INDIAN RIVER COUNTY – TRAFFIC SIGNAL GENERAL NOTES
REV 7.0 2-11-22

A. POWER SERVICE
1. POWER SERVICES SHALL FOLLOW THE LATEST STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION DESIGN STANDARD INDEX NO. 17504, 17736
2. SERVICE BREAKER BOX SHALL BE SQUARE-D MODEL #QO24L70RB, OR APPROVED EQUIVALENT.
3. POWER SERVICES ARE TO BE 120/240 VAC WITH TRIPLEX SERVICE DROP WIRE WITH TWO BLACK AND ONE WHITE CABLE FROM SERVICE DISCONNECT TO POWER SERVICE CONNECTION POINT.
4. ALL ABOVE GROUND CONDUIT SHALL BE HD GAVINIZED OR ALUMINUM.
5. MAST ARM POWER SERVICES SHALL BE MOUNTED ON A STUB POLE.
6. UNDERGROUND POWER SERVICE SHALL HAVE A LOAD PULL BOX AND A SEPARATE LINE PULL BOX AT THE SERVICE POINT.
7. CONCRETE STRAIN POLE INSTALLATIONS SHOULD HAVE THE POWER SERVICE MOUNTED ON THE STRAIN POLE.

B. TRAFFIC SIGNAL CONTROLLER
1. SHALL BE COMPATIBLE WITH ECONOLITE SYSTEM SOFTWARE.
2. SHALL HAVE INTERNAL TIME-BASED CAPABILITIES
3. SHALL HAVE INTERNAL RAILROAD PREEMPTION WITH IMMEDIATE RETURN TO COORDINATION.

C. TRAFFIC SIGNAL COMMUNICATIONS INTERCONNECT
NOTE: VARIANCE TO COMMUNICATION INTERCONNECT DUE TO DESIGN CRITERIA WOULD REQUIRE PRIOR APPROVAL FROM INDIAN RIVER COUNTY.

1. TWO 2" CONDUITS SHALL BE INSTALLED WITH ALL INTERCONNECT RUNS.
2. PULL BOXES CONTAINING INTERCONNECT ARE TO BE INSTALLED AT NO MORE THAN 1000 FOOT INTERVALS MARKED "TRAFFIC SIGNAL" (FDOT DESIGN STANDARD INDEX 17700).
3. FIBER OPTIC INTERCONNECT RUNS SHALL HAVE A SLACK/SPLICE BOX AT ALL SIGNALIZED INTERSECTIONS MARKED "FIBER OPTICS". SLACK/SPLICE BOXES SHALL CONTAIN A MINIMUM OF 100 FEET OF FIBER OPTIC CABLE SLACK (FDOT DESIGN STANDARD 635-001) AND SHALL BE LOCATED AT NO MORE THAN 1/2-MILE INTERVALS.
4. FIBER OPTIC CABLE SHALL BE 96-FIBER SINGLE MODE. A #14 AWG (OR IRC-APPROVED ALTERNATIVE) TRACE WIRE SHALL BE INSTALLED WITH THE FIBER RUN.
5. THE CONNECTION FROM THE SLACK/SPLICE BOX TO THE SIGNAL CABINET (PIG TAIL) SHALL BE A 12-FIBER SINGLE MODE CABLE. FIBER IN THE CABINET SHALL BE TERMINATED IN A FIBER OPTIC TERMINAL PANEL. THE FIBER CABLE SHALL NOT BE RUN BEHIND SHELVING.
6. IN THE CABINET, DATA CONVERSION WILL BE ACCOMPLISHED WITH EXTREME NETWORKS MODEL 1SW 4-10/100P, 2-10/100T, 2-SFP GIGABIT ETHERNET SWITCH AND HARDENED NETWORKS ITS80-BP EXTERNAL BYPASS SWITCH OR IRC-APPROVED EQUIVALENT. △2
7. RADIO LINK SHOULD BE ECONOLITE INTUICOM RADIO ACCESS POINT OR REMOTE STATION. INCLUDES MOUNTING HARDWARE, PoE INJECTOR OR APPROVED EQUIVALENT.

D. TRAFFIC SIGNAL MAST ARM
1. MAST ARMS SHALL FOLLOW THE LATEST STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION STANDARDS INDEX NO. 17743, 17745
2. △2 ALL MAST ARM POLES SHALL HAVE LUMINAIRES, BARRING OBSTRUCTIONS OR DESIGN CRITERIA. EACH LUMINAIRE SHALL BE PHOTO CELL CONTROLLER AND NOT POWERED THROUGH SIGNAL CABINET. WIRING SHALL BE #10 AWG OR LARGER SIZE AWG. LUMINAIRE CASING SHALL HAVE AN I.R.C. SUPPLIED STICKER ADHEARED TO THE CASING.
3. MAST ARM POLES ARE TO HAVE A TERMINAL COMPARTMENT IN PLACE OF A HAND HOLE, PER STANDARD 649-031.
4. MAST ARM MOUNTING HEIGHT (MEASUREMENT UB INDEX NO. 17743) SHALL BE 19-FEET FOR HORIZONTAL AND 20-FEET FOR VERTICAL MOUNTED SIGNALS, IN THE ABSENCES OF GEOMETRIC ABNORMALTIES.
5. ALL MAST ARMS SHALL BE GALVANIZED STEEL WITH FACTORY FINISHED U.S. GOVERNMENT AMS-STD 595 #14066 (HIGHWAY GREEN) IN ACCORDANCE WITH FDOT.
6. EACH TERMINAL COMPARTMENT SHALL HAVE A 20 CIRCUIT AWG#14 TERMINAL BLOCK.
7. MAST ARMS ARE TO HAVE L.E.D. INTERNALLY-ILLUMINATED SINGLE-SIDED STREET NAME SIGNS WITH LOCAL STREET NAMES AND 1" WHITE BORDER. THE SIGNS SHALL BE CONTROLLED FROM A PHOTO CELL WITH IN THE SIGNAL CABINET THE SIGNS ARE NOT TO HAVE INDIVIUALL PHOTO CELL. THE SIGNS SHALL HAVE REMOVABLE L.E.D. TUBE WITH R17D-HO ENDS. THE STREET NAME SIGNS ARE TO BE MOUNTED WITH FIXED BRACKETS ON THE ARM BETWEEN THE POLE AND THE FIRST TRAFFIC SIGNAL. △2

E. TRAFFIC SIGNAL POLES & SPAN WIRE
1. POLES SHALL FOLLOW THE LATEST STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION DESIGN STANDARD INDEX NO. 17725.
2. STRAIN POLES SHALL HAVE L.E.D., COBRA HEAD STYLE LUMINAIRES, BARRING OBSTRUCTIONS OR DESIGN CRITERIA. EACH LUMINAIRE SHALL BE PHOTO CELL CONTROLLER AND NOT POWERED THROUGH SIGNAL CABINET.
3. ALL ABOVE GROUND CONDUIT SHALL BE HD GAVINIZED.
4. BOTH UPPER AND LOWER SPAN SHALL BE NO LESS THAN 3/8 INCH CABLE WIRE.
5. THE SIGNAL CABLE SHALL BE ATTACHED TO THE MESSENGER WIRE BY LASHING RODS.

F. TRAFFIC SIGNAL HEADS
1. TRAFFIC SIGNALS MOUNTED ON SPAN CABLE ARE TO BE LIGHTWEIGHT McCAIN SIGNAL, (RED SECTION TO BE ALUMINUM AND ALL OTHER SECTIONS TO BE POLY PLASTIC), 12 INCH INDICATIONS.
2. TRAFFIC SIGNALS MOUNTED ON MAST SUPPORTS ARE TO BE ALL AUMIMUM McCAIN SIGNAL 12-INCH INDICATIONS. THE MOUNTING SHALL BE HORIZONTAL USING PELCO ASTRO BRAC OR IRC-APPROVED EQUIVALENT. SPAN MOUNT SIGNALS ARE TO BE MOUNTED VERTICAL. ALL VEHICLE SIGNAL HEADS ARE TO HAVE RETRO-RELFECTIVE BACK PLATES.
3. TRAFFIC SIGNALS ARE TO BE SUPPLIED WITH ALL L.E.D. INDICATIONS, INCLUDING ALL ARROWS AND YELLOWS.
4. TRAFFIC SIGNALS ARE TO BE SUPPLIED WITH TUNNEL VISORS.
5. TRAFFIC SIGNALS AND ASSOCIATED ACCESSORIES, INCLUDING BUT NOT LIMITIED TO BACKPLATES SHALL BE MCCAIN.
6. PEDESTRIAN SIGNALS ARE TO BE COUNT DOWN PEDESTRIAL SIGNALS WITH INTERNATIONAL-STYLE HAND/MAN (SYMBOLS) WITH FULL (NOT OUTLINE) L.E.D. INDICATIONS. EACH CORNER WILL BE FED WITH ONE SEVEN CONDUCTOR CABLE FOR PEDESTRIAN SIGNAL HEAD AND ONE FOUR CONDUCTOR CABLE FOR PEDESTRIAN DETECTOR.THESE CABLES WILL RUN FROM PEDESTRIAN SIGNAL AND DETECTOR DIRECTLY TO CONTROLLER BOX. (NO SPLICES). PEDESTRIAN DETECTOR SIGNS ARE TO BE R10-3I.

G. VIDEO DETECTORS
1. VIDEO DETECTION SYSTEM SHALL BE TRAFISENSE2 632 FLIR OR IRC-APPROVED EQUIVALENT.

H. VIDEO SURVEILLANCE
1. VIDEO CAMERAS SHALL BE AXIS Q6075-E PTZ DOME NETWORK CAMERA WITH SURGE PROTECTOR, LATEST TECHNOLOGY OR IRC-APPROVED EQUIVALENT.

I. BATTERY BACK-UP
1. BATTERY BACKUP SYSTEM IS TO BE USED ON ALL INSTALLATIONS UNLESS OTHERWISE STATED.
2. BATTERY BACKUP SHALL BE MYERS UPS SYSTEM MP2000E-TB WITH STANDING CABINET, EXTERNAL GENERATOR PLUG, ETHERNET CARD.

ADDENDUM 2

REVISIONS						
		DESCRIPTION	DATE	BY	DESCRIPTION
3/23/23	MCF	△2 BID ADDENDUM No. 2			

Kimley»Horn
BRIAN A. GOOD, P.E.
P.E. LICENSE NUMBER 56939
445 24th STREET, SUITE 200
VERO BEACH, FL 32960
(772)794-4100
REGISTRY No. 35106

INDIAN RIVER COUNTY
BOARD OF COUNTY COMMISSIONERS
66th AVENUE FROM 69th STREET
TO SR-510/85th STREET

INDIAN RIVER COUNTY
TRAFFIC SIGNAL
SPECIFICATIONS

SHEET NO. T-4

3/24/2023 7:36:06 AM K:\VRB_Roadway\4703504\Cadd\Phase II Construction Plans\SIGNALS\GNNTSG02.dgn

1505B
I.R.CO. Proj. No.

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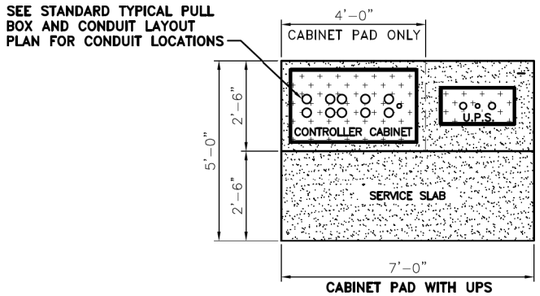
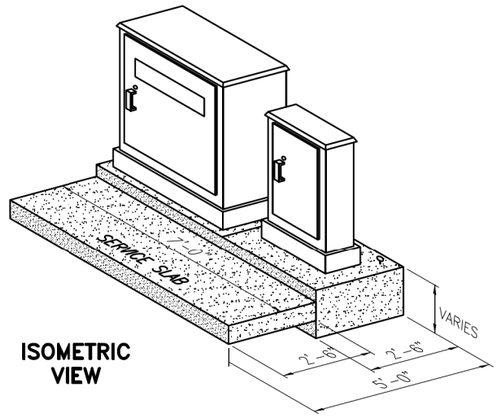
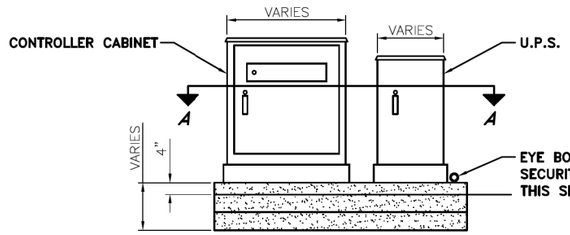
NOTES:
1. THIS DETAIL SHEET SUPPLEMENTS FDOT STANDARD PLANS INDEX 676-010.
2. LOW AREAS MAY REQUIRE A CABINET EXTENSION. VARIATIONS WILL BE NOTED ON THE SIGNAL PLAN.
3. CABINET PAD DIMENSIONS ASSUME A 26"x44" CONTROLLER CABINET AND A 16"x23" U.P.S. CONFIRM EQUIPMENT AND CABINET PAD SIZE.



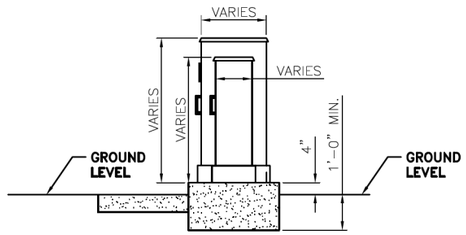
SECTION A-A & TOP VIEW OF PAD



ISOMETRIC VIEW



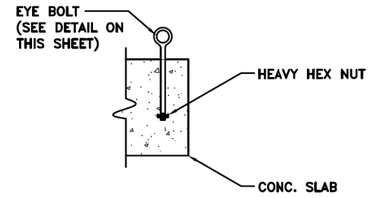
FRONT VIEW



RIGHT-SIDE VIEW

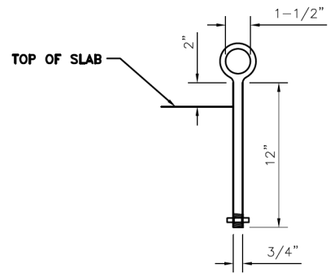
GROUND MOUNT CONTROLLER CABINET
NOT TO SCALE

NOTES:
1. EYE BOLTS SHALL HAVE A 1-1/2" INSIDE DIAMETER AND 3/4" SHANK DIAMETER AND MEET THE REQUIREMENTS OF FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION SECTION 634-2.3 HARDWARE AND FITTINGS.



STRAIGHT BOLT

DETAIL OF STRAIGHT EYE BOLT FOR GENERATOR SECURITY
NOT TO SCALE



DETAIL OF STRAIGHT EYE BOLT NOT TO SCALE

ADDENDUM 2

No.	Revision	Date	By

INDIAN RIVER COUNTY
1801 27th STREET
VERO BEACH, FL 32960
(772) 567-8000

Department of Public Works
Engineering Division

DESIGNED BY: E. FERGUSON, P.E.
DRAWN BY: K. P. HANSEN
APPROVED BY: E. FERGUSON, P.E.
ENGINEER OF RECORD: E. FERGUSON, P.E. FL REG. #62036
DATE: 12/1/2021

CABINET FOUNDATION
TRAFFIC STANDARD DETAILS

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION
3/23/23	MCF	⚠ BID ADDENDUM No. 2			

Kimley»Horn
BRIAN A. GOOD, P.E.
P.E. LICENSE NUMBER 56939
445 24th STREET, SUITE 200
VERO BEACH, FL 32960
(772) 794-4100
REGISTRY No. 35106

INDIAN RIVER COUNTY
BOARD OF COUNTY COMMISSIONERS
66th AVENUE FROM 69th STREET
TO SR-510/85th STREET

INDIAN RIVER COUNTY
CABINET PAD DETAIL

SHEET NO.
T-4B

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I.R.CO. Proj. No. 1505B

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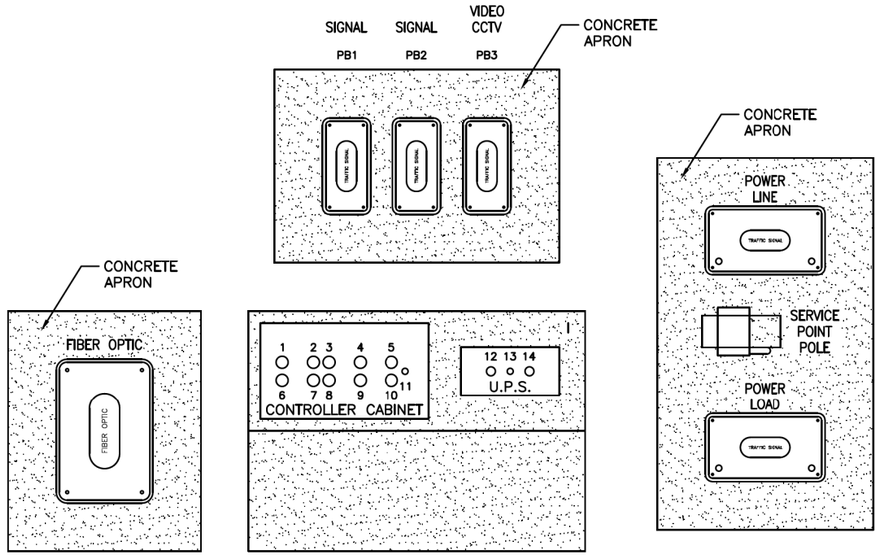


GROUND MOUNTED
CONTROLLER CABINET PAD

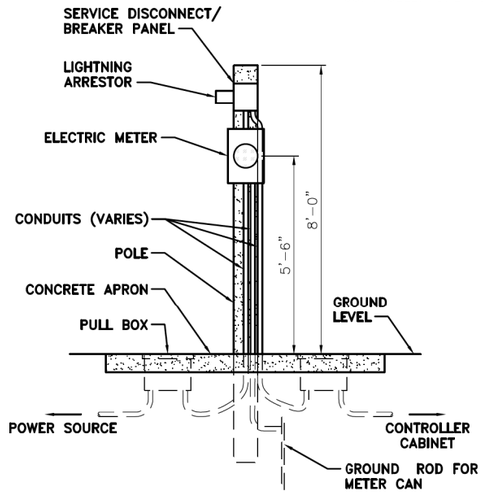
TOP VIEW

TYPICAL PULL BOX AND CONTROLLER CABINET CONDUIT LAYOUT NOT TO SCALE

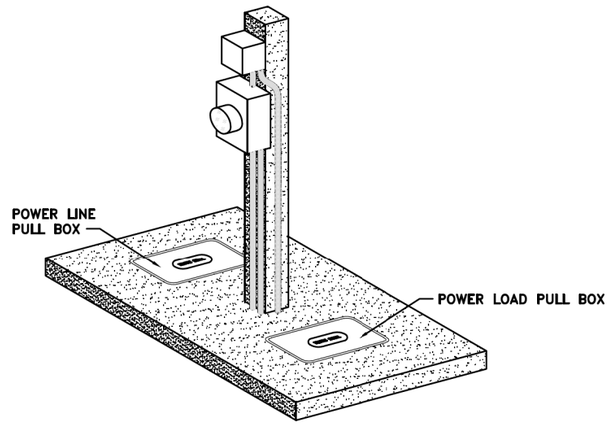
NOTES:
1. PULL BOX LOCATIONS SHOWN ARE TO DENOTE THE TYPE AND QUANTITY. SEE SIGNAL PLAN FOR PULL BOX LOCATIONS.
2. SEE FDOT STANDARD PLAN 635-001 FOR PULL BOX CONCRETE APRON.

CONTROLLER CABINET PAD CONDUIT ROUTING			
CONDUIT	FROM	TO	NOTES
1	CONTROLLER CABINET	FIBER OPTIC PULL BOX	
2	CONTROLLER CABINET	PB1	
3	CONTROLLER CABINET	PB2	
4	CONTROLLER CABINET	PB3	
5	CONTROLLER CABINET	CONDUIT #12	POWER
6	CONTROLLER CABINET	FIBER OPTIC PULL BOX	
7	CONTROLLER CABINET	PB1	SPARE
8	CONTROLLER CABINET	PB2	SPARE
9	CONTROLLER CABINET	PB3	SPARE
10	CONTROLLER CABINET	POWER LOAD PULL BOX	SPARE
11	----	----	1/2" GROUND ROD
12	UPS	CONDUIT #5	POWER
13	----	----	1/2" GROUND ROD
14	UPS	POWER LOAD PULLBOX	

NOTES:
1. SEE FDOT STANDARD PLAN 639-001 FOR SERVICE POINT POLE DETAILS.
2. ELECTRICAL SERVICE CONNECTION TO BE SINGLE PHASE 3 WIRE 120/240 V.
3. SERVICE DISCONNECT/BREAKER PANEL SQUARE D MODEL #Q0247L70RB OR APPROVED EQUAL.
4. PANEL TO CONTAIN 30 AMP LUMINAIRE BREAKER AND 50 AMP CONTROLLER BREAKER.



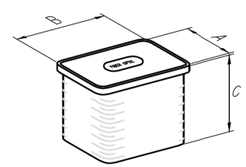
FRONT VIEW



ISOMETRIC VIEW

ELECTRICAL SERVICE POINT NOT TO SCALE

PULL BOX SIZES			
	A	B	C
FIBER OPTIC	24"	36"	24"
PB1	17"	30"	12"
PB2	17"	30"	12"
PB3	17"	30"	12"
POWER LINE	17"	30"	12"
POWER LOAD	17"	30"	12"



PULL BOX SCHEMATIC NOT TO SCALE

ADDENDUM 2

No.	Revision	Date	By

INDIAN RIVER COUNTY
1801 27th STREET
VERO BEACH, FL 32960
(772) 567-8000

Department of Public Works
Engineering Division

DESIGNED BY: E. FERGUSON, P.E.
DRAWN BY: K. P. HANSEN
APPROVED BY: E. FERGUSON, P.E.
ENGINEER OF RECORD: E. FERGUSON, P.E. FL REG. #62036
DATE: 12/1/2021

POWER SERVICE & CONTROLLER CABINET CONDUIT - TRAFFIC STANDARD DETAILS

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION
3/23/23	MCF	⚠2 BID ADDENDUM No. 2			

Kimley»Horn
BRIAN A. GOOD, P.E.
P.E. LICENSE NUMBER 56939
445 24th STREET, SUITE 200
VERO BEACH, FL 32960
(772) 794-4100
REGISTRY No. 35106

INDIAN RIVER COUNTY
BOARD OF COUNTY COMMISSIONERS
66th AVENUE FROM 69th STREET
TO SR-510/85th STREET

INDIAN RIVER COUNTY
POWER SERVICE &
CABINET CONDUIT

SHEET NO.
T-4C

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I.R.CO. Proj. No. 1505B

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TABULATION OF QUANTITIES

PAY ITEM NO.	DESCRIPTION	UNIT	SHEET NUMBERS T-7 PLAN	T-7 FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	TOTAL THIS SHEET PLAN	TOTAL THIS SHEET FINAL	GRAND TOTAL PLAN	GRAND TOTAL FINAL	REF. SHEET
630-2-11	CONDUIT (SIGNAL) (F & I) (OPEN TRENCH)	LF	235														235		235		
630-2-12	CONDUIT (SIGNAL) (F & I) (DIRECTIONAL BORE)	LF	390														390		390		
632-7-1	SIGNAL CABLE (F & I)	PI	1														1		1		
635-2-14	PULL & SPLICE BOX (F & I) (17"X30")	EA	13														13		13		
639-1-122	ELECTRICAL POWER SERVICE (UNDERGROUND) (METER PURCHASED BY CONTRACTOR)	AS	1														1		1		
639-2-1	ELECTRICAL SERVICE WIRE (F & I)	LF	20														20		20		
639-3-11	ELECTRICAL SERVICE DISCONNECT (F & I) (POLE)	EA	1														1		1		
641-2-12	PRESTRESSED CONCRETE POLE STANDARD PLANS 641-010 (F & I) (TYPE P-II SERVICE POLE)	EA	1														1		1		
646-1-11	ALUMINUM SIGNALS POLE PEDESTAL AND PEDESTRIAN DETECTOR POST (F & I) (PEDESTAL)	EA	6														6		6		
649-31-107	MAST ARM (F & I) (WIND SPEED - 150) (SINGLE ARM W/ LUMINAIRE) (46')	EA	1														1		1		
649-31-108	MAST ARM (F & I) (WIND SPEED - 150) (SINGLE ARM W/ LUMINAIRE) (60')	EA	1														1		1		
649-31-109	MAST ARM (F & I) (WIND SPEED - 150) (SINGLE ARM W/ LUMINAIRE) (70.5')	EA	2														2		2		
650-1-14	VEHICULAR TRAFFIC SIGNAL (F & I) (ALUMINUM) (3-SECTION) (1-WAY)	AS	8	2													8		8		
650-1-16	VEHICULAR TRAFFIC SIGNAL (F & I) (ALUMINUM) (4-SECTION) (1-WAY)	AS		2																	
650-1-18	VEHICULAR TRAFFIC SIGNAL (F & I) (ALUMINUM) (5-SECTION) (1-WAY) (STRAIGHT)	AS	2	2													2		2		
653-1-11	PEDESTRIAN SIGNAL - RECTANGLE WALK/DON'T WALK OR EQUIVALENT SYMBOLS (F & I) (LED-COUNTDOWN) (1-WAY)	AS	8														8		8		
665-1-11	PEDESTRIAN DETECTOR (F & I) (STANDARD)	EA	8														8		8		
660-4-11	VEHICLE DETECTION SYSTEM - VIDEO (F & I) (CABINET EQUIPMENT)	EA	1														1		1		
660-4-12	VEHICLE DETECTION SYSTEM - VIDEO (F & I) (ABOVE GROUND EQUIPMENT)	EA	4														4		4		
670-5-111	TRAFFIC CONTROLLER ASSEMBLY (CONTROLLER WITH CABINET) (F & I) (NEMA) (ONE PREEMPTION PLAN)	AS	1														1		1		
682-1-133	CCTV CAMERA (F & I) (DOME ENCLOSURE, NON-PRESSURIZED) (IP, HD)	EA	1														1		1		
684-1-1	MANAGED FIELD ETHERNET SWITCH, LAYER 2 (F & I)	EA	1														1		1		
685-1-14	UNINTERRUPTIBLE POWER SUPPLY (F & I) (LINE INTERACTIVE)	EA	1														1		1		
700-5-22	INTERNALLY ILLUMINATED SIGN (F & I, OVERHEAD MOUNT) (<12 SF)	EA	4														4		4		
715-1-11	LIGHTING - CONDUCTORS (F & I) (INSULATED, No. 10 OR <)	LF	1914														1914		1914		
715-5-31	LUMINAIRE & BRACKET ARM (F & I) (ALUMINUM)	EA	4														4		4		
632-7-6	SIGNAL CABLE (REMOVE - INTERSECTION)	PI	1														1		1		
639-1-610	ELECTRICAL POWER SERVICE (REMOVE) (OVERHEAD)	AS	1														1		1		
641-2-80	PRESTRESSED CONCRETE POLE STANDARD PLANS 641-010 (COMPLETE/DEEP REMOVAL POLES 30' AND GREATER)	EA	2														2		2		
646-1-60	ALUMINUM SIGNALS POLE (PEDESTAL AAND PEDESTRIAN DETECTOR POST) (REMOVE)	EA	2														2		2		
670-5-600	TRAFFIC CONTROLLER ASSEMBLY (CONTROLLER WITH CABINET) (REMOVE CONTROLLER AND CABINET)	AS	1														1		1		

ADDENDUM 2

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION
3/23/23	MCF	2 BID ADDENDUM No. 2			

Kimley»Horn
BRIAN A. GOOD, P.E.
P.E. LICENSE NUMBER 56939
445 24th STREET, SUITE 200
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BOARD OF COUNTY COMMISSIONERS
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SIGNALIZATION
TABULATION OF QUANTITIES

SHEET NO. T-5

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1505B

I.R.CO. Proj. No.

PAY ITEM FOOTNOTES

PAY ITEM NO. 101-1 - MOBILIZATION/DEMOBILIZATION
INCLUDES ALL NECESSARY EQUIPMENT INCLUDING A TWO PERSON BUCKET TRUCK FOR USE BY THE ENGINEER OR COUNTY REPRESENTATIVE DURING INSPECTION OF TRAFFIC SIGNAL.

PAY ITEM NO.102-1 - MAINTENANCE OF TRAFFIC
INCLUDES ALL COSTS ASSOCIATED WITH FURNISHING, INSTALLING MAINTAINING AND REMOVAL OF ALL ITEMS OF MAINTENANCE OF TRAFFIC NOT PAID FOR UNDER SEPARATE ITEMS.

PAY ITEM NO. 630-2-11 - CONDUIT (SIGNAL) (F&I) (OPEN TRENCH)
SHALL BE INSTALLED PER SECTION 630, OF FDOT'S STANDARD SPECIFICATIONS. ALL CONDUITS SHALL ENTER PULL BOXES AS REQUIRED IN FDOT STANDARD DESIGN INDEX 17700. ALL CONDUIT SHALL BE 2 INCH, SCHEDULE 40 PVC UNLESS SPECIFIED OTHERWISE IN THE PLANS OR SPECIFICATIONS. ALL SPARE CONDUITS SHALL ENTER THE SIGNAL CABLE PULL BOX UNLESS OTHER WISE STATED IN THE PLAN.

PAY ITEM NO. 630-2-12 - CONDUIT (SIGNAL) (F&I) (DIRECTIONAL BORE)
SHALL CONSIST OF MULTIPLE 2 INCH SCHEDULE 40 PVC SLEEVES PER BORE. SEE SPECIFIC PLAN SHEETS FOR NUMBER REQUIRED FOR THE BORE. ALL DIRECTIONAL BORING SHALL BE DONE IN CONFORMANCE WITH FDOT UTILITY ACCOMMODATIONS MANUAL REQUIREMENTS.

PAY ITEM NO. 632-7-1 - CABLE (SIGNAL) (F&I)
SHALL BE INSTALLED PER FDOT STANDARD INDEX 17727 AS APPLICABLE. THREE SPARE CONDUCTORS PER SIGNAL CABLE ARE REQUIRED. SPARES SHALL BE GROUNDED TO THE BUS GROUNDING FACILITY IN THE CONTROLLER CABINET. MAST ARM CABLING SHALL CONSIST OF A TWENTY CONDUCTOR IMSA-19 SIGNAL CABLE FROM CONTROL CABINET TO EACH MAST ARM. EACH CONDUCTOR SHALL BE TERMINATED UPON THE 20 TERMINAL-TERMINAL BLOCK LOCATED IN THE TERMINAL COMPARTMENT OF THE MAST. A SEPARATE IMSA-19 SEVEN CONDUCTOR SHALL BE RUN FROM THE TERMINAL BLOCK TO EACH SIGNAL HEAD. PEDESTRIAN SIGNALS SHALL HAVE A SEVEN CONDUCTOR TO EACH CORNER ALONG WITH A FOUR CONDUCTOR FOR THE PEDESTRIAN DETECTORS. SPAN WIRE INSTALLATIONS SHOULD CONSIST OF A SEPARATE IMSA-19 TWELVE CONDUCTOR CABLE TO EACH APPROACH. PEDESTRIAN SIGNALS SHALL HAVE AN IMSA-19 SEVEN CONDUCTOR TO EACH CORNER ALONG WITH A FOUR CONDUCTOR FOR THE PEDESTRIAN DETECTORS THESE CABLES SHOULD RUN FROM PEDESTRIAN SIGNAL TO CONTROL CABINET DIRECTLY.

PAY ITEM NO. 635-2-11 - PULL BOX (F&I) (TRAFFIC SIGNAL)
SHALL BE INSTALLED IN ACCORDANCE WITH FDOT DESIGN STANDARD INDEX 17700, AND IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO SIZE THE PULL BOXES SUCH THAT THEY WILL ALLOW PLACEMENT OF ALL CABLES INSIDE THE PULL BOXES WHILE MAINTAINING THE REQUIRED MINIMUM BENDING RADII ON THE CABLES AND NOT EXCEEDING THE MAXIMUM BENDING RADII OF THE CABLES (MIN. 17"X30"X12"). PULL BOX COVERS SHALL BE FDOT APPROVED OF NON-METALLIC CONSTRUCTION WITH RECESSED COVER LOGO "TRAFFIC SIGNAL"OR "FIBER OPTIC"AS APPROPRIATE. PULL BOXES SHALL BE QUAZITE AND PLACED BEHIND CURB AND GUTTER. IF THERE IS NO CURB AND GUTTER, THE PULL BOXES SHALL BE PLACED A MINIMUM OF 7 FEET FROM THE EDGE OF PAVEMENT WITH PULL BOXES AND LIDS BEING TRAFFIC BEARING. PULL BOXES SHALL NOT BE PLACED IN PEDESTRIAN RAMPS. PULL BOXES SHALL HAVE CONCRETE MOWER PADS IN ACCORDANCE WITH STANDARD DESIGN INDEX 17700.

PAY ITEM NO. 639-1-122 - ELECTRICAL POWER SERVICE (F&I) (UNDERGROUND) (METER PURCHASED BY CONTRACTOR)
SHALL INCLUDE THE COST OF ALL LABOR, MATERIALS, AND PERMITS REQUIRED TO FURNISH AND INSTALL THE ASSEMBLY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION WITH ALL AGENCIES REQUIRED FOR APPROVAL OF THE COMPLETED INSTALLATION. FDOT DESIGN STANDARD INDEX 17504, 17736 (AS APPLICABLE) SHALL APPLY.

PAY ITEM NO. 639-2-1 - ELECTRICAL SERVICE WIRE
THE CONTRACTOR SHALL BE RESPONSIBLE FOR SIZING THE CONDUCTORS FOR THE POWER SERVICE.

PAY ITEM NO. 660-4-11 AND 660-4-12 - VEHICLE DETECTION VIDEO (F&I) CABINET AND ABOVE GROUND EQUIPMENT
SHALL CONSIST OF 4 VEHICLE DETECTOR ASSEMBLIES (VIDEO TYPE), TRAFISENSE DETECTION, LATEST TECHNOLOGY. A COMPLETE VIDEO DETECTION INSTALLATION CONSISTENT WITH INDIAN RIVER COUNTY STANDARDS FOR ALL APPROACHES OF THE INTERSECTION IS REQUIRED. THE EQUIPMENT SHALL BE VIDEO DETECTION UNITS CAPABLE OF INTERFACE WITH THE TRAFFIC SIGNAL CONTROLLER UNIT AND SHALL INCLUDE THE COST OF MOUNTING ARMS TO EXTEND CAMERA TO A POSITION OVER THE ROADWAY UNLESS OTHER WISE STATED ON THE PLAN. THE CONTRACTOR IS REQUIRED TO COORDINATE WITH THE SUPPLIER AND INDIAN RIVER COUNTY TRAFFIC ENGINEERING DIVISION TO ENSURE RELIABLE OPERATION. CAMERA LOCATIONS MAY REQUIRE ADJUSTMENT IN THE FIELD. CONTACT INDIAN RIVER COUNTY TRAFFIC ENGINEERING DIVISION BEFORE ORDERING.

PAY ITEM NO. 670-5-111 - TRAFFIC CONTROLLER ASSEMBLY (F&I) (NEMA) (TYPE 5) (ONE PREEMPTION PLAN)
SHALL BE ECONOLITE TYPE 6 CABINET WITH INTERNAL PHOTO CELL STREET SIGN CONTROL. THE CONTRACTOR SHOULD COORDINATE WITH THE INDIAN RIVER COUNTY TRAFFIC ENGINEERING DIVISION PRIOR TO ORDERING ANY CONTROLLER RELATED EQUIPMENT.

PAY ITEM NO. 715-5-31 (2)
SHALL CONSIST OF AEL HOLOPHANE ATB2 P601 MVOLT R4 4K GN 20 TB PCLL OR APPROVED EQUIVALENT.

ALL TRAFFIC SIGNAL EQUIPMENT MUST BE CONSISTENT WITH INDIAN RIVER COUNTY TRAFFIC ENGINEERING DIVISION STANDARDS. CONTRACTOR SHALL COORDINATE WITH THE INDIAN RIVER COUNTY TRAFFIC ENGINEERING DIVISION TO CONFIRM THAT EQUIPMENT STANDARDS HAVE NOT CHANGED SINCE THE TIME OF PUBLICATION OF THESE PLANS.

1505B

I.R.CO. Proj. No.

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ADDENDUM 2

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION
3/23/23	MCF	(2) BID ADDENDUM No. 2			

Kimley»Horn
BRIAN A. GOOD, P.E.
P.E. LICENSE NUMBER 56939
445 24th STREET, SUITE 200
VERO BEACH, FL 32960
(772) 794-4100
REGISTRY No. 35106

INDIAN RIVER COUNTY
BOARD OF COUNTY COMMISSIONERS

66th AVENUE FROM 69th STREET
TO SR-510/85th STREET

SIGNALIZATION
PAY ITEM FOOTNOTES

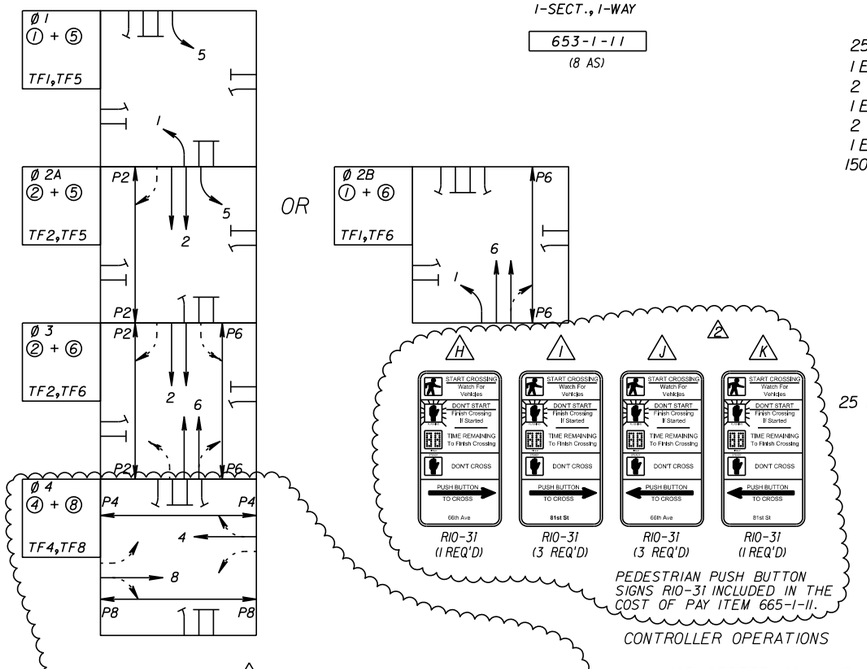
SHEET NO.
T-6

DETECTION CAMERA ASSIGMENTS

CAMERA NO.	ZONE NO.	DETECTOR OPERATION	TIMING FUNCTION	DELAY TIME (SEC)
V1	1	NORMAL	1	-
	6	NORMAL	6	-
V2	3	NORMAL	3	-
	8	NORMAL	8	-
V3	5	NORMAL	5	-
	2	NORMAL	2	-
	2R	DELAY/NORMAL	2	10
V4	7	NORMAL	7	-
	4	NORMAL	4	-

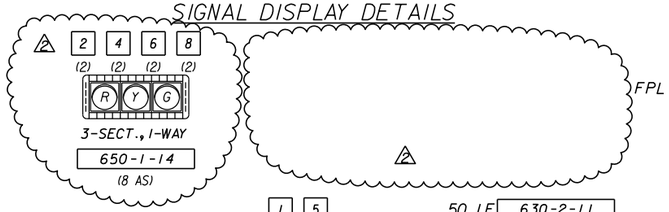
DETECTION CAMERA ASSIGNMENTS AND DETECTION ZONE AREAS ARE PRELIMINARY AND MAY REQUIRE FIELD ADJUSTMENT BY THE CONTRACTOR DURING INSTALLATION. DELAY TIME IS INITIAL AND MAY REQUIRE FIELD ADJUSTING AS DIRECTED BY PROJECT ENGINEER.

ASSOCIATED PHASE MOVEMENTS



PEDESTRIAN PUSH BUTTON SIGNS RIO-31 INCLUDED IN THE COST OF PAY ITEM 665-1-11.

SIGNAL DISPLAY DETAILS

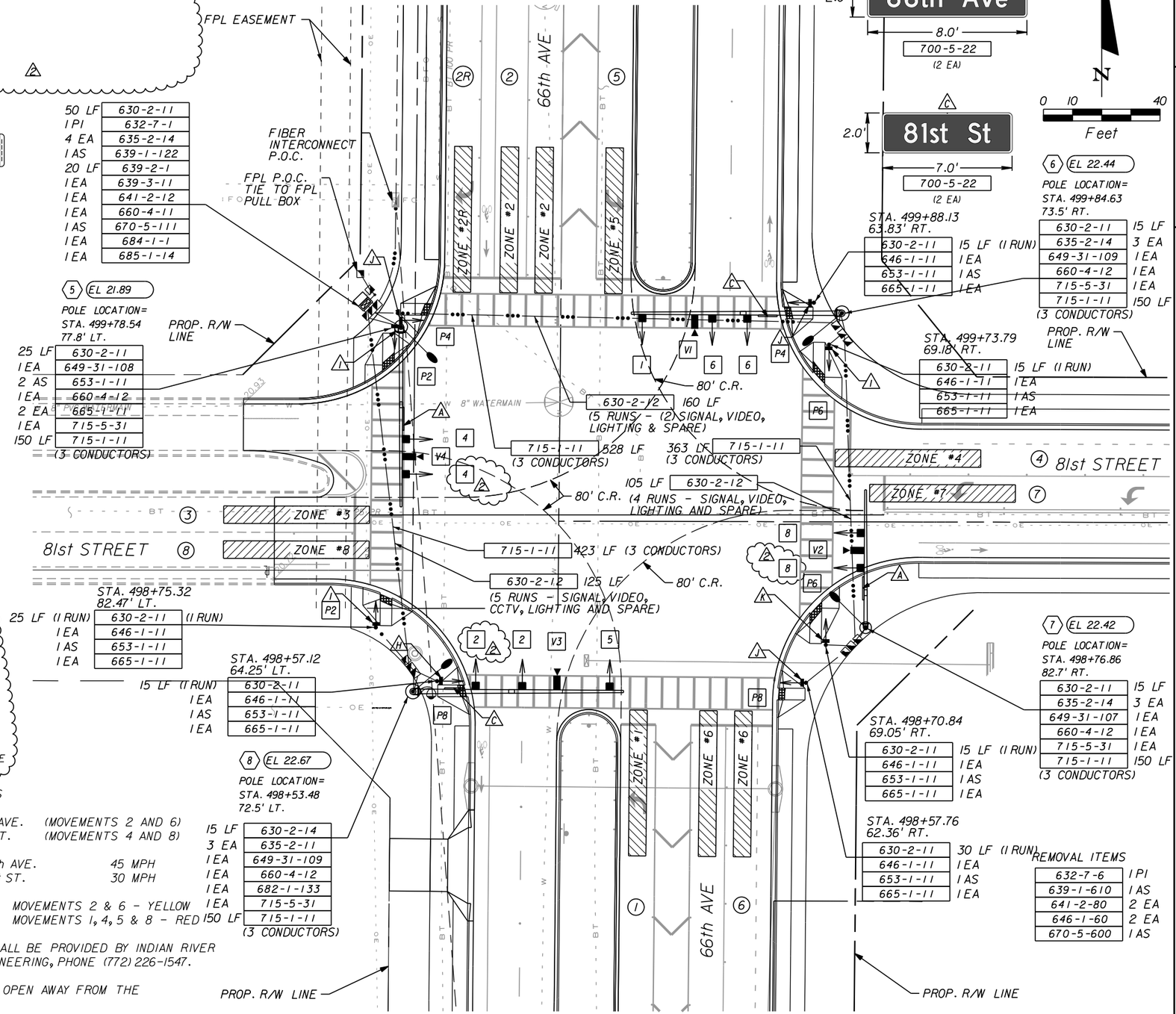


50 LF	630-2-11
1 PI	632-7-1
4 EA	635-2-14
1 AS	639-1-122
20 LF	639-2-1
1 EA	639-3-11
1 EA	641-2-12
1 EA	660-4-11
1 AS	670-5-111
1 EA	684-1-1
1 EA	685-1-14

5 EL 21.89
POLE LOCATION= STA. 499+78.54 77.8' LT.

25 LF	630-2-11
1 EA	649-31-108
2 AS	653-1-11
1 EA	660-4-12
2 EA	665-1-11
1 EA	715-5-31
150 LF	715-1-11

(3 CONDUCTORS)



STA. 499+88.13 63.83' RT.

630-2-11	15 LF (1 RUN)
646-1-11	1 EA
653-1-11	1 AS
665-1-11	1 EA

6 EL 22.44
POLE LOCATION= STA. 499+84.63 73.5' RT.

630-2-11	15 LF
635-2-14	3 EA
649-31-109	1 EA
660-4-12	1 EA
715-5-31	1 EA
715-1-11	150 LF

(3 CONDUCTORS)

STA. 499+73.79 69.18' RT.

630-2-11	15 LF (1 RUN)
646-1-11	1 EA
653-1-11	1 AS
665-1-11	1 EA

630-2-12 160 LF
105 LF 630-2-12
715-1-11 528 LF (3 CONDUCTORS)
363 LF 715-1-11 (3 CONDUCTORS)
715-1-11 423 LF (3 CONDUCTORS)
630-2-12 125 LF

STA. 498+75.32 82.47' LT.

25 LF (1 RUN)	630-2-11 (1 RUN)
1 EA	646-1-11
1 AS	653-1-11
1 EA	665-1-11

STA. 498+57.12 64.25' LT.

15 LF (1 RUN)	630-2-11
1 EA	646-1-11
1 AS	653-1-11
1 EA	665-1-11

8 EL 22.67
POLE LOCATION= STA. 498+53.48 72.5' LT.

15 LF	630-2-14
3 EA	635-2-11
1 EA	649-31-109
1 EA	660-4-12
1 EA	682-1-133
1 EA	715-5-31
150 LF	715-1-11

(3 CONDUCTORS)

7 EL 22.42
POLE LOCATION= STA. 498+76.86 82.7' RT.

630-2-11	15 LF
635-2-14	3 EA
649-31-107	1 EA
660-4-12	1 EA
715-5-31	1 EA
715-1-11	150 LF

(3 CONDUCTORS)

STA. 498+70.84 69.05' RT.

630-2-11	15 LF (1 RUN)
646-1-11	1 EA
653-1-11	1 AS
665-1-11	1 EA

STA. 498+57.76 62.36' RT.

630-2-11	30 LF (1 RUN)
646-1-11	1 EA
653-1-11	1 AS
665-1-11	1 EA

REMOVAL ITEMS

632-7-6	1 PI
639-1-610	1 AS
641-2-80	2 EA
646-1-60	2 EA
670-5-600	1 AS

CONTROLLER OPERATIONS

1. MAJOR STREET: 66th AVE. (MOVEMENTS 2 AND 6)
   MINOR STREET: 81st ST. (MOVEMENTS 4 AND 8)
2. SPEED LIMITS: 66th AVE. 45 MPH
   81st ST. 30 MPH
3. FLASHING OPERATION: MOVEMENTS 2 & 6 - YELLOW
   MOVEMENTS 1, 4, 5 & 8 - RED
4. ALL SIGNAL TIMING SHALL BE PROVIDED BY INDIAN RIVER COUNTY TRAFFIC ENGINEERING, PHONE (772) 226-1547.
5. CABINET DOOR SHALL OPEN AWAY FROM THE INTERSECTION.
6. ALL CONDUIT RUNS SHALL CONSIST OF 5 RUNS UNLESS OTHERWISE NOTED. ((2) SIGNAL, VIDEO, LIGHTING AND SPARE)

ADDENDUM 2

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION
3/23/23	MCF	2 BID ADDENDUM No. 2			

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BRIAN A. GOOD, P.E.
P.E. LICENSE NUMBER 56939
445 24th STREET, SUITE 200
VERO BEACH, FL 32960
(772) 794-4100
REGISTRY No. 35106

INDIAN RIVER COUNTY
BOARD OF COUNTY COMMISSIONERS

66th AVENUE FROM 69th STREET TO SR-510/85th STREET

66th AVENUE AND 81st STREET SIGNALIZATION PLAN

SHEET NO. T-7

1505B | I.R.CO. Proj. No.

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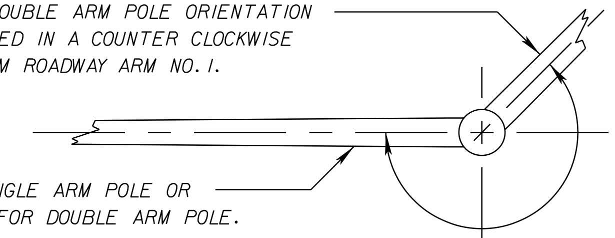
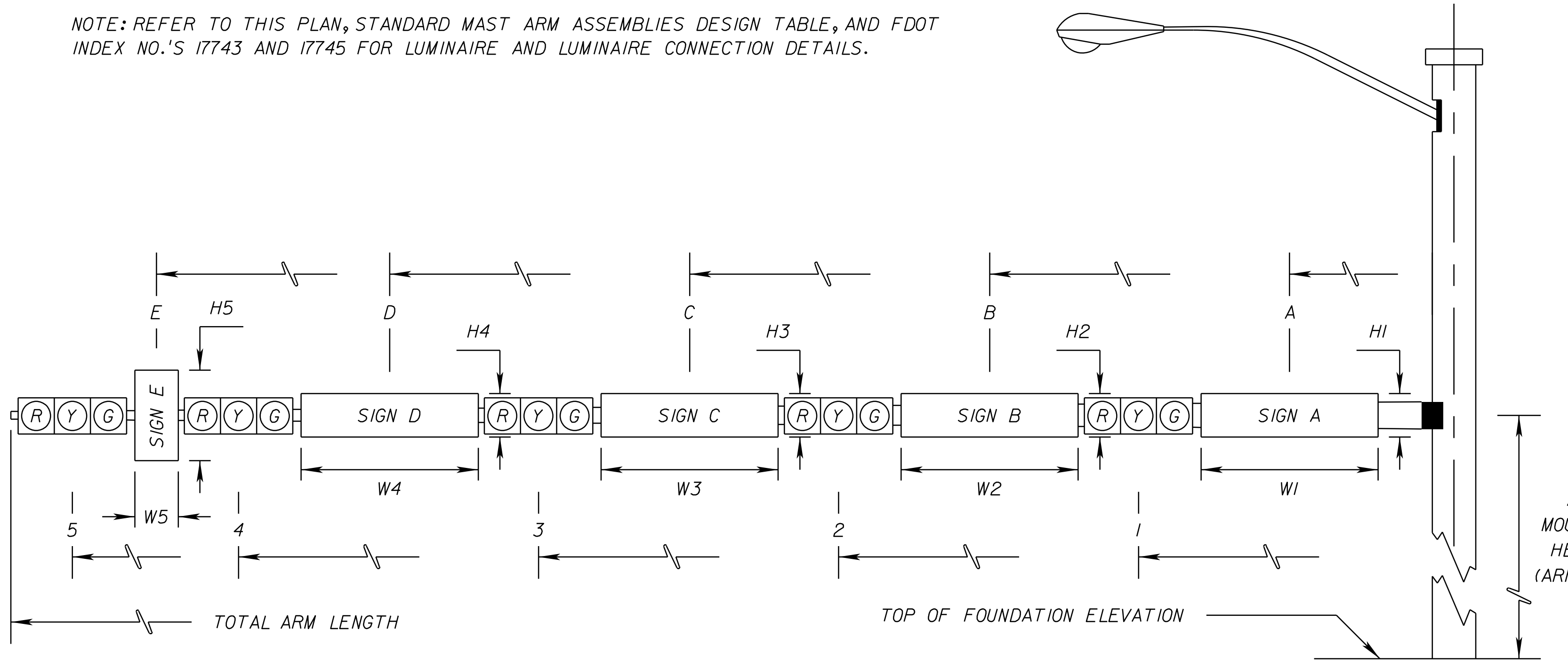
ARM NO. 2 - DOUBLE ARM POLE ORIENTATION TO BE MEASURED IN A COUNTER CLOCKWISE DIRECTION FROM ROADWAY ARM NO. 1.

ARM NO. 1 - SINGLE ARM POLE OR LONGEST ARM FOR DOUBLE ARM POLE.



NOTE: REFER TO THIS PLAN, STANDARD MAST ARM ASSEMBLIES DESIGN TABLE, AND FDOT INDEX NO.'S 17743 AND 17745 FOR LUMINAIRE AND LUMINAIRE CONNECTION DETAILS.



NOTE: ALL STATION/OFFSETS ARE REFERENCED TO THE BASELINE OF CONSTRUCTION OF 66TH AVENUE.

* DENOTES NUMBER OF SECTIONS IN SIGNAL HEAD ASSEMBLY

VD DENOTES VIDEO DETECTION CAMERA

ID NO.	SHEET NO.	LOCATION BY STA.	TOP OF FOUNDATION ELEVATION	RDWY ARM NO.	CROWN ELEV.	SIGNAL DATA: SIGNAL V/H	BACK PLATES Y/N	PED. SIGNAL Y/N	DISTANCE FROM POLE: 1	*	2	*	3	*	4	*	5	*	TOTAL ARM LENGTH	ARM M.H.	∠ BETWEEN DUAL ARMS 90/270	SIGN DATA: DISTANCE FROM POLE / HEIGHT AND WIDTH OF SIGN: A	H1	W1	B	H2	W2	C	H3	W3	D	H4	W4	E	H5	W5	FED. PAINT AMS-STD No.
5	T-7	499+78.54, 77.8'LT	21.89	1	21.88	H	Y	Y	38.50	3	50.50	3							60			31.50	2.0	8.0	44.50	VD	VD										595-14066
				2																																	
6	T-7	499+84.63, 73.5'RT	22.44	1	22.11	H	Y	Y	32.50	3	44.50	3	68.50	4					70.5			25.50	2.0	6.5				50.50	VD	VD							595-14066
				2																																	
7	T-7	498+76.86, 82.7'RT	22.42	1	21.90	H	Y	N	20.50	3	32.50	3							46			13.50	2.0	8.0	26.50	VD	VD										595-14066
				2																																	
8	T-7	498+53.48, 72.5'LT	22.67	1	21.99	H	Y	Y	21.50	3	37.50	3	67.50	4					70.5			14.00	2.0	6.5				49.50	VD	VD							595-14066
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66th AVENUE FROM 69th STREET TO SR-510/85th STREET

MAST ARM TABULATION

SHEET NO. T-8

I.R.CO. Proj. No. 1505B

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