OSCEOLA COUNTY

PUBLIC WORKS DEPARTMENT

CONTRACT PLANS

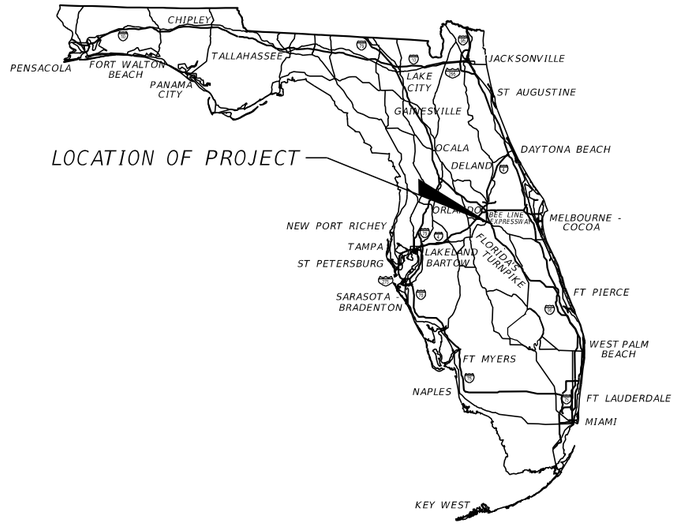
OSCEOLA COUNTY CONTRACT ID: PS-20-11504-DG

PARTIN SETTLEMENT ROAD

FROM NEPTUNE ROAD (CR 525) TO LAKESHORE BLVD.

COUNTY ROAD NO.523

SIGNALIZATION PLANS



INDEX OF SIGNALIZATION PLANS

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T-14 THRU T-17	STANDARD PENETRATION TEST (SPT) BORINGS
T-18 THRU T-19	GUIDE SIGN WORKSHEET

SIGNALIZATION PLANS
ENGINEER OF RECORD:

RYAN P. BOGAN, P.E.
P.E. LICENSE NUMBER 82217
JOHNSON, MIRMIRAN, & THOMPSON, INC
400 COLONIAL CENTER PKY, SUITE 100
LAKE MARY, FL 32746

COUNTY PROJECT MANAGER:

STEVEN KANE, P.E.

CONSTRUCTION CONTRACT NO.	FISCAL YEAR	SHEET NO.
TBD	23	T-1

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RYAN P. BOGAN
LICENSE
No 82217
STATE OF
FLORIDA
PROFESSIONAL ENGINEER

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JOHNSON, MIRMIRAN & THOMPSON
400 COLONIAL CENTER PKY, SUITE 100
LAKE MARY, FL 32746
RYAN P. BOGAN, P.E. NO. 82217

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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ELIAS N. JAMMAL
LICENSE
No 60126
STATE OF
FLORIDA
PROFESSIONAL ENGINEER

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TERRACON
1675 LEE ROAD
WINTER PARK, FL 32789
ELIAS N. JAMAL, P.E. NO. 60126

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PLAN INDEX

SHEET NO.	SHEET DESCRIPTION
T-2	SIGNATURE SHEET
T-14 THRU T-17	STANDARD PENETRATION TEST (SPT) BORINGS

SENAKA P. ATURALIYA
LICENSE
No 86226
STATE OF
FLORIDA
PROFESSIONAL ENGINEER

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JOHNSON, MIRMIRAN & THOMPSON
400 COLONIAL CENTER PKY, SUITE 100
LAKE MARY, FL 32746
SENAKA P. ATURALIYA, P.E. NO. 86226

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PLAN INDEX

SHEET NO.	SHEET DESCRIPTION
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T-12	STANDARD MAST ARM ASSEMBLIES DATA TABLE
T-13	SPECIAL MAST ARM ASSEMBLIES DATA TABLE

23.004, F.A.C.

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

ENGINEER OF RECORD

RYAN P. BOGAN, P.E.
LICENSE NUMBER 82217
JOHNSON, MIRMIRAN & THOMPSON
400 COLONIAL CENTER PKY, SUITE 100
LAKE MARY, FL 32746

OSCEOLA COUNTY
PUBLIC WORKS DEPARTMENT

ROAD IDENTIFICATION	CONTRACT ID
PARTIN SETTLEMENT RD.	PS-20-11504-DG

SIGNATURE SHEET

SHEET NO.
T-2

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TABULATION OF QUANTITIES

PAY ITEM NO.	DESCRIPTION	UNIT	SHEET NUMBERS										TOTAL THIS SHEET		GRAND TOTAL	
			T-6		T-7		T-8		T-9		T-10					
			PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL
630-2-11	CONDUIT, FURNISH & INSTALL, OPEN TRENCH	LF	40		80		150		150		121		541		541	
630-2-12	CONDUIT, FURNISH & INSTALL, DIRECTIONAL BORE	LF	226		385		531		349		155		1646		1646	
632-7-1	SIGNAL CABLE-RECONSTRUCTED INTERSECTION, FURNISH & INSTALL	PI	1		1		1		1		1		5		5	
635-2-11	PULL & SPLICE BOX, F&I, 13" X 24" COVER SIZE	EA			15		15		14		13		57		57	
639-1-122	ELECTRICAL POWER SERVICE, F&I, UNDERGROUND, METER PURCHASED BY CONTRACTOR	AS			1		1		1		1		4		4	
641-2-11	PRESTRESSED CONCRETE POLE, F&I, TYPE P-II PEDESTAL	EA			1		1		1		1		4		4	
641-2-60	PRESTRESSED CONCRETE POLE, COMPLETE POLE REMOVAL- PEDESTAL/SERVICE POLE	EA			1		1		1		1		4		4	
641-2-70	PRESTRESSED CONCRETE POLE, SHALLOW POLE REMOVAL- POLE 30' AND GREATER	EA					4						4		4	
646-1-11	ALUMINUM SIGNALS POLE, PEDESTAL	EA	4		6		5		6		2		23		23	
646-1-60	ALUMINUM SIGNALS POLE, REMOVE	EA	1		8		5		6				20		20	
646-2-115	ALUMINUM POLE-INDEX 695-001, FURNISH & INSTALL 15'	EA									4		4		4	
646-2-600	ALUMINUM POLE-INDEX 695-001, REMOVE	EA									2		2		2	
649-21-10	STEEL MAST ARM ASSEMBLY, FURNISH & INSTALL, SINGLE ARM 60'	EA							1				1		1	
649-21-15	STEEL MAST ARM ASSEMBLY, FURNISH & INSTALL, SINGLE ARM 70'	EA			2						1		3		3	
649-21-19	STEEL MAST ARM ASSEMBLY, FURNISH & INSTALL, DOUBLE ARM 70'-60'	EA							1				1		1	
649-21-21	STEEL MAST ARM ASSEMBLY, FURNISH & INSTALL, SINGLE ARM 78'	EA					2						2		2	
649-21-3	STEEL MAST ARM ASSEMBLY, FURNISH AND INSTALL, SINGLE ARM 40'	EA							1				1		1	
649-26-3	STEEL MAST ARM ASSEMBLY, REMOVE, SHALLOW FOUNDATION-BOLT ON ATTACHMENT	EA			2				2		1		5		5	
650-1-14	VEHICULAR TRAFFIC SIGNAL, FURNISH & INSTALL ALUMINUM, 3 SECTION, 1 WAY	AS			13		16		12				41		41	
650-1-16	VEHICULAR TRAFFIC SIGNAL, FURNISH & INSTALL ALUMINUM, 4 SECTION, 1 WAY	AS					2						2		2	
650-1-60	VEHICULAR TRAFFIC SIGNAL, REMOVE-POLES TO REMAIN	AS			7		15		8		8		38		38	
653-1-11	PEDESTRIAN SIGNAL, FURNISH & INSTALL LED COUNTDOWN 1 WAY	AS	4		4		2		4				14		14	
653-1-12	PEDESTRIAN SIGNAL, FURNISH & INSTALL LED COUNTDOWN 2 WAYS	AS			2		3		2				7		7	
653-1-60	PEDESTRIAN SIGNAL, REMOVE PED SIGNAL- POLE/PEDESTAL TO REMAIN	AS	4		8		6		6				24		24	
660-4-11	VEHICULAR DETECTION SYSTEM-VIDEO, FURNISH & INSTALL CABINET EQUIPMENT	EA			1		1		1		1		4		4	
660-4-12	VEHICULAR DETECTION SYSTEM-VIDEO, FURNISH & INSTALL ABOVE GROUND EQUIPMENT	EA			4		4		4		4		16		16	
660-4-51	VEHICULAR DETECTION SYSTEM-VIDEO, ADJUST/MODIFY CABINET EQUIPMENT	EA	1										1		1	
660-4-52	VEHICULAR DETECTION SYSTEM-VIDEO, ADJUST/MODIFY ABOVE GROUND EQUIPMENT	EA	1										1		1	
663-1-112	SIGNAL PRIORITY AND PREEMPTION SYSTEM, F&I, OPTICAL, DETECTOR	EA					4		4				8		8	
663-1-121	SIGNAL PRIORITY AND PREEMPTION SYSTEM, FURNISH AND INSTALL, GPS, REPLACE CABINET ELECTRONICS	EA			1		1		1		1		4		4	
663-1-122	SIGNAL PRIORITY AND PREEMPTION SYSTEM, FURNISH AND INSTALL, GPS, DETECTOR	EA			1		1		1		1		4		4	
665-1-11	PEDESTRIAN DETECTOR, FURNISH & INSTALL, STANDARD	EA	4		8		8		8		2		30		30	
665-1-60	PEDESTRIAN DETECTOR, REMOVE-POLE/PEDESTAL TO REMAIN	EA	4		8		6		6				24		24	
670-5-111	TRAFFIC CONTROLLER ASSEMBLY, F&I, NEMA, 1 PREEMPTION	AS									1		1		1	
670-5-112	TRAFFIC CONTROLLER ASSEMBLY, F&I, NEMA, 2 PREEMPTION	AS			1		1		1				3		3	
670-5-600	TRAFFIC CONTROLLER ASSEMBLY, REMOVE CONTROLLER WITH CABINET	AS			1		1		1		1		4		4	
671-2-40	TRAFFIC CONTROLLER, MODIFY	EA	1										1		1	
685-1-13	UNINTERRUPTABLE POWER SUPPLY, FURNISH & INSTALL, LINE INTERACTIVE WITH CABINET	EA			1		1		1		1		4		4	
700-3-201	SIGN PANEL, FURNISH & INSTALL OVERHEAD MOUNT, UP TO 12 SF	EA					3						3		3	
700-5-21	INTERNALLY ILLUMINATED SIGN, FURNISH & INSTALL OVERHEAD MOUNT, UP TO 12 SF	EA					2						2		2	
700-5-22	INTERNALLY ILLUMINATED SIGN, FURNISH & INSTALL, OVERHEAD MOUNT, 12-18 SF	EA			2		2		4		3		11		11	

REVISIONS				ENGINEER OF RECORD	OSCEOLA COUNTY PUBLIC WORKS DEPARTMENT		TABULATION OF QUANTITIES	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION	RYAN P. BOGAN, P.E. LICENSE NUMBER 82217 JOHNSON, MIRMIRAN & THOMPSON 400 COLONIAL CENTER PKY, SUITE 100 LAKE MARY, FL 32746	ROAD IDENTIFICATION	CONTRACT ID		T-3
					PARTIN SETTLEMENT RD.	PS-20-11504-DG		

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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.

Utilities

1. The location of the utilities shown in the plans is based on limited investigation techniques and should be considered approximate only. The exact location shall be determind 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 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 time frame. It shall be the contractor's responsibiltiy 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 nondestructive 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 it's 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., (800) 432-4770, 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.

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 Constructions 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 resposible for ensuring 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 applicalbe 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 to commencement, via email to Kathy.Lee@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 Aaron Torres (Senior Signal Tech) at (407) 738-9405 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 biweekly basis.

11. All disturbed areas, including pavement markings, shall be restored, at the contractor's expense, to original condition or better.

12. The contractor shall be advised that other projects may be under construction concurrently with this project and that coordinating 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.

13. 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.

14. 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.

15. 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 in writing.

16. 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.

17. All ends of conduits in pull boxes and cabinets shall be sealed with electrical putty after wiring is complete.

18. 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.

19. 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 - 660-2.2.2.2 Video" as it applies to video vehicle detection systems. Errors because of variations shall be fixed at the contractors expense, no additional compensation will be provided.

20. 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.

21. No video detection shall be installed on uprights of mast arms.

22. 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.

23. Cable grip shall be of sufficient size to not compromise the insulation on the signal cable.

24. 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.

25. Delay time shall be set to five seconds.

26. All signal assemblies shall have a veritcal clearance of 17.5' (minimum) to 19' (maximum) from the bottom of the assembly to the highest point of the road beneath.

27. Ground rods are to be installed in pull boxes when possible.

28. 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.

29. 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.

30. All field wiring shall be neatly bundled and clearly identified with pemanent legible, weatherproof tags that are securely attacahed to each cable. The tagging system proposed shall be submitted for approval with the other equipment submittals required for this project.

31. Three spare conductors shall be installed per vehicle phase. Spares shall be bound and grounded in cabinet.

32. A manual push cord shall be furnished per FDOT specifications 676-2.2.2.

33. Two spare conduits stubbed to the nearest pull box shall be installed in all new cabinet installations.

34. All signal runs installed shall be continuous runs or if not continuous must have a terminal strip installed and fastened to the mast arm.

35. All signal indications shall be L.E.D. L.E.D. product informations shall be submitted to the EOR for review and approval.

36. Solid conductors should be used for main roadway phases and tracers used for side street phases.

37. No mixing of signal wires and fiber will be permitted.

38. No use of LB conduits shall be used in existing or new cabinet installs.

39. All wires or fiber in pull boxes or signal cabinets must be clearly marked for directions and phases on video cables, video racks and any loops.

40. All pedestrian walkways shall use "cast in place" type ADA mat. No ADA mat fastened to the concrete or paint on mats shall be used.

Structures

1. The contractor shall verify structure orientation prior to placement. Structures of incorrect orientation shall be replaced at contractors expense. The contractor shall verify that all structures are set to elevations that wil lmeet 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 105-8.1.1. 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, Aaron Torres (Signal Project Manager) @ (407) 738-9405. Osceola County Transportation and Transit should be contacted ten business days before 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 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 inspections, 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.

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 to Osceola County Transportation and Transit. The Contractor shall leave one as-built plan in the drawer of the signal 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 Kathy Lee, P.E. on Osceola County projects to the office below. The contractor shall allow for 15 working day turn around on submittals.
   Osceola County Transportation and Transit
   Attn: Kathy Lee, P.E.
   1 Courthouse Square Suite 3100
   Kissimmee, FL 34741

2. Prior to any equipment order, the contractor shall submit for approval equipment specifications, or design data for all material proposed for this project.

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REVISIONS				ENGINEER OF RECORD	OSCEOLA COUNTY PUBLIC WORKS DEPARTMENT		GENERAL NOTES	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION	RYAN P. BOGAN, P.E. LICENSE NUMBER 82217 JOHNSON, MIRMIRAN & THOMPSON 400 COLONIAL CENTER PKY, SUITE 100 LAKE MARY, FL 32746	ROAD IDENTIFICATION	CONTRACT ID		
					PARTIN SETTLEMENT RD.	PS-20-11504-DG		T-4

Communications

1. All new fiber installations, trench or bore, shall have a spare 2-2" conduit installed with a 10 gauge trace wire.

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 enclosure at the end of the run. Splicing of fiber interconnect cable between splice enclosures 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 Transportation and Transit. Any supplied controller cabinet, controller, telemtry 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) 742-9166 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 Transportation and Transit. This notification shall be conveyed via electronic mail (email) to the Traffic Management Center Supervisor Lindsey Giovinazzo at Lindsey.Giovinazzo@osceola.org, and copy Traffic Operations Engineer Kathy Lee at kathy.lee@osceola.org. Notification shall include contact person, telephone number, purpose, location and duration. The disruption shall last no more than three consecutive business days. Where possible, the disruption shall be during off peak hours beginning at 9:00am and ending at 3:00pm or from 6:00pm to 7:00am.

7. Conduit locations shown on the plans are approximate. Conduit shall be placed within the right-of-way but can be adjusted to fit around the existing and proposed utilities. Any significant deviation from the plans shall be approved by the Engineer.

8. Do not place pull boxes at the bottom of ditches.

9. Pull boxes and covers shall be FDOT approved of non-metallic construction with recessed cover. The legend "OSCEOLA COUNTY ATMS" (first line) "FIBER OPTIC" (second line) shall be stamped on all covers.

10. The fiber optic cable shall be 96 SM unless state otherwise on the plans. Fiber optic drops shall be 12 SM.

11. Slack fiber optic cable (96 SM) as shown per plan and 50 LF of fiber optic drop cable (12 SM) is to be stored at each signalized intersection.

12. Warning tape is to be installed a minimum of 12" below grade. All underground fiber optic cable is to be installed with a #12, solid single conductor copper core, 45 MIL high-density polythylene insulated underground AWG locate wire.

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 MUTCD, 2009 edition including all revisions, and the FDOT FY 2021-22 Standard Plans for Road Construction. Attention is directed to the 102 Index 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, detailed in the 102 Index series.

4. Lane closures are allowed during the following times:
   a. M, T, Th, and F: 9am - 3pm (school days)
   b. Wednesday: 9am - 1:30pm (school days)
   c. M-F: 9am - 3pm (non-school days)
   d. Nighttime lane closures shall be permitted on a case-by-case basis

5. All conduit trenches shall be backfilled completely to provide safe crossing by the end of each working day or whenever the work zone becomes inactive. The contractor shall not open any area that cannot be backfilled in the same day/night operation.

6. Field review conduit routing prior to construction to determine appropriate trenching and direction bore equipment necessary for this project. The contractor is stating that they have field reviewed the project and determined the specific means and methods to their satisfaction.

7. 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-dutu law enforcement officer shall be incidental to the work and will not be paid separately.

8. Early "turn-on" of any new signal installation will only be permitted if authorized in writing by Osceola County Transportation and Transit. If the need arises, Osceola County Transportation and Transit will negotiate with the contractor for maintenance of the new 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.

9. 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.

10. Existing communications or command wire connections shall be maintained at all signalized locations during construction. Railroad flashing beacons, Railroad pre-emption, fire pre-emption and school zone flashers. Contractors shall provide temporary lines and connections if necessary.

11. 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:

102-1 Pay Item and all associated work is included in the Partin-Settlement Rd Improvement plans.
102-1 includes all items required to safely maintain traffic through the work zone, as specified in the latest FDOT Design Standard Index 102 Series. These items include, but are not limited to, high intesity flashing lights, temporary reflective pavement markers, impact attenuator modules, barricades and temporary street lighting, painted pavement markings. Payment under this item includes the professional engineer's fees for the preparation of the maintenance of traffic plan, 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.

630-2-11/630-2-12 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/cabling runs.

635-2-11: 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 Plan 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 show in Standard Plans 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, & 522-7, respectively.

639-1-122: 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' to bottom. Disconnect shall use breakers, no fuses or external switches permitted. Surge arrestor shall be wired on the load side of the disconnect.

649-21-10: 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 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 (number and configuration of CSL tubes shall comply with standards and specifications section 455-16.4 CSL tubes and Standard Plans 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 indentified as free of conflicts an/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 laborartory for the purpose of inspecting all drilled shaft installation 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 department 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 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 and luminaires installed on the mast arm.

650-1-60: 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 propoer 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. Any four section signal heads with flashing yellow arrow shall have the FTP-85-13 sign installed adjacent to the head assembly to the right.

653-1-11/653-1-12/653-1-60: Led pedestrian signals are to be single section and provided with international style lenses and countdown features.

660-4-11/660-4-12/660-4-51/660-4-52: 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 gournd, 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.

663-1-112/663-1-121/663-1-122: Contractor to furnish and install Global Traffic Technologies GPS receiver and antenna. The contractor will perform all signal testing, mapping and systme 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 pre-emption GPS multi-pair cable to connect to GPS antennas to GPS pre-emption controller interface.

665-1-11/665-1-60: Pedestrian push buttons shall include a MUTCD pedestrian sign, R10-3E for each button. 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 the plans.

670-5-600: 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" or R77 if cabinet is an Econolite with 3 shelves. (Special note: if there is limited sidewalk A.D.A. clearance, a reduced depth Type VI cabinet can be used with prior approval from Osceola County Transportation and Transit). Equipment used must be certified from the FDOT APL list. This NEMA Econolite Cobalt Controller shall provide total utility and interoperability with Osceola County Transportation and Transit's "Centracs" computer sytem. 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 pre-emption equipment, and relocations to/from the existing cabinet. A flush mounted automatic power transfer switch shall also be provided. Whenever possible, the cabinet is to be placed so that the door opens away from the intersection and opens full within the right-of-way. This pay iem includes the cost of the concrete for the controller pad and the service pad. All signal cabinets shall have a minimum of twelve 2-inch conduits, stubbed out to the nearest pull boxes, with a minimum of two spare 2-inch conduits, when intersection is complete.
NOTE: Refer to Osceola County Traffic Signal Cabinet and Controller Specifications 5/2016 for more detailed specifications. Contact Kevin Krug (407) 738-9405, kevin.krug@osceola.org or Kathy Lee, P.E. at (407) 742-0553, kathy.lee@osceola.org.

700-5-21/700-5-22: Illuminated street name 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 photo cell 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 breaker separately from the signal cabinet and shall be controlled by one master photocell.

REVISIONS				ENGINEER OF RECORD	OSCEOLA COUNTY PUBLIC WORKS DEPARTMENT		GENERAL NOTES	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION	RYAN P. BOGAN, P.E. LICENSE NUMBER 82217 JOHNSON, MIRMIRAN & THOMPSON 400 COLONIAL CENTER PKY, SUITE 100 LAKE MARY, FL 32746	ROAD IDENTIFICATION	CONTRACT ID		T-5
					PARTIN SETTLEMENT RD.	PS-20-11504-DG		

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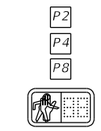
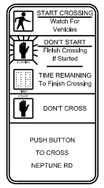
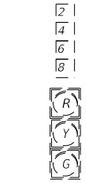


PED. SIGNAL
COUNT-DOWN
1-SECT., 1-WAY
4 AS
653-1-11

FTP-68B-06
9" X 18"

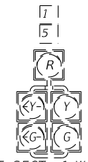


FTP-68B-06
9" X 18"



3-SECT., 1-WAY
6 EXISTING

3-SECT., 1-WAY
2 EXISTING



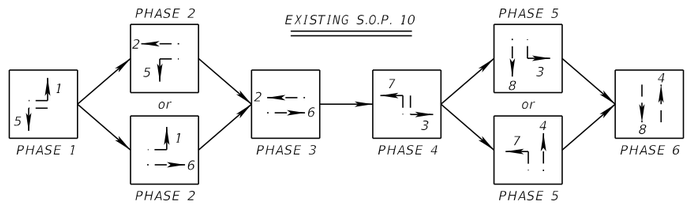
5-SECT., 1-WAY
2 EXISTING

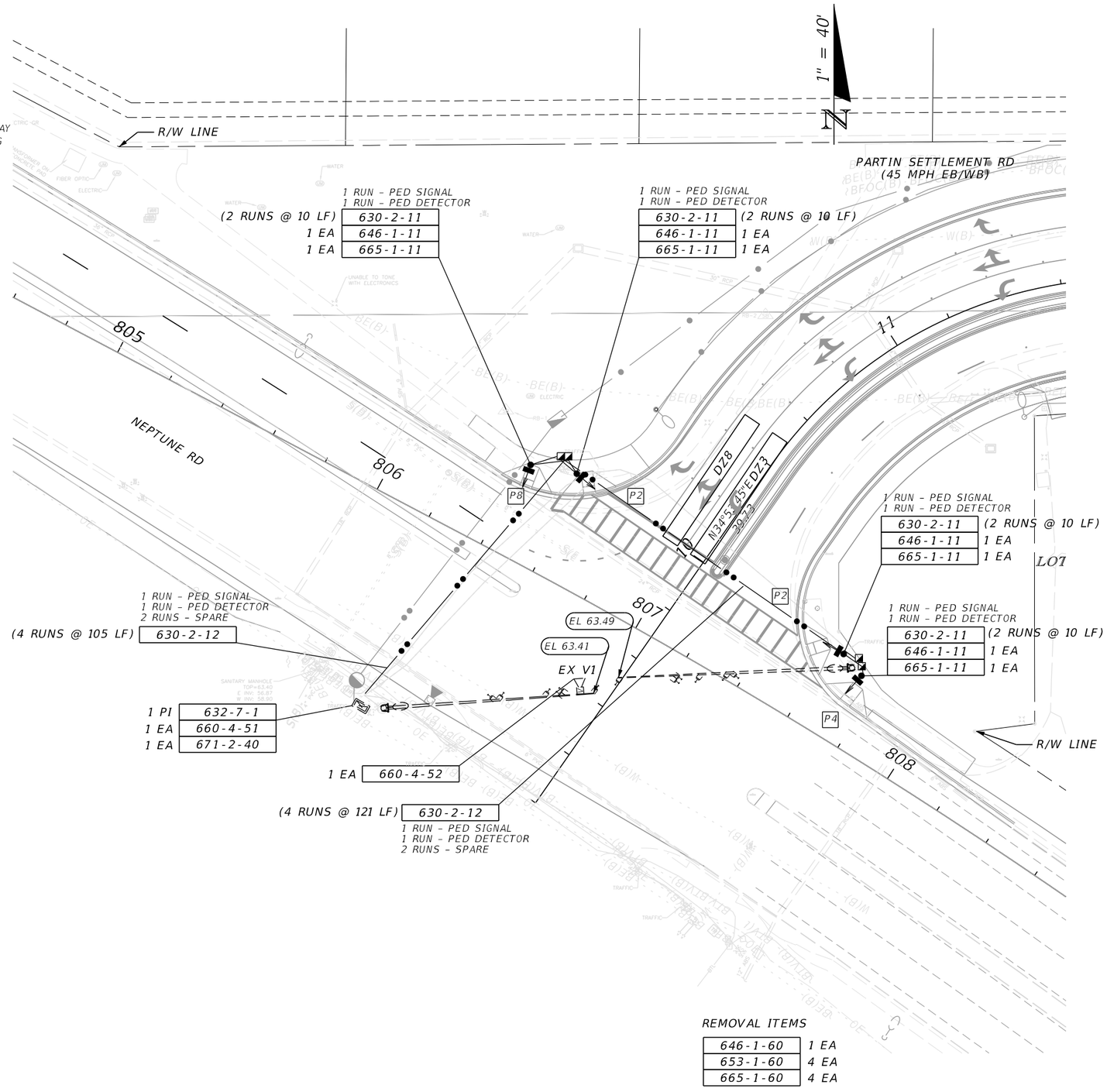
CONTROLLER TIMINGS									
TIMING FUNCTION									
MOVEMENT NUMBER		1	2	3	4	5	6	7	8
TIMING FUNCTION	MINIMUM GREEN	8	15	6	5	6	15	5	5
	EXTENSION	3	3.5	4.5	3	3	3.5	3	3
	MAXIMUM GREEN 1	10	75	45	20	40	50	35	55
	MAXIMUM GREEN 2								
	YELLOW CLEARANCE	4.4	4.4	4.8	4.4	4.4	4.4	4.4	4.8
	ALL RED	2	2	2	2	2	2	2	2
	PEDESTRIAN WALK		7.0						
	PED. CLEARANCE		28						
	RECALL								

ALL TIMINGS TO REMAIN UNLESS OTHERWISE SHOWN.

VIDEO DECECTION ASSIGNMENTS			
VIDEO DETECTOR	DETECTOR ZONE	DELAY TIME (SEC)	ZONE DIMENSION
EX V1	DZ3		6' X 50'
	DZ8	5	6' X 50'

SIZE AND PLACEMENT OF VIDEO DETECTION EQUIPMENT AND ZONES ARE INITIAL AND MAY REQUIRE FIELD ADJUSTMENT





REMOVAL ITEMS

646-1-60	1 EA
653-1-60	4 EA
665-1-60	4 EA

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

ENGINEER OF RECORD

RYAN P. BOGAN, P.E.
LICENSE NUMBER 82217
JOHNSON, MIRMIRAN & THOMPSON
400 COLONIAL CENTER PKY, SUITE 100
LAKE MARY, FL 32746

OSCEOLA COUNTY
PUBLIC WORKS DEPARTMENT

ROAD IDENTIFICATION	CONTRACT ID
PARTIN SETTLEMENT RD.	PS-20-11504-DG

SIGNALIZATION PLAN

SHEET NO. T-6

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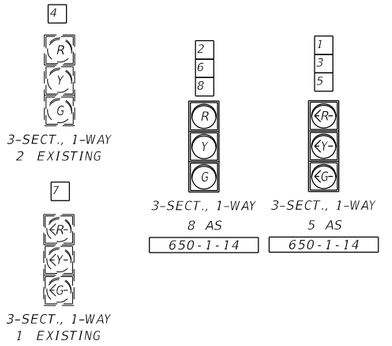
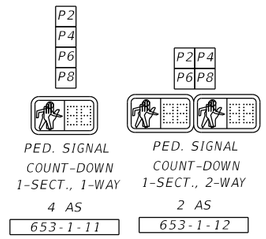
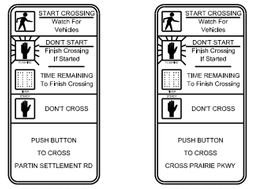


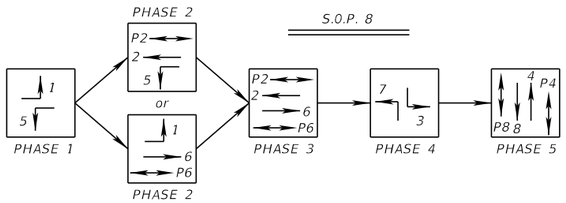




CONTROLLER TIMINGS									
TIMING FUNCTION									
MOVEMENT NUMBER		1	2	3	4	5	6	7	8
TIMING FUNCTION	MINIMUM GREEN		5	5	5	5	5	5	5
	EXTENSION		3	3	3	3	3	3	3
	MAXIMUM GREEN 1		30	20	25	10	20	25	20
	MAXIMUM GREEN 2								
	YELLOW CLEARANCE		4	4	4	4	4	4	4
	ALL RED		2.2	2.9	2.9	2	2.3	3	2.6
	PEDESTRIAN WALK		7.0		7.0		7.0		7.0
	PED. CLEARANCE		34		26		31		21
	RECALL								

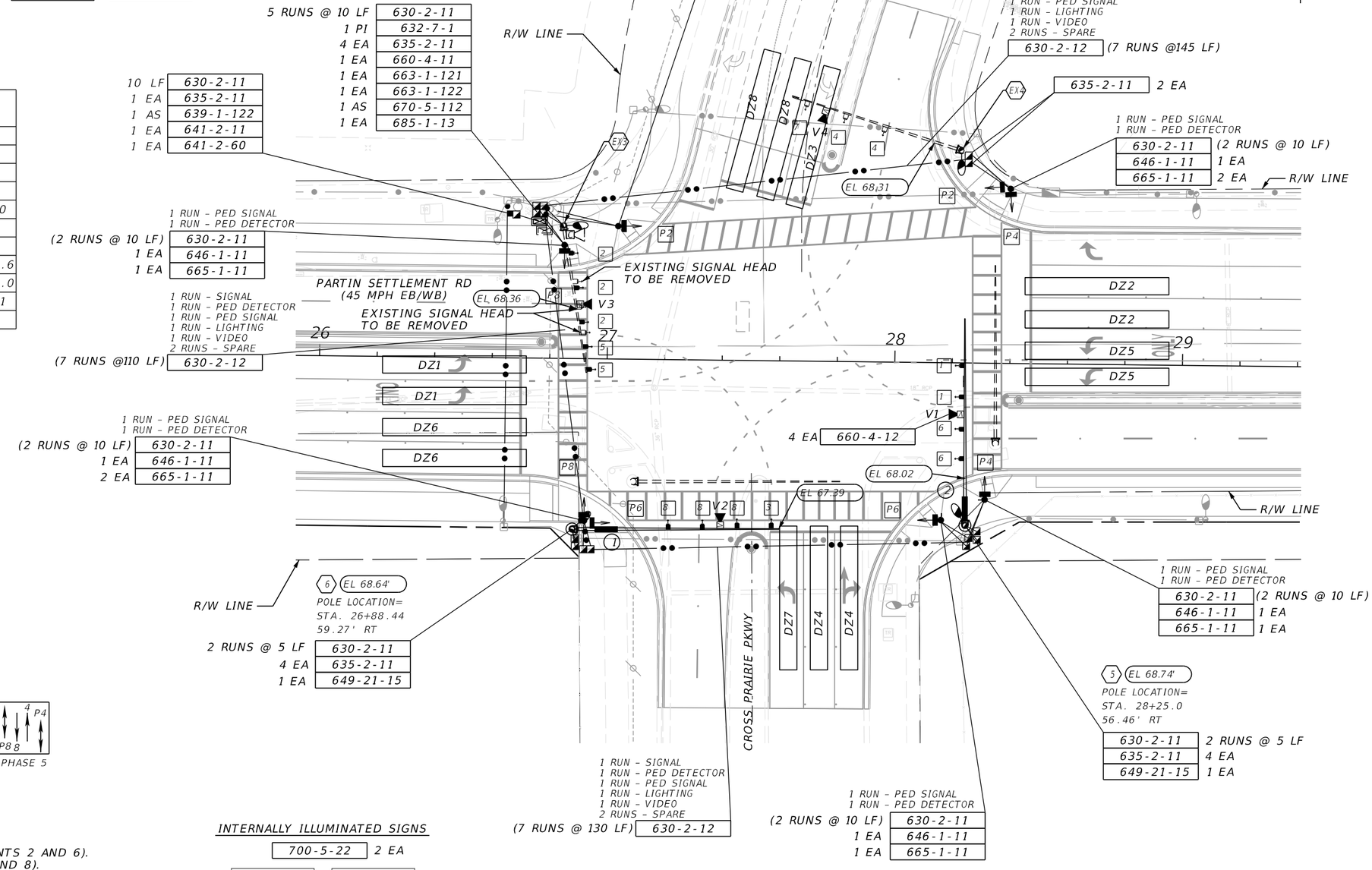
VIDEO DECECTION ASSIGNMENTS			
VIDEO DETECTOR	DETECTOR ZONE	DELAY TIME (SEC)	ZONE DIMENSION
V1	DZ1		6' X 50'
	DZ6		6' X 50'
V2	DZ3		6' X 50'
	DZ8		6' X 50'
V3	DZ5		6' X 50'
	DZ2		6' X 50'
V4	DZ7		6' X 50'
	DZ4		6' X 50'

SIZE AND PLACEMENT OF VIDEO DETECTION EQUIPMENT AND ZONES ARE INITIAL AND MAY REQUIRE FIELD ADJUSTMENT



CONTROLLER OPERATIONS:

1. THE MAJOR STREET IS PARTIN SETTLEMENT RD (MOVEMENTS 2 AND 6). MINOR STREET IS CROSS PRAIRIE PKWY (MOVEMENTS 4 AND 8).
2. WHEN SIGNAL IS IN FLASHING MODE, MOVEMENTS 2 AND 6 SHALL FLASH YELLOW. ALL OTHER VEHICLE MOVEMENTS SHALL FLASH RED.



INTERNALLY ILLUMINATED SIGNS

700-5-22 2 EA

Partin Settlement Rd (1) Cross Prairie Pkwy (2)

REVISIONS				ENGINEER OF RECORD	OSCEOLA COUNTY PUBLIC WORKS DEPARTMENT		SIGNALIZATION PLAN	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION	RYAN P. BOGAN, P.E. LICENSE NUMBER 82217 JOHNSON, MIRMIRAN & THOMPSON 400 COLONIAL CENTER PKY, SUITE 100 LAKE MARY, FL 32746	ROAD IDENTIFICATION: PARTIN SETTLEMENT RD.	CONTRACT ID: PS-20-11504-DG		T-7

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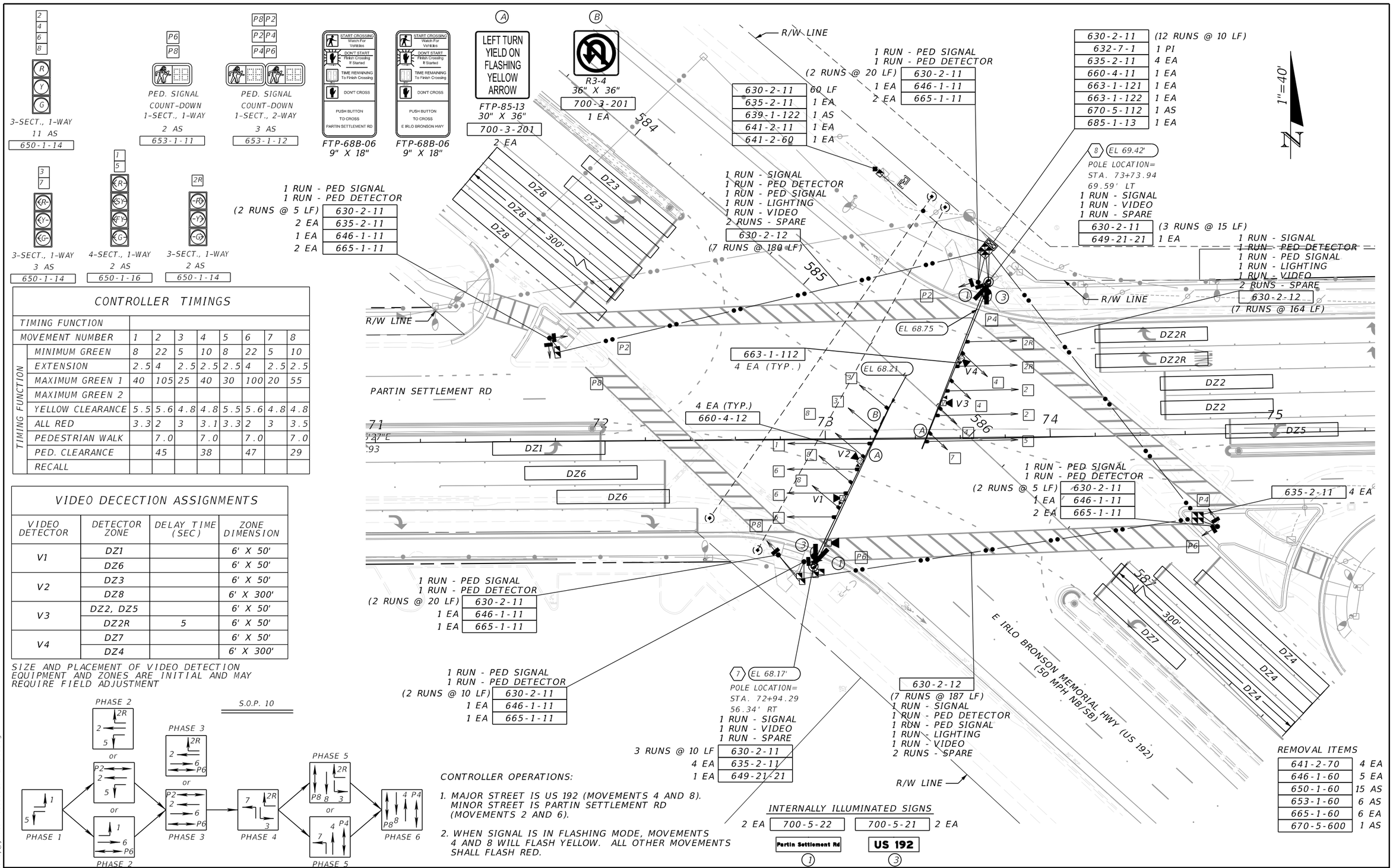

CONTROLLER TIMINGS

TIMING FUNCTION									
MOVEMENT NUMBER		1	2	3	4	5	6	7	8
TIMING FUNCTION	MINIMUM GREEN	8	22	5	10	8	22	5	10
	EXTENSION	2.5	4	2.5	2.5	2.5	4	2.5	2.5
	MAXIMUM GREEN 1	40	105	25	40	30	100	20	55
	MAXIMUM GREEN 2								
	YELLOW CLEARANCE	5.5	5.6	4.8	4.8	5.5	5.6	4.8	4.8
	ALL RED	3.3	2	3	3.1	3.3	2	3	3.5
	PEDESTRIAN WALK		7.0		7.0		7.0		7.0
	PED. CLEARANCE		45		38		47		29
	RECALL								

VIDEO DECECTION ASSIGNMENTS

VIDEO DETECTOR	DETECTOR ZONE	DELAY TIME (SEC)	ZONE DIMENSION
V1	DZ1		6' X 50'
	DZ6		6' X 50'
V2	DZ3		6' X 50'
	DZ8		6' X 300'
V3	DZ2, DZ5		6' X 50'
	DZ2R	5	6' X 50'
V4	DZ7		6' X 50'
	DZ4		6' X 300'

SIZE AND PLACEMENT OF VIDEO DETECTION EQUIPMENT AND ZONES ARE INITIAL AND MAY REQUIRE FIELD ADJUSTMENT

S.O.P. 10

CONTROLLER OPERATIONS:

1. MAJOR STREET IS US 192 (MOVEMENTS 4 AND 8). MINOR STREET IS PARTIN SETTLEMENT RD (MOVEMENTS 2 AND 6).
2. WHEN SIGNAL IS IN FLASHING MODE, MOVEMENTS 4 AND 8 WILL FLASH YELLOW. ALL OTHER MOVEMENTS SHALL FLASH RED.

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

ENGINEER OF RECORD

RYAN P. BOGAN, P.E.
LICENSE NUMBER 82217
JOHNSON, MIRMIRAN & THOMPSON
400 COLONIAL CENTER PKY, SUITE 100
LAKE MARY, FL 32746

OSCEOLA COUNTY
PUBLIC WORKS DEPARTMENT

ROAD IDENTIFICATION	CONTRACT ID
PARTIN SETTLEMENT RD.	PS-20-11504-DG

SIGNALIZATION PLAN

SHEET NO. T-8

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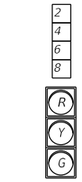
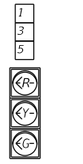
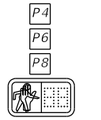


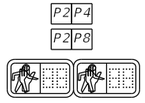
3-SECT., 1-WAY
8 AS
650-1-14



3-SECT., 1-WAY
4 AS
650-1-14



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



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

FTP-68B-06
9" X 18"

FTP-68B-06
9" X 18"

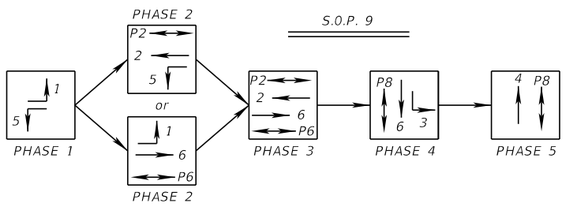
CONTROLLER TIMINGS

TIMING FUNCTION									
MOVEMENT NUMBER		1	2	3	4	5	6	7	8
TIMING FUNCTION	MINIMUM GREEN	8	16	10	10	8	16	10	10
	EXTENSION	2.5	3.5	2.5	2.5	2.5	3.5	2.5	2.5
	MAXIMUM GREEN 1	10	35	30	35	10	35	10	50
	MAXIMUM GREEN 2								
	YELLOW CLEARANCE	4.4	4.4	4	4	4.4	4.4	4	4
	ALL RED	2	2	2	2	2	2	2	2
	PEDESTRIAN WALK		7.0		7.0		7.0		7.0
	PED. CLEARANCE		34		22		13		22
	RECALL								

VIDEO DECECTION ASSIGNMENTS

VIDEO DETECTOR	DETECTOR ZONE	DELAY TIME (SEC)	ZONE DIMENSION
V1	DZ1		6' X 50'
	DZ6		6' X 50'
V2	DZ3		6' X 50'
	DZ8		6' X 50'
V3	DZ5		6' X 50'
	DZ2		6' X 50'
V4			
	DZ4		6' X 50'

SIZE AND PLACEMENT OF VIDEO DETECTION EQUIPMENT AND ZONES ARE INITIAL AND MAY REQUIRE FIELD ADJUSTMENT



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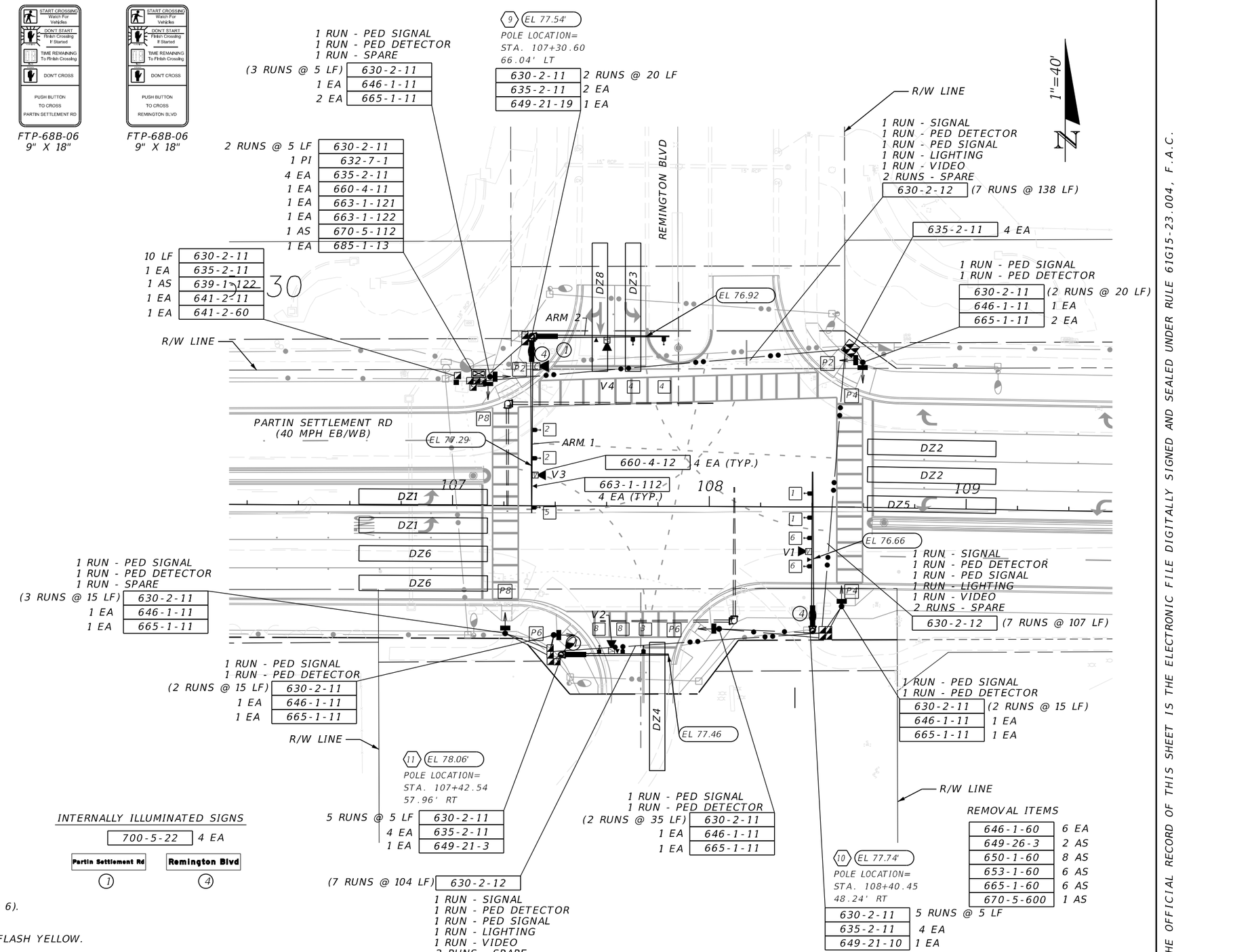

INTERNALLY ILLUMINATED SIGNS

700-5-22 4 EA

Partin Settlement Rd (1) Remington Blvd (4)

CONTROLLER OPERATIONS:

1. THE MAJOR STREET IS PARTIN SETTLEMENT RD (MOVEMENTS 2 AND 6). MINOR STREET IS REMINGTON BLVD (MOVEMENTS 4 AND 8).

2. WHEN SIGNAL IS IN FLASHING MODE, MOVEMENTS 2 AND 6 SHALL FLASH YELLOW. ALL OTHER VEHICLE MOVEMENTS SHALL FLASH RED.

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

ENGINEER OF RECORD

RYAN P. BOGAN, P.E.
LICENSE NUMBER 82217
JOHNSON, MIRMIRAN & THOMPSON
400 COLONIAL CENTER PKY, SUITE 100
LAKE MARY, FL 32746

OSCEOLA COUNTY
PUBLIC WORKS DEPARTMENT

ROAD IDENTIFICATION	CONTRACT ID
PARTIN SETTLEMENT RD.	PS-20-11504-DG

SIGNALIZATION PLAN

SHEET NO. T-9

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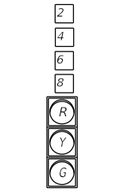
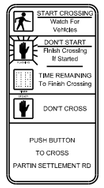


3-SECT., 1-WAY
8 AS
650-1-14

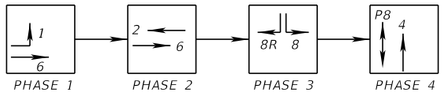
3-SECT., 1-WAY
1 AS
650-1-14

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



FTP-68B-06
9" X 18"

S.O.P. 16



PHASE 1 PHASE 2 PHASE 3 PHASE 4

CONTROLLER TIMINGS

TIMING FUNCTION								
	MOVEMENT NUMBER	1	2	3	4	5	6	7	8
TIMING FUNCTION	MINIMUM GREEN	10	15	8	5		15		
	EXTENSION	2	3.5	2	2		3.5		
	MAXIMUM GREEN 1	25	40	70	15		80		
	MAXIMUM GREEN 2								
	YELLOW CLEARANCE	4	4	4	4		4		
	ALL RED	2	2	2	2		2		
	PEDESTRIAN WALK								7
	PED. CLEARANCE								11
	RECALL								

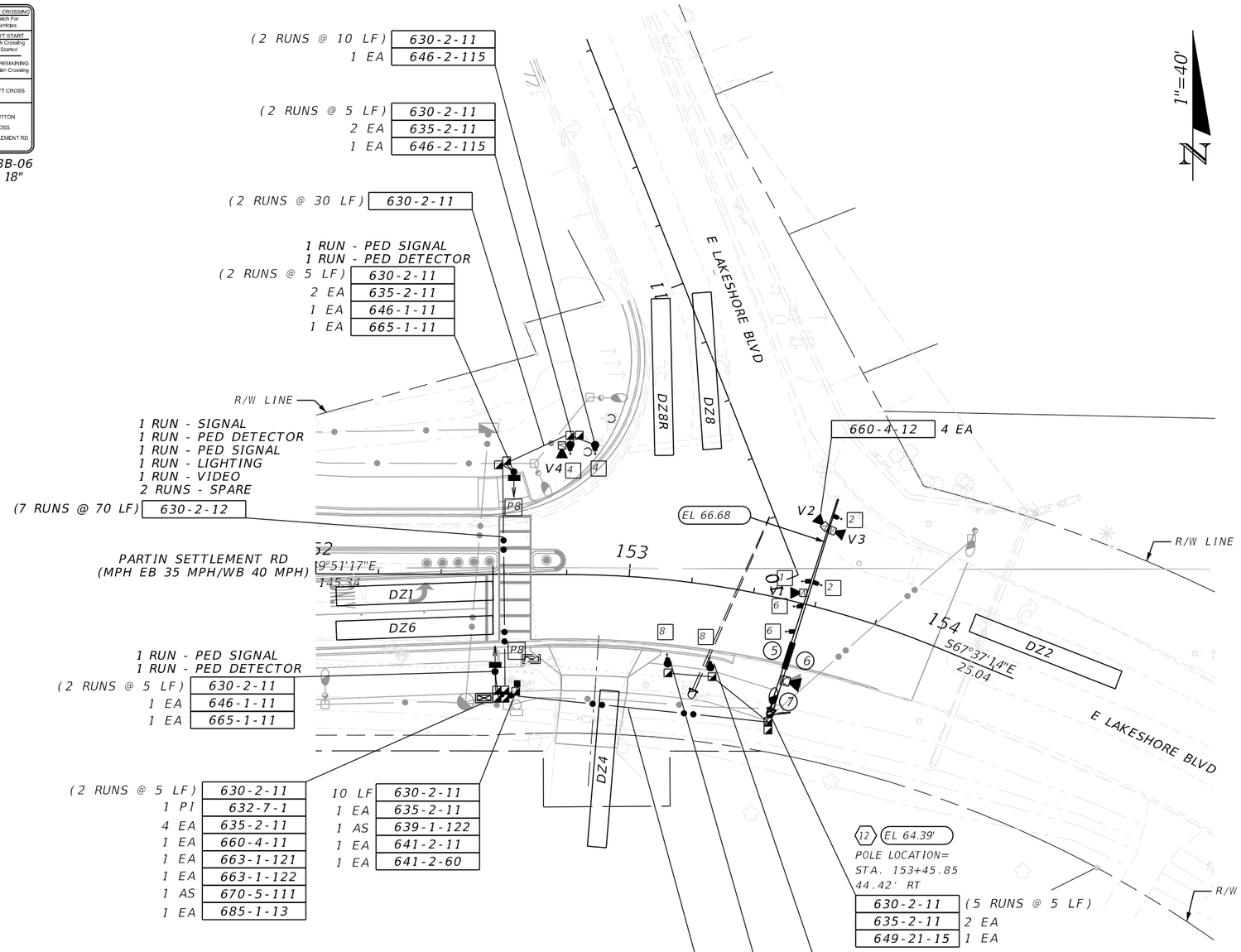
VIDEO DECECTION ASSIGNMENTS

VIDEO DETECTOR	DETECTOR ZONE	DELAY TIME (SEC)	ZONE DIMENSION
V1	DZ1		6' X 50'
	DZ6		6' X 50'
V2	DZ8		6' X 50'
	DZ8R	5	6' X 50'
V3			
	DZ2		6' X 50'
V4			
	DZ4		6' X 50'

SIZE AND PLACEMENT OF VIDEO DETECTION EQUIPMENT AND ZONES ARE INITIAL AND MAY REQUIRE FIELD ADJUSTMENT

CONTROLLER OPERATIONS:

1. MAJOR STREET IS PARTIN SETTLEMENT RD (MOVEMENTS 2 AND 6). MINOR STREET E LAKESHORE BLVD (MOVEMENT 4 AND 8).
2. WHEN SIGNAL IS IN FLASHING MODE, MOVEMENTS 2 AND 6 SHALL FLASH YELLOW. ALL OTHER MOVEMENTS SHALL FLASH RED.



INTERNALLY ILLUMINATED SIGNS

700-5-22 3 EA

REMOVAL ITEMS

646-2-600	2 EA
649-26-3	1 EA
650-1-60	8 AS
670-5-600	1 AS

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REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

ENGINEER OF RECORD
RYAN P. BOGAN, P.E.
LICENSE NUMBER 82217
JOHNSON, MIRMIRAN & THOMPSON
400 COLONIAL CENTER PKY, SUITE 100
LAKE MARY, FL 32746

OSCEOLA COUNTY
PUBLIC WORKS DEPARTMENT

ROAD IDENTIFICATION	CONTRACT ID
PARTIN SETTLEMENT RD.	PS-20-11504-DG

SIGNALIZATION PLAN

SHEET NO. T-10

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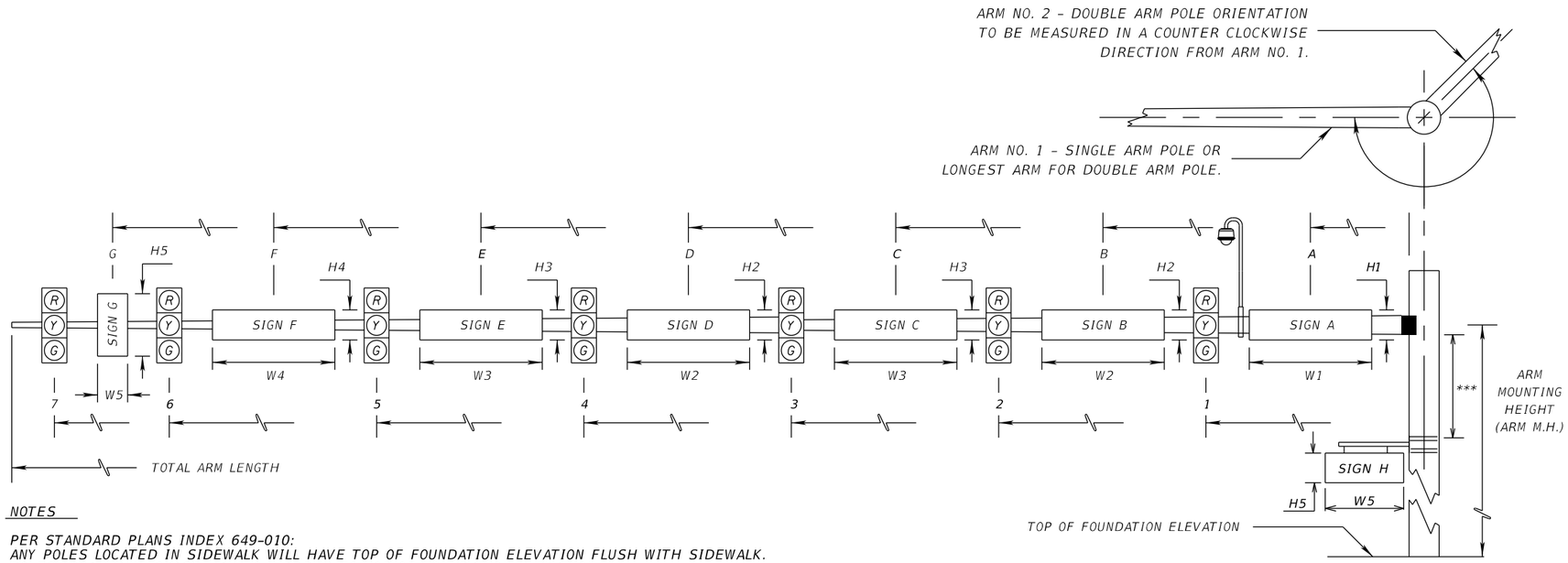

NOTES

PER STANDARD PLANS INDEX 649-010:
ANY POLES LOCATED IN SIDEWALK WILL HAVE TOP OF FOUNDATION ELEVATION FLUSH WITH SIDEWALK.
POLES LOCATED IN GRASS HAVE 0.5' ADDED TO TOP OF FOUNDATION ELEVATION.

*** INTERNALLY ILLUMINATED SIGN "H" SHALL BE MOUNTED FREE-SWINGING BELOW ARM FACE PLATE.

* DENOTES NUMBER OF SECTIONS IN SIGNAL HEAD ASSEMBLY

								SIGNAL DATA																					SIGN DATA								
											DISTANCE FROM POLE																			DISTANCE FROM POLE / HEIGHT AND WIDTH OF SIGN								
ID NO.	SHEET NO.	LOCATION BY STA.	TOP OF FOUND. ELEVATION	RDWY ARM NO.	CROWN ELEV.	LUMI-NAIRE Y/N	TERM. COMP. Y/N	SIGNAL V/H	BACK PLATES Y/N	PED. SIGNAL Y/N	1	*	2	*	3	*	4	*	5	*	6	*	7	*	8	*	9	*	TOTAL ARM LENGTH	ARM M.H.	ANGLE BETWEEN DUAL ARMS 90/270	H	H1	W1	A	H2	W2	CCTV	VIDEO DETECTION	PAINT COLOR
1	T-6	NEPTUNE NW	EXISTING	1	EXISTING	Y		V	Y	N	EXISTING TO REMAIN																										
---	-----	----------	-------																												-----										
2	T-6	NEPTUNE SE	EXISTING	1	EXISTING	Y		V	Y	N	EXISTING TO REMAIN																										
---	-----	----------	-------																												-----										
3	T-7	CROSS PRAIRIE NW	EXISTING	1	EXISTING	Y		V	Y	N	8.0	3	20.0	3	29.0	3	37.0	3	45.0	3									46'			2	24"	108"				10'	26.0'	EXISTING
---	-----	----------	-------																												-----										
4	T-7	CROSS PRAIRIE NE	EXISTING	1	EXISTING	Y		V	Y	N	EXISTING TO REMAIN																		60'			1	24"	108"					47.6'	EXISTING
---	-----	----------	-------																												-----										
5	T-7	28+25.0	68.74	1	68.02	Y		V	Y	N	21.5	3	31.5	3	43.0	3	54.0	3											60'	20.0'		2	24"	108"					37.0'	Midnight Neutral
---	-----	----------	-------																												-----										
6	T-7	26+88.44	68.64	1	67.39	Y		V	Y	N	31.5	3	43.5	3	55.5	3	67.5	3											70'	19.5'		1	24"	108"					50.0'	Midnight Neutral
---	-----	----------	-------																												-----										
7	T-8	72+94.29	68.17	1	68.21	Y		V	Y	N	24.0	3	28.0	3	35.0	3	40.0	3	47.0	3	52.0	3	60.0	4	65.0	3	75.0	3	78'	21.5'		1	24"	108"	56.0'	36"	30"		32', 50'	Midnight Neutral
---	-----	----------	-------																												-----		3	24"	60"						
8	T-8	73+73.94	69.42	1	68.75	Y		V	Y	N	26.0	3	31.0	3	39.0	3	44.0	3	49.0	3	58.0	3	70.0	3	70.0	3	76.0	4	78'	20.5'		1	24"	108"	70'	36"	36"	10'	35', 55'	Midnight Neutral
---	-----	----------	-------																												-----		3	24"	60"	74'	36"	30"			
9	T-9	107+30.60	77.54	1	77.29	Y		V	Y	N	35.0	3	45.5	3	65.0	4													70'	21.0'	90	4	24"	108"				10'	52.0'	Midnight Neutral
---	-----	----------	-------																												-----		1	24"	108"					27.5'	
10	T-9	108+40.45	77.74	1	76.66	Y		V	Y	N	23.5	3	34.5	3	42.5	3	52.0	3											60'	20.0'		4	24"	108"					29.0'	Midnight Neutral
---	-----	----------	-------																												-----										
11	T-9	107+42.54	78.06	1	77.46	Y		V	Y	N	13.0	3	22.5	3	30.5	3													40'	20.0'		1	24"	108"					18.0'	Midnight Neutral
---	-----	----------	-------																												-----										
12	T-10	153+45.85	64.39	1	66.68	Y		V	Y	N	26.0	3	34.5	3	42.5	3	42.5	3	65.0	3									70'	23.0'		7	24"	108"	18'	24"	108"	10'	39.0',60.5',60.5	Midnight Neutral
---	-----	----------	-------																												-----					18'	24"	108"			

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

ENGINEER OF RECORD
RYAN P. BOGAN, P.E.
LICENSE NUMBER 82217
JOHNSON, MIRMIRAN & THOMPSON
400 COLONIAL CENTER PKY, SUITE 100
LAKE MARY, FL 32746

OSCEOLA COUNTY
PUBLIC WORKS DEPARTMENT

ROAD IDENTIFICATION	CONTRACT ID
PARTIN SETTLEMENT RD.	PS-20-11504-DG

STANDARD MAST ARM TABULATION

SHEET NO. T-11

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

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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.)	
5	A60/S-P4/S/L-DS14/4.5	A60/S					44	P4/S/L	23.0	20.0	DS/14/4.5
6	A70/S-P5/S/L-DS16/5.0	A70/S					30	P5/S/L	---	19.5	DS/16/5.0
7	Special Designation	See Note 6					26	P6/S/L	---	21.5	DS/25/5.0
8	Special Designation	See Note 6					22	P6/S/L	---	20.5	DS/25/5.0
9	A70/D-A50/D-P5/D/L-DS18/5.0	A70/D		A50/D		90	0	P5/D/L	---	21.0	DS/18/5.0
10	A60/S-P4/S/L	A60/S					0	P4/S/L	---	20.0	See Note 7
11	A40/S-P2/S/L-DS12/4.5	A40/S					51	P2/S/L	---	20.0	DS/12/4.5
12	A78/S/H-P6/S/L-DS16/5.0	A78/S/H	31.0				7	P6/S/L	---	23.0	DS/16/5.0

NOTES [Notes Date 11-01-16]:

1. If an entry appears in column FAA, a shorter arm is required. This is obtained by removing length from the arm tip and the arm length shortened from FA to FAA. SAA Similar.
2. If an entry appears in column UAA, a shorter pole is required. This is obtained by removing length from the pole tip and the pole height shortened from UA to UAA.
3. Work this sheet with the Signal Designer's "Mast Arm Tabulation". See "Mast Arm Tabulation" for special instructions that include non-standard Handhole location, paint color, terminal compartment requirement, and pedestrian features.
4. Work with FY22-23 Standard Plans Index 649-030 and 649-031.
5. Design Wind Speed = 150 mph.
6. See the "Special Mast Arm Assemblies Data Table" Sheet for Special Mast Arm Assembly Information.
7. See the "Special Mast Arm Assemblies Data Table" Sheet for Special Drilled Shaft Information.

FOUNDATION NOTES [Notes Date 01-01-12]:

1. Design based on Borings taken sealed by Elias N. Jammal, PE.
2. Assumptions and Values used in design:

Mast Arm 5:
Soil Type: Sand (Cohesionless)
Soil Friction Angle = 30 deg.
Soil Weight = 50 pcf
SPT N-VALUE = 15 blows/ft.
Design Water Table is 0 ft. below surface.

Mast Arm 6:
Soil Type: Sand (Cohesionless)
Soil Friction Angle = 30 deg.
Soil Weight = 50 pcf
SPT N-VALUE = 13 blows/ft.
Design Water Table is 0 ft. below surface.

Mast Arm 7:
Soil Type: Sand (Cohesionless)
Soil Friction Angle = 30 deg.
Soil Weight = 50 pcf
SPT N-VALUE = 12 blows/ft.
Design Water Table is 0 ft. below surface.

Mast Arm 8:
Soil Type: Sand (Cohesionless)
Soil Friction Angle = 30 deg.
Soil Weight = 50 pcf
SPT N-VALUE = 11 blows/ft.
Design Water Table is 0 ft. below surface.

Mast Arm 9:
Soil Type: Sand (Cohesionless)
Soil Friction Angle = 30 deg.
Soil Weight = 50 pcf
SPT N-VALUE = 11 blows/ft.
Design Water Table is 0 ft. below surface.

Mast Arm 10:
Soil Type: Sand (Cohesionless)
Soil Friction Angle = 29 deg.
Soil Weight = 45 pcf
SPT N-VALUE = 8 blows/ft.
Design Water Table is 0 ft. below surface.

Mast Arm 11:
Soil Type: Sand (Cohesionless)
Soil Friction Angle = 29 deg.
Soil Weight = 45 pcf
SPT N-VALUE = 9 blows/ft.
Design Water Table is 0 ft. below surface.

Mast Arm 12:
Soil Type: Sand (Cohesionless)
Soil Friction Angle = 30 deg.
Soil Weight = 50 pcf
SPT N-VALUE = 13 blows/ft.
Design Water Table is 0 ft. below surface.

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REVISIONS				ENGINEER OF RECORD	OSCEOLA COUNTY PUBLIC WORKS DEPARTMENT		STANDARD MAST ARM ASSEMBLIES DATA TABLE	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD IDENTIFICATION	CONTRACT ID		
				SENAKA P. ATURALIYA, P.E. LICENSE NUMBER 86226 JOHNSON, MIRMIRAN & THOMPSON 400 COLONIAL CENTER PKY, SUITE 100 LAKE MARY, FL 32746	PARTIN SETTLEMENT RD.	PS-20-11504-DG		T-12

SPECIAL MAST ARM ASSEMBLIES DATA TABLE

Table Date 01-01-12

NUMBER OF LOCATIONS	STRUCTURE NUMBER	FIRST ARM				FIRST ARM EXTENSION				SECOND ARM				SECOND ARM EXTENSION				POLE						
		FA(ft)	FB(in)	FC(in)	FD(in)	FE(ft)	FF(in)	FG(in)	FH(in)	SA(ft)	SB(in)	SC(in)	SD(in)	SE(ft)	SF(in)	SG(in)	SH(in)	UA(ft)	UB(ft)	UC(in)	UD(in)	UE(in)	UF(deg)	UG(ft)
	7	39.0	11.54	17.0	0.25	42.5	16.05	22.0	0.5															
	8	39.0	11.54	17.0	0.25	42.5	16.05	22.0	0.5															

SPECIAL MAST ARM ASSEMBLIES DATA TABLE (CONT.)

Table Date 01-01-12

STRUCTURE NUMBER	FIRST ARM CONNECTION (in) First Arm Camber Angle = 2 Degrees											SECOND ARM CONNECTION (in) Second Arm Camber Angle = 2 Degrees										
	#Bolts	HT	FJ	FK	FL	FN	FO	FP	FR	FS	FT	#Bolts	HT	SJ	SK	SL	SN	SO	SP	SR	SS	ST
7	6	30.0	36.0	3.0	0.75	0.625	17.0	1.5	2.5	12.0	0.625											
8	6	30.0	36.0	3.0	0.75	0.625	16.9	1.5	2.5	12.0	0.625											

SPECIAL MAST ARM ASSEMBLIES DATA TABLE (CONT.)

Table Date 07-01-15

STRUCTURE NUMBER	POLE BASE CONNECTION (in)					SHAFT AND REINF.								LUMINAIRE AND LUMINAIRE CONNECTION										
	#Bolts	BA	BB	BC	BF	DA(ft)	DB(ft)	RA	RB	RC	RD(in)	RE	RF(in)	LA(ft)	LB(ft)	LC(in)	LD(in)	LE	LF(ft)	LG(in)	LH(in)	LJ(in)	LK(in)	LL(deg)
10						20.0	4.5	11	16	10	8	0	0											

NOTES [Notes Date 07-01-13]:
1. Work with Index 649-031.
2. Design Wind Speed = 150 mph
3. For Foundation Notes, see "Standard Mast Arm Assemblies Data Table" Sheet.

REVISIONS				ENGINEER OF RECORD	OSCEOLA COUNTY PUBLIC WORKS DEPARTMENT		SPECIAL MAST ARM ASSEMBLIES DATA TABLE	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION	SENAKA P. ATURALIYA, P.E. LICENSE NUMBER 86226 JOHNSON, MIRMIRAN & THOMPSON 400 COLONIAL CENTER PKY, SUITE 100 LAKE MARY, FL 32746	ROAD IDENTIFICATION	CONTRACT ID		T-13
					PARTIN SETTLEMENT RD.	PS-20-11504-DG		

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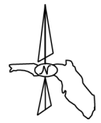
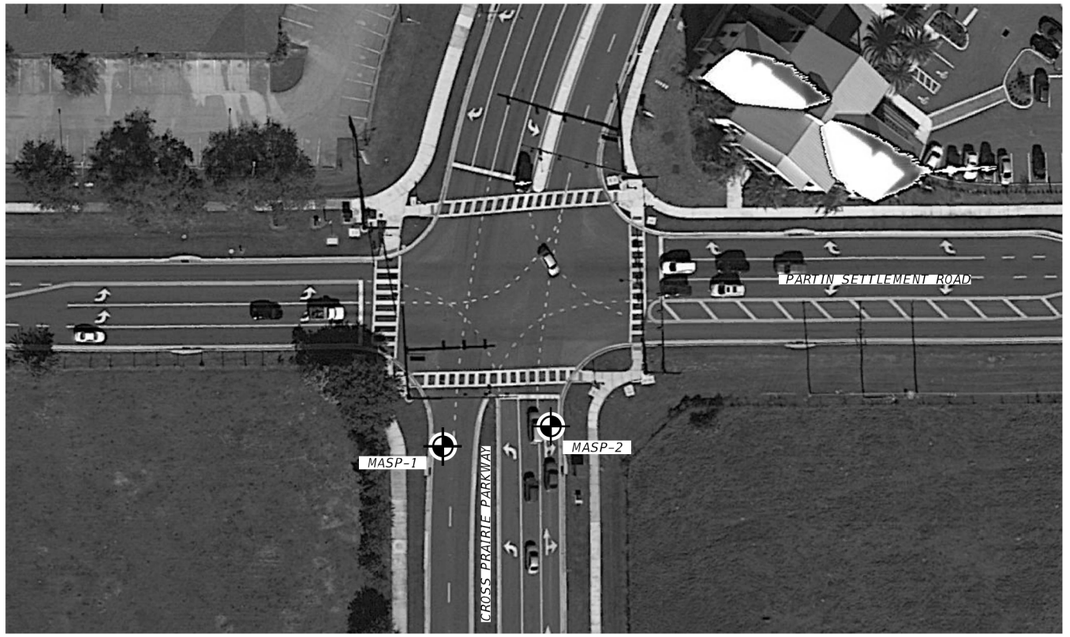


SCALE IN FEET

0 20 40

LEGEND

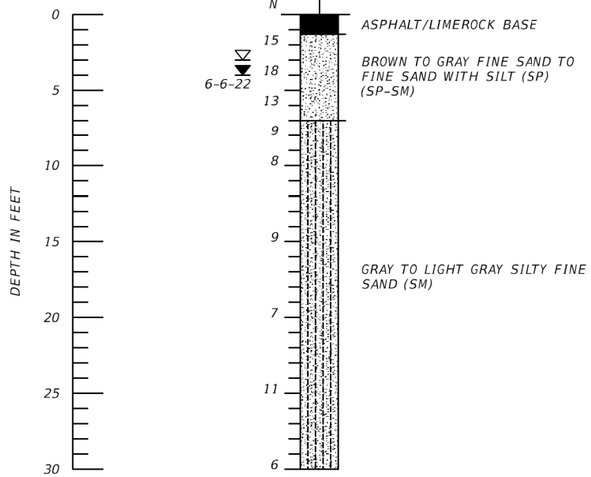
APPROXIMATE LOCATION OF STANDARD PENETRATION TEST BORING



LEGEND

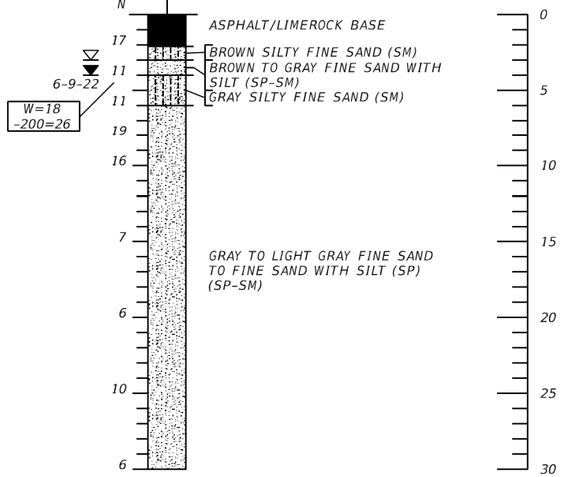
- ASPHALT AND BASE
- SILTY SAND
- SAND
- (SP) UNIFIED SOIL CLASSIFICATION GROUP SYMBOL
- 8-11-11 ENCOUNTERED GROUNDWATER LEVEL (DATE OF READING)
- ESTIMATED NORMAL SEASONAL HIGH GROUNDWATER LEVEL
- W=0 / -200=0 NATURAL MOISTURE CONTENT (%) FINES PASSING No. 200 SIEVE (%)
- N STANDARD PENETRATION RESISTANCE IN BLOWS PER FOOT UNLESS OTHERWISE NOTED

BORING No.: MASP-1
STATION: 27+18
OFFSET: 60' RT.
LATITUDE: 28.278490
LONGITUDE: -81.357558



BORING TERM. @ 30.0'
NO CASING
BORING DRILLED: 6-6-22
HAMMER TYPE: AUTOMATIC
RIG TYPE: BR-2500
DRILLED BY: M. CORNELE

BORING No.: MASP-2
STATION: 27+80
OFFSET: 56' RT.
LATITUDE: 28.278496
LONGITUDE: -81.357370



BORING TERM. @ 30.0'
NO CASING
BORING DRILLED: 6-9-22
HAMMER TYPE: AUTOMATIC
RIG TYPE: BR-2500
DRILLED BY: M. CORNELE

AUTOMATIC HAMMER

STANDARD PENETRATION TEST DATA

SPOON INSIDE DIA.	1 3/8 in.
SPOON OUTSIDE DIA.	2 in.
ASTM STANDARD DROP AUTOMATIC HAMMER	
AVG. HAMMER DROP	30 in.
HAMMER WEIGHT	140 lbs.

GRANULAR MATERIALS

RELATIVE DENSITY	SPT (BLOWS/FOOT)
VERY LOOSE	LESS THAN 3
LOOSE	3-8
MEDIUM DENSE	8-24
DENSE	24-40
VERY DENSE	GREATER THAN 40

SILTS AND CLAYS

CONSISTENCY	SPT (BLOWS/FOOT)
VERY SOFT	LESS THAN 1
SOFT	1-3
FIRM	3-6
STIFF	6-12
VERY STIFF	12-24
HARD	GREATER THAN 24

NOTES:

1) LAYER BOUNDARIES ARE APPROXIMATE AND REPRESENT SOIL LAYERS AT EACH TEST HOLE LOCATION ONLY. SUBSURFACE VARIATIONS BETWEEN BORINGS SHOULD BE ANTICIPATED.

2) BASED ON A REVIEW OF THE ST. JOHNS RIVER WATER MANAGEMENT DISTRICT POTENTIOMETRIC MAPS OF THE UPPER FLORIDAN AQUIFER FOR THIS PROJECT AREA, THE POTENTIAL ARTESIAN HEAD ELEVATION IS ESTIMATED TO BE +45 FEET NGVD. THE CONTRACTOR SHALL BE PREPARED TO HANDLE ARTESIAN WATER LEVELS UP TO ELEVATION +45 FEET NGVD.

3) LATITUDE AND LONGITUDE AT BORING LOCATIONS IS BASED ON HANDHELD GPS DEVICE.

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

REVISIONS				ENGINEER OF RECORD	OSCEOLA COUNTY PUBLIC WORKS DEPARTMENT		STANDARD PENETRATION TEST (SPT) BORINGS	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION	ELIAS N. JAMMAL, P.E. LICENSE NUMBER 60126 TERRACON 1675 LEE ROAD WINTER PARK, FLORIDA 32789	ROAD IDENTIFICATION	CONTRACT ID		T-14
					PARTIN SETTLEMENT RD.	PS-20-11504-DG		

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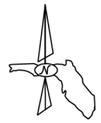


SCALE IN FEET

0 20 40

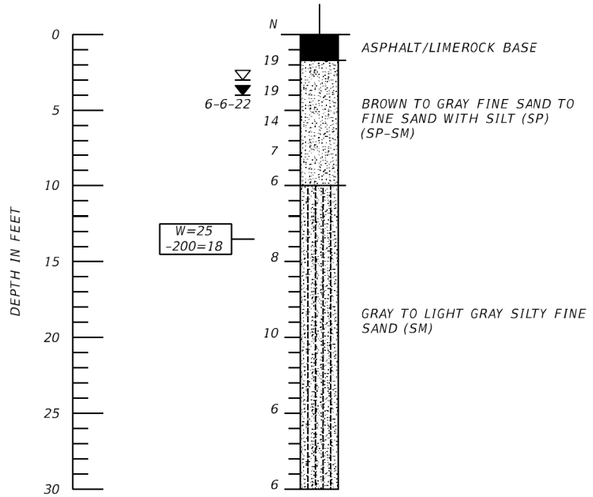
LEGEND

APPROXIMATE LOCATION OF STANDARD PENETRATION TEST BORING

LEGEND

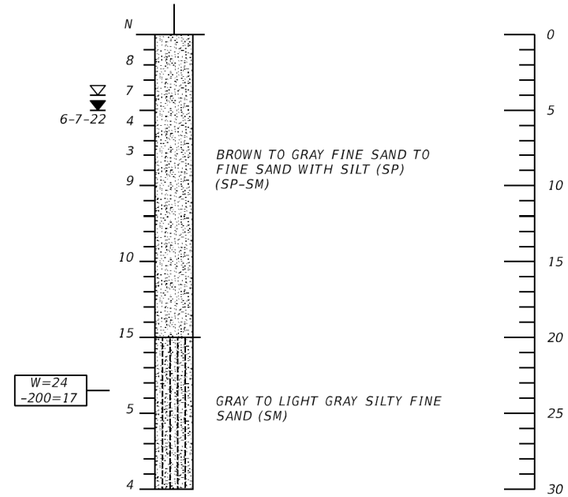
- ASPHALT AND BASE
- SILTY SAND
- SAND
- (SP) UNIFIED SOIL CLASSIFICATION GROUP SYMBOL
- 8-11-11 ENCOUNTERED GROUNDWATER LEVEL (DATE OF READING)
- ESTIMATED NORMAL SEASONAL HIGH GROUNDWATER LEVEL
- W=0 -200=0 NATURAL MOISTURE CONTENT (%) FINES PASSING No. 200 SIEVE (%)
- N STANDARD PENETRATION RESISTANCE IN BLOWS PER FOOT UNLESS OTHERWISE NOTED

BORING No.: MASP-3
STATION: 73+30
OFFSET: 58' RT.
LATITUDE: 28.278602
LONGITUDE: -81.343222



BORING TERM. @ 30.0'
NO CASING
BORING DRILLED: 6-6-22
HAMMER TYPE: AUTOMATIC
RIG TYPE: BR-2500
DRILLED BY: M. CORNELE

BORING No.: MASP-4
STATION: 73+78
OFFSET: 78' LT.
LATITUDE: 28.278970
LONGITUDE: -81.343086



BORING TERM. @ 30.0'
NO CASING
BORING DRILLED: 6-7-22
HAMMER TYPE: AUTOMATIC
RIG TYPE: BR-2500
DRILLED BY: M. CORNELE

AUTOMATIC HAMMER

STANDARD PENETRATION TEST DATA

SPOON INSIDE DIA.	1 3/8 in.
SPOON OUTSIDE DIA.	2 in.
ASTM STANDARD DROP AUTOMATIC HAMMER	
AVG. HAMMER DROP	30 in.
HAMMER WEIGHT	140 lbs.

GRANULAR MATERIALS

RELATIVE DENSITY	SPT (BLOWS/FOOT)
VERY LOOSE	LESS THAN 3
LOOSE	3-8
MEDIUM DENSE	8-24
DENSE	24-40
VERY DENSE	GREATER THAN 40

SILTS AND CLAYS

CONSISTENCY	SPT (BLOWS/FOOT)
VERY SOFT	LESS THAN 1
SOFT	1-3
FIRM	3-6
STIFF	6-12
VERY STIFF	12-24
HARD	GREATER THAN 24

NOTES:

1) LAYER BOUNDARIES ARE APPROXIMATE AND REPRESENT SOIL LAYERS AT EACH TEST HOLE LOCATION ONLY. SUBSURFACE VARIATIONS BETWEEN BORINGS SHOULD BE ANTICIPATED.

2) BASED ON A REVIEW OF THE ST. JOHNS RIVER WATER MANAGEMENT DISTRICT POTENTIOMETRIC MAPS OF THE UPPER FLORIDAN AQUIFER FOR THIS PROJECT AREA, THE POTENTIAL ARTESIAN HEAD ELEVATION IS ESTIMATED TO BE +45 FEET NGVD. THE CONTRACTOR SHALL BE PREPARED TO HANDLE ARTESIAN WATER LEVELS UP TO ELEVATION +45 FEET NGVD.

3) LATITUDE AND LONGITUDE AT BORING LOCATIONS IS BASED ON HANDHELD GPS DEVICE.

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REVISIONS				ENGINEER OF RECORD	OSCEOLA COUNTY PUBLIC WORKS DEPARTMENT		STANDARD PENETRATION TEST (SPT) BORINGS	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION	ELIAS N. JAMMAL, P.E. LICENSE NUMBER 60126 TERRACON 1675 LEE ROAD WINTER PARK, FLORIDA 32789	ROAD IDENTIFICATION	CONTRACT ID		T-15
					PARTIN SETTLEMENT RD.	PS-20-11504-DG		

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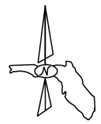
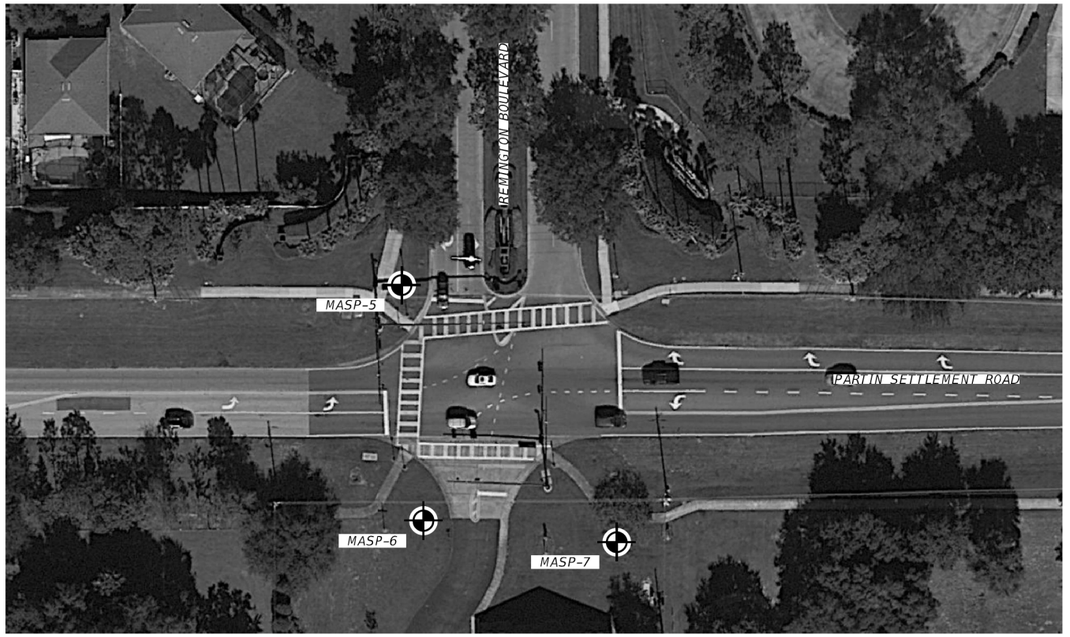


SCALE IN FEET

0 20 40

LEGEND

APPROXIMATE LOCATION OF STANDARD PENETRATION TEST BORING



LEGEND

SAND	SILTY SAND
(SP)	UNIFIED SOIL CLASSIFICATION GROUP SYMBOL
8-11-11	ENCOUNTERED GROUNDWATER LEVEL (DATE OF READING)
	ESTIMATED NORMAL SEASONAL HIGH GROUNDWATER LEVEL
W=0 -200=0	NATURAL MOISTURE CONTENT (%) FINES PASSING No. 200 SIEVE (%)
N	STANDARD PENETRATION RESISTANCE IN BLOWS PER FOOT UNLESS OTHERWISE NOTED

AUTOMATIC HAMMER

STANDARD PENETRATION TEST DATA

SPOON INSIDE DIA.	1 3/8 in.
SPOON OUTSIDE DIA.	2 in.
ASTM STANDARD DROP AUTOMATIC HAMMER	
AVG. HAMMER DROP	30 in.
HAMMER WEIGHT	140 lbs.

GRANULAR MATERIALS

RELATIVE DENSITY	SPT (BLOWS/FOOT)
VERY LOOSE	LESS THAN 3
LOOSE	3-8
MEDIUM DENSE	8-24
DENSE	24-40
VERY DENSE	GREATER THAN 40

SILTS AND CLAYS

CONSISTENCY	SPT (BLOWS/FOOT)
VERY SOFT	LESS THAN 1
SOFT	1-3
FIRM	3-6
STIFF	6-12
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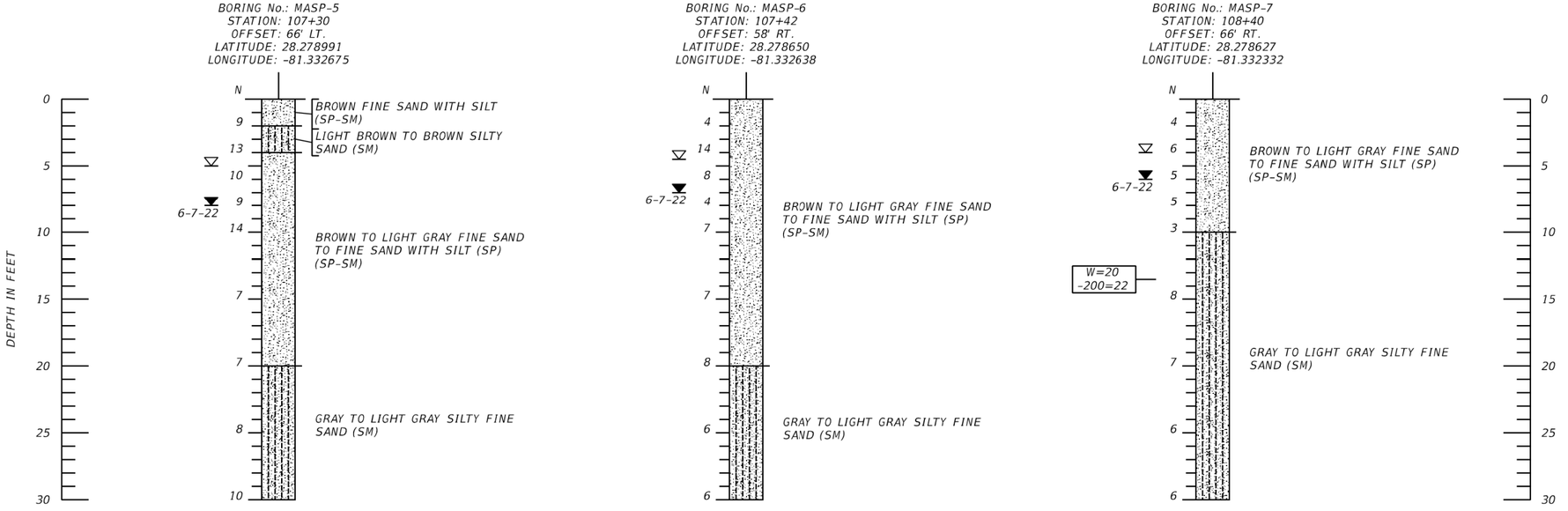

REVISIONS				ENGINEER OF RECORD	OSCEOLA COUNTY PUBLIC WORKS DEPARTMENT		STANDARD PENETRATION TEST (SPT) BORINGS	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION	ELIAS N. JAMMAL, P.E. LICENSE NUMBER 60126 TERRACON 1675 LEE ROAD WINTER PARK, FLORIDA 32789	ROAD IDENTIFICATION	CONTRACT ID		T-16
					PARTIN SETTLEMENT RD.	PS-20-11504-DG		

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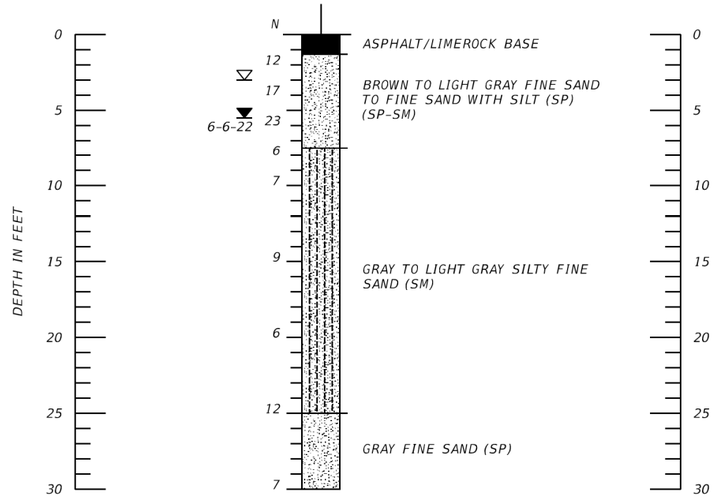
SCALE IN FEET

0 20 40

LEGEND

APPROXIMATE LOCATION OF STANDARD PENETRATION TEST BORING

BORING No.: MASP-8
STATION: 152+80
OFFSET: 12' RT.
LATITUDE: 28.278797
LONGITUDE: -81.318542



BORING TERM. @ 30.0'
NO CASING
BORING DRILLED: 6-6-22
HAMMER TYPE: AUTOMATIC
RIG TYPE: BR-2500
DRILLED BY: M. CORNELE

LEGEND

	ASPHALT AND BASE
	SAND
	SILTY SAND
(SP)	UNIFIED SOIL CLASSIFICATION GROUP SYMBOL
8-11-11	ENCOUNTERED GROUNDWATER LEVEL (DATE OF READING)
	ESTIMATED NORMAL SEASONAL HIGH GROUNDWATER LEVEL
W=0 -200=0	NATURAL MOISTURE CONTENT (%) FINES PASSING No. 200 SIEVE (%)
N	STANDARD PENETRATION RESISTANCE IN BLOWS PER FOOT UNLESS OTHERWISE NOTED

AUTOMATIC HAMMER

STANDARD PENETRATION TEST DATA

SPOON INSIDE DIA.	1 3/8 in.
SPOON OUTSIDE DIA.	2 in.
ASTM STANDARD DROP AUTOMATIC HAMMER	
AVG. HAMMER DROP	30 in.
HAMMER WEIGHT	140 lbs.

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LOOSE	3-8
MEDIUM DENSE	8-24
DENSE	24-40
VERY DENSE	GREATER THAN 40

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CONSISTENCY	SPT (BLOWS/FOOT)
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REVISIONS				ENGINEER OF RECORD	OSCEOLA COUNTY PUBLIC WORKS DEPARTMENT		STANDARD PENETRATION TEST (SPT) BORINGS	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION	ELIAS N. JAMMAL, P.E. LICENSE NUMBER 60126 TERRACON 1675 LEE ROAD WINTER PARK, FLORIDA 32789	ROAD IDENTIFICATION	CONTRACT ID		T-17
					PARTIN SETTLEMENT RD.	PS-20-11504-DG		

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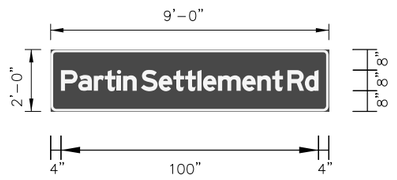
SIGN NAME	1	QTY	5	SIGN NUMBER	STATION(S)
PANEL		BORDER			none
WIDTH	9'-0"	WIDTH	1"		
HEIGHT	2'-0"	RADII	2.25"		
LEGEND	White	COLOR	White		
COLOR	Green				

SYMBOL(S)	ANGLE	X	Y	WID	HT

SIGN NUMBER	NUMBER OF POSTS	CLEARANCE Edge Of Land	COLUMN SIZE		AVERAGE LENGTH



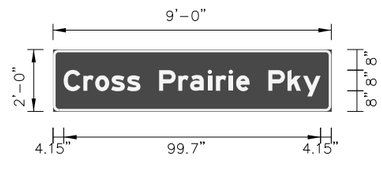
NO. OF LIGHT FIXTURES | FIXTURE SPACING | PHOTOMETRIC CURVE | WATT | VOLTAGE

COPY		P	a	r	t	i	n		S	e	t	t	l	e	m	e	n	t		R	d		L
SPACE	4	6.8	6	4.3	4.8	2.3	5.2	1.7	6.9	5.7	4.6	4.8	2.2	5.9	9.4	5.9	5.8	4.2	1.7	6.8	5.3	4	100
COPY																							
SPACE																							
COPY																							
SPACE																							
COPY																							
SPACE																							
COPY																							
SPACE																							
COPY																							
SPACE																							

SIGN NAME	2	QTY	2	SIGN NUMBER	STATION(S)
PANEL		BORDER			none
WIDTH	9'-0"	WIDTH	1"		
HEIGHT	2'-0"	RADII	2.25"		
LEGEND	White	COLOR	White		
COLOR	Green				

SYMBOL(S)	ANGLE	X	Y	WID	HT

SIGN NUMBER	NUMBER OF POSTS	CLEARANCE Edge Of Land	COLUMN SIZE		AVERAGE LENGTH



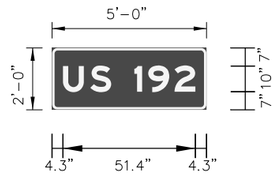
NO. OF LIGHT FIXTURES | FIXTURE SPACING | PHOTOMETRIC CURVE | WATT | VOLTAGE

COPY		C	r	o	s	s		P	r	a	i	r	i	e		P	k	y		L			
SPACE	4.1	7.6	4.6	6.2	6.1	5.3	7.2	7.4	4.6	6.9	3.2	5	2.8	5.3	7.2	7.4	6.1	6.8	4.1	99.7			
COPY																							
SPACE																							
COPY																							
SPACE																							
COPY																							
SPACE																							
COPY																							
SPACE																							
COPY																							
SPACE																							

SIGN NAME	3	QTY	2	SIGN NUMBER	STATION(S)
PANEL		BORDER			none
WIDTH	5'-0"	WIDTH	1"		
HEIGHT	2'-0"	RADII	2.25"		
LEGEND	White	COLOR	White		
COLOR	Green				

SYMBOL(S)	ANGLE	X	Y	WID	HT

SIGN NUMBER	NUMBER OF POSTS	CLEARANCE Edge Of Land	COLUMN SIZE		AVERAGE LENGTH



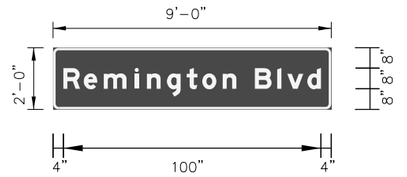
NO. OF LIGHT FIXTURES | FIXTURE SPACING | PHOTOMETRIC CURVE | WATT | VOLTAGE

COPY		U	S		1	9	2		L														
SPACE	4.3	10.8	8.4	9	5.4	10.2	6.1	4.3	39.4														
COPY																							
SPACE																							
COPY																							
SPACE																							
COPY																							
SPACE																							
COPY																							
SPACE																							
COPY																							
SPACE																							

SIGN NAME	4	QTY	2	SIGN NUMBER	STATION(S)
PANEL		BORDER			none
WIDTH	9'-0"	WIDTH	1"		
HEIGHT	2'-0"	RADII	2.25"		
LEGEND	White	COLOR	White		
COLOR	Green				

SYMBOL(S)	ANGLE	X	Y	WID	HT

SIGN NUMBER	NUMBER OF POSTS	CLEARANCE Edge Of Land	COLUMN SIZE		AVERAGE LENGTH



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

COPY		R	e	m	i	n	g	t	o	n		B	l	v	d		L						
SPACE	4	7.8	7.8	12	4.8	7.8	7.2	6	7.9	5.3	7.2	8.7	3.9	7.8	5.3	4	100						
COPY																							
SPACE																							
COPY																							
SPACE																							
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SPACE																							
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SPACE																							

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

ENGINEER OF RECORD

RYAN P. BOGAN, P.E.
LICENSE NUMBER 82217
JOHNSON, MIRMIRAN & THOMPSON
400 COLONIAL CENTER PKY, SUITE 100
LAKE MARY, FL 32746

OSCEOLA COUNTY
PUBLIC WORKS DEPARTMENT

ROAD IDENTIFICATION	CONTRACT ID
PARTIN SETTLEMENT RD.	PS-20-11504-DG

GUIDE WORK SHEET (1)

SHEET NO. T-18

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

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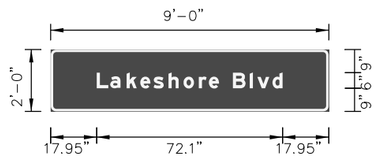
SIGN NAME	5		QTY	1	SIGN NUMBER	STATION(S)
PANEL		BORDER				none
WIDTH	9'-0"	WIDTH	1"			
HEIGHT	2'-0"	RADII	2.25"			
LEGEND	White	COLOR	White			
COLOR	Green					

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	a	k	e	s	h	o	r	e		B	l	v	d		L								
SPACE	17.9	5.2	6.4	5.3	5.2	5.8	5.8	5.9	3.9	4	5.4	6.5	2.8	5.8	4	17.8	72.1								
COPY																									
SPACE																									
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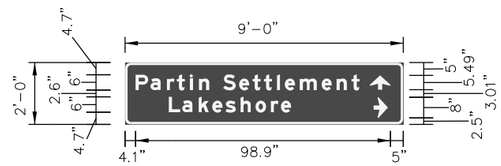
SPACE																									
COPY																									
SPACE																									
COPY																									
SPACE																									
COPY																									
SPACE																									

SIGN NAME	6		QTY	1	SIGN NUMBER	STATION(S)
PANEL		BORDER				none
WIDTH	9'-0"	WIDTH	1"			
HEIGHT	2'-0"	RADII	2.25"			
LEGEND	White	COLOR	White			
COLOR	Green					

SYMBOL(S)	ANGLE	X	Y	WID	HT
ARROWW	180	95	13.5	8	5.5
ARROWW	90	96.5	2.5	8	5.5

SIGN NUMBER	NUMBER OF POSTS	CLEARANCE Edge Of Lane	COLUMN SIZE		AVERAGE LENGTH



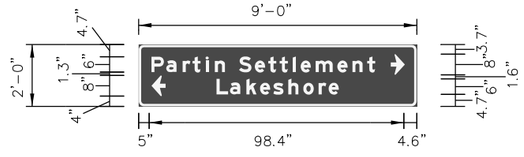
NO. OF LIGHT FIXTURES | FIXTURE SPACING | PHOTOMETRIC CURVE | WATT | VOLTAGE

COPY			P	a	r	t	l	n		S	e	t	t	l	e	m	e	n	t		L				
SPACE	4.3	5.8	6.4	3.8	5	3.8	4	5.4	6.2	5.2	4.3	5	3.1	5.8	8.5	5.8	5.8	3.1	16.1		86.9				
COPY		L	a	k	e	s	h	o	r	e		L													
SPACE	17	5.2	6.4	5.3	5.2	5.8	5.8	5.9	3.9	4	43.5	47.5													
COPY																									
SPACE																									
COPY																									
SPACE																									
COPY																									
SPACE																									
COPY																									
SPACE																									

SIGN NAME	7		QTY	1	SIGN NUMBER	STATION(S)
PANEL		BORDER				none
WIDTH	9'-0"	WIDTH	1"			
HEIGHT	2'-0"	RADII	2.25"			
LEGEND	White	COLOR	White			
COLOR	Green					

SYMBOL(S)	ANGLE	X	Y	WID	HT
ARROWW	90	97.9	12.3	8	5.5
ARROWW	270	5	4	8	5.5

SIGN NUMBER	NUMBER OF POSTS	CLEARANCE Edge Of Lane	COLUMN SIZE		AVERAGE LENGTH



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

COPY		P	a	r	t	l	n		S	e	t	t	l	e	m	e	n	t		L				
SPACE	5	5.8	6.4	3.8	5	3.6	4	5.4	6.2	5.2	4.4	5	3.1	5.8	8.5	5.8	5.8	3.1	16.1		86.8				
COPY		L	a	k	e	s	h	o	r	e		L													
SPACE	30.3	5.2	6.4	5.3	5.2	5.8	5.8	5.9	3.9	4	38.3	47.5													
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																									
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COPY																									
SPACE																									

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

ENGINEER OF RECORD
RYAN P. BOGAN, P.E.
LICENSE NUMBER 82217
JOHNSON, MIRMIRAN & THOMPSON
400 COLONIAL CENTER PKY, SUITE 100
LAKE MARY, FL 32746

OSCEOLA COUNTY
PUBLIC WORKS DEPARTMENT

ROAD IDENTIFICATION	CONTRACT ID
PARTIN SETTLEMENT RD.	PS-20-11504-DG

GUIDE WORK SHEET (2)

SHEET NO. T-19

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

7/20/2022 10:17:58 AM gbailey
c:\pwworking\jmt\d0156127\GNWTSP01.dgn