

COMPONENTS OF CONTRACT PLANS SET

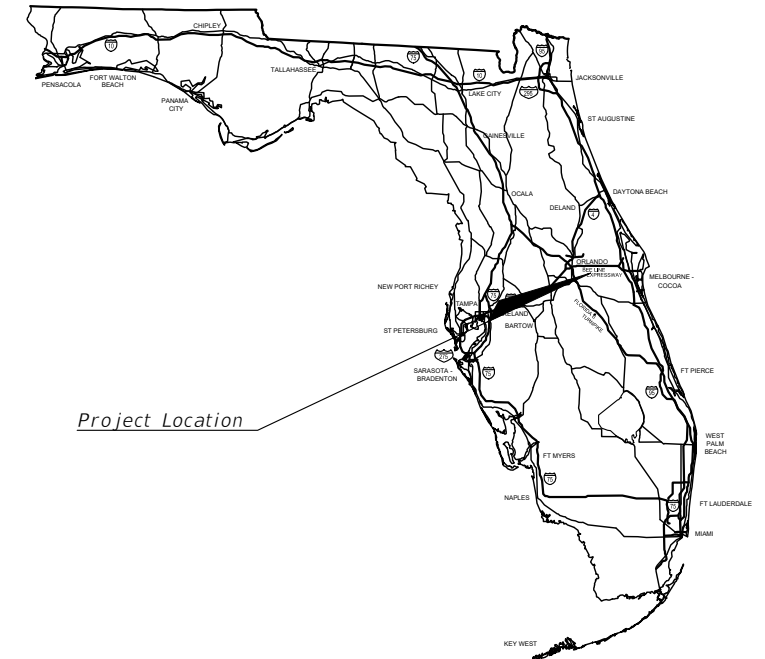
- ROADWAY PLANS
- SIGNING AND PAVEMENT MARKING PLANS
- SIGNALIZATION PLANS
- ITS PLANS
- LIGHTING PLANS



OSCEOLA COUNTY, FLORIDA TRANSPORTATION & TRANSIT

CONTRACT PLANS

SIMPSON RD SIGNALIZATION PLANS



Project Location


INDEX OF SIGNALIZATION PLANS

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T-11 to T-12	GUIDE SIGN WORKSHEETS
T-13 to T-14	SPT BORING RESULTS

SIGNALIZATION PLANS SHOP DRAWINGS
TO BE SUBMITTED TO:

JENNIFER M. DiSTEFANO, P.E.
VANASSE HANGEN BRUSTLIN, INC.
225 E. ROBINSON STREET, SUITE 300
ORLANDO, FL 32801

PLANS PREPARED BY:

 **vhb**
Engineers | Scientists
Planners | Designers
225 E. Robinson Street, Suite 300
Orlando, FL 32801 (407)839-4006
Certificate of Authorization # 3932

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

OSCEOLA COUNTY TRANSPORTATION AND TRANSIT

BRANDON ARRINGTON CHAIRMAN OF THE BOARD OF COUNTY COMMISSIONERS
VIVIANA JANER VICE CHAIRWOMAN OF THE BOARD OF COUNTY COMMISSIONERS
PEGGY CHOUDHRY COUNTY COMMISSIONER
RICKY BOOTH COUNTY COMMISSIONER
CHERYL GRIEB COUNTY COMMISSIONER
DON FISHER COUNTY MANAGER
TAWNY H OLORE, P.E. DIRECTOR OF TRANSPORTATION AND TRANSIT

FINAL PLANSET
DATE: JANUARY 16, 2023

GOVERNING STANDARD PLANS:
Florida Department of Transportation, FY2022-23 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.shtm>

APPLICABLE IRs: IR700-010-1

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

GOVERNING STANDARD SPECIFICATIONS:
Florida Department of Transportation, July, 2022 Standard
Specifications for Road and Bridge Construction at the following
website:
<http://www.fdot.gov/programmanagement/Implemented/SpecBooks>

OSCEOLA COUNTY PROJECT MANAGER: STEVEN KANE, P.E.

SIGNALIZATION PLANS

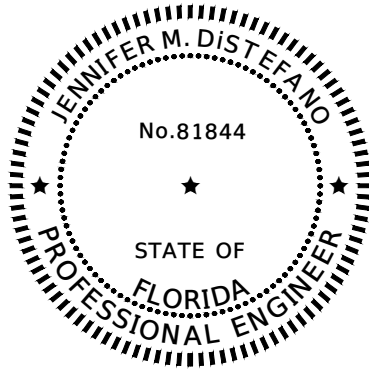
ENGINEER OF RECORD: JENNIFER M. DiSTEFANO, P.E.

P.E. NO.: 81844

SHEET
NO.

T-1

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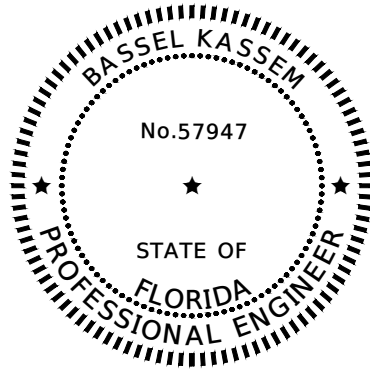
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VANASSE HANGEN BRUSTLIN, INC.
TRANSPORTATION, LAND DEVELOPMENT,
ENVIRONMENTAL SERVICES
225 E. ROBINSON ST., SUITE 300
LANDMARK CENTER TWO
ORLANDO, FL 32801
JENNIFER M. DISTEFANO, P.E. NO. 81844

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

PLAN INDEX

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T-11 to T-12	GUIDE SIGN WORKSHEETS



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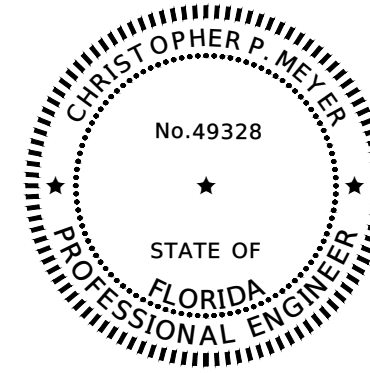
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FLORIDA BRIDGE AND TRANSPORTATION, INC.
633 DARTMOUTH STREET
ORLANDO, FL 32804
BASSEL KASSEM, P.E. NO. 57947

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PLAN INDEX

SHEET NO.	SHEET DESCRIPTION
T-2	SIGNATURE SHEET
T-10	STANDARD MAST ARM ASSEMBLIES DATA TABLE



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GEOTECHNICAL AND ENVIRONMENTAL CONSULTANTS, INC.
2510 MICHIGAN AVENUE, SUITE D
KISSIMMEE, FL
CHRISTOPHER P. MEYER, P.E. NO. 49328

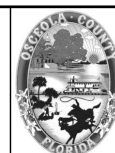
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PLAN INDEX

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T-2	SIGNATURE SHEET
T-13 to T-14	SPT BORING RESULTS

REVISIONS

DATE	DESCRIPTION	DATE	DESCRIPTION



OSCEOLA COUNTY
FLORIDA

SIGNATURE SHEET

SHEET NO.

T-2

TABULATION OF QUANTITIES

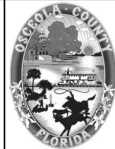
PAY ITEM NO.	DESCRIPTION	UNIT	SHEET NUMBERS														TOTAL THIS SHEET		GRAND TOTAL	
			T-5		T-6		T-7		T-8								PLAN	FINAL	PLAN	FINAL
			PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL						
630-2-11	CONDUIT, FURNISH & INSTALL, OPEN TRENCH	LF	96				120		75								291		291	
630-2-12	CONDUIT, FURNISH & INSTALL, DIRECTIONAL BORE	LF	415				238		234								887		887	
632-7-1	SIGNAL CABLE - NEW OR RECONSTRUCTED INTERSECTION, FURNISH & INSTALL	PI	1				1		1								3		3	
635-2-11	PULL & SPLICE BOX, F&I, 13" x 24" COVER SIZE	EA	13				15		12								40		40	
639-1-122	ELECTRICAL POWER SERVICE, F&I, UNDERGROUND, METER PURCHASED BY CONTRACTOR	AS	1				1		1								3		3	
639-2-1	ELECTRICAL SERVICE WIRE	LF	18				117		129								264		264	
641-2-12	PRESTRESSED CONCRETE POLE, F&I, TYPE P-II SERVICE POLE	EA	1				1		1								3		3	
641-2-60	PRESTRESSED CONCRETE POLE, COMPLETE POLE REMOVAL- PEDESTAL/SERVICE POLE	EA	1														1		1	
641-2-70	PRESTRESSED CONCRETE POLE, SHALLOW POLE REMOVAL- POLE 30' AND GREATER	EA	2														2		2	
646-1-11	ALUMINUM SIGNALS POLE, PEDESTAL	EA	4				5		4								13		13	
646-1-12	ALUMINUM SIGNALS POLE, FURNISH & INSTALL PEDESTRIAN DETECTOR POST	EA					1										1		1	
646-1-60	ALUMINUM SIGNALS POLE, REMOVE	EA	2														2		2	
649-21-3	STEEL MAST ARM ASSEMBLY, FURNISH AND INSTALL, SINGLE ARM 40'	EA							1								1		1	
649-21-6	STEEL MAST ARM ASSEMBLY, FURNISH AND INSTALL, SINGLE ARM 50'	EA	1														1		1	
649-21-9	STEEL MAST ARM ASSEMBLY, FURNISH AND INSTALL, DOUBLE ARM 50'-50'	EA					1		1								2		2	
649-21-10	STEEL MAST ARM ASSEMBLY, FURNISH AND INSTALL, SINGLE ARM, 60'	EA							1								1		1	
649-21-12	STEEL MAST ARM ASSEMBLY, FURNISH AND INSTALL, DOUBLE ARM 60'-40'	EA					1										1		1	
649-21-15	STEEL MAST ARM ASSEMBLY, FURNISH AND INSTALL, SINGLE ARM 70'	EA	2														2		2	
649-21-21	STEEL MAST ARM ASSEMBLY, FURNISH AND INSTALL, SINGLE ARM 78'	EA	1														1		1	
650-1-14	VEHICULAR TRAFFIC SIGNAL, FURNISH & INSTALL ALUMINUM, 3 SECTION, 1 WAY	AS			16		8		8								32		32	
650-1-16	VEHICULAR TRAFFIC SIGNAL, FURNISH & INSTALL ALUMINUM, 4 SECTION, 1 WAY	AS					3		4								7		7	
653-1-11	PEDESTRIAN SIGNAL, FURNISH & INSTALLED LED COUNTDOWN, 1 WAY	AS	2				4										6		6	
653-1-12	PEDESTRIAN SIGNAL, FURNISH & INSTALL LED COUNTDOWN, 2 WAYS	AS	3				2		4								9		9	
660-3-11	VEHICLE DETECTION SYSTEM- MICROWAVE, FURNISH & INSTALL CABINET EQUIPMENT	EA	1														1		1	
660-3-12	VEHICLE DETECTION SYSTEM- MICROWAVE, FURNISH & INSTALL, ABOVE GROUND EQUIPMENT	EA	3														3		3	
660-4-11	VEHICLE DETECTION SYSTEM- VIDEO, FURNISH & INSTALL CABINET EQUIPMENT	EA					1		1								2		2	
660-4-12	VEHICLE DETECTION SYSTEM - VIDEO, FURNISH & INSTALL ABOVE GROUND EQUIPMENT	EA	1				4		4								9		9	
663-1-121	SIGNAL PRIORITY AND PREEMPTION SYSTEM, FURNISH AND INSTALL, GPS, REPLACE CABINET ELECTRONICS	EA	1				1		1								3		3	
663-1-122	SIGNAL PRIORITY AND PREEMPTION SYSTEM, FURNISH AND INSTALL, GPS, DETECTOR	EA	1				1		1								3		3	
665-1-11	PEDESTRIAN DETECTOR, FURNISH & INSTALL, STANDARD	EA	8				8		8								24		24	
670-5-111	TRAFFIC CONTROLLER ASSEMBLY, F&I, NEMA, 1 PREEMPTION	AS					1		1								2		2	
685-1-13	UNINTERRUPTIBLE POWER SUPPLY, FURNISH & INSTALL, LINE INTERACTIVE WITH CABINET	EA					1		1								2		2	
700-3-201	SIGN PANEL, FURNISH & INSTALL OVERHEAD MOUNT, UP TO 12 SF	EA			1												1		1	
700-5-22	INTERNALLY ILLUMINATED SIGN, FURNISH & INSTALL, OVERHEAD MOUNT, 12-18 SF	EA			4		3		4								11		11	
715-1-12	LIGHTING CONDUCTORS, F&I, INSULATED, NO.8 - 6	LF	1746				846		861								3453		3453	
715-5-31	LUMINAIRE & BRACKET ARM- ALUMINUM, FURNISH & INSTALL NEW LUMINAIRE AND ARM ON NEW/EXISTING POLE	EA	4				2		3								9		9	

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REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION



Engineers | Scientists
Planners | Designers
225 E. Robinson Street, Suite 300
Orlando, FL 32801 (407)839-4006
Certificate of Authorization # 3932
Jennifer M. DiStefano, P.E.
PE # 81844



OSCEOLA COUNTY
FLORIDA

TABULATION OF
QUANTITIES

SHEET NO.
T-3

General

- 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 Plans, FDOT Design Manual, FDOT Standard Specifications for Road and Bridge Construction and Osceola County Contractor Signal Specifications.
- Temporary traffic control shall be maintained in accordance with the MUTCD, dated 2009 & all applicable revisions, and the FDOT Standard Plans, dated FY 2022-23. Attention is directed to the 102 Standard Plan Index series.
- The contractor shall notify Osceola County at least 48 hours before beginning any related traffic signal work.
- All existing signalization equipment to remain is assumed to be in good working order unless Osceola County is notified in writing prior to the start of construction. Any subsequent damage to the signal equipment shall be repaired at the contractor's expense.
- The contractor shall be advised that other projects may be under construction concurrently with this project. The contractor shall be responsible for coordinating all aspects of scheduling and work with other agencies and contractors in charge of concurrent projects.
- Final locations of any devices including cabinets shall be approved by the engineer prior to placement of the foundation if the location has changed from the plan.
- The contractor shall notify the TMC 48 hours in advance shall communications to an intersection be disrupted to perform work. Notification shall be conveyed via email to lindsey.giovinazzo@osceola.org and shall include contact name, phone number, purpose, location, and duration of outage.
- Three spare conductors shall be installed for each vehicle phase per Osceola County Standard.
- 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 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.
- Solid colored insulation conductors should be used for main roadway phases and tracers used for side street phases.
- 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.
- 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.

Procedures

- The contractor shall coordinate a field meeting with the signal project manager (407)738-9405, prior to removing any existing equipment, to determine which equipment should be delivered to Osceola County Transportation and Transit. The agreed upon equipment shall be disassembled into their component parts, tagged as to location, packaged as needed for protection from damage, and delivered to:
3850 Old Canoe Creek Rd
Attn: Aaron Torres
Saint Cloud, FL 34769
- The signal project manager is to be contacted at least 48 hours prior to delivery. Written acknowledgement of equipment receipt shall be obtained from the project manager in the form of a signed receipt bearing the contractor's letterhead. This itemized receipt shall state all equipment removed from each location was returned to Osceola County in good condition. The contractor shall present the receipt to the project manager at the time of signal inspection. Absence of such receipt shall be recorded on the punch list as an item to be corrected prior to final approval of the installation.
- All signalization equipment that is removed and not requested by Osceola County shall be properly disposed of at the contractor's expense in a manner and location approved by the project manager (407) 738-9405.

Submittals

- All submittal data on Osceola County projects shall be submitted to Aaron Torres, via email at aaron.torres@osceola.org.

Survey

- Survey prepared by DRMP, Inc. in April 2022.

Utilities

- 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.
- Refer to Simpson Road - South Segment Roadway Improvement Plans for list of utility owners and contact information.
- These plans reflect conditions known during plan development. In the event actual physical conditions prevent the application or progression of any work specified in these plans, the contractor shall notify the engineer immediately and prior to any further work activity.

Drilled Shafts

- The contractor shall hire a certified drilled shaft CTQP level I construction engineering and inspection (CEI) firm, and a concrete testing laboratory for the purpose of inspecting all drilled shaft installations per current 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 department for approval. Contractor to also coordinate with Osceola County to perform VT inspection at time of drilled shaft pour. Failure to obtain these services prior to the construction of the drilled shaft(s) shall result in rejection of the drilled shaft(s).
- The signal contractor is responsible for ensuring that no conflicts exist during the soft digs with drill shaft locations and must notify the Engineer of Record when they arise. The signal contractor is responsible for all associated cost, not complying with this signal note.
- The contractor shall be responsible for supplying approved shop drawings showing the bolt pattern and arm orientation prior to the pre-drill shaft meeting.

Mast Arms

- 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.

As-Built Plans

- As defined in the FDOT Standard Specifications, section 611-2.3, seven days prior to signal conditional acceptance inspection by the maintaining agency, the contractor shall provide a PDF of the as built plans to Osceola County Transportation and Transit. The Contractor shall also leave one as-built plan in the drawer of the signal cabinet. In addition to as built plans, contractor shall submit bore logs. The contractor shall be required to become familiar with Osceola County's inspection procedure.
- 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.

Pay Item Notes:

- 102-1 Pay Item and associated work is included in the Simpson Road - South Segment Roadway Improvement Plans. 102-1 includes all items required to safely maintain traffic throughout the work zone, as specified in the latest FDOT Standard Plans 102 Index. These items include, but are not limited to high intensity flashing lights, temporary reflective pavement markers, impact attenuator modules, barricades and temporary street lighting, pavement markings. Payment under this item includes the professional engineer's fees for the preparation of the maintenance of traffic plans, as well as compensation for all necessary detours. This item includes providing maintenance of traffic during inspections. Also includes the cost of maintaining communication, including temporary lines and connections, and video detection.
- 102-14 Pay Item and all associated work is included in the Simpson Road - South Segment Roadway Improvement Plans. Payment for this item shall only be made if conditions 1-5 in the FDOT BOE 102-14 item details are met and it was verified by the engineer or inspector.
- 630-2-XX A green #12 AWG trace wire shall be installed within any unused conduit and spliced within the pull box to provide electrical continuity. All references in the plan to rigid conduit shall be installed as 1.5" galvanized steel metal conduit. There shall be one spare 2" underground conduit installed per run. This shall be reflected in the callout. There shall be a separate conduit for video or loop runs from signal power conduits. Under no circumstances shall loop and video runs be housed in the same conduit as signal power.

- 633-1-XX 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 be "Quazite", have non-conductive covers, and meet ANSI Tier 22 Rating. Covers shall be stamped "Osceola County Traffic Signal" for all signalization applications.
- 641-2-12 includes the cost of providing concrete service pole to mount signal disconnect when not permitted to be mounted on power company pole. Service pole shall be exposed 12' above grade with disconnect mounted at 8'. Surge arrestor shall be wired on the load side of the disconnect.
- 646-1-XX all pedestrian pedestals shall be provided with aluminum breakaway transformer-type bases.
- 649-2X-XX 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 plan.
- 650-1-XX all traffic signal heads shall be aluminum. 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. Retro reflective back plate borders are required on all back plates. Any four section signal heads with the flashing yellow arrow shall have the FTP-85-13 sign installed adjacent to the head assembly to the right.
- 653-1-XX led pedestrian signals are to be single section and provided with international style lenses and countdown features.
- 660-4-XX all video detectors shall meet Osceola County's functionality requirements. Sunshields shall be provided on each 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 or cat 5 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. The contractor will perform all signal testing, mapping and system activation. Contractor to furnish 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-XX pedestrian push buttons shall include a MUTCD pedestrian sign, R10-3i for each button at the intersection of US 192/Simpson Rd, and R10-3e for each button at the intersections of Simpson Rd/New Beginnings Rd and Simpson Rd/Country Lane. The button and sign shall be placed on the face of the pole. Contact the engineer before proceeding if all A.D.A. Requirements cannot be met regarding the placement and accessibility of the buttons. Audible push buttons shall only be installed when called for on plan sheets.
- 670-5-XXX the controller assembly shall be Econolite R77 TS2 Type 1 operation, consist of an Econolite Cobalt 2100 controller, and 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 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. NOTE- Refer to Osceola County Traffic Signal Cabinet and Controller Specifications 5/2016. For more detailed specifications contact Aaron Torres (407) 738-9405, aaron.torres@osceola.org.
- 682-1-XXX all new CCTV Cameras shall 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.

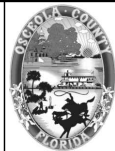
- 685-1-13 The UPS systems shall be Alpha XM 1100 or an equivalent Alpha model that meets Osceola County's communication system requirements. UPS cabinets shall be installed separately from the controller assembly, no piggy back mounts.
- 700-5-XX illuminated street signs shall be L.E.D. double faced type, producing a minimum of 50 lumens per watt. Signs shall be double-sided and mounted to separate cantilever arms below the 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.

REVISIONS

DATE	DESCRIPTION	DATE	DESCRIPTION



Engineers | Scientists
Planners | Designers
225 E. Robinson Street, Suite 300
Orlando, FL 32801 (407)839-4006
Certificate of Authorization # 3932
Jennifer M. DiStefano, P.E.
PE # 81844



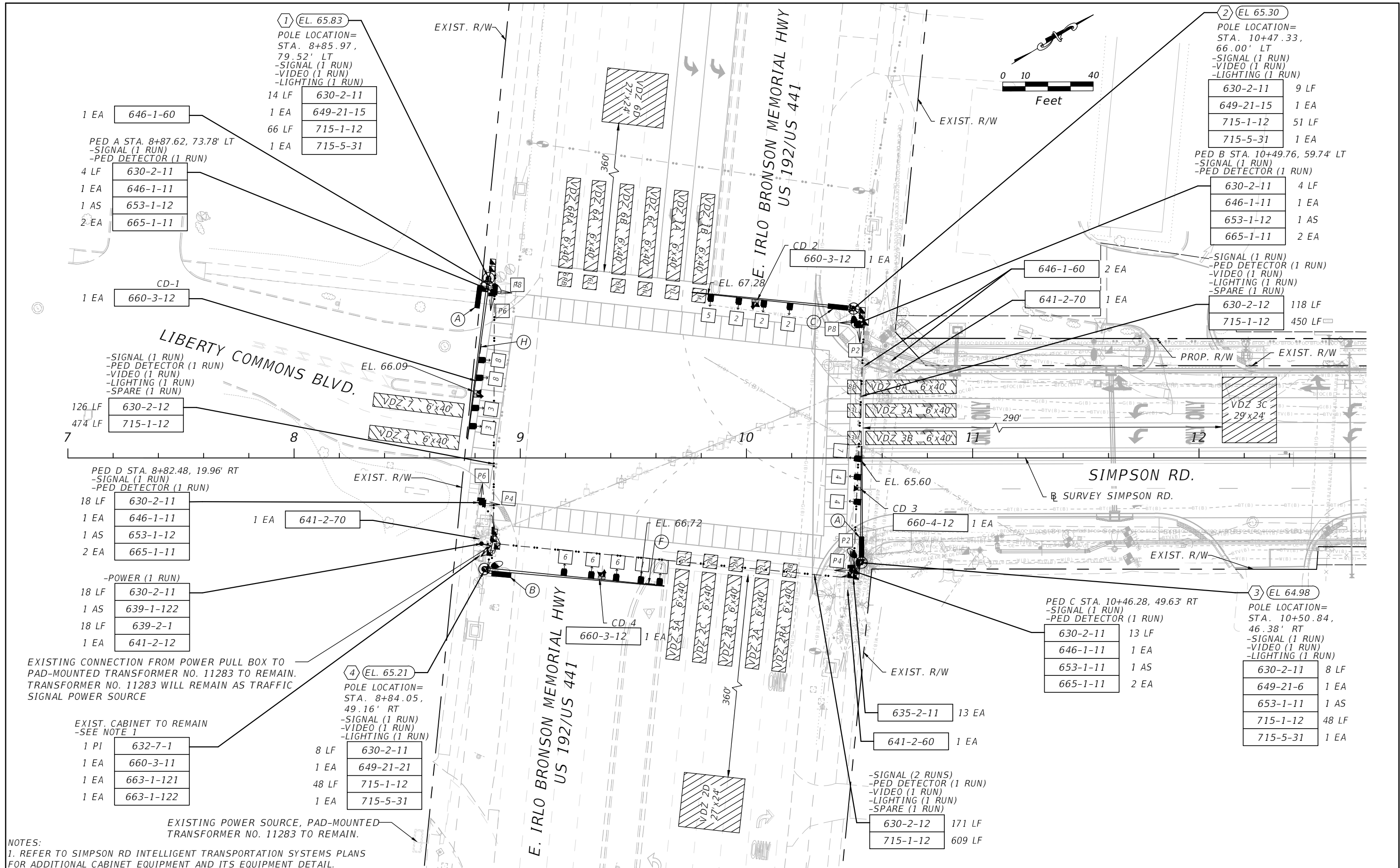
**OSCEOLA COUNTY
FLORIDA**

GENERAL NOTES

SHEET NO.

T-4

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1 EA	646-1-60
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① (EL. 65.83)
POLE LOCATION=
STA. 8+85.97,
79.52' LT
-SIGNAL (1 RUN)
-VIDEO (1 RUN)
-LIGHTING (1 RUN)

14 LF	630-2-11
1 EA	649-21-15
66 LF	715-1-12
1 EA	715-5-31

② (EL. 65.30)
POLE LOCATION=
STA. 10+47.33,
66.00' LT
-SIGNAL (1 RUN)
-VIDEO (1 RUN)
-LIGHTING (1 RUN)

630-2-11	9 LF
649-21-15	1 EA
715-1-12	51 LF
715-5-31	1 EA

PED A STA. 8+87.62, 73.78' LT
-SIGNAL (1 RUN)
-PED DETECTOR (1 RUN)

4 LF	630-2-11
1 EA	646-1-11
1 AS	653-1-12
2 EA	665-1-11

PED B STA. 10+49.76, 59.74' LT
-SIGNAL (1 RUN)
-PED DETECTOR (1 RUN)

630-2-11	4 LF
646-1-11	1 EA
653-1-12	1 AS
665-1-11	2 EA

CD-1
1 EA 660-3-12

CD 2
660-3-12 1 EA

646-1-60 2 EA
641-2-70 1 EA

SIGNAL (1 RUN)
-PED DETECTOR (1 RUN)
-VIDEO (1 RUN)
-LIGHTING (1 RUN)
-SPARE (1 RUN)

630-2-12	118 LF
715-1-12	450 LF

-SIGNAL (1 RUN)
-PED DETECTOR (1 RUN)
-VIDEO (1 RUN)
-LIGHTING (1 RUN)
-SPARE (1 RUN)

126 LF	630-2-12
474 LF	715-1-12

PED D STA. 8+82.48, 19.96' RT
-SIGNAL (1 RUN)
-PED DETECTOR (1 RUN)

18 LF	630-2-11
1 EA	646-1-11
1 AS	653-1-12
2 EA	665-1-11

1 EA 641-2-70

CD 3
660-4-12 1 EA

-POWER (1 RUN)

18 LF	630-2-11
1 AS	639-1-122
18 LF	639-2-1
1 EA	641-2-12

PED C STA. 10+46.28, 49.63' RT
-SIGNAL (1 RUN)
-PED DETECTOR (1 RUN)

630-2-11	13 LF
646-1-11	1 EA
653-1-11	1 AS
665-1-11	2 EA

③ (EL. 64.98)
POLE LOCATION=
STA. 10+50.84,
46.38' RT
-SIGNAL (1 RUN)
-VIDEO (1 RUN)
-LIGHTING (1 RUN)

630-2-11	8 LF
649-21-6	1 EA
653-1-11	1 AS
715-1-12	48 LF
715-5-31	1 EA

EXISTING CONNECTION FROM POWER PULL BOX TO PAD-MOUNTED TRANSFORMER NO. 11283 TO REMAIN. TRANSFORMER NO. 11283 WILL REMAIN AS TRAFFIC SIGNAL POWER SOURCE

EXIST. CABINET TO REMAIN
-SEE NOTE 1

1 PI	632-7-1
1 EA	660-3-11
1 EA	663-1-121
1 EA	663-1-122

④ (EL. 65.21)
POLE LOCATION=
STA. 8+84.05,
49.16' RT
-SIGNAL (1 RUN)
-VIDEO (1 RUN)
-LIGHTING (1 RUN)

8 LF	630-2-11
1 EA	649-21-21
48 LF	715-1-12
1 EA	715-5-31

635-2-11 13 EA
641-2-60 1 EA

-SIGNAL (2 RUNS)
-PED DETECTOR (1 RUN)
-VIDEO (1 RUN)
-LIGHTING (1 RUN)
-SPARE (1 RUN)

630-2-12	171 LF
715-1-12	609 LF

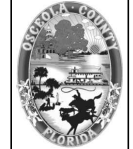
EXISTING POWER SOURCE, PAD-MOUNTED TRANSFORMER NO. 11283 TO REMAIN.

NOTES:
1. REFER TO SIMPSON RD INTELLIGENT TRANSPORTATION SYSTEMS PLANS FOR ADDITIONAL CABINET EQUIPMENT AND ITS EQUIPMENT DETAIL.

REVISIONS

DATE	DESCRIPTION	DATE	DESCRIPTION

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PE # 81844



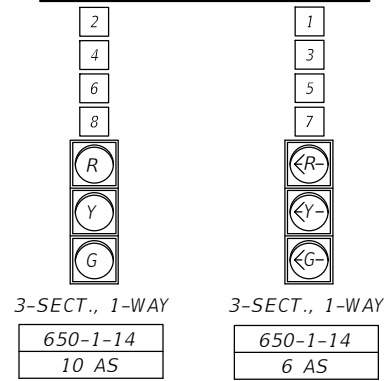
OSCEOLA COUNTY
FLORIDA

SIGNALIZATION PLAN (1)

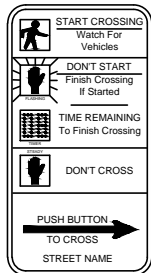
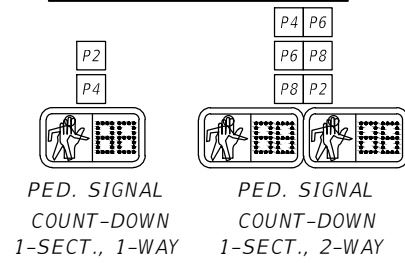
SHEET NO.
T-5

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

SIGNAL HEAD DETAILS



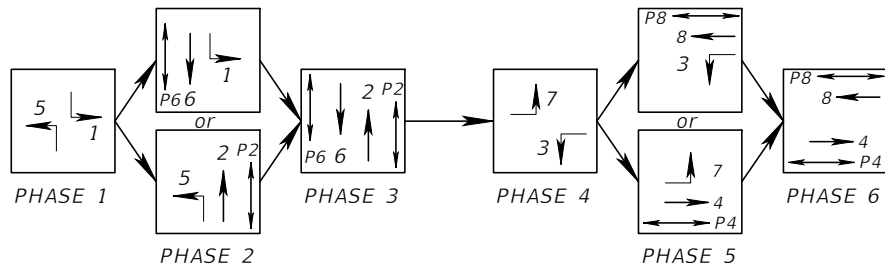
PEDESTRIAN SIGNAL HEAD DETAILS



COST OF R10-31 IS INCLUDED WITH 665-1-11

MOVEMENT DIAGRAM

SOP 10



CONTROLLER TIMINGS

CONTROLLER TIMINGS									
TIMING FUNCTION									
MOVEMENT NUMBER	1	2	3	4	5	6	7	8	
MINIMUM GREEN	5	16	5	5	5	16	5	5	
EXTENSION	3	2.5	3	3	3	2.5	3	3	
MAXIMUM GREEN 1	30	50	30	40	20	50	20	40	
MAXIMUM GREEN 2	-	-	-	-	-	-	-	-	
YELLOW CLEARANCE	5.1	5.1	4.4	3.4	5.1	5.1	3.4	4.4	
ALL RED	2.0	2.0	2.0	3.9	2.9	2.0	3.0	2.4	
PEDESTRIAN WALK	-	7	-	7	-	7	-	7	
PED. CLEARANCE	-	27	-	44	-	22	-	43	
RECALL	-	MIN	-	-	-	MIN	-	-	
DETECTOR FUNCTION	-	L	-	NL	-	L	-	NL	

NOTES:

- THE MAJOR ROADWAY IS US 192/US 441, WHICH HAS A POSTED SPEED LIMIT OF 50 MPH. THE MINOR ROADWAY IS SIMPSON ROAD/LIBERTY COMMONS BLVD. THE POSTED SPEED LIMIT ON SIMPSON ROAD IS 40 MPH AND THE SPEED LIMIT ON LIBERTY COMMONS BLVD IS ASSUMED TO BE 25 MPH.
- OVERHEAD STREET NAME SIGNS SHALL BE DOUBLE SIDED AND CANTILEVER MOUNTED TO THE PROPOSED MAST ARM UPRIGHT. SEE GUIDE SIGN WORKSHEET FOR DETAILS.
- VEHICLE DETECTION ZONE LENGTHS ON SIMPSON RD ARE BASED ON A 40 MPH POSTED SPEED LIMIT.

VIDEO DETECTORS

CAMERA DETECTOR	DETECTION ZONE	DELAY TIME (SEC.)	CHANNEL NO.	CAMERA DETECTOR	DETECTION ZONE	DELAY TIME (SEC.)	CHANNEL NO.
CD 1	VDZ 3A	-	CH 17	CD 3	VDZ 4	5	CH 26
	VDZ 3B	-	CH 18		VDZ 7	-	CH 49
	VDZ 3C	-	CH 19		VDZ 1A	-	CH 1
	VDZ 3L	-	CH 20	CD 4	VDZ 1B	-	CH 2
	VDZ 3M	-	CH 21		VDZ 1L	-	CH 3
	VDZ 8A	5	CH 53		VDZ 1M	-	CH 4
VDZ 8B	5	CH 54	VDZ 6A		-	CH 37	
VDZ 2B	-	CH 6	VDZ 6B		-	CH 38	
VDZ 2C	-	CH 7	VDZ 6C		-	CH 39	
VDZ 2D	-	CH 8	VDZ 6D		-	CH 40	
VDZ 2L	-	CH 9	VDZ 6L		-	CH 41	
VDZ 2M	-	CH 10	VDZ 6M		-	CH 42	
VDZ 2N	-	CH 11	VDZ 6N		-	CH 43	
VDZ 2RA	5	CH 12	VDZ 6RA		5	CH 44	
VDZ 2RB	5	CH 13	VDZ 6RB		5	CH 45	
VDZ 5A	-	CH 14					
VDZ 5L	-	CH 15					

OVERHEAD SIGNS

(A) **E Irlo Bronson** 700-5-22 2 EA

(B) **Liberty Commons** 700-5-22 1 EA

(C) **Simpson Rd** 700-5-22 1 EA

(F) SIGN F (30"x36") IS FOR FUTURE USE AND IS NOT PROPOSED AS PART OF THIS PROJECT.

(H) **RIGHT TURN ON RED MUST YIELD TO U-TURN** R10-30 30"x36" 700-3-201 1 EA

REVISIONS

DATE	DESCRIPTION	DATE	DESCRIPTION

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PE # 81844



OSCEOLA COUNTY FLORIDA

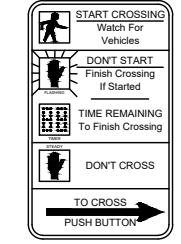
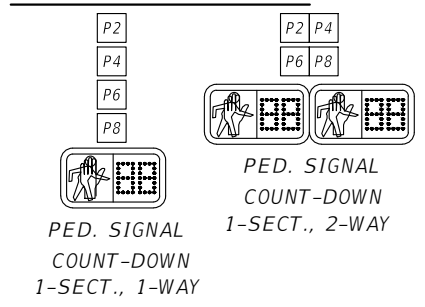
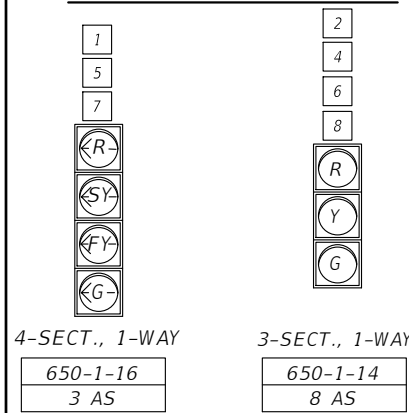
SIGNALIZATION PLAN (2)

SHEET NO.

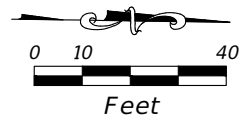
T-6

SIGNAL HEAD DETAILS

PEDESTRIAN SIGNAL HEAD DETAILS



COST OF R10-3E IS INCLUDED WITH 665-1-11

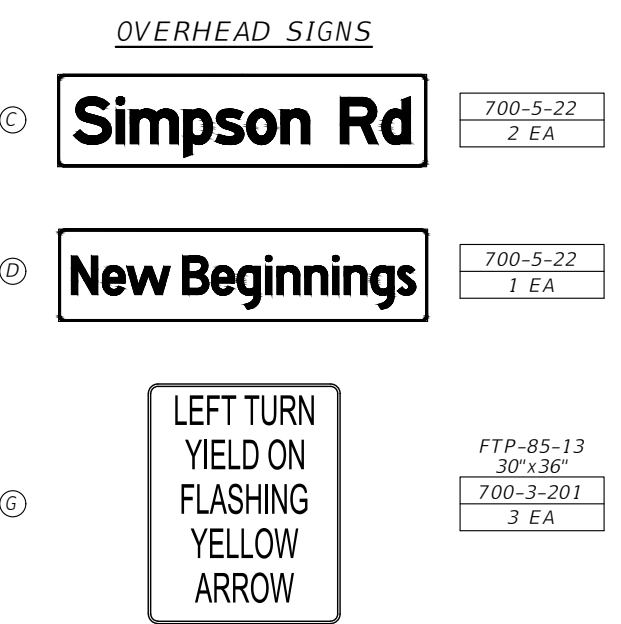


CONTROLLER TIMINGS

TIMING FUNCTION	1	2	3	4	5	6	7	8
MOVEMENT NUMBER	1	2	3	4	5	6	7	8
MINIMUM GREEN	5	16	-	5	5	16	5	5
EXTENSION	3	2.5	-	3	3	2.5	3	3
MAXIMUM GREEN 1	15	50	-	20	15	50	10	25
MAXIMUM GREEN 2	-	-	-	-	-	-	-	-
YELLOW CLEARANCE	4.4	4.4	-	3.4	4.4	4.4	3.4	3.4
ALL RED	2.0	2.0	-	2.0	2.0	2.0	2.0	2.4
PEDESTRIAN WALK	-	7	-	7	-	7	-	7
PED. CLEARANCE	-	15	-	20	-	14	-	23
RECALL	-	MIN	-	-	-	MIN	-	-
DETECTOR FUNCTION	-	L	-	NL	-	L	-	NL

VIDEO DETECTORS

CAMERA DETECTOR	DETECTION ZONE	DELAY TIME (SEC.)
CD 5	VDZ 2A	-
	VDZ 2B	-
	VDZ 5	-
CD 6	VDZ 4	5
	VDZ 7	-
CD 7	VDZ 1	-
	VDZ 6A	-
	VDZ 6R	5
CD 8	VDZ 8	5



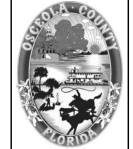
NOTES:

- THE MAJOR ROADWAY IS SIMPSON RD, WHICH HAS A POSTED SPEED LIMIT OF 40 MPH. THE MINOR ROADWAY IS NEW BEGINNINGS RD WHICH HAS A POSTED SPEED LIMIT OF 15 MPH.
- OVERHEAD STREET NAME SIGNS SHALL BE DOUBLE SIDED AND CANTILEVER MOUNTED TO THE PROPOSED MAST ARM UPRIGHT. SEE GUIDE SIGN WORKSHEET FOR SIGN DETAILS.
- VEHICLE DETECTION ZONE LENGTHS ON SIMPSON RD ARE BASED ON A 40 MPH POSTED SPEED LIMIT.
- REFER TO MAINTENANCE OF TRAFFIC PLANS FOR ADDITIONAL PAVEMENT MARKING INFORMATION.

REVISIONS

DATE	DESCRIPTION	DATE	DESCRIPTION

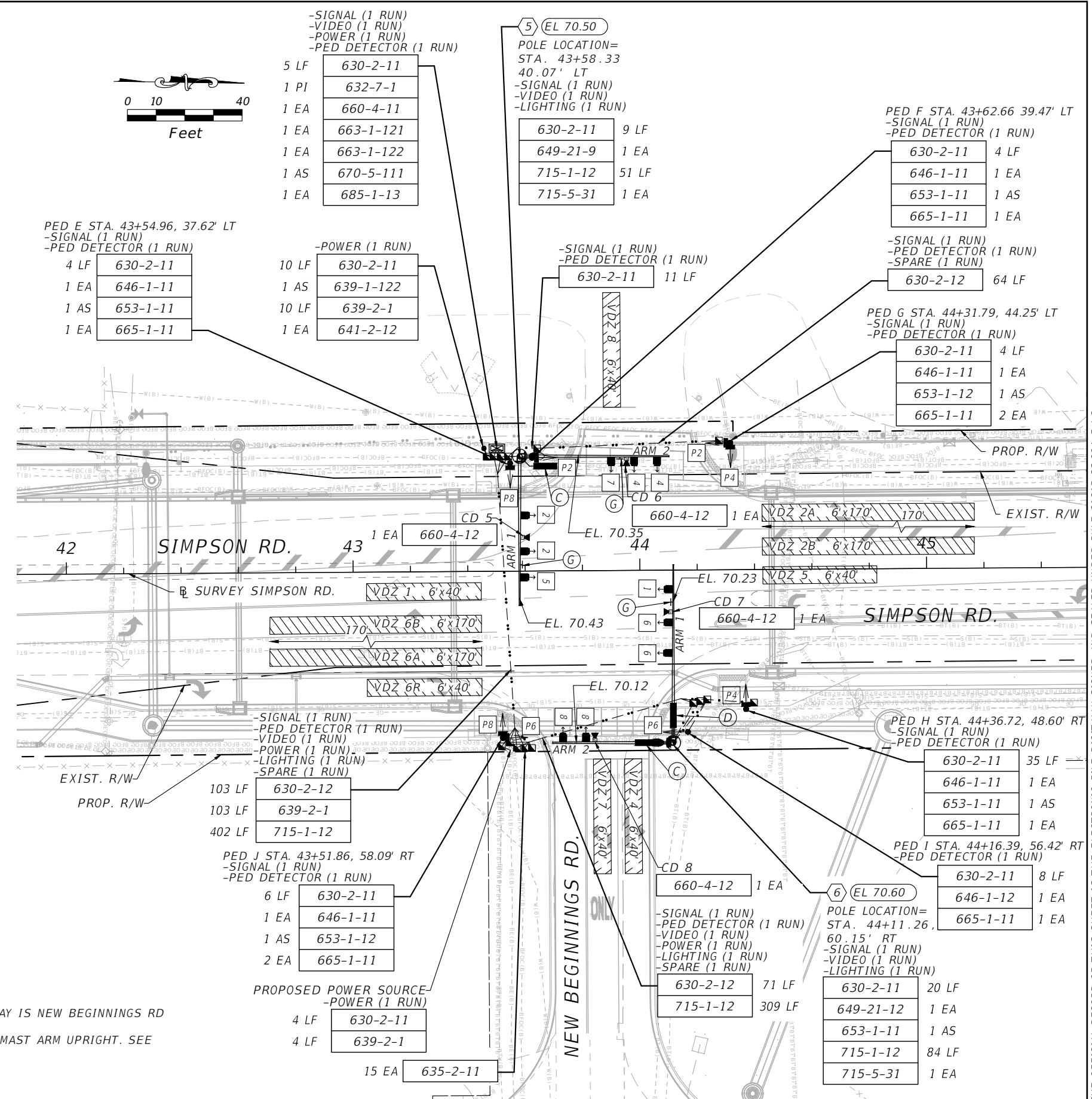
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PE # 81844



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FLORIDA

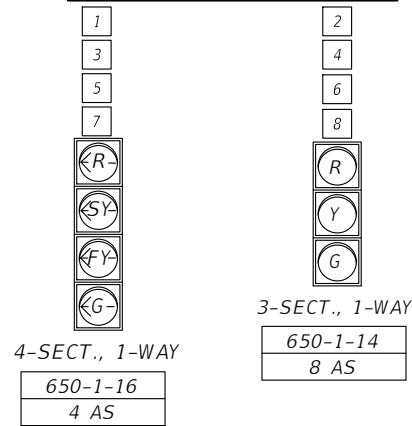
SIGNALIZATION PLAN (3)

SHEET NO.
T-7

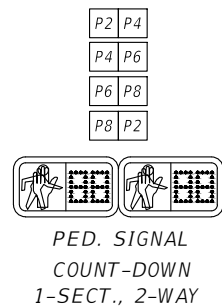


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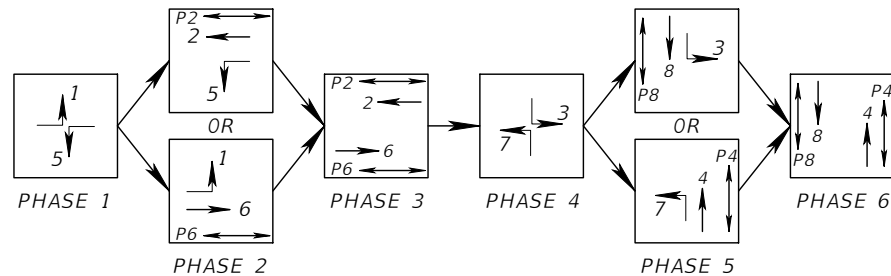
SIGNAL HEAD DETAILS



PEDESTRIAN SIGNAL HEAD DETAILS



MOVEMENT DIAGRAM (SOP 10)



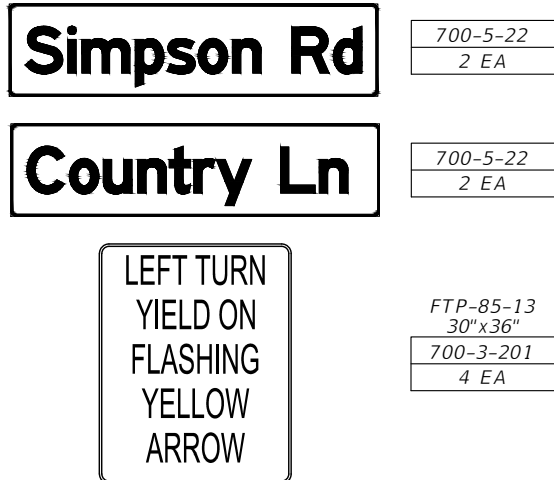
CONTROLLER TIMINGS

TIMING FUNCTION								
MOVEMENT NUMBER	1	2	3	4	5	6	7	8
MINIMUM GREEN	5	15	5	5	5	15	5	5
EXTENSION	3	2.5	3	3	3	2.5	3	3
MAXIMUM GREEN 1	20	50	15	20	20	50	15	20
MAXIMUM GREEN 2	-	-	-	-	-	-	-	-
YELLOW CLEARANCE	4.4	4.4	3.4	3.4	4.4	4.4	3.4	3.4
ALL RED	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
PEDESTRIAN WALK	-	7	-	7	-	7	-	7
PED. CLEARANCE	-	18	-	21	-	23	-	21
RECALL	-	MIN	-	-	-	MIN	-	-
DETECTOR FUNCTION	-	L	-	NL	-	L	-	NL

VIDEO DETECTORS

CAMERA DETECTOR	DETECTION ZONE	DELAY TIME (SEC.)
CD 9	VDZ 2A	-
	VDZ 2B	-
	VDZ 5	-
CD 10	VDZ 7	-
	VDZ 4	5
CD 11	VDZ 1	-
	VDZ 6A	-
CD 12	VDZ 3	-
	VDZ 8	5

OVERHEAD SIGNS



NOTES:

- THE MAJOR ROADWAY IS SIMPSON RD, WHICH HAS A POSTED SPEED LIMIT OF 40 MPH. THE MINOR ROADWAY IS COUNTRY LANE. THE POSTED SPEED LIMIT ON COUNTRY LANE WEST OF SIMPSON RD IS 25 MPH AND THE POSTED SPEED LIMIT ON COUNTRY LANE EAST OF SIMPSON ROAD IS 10 MPH.
- OVERHEAD STREET NAME SIGNS SHALL BE DOUBLE SIDED AND CANTILEVER MOUNTED TO THE PROPOSED MAST ARM UPRIGHT. SEE GUIDE SIGN WORKSHEET FOR SIGN DETAILS.
- VEHICLE DETECTION ZONE LENGTHS ON SIMPSON RD ARE BASED ON A 40 MPH POSTED SPEED LIMIT.

REVISIONS

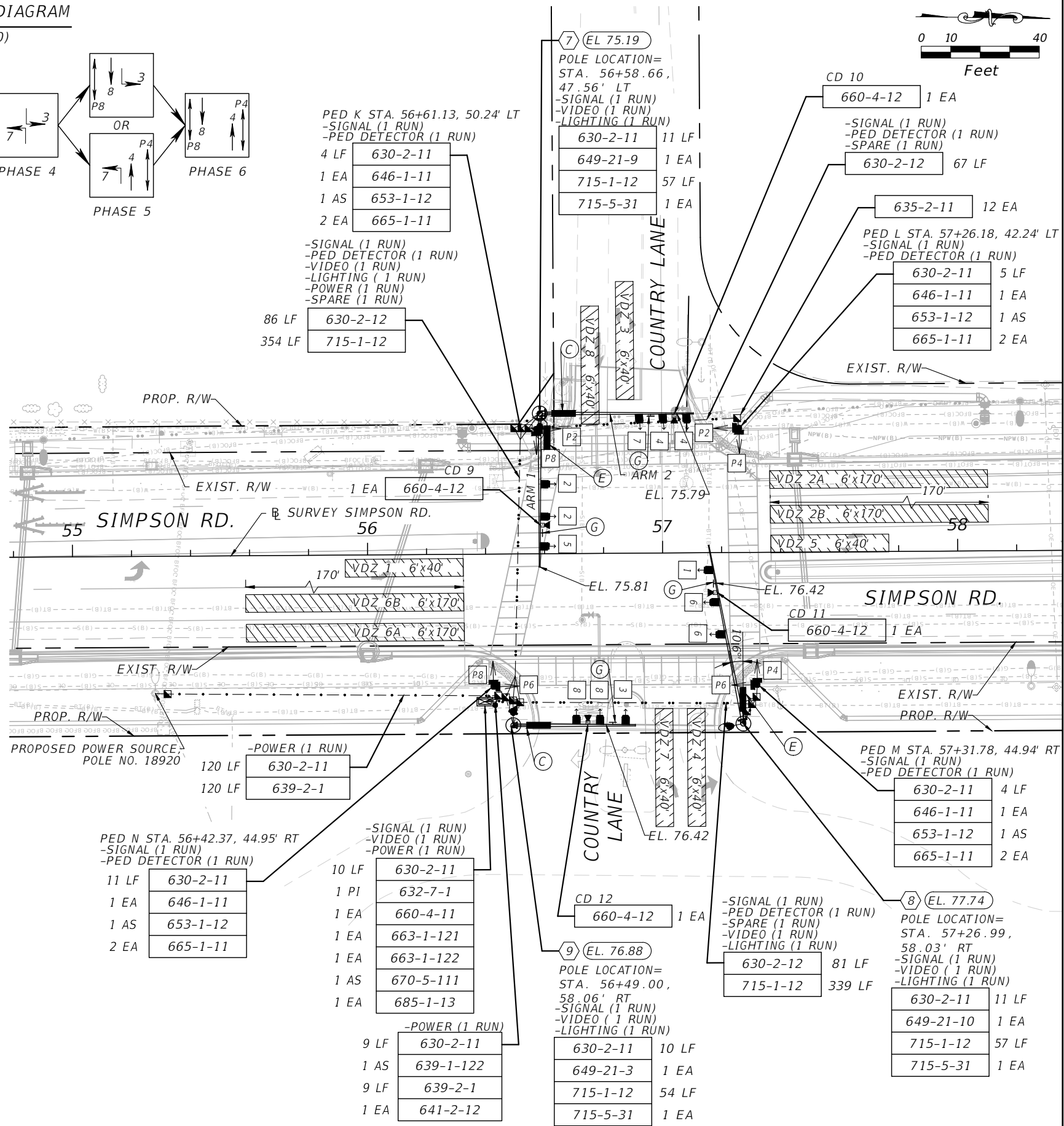
DATE	DESCRIPTION	DATE	DESCRIPTION

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FLORIDA

SIGNALIZATION PLAN (4)

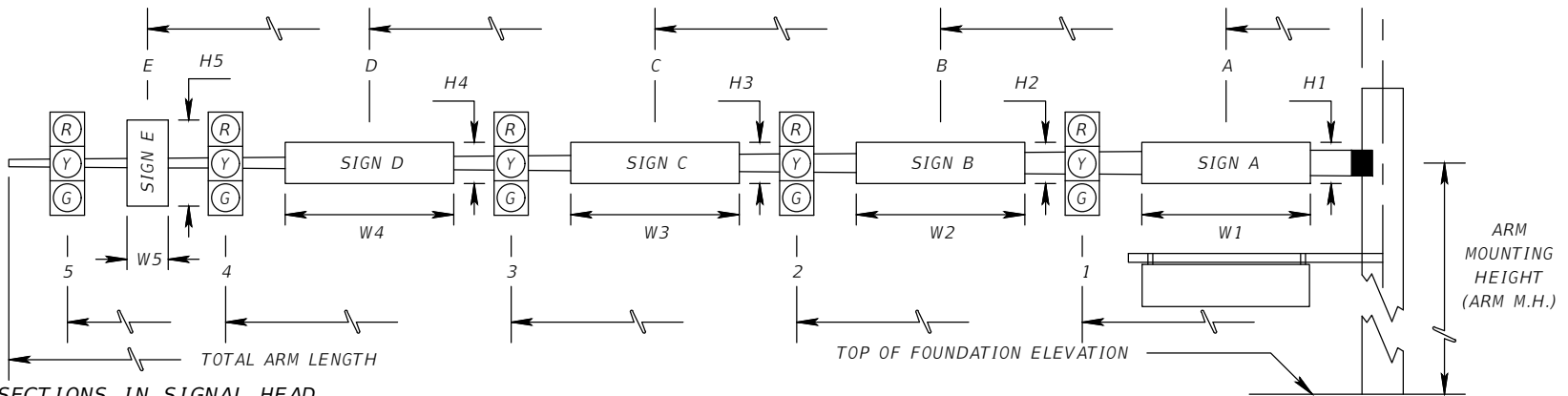
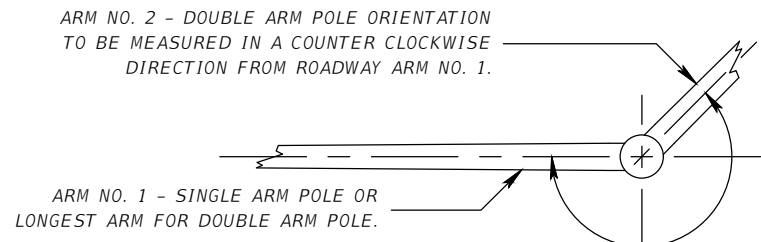
SHEET NO.
T-8



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SPECIAL INSTRUCTIONS

ID NO.	PED. BUTTON	PED. SIGNALS	HANDHOLE LOCATION



* DENOTES NUMBER OF SECTIONS IN SIGNAL HEAD ASSEMBLY

SIGNAL DATA

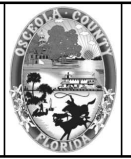
ID NO.	SHEET NO.	LOCATION BY STA.	TOP OF FOUND. ELEVATION	RDWY ARM NO.	CROWN ELEV.	SIGNAL V/H	BACK PLATES Y/N	PED. SIGNAL Y/N	DISTANCE FROM POLE												TOTAL ARM LENGTH	ARM M.H.	ANGLE BETWEEN DUAL ARMS 90/270	VIDEO DET. DIST FROM POLE	SIGN DATA						PAINT COLOR
									DISTANCE FROM POLE / HEIGHT AND WIDTH OF SIGN																A	H1	W1	B	H2	W2	
									1	*	2	*	3	*	4	*	5	*	6	*											
1	T-5	STA 8+85.97, 79.52' LT	65.83	1	66.09	V	Y	N	35.0	3	43.0	3	56.5	3	64.5	3	70	20.5		50.0	30.0	3.0	2.5					MIDNIGHT NEUTRAL			
2	T-5	STA 10+47.33, 66.00' LT	65.30	1	67.28	V	Y	N	26.5	3	38.0	3	49.5	3	62.0	3	70	22.0		42.0								MIDNIGHT NEUTRAL			
3	T-5	STA 10+50.84, 46.38' RT	64.98	1	65.60	V	Y	Y	25.5	3	36.5	3	44.5	3	50	21.0		31.5								MIDNIGHT NEUTRAL					
4	T-5	STA 8+84.05, 49.16' RT	65.21	1	66.72	V	Y	N	21.0	3*	33.5	3	45.5	3	57.0	3	78	22.0		50.5	72.0*	3.0	2.5					MIDNIGHT NEUTRAL			
5	T-7	STA 43+58.33, 40.07' LT	70.50	1	70.43	V	Y	N	19.0	3	31.5	3	40.5	4	50	21.0	90	26.5	37.5	3.0	2.5					MIDNIGHT NEUTRAL					
				2	70.35	V	Y	N	30.0	4	38.0	3	46.0	3	50	21.0		35.5	33.0	3.0	2.5										
6	T-7	STA 44+11.26, 60.15' RT	70.60	1	70.23	V	Y	Y	29.5	3	40.0	3	51.5	4	60	20.5	90	43.5	47.0	3.0	2.5					MIDNIGHT NEUTRAL					
				2	70.12	V	Y	Y	28.5	3	36.5	3	40	20.5		25.5															
7	T-8	STA 56+58.66, 47.56' LT	75.19	1	75.81	V	Y	N	22.0	3	33.0	3	43.5	4	50	21.5	90	36.0	39.0	3.0	2.5					MIDNIGHT NEUTRAL					
				2	75.79	V	Y	N	32.0	4	40.0	3	48.0	3	50	21.5		44.0	36.0	3.0	2.5										
8	T-8	STA 57+26.99, 58.03' RT	77.74	1	76.42	V	Y	N	29.5	3	41.0	3	52.0	4	60	19.5		44.0	47.0	3.0	2.5					MIDNIGHT NEUTRAL					
9	T-8	STA 56+49.00, 58.06' RT	76.88	1	76.42	V	Y	N	20.0	3	28.0	3	37.0	4	40	20.5		24.0	32.5	3.0	2.5					MIDNIGHT NEUTRAL					
				2																											

NOTES:
 1. SIGN A ON PROPOSED MAST ARM 4 IS FOR FUTURE USE AND IS NOT PROPOSED AS PART OF THIS PROJECT.
 2. SIGNAL HEAD 1 ON PROPOSED MAST ARM 4 IS FOR FUTURE USE AND IS NOT PROPOSED AS PART OF THIS PROJECT.

REVISIONS

DATE	DESCRIPTION	DATE	DESCRIPTION

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 PE # 81844



**OSCEOLA COUNTY
 FLORIDA**

MAST ARM TABULATION

SHEET NO.
 T-9

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			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					45	P5/S/L		20.5	DS/18/5.0
2	A70/S - P5/S/L	A70/S					96	P5/S/L		22.0	DS/16/5.0
3	A50/S - P3/S/L	A50/S					45	P3/S/L		21.0	DS/14/5.0
4	A78/S - P6/S/L	A78/S					24	P6/S/L		22.0	DS/25/5.0
5	A50/D - A50/D - P4/D/L	A50/D		A50/D		90	90	P4/D/L		21.0	DS/25/5.0
6	A60/D - A40/D - P4/D/L	A60/D		A40/D		90	90	P4/D/L		20.5	DS/20/5.0
7	A50/D - A50/D - P4/D/L	A50/D		A50/D		90	0	P4/D/L		21.5	DS/25/5.0
8	A60/S - P4/S/L	A60/S					79	P4/S/L		19.5	DS/25/5.0
9	A40/S - P2/S/L	A40/S					90	P2/S/L		20.5	DS/18/5.0


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.
- 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 INDEXES 649-030 AND 649-031.
- DESIGN WIND SPEED = 150 MPH IN ACCORDANCE WITH THE JANUARY 2022 STRUCTURES MANUAL.

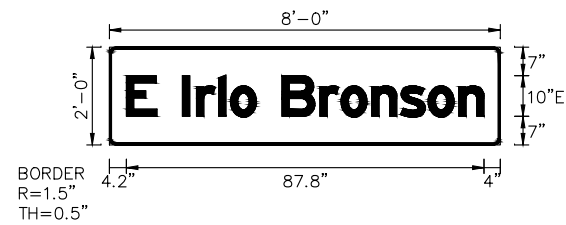
FOUNDATION NOTES [NOTES DATE 01-01-12]:

- DESIGN BASED ON BORINGS TAKEN ON 04/06/2021 THROUGH 04/08/2021 SEALED BY GEOTECHNICAL AND ENVIRONMENTAL CONSULTANTS, INC.
- ASSUMPTIONS AND VALUES USED IN DESIGN:
 SOIL TYPE = COHESIONLESS (FINE SAND)
 SOIL LAYER THICKNESS = 30 FT.
 DESIGN WATER TABLE = 0 FT. BELOW SURFACE

GEOTECHNICAL PROPERTIES			
ID NO.	EFFECTIVE UNIT WEIGHT (PCF)	FRICTION ANGLE (DEG)	SPT N-VALUE (BLOWS/FT)
1	47	30	11
2	47	30	11
3	47	30	11
4	47	30	10
5	42	29	7
6	42	29	7
7	42	29	6
8	42	29	6
9	42	29	6

REVISIONS				BASSEL KASSEM, P.E. P.E. LICENSE NUMBER 57947 FBT-FLORIDA BRIDGE AND TRANSPORTATION, INC. 633 DARTMOUTH STREET ORLANDO, FL 32804 (407) 513-9709		OSCEOLA COUNTY FLORIDA	STANDARD MAST ARM ASSEMBLIES DATA TABLE	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION					T-10

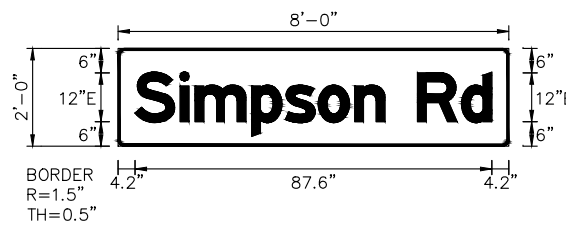
SIGN NAME	A		QTY	2	SIGN NUMBER	STATION(S)
PANEL	BORDER		none			
WIDTH	8'-0"	WIDTH	0.5"			
HEIGHT	2'-0"	RADII	1.5"			
LEGEND	White	COLOR	White			
COLOR	Green					
SYMBOL(S)	ANGLE	X	Y	WID	HT	
SIGN NUMBER	NUMBER OF POSTS	CLEARANCE Edge Of Lane	COLUMN SIZE		AVERAGE LENGTH	



NO. OF LIGHT FIXTURES	FIXTURE SPACING	PHOTOMETRIC CURVE	WATT	VOLTAGE

COPY	E	I	r	I	o	B	r	o	n	s	o	n	L		
SPACE	4.5	12	18.3	21.7	27.1	30.1	36.5	42.7	52	57.2	64.7	71.8	78.6	86.1	87.8
COPY															
SPACE															
COPY															
SPACE															
COPY															
SPACE															
COPY															
SPACE															

SIGN NAME	C		QTY	5	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 Lane	COLUMN SIZE		AVERAGE LENGTH	



NO. OF LIGHT FIXTURES	FIXTURE SPACING	PHOTOMETRIC CURVE	WATT	VOLTAGE

COPY	S	i	m	p	s	o	n	R	d	L
SPACE	4.2	15.2	18.9	32.8	41.1	49.2	58.1	73.6	84.4	87.6
COPY										
SPACE										
COPY										
SPACE										
COPY										
SPACE										
COPY										
SPACE										

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION


 Engineers | Scientists
 Planners | Designers
 225 E. Robinson Street, Suite 300
 Orlando, FL 32801 (407)839-4006
 Certificate of Authorization # 3932
 Jennifer M. DiStefano, P.E.
 PE # 81844

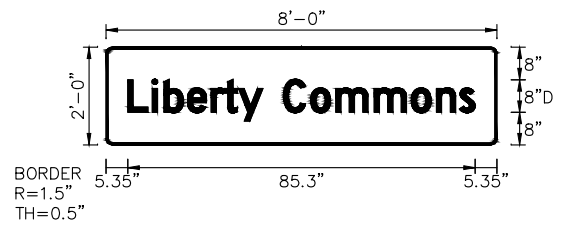


OSCEOLA COUNTY
FLORIDA

GUIDE SIGN
WORKSHEET (1)

SHEET
NO.
T-11

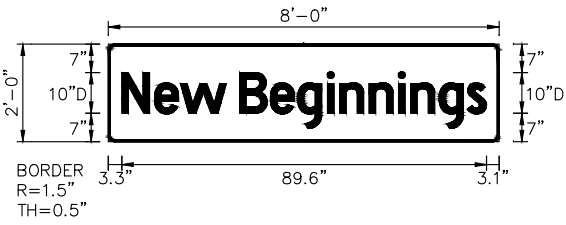
SIGN NAME	B		QTY	1	SIGN NUMBER	STATION(S)
PANEL	BORDER		none			
WIDTH	8'-7"	WIDTH	0.5"			
HEIGHT	1'-1"	RADII	0"			
LEGEND	White	COLOR	White			
COLOR	Green					
SYMBOL(S)	ANGLE	X	Y	WID	HT	
SIGN NUMBER	NUMBER OF POSTS	CLEARANCE Edge Of Lane	COLUMN SIZE		AVERAGE LENGTH	



NO. OF LIGHT FIXTURES	FIXTURE SPACING	PHOTOMETRIC CURVE	WATT	VOLTAGE

COPY	L	i	b	e	r	t	y	C	o	m	m	o	n	s	L
SPACE	0	7.5	11.1	18.3	25.6	29.7	34	44	52.4	60.1	71.9	83.3	91	98.2	102.9
COPY															
SPACE															
COPY															
SPACE															
COPY															
SPACE															
COPY															
SPACE															

SIGN NAME	D		QTY	1	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 Lane	COLUMN SIZE		AVERAGE LENGTH	

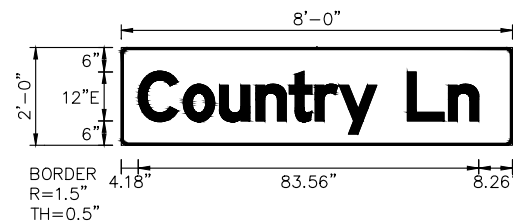


NO. OF LIGHT FIXTURES	FIXTURE SPACING	PHOTOMETRIC CURVE	WATT	VOLTAGE

COPY	N	e	w	B	e	g	i	n	n	i	n	g	s	L
SPACE	3.3	11.4	17.7	32.3	39.8	46.4	53.8	56.8	64.1	71.3	74.3	81.2	88.2	89.6
COPY														
SPACE														
COPY														
SPACE														
COPY														
SPACE														
COPY														
SPACE														

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SIGN NAME	E	QTY	z	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 Lane	COLUMN SIZE		AVERAGE LENGTH



NO. OF LIGHT FIXTURES	FIXTURE SPACING	PHOTOMETRIC CURVE	WATT	VOLTAGE
-----------------------	-----------------	-------------------	------	---------

COPY	C	o	u	n	t	r	y	L	n	L	
SPACE	4.2	15.2	24.1	33.1	41.3	47.6	53.5	62.7	70.2	80.3	83.6
COPY											
SPACE											
COPY											
SPACE											
COPY											
SPACE											
COPY											
SPACE											
COPY											
SPACE											

SIGN NAME		QTY		SIGN NUMBER	STATION(S)
PANEL	BORDER				
WIDTH		WIDTH			
HEIGHT		RADII			
LEGEND		COLOR			
COLOR					
SYMBOL(S)	ANGLE	X	Y	WID	HT
SIGN NUMBER	NUMBER OF POSTS	CLEARANCE Edge Of Lane	COLUMN SIZE		AVERAGE LENGTH

NO. OF LIGHT FIXTURES	FIXTURE SPACING	PHOTOMETRIC CURVE	WATT	VOLTAGE
-----------------------	-----------------	-------------------	------	---------

COPY										
SPACE										
COPY										
SPACE										
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COPY										
SPACE										

SIGN NAME		QTY		SIGN NUMBER	STATION(S)
PANEL	BORDER				
WIDTH		WIDTH			
HEIGHT		RADII			
LEGEND		COLOR			
COLOR					
SYMBOL(S)	ANGLE	X	Y	WID	HT
SIGN NUMBER	NUMBER OF POSTS	CLEARANCE Edge Of Lane	COLUMN SIZE		AVERAGE LENGTH

NO. OF LIGHT FIXTURES	FIXTURE SPACING	PHOTOMETRIC CURVE	WATT	VOLTAGE
-----------------------	-----------------	-------------------	------	---------

COPY										
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SIGN NAME		QTY		SIGN NUMBER	STATION(S)
PANEL	BORDER				
WIDTH		WIDTH			
HEIGHT		RADII			
LEGEND		COLOR			
COLOR					
SYMBOL(S)	ANGLE	X	Y	WID	HT
SIGN NUMBER	NUMBER OF POSTS	CLEARANCE Edge Of Lane	COLUMN SIZE		AVERAGE LENGTH

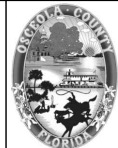
NO. OF LIGHT FIXTURES	FIXTURE SPACING	PHOTOMETRIC CURVE	WATT	VOLTAGE
-----------------------	-----------------	-------------------	------	---------

COPY										
SPACE										
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COPY										
SPACE										

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION



Engineers | Scientists
Planners | Designers
225 E. Robinson Street, Suite 300
Orlando, FL 32801 (407) 839-4006
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Jennifer M. DiStefano, P.E.
PE # 81844



OSCEOLA COUNTY
FLORIDA

GUIDE SIGN
WORKSHEET (2)

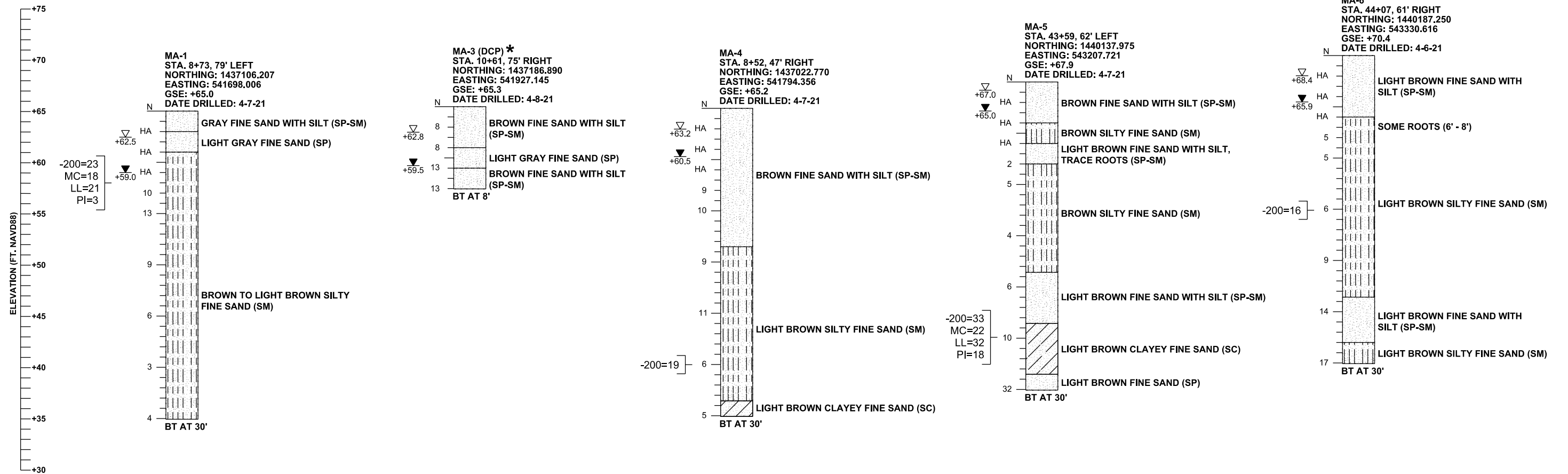
SHEET
NO.

T-12

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US 192 AND SIMPSON ROAD / LIBERTY COMMONS BOULEVARD INTERSECTION

SIMPSON ROAD AND NEW BEGINNINGS ROAD 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. NAVD88) 24 HRS. AFTER DATE DRILLED
- 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



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.

* DUE TO UNDERGROUND UTILITIES, BORING MA-3 COULD NOT BE PERFORMED AS AN SPT. THE DYNAMIC CONE PENETROMETER (DCP) TEST BORING MA-3 WAS PERFORMED IN GENERAL ACCORDANCE WITH "DYNAMIC CONE FOR SHALLOW IN-SITU PENETRATION TESTING, VANE SHEAR AND CONE PENETRATION TESTING OF IN-SITU SOILS", ASTM STP 399, 1966.

THE "N" VALUES SHOWN FOR THE DCP TEST BORING REPRESENT APPROXIMATE STANDARD PENETRATION RESISTANCE, BLOWS PER FOOT CORRELATED FROM MEASURED DCP RESISTANCE, BLOWS PER 1.75 INCHES OF 1.75 INCHES OF PENETRATION. THE CORRELATION OF DCP TO SPT "N" VALUES IS BASED ON THE CALIBRATION CURVE FOR COASTAL PLAINS SOILS, ASTM SPT 399, 1966.

BORING LOCATIONS WERE ESTABLISHED IN THE FIELD USING A SUB-METER ACCURACY TRIMBLE GPS UNIT. BORING LOCATIONS WERE SURVEYED BY DRMP, INC. FOR VERTICAL AND HORIZONTAL CONTROL.

ACCORDING TO THE FDEP SEPTEMBER 2017 POTENTIOMETRIC CONTOURS MAP, THE POTENTIOMETRIC SURFACE OF THE FLORIDA AQUIFER IN THE VICINITY OF THE SUBJECT INTERSECTIONS IS APPROXIMATELY +50 FEET NGVD. THE CONTRACTOR SHALL BE PREPARED TO HANDLE ARTESIAN HEAD LEVELS UP TO +50 FEET NGVD.

SPLIT SPOON SAMPLER:
 INSIDE DIAMETER: 1.375 IN.
 OUTSIDE DIAMETER: 2.0 IN.
 AVERAGE HAMMER DROP: 30 IN.
 HAMMER WEIGHT: 140 LBS.
 HAMMER TYPE: AUTOMATIC (MA-1, MA-4, MA-5, AND MA-6)
 MANUAL (MA-3)

BORINGS MA-1, MA-3, MA-4
 SECTION: 30
 TOWNSHIP: 25 SOUTH
 RANGE: 30 EAST

BORINGS MA-5 AND MA-6
 SECTION: 19
 TOWNSHIP: 25 SOUTH
 RANGE: 30 EAST

CORRELATION OF STANDARD PENETRATION RESISTANCE WITH RELATIVE DENSITY AND CONSISTENCY OF SOIL

SOIL TYPE	AUTOMATIC HAMMER N VALUE (blows per foot)	RELATIVE DENSITY
GRANULAR SOILS SANDS	0-3	VERY LOOSE
	3-8	LOOSE
	8-24	MEDIUM DENSE
	24-40	DENSE
	OVER 40	VERY DENSE
AUTOMATIC HAMMER N VALUE (blows per foot)		
NON-GRANULAR SOILS		CONSISTENCY
SILTS, CLAYS, MUCK, PEAT	0-1	VERY SOFT
	1-3	SOFT
	3-6	FIRM
	6-12	STIFF
	12-24	VERY STIFF
OVER 24	HARD	
MANUAL HAMMER (SAFETY) N VALUE (blows per foot)		
GRANULAR SOILS		RELATIVE DENSITY
SANDS	0-4	VERY LOOSE
	4-10	LOOSE
	10-30	MEDIUM DENSE
	30-50	DENSE
	OVER 50	VERY DENSE
MANUAL HAMMER (SAFETY) N VALUE (blows per foot)		
NON-GRANULAR SOILS		CONSISTENCY
SILTS, CLAYS, MUCK, PEAT	0-2	VERY SOFT
	2-4	SOFT
	4-8	FIRM
	8-15	STIFF
	15-30	VERY STIFF
OVER 30	HARD	

FIGURE 3A

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CHRISTOPHER P. MEYER, P.E.
 P.E. LICENSE NUMBER 49328
 GEOTECHNICAL AND ENVIRONMENTAL CONSULTANTS, INC.
 2510 MICHIGAN AVENUE, SUITE D
 KISSIMMEE, FL 34744-1933



OSCEOLA COUNTY
 FLORIDA

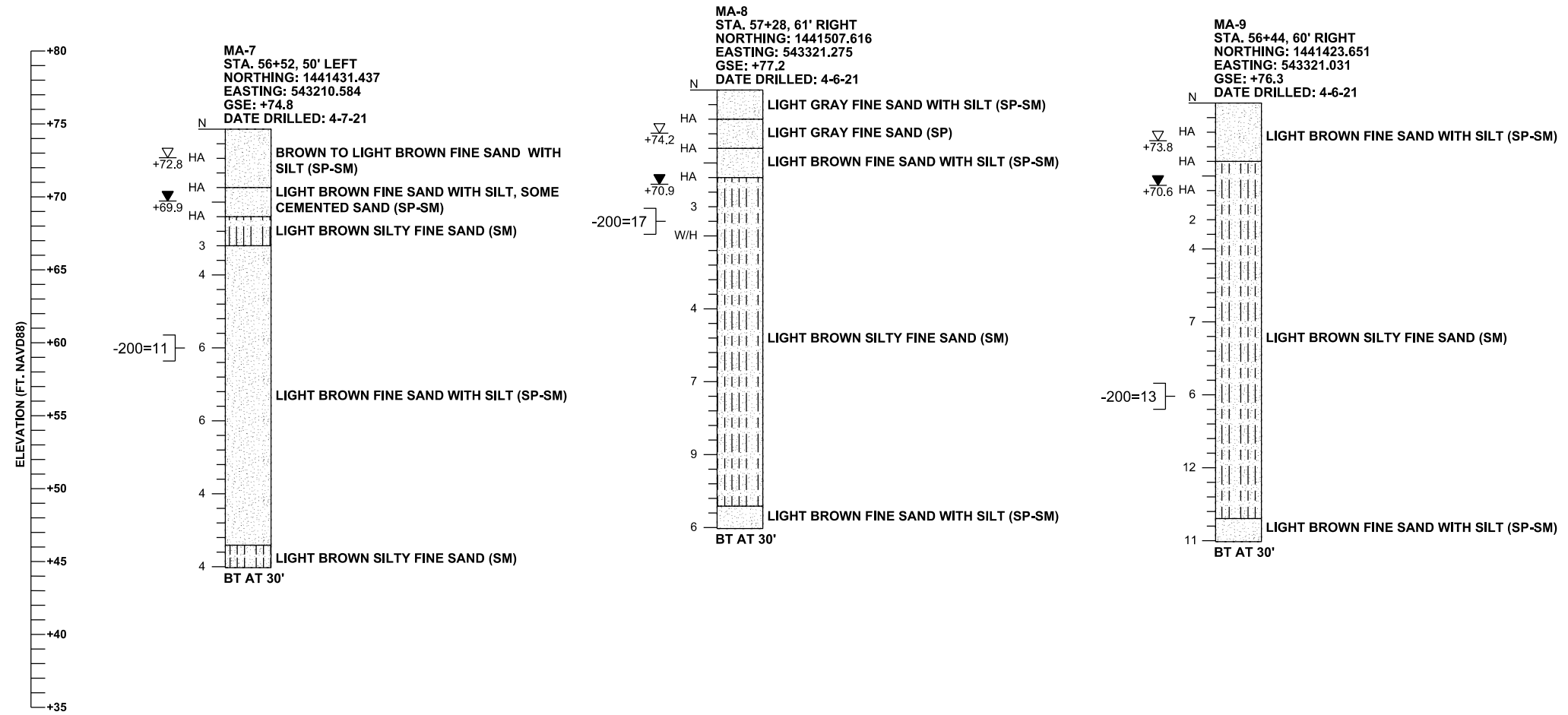
SPT BORING RESULTS FOR
 MAST ARM SIGNAL POLES

SHEET NO.

T-13

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

SIMPSON ROAD AND COUNTRY LANE INTERSECTION



LEGEND

- GSE GROUND SURFACE ELEVATION (FT. NAVD88)
- N STANDARD PENETRATION RESISTANCE, BLOWS PER FOOT
- HA HAND AUGERED FOR UTILITY CLEARANCE
- W/H WEIGHT OF HAMMER
- ▽ ESTIMATED SEASONAL HIGH GROUNDWATER ELEVATION (FT. NAVD88)
- ▼ ENCOUNTERED GROUNDWATER ELEVATION (FT. NAVD88) 24 HRS. AFTER DATE DRILLED
- BT BORING TERMINATED AT DEPTH INDICATED
- 200= PERCENT PASSING NO. 200 U.S. STANDARD SIEVE



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.

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ACCORDING TO THE FDEP SEPTEMBER 2017 POTENTIOMETRIC CONTOURS MAP, THE POTENTIOMETRIC SURFACE OF THE FLORIDA AQUIFER IN THE VICINITY OF THE SUBJECT INTERSECTIONS IS APPROXIMATELY +50 FEET NGVD. THE CONTRACTOR SHALL BE PREPARED TO HANDLE ARTESIAN HEAD LEVELS UP TO +50 FEET NGVD.

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

SECTION: 19
 TOWNSHIP: 25 SOUTH
 RANGE: 30 EAST

CORRELATION OF STANDARD PENETRATION RESISTANCE WITH RELATIVE DENSITY AND CONSISTENCY OF SOIL

GRANULAR SOILS	AUTOMATIC HAMMER	RELATIVE DENSITY	
	N VALUE (blows per foot)		
SANDS	0-3	VERY LOOSE	
	3-8	LOOSE	
	8-24	MEDIUM DENSE	
	24-40	DENSE	
	OVER 40	VERY DENSE	
NON-GRANULAR SOILS	AUTOMATIC HAMMER	CONSISTENCY	
	N VALUE (blows per foot)		
	0-1		VERY SOFT
	1-3		SOFT
	3-6		FIRM
	6-12		STIFF
12-24	VERY STIFF		
OVER 24	HARD		

FIGURE 3B

REVISIONS				CHRISTOPHER P. MEYER, P.E. P.E. LICENSE NUMBER 49328 GEOTECHNICAL AND ENVIRONMENTAL CONSULTANTS, INC. 2510 MICHIGAN AVENUE, SUITE D KISSIMMEE, FL 34744-1933		OSCEOLA COUNTY FLORIDA	SPT BORING RESULTS FOR MAST ARM SIGNAL POLES	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION					T-14

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