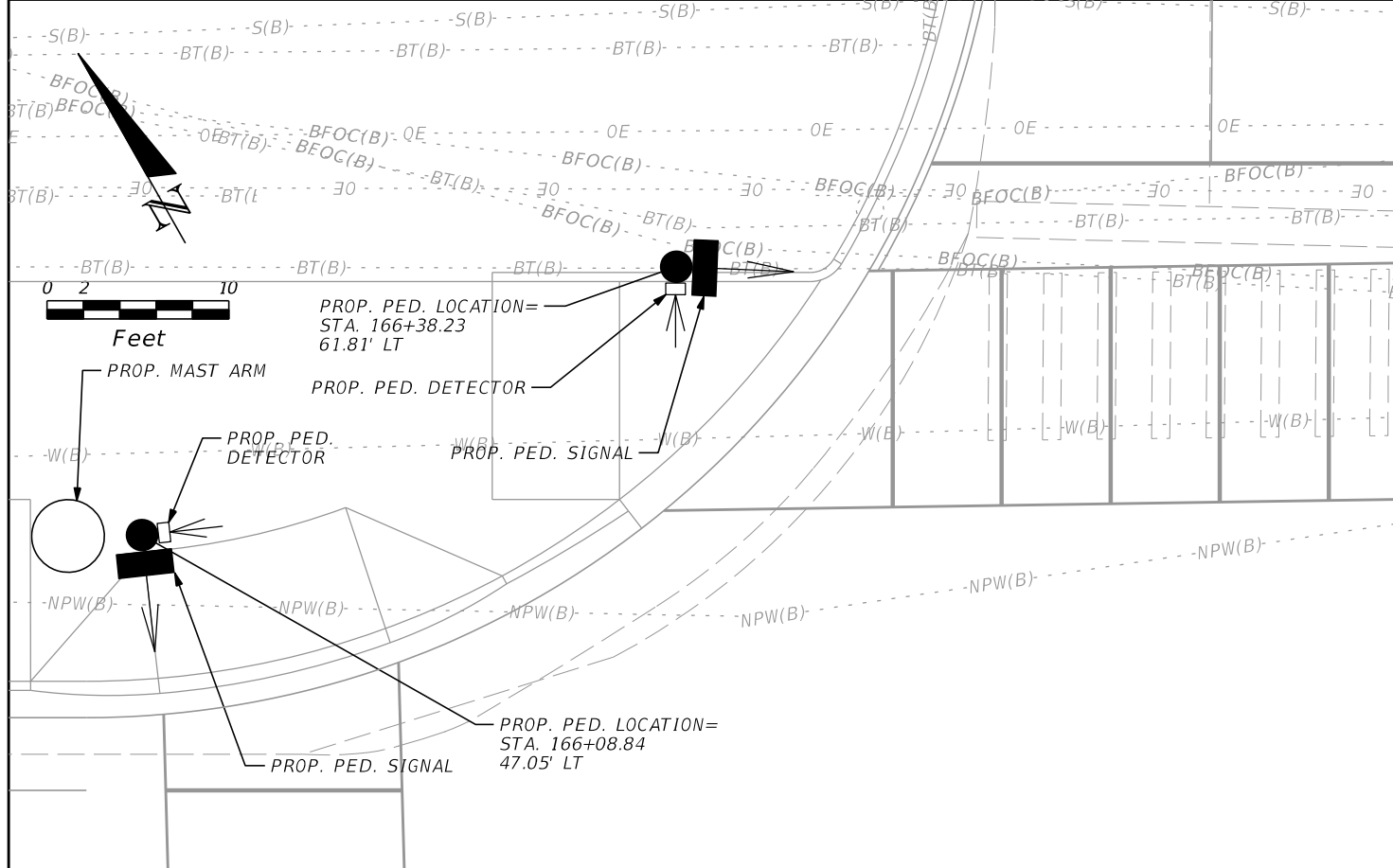
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 P.E. LICENSE NUMBER 88597
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PED LOCATION DETAILS
TOHOQUA BLVD


SHEET NO.
T-22

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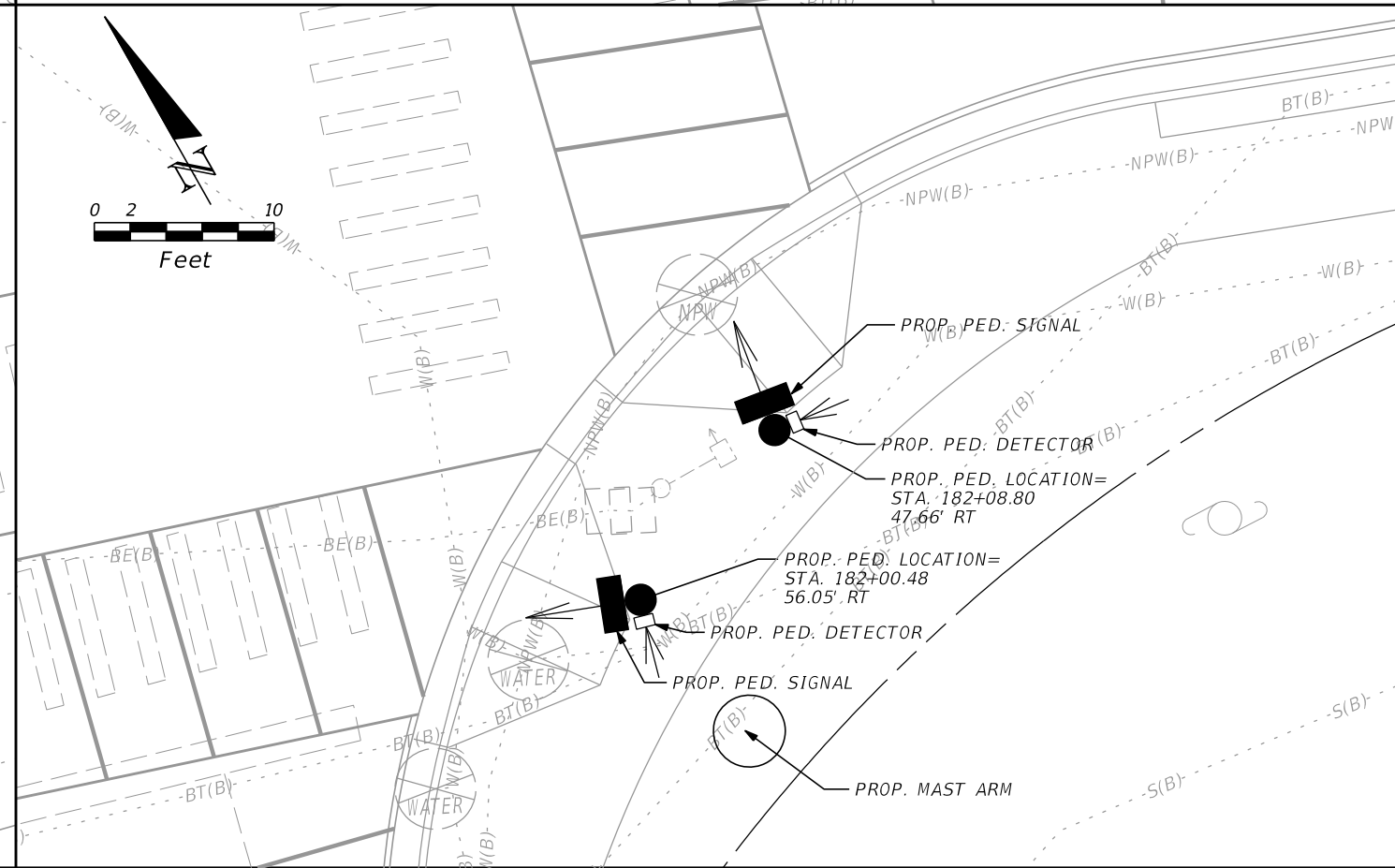
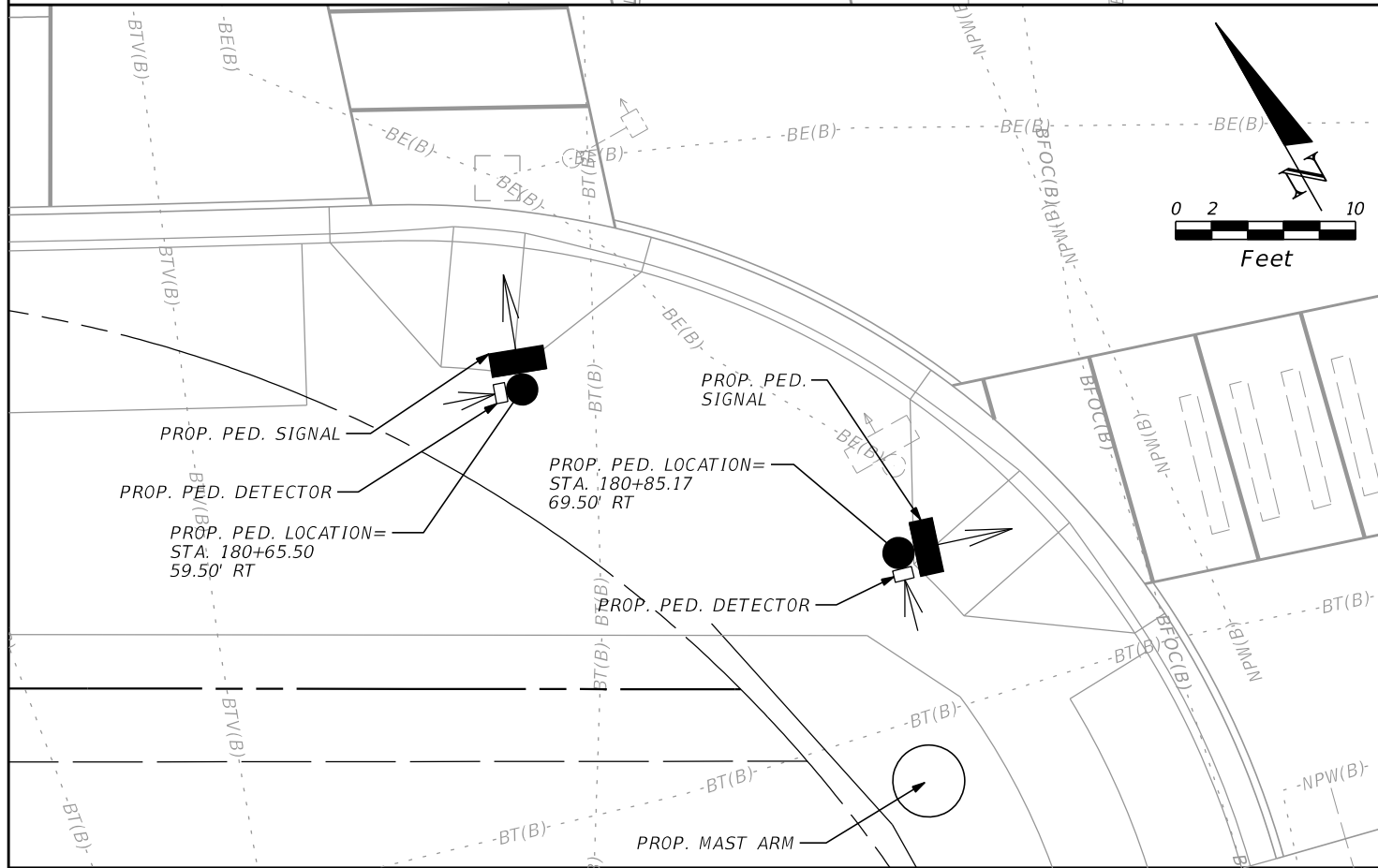
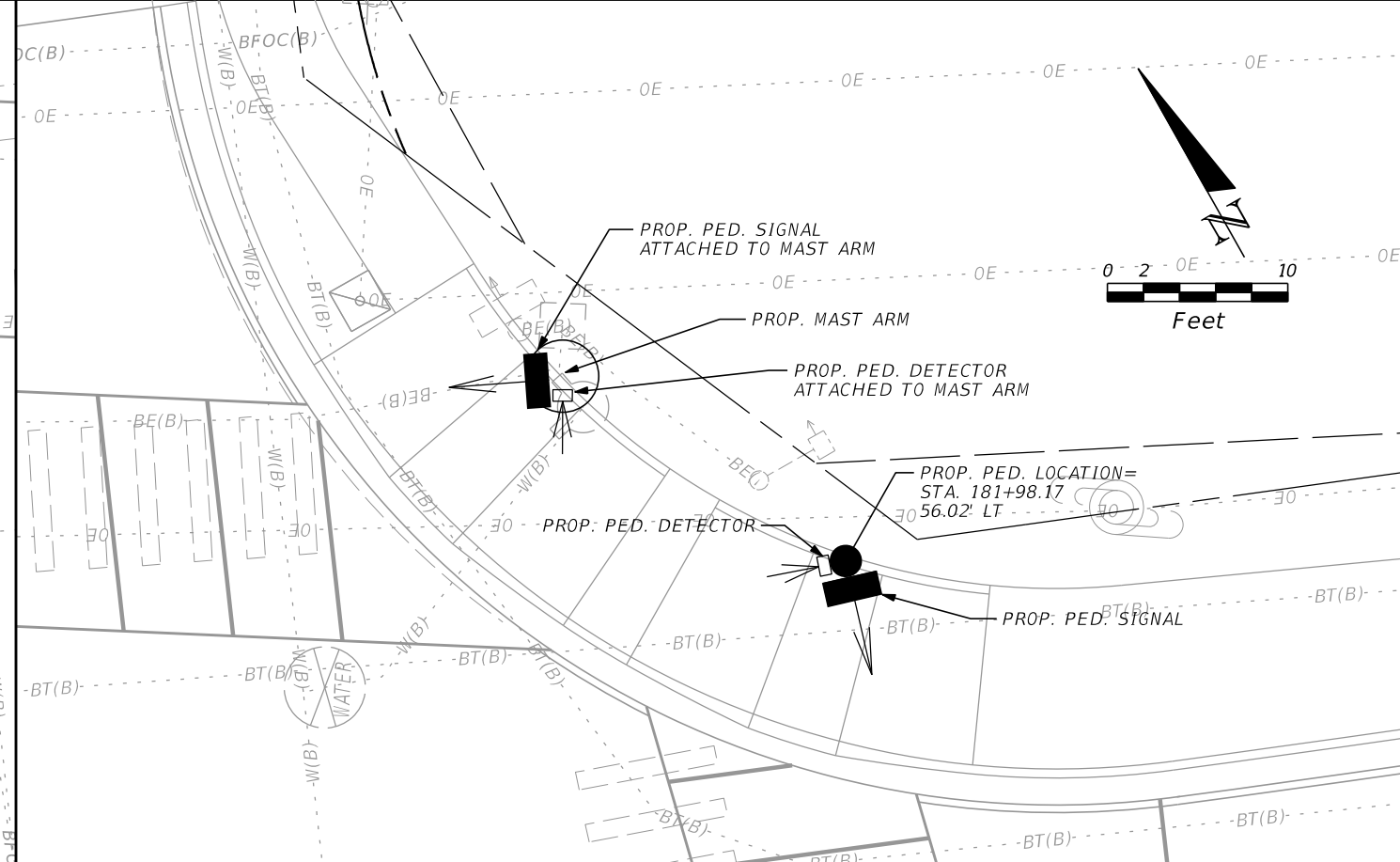
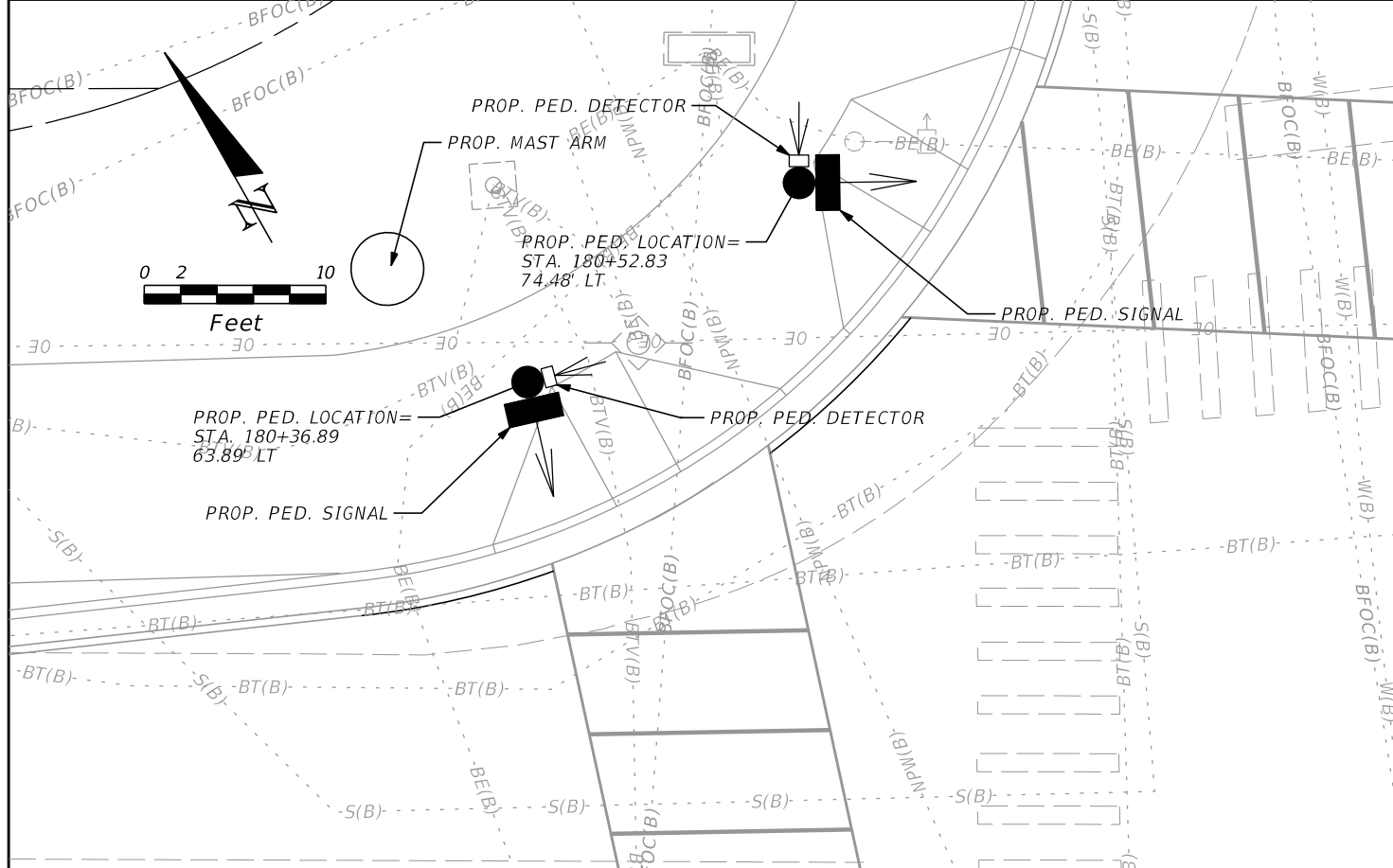
REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

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 P.E. LICENSE NUMBER 88597
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 AND TRANSPORTATION
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PED LOCATION DETAILS
SERGEANT GRAHAM DR.
 SHEET NO.
 T-23

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 JACKSONVILLE, FL 32258

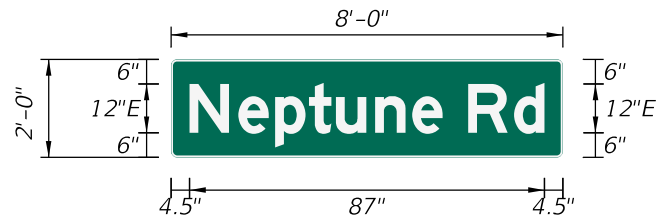
 OSCEOLA COUNTY TRANSPORTATION
 AND TRANSPORTATION
 1 COURTHOUSE SQUARE, SUITE 3100
 KISSIMMEE, FLORIDA 34741-5488
 PHONE:(407) 742-0662 FAX:(407) 742-0600

PED LOCATION DETAILS
OLD CANOE CREEK RD

SHEET NO.
T-24

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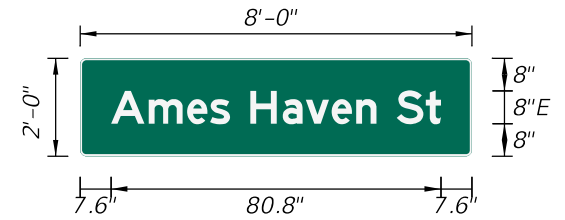
SIGN NAME	SIGN A	QTY	SIGN NUMBER	STATION(S)	
PANEL	BORDER			none	
WIDTH 8'-0"	WIDTH 0.5"				
HEIGHT 2'-0"	RADII 1.5"				
LEGEND White	COLOR White				
COLOR Green					
SYMBOL(S)	ANGLE	X	Y	WID	HT
SIGN NUMBER	NUMBER OF POSTS	CLEARANCE Edge Of Land	COLUMN SIZE	AVERAGE LENGTH	



NO. OF LIGHT FIXTURES	FIXTURE SPACING	PHOTOMETRIC CURVE	WATT	VOLTAGE

COPY	N	e	p	t	u	n	e	L											
SPACE	4.5	12	9	8.3	6.6	9.6	9.1	7.4	29.5	62									
COPY	R	d	L																
SPACE	72.8	11.3	7.4	4.5	18.7														
COPY																			
SPACE																			
COPY																			
SPACE																			
COPY																			
SPACE																			
COPY																			
SPACE																			

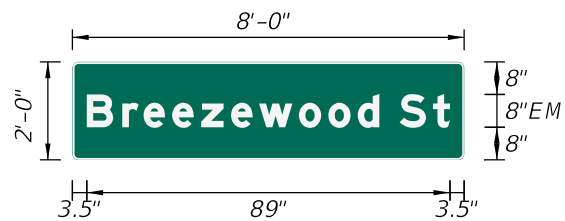
SIGN NAME	SIGN B	QTY	SIGN NUMBER	STATION(S)	
PANEL	BORDER			none	
WIDTH 8'-0"	WIDTH 0.5"				
HEIGHT 2'-0"	RADII 1.5"				
LEGEND White	COLOR White				
COLOR Green					
SYMBOL(S)	ANGLE	X	Y	WID	HT
SIGN NUMBER	NUMBER OF POSTS	CLEARANCE Edge Of Land	COLUMN SIZE	AVERAGE LENGTH	



NO. OF LIGHT FIXTURES	FIXTURE SPACING	PHOTOMETRIC CURVE	WATT	VOLTAGE

COPY	A	m	e	s	H	a	v	e	n	S	t	L							
SPACE	7.6	16.8	26.2	31.8	36.7	41.7	49.6	55.3	61.6	67.6	72.6	77.6	84.7	80.8					
COPY																			
SPACE																			
COPY																			
SPACE																			
COPY																			
SPACE																			
COPY																			
SPACE																			
COPY																			
SPACE																			

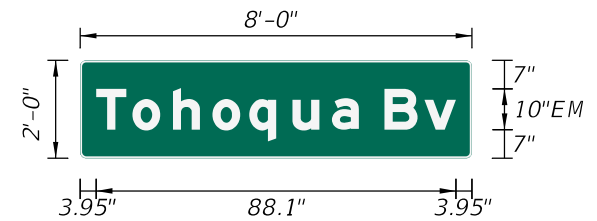
SIGN NAME	SIGN BB	QTY	SIGN NUMBER	STATION(S)	
PANEL	BORDER			none	
WIDTH 8'-0"	WIDTH 0.5"				
HEIGHT 2'-0"	RADII 1.5"				
LEGEND White	COLOR White				
COLOR Green					
SYMBOL(S)	ANGLE	X	Y	WID	HT
SIGN NUMBER	NUMBER OF POSTS	CLEARANCE Edge Of Land	COLUMN SIZE	AVERAGE LENGTH	



NO. OF LIGHT FIXTURES	FIXTURE SPACING	PHOTOMETRIC CURVE	WATT	VOLTAGE

COPY	B	r	e	e	z	e	w	o	o	d	S	t	L						
SPACE	3.5	12.2	17.4	24.5	31.6	38.9	45.7	55.5	62.7	69.9	75.2	80.2	88.3	89					
COPY																			
SPACE																			
COPY																			
SPACE																			
COPY																			
SPACE																			
COPY																			
SPACE																			

SIGN NAME	SIGN C	QTY	SIGN NUMBER	STATION(S)	
PANEL	BORDER			none	
WIDTH 8'-0"	WIDTH 0.5"				
HEIGHT 2'-0"	RADII 1.5"				
LEGEND White	COLOR White				
COLOR Green					
SYMBOL(S)	ANGLE	X	Y	WID	HT
SIGN NUMBER	NUMBER OF POSTS	CLEARANCE Edge Of Land	COLUMN SIZE	AVERAGE LENGTH	



NO. OF LIGHT FIXTURES	FIXTURE SPACING	PHOTOMETRIC CURVE	WATT	VOLTAGE

COPY	T	o	h	o	q	u	a	B	v	L									
SPACE	3.9	12.8	22.7	32.4	41.4	52	61.7	68.3	74.6	84.4	88.1								
COPY																			
SPACE																			
COPY																			
SPACE																			
COPY																			
SPACE																			
COPY																			
SPACE																			

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

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 P.E. LICENSE NUMBER 88597
 GAI CONSULTANTS, INC.
 12574 FLAGLER CENTER BLVD-SUITE 202
 JACKSONVILLE, FL 32258



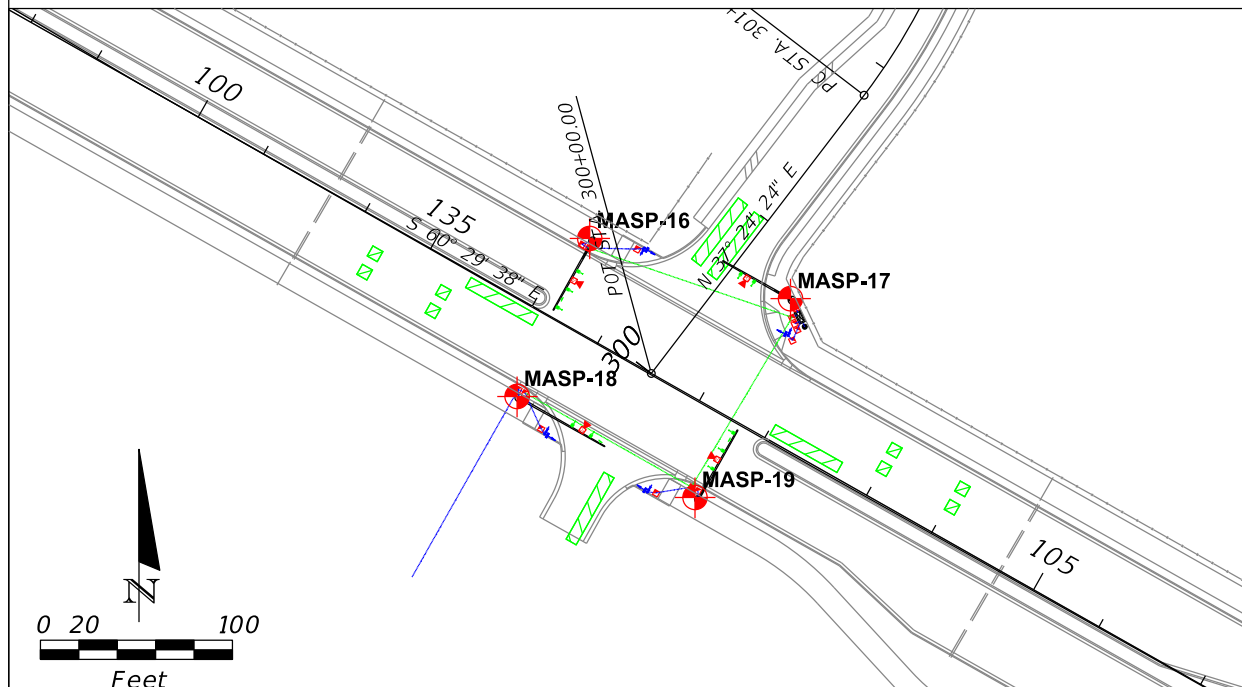
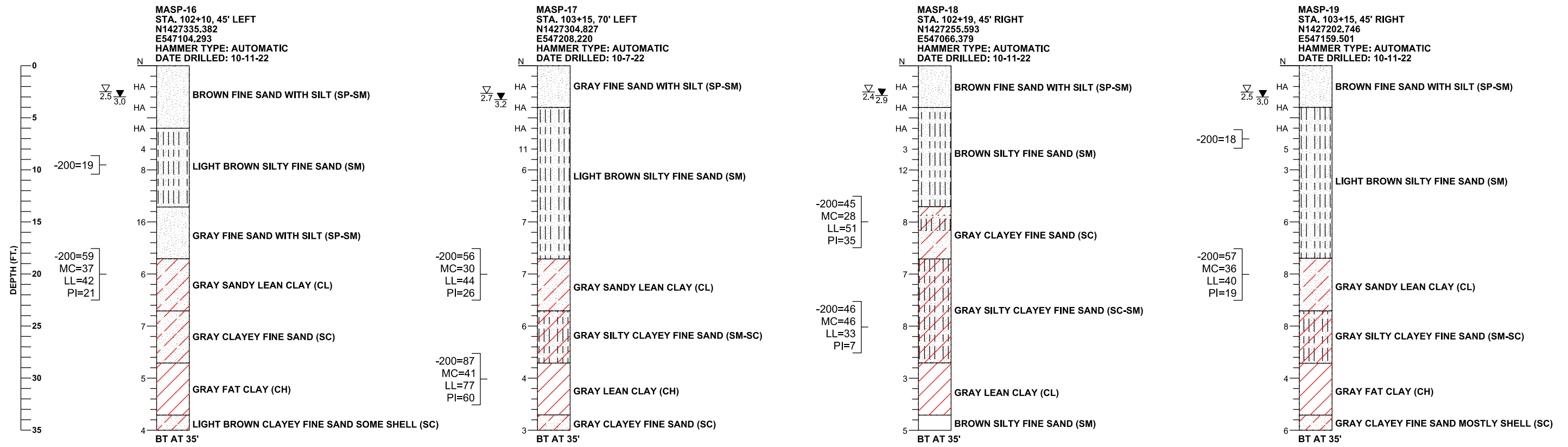
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 1 COURTHOUSE SQUARE, SUITE 3100
 KISSIMMEE, FLORIDA 34741-5488
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GUIDESIGN WORKSHEET

SHEET NO.
T-25

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NEPTUNE ROAD AND AMES HAVEN ROAD



- LEGEND**
- N STANDARD PENETRATION RESISTANCE, BLOWS PER FOOT
 - HA HAND AUGERED FOR UTILITY CLEARANCE
 - ▽ 2.5 ESTIMATED SEASONAL HIGH GROUNDWATER DEPTH (FT.)
 - ▼ 3.0 ENCOUNTERED GROUNDWATER DEPTH (FT.)
 - BT BORING TERMINATED AT DEPTH INDICATED
 - 200= PERCENT PASSING NO. 200 U.S. STANDARD SIEVE
 - MC= PERCENT NATURAL MOISTURE CONTENT
 - LL= LIQUID LIMIT
 - PI= PLASTICITY INDEX

- SAND
- SAND AND SILT
- SAND AND CLAY
- CLAY
- SAND, SILT AND CLAY

GENERAL NOTES

SUBSURFACE CONDITIONS SHOWN ON THE BORINGS REPRESENT THE CONDITIONS ENCOUNTERED AT THE BORING LOCATIONS. ACTUAL CONDITIONS BETWEEN THE BORINGS MAY VARY FROM THOSE SHOWN. UNIFIED SOIL CLASSIFICATIONS SHOWN ON THE BORINGS ARE BASED ON VISUAL EXAMINATION AND THE LABORATORY TESTING SHOWN.

STANDARD PENETRATION TEST BORINGS WERE PERFORMED IN ACCORDANCE WITH ASTM D-1586. STANDARD PENETRATION RESISTANCES ARE SHOWN ON THE BORINGS AT THE TEST DEPTHS IN BLOWS PER FOOT UNLESS OTHERWISE NOTED.

THE BORING LOCATIONS WERE NOT SURVEYED. BORING LOCATIONS WERE ESTABLISHED IN THE FIELD USING A HANDHELD SUB-METER ACCURACY TRIMBLE GPS UNIT.

BASED ON REVIEW OF THE FDEP MAP ENTITLED "UPPER FLORIDA AQUIFER POTENTIOMETRIC SURFACE", DATED SEPTEMBER 2017". THE MAXIMUM ELEVATION OF THE ARTESIAN HEAD IS ESTIMATED TO BE APPROXIMATELY +50 FT. NAVD88. THE CONTRACTOR SHALL BE PREPARED TO HANDLE ARTESIAN HEAD LEVELS UP TO +50 FT. NAVD88.

SPLIT SPOON SAMPLER:
 INSIDE DIAMETER: 1.375 IN.
 OUTSIDE DIAMETER: 2.0 IN.
 AVERAGE HAMMER DROP: 30 IN.
 HAMMER WEIGHT: 140 LBS.

AUTOMATIC HAMMER			
GRANULAR SOILS: SANDS		NON-GRANULAR SOILS: SILTS, CLAYS, MUCK	
N VALUE (BLOWS/FT)	RELATIVE DENSITY	N VALUE (BLOWS/FT)	CONSISTENCY
0-3	VERY LOOSE	0-1	VERY SOFT
3-8	LOOSE	1-3	SOFT
8-24	MEDIUM DENSE	3-6	FIRM
24-40	DENSE	6-12	STIFF
OVER 40	VERY DENSE	12-24	VERY STIFF
		OVER 24	HARD

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION
J4617G			

GEC Geotechnical and Environmental Consultants, Inc.
 2510 MICHIGAN AVE., SUITE D
 KISSIMMEE, FL 34744
 CHRISTOPHER P. MEYER, P.E.
 P.E. LICENSE NUMBER 49328

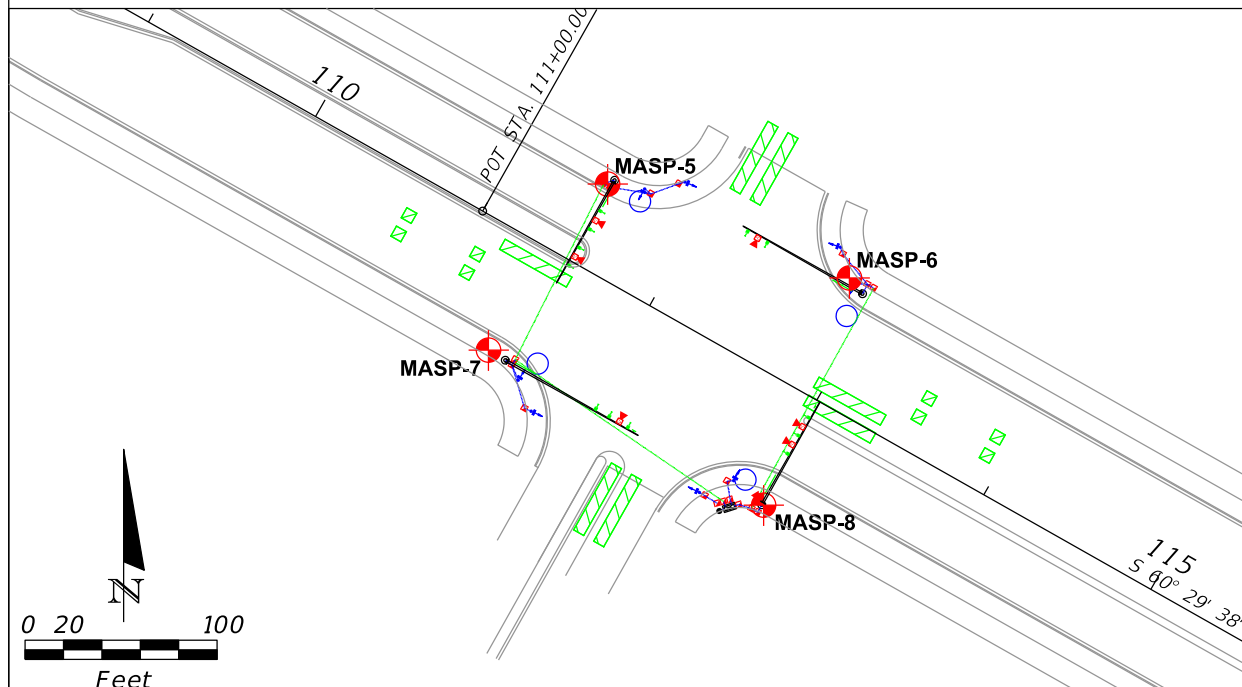
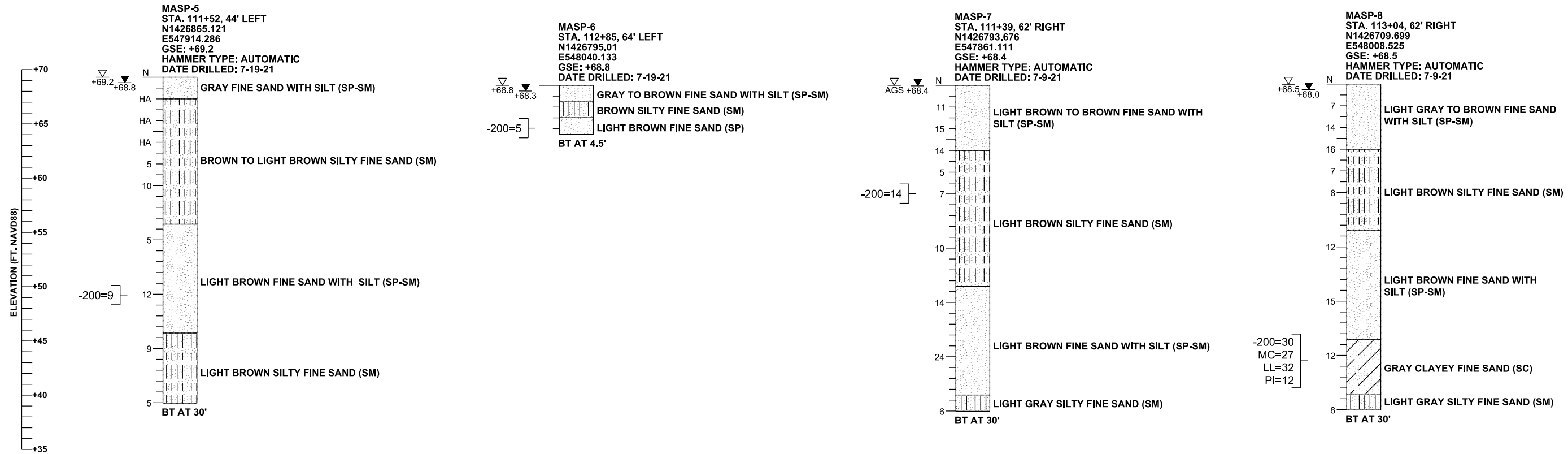
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 KISSIMMEE, FLORIDA 34741-5488
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**REPORT OF SPT BORINGS
 FOR MAST ARM SIGNAL POLES**

FIGURE 10E
 SHEET NO.
 T-27

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NEPTUNE ROAD AND TOHOQUA BOULEVARD INTERSECTION



- LEGEND**
- GSE GROUND SURFACE ELEVATION (FT. NAVD88)
 - N STANDARD PENETRATION RESISTANCE, BLOWS PER FOOT
 - HA HAND AUGERED FOR UTILITY CLEARANCE
 - AGS ESTIMATED SEASONAL HIGH GROUNDWATER LEVEL ABOVE GROUND SURFACE
 - +69.2 ESTIMATED SEASONAL HIGH GROUNDWATER ELEVATION (FT. NAVD88)
 - +68.8 ENCOUNTERED GROUNDWATER ELEVATION (FT. NAVD)
 - BT BORING TERMINATED AT DEPTH INDICATED
 - 200= PERCENT PASSING NO. 200 U.S. STANDARD SIEVE
 - MC= PERCENT NATURAL MOISTURE CONTENT
 - LL= LIQUID LIMIT
 - PI= PLASTICITY INDEX

- SAND
- SAND AND SILT
- SAND AND CLAY

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 INSIDE DIAMETER: 1.375 IN.
 OUTSIDE DIAMETER: 2.0 IN.
 AVERAGE HAMMER DROP: 30 IN.
 HAMMER WEIGHT: 140 LBS.

AUTOMATIC HAMMER			
GRANULAR SOILS: SANDS		NON-GRANULAR SOILS: SILTS, CLAYS, MUCK	
N VALUE (BLOWS/FT)	RELATIVE DENSITY	N VALUE (BLOWS/FT)	CONSISTENCY
0-3	VERY LOOSE	0-1	VERY SOFT
3-8	LOOSE	1-3	SOFT
8-24	MEDIUM DENSE	3-6	FIRM
24-40	DENSE	6-12	STIFF
OVER 40	VERY DENSE	12-24	VERY STIFF
		OVER 24	HARD

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

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 2510 MICHIGAN AVE., SUITE D
 KISSIMMEE, FL 34744
 CHRISTOPHER P. MEYER, P.E.
 P.E. LICENSE NUMBER 49328
 GEC J46177G

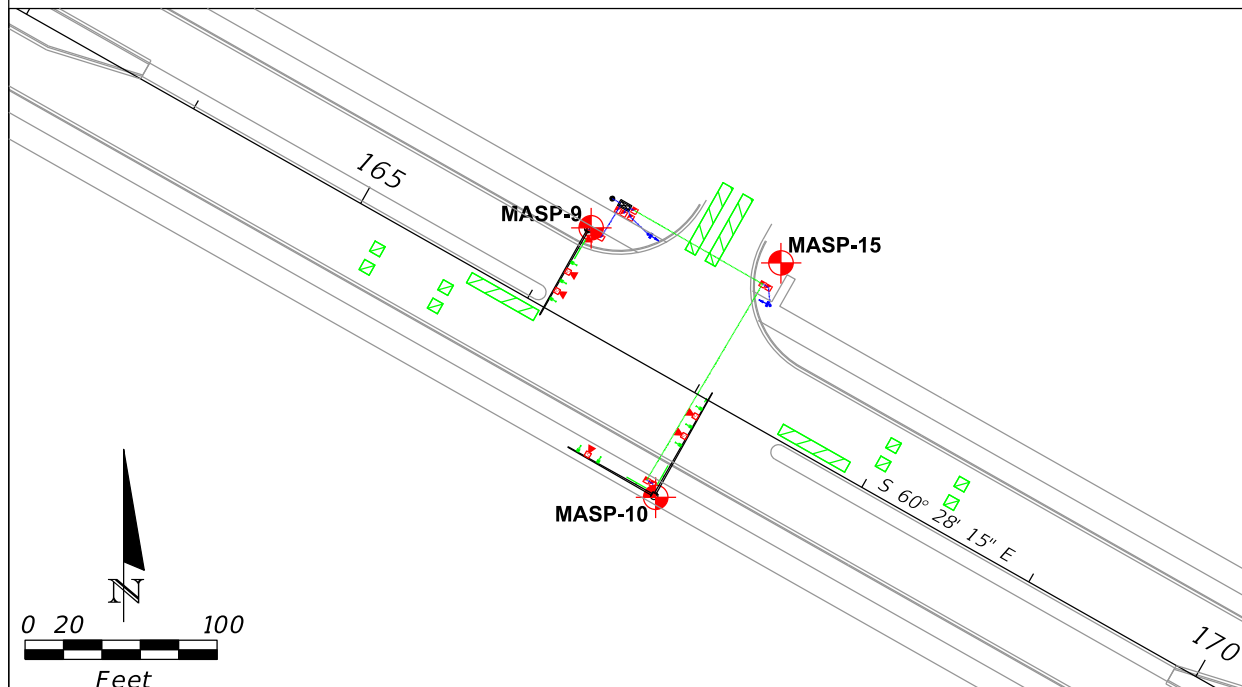
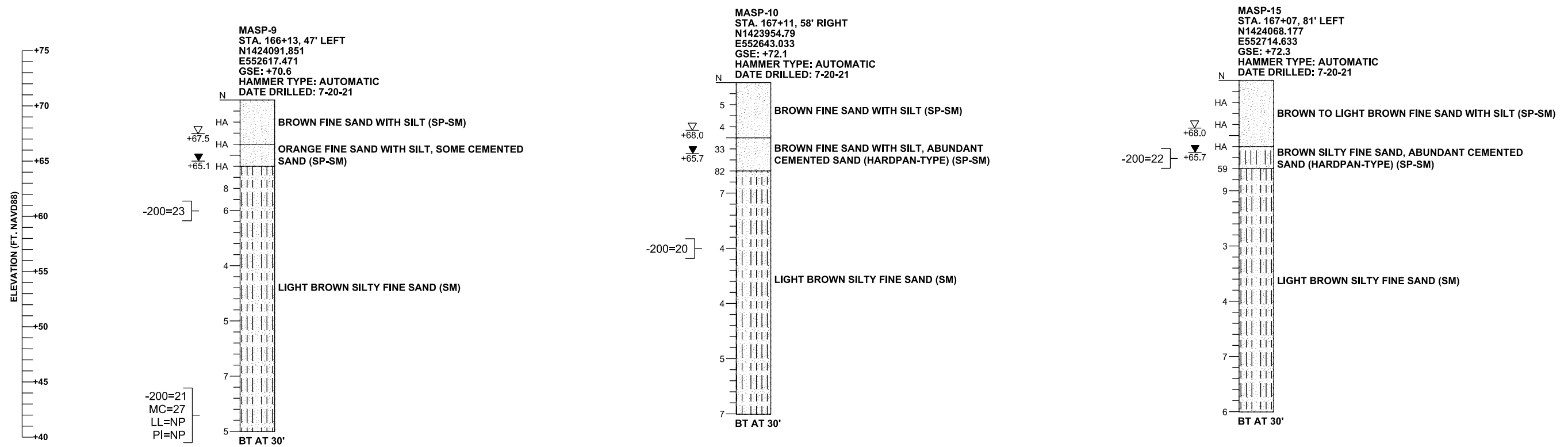
OSCEOLA COUNTY TRANSIT AND TRANSPORTATION
 1 COURTHOUSE SQUARE, SUITE 3100
 KISSIMMEE, FLORIDA 34741-5488
 PHONE:(407) 742-0662 FAX:(407) 742-0600

**REPORT OF SPT BORINGS
 FOR MAST ARM SIGNAL POLES**

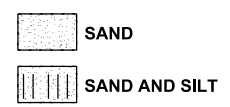
FIGURE 10B
 SHEET NO.
 T-28

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

NEPTUNE ROAD AND SGT. GRAHAM DRIVE INTERSECTION



- LEGEND**
- GSE GROUND SURFACE ELEVATION (FT. NAVD88)
 - N STANDARD PENETRATION RESISTANCE, BLOWS PER FOOT
 - HA HAND AUGERED FOR UTILITY CLEARANCE
 - ▽ ESTIMATED SEASONAL HIGH GROUNDWATER ELEVATION (FT. NAVD88)
 - ▼ ENCOUNTERED GROUNDWATER ELEVATION (FT. NAVD)
 - BT BORING TERMINATED AT DEPTH INDICATED
 - 200= PERCENT PASSING NO. 200 U.S. STANDARD SIEVE
 - MC= PERCENT NATURAL MOISTURE CONTENT
 - LL= LIQUID LIMIT
 - PI= PLASTICITY INDEX
 - NP= NON-PLASTIC



- GENERAL NOTES**
- SUBSURFACE CONDITIONS SHOWN ON THE BORINGS REPRESENT THE CONDITIONS ENCOUNTERED AT THE BORING LOCATIONS. ACTUAL CONDITIONS BETWEEN THE BORINGS MAY VARY FROM THOSE SHOWN. UNIFIED SOIL CLASSIFICATIONS SHOWN ON THE BORINGS ARE BASED ON VISUAL EXAMINATION AND THE LABORATORY TESTING SHOWN.
- STANDARD PENETRATION TEST BORINGS WERE PERFORMED IN ACCORDANCE WITH ASTM D-1586. STANDARD PENETRATION RESISTANCES ARE SHOWN ON THE BORINGS AT THE TEST DEPTHS IN BLOWS PER FOOT UNLESS OTHERWISE NOTED.
- THE BORING LOCATIONS WERE NOT SURVEYED. BORING LOCATIONS WERE ESTABLISHED IN THE FIELD USING A HANDHELD SUB-METER ACCURACY TRIMBLE GPS UNIT.
- BASED ON REVIEW OF THE FDEP MAP ENTITLED "UPPER FLORIDA AQUIFER POTENTIOMETRIC SURFACE", DATED SEPTEMBER 2017". THE MAXIMUM ELEVATION OF THE ARTESIAN HEAD IS ESTIMATED TO BE APPROXIMATELY +50 FT. NAVD88. THE CONTRACTOR SHALL BE PREPARED TO HANDLE ARTESIAN HEAD LEVELS UP TO +50 FT. NAVD88.

SPLIT SPOON SAMPLER:
 INSIDE DIAMETER: 1.375 IN.
 OUTSIDE DIAMETER: 2.0 IN.
 AVERAGE HAMMER DROP: 30 IN.
 HAMMER WEIGHT: 140 LBS.

AUTOMATIC HAMMER			
GRANULAR SOILS: SANDS		NON-GRANULAR SOILS: SILTS, CLAYS, MUCK	
N VALUE (BLOWS/FT)	RELATIVE DENSITY	N VALUE (BLOWS/FT)	CONSISTENCY
0-3	VERY LOOSE	0-1	VERY SOFT
3-8	LOOSE	1-3	SOFT
8-24	MEDIUM DENSE	3-6	FIRM
24-40	DENSE	6-12	STIFF
OVER 40	VERY DENSE	12-24	VERY STIFF
		OVER 24	HARD

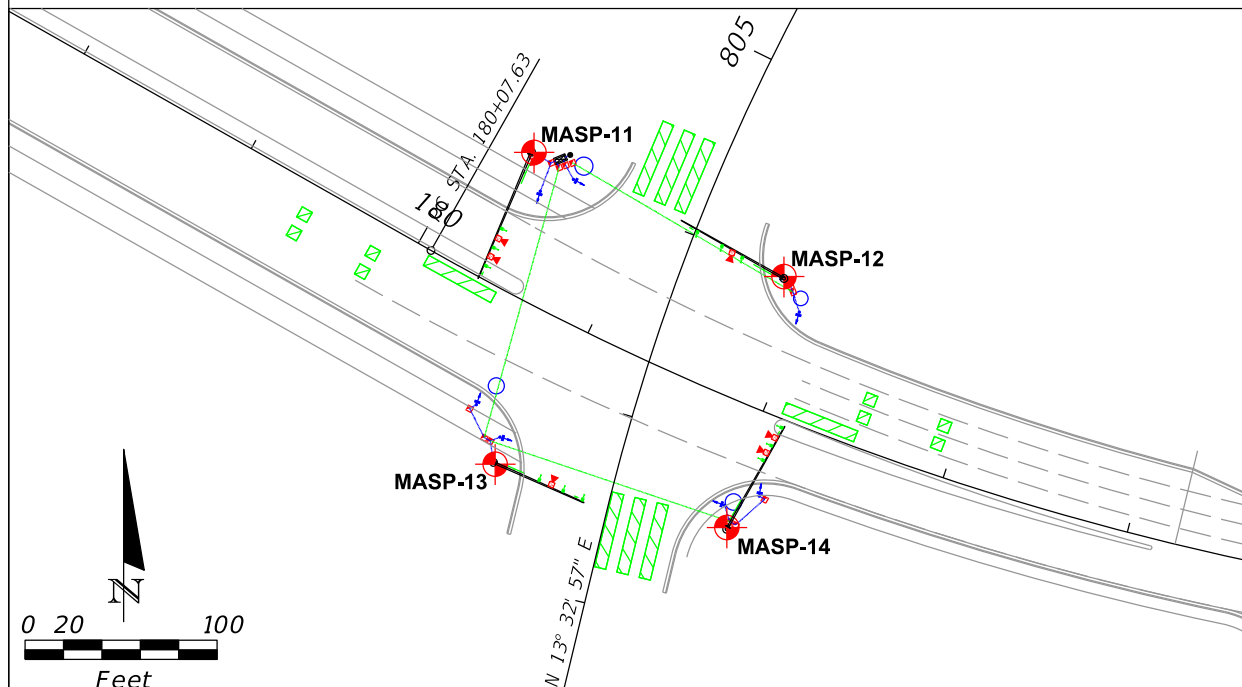
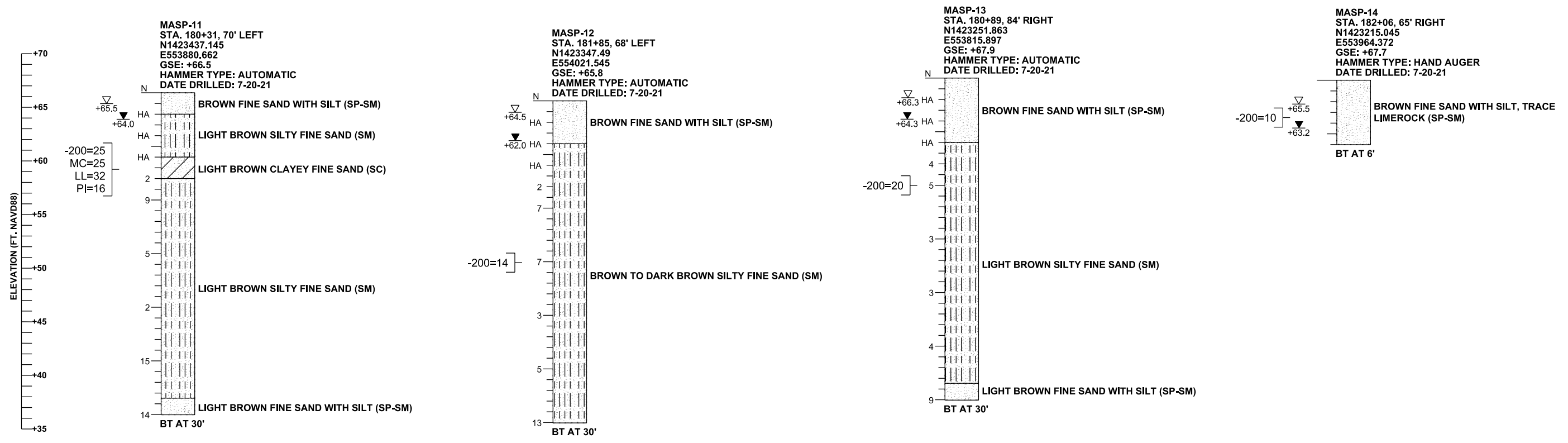
REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

**REPORT OF SPT BORINGS
FOR MAST ARM SIGNAL POLES**

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.

NEPTUNE ROAD AND OLD CANOE CREEK ROAD INTERSECTION



- LEGEND**
- GSE GROUND SURFACE ELEVATION (FT. NAVD88)
 - N STANDARD PENETRATION RESISTANCE, BLOWS PER FOOT
 - HA HAND AUGERED FOR UTILITY CLEARANCE
 - +65.5 ESTIMATED SEASONAL HIGH GROUNDWATER ELEVATION (FT. NAVD88)
 - +64.0 ENCOUNTERED GROUNDWATER ELEVATION (FT. NAVD)
 - BT BORING TERMINATED AT DEPTH INDICATED
 - 200= PERCENT PASSING NO. 200 U.S. STANDARD SIEVE
 - MC= PERCENT NATURAL MOISTURE CONTENT
 - LL= LIQUID LIMIT
 - PI= PLASTICITY INDEX

- SAND
- SAND AND SILT
- SAND AND CLAY

GENERAL NOTES

SUBSURFACE CONDITIONS SHOWN ON THE BORINGS REPRESENT THE CONDITIONS ENCOUNTERED AT THE BORING LOCATIONS. ACTUAL CONDITIONS BETWEEN THE BORINGS MAY VARY FROM THOSE SHOWN. UNIFIED SOIL CLASSIFICATIONS SHOWN ON THE BORINGS ARE BASED ON VISUAL EXAMINATION AND THE LABORATORY TESTING SHOWN.

STANDARD PENETRATION TEST BORINGS WERE PERFORMED IN ACCORDANCE WITH ASTM D-1586. STANDARD PENETRATION RESISTANCES ARE SHOWN ON THE BORINGS AT THE TEST DEPTHS IN BLOWS PER FOOT UNLESS OTHERWISE NOTED.

THE BORING LOCATIONS WERE NOT SURVEYED. BORING LOCATIONS WERE ESTABLISHED IN THE FIELD USING A HANDHELD SUB-METER ACCURACY TRIMBLE GPS UNIT.

BASED ON REVIEW OF THE FDEP MAP ENTITLED "UPPER FLORIDA AQUIFER POTENTIOMETRIC SURFACE", DATED SEPTEMBER 2017". THE MAXIMUM ELEVATION OF THE ARTESIAN HEAD IS ESTIMATED TO BE APPROXIMATELY +50 FT. NAVD88. THE CONTRACTOR SHALL BE PREPARED TO HANDLE ARTESIAN HEAD LEVELS UP TO +50 FT. NAVD88.

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24-40	DENSE	6-12	STIFF
OVER 40	VERY DENSE	12-24	VERY STIFF
		OVER 24	HARD

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

GEC Geotechnical and Environmental Consultants, Inc.
 2510 MICHIGAN AVE., SUITE D
 KISSIMMEE, FL 34744
 CHRISTOPHER P. MEYER, P.E.
 P.E. LICENSE NUMBER 49328
 GEC J46171G

OSCEOLA COUNTY TRANSIT AND TRANSPORTATION
 1 COURTHOUSE SQUARE, SUITE 3100
 KISSIMMEE, FLORIDA 34741-5488
 PHONE:(407) 742-0662 FAX:(407) 742-0600

REPORT OF SPT BORINGS
FOR MAST ARM SIGNAL POLES

FIGURE 10D
 SHEET NO.
 T-30

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