CITY OF WINTER PARK, FLORIDA

CONTRACT PLANS

FAIRBANKS AVENUE (S.R. 426)

FROM I-4 TO US I7-92

FPID 423353-I-58-0I

ORANGE COUNTY (75006)

INDEX OF SIGNALIZATION PLANS

SHEET DESCRIPTION

SIGNALIZATION PLANS

GUIDE SIGN WORKSHEET MAST ARM TABULATION

UTILITY CONFLICT PLAN

ON FAIRBANKS AVENUE TRAFFIC MONITORING SITES

TABULATION OF QUANTITIES

STANDARD MAST ARM ASSEMBLIES DATA TABLE

REPORT OF SPT BORINGS FOR MAST ARMS SIGNAL POLES

KEY SHEET

GENERAL NOTES

SHEET NO.

T-1

T-2 T-3 - T-4

T-9

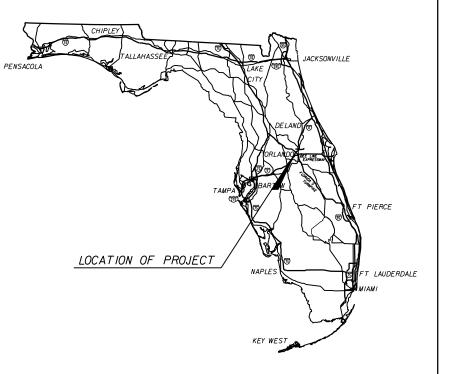
T-II T-I2

T-15

T-5 - T-8

T-13 - T-14

SIGNALIZATION PLANS



SIGNALIZATION SHOP DRAWINGS
TO BE SUBMITTED TO:
DEEANGELA R. TJIKUENI, P.E.
CH2M HILL
225 E. ROBINSON ST.
SUITE 505
ORLANDO, FLORIDA 32801
(407) 423-0030

PLANS PREPARED BY:

CH2MHILL

225 E. ROBINSON ST. SUITE 505 ORLANDO, FLORIDA 32801 (407) 423-0030

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

90% PLANS MAY 2011

	KEY	SHEET REVISIONS
DATE	BY	DESCRIPTION

SIGNALIZATION PLANS
ENGINEER OF RECORD: DEEANGELA R. TJIKUENI

P.E. NO. 68301

FISCAL YEAR	SHEET NO.
2011	T-1

CITY PROJECT MANAGER: DAVID L. ZUSI, P.E. FDOT PROJECT MANAGER: TUSHAR PATEL

amulli

/2011

1:01:13 PM

P:\CityOfWinterPark\353355RDWY\Drawings\3533550000I\signals\keyssg0I.dgn

TABULATION OF QUANTITIES

PAY	DESCRIPTION	UNIT		SHEET NUMBERS								TOTAL GRAND THIS TOTAL			REF. SHEET							
ITEM NO.	DESCRIPTION	OWIT	T-5	<i>T-</i> 6	T-7	T-8	T-1		5		l <u>e</u> .		5 l		5	- · · · · ·	5	- · · · ·				
630-1-12	CONDUIT-SIGNALS, F&I, UNDERGROUND	LF	PLAN FINAL 298	PLAN FINAL	PLAN FINAL	PLAN FINAL	PLAN 15	FINAL	PLAN FIN	AL P	PLAN FII	VAL	PLAN I	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN 1855	FINAL	PLAN FINAL	+
630-1-13	CONDUIT-SIGNALS, F&I, SAWCUT & PLACE UNDER	LF	120	18	176	115	2												431		43/	
630-1-14	EXISTING PAVEMENT CONDUIT, SIGNALS, F&I, UNDERGROUND JACKED	LF	349	<i>38</i> 5	245	240													1219		1219	
632-7-1	CABLE, SIGNAL, FURNISH & INSTALL	PI			1	1													2		2	
635-1-11	PULL & JUNCTION BOXES, F&I, PULL BOX	EA	10	8	9	9	2												<i>38</i>		38	
639-1-21	SIGNALS, ELECTRICAL POWER SERVICE, UNDERGROUND,				1	1													2		2	
	METER FURNISHED BY POWER COMPANY				1 '	·													50.		-	
639-2-1	SIGNALS, ELECTRICAL SERVICE WIRE	LF			295	296													591		591	
641-2-12	PRESTRESSED CONCRETE POLE, F&I, TYPE P-II SERVICE POLE	EA			1	1													2		2	
649-31-214	MAST ARM, F&I, WIND SPEED-130, DOUBLE ARM, W/O LUMINAIRE, 46' AND 46'	EA				1													1		1	
649-31-215	MAST ARM, F&I, WIND SPEED-130, DOUBLE ARM, W/O LUMINAIRE, 46' AND 60'	EA			1														1		/	
649-31-216	MAST ARM, F&I, WIND SPEED-130, DOUBLE ARM, W/O	EA				1													,		,	
649-31-217	LUMINAIRE, 46' AND 70.5' MAST ARM, F&I, WIND SPEED-130, DOUBLE ARM, W/O	EA			,							\perp							,		,	
	LUMINAIRE, 60' AND 60'																					
650-51-311 650-51-411	TRAFFIC SIGNAL, F&I, 3 SECTION, I WAY, STANDARD TRAFFIC SIGNAL, F&I, 4 SECTIONS, I WAY, STANDARD	AS AS			8	7 2													/5 3		/5 3	
																			,			
653-191	PEDESTRIAN SIGNAL, F&I, LED-COUNT DOWN,	AS	/	2		4													7		7	
653-192	PEDESTRIAN SIGNAL, F&I, LED-COUNT DOWN, 2 DIRECTION	AS			4	2													6		6	
659-106 659-107	SIGNAL HEAD AUXILIARIES, F&I, TUNNEL VISOR SIGNAL HEAD AUXILIARIES, F&I, ALUMINUM PEDESTAL	EA EA	,	2	28 4	29 2													57 9		57	
660-2-102	LOOP ASSEMBLY, F&I, TYPE B	AS	4	4															8		8	
660-2-106	LOOP ASSEMBLY, F&I, TYPE F	AS	4	5															9		9	
663-74-11	VEHICLE DETECTOR ASSEM, F&I, OPTICAL TYPE	EA			4	4													8		8	
665-12	PEDESTRIAN DETECTOR, F&I, DETECTOR	EA				4													4		4	
	STATION WITH POST & SIGN																					
665-13	PEDESTRIAN DETECTOR, F&I, DETECTOR WITH SIGN ONLY	EA	1	2	8	4													15		/5	
665-40	PEDESTRIAN DETECTOR, RELOCATE	EA	1	1															2		2	
670-5-110	TRAFFIC CONTROLLER ASSEMBLY, F&I, NEMA	AS			1	I													2		2	
690-10	SIGNAL HEAD TRAFFIC ASSEMBLY REMOVAL	EA			5	7						-							12		12	
690-20	SIGNAL PEDESTRIAN ASSEMBLY REMOVAL	EA	1	2	2	1													6		6	
690-32-1 690-50	POLE REMOVAL, SHALLOW DIRECT BURIAL CONTROLLER ASSEMBLY, REMOVE, COMPLETE	EA EA			2	2				-		\dashv	-						4 2		4 2	
	ASSEMBLY				,														_		-	
690-60 690-70	DETECTOR VEHICLE ASSEMBLY REMOVE DETECTOR PEDESTRIAN ASSEMBLY REMOVE	EA EA	,	2	10 2	<i>10</i> 2				-		\dashv							20 7		20	
690-80	SPAN WIRE ASSEMBLY, REMOVE	EΑ	,	_	1	1													2		2	
690-90 690-100	CONDUIT & CABLING REMOVE SIGNAL EQUIPMENT MISCELLANEOUS REMOVE	PI PI	,	1		/						-+							2		2 2	<u> </u>
699-1-1	INTERNAL ILLUM SIGN. F&I. STREET NAME	EA			4	4						\perp							8		8	
	· ·				7	7						\Rightarrow										
741-70-111	TMS VEHICLE SENSOR, CLASS II, F&I, TYP I, I/2 LN	EA					4												4		4	
745-70-12	TMS INDUCTIVE LOOP ASSEM, F&I, 2 LOOPS/LANE	AS					16												16		16	
746-71-131	TMS CABINET, F&I, TYP III, PEDESTAL MOUNT, I BACKPLANE	EA					2												2		2	
DATE BY	R E V S O N S DESCRIPTION DATE BY		DESCRIPTION		gineer of Record: Dee E. License No.: 68301				CITY	OF W	VINTER I	ARK										SHEET
				22	H2M HILL 5 E. ROBINSON STR			ROAD	NO.	COUNTY	r T	CITY	r PROJECT	NO.	-	TA RI	/// A	TION	I OF	OIIA N	TITIES	NO.
				SU	JITE 505 RLANDO, FL 32801-43 ERTIFICATE OF AUTH	322	0072	SR 4.	26 (RANG	GE		2010-0]			и и V л \		e V 1 11 1 V		T-2
				<u> </u>				I	1		amulliga				5/27/2011	/:0	1:51 PM	P:\City	y0fWinterPark√3	53355RDWY \D r	awings\3533550000 \signals	\tabqsg0I.dgn

GENERAL NOTES:

- I. UNLESS OTHERWISE NOTED, ALL REMOVED EQUIPMENT SHALL BE TURNED OVER TO THE CITY OF WINTER PARK AT 707 NICOLET AVENUE OR DISPOSED OF AS DIRECTED BY THE ENGINEER, EXCEPT POLES, WHICH SHALL BE DISPOSED OF BY THE CONTRACTOR. CONTRACTOR TO NOTIFY THE CITY OF WINTER PARK, WAYNE (BUTCH) MARGRAF AT (407) 599-34II TWO (2) BUSINESS DAYS PRIOR TO BEGINNING CONSTRUCTION.
- 2. IT SHOULD BE NOTED THAT NO TEST BORINGS WERE MADE WHERE CONDUIT RUNS ARE TO BE INSTALLED BY JACKING, DIRECTIONAL BORING, OR TRENCHING. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO EXAMINE THE JOB SITE CONDITIONS BEFORE SUBMITTING BID PROPOSALS IN ACCORDANCE WITH SECTION 2-4 OF THE SPECIFICATIONS.
- 3. THE CONTRACTOR SHALL MAINTAIN THE EXISTING TRAFFIC SIGNALS DURING THIS PROJECT.
- 4. THE CONTRACTOR SHALL NOTIFY THE SUNSHINE STATE ONE CALL AT 811-432-4770 AND THE APPROPRIATE UTILITY COMPANIES LISTED BELOW AT LEAST 2 FULL BUSINESS DAYS IN ADVANCE OF CONSTRUCTION OPERATIONS.
- 5. THE CONTRACTOR SHALL ADHERE TO ALL CITY AND COUNTY ORDINANCES AND STATE REGULATIONS DURING ALL CONSTRUCTION OPERATIONS.
- 6. THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL UTILITIES PRIOR TO EXCAVATION.
- 7. THE CONTRACTOR SHALL PROVIDE THE CITY OF WINTER PARK ONE SET OF AS-BUILTS MEETING REQUIREMENTS OF SECTION 611 OF THE FDOT SPECIFICATIONS.
- 8. THE CONTRACTOR SHALL ADHERE TO OSHA RULE (29 CFR PART 1926 EFFECTIVE 11/10) AS REFERENCED IN FDOT ROADWAY DESIGN BULLETIN 11-03.

SIGNALIZATION GENERAL NOTES:

- I. ALL PEDESTRIAN PHASES TO BE ACTUATED BY PUSH BUTTON.
- 2. THE CONTRACTOR WHO IS ENGAGED IN INSTALLING OR MAINTAINING TRAFFIC SIGNALS SHALL HAVE ALL WORK PERFORMED UNDER THE SUPERVISION OF A TECHNICIAN CERTIFIED BY THE INTERNATIONAL MUNICIPAL SIGNAL ORGANIZATION (IMSA) AS A LEVEL II TRAFFIC SIGNALS TECHNICIAN. THE TECHNICIAN SHALL REPORT TO THE JOB SITE WITHIN TWO HOURS OF NOTIFICATION TO THE WORK SITE SUPERVISOR TO CORRECT ANY PROBLEM OR EMERGENCY THAT MAY ARISE. IN ADDITION, A TECHNICIAN CERTIFIED AS AN IMSA LEVEL I TRAFFIC SIGNAL TECHNICIAN SHALL BE PRESENT ON THE JOB SITE AT ALL TIMES THE TRAFFIC SIGNALIZATION WORK IS IN PROGRESS. THE CONTRACTOR SHALL PROVIDE A LOCAL 24 HOUR TELEPHONE NUMBER TO THE FOOT ENGINEER PRIOR TO ANY CONSTRUCTION OF SIGNALIZED LOCATION.
- 3. INSTALL CONDUIT ACCORDING TO ROADWAY AND TRAFFIC DESIGN STANDARDS, INDEX 17721.
- 4. USE CONDUITS OF SUFFICIENT SIZE TO ALLOW THE CONDUCTORS TO BE INSTALLED WITHOUT ANY DAMAGE AND MEETING NEC REQUIREMENTS. USE CONDUIT THAT IS AT LEAST TWO INCHES (50MM) IN DIAMETER, EXCEPT FOR ELECTRICAL POWER AND TELEPHONE SERVICE DUCTS, WHICH SHALL BE MINIMUM OF ONE INCH (25MM) IN DIAMETER.
- 5. VERIFY COLOR CODES FOR THE SIGNAL CABLE WITH THE LOCAL TRAFFIC SIGNAL MAINTAINING AGENCY PRIOR TO ORDERING MATERIAL.
- 6. PROVIDE PULL BOXES WITH LIDS CONSTRUCTED OF NON-DIELECTRIC COMPOSITE MATERIAL. THESE LIDS SHALL BE STAMPED OR CAST WITH THE MANUFACTURER'S LOGO AND THE LEGEND "TRAFFIC SIGNAL".
- 7. THE CONTRACTOR SHALL ADJUST CONDUIT & PULL BOXES IN ORDER TO AVOID ANY POSSIBLE CONFLICTS WITH UNDERGROUND UTILITIES.
- 8. IF REQUIRED, THE CONTRACTOR SHALL PROVIDE THE NECESSARY EQUIPMENT FOR SUPPORTING EXISTING UTILITY POLES DURING CONSTRUCTION OF NEW SIGNAL POLES AND FOUNDATIONS. THE CONTRACTOR SHALL COORDINATE THIS EFFORT WITH THE UTILITY COMPANIES.
- 9. SIGNAL POLE STATIONING AND OFFSETS MAY REQUIRE MINOR ADJUSTMENTS IN THE FIELD TO INSURE HORIZONTAL CLEARANCE IS MAINTAINED FROM THE EDGE OF TRAVEL TO THE CLOSEST SURFACE OF THE POLE AND WITHIN ROADWAY RIGHT-OF-WAY.
- 10. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL SIGNAL POLE AND ROADWAY ELEVATIONS PRIOR TO POLE FABRICATION AND PLACEMENT.
- II. THE CONTRACTOR TO HAND DIG THE FIRST 4' AT EACH POLE LOCATION AND 2' AT EACH PEDESTAL TO VERIFY THAT THERE ARE NO UTILITY CONFLICTS. CONTACT THE APPROPRIATE UTILITY COMPANIES FOR LOCATES 2 FULL BUSINESS DAYS PRIOR TO ANY EXCAVATION.
- 12. THE CONTRACTOR IS REQUIRED TO INSPECT THE INSTALLATION OF THE TRAFFIC SIGNALS IN ACCORDANCE WITH FDOT SPECIFICATION 105-5.10. THE CONTRACTOR SHALL COORDINATE THE FINAL ACCEPTANCE INSPECTION IN ACCORDANCE WITH FDOT SPECIFICATION 611-2.2 WITH THE ENGINEER AT LEAST TEN DAYS IN ADVANCE. THE CITY OF WINTER PARK TRAFFIC MANAGER, BUTCH MARGRAF AT (407) 599-3411 AND THE FDOT TRAFFIC SIGNAL QUALITY ASSURANCE MANAGER AT (386) 943-5318 SHOULD ALSO BE CONTACTED TEN DAYS BEFORE THE INSPECTION IS TO BE PERFORMED SO THEY MAY BE PRESENT.
- I3. FOR MISCELLANEOUS STRUCTURES THAT HAVE BEEN COMPLETED AND SCHEDULED FOR ACCEPTANCE, THE CONTRACTOR SHALL CONTACT DISTRICT FIVE STRUCTURES MAINTENANCE OFFICE AT (386)-740-3463 ONE MONTH PRIOR TO COMPLETION OF PROJECT TO SCHEDULE AN INSPECTION OF STRUCTURES INCLUDING: CABLE SIGNS, CANTILEVER SIGNS, TRUSS SIGNS, HIGH MAST LIGHT POLES, ITS, DMS AND TRAFFIC SIGNAL MAST ARMS.
- 14. ANY NEW OR EXISTING STRIPING CUT BECAUSE OF LOOP PLACEMENT SHALL BE RE-STRIPED PRIOR TO ACCEPTANCE.
- 15. TYPE "F" LOOPS SHALL BE 6'X 40' AND EXTEND 5' PAST THE STOP BAR UNLESS SHOWN OTHERWISE IN PLANS.

- 16. IN THE EVENT PERMANENT VEHICLE DETECTION IS DISRUPTED, PROVIDE AN ALTERNATIVE MEANS OF DETECTION TO ALL LANES
 APPROACHING THE INTERSECTION, SEPARATING EACH MOVEMENT WHICH PREVIOUSLY HAD DETECTION. THE TYPE OF DETECTOR
 SHALL BE APPROVED BY THE ENGINEER PRIOR TO INSTALLATION. EQUIPMENT SHALL ONLY DETECT THE INTENDED MOVEMENT.
- IT. WHENEVER POSSIBLE, ALL LOOPS AND SYSTEM SENSORS SHALL BE CUT INTO THE ASPHALTIC CONCRETE STRUCTURAL COURSE PRIOR TO PLACEMENT OF THE FRICTION COURSE. ALL LOOP LEAD-IN CABLES SHALL BE PLACED IN CONDUIT.

PAY ITEM NOTES:

- I. THE CONTRACTOR HAS THE OPTION TO USE DIRECTIONAL BORE AS THE CONDUIT INSTALLATION METHOD FOR PAY ITEM 630-1-14
- 2. PAY ITEM 639-1-21TO INCLUDE ALL FEES BY THE POWER COMPANY FOR ENERGIZING THE POWER SERVICE.
- 3. PAY ITEM 699-I-I SHALL INCLUDE A MASTER PHOTOCELL MOUNTED EITHER INSIDE THE CABINET WITH A 2" PLEXIGLASS WINDOW, OR NEAR THE ELECTRIC SERVICE WITHIN REACH OF A LIFT TRUCK. THE PHOTOCELL SHALL BE INSTALLED WHERE STREETLIGHTS DO NOT AFFECT OPERATION.

CONTROLLER NOTES:

- I. THE CONTROLLER ASSEMBLY SHALL CONSIST OF A NEMA TS 2 CABINET WITH A TS2 TYPE 2 CONTROLLER.

 THE CONTROLLER ASSEMBLY SHALL HAVE ALL NECESSARY HARDWARE TO COMMUNICATE WITH CITY OF WINTER PARK SIGNAL SYSTEM.

 ANY ADDITIONAL EQUIPMENT AND/OR ACCESSORIES REQUIRED FOR THE TERMINATION AND OPERATION OF THE FIBER OPTIC INTERCONNECT

 CABLE SHALL BE FURNISHED AND INSTALLED AS PART OF THE CONTROLLER ASSEMBLY.
- 2. A MANUAL PUSH-BUTTON CORD SHALL BE FURNISHED IN THE CONTROLLER CABINET.
- 3. THE CONTROLLER CABINET SHALL BE ORIENTED SO THAT THE DOOR OPENS AWAY FROM THE INTERSECTION.

SIGNAL HEAD NOTES:

I. ALL VEHICULAR SIGNAL HEAD ASSEMBLIES SHALL BE BLACK, CAST ALUMINUM WITH TUNNEL VISORS AND LEDS.

PED FEATURES NOTES:

- I. THREE (3) SPARE CONDUCTORS ARE TO BE RUN TO THE FURTHEST PEDESTRIAN SIGNAL HEAD.
- 2. ALL PEDESTRIAN SIGNALS SHALL BE 16" LED, COUNTDOWN TYPE.

MAST ARM NOTES:

- I. IF A CONTINUOUS RUN OF SIGNAL CABLE IS NOT POSSIBLE FROM THE CABINET TO THE SIGNAL HEAD, THEN A TERMINAL BLOCK SHALL BE USED.
- 2. SIX FEET OF ADDITIONAL SIGNAL CABLE SLACK SHALL BE WOUND INSIDE THE UPRIGHT AND SUPPORTED BY THE CABLE CLAMP SUCH THAT THE TERMINAL BLOCK CAN BE REMOVED FROM THE UPRIGHT TO ALLOW FOR TROUBLE SHOOTING.
- 3. THE CABLE GRIP SHALL BE OF SUFFICIENT SIZE TO NOT COMPROMISE THE INSULATION ON THE SIGNAL CABLE.
- 4. FDOT WILL BE THE OWNER AND THE CITY OF WINTER PARK WILL BE MAINTAINING AGENCY OF THE MAST ARMS UPON PROJECT ACCEPTANCE.

TRAFFIC MONITORING SITE NOTES:

- I. NOTIFY THE DISTRICT TRAFFIC OPERATIONS OFFICE AT LEAST TEN (10) WORKING DAYS PRIOR TO BEGINNING ANY WORK. CONTACT JERRY TRAUDT AT (386) 943-5380 CONCERNING ANY QUESTIONS. THE DISTRICT TRAFFIC OPERATIONS OFFICE MUST APPROVE ANY CHANGE TO THE PROPOSED COUNT STATION LOCATION.
- 2. INSTALL TYPE III BASE-MOUNTED TRAFFIC MONITORING SITE CABINETS, PER ROADWAY AND TRAFFIC DESIGN STANDARD 17900.
 AND THE FOLLOWING:
 - A PULL BOX IS TO BE PLACED APPROXIMATELY 4 FEET FROM THE PAVEMENT EDGE.
 - THE CABINETS SHALL BE WIRED WITH THE "J" & "P" AMPHENOL CLASSIFICATION AND ADR-1000 WIRING HARNESSES.
- 3. FURNISH AND INSTALL PIEZOELECTRIC AXLE SENSORS AND SPEED CLASSIFICATION LOOP ASSEMBLIES PER ROADWAY AND TRAFFIC DESIGN STANDARDS 17721, 17781 AND 17900.
- SPLICE ALL LOOP WIRES, IN PULL BOXES, TO SHIELDED "HOMERUN CABLE" (INCLUDED IN THE LOOP ASSEMBLY), AND EXTEND THEM THROUGH A 2-INCH CONDUIT TO THE CABINET. <u>PIEZO LEADS SHALL NOT BE SPLICED</u>. RUN THE PIEZO AXLE SENSOR LEADS THROUGH A SEPARATE 2-INCH CONDUIT TO THE CABINET.
- 5. PULL BOXES AND COVERS SHALL BE FDOT APPROVED OF NON-METALLIC CONSTRUCTION WITH RECESSED COVER LOGO "TRAFFIC SIGNALS".

						T			
DATE	I RY	R E V I . DESCRIPTION	S I O N S DATE	l RY	DESCRIPTION	Engineer of Record: DeeAngela R. Tjikueni P.E. License No.: 68301		CITY OF WINTER	PARK
DATE	1 2	BESCHI FION	DATE	"	BESCHII FION	CH2M HILL			
						225 E. ROBINSON STREET	ROAD NO.	COUNTY	CITY PROJECT NO.
						SUITE 505 ORLANDO, FL 32801-4322 CERTIFICATE OF AUTHORIZATION NO. 000072	SR 426	ORANGE	2010-01

GENERAL NOTES

SHEET NO.

T-3

PROGRESS ENERGY CONSTRUCTION GUIDELINES:

- I. NOTIFICATIONS TO PROGRESS ENERGY-TRANSMISSION:
 - a. ANY TEMPORARY BRACING OR HOLDING OF PROGRESS ENERGY-TRANSMISSION POLES, EXISTING OR PROPOSED, REQUIRED FOR CONSTRUCTION WILL REQUIRE 30 WORKING DAYS ADVANCE NOTICE TO THE PROGRESS ENERGY-TRANSMISSION FIELD REPRESENTATIVE.
 - b. WHEN REQUESTING OUTAGES THE CONTRACTOR(S) MUST FOLLOW THE FOLLOWING GUIDELINES:
 - I. PROGRESS ENERGY-TRANSMISSION REQUIRES 21 DAYS LEAD TIME FOR ANY REQUESTED OUTAGE FOR ANY TRANSMISSION LINE.
 TOTAL START TO FINISH DURATION FOR EACH REQUESTED OUTAGE IS REQUIRED, ALONG WITH DAILY TIME FRAMES.
 - 2. IN CASES OF MULTIPLE TRANSMISSION LINES, PROGRESS ENERGY-TRANSMISSION WILL ONLY ALLOW ONE CIRCUIT OUT OF SERVICE AT ANY GIVEN TIME.
 - 3. IF AT ANY TIME A DE-ENERGIZED LINE WILL NEED TO BE PLACED BACK INTO SERVICE, SUCH AS A SYSTEM EMERGENCY (HURRICANE, LOSS OF ANOTHER TRANSMISSION LINE, AND/OR EXTREME LOAD, ETC.), PROGRESS ENERGY-TRANSMISSION WILL ASK THE ROADWAY CONTRACTOR, WITHIN A TWO HOUR PERIOD, TO SHUT DOWN ANY CONSTRUCTION THAT WOULD RESTRICT PROGRESS ENERGY-TRANSMISSION CONSTRUCTION CREWS FROM PLACING THE DE-ENERGIZED LINE BACK INTO SERVICE.
 - 4. TYPICALLY, ANY DE-ENERGIZING OF ANY PROGRESS ENERGY-TRANSMISSION LINES CAN ONLY OCCUR DURING THE FOLLOWING TIME PERIODS; OCTOBER 1st TO NOVEMBER 15th, AND MARCH 1st TO APRIL 15th. ANY ADDITIONAL REQUIRED DE-ENERGIZED TIME PERIODS NEEDED THROUGHOUT THE PROJECT WILL NEED TO BE COORDINATED WITH EITHER THE UTILITY AGENCY OWNER (UAO) FIELD OR PROJECT REPRESENTATIVE.
 - 5. DE-ENERGIZED TIME PERIODS CAN NOT EXCEED A TWO WEEK DURATION, A NEW REQUEST IS REQUIRED IF ADDITIONAL TIME IS NEEDED.
 - 6. PROGRESS ENERGY-TRANSMISSION CAN NOT GUARANTEE THAT THE CONTRACTOR WILL GET THE APPROVAL FOR THE OUTAGE, IT IS THE ROADWAY CONTRACTORS RESPONSIBILITY TO FOLLOW UP WITH THE FIELD REPRESENTATIVE.
- 2. DURING CONSTRUCTION, THE CONTRACTOR(S) CAN NOT HAVE ANY EQUIPMENT HEIGHT EXCEEDING 20 FEET UNDER OR NEAR OVERHEAD ENERGIZED TRANSMISSION LINES TO AVOID INJURY OR DEATH BY ELECTROCUTION.
- 3. WHEN THE ROADWAY CONTRACTOR IS EXCAVATING NEAR OR AROUND PROGRESS ENERGY-TRANSMISSION FACILITIES, THEY SHALL PROVIDE AT LEAST A FIFTEEN (15') FEET HORIZONTAL RADIUS ADJACENT TO THE FACILITY, IF THIS CANNOT BE MET, A NOTIFICATION TO THE PROGRESS ENERGY FLORIDA (PEF) FIELD REPRESENTATIVE TO ARRANGE FOR A FIELD MEETING.
- 4. THE ROADWAY CONTRACTOR IS PROHIBITED TO STACK MATERIAL (SOILS, FILL DIRT, GRAVEL, ETC.) UNDER OR NEAR ENERGIZED OVERHEAD POWER LINES EXCEEDING NATIONAL ELECTRIC SAFETY CODE (NESC) AND PEF REQUIREMENTS. THE ROADWAY CONTRACTOR MUST MAINTAIN TO FOLLOWING VERTICAL CLEARANCES FROM THE TRANSMISSION WIRES:

 a. 69kV TRANSMISSION LINES
 20 feet

 b. II5kV TRANSMISSION LINES
 21 feet

 c. 230kV TRANSMISSION LINES
 23 feet

 d. 500kV TRANSMISSION LINES
 29 feet

IF THE ROADWAY CONTRACTOR NEEDS ASSISTANCE IN CALCULATING THE MAXIMUM HEIGHT OF THE MATERIAL PILES, HE CAN CONTACT THE UAO PROJECT REPRESENTATIVE PRIOR TO UNLOADING THE MATERIAL.

THE USE OF EQUIPMENT ENCROACHING INTO THE ABOVE MENTIONED CLEARANCES WILL RESULT IN AN OSHA AND NESC VIOLATION.

UTILITY CONTACTS

I. THE CONTRACTOR SHALL NOTIFY UTILITY OWNERS LISTED BELOW THROUGH SUNSHINE ONE CALL OF FLORIDA, INC. (I-800-432-4770) TWO BUSINESS DAYS IN ADVANCE OF BEGINNING CONSTRUCTION ON THE JOB SITE:

UTILITY AGENCY OWNER	TELEPHONE NUMBER
AT&T Corp/ PEA (Long Distance)	(813) 342-0512
AT&T FLORIDA	(407) 273-5084
BRIGHT HOUSE NETWORKS, LLC	(407) 532-8509
CENTURY LINK (f/k/a EMBARQ FLORIDA)	(407) 830-3650
CITY OF WINTER PARK	(407) 559-3240
PROGRESS ENERGY (TRANSMISSION)	(407) 942-9243
PROGRESS ENERGY (DISTRIBUTION)	(407) 942-9421
TECO PEOPLES GAS	(407) 420-2678
T W TELECOM	(407) 215-6895
VERIZON BUSINESS	(407) 541-2083

THE FOLLOWING LIST OF UTILITY COMPANIES HAVE FACILITIES WITHIN THE PROJECT LIMITS.
IT HAS BEEN DETERMINED THAT NO RELOCATION IS ANTICIPATED BY THE FOLLOWING COMPANIES FOR THIS PROJECT:

UTILITY AGENCY OWNER	TELEPHONE NUMBE
AT&T Corp/ PEA (Long Distance)	(813) 342-0512
AT&T FLORIDA	(407) 273-5084
BRIGHT HOUSE NETWORKS, LLC	(407) 532-8509
CENTURY LINK (f/k/a EMBARQ FLORIDA)	(407) 830-3650
PROGRESS ENERGY (TRANSMISSION)	(407) 942-9243
PROGRESS ENERGY (DISTRIBUTION)	(407) 942-9421
T W TELECOM	(407) 215-6895
VERIZON BUSINESS	(407) 541-2083

		REVIS	SIONS			Engineer of Record: DeeAngela R. Tjikueni
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	P.E. License No.: 68301
						CH2M HILL
						225 E. ROBINSON STREET
						SUITE 505 ORLANDO, FL 32801-4322
						CERTIFICATE OF AUTHORIZATION NO. (

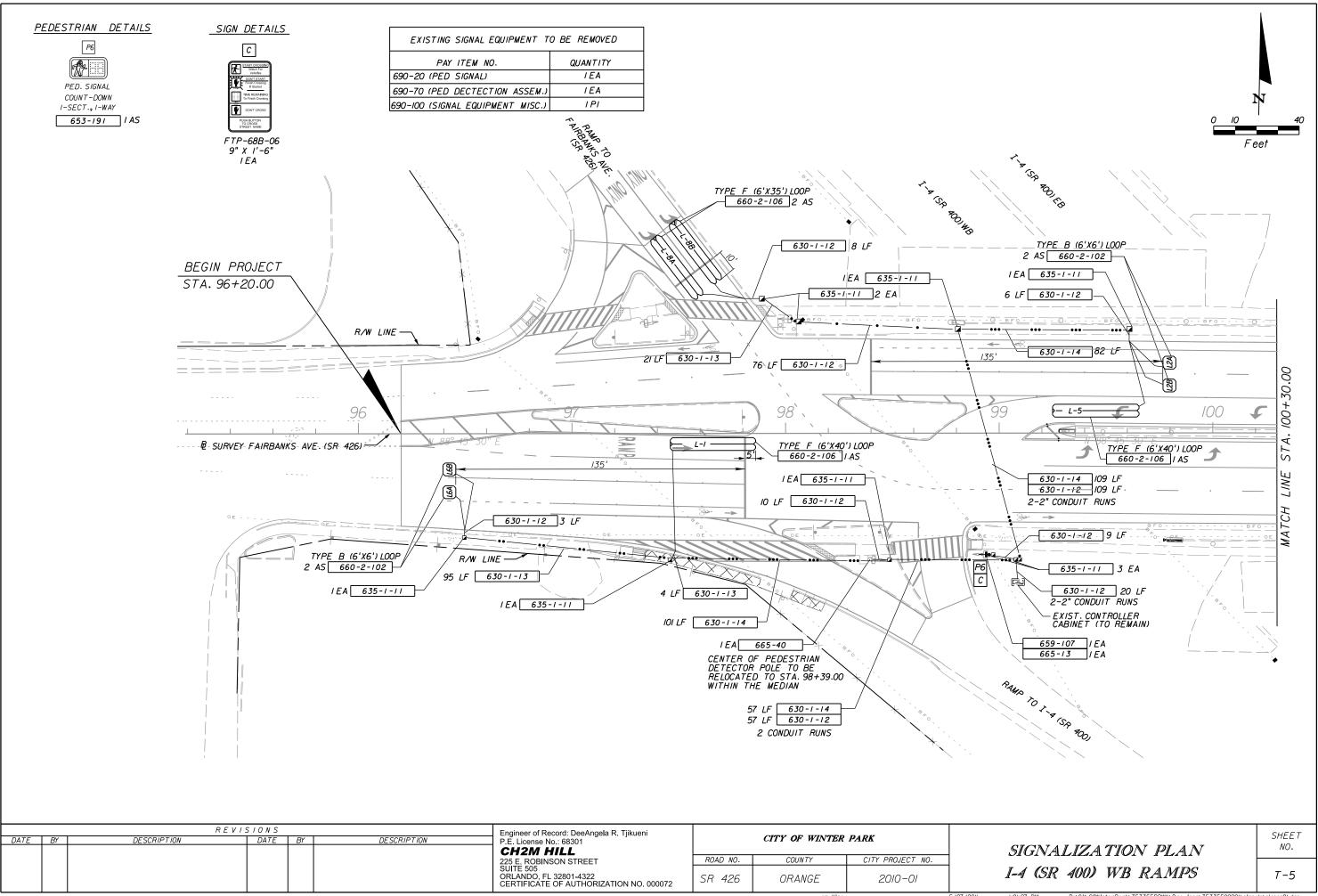
	CITY OF WINTER	PARK
ROAD NO.	COUNTY	CITY PROJECT NO.
SR 426	ORANGE	2010-01

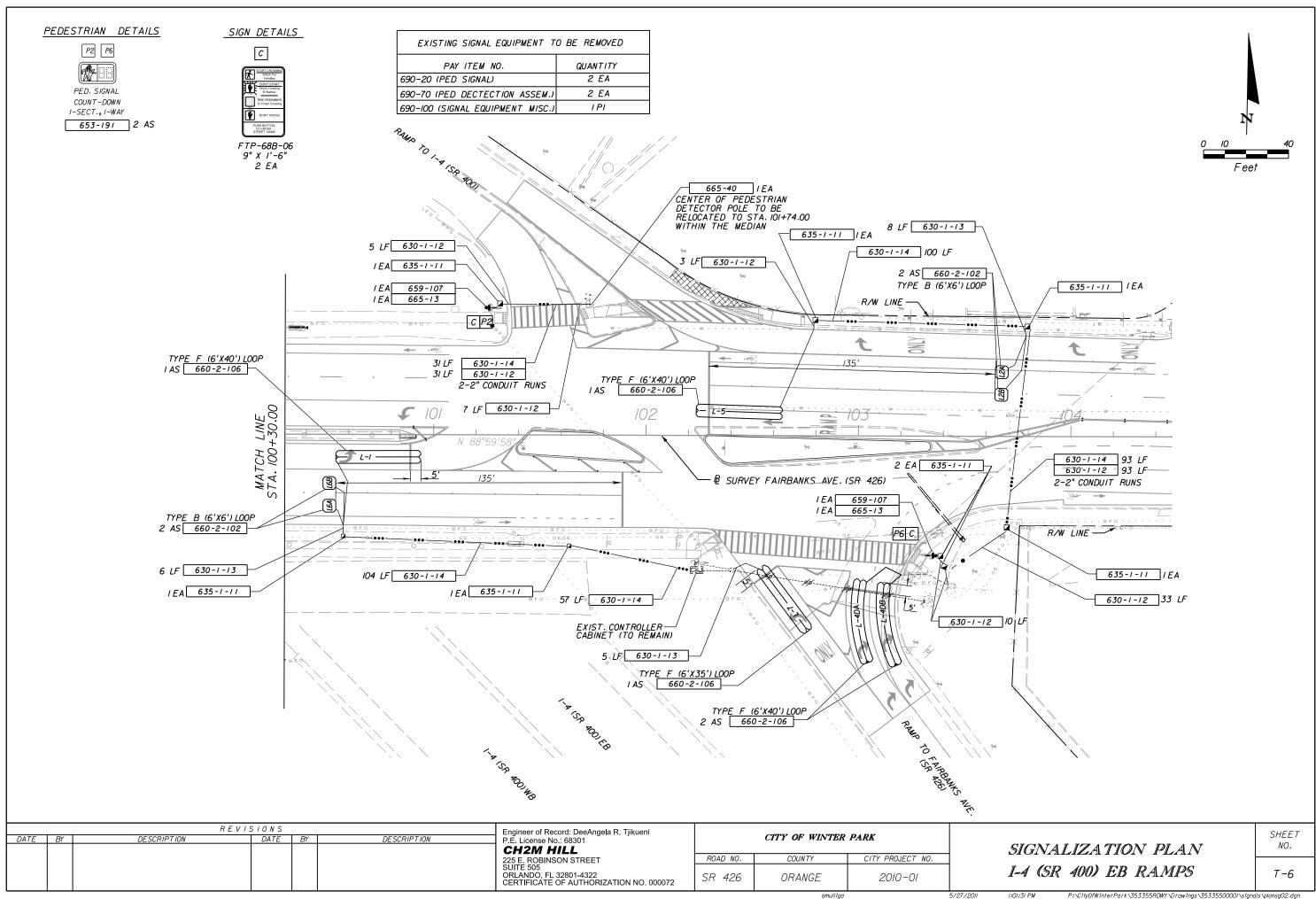
000072

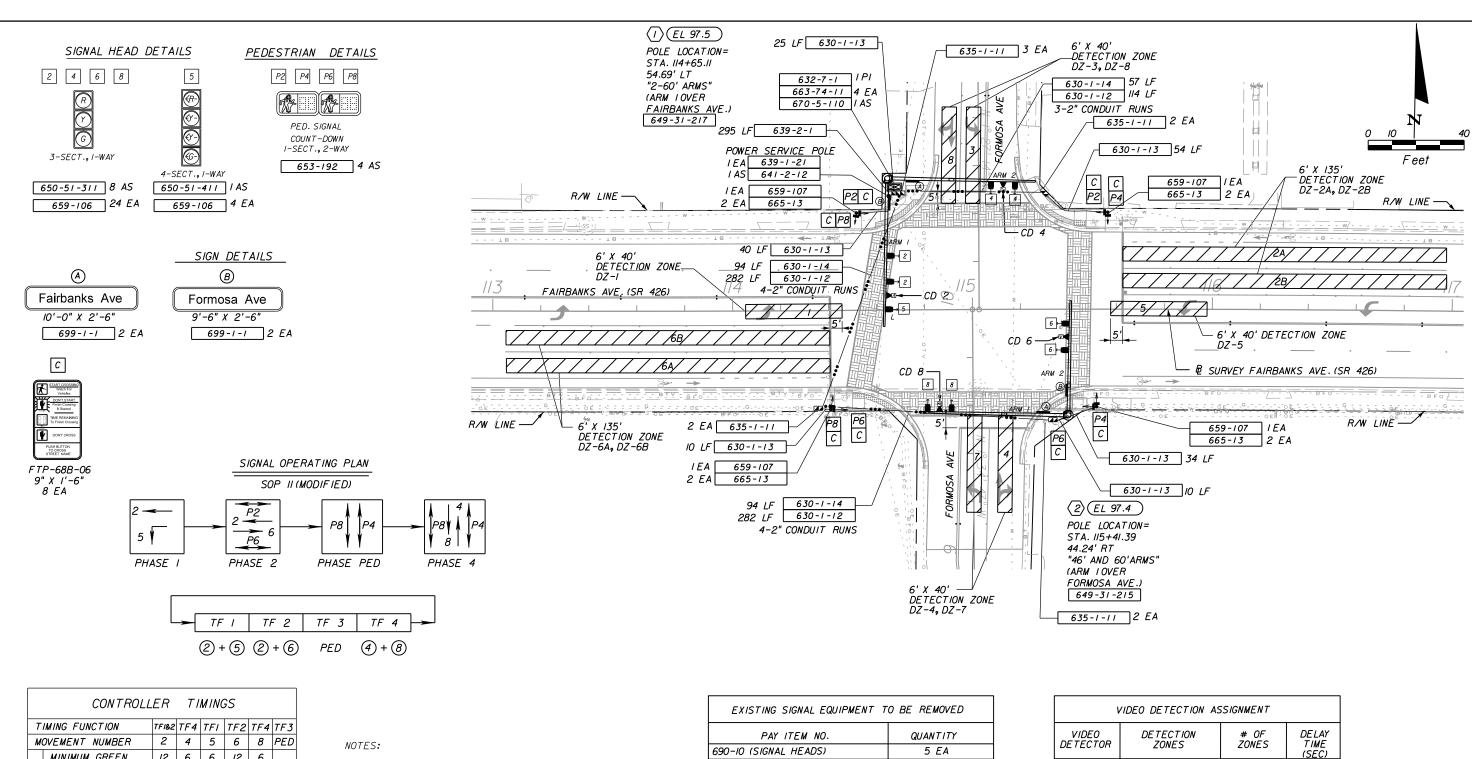
GENERAL NOTES

SHEET NO.

T-4







	CONTROLLER TIMINGS										
Т	IMING FUNCTION	TFI&2	TF4	TFI	TF2	TF4	TF3				
М	OVEMENT NUMBER	2	4	5	6	8	PED				
	MINIMUM GREEN	12	6	6	12	6					
_	MAXIMUM GREEN	50	15	30	50	15					
FUNCTION	EXTENSION	0.5	3.5	3.5	0.5	3.5					
NC 7	YELLOW CLEARANCE	4	4	4	4	4	4				
FU	ALL RED	2	2	2	2	2					
9//	PEDESTRIAN WALK	7	7	-	7	7	4				
TIMING	PED. CLEARANCE	18	25	-	18	25					
1	RECALL	MIN	0FF	0FF	MIN	0FF	0F F				
	DETECTION FUNCTION	L	NL	NL	L	NL	NL				
	FLASH OPERATION	Υ	R	R	Υ	R					

TIMINGS ARE INITIAL AND MAY REQUIRE FIELD ADJUSTING AS DIRECTED PROJECT ENGINEER.

- I. MAJOR STREET IS FAIRBANKS AVENUE (SR 426). THE POSTED SPEED LIMIT IS 35 MPH.
- 2. THE MINOR STREET IS FORMOSA AVENUE.

DESCRIPTION

- 3. PEDESTRIAN SIGNAL LED'S SHALL BE FULL MAN AND FULL HAND OVERLAY, COUNTDOWN TYPE.
- 4. CONTROLLER BASE SHALL BE THE SAME ELEVATION AS CENTERLINE OF FAIRBANKS AVENUE OR GREATER.
- 5. SEE SHEET T-12 FOR ADDITIONAL INFORMATION ON THE MAST ARMS AND UTILITY CONFLICTS.

EXISTING SIGNAL EQUIPMENT TO BE REMOVED						
PAY ITEM NO.	QUANTITY					
690-10 (SIGNAL HEADS)	5 <i>EA</i>					
690-20 (PED SIGNAL)	2 EA					
690-32-1 (CONC POLES)	2 EA					
690-50 (CONTROLLER ASSEM.)	I EA					
690-60 (VEHICLE DETEC)	IO EA					
690-70 (PED DECTECTION ASSEM.)	2 EA					
690-80 (SPAN WIRE)	I EA					
690-90 (CONDUIT & CABLE)	I PI					

VIDEO DETECTION ASSIGNMENT									
VIDEO DETECTOR	DETECTION ZONES	# OF ZONES	DELAY TIME (SEC)						
CD 2	DZ-2A, 2B, 5	3							
CD 4	DZ-7, DZ-4	2	5						
CD 6	DZ-6A, 6B, I	3							
CD 8	DZ-3, DZ-8	2	5						

DELAY TIME IS INITIAL AND MAY REQUIRE ADJUSTING

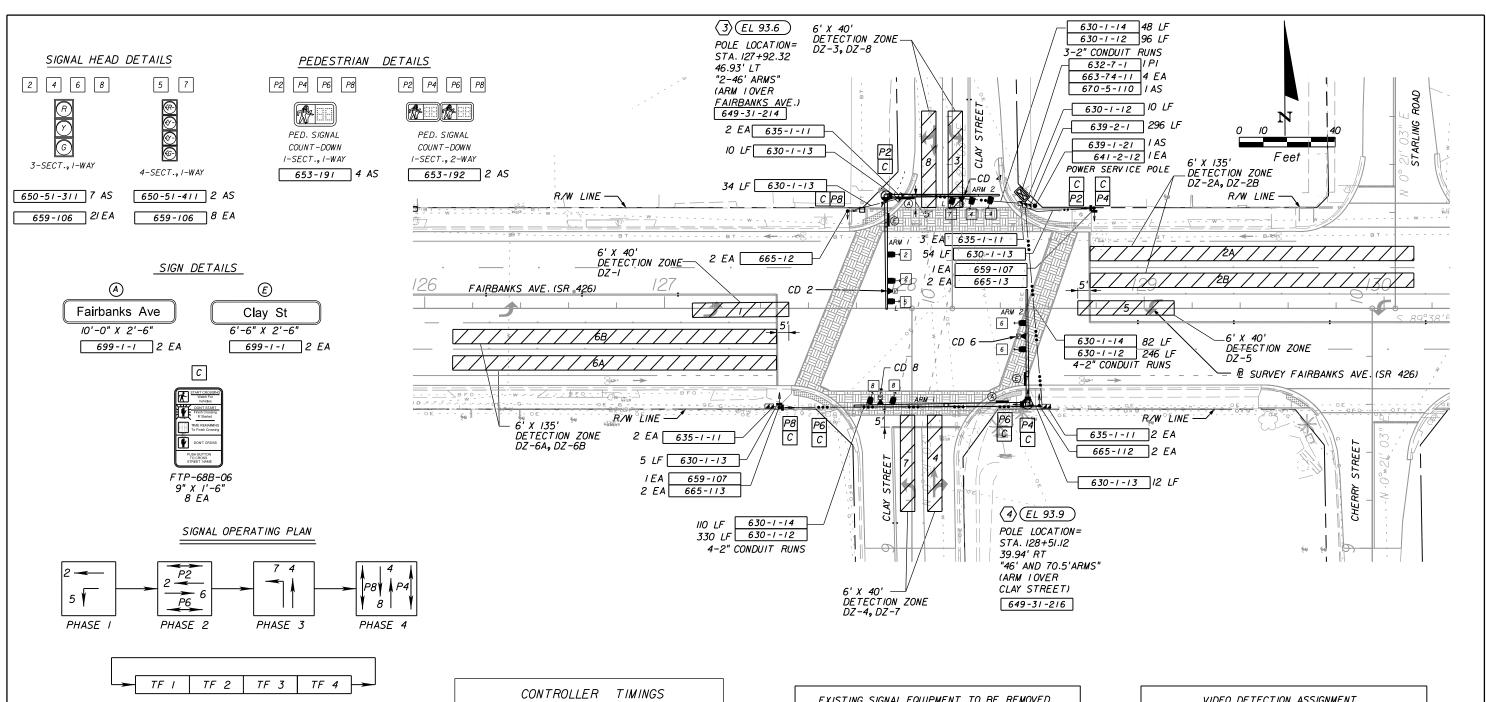
,,,,	000777	TO NO BINEOTED THOUSET	ZNOMEZN.			
			REVIS	SIONS		
DATE	BY	DESCRIPTION		DATE	BY	

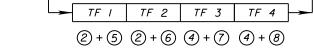
Engineer of Record: DeeAngela R. Tjikueni P.E. License No.: 68301 CH2M HILL

CH2M HILL
225 E. ROBINSON STREET
SUITE 505
ORLANDO, FL 32801-4322
CERTIFICATE OF AUTHORIZATION NO. 000072

CITY OF WINTER PARK							
ROAD NO.	COUNTY	CITY PROJECT NO.					
SR 426	ORANGE	2010-01					

SIGNALIZATION PLAN FAIRBANKS AVE/FORMOSA AVE SHEET NO.





NOTES:

DATE

- I. MAJOR STREET IS FAIRBANKS AVENUE (SR 426). THE POSTED SPEED LIMIT IS 35 MPH.
- 2. THE MINOR STREET IS CLAY STREET.
- 3. PEDESTRIAN SIGNAL LED'S SHALL BE FULL MAN AND FULL HAND OVERLAY, COUNTDOWN TYPE.
- 4. CONTROLLER BASE SHALL BE THE SAME ELEVATION AS CENTERLINE OF FAIRBANKS AVENUE OR GREATER.

CONTROLLER TIMINGS												
TIMING FUNCTION TF182 TF384 TF1 TF2 TF3 TF												
М	OVEMENT NUMBER	2	4	5	6	7	8					
	MINIMUM GREEN	12	6	6	12	6	6					
L	MAXIMUM GREEN	50	25	30	50	15	25					
FUNCTION	EXTENSION	0.5	3.5	3.5	0.5	3.5	3.5					
VC	YELLOW CLEARANCE	4	4	4	4	4	4					
FU	ALL RED	2	2	2	2	2	2					
Ø.	PEDESTRIAN WALK	7	7	_	7	-	7					
TIMING	PED. CLEARANCE	18	20	-	18	-	20					
_	RECALL	MIN	0FF	0FF	MIN	0FF	0FF					
	DETECTION FUNCTION	L	NL	NL	L	NL	NL					
	FLASH OPERATION	Υ	R	R	Υ	R	R					
TI	MINGS ARE INITIAL AN	D MA	Y RE	QU IRI	E FIL	ELD						

ADJUSTING AS DIRECTED PROJECT ENGINEER.

EXISTING SIGNAL EQUIPMENT T	U BL NEWOVED
PAY ITEM NO.	QUANTITY
690-10 (SIGNAL HEADS)	7 EA
690-20 (PED SIGNAL)	I EA
690-32-1 (CONC POLES)	2 EA
690-50 (CONTROLLER ASSEM.)	I EA
690-60 (VEHICLE DETEC)	IO EA
690-70 (PED DECTECTION ASSEM.)	2 EA
690-80 (SPAN WIRE)	I EA
690-90 (CONDUIT & CABLE)	I PI

VIDEO DETECTION ASSIGNMENT									
VIDEO DETECTOR	DETECTION ZONES	# OF ZONES	DELAY TIME (SEC)						
CD 2	DZ-2A, 2B, 5	3							
CD 4	DZ-4, DZ-7	2	5						
CD 6	DZ-6A, 6B, I	3							
CD 8	DZ-3, DZ-8	2	5						

DELAY TIME IS INITIAL AND MAY REQUIRE ADJUSTING

MAST ARMS AND UTILITY CONFLICTS.	5.	SEE .	SHEET	T-I2 FOR	<i>ADDITIONAL</i>	INFORMATION	ON	THE
		MAST	ARMS	AND UTILI	TY CONFLICT.	s.		

		REVIS	5 1 0 N S			Engineer of Record: DeeAngela R. Tjikueni
Έ	BY	DESCRIPTION	DATE	BY	DESCRIPTION	P.E. License No.: 68301
						CH2M HILL
						225 E. ROBINSON STREET
						SUITE 505 ORLANDO, FL 32801-4322
						CERTIFICATE OF AUTHORIZATION NO. 000072

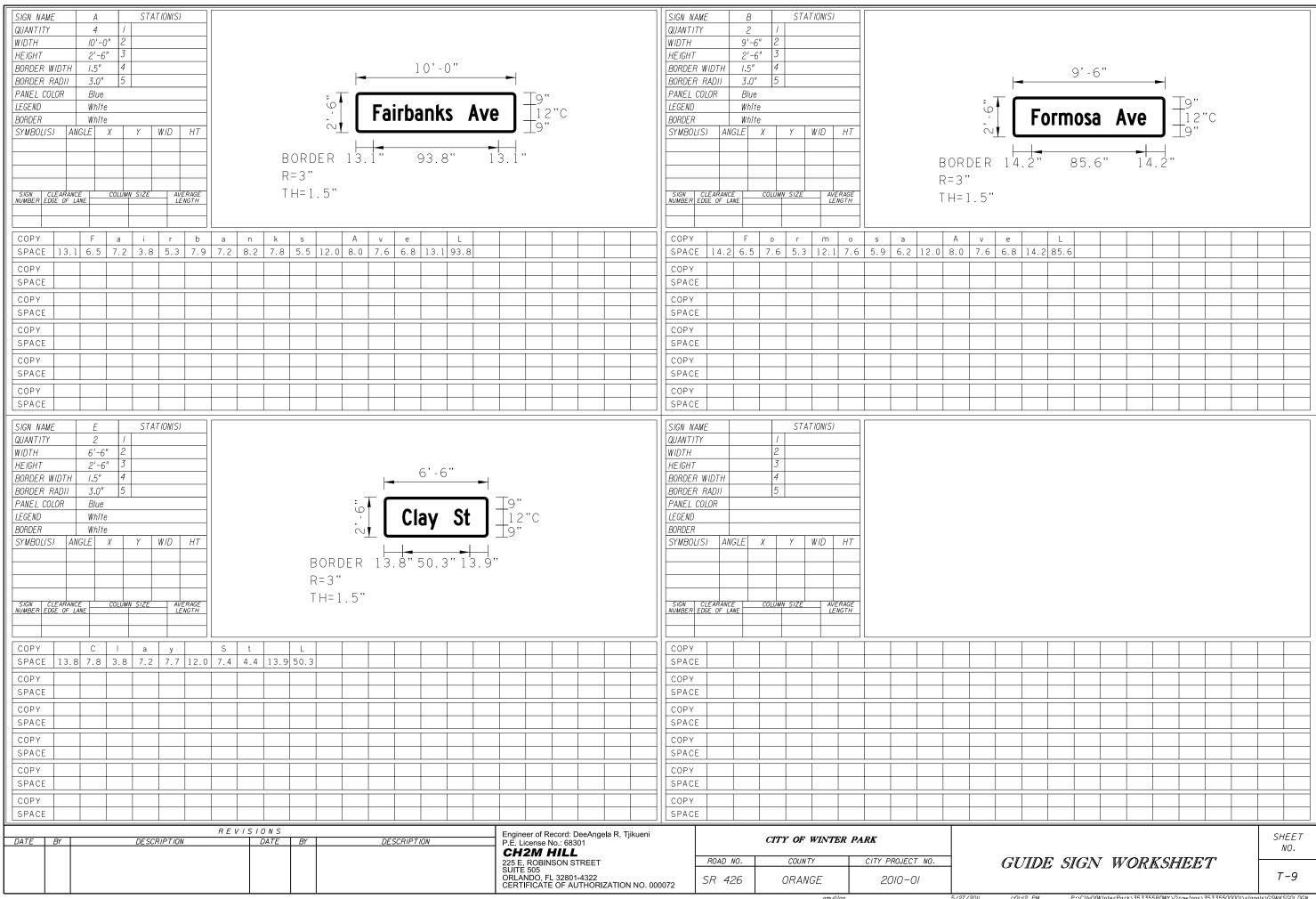
	CITY OF WINTER	PARK	
ROAD NO.	COUNTY	CITY PROJECT NO.	
SR 426	ORANGE	2010-01	À

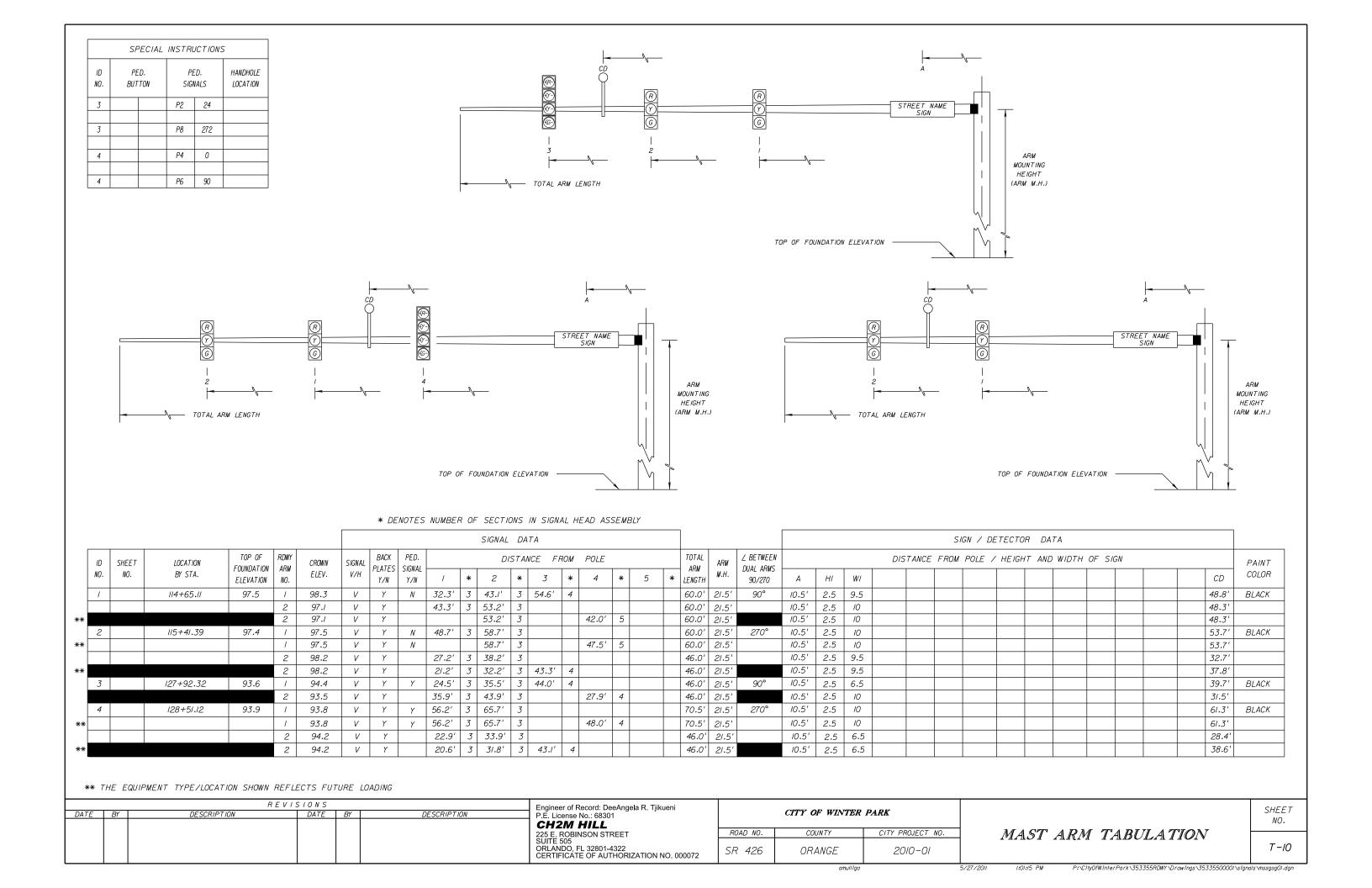
SIGNAL	LIZATION PLAN	
FAIRBANKS	A VE/CLA Y STREET	

SHEET NO.

T-8

P:\CityOfWinterPark\353355RDWY\Drawings\3533550000|\signals\plansg04.dgn





STANDARD MAST ARM ASSEMBLIES DATA TABLE																		
STRUCTURE	(1)	ı	FIRST ARN	1	S	SECOND ARI	М	,,,,	, ,		P0	LE		SF	PECIAL DR	ILLED SHA	NFT ⁽⁴⁾	GROUT
ID NUMBERS	ASSEMBLY NUMBERS	ARM TYPE	FAA ⁽²⁾ (ft.)	FBA ⁽²⁾ (in.)	ARM TYPE	FAA ⁽²⁾ (ft.)	FBA ⁽²⁾ (in.)	UF (deg)	LL (deg)	POLE TYPE	UAA ⁽³⁾ (ft.)	UB (ft.)	UCA ⁽³⁾ (in.)	DA (ft.)	DB (ft.)	RA	RB	PAD Y/N
1	E5-E5-T4	E5			E5			90		T4	23	21.5	18.78					N
2	E5-E4-T4	E5			E4			270		T4	23	21.5	18.78					N
3	E4-E4-T3	E4			E4			90		Т3	23	21.5	15.78					N
4	E6-E4-T4	E6			E4			270		T4	23	21.5	18.78					N

TABLE NOTES:

I. ASSEMBLY NUMBER LEGEND

SINGLE ARM:

ARM TYPE - POLE TYPE = D# - S#

= E# - T#

= F# - W#

DOUBLE ARM:

FIRST ARM TYPE - SECOND ARM TYPE - POLE TYPE = D# - D# - S#

= E# - E# - T#

= F# - F# - W#

- 2. IF AN ENTRY APPEARS IN COLUMNS "FAA" AND "FBA", A SHORTER ARM IS REQUIRED. THIS IS OBTAINED BY REMOVING LENGTH FROM THE ARM TIP. FOR THESE CASES THE MAST ARM LENGTH SHALL BE SHORTENED FROM "FA" TO "FAA" AND THE TIP DIAMETER SHALL BE INCREASED FROM "FB" TO "FBA".
- 3. IF AN ENTRY APPEARS IN COLUMNS "UAA" AND "UCA", A SHORTER POLE IS REQUIRED. THIS IS OBTAINED BY REMOVING LENGTH FROM THE POLE TIP. FOR THESE CASES THE POLE HEIGHT SHALL BE SHORTENED FROM "UA" TO "UAA" AND THE POLE TIP DIAMETER SHALL BE INCREASED FROM "UC" TO "UCA".
- 4. THE FOUNDATIONS FOR STANDARD MAST ARM ASSEMBLIES ARE PRE-DESIGNED AND ARE BASED UPON THE FOLLOWING CONSERVATIVE SOIL CRITERIA WHICH COVERS THE GREAT MAJORITY OF SOIL TYPES FOUND IN FLORIDA. ONLY COMPLETE THE "SPECIAL DRILLED SHAFT" DATA INFORMATION IF SITE CONDITIONS DICTATE DRILLED SHAFTS WITH ADDITIONAL FOUNDATION CAPACITY.

CLASSIFICATION = COHESIONLESS (FINE SAND) FRICTION ANGLE = 30 DEGREES (30°) UNIT WEIGHT = 50 LBS. / CU. FT. (ASSUMED SATURATED)

GENERAL NOTES:

- I. 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.
- 2. WORK WITH INDEX NOS. 17743 AND 17745.
- 3. WHEN PLACING STANDARD MAST ARM ASSEMBLIES ON EXISTING FOUNDATIONS, REMOVE EXISTING GROUT PAD AND CUT EXISTING ANCHOR BOLTS FLUSH WITH TOP OF FOUNDATION. REPLACE DAMAGED OR REMOVED PORTIONS OF THE FOUNDATION, USING EPOXY BONDING COMPOUND ACCORDING TO SECTION 400 OF THE SPECIFICATIONS. REPLACE GROUT PAD ACCORDING TO SECTION 934 OF THE SPECIFICATIONS.

R E V I S I O N S									
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	Engineer of R			
						CH2M F			
						225 E. ROBIN SUITE 505			
						ORLANDO, FI CERTIFICATE			

gineer of Record: DeeAngela R. Tjikueni
. License No.: 68301

#2M #ILL

i E. ROBINSON STREET
ITE 505
LANDO, FL 32801-4322
RTIFICATE OF AUTHORIZATION NO. 000072

CITY OF WINTER PARK

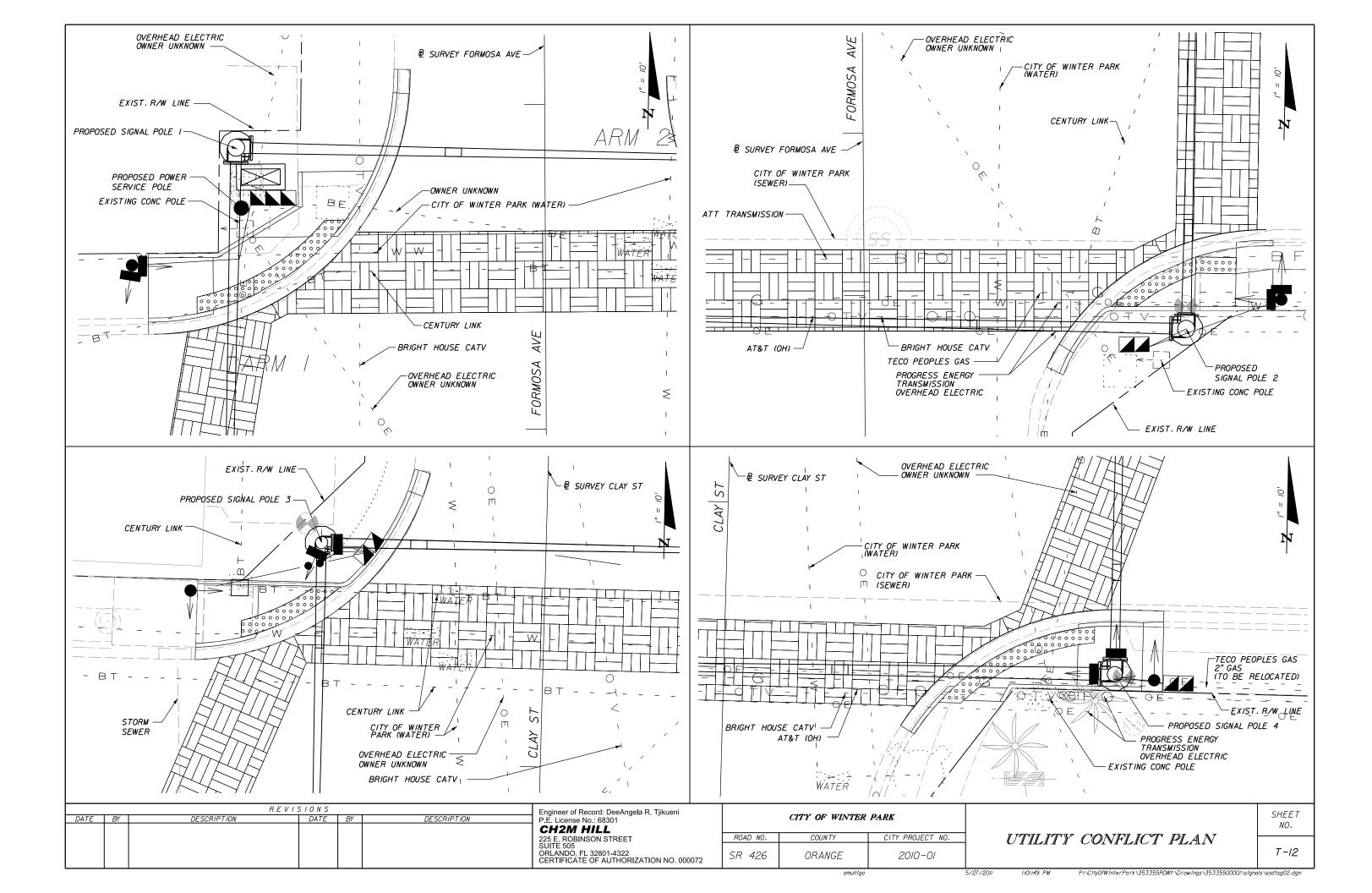
ROAD NO. COUNTY CITY PROJECT NO.

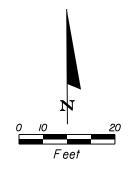
SR 426 ORANGE 2010-01

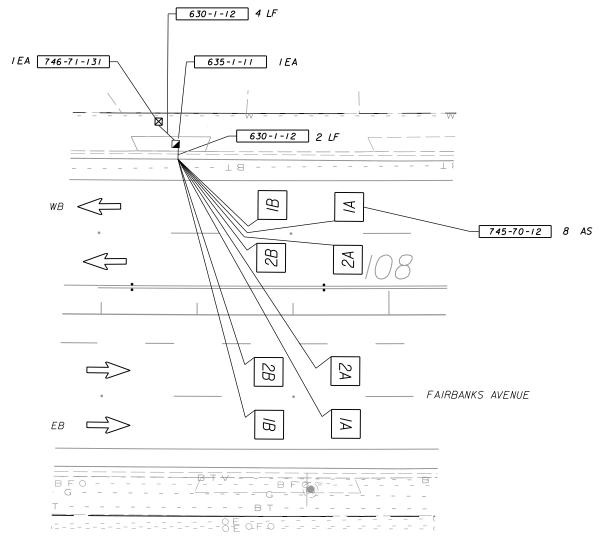
STANDARD MAST ARM
ASSEMBLIES DATA TABLE

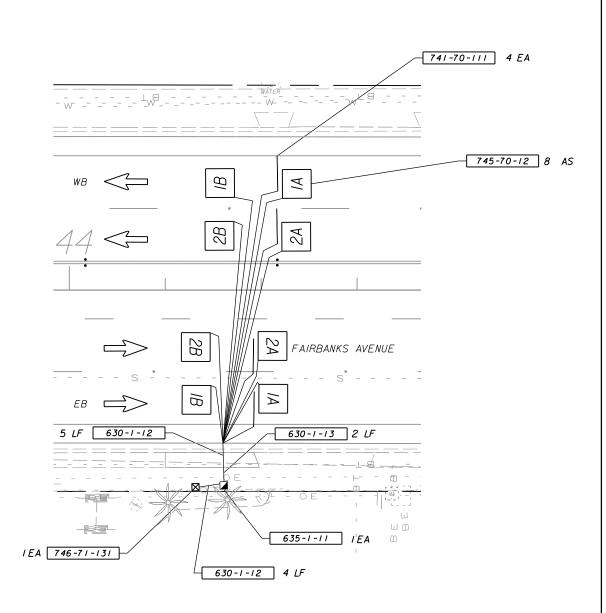
SHEET NO.

53355PDWY\Drawinge\3533550000\\eignale\meenea02 dan









TRAFFIC MONITORING SITE (TMS): 750435LP

MILE POST 0.900

MILE POST 0.207

TRAFFIC MONITORING SITE (TMS): 750585

REVISIONS Engineer of Record: DeeAngela R. Tjikueni P.E. License No.: 68301 **CH2M HILL** 225 E. ROBINSON STREET SUITE 505 CITY OF WINTER PARK DATE BY DESCRIPTION ROAD NO. COUNTY CITY PROJECT NO. ORLANDO, FL 32801-4322 CERTIFICATE OF AUTHORIZATION NO. 000072

SR 426 ORANGE 2010-01

TRAFFIC MONITORING SITES

SHEET NO. T-15

P:\CityOfWinterPark\353355RDWY\Drawings\3533550000I\signals\plansg05A.dgn