

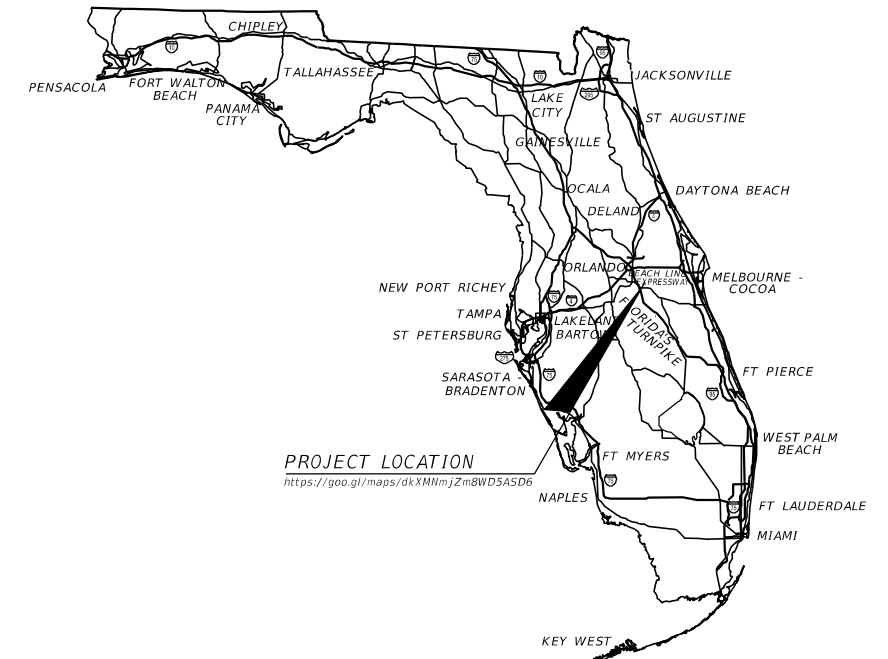


OSCEOLA COUNTY, FLORIDA
 TRANSPORTATION & TRANSIT DEPARTMENT

CONSTRUCTION PLANS

NARCOOSEE ROAD AND CYRILS DRIVE

SIGNALIZATION PLANS



INDEX OF SIGNALIZATION PLANS

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OSCEOLA COUNTY BOARD OF COUNTY COMMISSIONERS (BOCC)

PEGGY CHOUDRY	DISTRICT 1
VIVIANA JANER	DISTRICT 2
BRANDON ARRINGTON	DISTRICT 3
CHERYL GRIEB	DISTRICT 4
FRED HAWKINS, JR	DISTRICT 5

GOVERNING STANDARD PLANS:

Florida Department of Transportation, FY2020/21 Standard Plans for Road and Bridge Construction and applicable Interim Revisions (IRs).

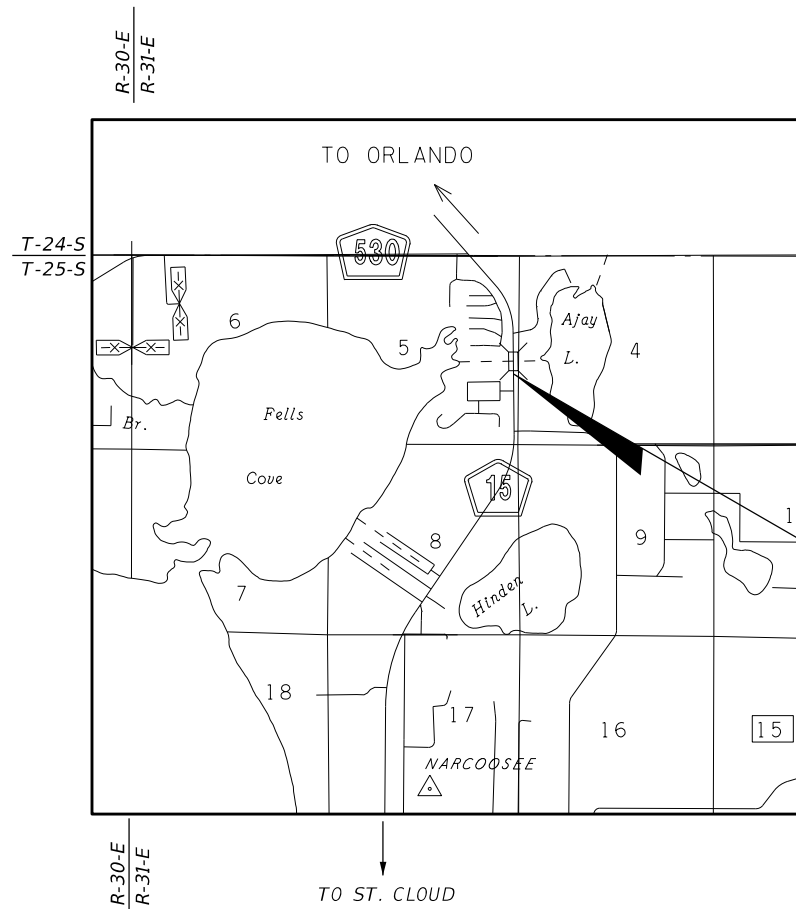
Standard Plans for Road Construction and associated IRs are available at the following website: <http://www.fdot.gov/design/standardplans>

APPLICABLE IRs: N/A

Standard Plans for Bridge Construction are included in the Structures Plans Component.

GOVERNING STANDARD SPECIFICATIONS:

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



PROJECT LOCATION
<https://goo.gl/maps/dkXMmJZm8WDSASD6>

FINAL PLANS
 01/13/21

SIGNALIZATION SHOP DRAWINGS
 TO BE SUBMITTED TO:

AYMAN HASAH AS-SAIDI, P.E.
 TRAFFIC & MOBILITY CONSULTANTS, LLC.
 3101 MAGUIRE BLVD
 SUITE 265
 ORLANDO, FL 32803
 407-531-5332

PLANS PREPARED BY:

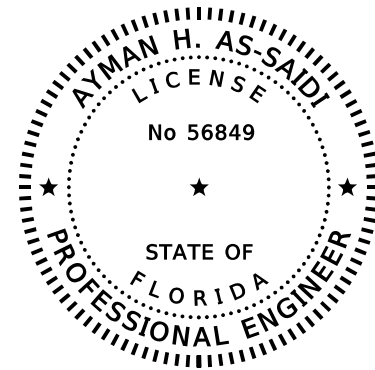


TRAFFIC & MOBILITY CONSULTANTS, LLC.
 3101 MAGUIRE BLVD
 SUITE 265
 ORLANDO, FL 32803
 CERTIFICATE OF AUTHORIZATION: 30024
 407-531-5332

SIGNALIZATION PLANS
 ENGINEER OF RECORD: AYMAN HASAN AS-SAIDI, P.E.

P.E. NO.: 56849

TMC CONTRACT NO.	FISCAL YEAR	SHEET NO.
20024	20	T-1



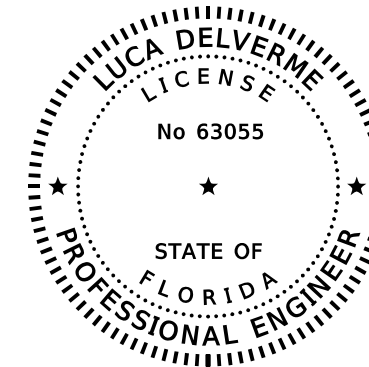
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CERTIFICATE OF AUTHORIZATION 30024

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

SHEET NO.	SHEET DESCRIPTION
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AVCON, INC.
5555 E. MICHIGAN STREET, SUITE 200
ORLANDO, FL 32822-2779
CERTIFICATE OF AUTHORIZATION NO: 5057
LUCA DELVERME, P.E. NO. 63055

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SHEET NO.	SHEET DESCRIPTION
T-2	SIGNATURE SHEET
T-12	STANDARD MAST ARM ASSEMBLIES DATA TABLE

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION



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Osceola County
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"Honoring the past shaping the future."


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		PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	
			PLAN	FINAL	PLAN	FINAL							
630-2-11	CONDUIT, FURNISH & INSTALL, OPEN TRENCH	LF	342							342		342	
630-2-12	CONDUIT, FURNISH & INSTALL, DIRECTIONAL BORE	LF	393							393		393	
632-7-1	SIGNAL CABLE- NEW OR RECONSTRUCTED INTERSECTION, FURNISH & INSTALL	PI	1							1		1	
633-2-31	FIBER OPTIC CONNECTION, INSTALL, SPLICE	EA	12							12		12	
633-3-11	FIBER OPTIC CONNECTION HARDWARE, FURNISH & INSTALL, SPLICE ENCLOSURE	EA	1							1		1	
633-3-12	FIBER OPTIC CONNECTION HARDWARE, FURNISH & INSTALL, SPLICE TRAY	EA	1							1		1	
633-3-16	FIBER OPTIC CONNECTION HARDWARE, FURNISH & INSTALL, PATCH PANEL-FIELD TERMINATED	EA	1							1		1	
635-2-11	PULL & SPLICE BOX, F&I, 13" x 24" COVER SIZE	EA	17							17		17	
635-2-12	PULL & SPLICE BOX, F&I, 24" x 36" COVER SIZE	EA	1							1		1	
635-2-13	PULL & SPLICE BOX, F&I, 36" ROUND COVER SIZE	EA	1							1		1	
639-1-122	ELECTRICAL POWER SERVICE, F&I, OVERHEAD METER PURCHASED BY CONTRACTOR FROM POWER COMPANY	AS	1							1		1	
639-2-1	ELECTRICAL SERVICE WIRE, FURNISH & INSTALL	LF	65							65		65	
641-2-12	PRESTRESSED CONCRETE POLE, F&I, TYPE P-11, SERVICE POLE	EA	1							1		1	
646-1-11	ALUMINUM SIGNAL POLE, PEDESTAL	EA			6					6		6	
649-21-1	STEEL MAST ARM ASSEMBLY, FURNISH AND INSTALL, SINGLE ARM 30'	EA	1							1		1	
649-21-3	STEEL MAST ARM ASSEMBLY, FURNISH AND INSTALL, SINGLE ARM 40'	EA	1							1		1	
649-21-10	STEEL MAST ARM ASSEMBLY, FURNISH AND INSTALL, SINGLE ARM 60'	EA	1							1		1	
649-21-15	STEEL MAST ARM ASSEMBLY, FURNISH AND INSTALL, SINGLE ARM 70'	EA	1							1		1	
650-1-14	TRAFFIC SIGNAL, FURNISH & INSTALL ALUMINUM, 3 SECTION, 1 WAY	AS	11							11		11	
650-1-19	TRAFFIC SIGNAL, FURNISH & INSTALL ALUMINUM, 5 SECTION, 1 WAY	AS	2							2		2	
653-1-11	PEDESTRIAN SIGNAL FURNISH & INSTALL LED COUNTDOWN, 1 WAY	AS			6					6		6	
660-4-11	VEHICLE DETECTION SYSTEM- VIDEO, FURNISH & INSTALL CABINET EQUIPMENT	EA	1							1		1	
660-4-12	VEHICLE DETECTION SYSTEM- VIDEO, FURNISH & INSTALL ABOVE GROUND EQUIPMENT	EA	4							4		4	
663-1-121	SIGNAL PRIORITY AND PREEMPTION SYSTEM, F&I, GPS, CABINET ELECTRONICS	EA	1							1		1	
663-1-122	SIGNAL PRIORITY AND PREEMPTION SYSTEM, FURNISH AND INSTALL, GPS, DETECTOR	EA	1							1		1	
665-1-11	PEDESTRIAN DETECTOR, FURNISH & INSTALL, STANDARD	EA			6					6		6	
670-5-111	TRAFFIC CONTROLLER ASSEMBLY, FURNISH & INSTALL, NEMA, 1 PREEMPTION	AS	1							1		1	
682-1-113	ITS CCTV CAMERA, F&I, DOME PTZ ENCLOSURE-PRESSURIZED, IP, HIGH DEFINITION	EA	1							1		1	
684-1-1	MANAGED FIELD ETHERNET SWITCH, FURNISH & INSTALL	EA	1							1		1	
685-1-12	UNINTERRUPTIBLE POWER SUPPLY, FURNISH & INSTALL, ONLINE/DOUBLE CONVERSATION	EA	1							1		1	
700-5-22	INTERNALLY ILLUMINATED SIGN, FURNISH & INSTALL OVERHEAD MOUNT, 12-18 SF, DOUBLE SIDED	EA	4							4		4	
715-3-31	LUMINAIRE & BRACKET ARM-ALUMINUM, FURNISH & INSTALL NEW LUMINAIRE AND ARM ON NEW POLE	EA	4							4		4	

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION



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Osceola County
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"Honoring the past shaping the future."

TABULATION OF QUANTITIES

SHEET NO.
T-3

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

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 OSCEOLA COUNTY.
2. DATA SOURCES: PLEASE REFER TO SITE DEVELOPMENT PLANS FOR DATA SOURCES.

UTILITIES

1. THE LOCATION OF THE UTILITIES SHOWN IN THE PLANS IS BASED ON LIMITED INVESTIGATION TECHNIQUES AND SHOULD BE CONSIDERED APPROXIMATE ONLY. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO HAVE EXACT LOCATIONS OF THE UNDERGROUND UTILITIES PRIOR TO DIGGING. THE EXACT LOCATION SHALL BE DETERMINED BY THE CONTRACTOR DURING CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE TO VERIFY IF OTHER UTILITIES (NOT SHOWN IN THE PLANS) EXIST WITHIN THE AREA OF CONSTRUCTION. SHOULD THERE BE OTHER UTILITIES; THE CONTRACTOR SHALL NOTIFY THE RESPECTIVE UTILITY OWNERS TO RESOLVE UTILITY CONFLICTS AND UTILITY ADJUSTMENTS, AS REQUIRED. UTILITIES SHALL REMAIN UNLESS OTHERWISE NOTED. THE CONTRACTOR IS RESPONSIBLE FOR THE PROTECTION OF ALL UTILITIES TO REMAIN IN PLACE.
2. THE CONTRACTOR SHALL 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.
3. AS DIRECTED BY THE PROJECT ENGINEER, THE CONTRACTOR SHALL ADJUST CONDUIT VERTICALLY TO AVOID ANY POSSIBLE CONFLICTS WITH UNDERGROUND UTILITIES.
4. IT IS THE INTENT OF THESE PLANS THAT THE PROPOSED EQUIPMENT TO BE INSTALLED IS TO BE PLACED IN SUCH A MANNER SO AS TO TOTALLY AVOID ANY CONFLICTS WITH EXISTING UTILITIES ALONG THE ROUTE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN THE NECESSARY INFORMATION TO PLAN THEIR WORK WITHIN THE DESIGN OR SPECIFIED PARAMETERS, AND THE SPECIFIED TIMEFRAME. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO LOCATE ALL ABOVEGROUND AND UNDERGROUND CONFLICTS IN ADVANCE OF THE PLACEMENT OF ANY CONDUIT OR OTHER FACILITIES.
5. THE CONTRACTOR SHALL HAND DIG THE FIRST FOUR FEET OF ANY POLE OR PEDESTAL INSTALLATION TO ENSURE THAT THERE ARE NO UNDERGROUND UTILITY CONFLICTS. NO SEPARATE PAYMENT SHALL BE MADE FOR THIS WORK. EXTREME CAUTION SHALL BE USED BY THE CONTRACTOR WHEN EXCAVATING, INSTALLING, BACKFILLING AND COMPACTING AROUND EXISTING UTILITIES.
6. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE LOCATION (BOTH VERTICAL AND HORIZONTAL) AND PROTECTION, REPAIR AND/OR REPLACEMENT OF ALL UTILITIES THAT MAY BE AFFECTED BY THE CONSTRUCTION OF THIS PROJECT. THIS SHOULD BE PERFORMED BY VACUUM EXCAVATION OR COMPARABLE NON-DESTRUCTIVE EQUIPMENT. THE COST OF REPAIRS AND OR REPLACEMENT SHALL BE COVERED BY THE CONTRACTOR OR UTILITY OWNER.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING THE COMPANY PROVIDING ELECTRIC POWER TO DETERMINE IF A SERVICE PROCESSING FEE IS REQUIRED. IF REQUIRED, THE FEE SHALL BE REFLECTED IN THE CONTRACTORS BID UNIT PRICE FOR ELECTRICAL POWER SERVICE ASSEMBLY.
8. THE CONTRACTOR IS ADVISED THAT THE PRESENCE OF OVERHEAD ELECTRIC CONDUCTORS IN CLOSE PROXIMITY TO THE LOCATIONS OF THE PROPOSED SIGNAL MAST ARMS MAY LIMIT THE TYPE OF EQUIPMENT THAT CAN BE USED IN CONSTRUCTION OF THE MAST ARM AND ITS FOUNDATION. CONTRACTOR SHALL COORDINATE WITH POWER COMPANY TO DEACTIVATE LINES IF NECESSARY.
9. THE CONTRACTOR SHALL NOTIFY UTILITY OWNERS THROUGH SUNSHINE ONE CALL OF FLORIDA INC. AT 811 OR WWW.SUNSHINE811.COM, AND UTILITY OWNERS LISTED BELOW TWO BUSINESS DAYS IN ADVANCE OF BEGINNING CONSTRUCTION ON THE JOB SITE. A CONTRACTOR'S REPRESENTATIVE SHALL BE PRESENT WHEN THE UTILITY COMPANY LOCATES THEIR FACILITIES. THE

LOCATION OF EXISTING UTILITIES SHALL BE DETERMINED BY THE CONTRACTOR AND THE UTILITY REPRESENTATIVE WHEN NECESSARY DURING CONSTRUCTION.

LIST OF UTILITY OWNERS:

COMPANY	CONTACT	TELEPHONE #
CENTURY LINK	BILL MCCLOUD	(850) 599-1444
CHARTER COMMUNICATIONS	MARVIN USRY, JR	(407) 532-8509
COMCAST COMMUNICATIONS	WADE MATHEWS	(352) 516-3824
OSCEOLA COUNTY TRAFFIC	JACK LOTT	(407) 742-7534
ORLANDO UTILITIES	ORLANDO ALANCASTRO	
TECO PEOPLES GAS- ORLANDO	JOAN DOMNING	(813) 275-3783
AT&T/DISTRIBUTION	DINO FARRUGIO	(561) 997-0240
UNITI FIBER	JOHN HALLEY	(251) 753-8695
C/O ST CLOUD W/WW LINE	RICK MAURO	(407) 957-7341
SYSTEMS DIVISION		

GENERAL

1. UNLESS OTHERWISE NOTED IN THE TECHNICAL SPECIFICATIONS: INSTALLATION, ACCEPTANCE, AND PAYMENT FOR ALL ITEMS REQUIRED IN THESE PLANS SHALL BE IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE FOLLOWING, REFERENCED IN THE KEY SHEET: MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION (STANDARD SPECIFICATIONS), FDOT STANDARD PLANS FOR ROAD AND BRIDGE CONSTRUCTION AND FDOT DISTRICT 5 PREFERENCES.
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 IN THESE PLANS, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY AND PRIOR TO ANY FURTHER WORK ACTIVITY.
3. APPROVAL OF SHOP DRAWINGS DOES NOT CONSTITUTE A WARRANTY THAT THE SIGNAL EQUIPMENT COMPLIES WITH THE STANDARDS OF THE MAINTAINING AGENCY. THE CONTRACTOR IS RESPONSIBLE FOR INSURING THAT THE PROPOSED SIGNAL EQUIPMENT MEETS THE REQUIREMENTS SPECIFIED IN THE CONTRACT, SPECIFICATIONS AND CONTRACT PLANS.
4. THE CONTRACTOR SHALL SUBMIT FOR APPROVAL TWO SETS OF SHOP DRAWINGS, MANUFACTURER'S DESCRIPTIVE LITERATURE AND TECHNICAL DATA FOR EACH EQUIPMENT ITEM PROPOSED ON THIS PROJECT TO THE EOR.
5. THE MAINTAINING AGENCY IS OSCEOLA COUNTY. A RIGHT OF WAY UTILIZATION PERMIT IS REQUIRED. THE CONTRACTOR SHALL NOTIFY THE MAINTAINING AGENCY AT LEAST 72 HOURS BEFORE BEGINNING ANY RELATED TRAFFIC SIGNAL WORK. THE CONTRACTOR SHALL OBTAIN ALL CONSTRUCTION PERMITS REQUIRED FOR THE PROJECT FOR APPLICABLE CITIES, COUNTY, AGENCIES, AND FDOT. APPROVAL OF PLANS BY OSCEOLA COUNTY DOES NOT CONSTITUTE A PERMIT.
6. EQUIPMENT WARRANTY SHALL BE ONE YEAR, MANUFACTURER'S PROVIDED OR PER FDOT STANDARD SPECIFICATIONS (LATEST EDITION), WHICHEVER IS LONGER.
7. PRIOR TO BEGINNING CONSTRUCTION, THE CONTRACTOR SHALL PROVIDE WRITTEN NOTICE OF COMMENCEMENT, VIA EMAIL, TO MOHAMMED.ZAID@OSCEOLA.ORG. NOTICE SHALL INCLUDE THE DATE OF COMMENCEMENT, LOCATION AND TYPE OF WORK & INFORMATION REGARDING ANY MALFUNCTIONING SIGNAL EQUIPMENT. THIS SHALL BE COMPLETED AT LEAST 48 HOURS PRIOR TO COMMENCEMENT OF WORK. THE ENGINEER SHALL BE NOTIFIED AS WELL.
8. DURING NON-WORKING HOURS, NO EQUIPMENT, VEHICLES OR MATERIAL SHALL BE PARKED OR STORED WITHIN THIRTY FEET OF THE ROADWAY CARRYING TRAFFIC. IF THE ABOVE IS NOT POSSIBLE, A STORAGE AREA WITH PROPER DELINEATION AND ADVANCED WARNING SHALL BE USED WITH THE APPROVAL OF THE ENGINEER.
9. THE CONTRACTOR SHALL NOTIFY KEVIN KRUG (SENIOR SIGNAL TECH) (407) 738-9405 AND OSCEOLA COUNTY TMC (407)-742-9201 AT LEAST TWO FULL BUSINESS DAYS IN ADVANCE OF INSTALLING GROUND RODS, UNDERGROUND

CONDUIT, OR SETTING POLES SO THAT THESE OPERATIONS CAN BE OBSERVED.

10. CONTRACTOR SHALL PROVIDE TO THE COUNTY AN UPDATED CONSTRUCTION SCHEDULE IN THE FORM OF A TWO-WEEK LOOK AHEAD ON A BI-WEEKLY BASIS.
11. ALL DISTURBED AREAS, INCLUDING PAVEMENT MARKINGS, SHALL BE RESTORED, AT THE CONTRACTOR'S EXPENSE, TO ORIGINAL CONDITION OR BETTER.
12. SAW CUTTING OF THE EXISTING SIDEWALK SHALL BE MADE ONLY AT THE NEAREST FLAG JOINTS.
13. EXISTING DRAINAGE STRUCTURES WITHIN THE CONSTRUCTION LIMITS SHALL REMAIN, UNLESS OTHERWISE NOTED.
14. SPECIAL ATTENTION IS DIRECTED TO THE FACT THAT SOME DRAINAGE STRUCTURES EXTEND INTO THE STABILIZED PORTION OF THE ROADBED AND EXTREME CAUTION WILL BE NECESSARY IN STABILIZATION OPERATIONS AT THOSE LOCATIONS.
15. THE CONTRACTOR SHALL BE ADVISED THAT OTHER PROJECTS MAY BE UNDER CONSTRUCTION CONCURRENTLY WITH THIS PROJECT AND THAT COORDINATION EFFORTS MAY BE NECESSARY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE CONSTRUCTION SCHEDULE AND FOR THE AMOUNT OF COORDINATION REQUIRED. THE CONTRACTOR SHALL COORDINATE ANY AND ALL CONSTRUCTION ACTIVITIES AND TRAFFIC CONTROL PHASES WITH ANY CONTRACTOR WITHIN OR ADJACENT TO PROJECT LIMITS.
16. FINAL LOCATIONS OF ALL CABINETS SHALL BE APPROVED BY THE ENGINEER PRIOR TO PLACEMENT OF THE FOUNDATION, IF THE LOCATION HAS CHANGED FROM THE PLAN.
17. NOTHING IN THE GENERAL NOTES OR SPECIAL PROVISIONS SHALL RELIEVE THE CONTRACTOR FROM THEIR RESPONSIBILITIES TOWARD THE SAFETY AND CONVENIENCE OF THE GENERAL PUBLIC AND THE RESIDENCES ALONG THE PROPOSED CONSTRUCTION AREA.
18. OFFSETS TO POLES, CABINETS AND PULL BOXES ARE TO THE CENTER OF THOSE ITEMS. THE LOCATION OF ALL PROPOSED EQUIPMENT TO BE INSTALLED SHALL BE CONSIDERED TO BE APPROXIMATE. FIELD ADJUSTMENT OF ALL PROPOSED EQUIPMENT MAY BECOME NECESSARY TO ACCOMMODATE EXISTING FIELD CONDITIONS. VARIATIONS FROM THE PROPOSED LOCATION MUST BE PRE-APPROVED BY THE COUNTY ENGINEER IN WRITING.
19. PULL BOXES SHALL BE PLACED BEHIND CURB AND GUTTER. IF THERE IS NO CURB AND GUTTER, THEN PULL BOXES SHALL BE PLACED AT LEAST TEN FEET FROM THE EDGE OF PAVEMENT OR ROADWAY RADII. PULL BOXES SHALL NOT BE PLACED IN RAMPS. PULL BOXES SHALL NOT BE LOCATED AT THE BOTTOM OF ANY DITCH OR RETENTION AREA/POND. PULL BOXES INSTALLED ALONG A SLOPED SURFACE SHALL MATCH THE SLOPE OF THE EXISTING SURFACE. PULL BOXES SHALL BE TRAFFIC RATED.
20. ALL ENDS OF CONDUITS IN PULL BOXES AND CABINETS SHALL BE SEALED WITH ELECTRICAL PUTTY AFTER WIRING IS COMPLETE.
21. THE CONTRACTOR SHALL MAKE ALL VIDEO 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.
22. THE VIDEO DETECTION SYSTEM SHALL BE ON THE FLORIDA DEPARTMENT OF TRANSPORTATION (FDOT) APPROVED PRODUCTS LIST AND MEET ALL QUALIFYING SPECIFICATIONS IDENTIFIED HEREIN OR AS DESCRIBED IN FDOT SECTION 660 "VEHICLE DETECTION SYSTEM - 660-2.1.2.2 VIDEO" AS IT APPLIES TO VIDEO VEHICLE DETECTION SYSTEMS. ERRORS BECAUSE OF VARIATIONS SHALL BE FIXED AT THE CONTRACTOR EXPENSE, NO ADDITIONAL COMPENSATION WILL BE PROVIDED.
23. IT IS THE CONTRACTOR'S RESPONSIBILITY TO REVIEW THE PLACEMENT OF THE VIDEO IMAGE DETECTION DEVICES AND COORDINATE WITH THE ENGINEER OF RECORD TO DETERMINE THE MOST OPTIMAL LOCATION FOR THE INSTALLATION OF THE VIDEO IMAGE DETECTION DEVICES IN ORDER TO MEET THE PERFORMANCE REQUIREMENTS OF THE TECHNICAL SPECIFICATIONS.

REVISIONS

DATE	DESCRIPTION	DATE	DESCRIPTION

TMC
Traffic & Mobility Consultants

AYMAN HASAN AS-SAIDI, P.E.
P.E. LICENSE NUMBER 56849
TRAFFIC & MOBILITY CONSULTANTS, LLC.
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GENERAL NOTES

SHEET NO.

T-4

24. NO VIDEO DETECTION SHALL BE INSTALLED ON UPRIGHTS OF MASTARMS.
25. SIX FEET OF ADDITIONAL SIGNAL CABLE SLACK SHALL BE PRESENT IN THE UPRIGHT SUCH THAT THE TERMINAL BLOCK CAN BE REMOVED FROM THE UPRIGHT TO ALLOW FOR TROUBLE SHOOTING.
26. CABLE GRIP SHALL BE OF SUFFICIENT SIZE TO NOT COMPROMISE THE INSULATION ON THE SIGNAL CABLE.
27. ALL CABLE SHALL BE PULLED IN THE CONDUIT WITH A CABLE GRIP DESIGNED TO PROVIDE A FIRM HOLD ON THE EXTERIOR COVERING OF THE CABLE. A WINCH WITH A SLIP CLUTCH SHALL BE USED TO ENSURE THAT THE ALLOWABLE TENSION UNIT IS NOT EXCEEDED. AN APPROVED LUBRICANT SHALL BE USED TO FACILITATE THE PULLING OF THE CABLE.
28. DELAY TIME SHALL BE SET TO FIVE SECONDS.
29. ALL SIGNAL ASSEMBLIES SHALL HAVE A VERTICAL CLEARANCE OF 17.5' (MINIMUM) TO 19' (MAXIMUM) FROM THE BOTTOM OF THE ASSEMBLY TO THE HIGHEST POINT OF THE ROAD BENEATH.
30. GROUND RODS ARE TO BE INSTALLED IN PULL BOXES WHEN POSSIBLE.
31. SIGNAL CABLE SHALL BE SPLICED TO A SEPARATE 7 CONDUCTOR CABLE FOR EACH SIGNAL AND 7 CONDUCTOR CABLE FOR EACH PEDESTRIAN HEAD. THESE SPLICES SHALL BE INSTALLED IN EITHER THE HAND-HOLE OF THE STEEL POLE/CONCRETE STRAIN POLE OR WITHIN THE TRANSFORMER BASE OF A PEDESTRIAN PEDESTAL. THE COLOR CODE OF SIGNAL CABLE SHALL BE VERIFIED WITH OSCEOLA COUNTY PRIOR TO WIRING INTERSECTION. A PERMANENT TAG SHALL BE PLACED AT BOTH OF THE WIRE TERMINATIONS DESIGNATING THE PHASE USED. ALL UNUSED SIGNAL WIRES SHALL BE BONDED TO THE POLE GROUND. EACH DETECTOR PUSH BUTTON SHALL 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 SHALL REMAIN INTACT FROM THE SIGNAL HEADS TO THE FIELD TERMINATION POINTS. NO UN-JACKETED INDIVIDUAL CONDUCTORS SHALL REST IN ANY FIELD DRILLED STRUCTURES OR ASSEMBLIES.
32. CONTRACTOR SHALL VERIFY COLOR CODES FOR BOTH SIGNAL AND INTERCONNECT CABLE WITH OSCEOLA COUNTY BEFORE ORDERING. WIRING DIAGRAMS SHALL BE IN ACCORDANCE WITH OSCEOLA COUNTY SPECIFICATIONS.
33. ALL FIELD WIRING SHALL BE NEATLY BUNDLED AND CLEARLY IDENTIFIED WITH PERMANENT LEGIBLE, WEATHERPROOF TAGS THAT ARE SECURELY ATTACHED TO EACH CABLE. THE TAGGING SYSTEM PROPOSED SHALL BE SUBMITTED FOR APPROVAL WITH THE OTHER EQUIPMENT SUBMITTALS REQUIRED FOR THIS PROJECT.
34. THREE SPARE CONDUCTORS SHALL BE INSTALLED PER VEHICLE PHASE. SPARES SHALL BE BOUND AND GROUNDED IN CABINET.
35. MANUAL PUSH CORD SHALL BE FURNISHED PER FDOT SPECIFICATIONS 676-2.2.2.
36. ALL SIGNAL RUNS INSTALLED SHALL BE CONTINUOUS RUNS OR IF NOT CONTINUOUS MUST HAVE A TERMINAL STRIP INSTALLED AND FASTENED TO THE MAST ARM.
37. ALL SIGNAL INDICATIONS SHALL BE L.E.D. PRODUCT INFORMATION SHALL BE SUBMITTED TO THE EOR FOR REVIEW AND APPROVAL.
38. SOLID CONDUCTORS SHOULD BE USED FOR MAIN ROADWAY PHASES AND TRACERS USED FOR SIDE STREET PHASES.
39. NO MIXING OF SIGNAL WIRES AND FIBER WILL BE PERMITTED
40. NO USE OF LB CONDUITS SHALL BE USED IN EXISTING OR NEW CABINET INSTALLS
41. ALL WIRES OR FIBER IN PULL BOXES OR SIGNAL CABINETS MUST BE CLEARLY MARKED FOR DIRECTION AND PHASES ON VIDEO CABLES AND VIDEO RACKS.

POLLUTION PREVENTION

1. THE CONTRACTOR SHALL COMPLY WITH THE REQUIREMENTS SET FORTH IN SECTION 104 OF THE FDOT STANDARD SPECIFICATIONS REGARDING THE PREVENTION, CONTROL, AND ABATEMENT OF EROSION AND WATER POLLUTION. THE COST OF THIS COMPLIANCE SHALL BE CONSIDERED INCIDENTAL TO THE PROJECT.
2. SOD SHALL BE PLACED AT LOCATIONS TO PREVENT DAMAGE TO ADJACENT FACILITIES AND PROPERTY DUE TO EROSION ON ALL NEWLY GRADED CUT AND FILL SLOPES AS WORK PROGRESSES. SOD SHALL BE INCIDENTAL TO OTHER ITEMS.

STRUCTURES

1. THE CONTRACTOR SHALL VERIFY STRUCTURE ORIENTATION PRIOR TO PLACEMENT. STRUCTURES OF INCORRECT ORIENTATION SHALL BE REPLACED AT CONTRACTOR'S EXPENSE. THE CONTRACTOR SHALL VERIFY THAT ALL STRUCTURES ARE SET TO ELEVATIONS THAT WILL MEET VERTICAL CLEARANCE REQUIREMENTS SPECIFIED IN FDOT, MUTCD, AND COUNTY STANDARDS PRIOR TO INSTALLING STRUCTURAL MATERIAL. IF A DISCREPANCY IS FOUND, CONTACT THE ENGINEER OF RECORD.

INSPECTIONS

1. ALL FINAL INSPECTIONS ARE TO BE SCHEDULED IN ACCORDANCE WITH CONTRACT DOCUMENTS. THE MAINTAINING AGENCY SHALL BE NOTIFIED AT LEAST 72 HOURS BEFORE TURN-ON INSPECTION.
2. THE CONTRACTOR IS REQUIRED TO INSPECT THE INSTALLATION OF THE TRAFFIC SIGNALS IN ACCORDANCE WITH FDOT SPECIFICATION 105-8.11. THE CONTRACTOR SHALL COORDINATE THE FINAL ACCEPTANCE INSPECTION IN ACCORDANCE WITH FDOT SPECIFICATION 611-2.2 WITH THE ENGINEER AT LEAST TEN BUSINESS DAYS IN ADVANCE. KEVIN KRUG (SENIOR SIGNAL TECH) @ (407) 738-9405. OSCEOLA COUNTY TRAFFIC ENGINEERING SHOULD BE CONTACTED TEN BUSINESS DAYS BEFORE THE INSPECTIONS ARE TO BE PERFORMED SO THEY MAY BE PRESENT.
3. CONTRACTOR SHALL HAVE THE APPROVED SHOP DRAWINGS AVAILABLE ON THE PROJECT SITE.
4. ALL WORK WHICH WILL NOT BE READILY VISIBLE UPON COMPLETION SHALL NOT BE CONCEALED UNTIL AN APPROVED INSPECTION. IN THE EVENT THAT ITEMS ARE CONCEALED, IT WILL BE THE CONTRACTOR'S RESPONSIBILITY TO EXPOSE THE QUESTIONED ITEM(S) FOR THE INSPECTOR'S APPROVAL, AT NO ADDITIONAL COST TO THE COUNTY. THIS INCLUDES, BUT IS NOT LIMITED TO:
 - A. BURIED OR IMBEDDED CONDUIT
 - B. GROUND WIRE, RODS, AND ARRAY
5. THE APPLICATION OF THE FOLLOWING MATERIALS TO VARIOUS TRAFFIC SIGNAL COMPONENTS SHALL BE PERFORMED DURING ASSEMBLY:
 - A. THREADED HARDWARE: ALL NON-ELECTRICAL THREADED HARDWARE (I.E. ASTRO BRACKET HARDWARE, POLE HARDWARE, OR ANY THREADED SURFACE) SHALL BE COATED WITH AN ANTI-SEIZE LUBRICANT APPROVED BY THE ENGINEER. NO SPRAY ON ANTI-SEIZE COMPOUND WILL BE ACCEPTED.
 - B. GASKETING SURFACES: ALL GASKET SURFACES SHALL BE LIGHTLY COATED WITH COUNTY APPROVED SILICONE GREASE.
 - C. ELECTRICAL CONNECTIONS: ALL MECHANICAL/ELECTRICAL CONNECTIONS SHALL 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 SHALL BE TREATED IN ACCORDANCE WITH THE "SPECIAL PROVISION FOR INSTALLATION OF PAINT-OVER-GALVANIZED STEEL MAST-ARM ASSEMBLIES".
 - E. WEATHERPROOFING: IRREGULAR MATING SURFACES SHALL 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.
 - F. CABLE ENTRY/EXIT: WHENEVER A CABLE ENTERS OR EXITS A FIELD DRILLED HOLE, THE CABLE SHALL BE PROTECTED FROM ABRASION WITH AN APPROVED MEANS.
6. IN AN INSPECTION, THE CONTRACTOR SHALL PROVIDE ALL NECESSARY

- EQUIPMENT INCLUDING A TWO-MAN BUCKET TRUCK OR PLATFORM LIFT TRUCK FOR USE BY THE INSPECTOR AND MAINTENANCE.
7. IF THE CONTRACTOR CALLS FOR AN INSPECTION AND THE CONTRACTOR IS NOT PREPARED FOR THE INSPECTION (I.E. THE INSPECTION HAS TO BE RESCHEDULED), THE CONTRACTOR SHALL BE BACK CHARGED FOR ALL COSTS ASSOCIATED WITH THE INSPECTION.
8. A CONSTRUCTION ENGINEERING INSPECTOR (CEI) SHALL BE HIRED INDEPENDENTLY TO MONITOR ALL DRILLED SHAFT CONSTRUCTION AND INSTALLATION. THE CEI SHALL REVIEW AND APPROVE ALL DRILLED SHAFT PROCEDURAL, MATERIAL AND STRUCTURAL DOCUMENTATION PRIOR TO INSTALLATION OF DRILLED SHAFT. SERVICES OF THE CEI SHALL BE PURSUANT TO THE FDOT CONSTRUCTION PROJECT ADMINISTRATION MANUAL (CPAM) SECTIONS 4.1, 10.5 AND ANY ADDITIONAL SECTIONS DEEMED APPLICABLE BY THE PERMITTING AND/OR MAINTAINING AGENCY.

AS-BUILT PLANS

1. THE CONTRACTOR SHALL PROVIDE FOUR SETS OF MARKED UP (AS-BUILT) CONSTRUCTION PLANS TO THE ENGINEER AND MAINTAINING AGENCY AS DEFINED IN FDOT STANDARDS AND BRIDGE SPECIFICATIONS SECTION 611, SEVEN DAYS PRIOR TO SIGNAL CONDITIONAL ACCEPTANCE INSPECTION BY THE MAINTAINING AGENCY. THE CONTRACTOR SHALL BE REQUIRED TO BECOME FAMILIAR WITH OSCEOLA COUNTY'S INSPECTION PROCEDURE. THE CONTRACTOR SHALL ALSO PROVIDE A PDF OF THE AS BUILT PLANS AND A PHYSICAL COPY OF THE AS BUILT PLANS IN THE SIGNAL CONTROLLER CABINET. IN ADDITION TO AS BUILT PLANS, CONTRACTOR SHALL SUBMIT BORE LOGS.
2. THE CONTRACTOR SHALL SUBMIT A SKETCH TO THE ENGINEER FOR APPROVAL, IF THE LOCATION OF ANY VERTICAL PLACEMENT VARIES FROM THE DESIGNATED LOCATION OF THE PLAN. UPON FINAL INSPECTION AND ACCEPTANCE, THE CONTRACTOR SHALL PROVIDE AS-BUILT AND AS-INSTALLED DRAWINGS AS STIPULATED IN THE CONTRACT.



SUBMITTALS

1. ALL SUBMITTAL DATA SHOULD BE SUBMITTED TO MOHAMMED ZAID, PE ON OSCEOLA COUNTY PROJECTS TO THE OFFICE BELOW. THE CONTRACTOR SHALL ALLOW FOR 15 WORKING DAY TURN AROUND ON SUBMITTALS.

OSCEOLA COUNTY TRAFFIC ENGINEERING
ATTN: MOHAMMED ZAID, PE
1 COURTHOUSE SQUARE SUITE 3100
KISSIMMEE, FL 34741
MOHAMMED.ZAID@OSCEOLA.ORG
2. PRIOR TO ANY EQUIPMENT ORDER, THE CONTRACTOR SHALL SUBMIT FOR APPROVAL EQUIPMENT SPECIFICATIONS, OR DESIGN DATA FOR ALL MATERIAL PROPOSED FOR THIS PROJECT.

COMMUNICATIONS

1. ALL NEW FIBER INSTALLATIONS, TRENCH OR BORE, SHALL HAVE A SPARE 2" CONDUIT INSTALLED WITH A 10-GAUGE TRACE WIRE. FIBER SHALL BE INSTALLED IN 1-2" CONDUIT. TOTAL NUMBER OF CONDUITS INSTALLED SHALL BE 2-2" CONDUITS.
2. ANY FIBER INTERCONNECT CABLE THAT IS CUT OR DAMAGED DURING CONSTRUCTION MUST BE REPLACED AS AN ENTIRE RUN AND SHALL BE RE-SPLICED WITHIN THE SPLICE CLOSURE AT THE END OF THE RUN. SPLICING OF FIBER INTERCONNECT CABLE BETWEEN SPLICE CLOSURES IS NOT PERMITTED. THE CONTRACTOR SHALL BEAR ALL EXPENSES ASSOCIATED WITH THE INSTALLATION OF THE NEW INTERCONNECT CABLE.
3. PULL/JUNCTION BOXES, AND ANY OTHER SIGNAL OR OTHER SYSTEMS EQUIPMENT DAMAGED BY THE CONTRACTOR SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
4. ANY MATERIAL FURNISHED FOR THE PURPOSES OF: NEW INSTALLATION, REPLACEMENT, OR REPAIR OF THE EXISTING COMMUNICATIONS INFRASTRUCTURE SHALL MEET THE STANDARDS AND SPECIFICATIONS OF OSCEOLA COUNTY TRAFFIC ENGINEERING. ANY SUPPLIED CONTROLLER

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CABINET, CONTROLLER, TELEMETRY UNIT, COMMUNICATIONS CABLE, PULL BOX, CONDUIT, TERMINATION DEVICE, JUNCTION BOX, AND COMMUNICATIONS INTERFACE PANEL SHALL COMPLY WITH THE LATEST REQUIREMENTS AS STATED BY OSCEOLA COUNTY.

5. IF THERE IS FIBER OPTIC CABLE WITHIN YOUR PROJECT LIMITS OR WITHIN 1500 FEET OF YOUR PROJECT LIMITS, CONTACT LINDSEY.GIOVINAZZO@OSCEOLA.ORG, (407) 742-9201 OR KEVIN KRUG AT (407) 738-9405.
6. WHEN COMMUNICATIONS TO AN INTERSECTION MUST BE DISRUPTED BY A CONTRACTOR TO PERFORM WORK, THE CONTRACTOR SHALL PROVIDE TWO-DAY ADVANCE NOTICE IN WRITING TO THE OSCEOLA COUNTY TRAFFIC ENGINEERING. THIS NOTIFICATION SHALL BE CONVEYED VIA ELECTRONIC MAIL (E-MAIL) TO THE TRAFFIC MANAGEMENT CENTER SUPERVISOR LINDSEY GIOVINAZZO AT LINDSEY.GIOVINAZZO@OSCEOLA.ORG. NOTIFICATION SHALL INCLUDE CONTACT PERSON, CONTACT TELEPHONE NUMBER, PURPOSE, LOCATION AND DURATION. THE DISRUPTION SHALL LAST FOR NO MORE THAN THREE CONSECUTIVE BUSINESS DAYS. WHERE POSSIBLE, THE DISRUPTION SHALL BE DURING OFF PEAK HOURS BEGINNING AT 9:00 AM AND ENDING AT 3:00 PM OR FROM 6:00 PM TO 7:00 AM.

TRAFFIC CONTROL

1. MAINTENANCE OF SIGNALS RESPONSIBILITY BELONGS TO CONTRACTOR FROM TIME WORK BEGINS UNTIL THE COUNTY ISSUES CONDITIONAL ACCEPTANCE AT FINAL INSPECTION, AT WHICH TIME MAINTENANCE RESPONSIBILITIES ARE PROPERLY TRANSFERRED TO THE COUNTY. THE CONTRACTOR SHALL HAVE A CERTIFIED TRAFFIC SIGNAL TECHNICIAN (MINIMUM IMSA LEVEL II) ON CALL WITH A MAXIMUM TWO-HOUR RESPONSE TIME.
2. TRAFFIC SHALL BE MAINTAINED IN ACCORDANCE WITH THE FDOT STANDARD PLANS FOR ROAD AND BRIDGE CONSTRUCTION EDITION SHOWN ON KEYSHEET OF THIS PLAN SET, LATEST EDITION OF MUTCD AND STANDARD SPECIFICATIONS EDITION SHOWN ON KEYSHEET OF THIS PLAN SET. ATTENTION IS DIRECTED TO THE STANDARD PLANS INDEX 102 SERIES.
3. DURING NON-WORKING HOURS, NO EQUIPMENT, VEHICLES OR MATERIAL SHALL BE PARKED OR STORED WITHIN THE CLEAR ZONE OF THE ROADWAY CARRYING TRAFFIC, AS DETAILED IN INDEX 102.
4. DURING THE TIME THE CONTRACTOR IS RESTORING ALL MALFUNCTIONING TRAFFIC SIGNAL EQUIPMENT, THE CONTRACTOR SHALL PROVIDE, AT THEIR EXPENSE, TEMPORARY TRAFFIC CONTROL DEVICES, FLAGGER PERSONNEL, AND LAW ENFORCEMENT PERSONNEL AS NECESSARY TO MAINTAIN A SAFE AND EFFICIENT FLOW.
5. LANE CLOSURE HOURS ARE ALLOWED DURING THE FOLLOWING TIMES:
 - A. M, T, TH, AND F: 9AM-3PM (SCHOOL DAYS)
 - B. W: 9AM-1:30 PM (SCHOOL DAYS)
 - C. M-F: 9AM-3PM (NON-SCHOOL DAYS)
 - D. NIGHTTIME LANE CLOSURES SHALL BE PERMITTED ON A CASE BY CASE BASIS.
6. WHENEVER SIGNAL WORK IS BEING PERFORMED AT AN INTERSECTION (INSTALLING CONDUIT IN THE STREET, REMOVING EXISTING SIGNAL EQUIPMENT, INSTALLING NEW SIGNAL EQUIPMENT, INSTALLING LOOPS AND RUNS, TURNING ON NEW SIGNALS, ETC.) WHERE A LANE IS CLOSED, AN OFF-DUTY LAW ENFORCEMENT OFFICER SHALL DIRECT TRAFFIC. THE COST OF THE OFF-DUTY LAW ENFORCEMENT OFFICER SHALL BE INCIDENTAL TO THE WORK AND WILL NOT BE PAID SEPARATELY.
7. EARLY "TURN-ON" OF ANY NEW SIGNAL INSTALLATION WILL ONLY BE PERMITTED IF AUTHORIZED IN WRITING BY OSCEOLA COUNTY TRAFFIC ENGINEERING. IF THIS NEED ARISES, OSCEOLA COUNTY TRAFFIC ENGINEERING WILL NEGOTIATE WITH THE CONTRACTOR FOR MAINTENANCE OF THE SIGNAL. NEW SIGNAL LOCATIONS SHALL BE FLASHED NO LESS THAN SEVEN DAYS, AND NO MORE THAN FOURTEEN DAYS PRIOR TO THE INSPECTION. ALL NEW SIGNALS SHALL BE TURNED ON FULL CYCLE AFTER FLASHING (TUESDAYS THRU THURSDAYS ONLY). SIGNAL HEADS MUST BE BAGGED WITH BURLAP OR TURNED BACK UNTIL THIS TIME.


8. ALL EXISTING REGULATORY AND INFORMATIONAL SIGNS AND TRAFFIC SIGNALS SHALL BE MAINTAINED AND PROTECTED BY THE CONTRACTOR FOR AS LONG AS DEEMED NECESSARY BY THE COUNTY. IF ANY SIGNS OR SIGNALS ARE DAMAGED OR LOST DURING THE CONSTRUCTION PERIOD, SUCH SIGNS AND SIGNALS SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR AT CONTRACTOR'S EXPENSE.
9. EXISTING COMMUNICATIONS OR COMMAND WIRE CONNECTIONS SHALL BE MAINTAINED AT ALL SIGNALIZED LOCATIONS DURING CONSTRUCTION. RAILROAD FLASHING BEACONS, RAILROAD PREEMPTION, FIRE PRE-EMPTION AND SCHOOL ZONE FLASHERS. CONTRACTORS SHALL PROVIDE TEMPORARY LINES AND CONNECTIONS IF NECESSARY.
10. THE CONTRACTOR SHALL MAINTAIN ON-LINE COMMUNICATIONS OF EXISTING OR TEMPORARY SIGNALIZATION. COST OF MAINTAINING COMMUNICATION WITH THE CENTRAL SITE, INCLUDING TEMPORARY LINES AND CONNECTIONS, SHALL BE PAID FOR UNDER THE MAINTENANCE OF TRAFFIC PAY ITEM NUMBER. ALL REPORTED MALFUNCTIONS OF THE COMMUNICATIONS SYSTEM SHALL BE RESPONDED TO BY THE CONTRACTOR WITHIN TWO HOURS AND SHALL BE REPAIRED WITHIN 24 HOURS.

PAY ITEM NOTES

- 630-2-XX: ALL CONDUIT MATERIALS SHALL MEET THE MINIMUM REQUIREMENTS OF SECTION A630-2 OF THE CURRENT MINIMUM SPECIFICATIONS FOR TRAFFIC CONTROL SIGNAL DEVICES (MSTCSD). ALL CONDUIT INSTALLED SHALL BE INSTALLED AS PER THE LATEST FDOT SPECIFICATIONS. A TEN GAUGE TRACE WIRE SHALL BE INSTALLED WITHIN ANY UNUSED CONDUIT AND SPLICED WITHIN THE PULL BOX TO PROVIDE ELECTRICAL CONTINUITY. IF CONFLICTS ARISE BETWEEN SPECIFICATIONS, THE MOST STRINGENT SHALL APPLY. ALL REFERENCES IN THE PLAN TO RIGID CONDUIT SHALL BE INSTALLED AS 1.5" GALVANIZED STEEL METAL CONDUIT. ALL UNDERGROUND CONDUIT SHALL BE 2". THERE SHALL BE ONE SPARE 2" UNDERGROUND CONDUIT INSTALLED PER RUN. THIS SHALL BE REFLECTED IN THE CALLOUT. IT SHOULD BE NOTED THAT NO TEST BORINGS WERE MADE WHERE CONDUIT RUNS ARE TO BE INSTALLED BY DIRECTIONAL BORE, JACKING OR TRENCHING. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO EXAMINE JOB SITE CONDITIONS BEFORE SUBMITTING BID PROPOSALS IN ACCORDANCE WITH SECTION 2-4 OF THE FDOT SPECIFICATIONS. THERE SHALL BE A SEPARATE CONDUIT FOR VIDEO AND SIGNAL.
- 632-7-1 INCLUDES COST OF PEDESTRIAN SIGNAL HEAD WIRING/CABLE RUNS.
- 633-1-XXX BACKBONE FIBER OPTIC CABLE SHALL BE AT MINIMUM 72 COUNT, SINGLE MODE AND ARMORED. DROP FIBER OPTIC CABLE SHALL BE AT MINIMUM 12 COUNT, SINGLE MODE AND ARMORED.
- 635-2-XX: PULL BOXES SHALL HAVE NON-METALLIC QUAZITE "HEAVY DUTY" COVERS RATED FOR A STATIC DESIGN LOAD OF AT LEAST 20,000 LBS. OVER A 10" SQUARE AREA. COVERS SHALL BE STAMPED "OSCEOLA COUNTY TRAFFIC SIGNAL" FOR ALL SIGNALIZATION APPLICATIONS. ALL PULL BOXES SHALL BE OF COMPOSITE MATERIAL AND INSTALLED WITH A MINIMUM 12" WIDE, 6" DEEP CONCRETE APRON PER FDOT STANDARD PLANS INDEX 635-001. THE MINIMUM 28-DAY COMPRESSIVE STRENGTH REQUIREMENT FOR THIS CONCRETE IS 3000 PSI. THE PEA ROCK BED BENEATH PULL BOX SHALL BE AT A MINIMUM OF 12" DEEP AND HAVE A 12" WIDE APRON AROUND THE BOTTOM OF THE PULL BOX (I.E. THE BOX SHALL SIT ON THE COMPACTED BED OF PEA ROCK AS SHOWN IN FDOT STANDARD PLANS INDEX 635-001). THE FOUNDATION MATERIAL BENEATH THE PEA ROCK BED SHALL BE COMPACTED TO THE COUNTY'S APPROVAL. THE AREA TO BE COMPACTED IS, BUT NOT LIMITED TO THAT AREA UNDER THE PEA ROCK BED, THE MATERIAL ABOVE THE PEA ROCK BED, AND ONE FOOT OUTSIDE THE PULL BOX APRON SHALL BE COMPACTED PRIOR TO PLACING THE CONCRETE. CONCRETE FORMS, PLACING CONCRETE, JOINTS AND FINISHING SHALL MEET SECTION 520-3, 520-5, 522-5, & 522-7, RESPECTIVELY. CONTRACTORS RESPONSIBLE FOR DAMAGE OF ANY PULL BOXES BEING RELOCATED.
- 646-1-11: CONTRACTOR TO ENSURE PEDESTRIAN POLE IS INSTALLED ON SURFACE OF LEVEL GRADE W/ A FLAT 4'X4' LANDING AREA ADJACENT TO THE PUSH BUTTON. PED POLES SHALL NOT BE INSTALLED ON ANY RAMP SURFACES. ALL PEDESTRIAN SIGNALS SHALL BE INTERNATIONAL SYMBOLS. PEDESTRIAN SIGNAL HEAD ASSEMBLIES SHALL HAVE A VERTICAL CLEARANCE OF 7' MINIMUM AND 10' MAXIMUM FROM THE BOTTOM OF THE ASSEMBLIES TO THE SIDEWALK.

- 649-21-XX: POLES REQUIRING MODIFICATION OF THE ARM LENGTH SHALL BE TREATED PER THE GENERAL NOTES ON THE RESPECTIVE DETAIL SHEETS PROVIDED IN THE CONTRACT PLANS. COMPONENTS REQUIRING FIELD METALLIZING AND TOUCH UP SHALL BE TREATED PER SECTION 975. STEEL PROVIDED FOR STRUCTURAL MODIFICATIONS SHOWN IN THE CONTRACT PLANS SHALL BE PER SECTION 962 AND OF A SIMILAR TYPE AND GRADE OF THE COMPONENT ATTACHED TO. IF REQUIRED, FIELD WELDING SHALL BE DONE ONLY WITH THE PRE-APPROVAL OF THE STRUCTURAL ENGINEER AND SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 460 INCLUDING FDOT SUPPLEMENTAL SPECIFICATIONS. BID PRICE FOR INSTALLATION OF MAST ARMS SHALL INCLUDE FOUNDATION CONSTRUCTION, INCLUDING CSL TUBES (NUMBER AND CONFIGURATION OF CSL TUBES SHALL COMPLY WITH STANDARDS AND SPECIFICATIONS SECTION 455-16.4 CSL TUBES AND FDOT STANDARD PLANS INDEX 649-031). THE CONTRACTOR SHALL BE RESPONSIBLE AT THE TIME OF PICK-UP TO VERIFY AND NOTE ANY EXISTING DEFECTS OR MISSING ITEMS. ITEMS NOT NOTED AT THE TIME OF PICK-UP SHALL BE CORRECTED AT THE CONTRACTOR'S EXPENSES. PAYMENT INCLUDES THE DEVELOPMENT AND SUBMITTAL OF A DRILLED SHAFT INSTALLATION PLAN PER INTERSECTION FOR THE COUNTY'S APPROVAL AS REFERENCED IN FDOT SPECIFICATIONS. A GIVEN MAST ARM/POLE ASSEMBLY LOCATION SHALL BE FIELD VERIFIED AND IDENTIFIED AS FREE OF CONFLICTS AND/OR OBJECTS BY THE CONTRACTOR PRIOR TO PROCUREMENT OF THE ASSOCIATED MAST ARM/POLE ASSEMBLY. THE COUNTY SHALL HIRE A CERTIFIED DRILLED SHAFT CTOP LEVEL I CONSTRUCTION ENGINEERING AND INSPECTION (CEI) FIRM, AND A CONCRETE TESTING LABORATORY FOR THE PURPOSE OF INSPECTING ALL DRILLED SHAFT INSTALLATIONS PER FDOT STANDARDS. THE FIRM SHALL THEN SUBMIT A SIGNED AND SEALED REPORT VERIFIED BY THE PE IN RESPONSIBLE CHARGE OF THE DRILLED SHAFT INSPECTOR TO THE COUNTY FOR APPROVAL. FAILURE TO OBTAIN THESE SERVICES PRIOR TO THE CONSTRUCTION OF THE DRILLED SHAFT(S) SHALL RESULT IN THE REJECTION OF THE DRILLED SHAFT(S). THE CONTRACTOR SHALL BE RESPONSIBLE FOR SUPPLYING APPROVED SHOP DRAWINGS SHOWING THE BOLT PATTERN AND ARM ORIENTATION PRIOR TO THE PRE-DRILL SHAFT MEETING THE EQUIPMENT AND/OR THE LOCAL POWER COMPANY COORDINATION SHALL BE REFLECTED IN THE CONTRACTOR'S BID UNIT PRICE FOR MAST ARM CONSTRUCTION. THE MAST ARMS SHALL BE PAINTED "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.
- 650-1-XX: ALL TRAFFIC SIGNAL HEADS SHALL BE STANDARD, NOT LIGHTWEIGHT. DRAIN HOLES SHALL BE PROVIDED FOR EACH SIGNAL HEAD SECTION OF A SIGNAL. AN ARTICULATED ASTRO-BRACKET SHALL BE PROVIDED UNDER THIS PAY ITEM IF NEEDED FOR PROPER ORIENTATION OF HORIZONTAL SIGNAL HEAD ON A SKEWED ARM OR APPROACH. THIS PAY ITEM INCLUDES BACKPLATES AND TUNNEL VISORS. RETRO REFLECTIVE BACK PLATE BORDERS ARE REQUIRED ON ALL BACK PLATES.
- 653-1-XX: LED PEDESTRIAN SIGNALS ARE TO BE SINGLE SECTION AND PROVIDED WITH INTERNATIONAL STYLE LENSES AND COUNTDOWN FEATURES.
- 660-4-XX: VIDEO DETECTORS SUPPLIES SHALL MEET OSCEOLA COUNTY'S FUNCTIONALITY REQUIREMENTS. SUNSHIELDS SHALL BE PROVIDED ON EACH VIDEO CAMERA, A MENU-DRIVEN INTERFACE REQUIRING NO SEPARATE COMPUTER FOR SET-UP OR MAINTENANCE SHALL BE PROVIDED. VIDEO CAMERAS SHALL BE COLOR AND SEALED PRESSURIZED HOUSING. THIS PAY ITEM SHALL ALSO INCLUDE LIGHTNING AND SURGE PROTECTION CONSISTING OF POINT DISCHARGE DISSIPATION TERMINALS ON EACH CAMERA, COAX 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.
- 663-1-XXX: CONTRACTOR TO FURNISH AND INSTALL GLOBAL TRAFFIC TECHNOLOGIES GPS RECEIVER AND ANTENNA. COUNTY WILL PERFORM SIGNAL TESTING, MAPPING, AND SYSTEM ACTIVATION. CONTRACTOR TO FURNISH

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AND INSTALL GLOBAL TRAFFIC TECHNOLOGIES FIRE-RESCUE GPS PRE-EMPTION CONTROLLER INTERFACE MODULE. CONTRACTOR TO FURNISH AND INSTALL GLOBAL TRAFFIC TECHNOLOGIES SYSTEM-SPECIFIC PREEMPTION GPS MULTI-PAIR CABLE TO CONNECT TO GPS ANTENNAS TO GPS PRE-EMPTION CONTROLLER INTERFACE.

665-1-11: COST OF FURNISHING AND INSTALLING A MUTCD PEDESTRIAN SIGN R10-3E SHALL BE INCLUDED IN PRICE OF PAY ITEM.

670-5-XXX: THE CONTROLLER ASSEMBLY SHALL CONSIST OF A NEMA ECONOLITE COBALT CONTROLLER AND A TS2 TYPE 1 SHELF MOUNTED WITHIN A TYPE VI CONTROLLER CABINET MINIMUM HEIGHT OF 68" 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 TRAFFIC ENGINEERING). EQUIPMENT USED MUST BE CERTIFIED FROM THE FDOT APL LIST. THIS NEMA ECONOLITE COBALT CONTROLLER SHALL PROVIDE TOTAL UTILITY AND INTEROPERABILITY WITH OSCEOLA COUNTY TRAFFIC ENGINEERING'S "CENTRACS" COMPUTER SYSTEM. THE CABINET SHALL INCLUDE A MINIMUM OF FOURTEEN (14) LOAD SWITCH BAYS AND ACCOMMODATIONS FOR THE VIDEO DETECTION SYSTEM. THE CABINET AIR FILTER SHALL BE OF THE REUSABLE WASHABLE ALUMINUM TYPE. THE TOP OF THE CONTROLLER PAD SHALL BE AT LEAST SIX INCHES ABOVE THE ROADWAY ELEVATION. THIS PAY ITEM SHALL ALSO INCLUDE COMPLETE REINTEGRATION OF THE EXISTING GPS PRIORITY CONTROL PREEMPTION EQUIPMENT, AND RELOCATION TO/FROM THE EXISTING CABINET. A FLUSH MOUNTED AUTOMATIC POWER TRANSFER SWITCH SHALL BE INCLUDED ON THE CABINET. A TECHNICIAN SERVICE PAD 30" IN WIDTH SHALL ALSO BE PROVIDED. 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. THIS PAY ITEM INCLUDES THE COST OF THE CONCRETE FOR THE CONTROLLER PAD AND THE SERVICE PAD.


676-2-XX: CABINETS UTILIZING DIN RAIL MOUNTED SURGE PROTECTIVE DEVICES MUST BE GROUNDED WITH A CONDUCTOR TO THE CABINET BUSSBAR.

682-1-XX: CLOSED-CIRCUIT TELEVISION (CCTV) SHALL BE HIGH-DEFINITION IP PTZ CAMERAS.

685-1-XX: UNINTERRUPTED POWER SUPPLY TO BE INSTALLED WITHIN CONTROLLER CABINET. UPS ASSEMBLIES MUST INCLUDE BATTERIES PROVIDED BY THE UPS MANUFACTURER OR IN ACCORDANCE WITH MANUFACTURER'S REQUIREMENTS.

700-5-XX: ILLUMINATED STREET SIGNS SHALL BE L.E.D. DOUBLE FACED TYPE, PRODUCING A MINIMUM OF 50 LUMENS PER WATT. SIGNS SHALL BE DOUBLE-SIDED UNLESS OTHERWISE NOTED IN PLANS AND ATTACHED TO CANTILEVER ARM INSTALLED BENEATH MAST ARMS. ALL INTERNALLY ILLUMINATED STREET NAME SIGNS SHALL HAVE ONE COMMON PHOTOCELL INSTALLED IN CABINET. INTERNALLY ILLUMINATED STREET NAME SIGNS SHALL HAVE A 24" VIEWING HEIGHT. THIS VIEWING HEIGHT DOES NOT INCLUDE THE HEIGHT OF THE SIGN ASSEMBLY. INTERNALLY ILLUMINATED STREET NAME SIGNS SHALL BE BURNED IN FOR 60 DAYS BEFORE FINAL ACCEPTANCE. THE SIGNS SHALL USE A BREAKER SEPARATELY FROM THE SIGNAL CABINET AND SHALL BE CONTROLLED BY ONE MASTER PHOTOCELL.

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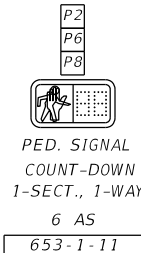
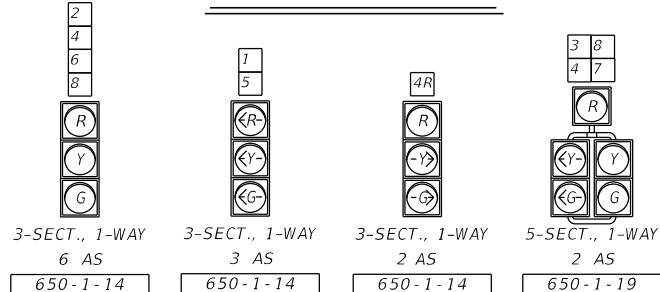
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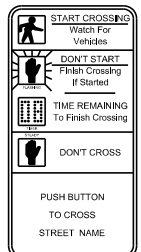
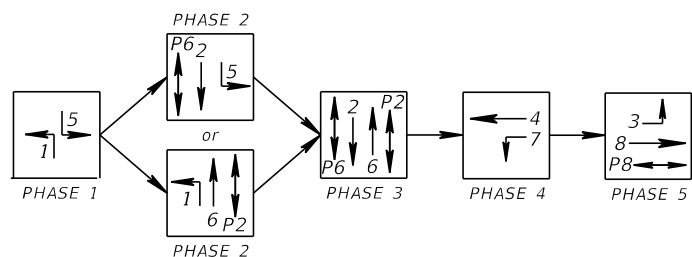
SHEET NO.
T-7

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TRAFFIC SIGNAL HEAD DETAILS

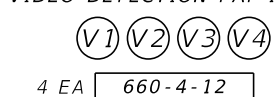


S.O.P. 9 (MOD)



FTP-68B-06 3 EA 9"X18" (INCLUDED IN 665-1-11) CONTRACTOR SHALL VERIFY STREET NAME PRIOR TO FABRICATION

VIDEO DETECTION PAY ITEMS



INTERNALLY ILLUMINATED OVERHEAD SIGNS N.T.S.

Cyrils Dr DOUBLE SIDED 2 EA 700-5-22

Narcoossee Rd DOUBLE SIDED 2 EA 700-5-22

VIDEO DETECTION ASSIGNMENTS

CAMERA DETECTION	DETECTION ZONE	DELAY TIME (SEC)	DETECTION ZONE DIMENSION
V1	DZ-6/6A	-	6'X330'
	DZ-1	-	6'X40'
V2	DZ-4/4A	5	6'X40'
	DZ-7	-	6'X40'
V3	DZ-5/5A	-	6'X40'
	DZ-2/2A	-	6'X330'
V4	DZ-8	-	6'X40'

SIZE AND PLACEMENT OF VIDEO DETECTION ZONES ARE INITIAL AND MAY REQUIRE FIELD ADJUSTING AS DIRECTED BY PROJECT ENGINEER.

CONTROLLER TIMINGS

MOVEMENT NUMBER	1	2	3	4	5	6	7	8
DIRECTION	NBL	SB	EBL	WB	SBL	NB	WBL	EB
MINIMUM GREEN	7	15	7	10	7	15	10	7
EXTENSION	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
MAX GREEN I	20	70	30	40	20	70	40	30
MAX GREEN II								
YELLOW CLEARANCE	4.8	4.8	4.0	4.4	4.8	4.8	4.4	4.0
ALL RED	2.2	2.4	2.0	2.0	2.4	2.4	2.0	2.0
PEDESTRIAN WALK		7				7		7
PED. CLEARANCE		16				30		34
RECALL		MIN				MIN		
DETECTOR FUNCTION		L				L		
FLASH		R	Y	R	R	Y	R	R

GENERAL NOTES:

- NARCOOSSEE ROAD (SPEED LIMIT 45 MPH), IS THE MAIN STREET (MOVT'S 1, 2, 5 & 6) AND CYRILS ROAD (SPEED LIMIT 40 MPH), IS THE MINOR STREET (MOVT'S 3, 4, 7 & 8).
- ENSURE ALL PEDESTRIAN DETECTORS ARE IMMEDIATELY ADJACENT TO A MINIMUM 4' X 4' FLAT LANDING.

CABINET PAY ITEMS

- 632-7-1 1 PI
- 633-2-31 12 EA
- 633-3-11 1 EA
- 633-3-12 1 EA
- 633-3-16 1 EA
- 639-1-122 1 EA
- 639-2-1 20 LF
- 641-2-12 1 EA
- 660-4-11 1 EA
- 663-1-121 1 EA
- 663-1-122 1 EA
- 670-5-111 1 EA
- 684-1-1 1 EA
- 685-1-12 1 EA

- 4 RUNS @ 20 LF 1-2" SIGNAL 1-2" LIGHTING 1-2" VIDEO 1-2" SPARE 630-2-11 20 LF
- 6 RUNS @ 30 LF 1-2" SIGNAL 1-2" VIDEO 1-2" LIGHTING 1-2" PED SIGNAL 1-2" PED DETECTOR 1-2" SPARE 630-2-11 30 LF 635-2-11 4 EA
- 3 RUNS @ 15 LF 1-2" PED SIGNAL 1-2" PED DETECTOR 1-2" SPARE 630-2-11 15 LF
- 6 RUNS @ 55 LF 1-2" SIGNAL 1-2" LIGHTING 1-2" VIDEO 1-2" PED SIGNAL 1-2" PED DETECTOR 1-2" SPARE 630-2-12 55 LF
- 3 RUNS @ 15 LF 1-2" PED SIGNAL 1-2" PED DETECTOR 1-2" SPARE 630-2-11 15 LF
- 4 RUNS @ 20 LF 1-2" SIGNAL 1-2" LIGHTING 1-2" VIDEO 1-2" SPARE 630-2-11 20 LF
- 5 RUNS @ 170 LF 1-2" SIGNAL 1-2" LIGHTING 1-2" VIDEO 1-2" PED SIGNAL 1-2" SPARE 630-2-12 170 LF
- 6 RUNS @ 83 LF 1-2" SIGNAL 1-2" LIGHTING 1-2" VIDEO 1-2" PED SIGNAL 1-2" PED DETECTOR 1-2" SPARE 630-2-12 83 LF
- 4 RUNS @ 7 LF 1-2" SIGNAL 1-2" LIGHTING 1-2" VIDEO 1-2" SPARE 630-2-11 7 LF
- 6 RUNS @ 90 LF 1-2" SIGNAL 1-2" LIGHTING 1-2" VIDEO 1-2" PED SIGNAL 1-2" PED DETECTOR 1-2" SPARE 630-2-11 90 LF
- 3 RUNS @ 20 LF 1-2" PED SIGNAL 1-2" PED DETECTOR 1-2" SPARE 630-2-11 20 LF
- 4 RUNS @ 5 LF 1-2" SIGNAL 1-2" LIGHTING 1-2" VIDEO 1-2" SPARE 630-2-11 5 LF
- 3 RUNS @ 40 LF 1-2" PED SIGNAL 1-2" PED DETECTOR 1-2" SPARE 630-2-11 40 LF
- 6 RUNS @ 45 LF 1-2" SIGNAL 1-2" VIDEO 1-2" LIGHTING 1-2" PED SIGNAL 1-2" PED DETECTOR 1-2" SPARE 630-2-11 45 LF 635-2-11 6 EA
- 3 RUNS @ 40 LF 1-2" PED SIGNAL 1-2" PED DETECTOR 1-2" SPARE 630-2-11 40 LF
- 4 RUNS @ 25 LF 1-2" SIGNAL 1-2" LIGHTING 1-2" VIDEO 1-2" SPARE 630-2-11 25 LF
- 4 RUNS @ 45 LF 1-2" SIGNAL 1-2" LIGHTING 1-2" VIDEO 1-2" SPARE 630-2-11 45 LF
- 4 RUNS @ 7 LF 1-2" SIGNAL 1-2" LIGHTING 1-2" VIDEO 1-2" SPARE 630-2-11 7 LF
- 6 RUNS @ 25 LF 1-2" SIGNAL 1-2" LIGHTING 1-2" VIDEO 1-2" SPARE 630-2-11 25 LF
- 4 RUNS @ 45 LF 1-2" SIGNAL 1-2" LIGHTING 1-2" VIDEO 1-2" SPARE 630-2-11 45 LF
- 6 RUNS @ 85 LF 1-2" SIGNAL 1-2" LIGHTING 1-2" VIDEO 1-2" PED SIGNAL 1-2" PED DETECTOR 1-2" SPARE 630-2-12 85 LF 635-2-12 1 EA

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

AYMAN HASAN AS-SAIDI, P.E.
P.E. LICENSE NUMBER 56849
TRAFFIC & MOBILITY CONSULTANTS, LLC.
3101 MAGUARE BLVD, SUITE 265
ORLANDO, FL. 32803
CERTIFICATE OF AUTHORIZATION 30024

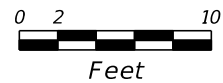
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SHEET NO.
T-8

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

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



SCALE AND ORIENTATION "NORTH" CONSISTENT FOR ALL DETAILS

LEGEND

- PEDESTRIAN SIGNAL (FACING THE WALKING PATH)
- PULL BOX
- PULL BOX
- JACK AND BORE CONDUIT
- DIRECT BURIED CONDUIT
- TEST HOLE
- DETECTABLE WARNINGS

NW QUADRANT

NE QUADRANT

CYRILS DRIVE

CYRILS DRIVE

646-1-11 2 EA
653-1-11 2 EA
665-1-11 2 EA

646-1-11 2 EA
653-1-11 2 EA
665-1-11 2 EA

SW QUADRANT

SE QUADRANT

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

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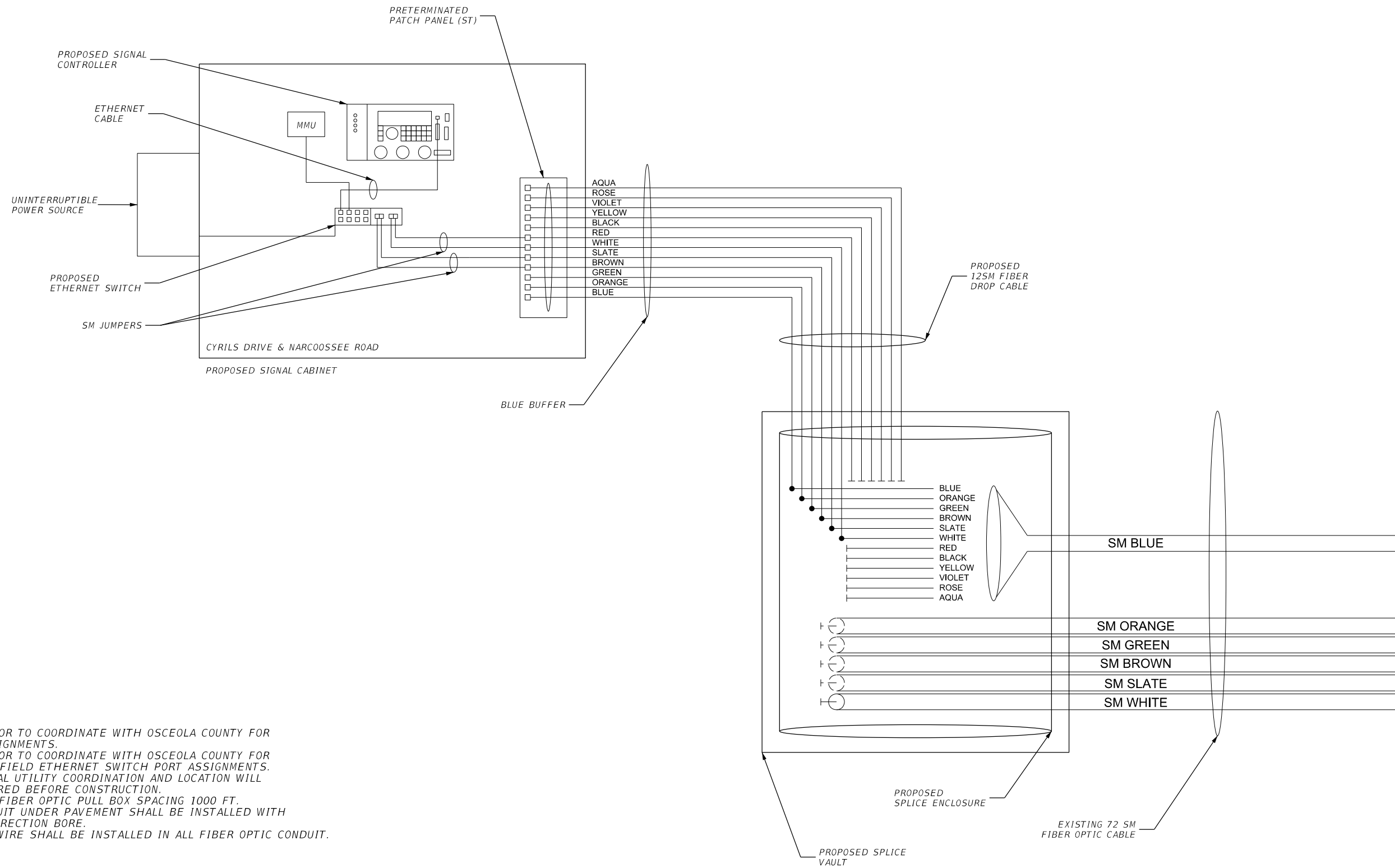
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CORNER CLIPS

SHEET NO.
T-9

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- NOTES:
1. CONTRACTOR TO COORDINATE WITH OSCEOLA COUNTY FOR PORT ASSIGNMENTS.
 2. CONTRACTOR TO COORDINATE WITH OSCEOLA COUNTY FOR MANAGED FIELD ETHERNET SWITCH PORT ASSIGNMENTS.
 3. ADDITIONAL UTILITY COORDINATION AND LOCATION WILL BE REQUIRED BEFORE CONSTRUCTION.
 4. MAXIMUM FIBER OPTIC PULL BOX SPACING 1000 FT.
 5. ITS CONDUIT UNDER PAVEMENT SHALL BE INSTALLED WITH SIGNAL DIRECTION BORE.
 6. A TRACE WIRE SHALL BE INSTALLED IN ALL FIBER OPTIC CONDUIT.

LEGEND:
 ● PROPOSED FUSION SPLICE

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

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FIBER SPLICE DIAGRAM

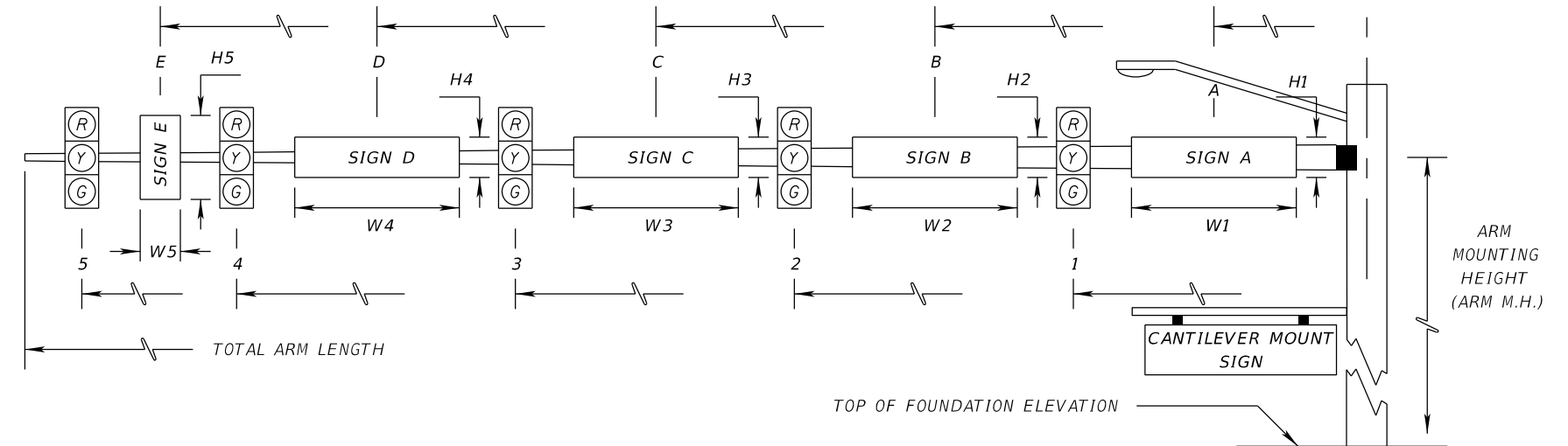
SHEET NO.
T-10

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SPECIAL INSTRUCTIONS				
ID NO.	PED. BUTTON	PED. SIGNALS	HANDHOLE LOCATION	
1	N/A	N/A	180°	
2	N/A	N/A	180°	
3	N/A	N/A	180°	
4	N/A	N/A	180°	

LOCATIONS OF SIGNAL HEADS ARE MEASURED FROM ϕ OF UPRIGHT

TOTAL ARM LENGTH MEASURED FROM FACE PLATE



* DENOTES NUMBER OF SECTIONS IN SIGNAL HEAD ASSEMBLY

ID NO.	SHEET NO.	LOCATION BY STA.	TOP OF FOUND. ELEVATION	RDWY ARM NO.	CROWN ELEV.	SIGNAL DATA											TOTAL ARM LENGTH	ARM M. H.	ANGLE BETWEEN DUAL ARMS 90/270	CCTV/VIDEO DETECTION POSITION									PAINT COLOR								
						SIGNAL V/H	BACK PLATES Y/N	PED. SIGNAL Y/N	DISTANCE FROM POLE											DISTANCE FROM POLE/HEIGHT & WIDTH OF SIGN																	
									1	*	2	*	3	*	4	*				5	*	A	H1	W1	B	H2	W2	C		H3	W3						
1	T-8	355+84.33	67.49	1	68.29	V	Y	N	16.3	3	28.5	3	40.3	3	51.4	3	3	70	21.0	N/A				45.4													MIDNIGHT NEUTRAL
---	---	---	---	2																																	
2	T-8	356+52.69	65.25	1	66.48	V	Y	N	6.2	5	16.5	3	26.8	3	38.5	3		40	22.0	N/A				30.9													
---	---	---	---	2																																	
3	T-8	357+36.52	66.28	1	66.37	V	Y	N	15.6	3	27.5	3	39.4	3		3		60	22.0	N/A				21.9			33.4										
---	---	---	---	2																																	
4	T-8	356+16.57	67.02	1	66.98	V	Y	N	9.9	3	19.7	5						30	21.5	N/A				14.3													
---	---	---	---	2																																	

ID NO.	SHEET NO.	LOCATION BY STA.	TOP OF FOUND. ELEVATION	RDWY ARM NO.	CROWN ELEV.	SIGNAL DATA (FUTURE LOADING)											TOTAL ARM LENGTH	ARM M. H.	ANGLE BETWEEN DUAL ARMS 90/270	CCTV/VIDEO DETECTION POSITION									PAINT COLOR									
						SIGNAL V/H	BACK PLATES Y/N	PED. SIGNAL Y/N	DISTANCE FROM POLE											DISTANCE FROM POLE/HEIGHT & WIDTH OF SIGN																		
									1	*	2	*	3	*	4	*				5	*	A	H1	W1	B	H2	W2	C		H3	W3							
1	T-8	355+84.33	67.49	1	68.29	V	Y	N	16.3	3	28.5	3	40.3	3	51.4	3	63.4	3	70	21.0	N/A				45.4													
---	---	---	---	2																																		
2	T-8	356+52.69	65.25	1	66.48	V	Y	N	6.2	5	16.5	3	26.8	3	38.5	3		40	22.0	N/A				30.9														
---	---	---	---	2																																		
3	T-8	357+36.52	66.28	1	66.37	V	Y	N	15.6	3	27.5	3	39.4	3	51.3	3		60	22.0	N/A				21.9			33.4											
---	---	---	---	2																																		
4	T-8	356+16.57	67.02	1	66.98	V	Y	N	9.9	3	19.7	5						30	21.5	N/A				14.3														
---	---	---	---	2																																		

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

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MAST ARM TABULATION

SHEET NO.
T-11

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STANDARD MAST ARM ASSEMBLIES DATA TABLE											
STRUCTURE ID NUMBERS	DESIGNATION	FIRST ARM		SECOND ARM		UF (deg)	LL (deg)	POLE			DRILLED SHAFT ID
		ARM ID	FAA (ft.)	ARM ID	SAA (ft.)			POLE ID	UAA (ft.)	UB (ft.)	
1	A70/S-P5/S/L	A70/S		N/A			90	P5/S/L		21.0	DS/18/5.0
2	A40/S-P2/S/L	A40/S		N/A			310	P2/S/L		22.0	DS/14/4.5
3	A60/S-P4/S/L	A60/S		N/A			90	P4/S/L		22.0	DS/16/4.5
4	A30/S-P1/S/L	A30/S		N/A			90	P1/S/L		21.5	DS/12/4.5

TABLE NOTES

- 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 Type P2 and larger require a minimum 4.5 foot diameter drilled shaft. Pole Types P5 and larger require a minimum 5.0 foot diameter 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.
- Design Wind Speed = 150 mph
- Work this Data Table with FDOT Standard Plans Index 649-030 and 649-031.

FOUNDATION NOTES

- Design based on Addendum Sheet to N. Narcoossee Road & Cyrils Drive 4-6-2020 Advanced Continuous Surface Wave Testing Report by Ground Stiffness Surveys. Report No. GSS328. Dated 04/13/2020. Signed and Sealed by David Wilshaw, P.G. Number 2413.
- Assumptions and values used in design:
Soil Type = SAND
Design Water Table is 0 feet below surface.

Pole 1:
Soil Layer Thickness = 30 ft
Soil Friction Angle = 28.8 deg
Average SPT "N" Value = 11.6
Soil Weight = 52 pcf

Pole 2:
Soil Layer Thickness = 30 ft
Soil Friction Angle = 28.3 deg
Average SPT "N" Value = 9.7
Soil Weight = 51.5 pcf

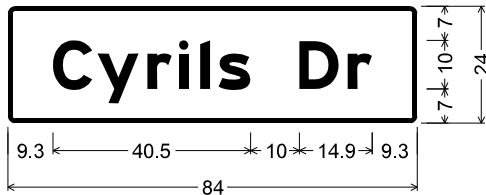
Pole 3:
Soil Layer Thickness = 30 ft
Soil Friction Angle = 28.8 deg
Average SPT "N" Value = 11.6
Soil Weight = 52 pcf

Pole 4:
Soil Layer Thickness = 30 ft
Soil Friction Angle = 27.7 deg
Average SPT "N" Value = 7.0
Soil Weight = 50.9 pcf
- Drilled shaft bottoms shall be relatively clean of loose cuttings prior to concrete placement.
- Layers of dense sand may be encountered at this site. Such materials may make shaft excavations and/or temporary casing installation difficult. The Contractor shall expect to encounter these types of materials at all shaft locations and shall be prepared to use specialized equipment and/or procedures to facilitate shaft excavation and/or temporary casing installation. When temporary casing is used, the casing tip shall be reinforced and the casing thickness shall be adequate to prevent causing damage/deformation during installation through dense layers.
- Drilled shafts shall be constructed in accordance with FDOT Standard Specifications Section 455. Natural slurry shall not be relied upon to prevent caving of soils and maintaining an open hole.
- High groundwater levels are possible during periods of heavy or prolonged rainfall, so the Contractor shall have resources on site to address potential artesian conditions and localized inflows of water.

REVISIONS				AVCON, INC. ENGINEERS & PLANNERS 5555 EAST MICHIGAN STREET, SUITE 200 ORLANDO, FL 32822-2779 OFFICE: (407) 599-1122 CORPORATE CERTIFICATE OF AUTHORIZATION No: 5057 EOR: Luca DeVerme P.E. 63055	STANDARD MAST ARM ASSEMBLIES DATA TABLE	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION			T-12

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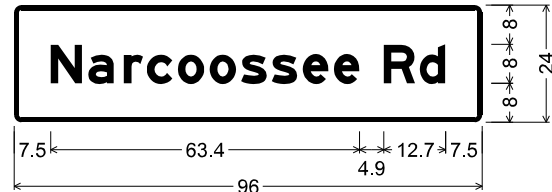
SIGN NAME	SIGN A	QTY	2	SIGN NO.		STATION(S)	
PANEL		BORDER					
WIDTH	7'-0"	WIDTH	1.0"				
HEIGHT	2'-0"	RADII	1.5"				
LEGEND		COLOR					
COLOR							WHITE ON GREEN
SYMBOL(S)	ANGLE	X	Y	WID	HT		
SIGN NO.	NO. OF POSTS	EDGE OF LANE CLEARANCE	COLUMN SIZE	AVERAGE LENGTH			



1.5" Radius, 1.0" Border, White on, Green;
 "Cyrilis Dr", E Mod 2K 60% spacing;
 Table of distances between letter and object lefts

COPY		C	y	r	i	l	s	D	r														
SPACE	9.3	9.1	10.2	6.5	4.4	3.7	16.6	9.9	5.0	9.3													
COPY																							
SPACE																							
COPY																							
SPACE																							
COPY																							
SPACE																							
COPY																							
SPACE																							

SIGN NAME	SIGN B	QTY	2	SIGN NO.		STATION(S)	
PANEL		BORDER					
WIDTH	8'-0"	WIDTH	1.0"				
HEIGHT	2'-0"	RADII	1.5"				
LEGEND		COLOR					
COLOR							WHITE ON GREEN
SYMBOL(S)	ANGLE	X	Y	WID	HT		
SIGN NO.	NO. OF POSTS	EDGE OF LANE CLEARANCE	COLUMN SIZE	AVERAGE LENGTH			



1.5" Radius, 1.0" Border, White on, Green;
 "Narcossee Rd", E Mod 2K specified length;
 Table of distances between letter and object lefts

COPY		N	a	r	c	o	o	s	s	e	e	R	d											
SPACE	7.5	7.7	7.3	4.7	6.4	6.5	6.5	6.2	6.4	6.4	10.2	7.4	5.3	7.5										
COPY																								
SPACE																								
COPY																								
SPACE																								
COPY																								
SPACE																								
COPY																								
SPACE																								

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION



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GUIDE SIGN WORKSHEET

SHEET NO.
 T-13