

VERANO DRI
ST. LUCIE COUNTY, FLORIDA

SIGNALIZATION PLANS

CROSSTOWN PARKWAY
&
VILLAGE PARKWAY

CROSSTOWN PARKWAY POSTED SPEED: 45 MPH
VILLAGE PARKWAY POSTED SPEED: 40 MPH
VERANO PARKWAY POSTED SPEED: 35 MPH

THESE PLANS HAVE BEEN PREPARED IN ACCORDANCE WITH AND GOVERNED BY THE CITY OF PORT ST. LUCIE ENGINEERING DEPARTMENT.

GOVERNING SPECIFICATIONS:
FLORIDA DEPARTMENT OF TRANSPORTATION DESIGN STANDARDS AND STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION (MOST CURRENT EDITION), AS AMENDED BY CONTRACT DOCUMENTS.

SIGNALIZATION SHOP DRAWINGS
TO BE SUBMITTED TO:

MACKENZIE ENGINEERING AND
PLANNING, INC.
1172 SW 30TH STREET, SUITE 500
PALM CITY, FLORIDA 34990
SHAUN G. MACKENZIE, P.E.

PLANS PREPARED BY:

MACKENZIE ENGINEERING AND
PLANNING, INC.
1172 SW 30TH STREET, SUITE 500
PALM CITY, FLORIDA 34990
SHAUN G. MACKENZIE, P.E.
CA 29013

ATTENTION IS DIRECTED TO THE FACT THAT
THESE PLANS MAY HAVE BEEN ALTERED IN
SIZE BY REPRODUCTION. THIS MUST BE
CONSIDERED WHEN OBTAINING SCALED DATA.

ENGINEER'S CERTIFICATION

DATE: _____ PROFESSIONAL ENGINEER # 61751

SHAUN MACKENZIE, P.E.

INDEX OF SHEETS

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PREPARED BY:
MACKENZIE ENGINEERING AND PLANNING, INC.


Engineering & Planning, Inc.

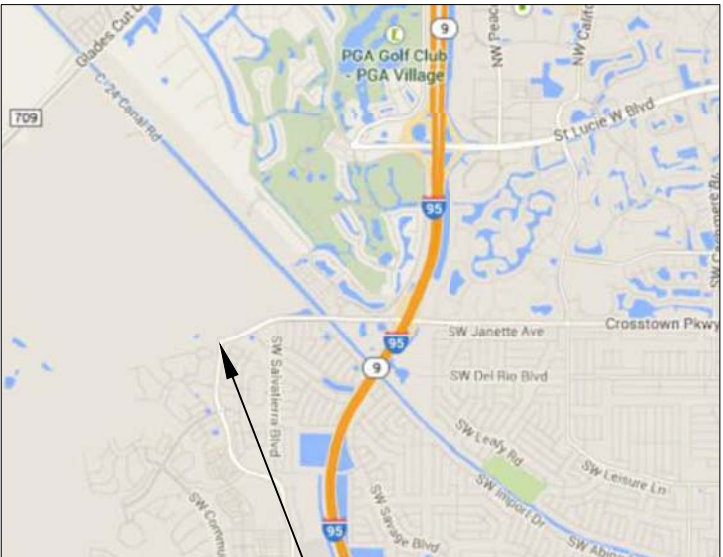
CLIENT:
VERANO DEVELOPMENT LLC
WEST PALM BEACH, FLORIDA



LOCATION MAP

NTS

SEC. 4, TWP. 37S, RGE 39E



PROJECT LOCATION


Engineering & Planning, Inc.

NO:	1								
REVISION:	PSL - LANE CONFIG								
BY:	KT								
SCALE:	NTS								
APPROVED:	SM								
DRAWN:	KT								
CHECKED:	SM								
DATE:	9/18/19								
FIELD BOOK NO:									

KEY SHEET
CROSSTOWN PARKWAY AND
VILLAGE PARKWAY

SHEET:	1
OF:	9
MEP PROJECT NO.	002030
COA NO.	29013

TABULATION OF QUANTITIES

[illegible]

SCALE: NTS	NO:	REVISION:	BY:
APPROVED: SM	1	PSL - LANE CONFIG	KT
DRAWN: KT			
CHECKED: SM			
DATE: 9/18/19			
FIELD BOOK NO:			

TABULATION OF QUANTITIES
CROSTOWN PARKWAY AND VILLAGE PARKWAY

SHEET: 2
OF: 9
MEP PROJECT NO.
002030
COA NO.
29013

GENERAL NOTES

- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH AND CONFORM TO THE MOST STRINGENT REQUIREMENTS OF THE PROJECT SPECIFICATIONS AND THE LATEST EDITION OF THE FLORIDA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION (FDOT), AND ALL OTHER APPLICABLE FEDERAL, STATE AND LOCAL CODES AND REGULATIONS.
2. SUBSURFACE UTILITIES SHOWN ON THE DRAWINGS SHALL BE CONSIDERED APPROXIMATE ONLY. THE ACCURACY OF THIS INFORMATION IS NOT GUARANTEED AND IS NOT TO BE CONSTRUED AS PART OF THE PLANS GOVERNING CONSTRUCTION OF THE PROJECT. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIS OWN DETERMINATION AS TO THE TYPE AND LOCATION OF UNDERGROUND AND OTHER UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE. THE CONTRACTOR AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.
3. ALL EXISTING UTILITIES ARE TO BE RELOCATED OR ADJUSTED BY OTHERS OR AS COORDINATED BY THE CONTRACTOR.
4. THE CONTRACTOR SHALL NOTIFY THE CITY OF PORT ST. LUCIE PUBLIC WORKS DEPT. TWO (2) FULL BUSINESS DAYS IN ADVANCE OF ANY WORK TO BE CARRIED OUT AT ANY SIGNAL. 772-871-5177
5. THE CONTRACTOR SHALL NOTIFY THE UTILITY COMPANIES TO ALLOW THEIR REPRESENTATIVES TO ACCURATELY LOCATE THEIR FACILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COORDINATION WITH THE RESPECTIVE UTILITY COMPANIES DURING ANY UTILITY CONSTRUCTION OR RELOCATION.
6. CONTACT SUNSHINE ONE CALL OF FLORIDA AT 811 OR SUNSHINE811.COM AT LEAST TWO (2) FULL BUSINESS DAYS BEFORE DIGGING. FLORIDA 'SUNSHINE ONE' LOCATES PROCEDURES SHALL BE FOLLOWED AT ALL TIMES. (NOTE: IF THERE IS A TRAFFIC MONITORING SITE ON THE PROJECT OR WITHIN 1 MILE OF THE CONSTRUCTION, THE TRANSPORTATION STATISTICS OFFICE IN TALLAHASSEE SHALL BE ADDED TO THE LIST OF UTILITY OWNERS.)
7. THE APPROPRIATE UTILITY COMPANIES SHALL BE NOTIFIED BY THE CONTRACTOR TWO (2) BUSINESS DAYS IN ADVANCE OF ANY EXCAVATION INVOLVING ITS UTILITIES SO THAT A COMPANY REPRESENTATIVE CAN BE PRESENT.
- | | | |
|----------------------------------|------------------|--------------|
| UTILITY OWNER: | | |
| CITY OF PORT ST. LUCIE TRAFFIC | PAUL JOHNSON | 772-871-5182 |
| CITY OF PORT ST. LUCIE UTILITIES | COLLEEN JACOBSEN | 772-871-5063 |
| FLORIDA CITY GAS | HOLLY COOMBS | 321-638-3419 |
| FLORIDA POWER AND LIGHT | JOEL BRAY | 386-586-6403 |
| HOMETOWN CABLE | TERRY DAY | 772-344-1539 |
| ATT DISTRIBUTION | DINO FARRUGGIO | 561-997-0240 |
| TRADITION IRRIGATION | JOHN GALLAGHER | 772-345-5119 |
8. EXISTING DRAINAGE STRUCTURES WITHIN CONSTRUCTION LIMITS SHALL REMAIN, UNLESS OTHERWISE NOTED.
9. ANY PUBLIC LAND CORNER OR BENCH MARK WITHIN THE LIMITS OF CONSTRUCTION IS TO BE PROTECTED. IF A CORNER MONUMENT IS IN DANGER OF BEING DESTROYED AND HAS NOT BEEN PROPERLY REFERENCED, THE PROJECT ENGINEER SHOULD NOTIFY THE CITY SURVEYOR, WITHOUT DELAY, BY TELEPHONE.
10. THE CONTRACTOR SHALL PROVIDE THE ENGINEER AN EROSION AND SEDIMENT CONTROL PLAN PRIOR TO CONSTRUCTION IN ACCORDANCE WITH FDOT DESIGN STANDARDS INDEX 102 & 103.
11. MATCH EXISTING SOD TYPE FOR ALL DISTURBED SOD AREAS UNLESS OTHERWISE DIRECTED. COST OF WATER AND FERTILIZER TO BE INCLUDED IN COST OF SOD.
12. PROVIDE A CLEAN-CUT EDGE OF EXISTING PAVEMENT TO BEGIN ALL PAVEMENT WIDENING. THIS EDGE MAY BE ACHIEVED BY SAWCUT OR OTHER APPROVED METHODS.
13. EXISTING PAVEMENT WITHIN NEW CONSTRUCTION AREAS SHALL BE REMOVED AS STANDARD CLEARING & GRUBBING.
14. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING THE EXISTING BASE THAT IS EXPOSED DUE TO MILLING OPERATIONS WITH A PRIME COAT. TRAFFIC IS NOT PERMITTED ON BASE MATERIAL. COST OF PRIME COAT IS INCLUDED IN THE COST OF MILLING.
15. THE CONTRACTOR SHALL REFURBISH EXISTING PAVEMENT MARKINGS DAMAGED DURING CONSTRUCTION.
16. SEVEN COPIES OF SHOP DRAWINGS AND DESIGN DATA SHALL BE SUBMITTED TO THE ENGINEER OF RECORD. ALLOW 30 DAYS TURN AROUND FOR SUBMITTALS.
17. ALL SUBMITTALS SHOULD BE SENT TO:
MACKENZIE ENGINEERING AND PLANNING INC.
1172 SW 30TH STREET, SUITE 500
PALM CITY, FL 34990
18. ALL SIGNS AND OTHER TRAFFIC CONTROL DEVICES, EXCEPT EQUIPMENT SHOWN OR NOTED ON THE PLAN SHEETS FOR REMOVAL SHALL BE REMOVED BY THE CONTRACTOR AND STOCKPILED WITHIN THE RIGHT OF WAY ONLY AFTER 48 HOURS NOTICE TO THE MAINTAINING AGENCY.
19. THE SIGNAL MAINTAINING AGENCY IS CITY OF PORT ST. LUCIE TRAFFIC OPERATIONS. THE CONTRACTOR SHALL DELIVER ALL TRAFFIC CONTROL DEVICES TO THE CITY OF PORT ST. LUCIE TRAFFIC OPERATIONS, 821 DWYER AVENUE, PORT ST. LUCIE, FLORIDA 34983, BETWEEN THE HOURS OF 7 AM AND 4 PM, MONDAY THRU FRIDAY. CONTACT 772-344-4360 AT LEAST 15 MINUTES PRIOR TO ARRIVAL.
20. ALL CONDUIT SHALL BE TWO (2) INCH MINIMUM UNLESS OTHERWISE SPECIFIED IN PLANS. ELECTRICAL POWER SERVICE CONDUIT SHALL CONFORM WITH FDOT STANDARD INDEX # 639-001
21. THE CONTRACTOR IS TO USE CAUTION WHEN WORKING IN OR AROUND ALL EXISTING UTILITIES, INCLUDING OVERHEAD POWER LINES. THE CONTRACTOR SHALL EXCAVATE BY HAND WHERE CONFLICTS MAY EXIST.
22. LOCATIONS OF UTILITIES SHOWN ON THE PLANS ARE APPROXIMATE ONLY. THE EXACT LOCATION SHALL BE DETERMINED BY THE CONTRACTOR PRIOR TO EXCAVATION.
23. THE PROPOSED LOCATIONS OF ALL POLES, PEDESTALS, AND OTHER EQUIPMENT REQUIRING EXCAVATION SHALL BE CONSIDERED APPROXIMATE DUE TO THE POTENTIAL OF CONFLICT WITH UNDERGROUND UTILITIES. SLIGHT ADJUSTMENTS DIRECTED BY THE ENGINEER MAY ALSO BE NECESSARY TO SATISFY SAFETY CODES.
24. AT THE TIME OF THE FINAL ACCEPTANCE OF THE PROJECT, THE CONTRACTOR SHALL FURNISH TWO (2) COMPLETE SETS OF AS-BUILT PLANS, CAD (.DWG) DRAWINGS, AND A COPY OF MAST ARM SHOP DRAWINGS TO EACH OF THE CONTACTS:
- | |
|--|
| CITY OF PORT ST. LUCIE
PUBLIC WORKS DEPARTMENT
121 SW PORT ST. LUCIE BLVD, BLDG B
PORT ST. LUCIE BLVD, FL 34984 |
|--|

- THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION WITH THE CITY OF PORT ST. LUCIE FOR THE ADJUSTMENT OF ALL LANDSCAPING, LIGHTING, IRRIGATION LINES AND ADJUSTMENTS OF IRRIGATION ZONES. THE CONTRACTOR SHALL PROVIDE A 1 YEAR WARRANTY ON ALL PLANTING MATERIALS RELOCATED OR FURNISHED.
26. A 90 DAY BURN-IN PERIOD IS REQUIRED FOR ALL TRAFFIC SIGNAL EQUIPMENT.
- SIGNAL NOTES
1. INSTALLATION SHALL BE PERFORMED IN ACCORDANCE WITH FDOT STANDARD INDEX 6XX TRAFFIC SIGNAL AND EQUIPMENT, 6XX INTELLIGENT TRANSPORTATION SYSTEMS (ITS), AND CITY OF PORT ST. LUCIE (CPSL) ENGINEERING STANDARDS AND SPECIFICATIONS. WHERE CONFLICTING INFORMATION MAY OCCUR CPSL STANDARDS SHALL TAKE PRECEDENCE.
 2. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO OBTAIN A #8 KEY FROM THE TRAFFIC OPERATIONS COMPOUND AT 821 DWYER AVE TO ACCESS ANY OPERATIONAL TRAFFIC CABINET.
 3. ALL TRAFFIC INDICATIONS AND PED SIGNALS SHALL BE L.E.D. WITH TUNNEL VISORS. THE PEDESTRIAN SIGNALS SHALL BE COUNT DOWN INDICATIONS.
 4. FOR PROGRAMMED FLASH OPERATION, THE MAJOR STREET IS TO FLASH YELLOW AND THE MINOR STREET IS TO FLASH RED
 5. THE CONTROLLER ASSEMBLY SHALL BE A NAZTEC TS2 TYPE 1 CABINET WITH NUMBER 8 KEY. THE TOP OF THE CONTROLLER CABINET FOUNDATION SHALL BE 12" ABOVE THE SIDEWALK ELEVATION TO PREVENT FLOODING. IN THE EVENT THERE IS NO SIDEWALK, THE TOP OF THE CONTROLLER CABINET FOUNDATION SHALL BE 12" ABOVE THE EDGE OF PAVEMENT.
 6. A DISCONNECT SWITCH TO BE MOUNTED ON A SEPARATE CONCRETE POLE ON CONTROLLER CABINET CORNER.
 7. CONTROLLER BASE SHALL HAVE TWO (2) CONDUITS FOR COMMUNICATION CABLE IN ADDITION TO THE TWO (2) SPARES THAT ARE REQUIRED. THEY SHALL BE TERMINATED INTO THE COMMUNICATION PULL BOX.
 8. THE CONTRACTOR SHALL COORDINATE WITH FLORIDA POWER AND LIGHT TO DETERMINE ELECTRICAL SERVICE FEED LOCATION.
 9. THE CONTROLLER CABINET SHALL BE ORIENTED WITH THE DOOR OPENING AWAY FROM THE ROADWAY, SO THAT THE TECHNICIAN CAN VIEW THE ENTIRE INTERSECTION WHILE WORKING IN THE CABINET.
 10. A CONCRETE TECHNICIAN PAD SHALL BE CONSTRUCTED ADJACENT TO THE CONTROLLER CABINET AT SIDEWALK ELEVATION WITH A 6" EYEBOLT PROTRUDING FROM THE CONCRETE AT THE HINGE SIDE OF THE CABINET TO SECURE A GENERATOR. IN THE ABSENCE OF SIDEWALK, THE CONCRETE TECHNICIAN PAD SHALL BE AT EDGE OF PAVEMENT ELEVATION.
 11. TOP OF MAST ARM FOUNDATIONS WITHIN THE SIDEWALKS SHALL MATCH FINISH CONTOUR AND ELEVATION OF SIDEWALKS WITHOUT JOINTS. THE CONTRACTOR IS RESPONSIBLE FOR THE PROPER BOLT PROJECTION ABOVE FINISHED SIDEWALK GRADE.
 12. LUMINAIRE ON MAST ARMS SHALL BE 120 VOLT, LIGHT EMITTING DIODE (LED) 250 WATT HPS EQUIVALENT AND SHALL BE WIRED ON A SEPARATE BREAKER IN THE DISCONNECT BOX.
 13. THE CONTROLLER SHALL OPERATE AN APPROVED FLORIDA D.O.T. SIGNAL OPERATING PLAN.
 14. SIGNAL TIMING DISPLAYED FOR LOCAL OPERATION ARE SUGGESTED TIMINGS BASED ON THE MPO AREA VOLUME COUNTS - ACTUAL TIMING AND COORDINATION PLANS ARE TO BE DETERMINED BY THE CITY OF PORT ST. LUCIE PROFESSIONAL ENGINEER'S REPRESENTATIVE.
 15. FINAL LOCATION OF MAST ARMS TO BE FIELD DETERMINED AND APPROVED BY THE CITY AND ENGINEER OF RECORD.
 16. ALL PEDESTRIAN SIGNALS SHALL BE ACCESSIBLE PEDESTRIAN SIGNALS AND MEET ALL CURRENT ADA REQUIREMENTS.
 17. ALL ILLUMINATED STREET NAME SIGNS SHALL BE RIGIDLY MOUNTED AND WIRED TO A SINGLE PHOTO CELL LOCATED IN THE CONTROLLER CABINET. LETTERING SIZE AND FHWA FONT TYPE SHALL MEET CURRENT MUTCD AND FDOT STANDARDS.
 18. OPTICAL VEHICLE DETECTORS SHALL BE ITERIS EDGE II, WITH ITERIS EDGE CONNECT AND ITERIS TS2-IM MODULE, AND SHALL BE CAPABLE OF MULTI ZONE DETECTION. DETECTORS SHALL BE ITERIS R24-WDR AND SHALL BE MOUNTED ABOVE THE MAST ARM USING ASTRO BRACKET HARDWARE AT A HEIGHT CAPABLE OF THE REQUIRED DETECTION AND AS RECOMMENDED BY THE SYSTEM MANUFACTURER. THE DETECTION SYSTEM SHALL BE EQUIPPED WITH AN LCD MONITOR FOR CONFIGURATION OF THE DETECTOR LOOPS. SHOP DRAWINGS SHALL BE SUBMITTED TO THE CITY OF PORT ST. LUCIE FOR APPROVAL AND MUST COMPLY WITH THE CITY'S VIDEO SYSTEM. ALL VIDEO POWER CABLES, PROCESSORS, AND EQUIPMENT SHALL BE PROVIDED FOR A COMPLETE AND OPERATIONAL VIDEO DETECTION SYSTEM. MANUFACTURERS SHALL BE PRESENT AT TURN ON FOR PROGRAMMING AND SETUP.
 19. ALL SIGNALS SHALL BE EQUIPPED WITH AN UNINTERRUPTABLE POWER SUPPLY (UPS). A NOVUS FXM 2000 IN A NOVUS FORTEX FX 200 CABINET MOUNTED ON A CONCRETE PAD ALONG SIDE THE CONTROLLER FOUNDATION AND HAVE NETWORK INTERFACE CARD INSTALLED AND CONFIGURED.
 20. FIBER OPTIC ETHERNET SWITCH SHALL BE SIEMENS RUGGEDCOM RS-900G-HI-D-2SC10-XX OR CISCO INDUSTRIAL ETHERNET 4000 SERIES 20 PORTS MANAGED- (PART # IE-4000-8GT8GP4G-EY/CISCO AC-DC POWER MODULE FOR POE SOLUTION (PART # PWR-IE170W-PC-AC) AND SHALL BE FULLY CONFIGURED FOR OPERATION, INCLUDING ASSIGNED IP ADDRESS DETERMINED BY THE CITY OF PORT ST. LUCIE TRAFFIC DIVISION. CONTRACTOR SHALL CONTACT TRAFFIC DIVISION TO DETERMINE WHICH SWITCH WILL BE APPROPRIATE FOR INSTALL.
 21. TRAFFIC MONITORING CAMERA SHALL BE BOSCH AUTODOME IP STARLIGHT 7000 HD PAN TILT ZOOM, SHALL HAVE SURGE & LIGHTING PROTECTION, AND SHALL BE MOUNTED WITH MAST-O-BRACKET AND NEOPRENE WRAP. THE CITY OF PORT ST. LUCIE TRAFFIC DIVISION SHALL DETERMINE THE MOUNTING LOCATION.
 22. ALL PATCH CABLES, SPLITTERS AND MISC. MATERIALS REQUIRED FOR THE INSTALLATION OF TRAFFIC MONITORING EQUIPMENT SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR. INSTALLED PATCH CABLE SHALL MATCH EXISTING PATCH CABLE DIMENSIONS AND TYPE. ANY DEVIATIONS SHALL BE APPROVED BY TRAFFIC DIVISION.
 23. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THAT ALL EQUIPMENT, INCLUDING TRAFFIC MONITORING EQUIPMENT IS FULLY OPERATIONAL BEFORE THE SIGNAL ENTERS ANY STATE OF OPERATION.
 24. SIGNAL CONDUCTOR SHALL PASS THROUGH HOLE IN PELCO/ASTRO MOUNTING BRACKET, INTO SIGNAL MOUNTING PIPE AND INTO SIGNAL, SO CABLE IS NOT EXPOSED TO THE ELEMENTS.
 25. FIVE SECTION SIGNAL HEADS SHALL HAVE AN ADDITIONAL TERMINAL STRIP INSTALLED IN THE RED BALL SIGNAL HEAD WITH A RED AND NEUTRAL JUMPER WIRE ATTACHED FOR THE EASE OF REPLACING THE RED BALL LED

SIGNAL NOTES

SIGNAL.

26. ALL SIGNAL HEADS SHALL HAVE BACK PLATES INSTALLED USING ALL NECESSARY HARDWARE ACCORDING TO THE LATEST FDOT STANDARDS.
 27. CONTRACTOR SHALL NOT USE WIRE NUTS ANYWHERE WITHIN THE CONTROLLER CABINET, STREET LIGHT CIRCUIT OR SIGNAL CIRCUIT. APPROVED CONNECTIONS ARE TERMINAL STRIPS, WATER TIGHT BUTT SPLICES (RUBBER TAPE ELECTRICAL TAPE, SCOTCH COTE) AND SPLIT BOLTS. THERE SHALL BE NO TERMINAL STRIPS IN PEDESTRIAN SIGNAL T-BASES, WATER TIGHT SPLICES ONLY.
 28. ALL SIGNAL UPRIGHT HAND HOLES SHALL HAVE TERMINAL STRIPS INSTALLED FOR THE TERMINATION OF SIGNAL CONDUCTOR FROM THE CONTROLLER CABINET TO THE SIGNAL HEADS/PEDESTRIAN SIGNALS.
 29. ALL GROUND WIRING WITHIN PULL BOXES REQUIRING TERMINATION TO GROUND ROD SHALL BE ATTACHED USING CAD WELD IGNITORS.
 30. SIGNAL CONDUCTOR WITHIN CONTROLLER CABINET SHALL COMPLETELY ENCIRCLE INSIDE OF CABINET BEFORE TERMINATION TO ALLOW SLACK FOR KNOCK DOWNS.
 31. ALL SPARE SIGNAL CONDUCTOR WITHIN CONTROLLER CABINET SHALL BE TERMINATED DIRECTLY TO GROUND/NEUTRAL BARS.
 32. ALL SIGNAL CONDUCTOR WITHIN THE UPRIGHT HAND HOLE AND CONTROLLER CABINET SHALL BE PROPERLY LABELED USING FLAG TIE WRAPS.
 33. ALL DETECTION CAMERA PELCO BRACKETS SHALL BE DRILLED AND TAPPED FOR 1/4-20 SET SCREW AFTER INSTALLATION TO PREVENT CAMERA FROM LAYING OVER IN HIGH WINDS.
 34. WEEP HOLES SHALL BE DRILLED IN ALL SIGNAL HEADS / PEDESTRIAN SIGNALS.
 35. ANTI SEIZE SHALL BE USED ON ALL MOUNTING HARDWARE FOR SIGNAL/CAMERA BRACKETS.
 36. THE FOLLOWING ITEMS SHALL BE USED FOR FIBER OPTIC INTERCONNECT:
 - PULL BOX (FIBER OPTIC) - TIER 15 (MIN.)
 - BOX: QUAZITE - PG1730BB18 - 17" X 30" X 18" DEEP, COVER: QUAZITE - PG1730CA00
 - BOX: SYNERTECH - S1730B18FA - 17" X 30" X 18" DEEP, COVER: SYNERTECH - S1730HBBOA
 - SPLICE BOX (FIBER OPTIC) - TIER 15 (MIN.)
 - BOX: QUAZITE - PG3048BB - 30" X 48" X 36" DEEP, COVER: QUAZITE - PG3048HC00
 - BOX: OLDCASTLE - 3048-36 - 30" X 48" X 36" DEEP, COVER: OLDCASTLE - UNI-HALF 3048
 - SPLICE CLOSURES (FIBER OPTIC): TYCO FOSC-450-C6-6T-N0-C6V
 - ENCLOSURE SPLICE TRAY: FOSC-ACC-C-TRAY-24
 - BASKET: FOSC-ACC-C-BASKET
 - FIBER OPTIC CABLE
 - CORNING/SIECOR - 096EU4-T4701D20 - 96 FIBER ALTOS GEL-FREE CABLE NON-ARMORED SMFE 1.4/0.4/0.3 DB/KM 12F/TUBE PRINT IN FT.
 - CORNING/SIECOR - 012EU4-T4701D20 - 12 FIBER ALTOS GEL-FREE CABLE NON-ARMORED SMFE 1.4/0.4/0.3 DB/KM 12F/TUBE PRINT IN FT.
 38. ALL FIBER OPTIC PAY ITEMS SHALL BE IN ACCORDANCE WITH AND CONFORM TO THE LATEST EDITION OF THE CITY OF PORT ST. LUCIE'S FIBER OPTIC NETWORK MINIMUM DESIGN STANDARDS AND DETAILS (APPENDIX "A" TO THE UTILITY STANDARDS MANUAL).
 39. THE CITY SHALL BE SUPPLIED WITH ONE (1) HONDA EU 3000I PORTABLE INVERTOR GENERATOR (OR EQUIVALENT) UPON COMPLETION OF THE TRAFFIC SIGNAL. IT SHALL BE EQUIPPED WITH ELECTRONIC START AND WHEELS.
 40. THE FOLLOWING FIBER OPTIC PAY ITEMS SHALL BE INCORPORATED INTO THE SIGNALIZATION PLANS FOR EACH INTERSECTION.

CCTV ITEMS	
• 686-101-2 VIDEO DATA SERIAL CONVERTER (F&I)	1 EA
• 686-101-3 COPPER DATA PATCH CABLES 5 (F&I)	1 EA
• 686-101-4 CAMERA ASSEMBLY, BOSCH 36X G5, SMOKED LENS W/ COMPOSITE CABLE & GASKET (F&I)	1 EA
• 686-101-5 CCTV PENDANT MOUNT, MASTOBAC & NEOPRENE WRAP (F&I)	1 EA
• 686-101-6 VIDEO COAX PATCH CABLES W/ SPLITTER (F&I)	1 EA
• 686-101-8 CCTV MAINTENANCE UNIT (SURGE ARRESTOR PANEL FOR POWER, DATA, VIDEO W/ INTERFACE) (F&I)	1 EA
• 686-101-7A BOSCH 1 CH. ENCODER (VIPX1XF)	1 EA
• 686-101-7C MULTI-VOLTAGE POWER SUPPLY MODULE (F&I)	1 EA
ELECTRONICS	
• 684-1-1A FO ETHERNET SWITCH 1000BASEF, 20PT-8CU (F&I)	1 EA
• 684-1-1B FO ETHERNET SWITCH 1000BASEF, 20PT-8CU POE (F&I)	1 EA
• 684-1-1C CISCO INDUSTRIAL 4000 8GT8GP4G-E FO ETHERNET SWITCH 1000BASEF, 20PT-20CU POE (F&I)	1 EA
FIBER OPTIC CABLE OSP	
• 101-1 MOBILIZATION AND DOCUMENTATION	LS
• 33-TW TRACER WIRE W/ RADIO DETECTION SYSTEM BALANCING FOR CITYWIDE LOCATE SYSTEM (F&I)	LF
• 633-113-123 FO CABLE 96F, SM, LT, UG (F&I)	LF
• 633-113-DM ROW DELINEATOR MARKER POST ORANGE 6' (F&I)	1 EA
• 633-1-121 FO CABLE 12F, SM, DROP CABLE (F&I)	LF
• 633-2-31 FO CONNECTION (INSTALL) SPLICE	1 EA
• 633-2-32 FO CONNECTION (INSTALL) TERMINATION	1 EA
• 633-7-12 FO SPLICE-TERM. CABINET, 12F, WALL/RACK (F&I)	1 EA
• 633-9-A FO JUMPER, DUPLEX ST-ST, SM, 10' (F&I)	1 EA
• 633-9-B FO JUMPER, DUPLEX SC-ST, SM, 10' (F&I)	1 EA
• 633-9-C FO JUMPER, DUPLEX LC-ST, SM, 10' (F&I)	1 EA
• 633-9-12 FO SPLICE CLOSURE 12F, AERIAL/UG (F&I)	1 EA
• 633-9-96 FO SPLICE CLOSURE 96F, AERIAL/UG (F&I)	1 EA
• 635-1-15 FO PULLBOX (F&I)	1 EA
• 635-1-15A FO PULLBOX (F&I)	1 EA

 41. IN ADDITION TO THE ABOVE GENERAL NOTES, IT SHALL BE THE RESPONSIBILITY OF THE DESIGN ENGINEER TO ENSURE ADDITIONAL GENERAL NOTES AND PAY ITEM FOOT NOTES SPECIFIC TO THE PROJECT ARE INCLUDED IN THE CONSTRUCTION PLANS AND SUBMITTED FOR CITY APPROVAL.



NO:	REVISION:	BY:
1	PSL - LANE CONFIG	KT
SCALE: NTS APPROVED: SM DRAWN: KT CHECKED: SM DATE: 9/18/19		FIELD BOOK NO:

GENERAL NOTES	CROSTOWN PARKWAY AND VILLAGE PARKWAY
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SHEET: 3
OF: 9
MEP PROJECT NO. 002030
COA NO. 29013

- | INSYNC ADAPTIVE EQUIPMENT | |
|---|-------------|
| CABINET | |
| • INSYNC SHELF MOUNT PROCESSOR | 1 EA |
| • INSYNC EQUIPMENT PANEL | 1 EA |
| • WINSYNC SDLC MODULE | 1 EA |
| • INSYNC INTERCEPT MODULE | 1 EA |
| • DIN RELAY IV | 1 EA |
| • INSYNC DUAL SERIAL CABLE | 1 EA |
| • INSYNC BIU CABLE, 1 OR 2 BIU | 1 EA |
| • SDLC MODULE POWER CABLE MW 12VDC 2.03A | 1 EA |
| • 3' AND 7' PATCH CABLES | 1 EA |
| • 18/2 CABLE FOR MISC. WIRING | Roll |
| • SURGE PROTECTION POWER STRIP | 1 EA |
| DETECTION | |
| • INSYNC DIGITAL CAMERAS FOR VIDEO DETECTION | 4 EA |
| • INSYNC UNIVERSAL CAMERA MOUNT BRACKET | 4 EA |
| • 14/3 TRAFFIC POWER CABLE IMSA 20-1 STRANDED | TBD |
| • CAT6 SHIELDED ETHERNET CABLE | TBD |
| • PELCO ASTRO-BRAC MOUNT | 4 EA |
| • PELCO GUSSETED TUBE - 72" | 4 EA |
| • PELCO CAMERA BRACKET - SH-514 | 4 EA |
| • INLINE ETHERNET SURGE PROTECTION | 4 EA |
| • VERACITY OUTREACH MAX OR LITE REPEATER | TBD - Max 4 |
| • MICROSEMI SINGLE PORT 30W INDUSTRIAL POE INJECTOR | TBD - Max 3 |
| • POLYCASE ENCLOSURE FOR REPEATER IN PULL BOX | TBD - Max 4 |

43. TRAFFIC CONTROL PLANS FOR THE PROJECT SHALL COMPLY WITH THE LATEST EDITION OF THE FLORIDA DEPARTMENT OF TRANSPORTATION DESIGN STANDARDS, THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) AND THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION. AS A MINIMUM CRITERIA, THE CONTRACTOR MAY BE DIRECTED BY THE PROJECT ENGINEER TO DEVELOP AND IMPLEMENT MODIFICATIONS TO THE TRAFFIC SIGNAL OPERATION (I.E. TIMING AND PHASING, FOR SIGNALS LOCATED WITHIN THE PROJECT LIMITS. THE CONTRACTOR'S RESPONSE TIME TO REPORTED MALFUNCTIONS OF THE TRAFFIC SIGNALS WITHIN THE PROJECT LIMITS SHALL BE NO MORE THAN TWO (2) HOURS. AND THE CONTRACTOR SHALL RESTORE ALL MALFUNCTIONING TRAFFIC SIGNAL EQUIPMENT TO ITS LEVEL OF OPERATION PRIOR TO MALFUNCTION WITHIN TWENTY-FOUR (24) HOURS. DURING THIS TIME, THE CONTRACTOR SHALL PROVIDE AT HIS EXPENSE, TEMPORARY TRAFFIC CONTROL DEVICES, FLAGGER PERSONNEL, AND LAW ENFORCEMENT PERSONNEL, AS NECESSARY, TO MAINTAIN A SAFE AND EFFICIENT FLOW OF TRAFFIC AT AFFECTED SIGNALIZED AND UN-SIGNALIZED INTERSECTIONS. THE ENGINEER SHALL APPROVE ALL MODIFICATIONS PRIOR TO THEIR IMPLEMENTATION.

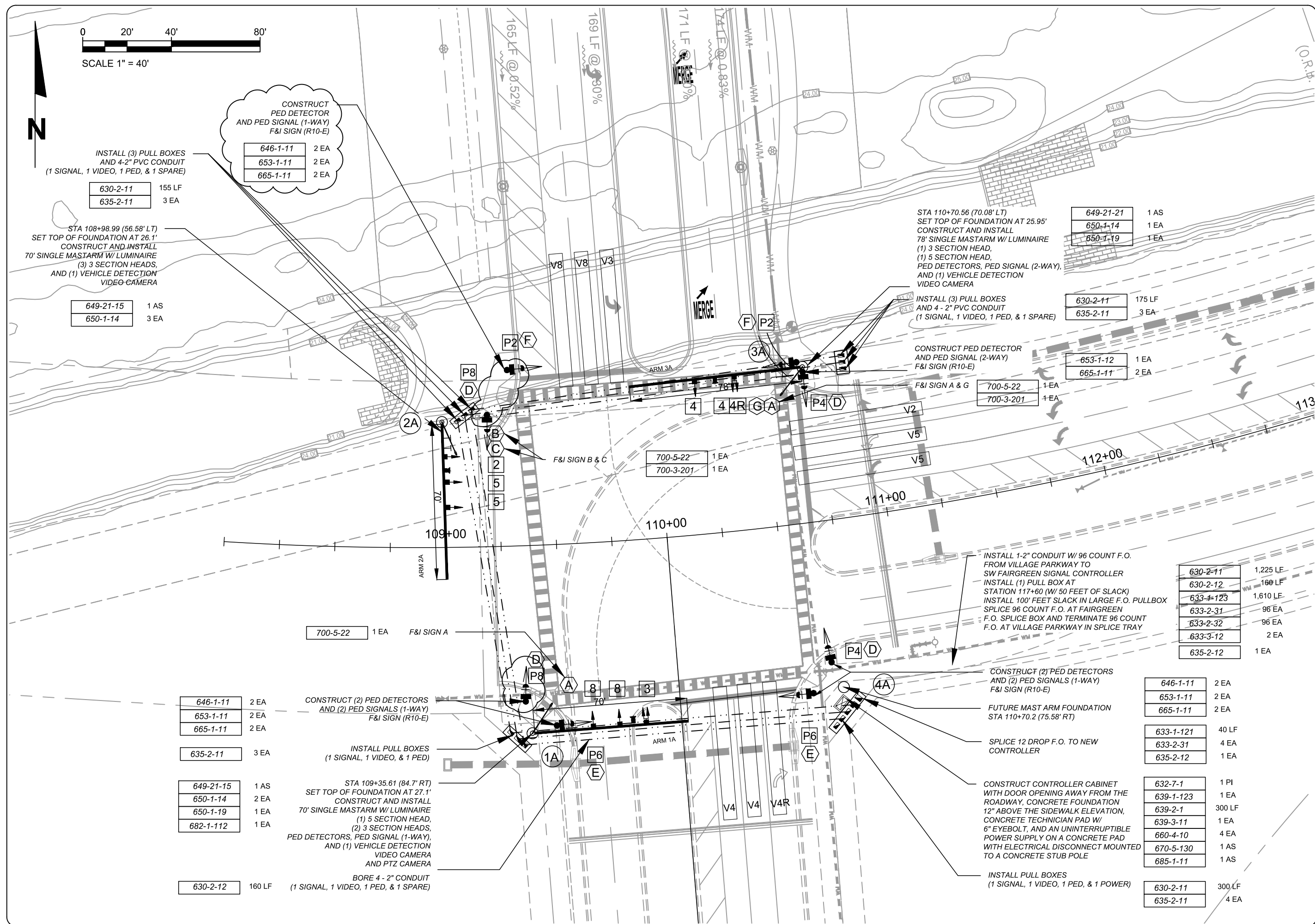
101-1	THE CONTRACTOR SHALL PROVIDE ALL NECESSARY EQUIPMENT INCLUDING A TWO-MAN BUCKET OR PLATFORM LIFT TRUCK FOR USE BY THE ENGINEER DURING INSPECTION OF TRAFFIC SIGNALS.
632-7-11	VERIFY THE COLOR CODE OF SIGNAL CABLE WITH THE MAINTAINING AGENCY PRIOR TO WIRING INTERSECTION.
635-2-XX	THE PULL AND SPICE BOX SHALL BE FURNISH ONLY. THE CITY OF PORT ST. LUCIE WILL SPlice AND INSTALL. THE SPlice ENCLOSURE AND ALL MATERIALS REQUIRED TO COMPLETE THE TERMINATIONS ARE TO BE IN ACCORDANCE WITH AND CONFORM TO THE LATEST EDITION OF THE CITY OF PORT ST. LUCIE'S FIBER OPTIC NETWORK MINIMUM DESIGN STANDARDS AND DETAILS (APPENDIX "A" TO THE UTILITY STANDARDS MANUAL).
650-1-XX	STANDARD HEADS WITH LED ON ALL INDICATIONS, INCLUDING ARROWS. USE SIGNAL HEAD SUPPORTING TUBE THAT IS CAPABLE OF ADJUSTING VERTICALLY A MINIMUM OF 1.5 FEET.
653-1-XX	ALL PED INDICATOR SYMBOLS MUST BE A MINIMUM OF 9 INCHES HIGH
650-1-XX	USE LOUVERED POLYCARBONATE (OR EQUIVALENT) SIGNAL BACK PLATES.
650-1-XX	CONTRACTOR SHALL DELIVER ALL REMOVED USABLE EQUIPMENT TO: CITY OF PORT ST. LUCIE ENGINEERING DEPARTMENT 821 SW DWYER AVENUE PORT ST. LUCIE, FL 34983

-
- Diagram illustrating a trench cross-section. The trench is 30" MIN. deep. The bottom of the trench is labeled "MINIMUM NECESSARY". The top of the trench is labeled "FINISHED GRADE". The trench is filled with "BACKFILL & TAMP W/MATERIAL REMOVED FROM TRENCH". A "WARNING TAPE" is shown at the bottom of the trench.



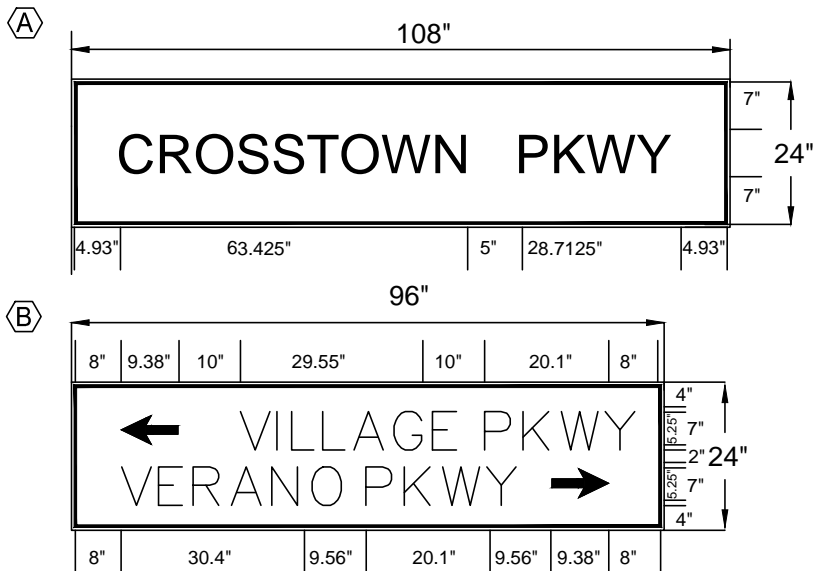
SCALE: NTS APPROVED: SM DRAWN: KT CHECKED: SM DATE: 9/18/19	NO:	REVISION:	BY:
	1	PSL - LANE CONFIG	KT
FIELD BOOK NO:			

SHEET: 4
OF: 9
MEP PROJECT NO. 002030
COA NO. 29013



DETAIL OF SIGNS

NTS



LETTERING:
CAPITAL LETTERS
10" SERIES C

700-5-22 2 EA

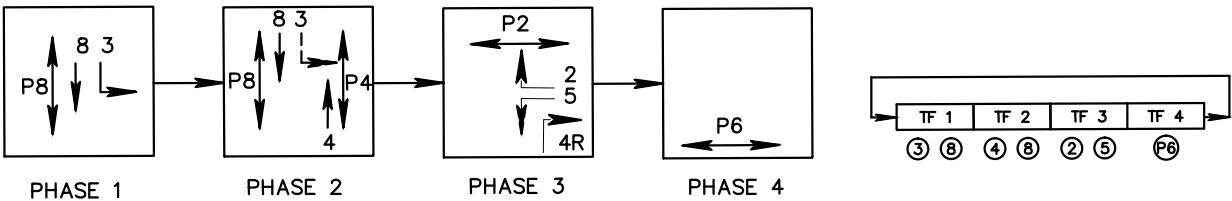
LETTERING:
CAPITAL LETTERS
7" SERIES C

700-5-22 1 EA

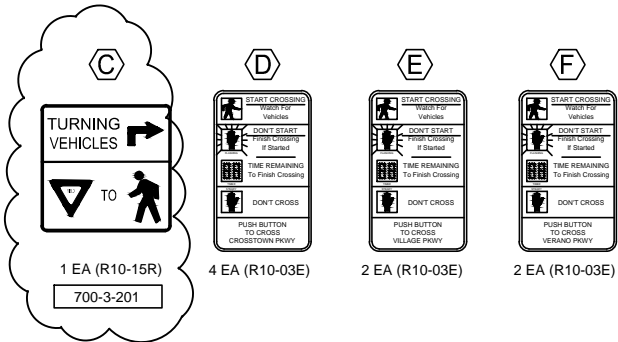
CONTROLLER TIMINGS

INTERVAL		1	2	3	4	5	6	7	8
MOVEMENT			WB	SBL	NB	WBL	EB		SB
TIMING FUNCTION	MINIMUM GREEN		-	-	-	-			-
	EXTENSION		-	-	-	-			-
	MAXIMUM GREEN 1		-	-	-	-			-
	MAXIMUM GREEN 2		-	-	-	-			-
	YELLOW INTERVAL		4.8	4	4.4	4.8			4
	ALL RED CLEARANCE		2.0	2.0	2.0	2.0			2.0
	PEDESTRIAN WALK		7		7		7		7
	PED. CLEARANCE		35		39		35		32
	RECALL		MIN						
	DETECTION FUNCTION		LOCK	NON-LOCK	NON-LOCK	NON-LOCK			NON-LOCK

S.O.P. 12 (MODIFIED)

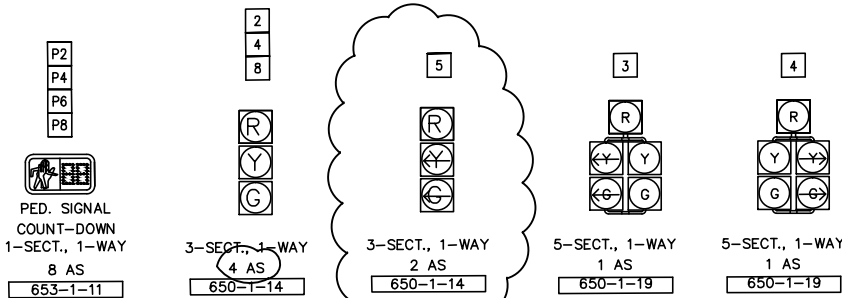


SIGN DETAIL A AND B:
INTERNALLY ILLUMINATED LED SIGN SINGLE FACE RIGID MOUNTED
ON THE MAST ARM OVERHEAD



DETAIL OF SIGNAL HEADS

NTS



VIDEO DETECTION CHART

VIDEO DETECTOR	MOVEMENT NUMBER
V1	8, 3
V2	4, 4R
V3	5, 2

CONTROLLER NOTES

- BACK PLATES REQUIRED FOR ALL NEW SIGNAL HEADS.
- PROVIDE TUNNEL VISORS ON ALL SIGNAL HEADS.
- CONTROLLER TO UTILIZE SOP NO. 12 (MODIFIED).
- THE MAJOR STREET IS CROSSTOWN PKWY AND THE MINOR STREET IS VILLAGE/VERANO PKWY

SIGNALIZATION PLAN

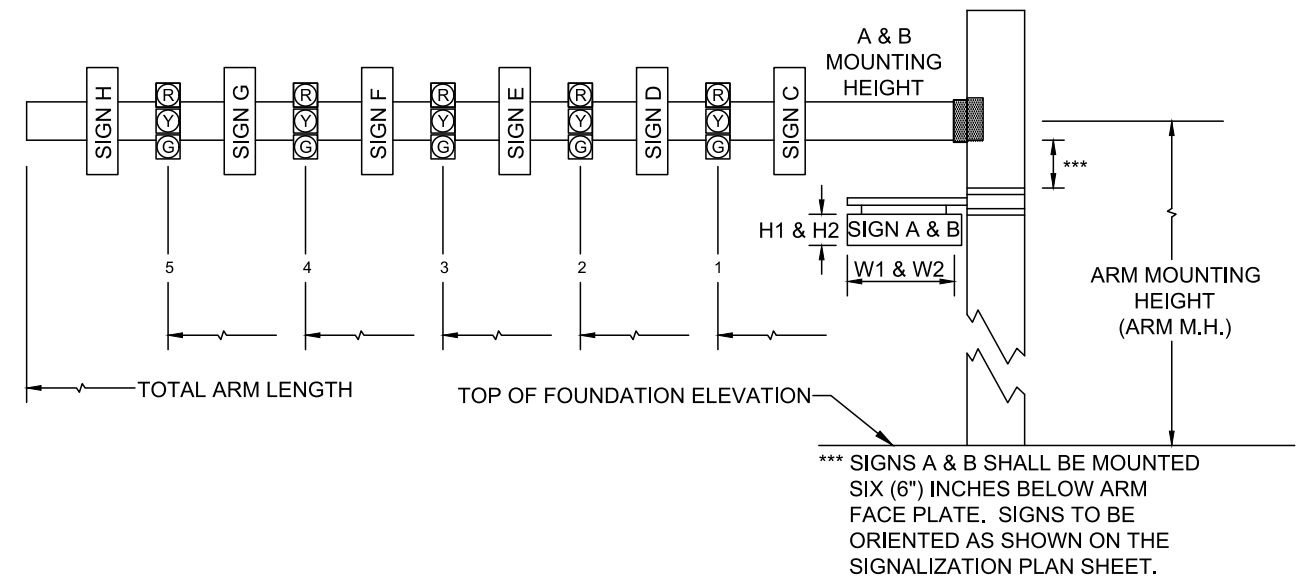
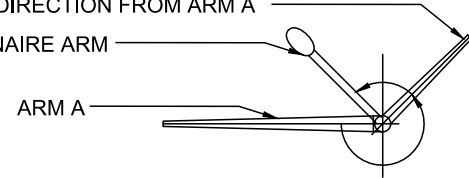
CROSSTOWN PARKWAY AND
VILLAGE PARKWAY

NO:	1								
REVISION:									
BY:	KT								
CPSL ENG AND TRAFFIC									
SCALE: NTS									
APPROVED: SM									
DRAWN: KT									
CHECKED: SM									
DATE: 9/18/19									
FIELD BOOK NO:									

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A diagram showing a horizontal line labeled "BASELINE" at the bottom left. From the left end of this baseline, a line extends upwards and to the right, ending at a circle. The angle between the horizontal baseline and the upward-sloping line is labeled $\angle A^\circ$. Another angle, also labeled $\angle A^\circ$, is shown between a vertical line and the upward-sloping line.

ARM A



ARM ORIENTATION		
ID NO.	SHEET NO.	$\angle A^0$
1A	5	-
2A	5	-
3A	5	-
4A	5	-

[illegible]

SIGNAL HEAD, SIGNAL HEAD BACK PLATE AND SIGN LOCATIONS SHOWN ON THIS SHEET REFLECT FUTURE SIGNAL REQUIREMENTS. SEE APPROPRIATE PLAN SHEET FOR INITIAL SIGNAL HEAD, SIGNAL HEAD BACK PLATE AND SIGN CONFIGURATION AND LOCATION.

Mackenzie
Engineering & Planning, Inc.

[illegible]

MAST ARM TABULATION

SHEET: 7
OF: 9
MEP PROJECT NO. 002030
COA NO. 29013

STANDARD MAST ARM ASSEMBLIES DATA TABLE															Table Date 4-08-19		
STRUCTURE ID NUMBER	DESIGNATION	FIRST ARM		SECOND ARM		UF (deg)	LL (deg)	POLE			DRILLED SHAFT DATA						
		ARM ID	FAA (ft)	ARM ID	SAA (ft)			POLE ID	UAA (ft)	UB (ft)	SHAFT ID	DA (ft)	DB (ft)	RA	RB	RC	RD (in)
POLE 1	A70S-P5SL-DS165.0	A70S	---	---	---		---	P5SL	---	21	DS/16/5.0	---	---	---	---	---	---
POLE 2	A70S-P5SL-DS165.0	A70S	---	---	---		---	P5SL	---	21	DS/16/5.0	---	---	---	---	---	---
POLE 3	A78S-P6SL-DS185.0	A78S	---	---	---		---	P6SL	---	21	DS/18/5.0	---	---	---	---	---	---

Table Notes

- Assembly Number Legend

ARM ID	POLE ID
AXX - Arm Length	PX - Pole Number
S - Single Arm	S - Single Arm
D - Double Arm	D - Double Arm
H - Heavy Duty	L - Luminaire
- 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 arm length shortened from UA to UAA.

FOUNDATION CONSTRUCTION NOTES:

1. Drilled shaft inspector shall notify Geotechnical and Structural Engineers of Record if encountered soil conditions differ from those shown in the referenced soils report. In such cases, placement of reinforcing steel and concrete shall be performed until the Structural Engineer of Record has reviewed the information and has determined whether modifications to the drilled shaft foundation are required.

GENERAL NOTES

1. Work this sheet with Signal Designer's "Mast Arm Tabulation".
See "Mast Arm Tabulation" for special instruction that include non-standard handhole location, paint color, terminal compartment requirement, and pedestrian features.
2. Work with Index Nos. 649-030 and 649-031
3. Design Wind Speed = 170 MPH
4. Design includes Backplates on all signals

5. For Poles 1 through 3
Design based on Borings taken and sealed by
David P. Andre, P.E. (Andersen Andre Consulting Engineers, Inc.)
6. For Poles 1 through 3
Assumptions and Values used in design:

Boring SPT-3: (for Pole 1)

Design Water Table is 7.5 ft. below surface

Soil Type: Cohesionless (Sand)

Depth (feet)	Soil Friction Angle ϕ (degrees)	Soil Unit Weight γ (pcf)		Cohesion (tsf)	SPT 'N' Value	
		Sat.	Sub.		Range	Average
0-18	34	114	52	0	9-31	16
18-23	29	109	47	0	2	2
23-30	32	115	53	0	10-38	24

Boring SPT-2 (for Pole 2)

Design Water Table is 5.5 ft. below surface

Soil Type: Cohesionless (Sand)

0-18	34	114	52	0	8.21	16
18-23	29	109	47	0	4	4
23-30	32	115	53	0	10.28	9

Boring SPT-1: (for Pole 3)

Design Water Table is 6.5 ft. below surface

Soil Type: Cohesionless (Sand)

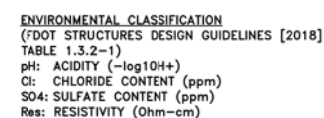
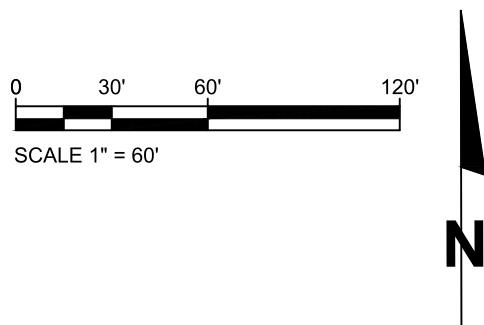
0-18	35	115	53	0	8.40	24
18-23	29	109	47	0	4	4
23-30	35	115	53	0	10.44	27

[illegible]

MAS | ARM ASSEMBLY

CROSSTOWN PARKWAY AND
VILLAGE PARKWAY

SHEET: 8
OF: 9
MEP PROJECT NO.
002030
COA NO.
29013



Boring No.	Depth below existing grade (feet)	SPT 'N' Value Range (Average)	Unit Weight, γ (pcf)		Angle of Internal Friction, ϕ (degrees)	Cohesion (tsf)
			Sat.	Subm.		
TB-1	0-18	9-31 (16)	114	52	34	0
	18-23	2 (2)	109	47	29	0
	23-30	10-38 (24)	115	53	32	0
TB-2	0-18	8-21 (16)	114	52	34	0
	18-23	4 (4)	109	47	29	0
	23-30	10-28 (19)	115	53	32	0
TB-3	0-18	8-40 (24)	115	53	35	0
	18-23	4 (4)	109	47	29	0
	23-30	10-44 (27)	115	53	35	0