				SHEET	NUM.					PAI		ITEM	ITEM	GRAND	UNIT	DESCRIPTION	SEE SHEET	
5	6	6A	7	8	19	20	21	40	49	01/SAF/PV	02/SAF/ OT/AQUA	IIEW	EXT	TOTAL	UNII	DESCRIPTION	NO.	CALCI
																PAVEMENT		\Box
		100					893			893		204	10000	893	SY	SUBGRADE COMPACTION		-
		100								100 100		251 253	01000 01000	100 100	SY SY	PARTIAL DEPTH PAVEMENT REPAIR (441) PAVEMENT REPAIR		-
		100					7,283			7 , 283		253	01000	7,283		PAVEMENT PLANING, ASPHALT CONCRETE, 3.0"		\dashv
14	1						159			174		301	46000	174		ASPHALT CONCRETE BASE, PG64-22		\dashv
17	,						100			117				117	C /	,		
11	1						150			162		304	20000	162	CY	AGGREGATE BASE		4
.3							736 278			736 281		407 441	20000 50101	736 281		NON-TRACKING TACK COAT ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), AS PER PLAN, PG70-22M	5	\dashv
.3				1			388			391		441	50300	391	<u>CY</u> CY	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (448)		\dashv
<u> </u>		1					754			754		SPECIAL	69098100	754	FT	REINFORCEMENT MESH FOR SAW CUT JOINTS	6A	\exists
																WATER WORK		\exists
						158				38	120	202	34900	158	FT	WATER WORK PIPE REMOVED (12" WATER MAIN)		\dashv
						179				38	141	SPECIAL	63820168	179	FT	12" WATER MAIN DIP CLASS 52 MECHANICAL JOINTS AND FITTINGS (AQUA)	36	\dashv
				1		.3				3	171	SPECIAL	63820500	3	EACH	VALVE BOX ADJUSTED TO GRADE (AQUA)	36	
				1		2					2	SPECIAL	63820712	2		12" X 12" TAPPING SLEEVE, VALVE AND VALVE BOX (AQUA)	36	
						1					1	SPECIAL	63820754	1	EACH	FIRE HYDRANT REMOVED AND RESET (AQUA)	36	
						12					12	SPECIAL	63820786	12		RETAP AND RECONNECT WATER SERVICE CONNECTION(AQUA)	36	
				-		2					2	SPECIAL SPECIAL	63820884 63820904	2	EACH	CUT AND PLUG EXISTING 12" WATER LINE(AQUA) SERVICE BOX REMOVE, (AQUA)	36	
						2					2	SPECIAL	63820904	2	EACH EACH	1 1/2" CURB VALVE AND BOX (AQUA)	36 36	
												JI LUIAL	03020314	2	LACII	THE COND VALVE AND DOX (AGOA)	- 30	\dashv
																SANITARY SEWER		
					5					5		611	99655	5	EACH	MANHOLE ADJUSTED TO GRADE, AS PER PLAN (SANITARY)	6B	\dashv
		1														TRAFFIC CONTROL		\dashv
								14		14		621	00100	14	EACH	RPM		
								14		14		621	54000	14	EACH	RAISED PAVEMENT MARKER REMOVED		
								52		52		630	03100	52	FT	GROUND MOUNTED SUPPORT, NO. 3 POST		
		1						5		5		630	85100	5	EACH	REMOVAL OF GROUND MOUNTED SIGN AND REFRECTION		_
								4		4		630	86002	4	EACH	REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL		\dashv
								0.4		0.4		646	10010	0.4	MILE	EDGE LINE, 6"		\dashv
								0.3		0.3		646	10110	0.3	MILE	LANE LINE, 6"		
								0.13		0.13		646	10200	0.13	MILE	CENTER LINE		_
		1						1,017		1,017		646	10300	1,017	FT	CHANNELIZING LINE, 8"		\dashv
		+						492		492		646	10310	492	FT	CHANNELIZING LINE, 12"		\dashv
								228		228		646	10400	228	FT	STOP LINE		-
								372		372		646	10500	372	FT	CROSSWALK LINE		
								16		16		646	20300	16	EACH	LANE ARROW		
	1																	
									20	20		611	00406	20	ЕТ	TRAFFIC SIGNALS		\dashv
									28	28		611 625	00406	28	FT	4" CONDUIT, TYPE F		
									2	2		625	18100	2	EACH	4" CONDUIT, TYPE F BRACKET ARM, 12'		_
									2 368	2 368		625 625	18100 23000	2 368	EACH FT	4" CONDUIT, TYPE F BRACKET ARM, 12' NO. 4 AWG 600 VOLT DISTRIBUTION CABLE		_
									2	2		625	18100	2	EACH FT	4" CONDUIT, TYPE F BRACKET ARM, 12'		
									2 368 1,396 159	2 368 1,396 159		625 625 625 625	18100 23000 23306 25400	2 368 1,396 159	EACH FT FT FT	4" CONDUIT, TYPE F BRACKET ARM, 12' NO. 4 AWG 600 VOLT DISTRIBUTION CABLE NO. 10 AWG 600 VOLT DISTRIBUTION CABLE CONDUIT, 2", 725.04		
									2 368 1,396 159	2 368 1,396 159		625 625 625 625 625	18100 23000 23306 25400 25500	2 368 1,396 159	EACH FT FT FT	4" CONDUIT, TYPE F BRACKET ARM, 12' NO. 4 AWG 600 VOLT DISTRIBUTION CABLE NO. 10 AWG 600 VOLT DISTRIBUTION CABLE CONDUIT, 2", 725.04 CONDUIT, 3", 725.04		
									2 368 1,396 159 10 44	2 368 1,396 159 10 44		625 625 625 625 625 625	18100 23000 23306 25400 25500 25902	2 368 1,396 159	EACH FT FT FT FT	4" CONDUIT, TYPE F BRACKET ARM, 12' NO. 4 AWG 600 VOLT DISTRIBUTION CABLE NO. 10 AWG 600 VOLT DISTRIBUTION CABLE CONDUIT, 2", 725.04 CONDUIT, 3", 725.04 CONDUIT, JACKED OR DRILLED, 725.04, 2"		
									2 368 1,396 159	2 368 1,396 159		625 625 625 625 625	18100 23000 23306 25400 25500	2 368 1,396 159	EACH FT FT FT	4" CONDUIT, TYPE F BRACKET ARM, 12' NO. 4 AWG 600 VOLT DISTRIBUTION CABLE NO. 10 AWG 600 VOLT DISTRIBUTION CABLE CONDUIT, 2", 725.04 CONDUIT, 3", 725.04		
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									2 368 1,396 159 10 44 265 304 2	2 368 1,396 159 10 44 265 304 2		625 625 625 625 625 625 625 625 625 625	18100 23000 23306 25400 25500 25902 25902 25902 26252	2 368 1,396 159 10 44 265 304 2	FT FT FT FT FT FT FT EACH	4" CONDUIT, TYPE F BRACKET ARM, 12' NO. 4 AWG 600 VOLT DISTRIBUTION CABLE NO. 10 AWG 600 VOLT DISTRIBUTION CABLE CONDUIT, 2", 725.04 CONDUIT, 3", 725.04 CONDUIT, JACKED OR DRILLED, 725.04, 2" CONDUIT, JACKED OR DRILLED, 725.04, 3" CONDUIT, JACKED OR DRILLED, 725.04, 4" LUMINAIRE, CONVENTIONAL, SOLID STATE (LED), 200 WATT		
									2 368 1,396 159 10 44 265 304	2 368 1,396 159 10 44 265 304		625 625 625 625 625 625 625 625 625 625	18100 23000 23306 25400 25500 25902 25902 25902 26252 29000	2 368 1,396 159 10 44 265 304	FT F	4" CONDUIT, TYPE F BRACKET ARM, 12' NO. 4 AWG 600 VOLT DISTRIBUTION CABLE NO. 10 AWG 600 VOLT DISTRIBUTION CABLE CONDUIT, 2", 725.04 CONDUIT, 3", 725.04 CONDUIT, JACKED OR DRILLED, 725.04, 2" CONDUIT, JACKED OR DRILLED, 725.04, 3" CONDUIT, JACKED OR DRILLED, 725.04, 4" LUMINAIRE, CONVENTIONAL, SOLID STATE (LED), 200 WATT		
									2 368 1,396 159 10 44 265 304 2	2 368 1,396 159 10 44 265 304 2		625 625 625 625 625 625 625 625 625 625	18100 23000 23306 25400 25500 25902 25902 25902 26252 29000 30700	2 368 1,396 159 10 44 265 304 2	FT FT FT FT FT FT FT EACH	4" CONDUIT, TYPE F BRACKET ARM, 12' NO. 4 AWG 600 VOLT DISTRIBUTION CABLE NO. 10 AWG 600 VOLT DISTRIBUTION CABLE CONDUIT, 2", 725.04 CONDUIT, 3", 725.04 CONDUIT, JACKED OR DRILLED, 725.04, 2" CONDUIT, JACKED OR DRILLED, 725.04, 3" CONDUIT, JACKED OR DRILLED, 725.04, 4" LUMINAIRE, CONVENTIONAL, SOLID STATE (LED), 200 WATT TRENCH PULL BOX, 725.08, 18"		
									2 368 1,396 159 10 44 265 304 2	2 368 1,396 159 10 44 265 304 2		625 625 625 625 625 625 625 625 625 625	18100 23000 23306 25400 25500 25902 25902 25902 26252 29000 30700 30706 32000	2 368 1,396 159 10 44 265 304 2 197 1	FT FT FT FT FT FT FT FT FT EACH	4" CONDUIT, TYPE F BRACKET ARM, 12' NO. 4 AWG 600 VOLT DISTRIBUTION CABLE NO. 10 AWG 600 VOLT DISTRIBUTION CABLE CONDUIT, 2", 725.04 CONDUIT, 3", 725.04 CONDUIT, JACKED OR DRILLED, 725.04, 2" CONDUIT, JACKED OR DRILLED, 725.04, 3" CONDUIT, JACKED OR DRILLED, 725.04, 4" LUMINAIRE, CONVENTIONAL, SOLID STATE (LED), 200 WATT TRENCH PULL BOX, 725.08, 18" PULL BOX, 725.08, 24" GROUND ROD		
									2 368 1,396 159 10 44 265 304 2	2 368 1,396 159 10 44 265 304 2 197 1 5		625 625 625 625 625 625 625 625 625 625	18100 23000 23306 25400 25500 25902 25902 25902 26252 29000 30700 30706	2 368 1,396 159 10 44 265 304 2	FT FT FT FT FT FT FT FT EACH FT EACH	4" CONDUIT, TYPE F BRACKET ARM, 12' NO. 4 AWG 600 VOLT DISTRIBUTION CABLE NO. 10 AWG 600 VOLT DISTRIBUTION CABLE CONDUIT, 2", 725.04 CONDUIT, 3", 725.04 CONDUIT, JACKED OR DRILLED, 725.04, 2" CONDUIT, JACKED OR DRILLED, 725.04, 3" CONDUIT, JACKED OR DRILLED, 725.04, 4" LUMINAIRE, CONVENTIONAL, SOLID STATE (LED), 200 WATT TRENCH PULL BOX, 725.08, 18" PULL BOX, 725.08, 24"	42	
									2 368 1,396 159 10 44 265 304 2 197 1 5	2 368 1,396 159 10 44 265 304 2 197 1 5		625 625 625 625 625 625 625 625 625 625	18100 23000 23306 25400 25500 25902 25902 25902 26252 29000 30700 30706 32000	2 368 1,396 159 10 44 265 304 2 197 1	FT FT FT FT FT FT EACH EACH EACH	4" CONDUIT, TYPE F BRACKET ARM, 12' NO. 4 AWG 600 VOLT DISTRIBUTION CABLE NO. 10 AWG 600 VOLT DISTRIBUTION CABLE CONDUIT, 2", 725.04 CONDUIT, 3", 725.04 CONDUIT, JACKED OR DRILLED, 725.04, 2" CONDUIT, JACKED OR DRILLED, 725.04, 3" CONDUIT, JACKED OR DRILLED, 725.04, 4" LUMINAIRE, CONVENTIONAL, SOLID STATE (LED), 200 WATT TRENCH PULL BOX, 725.08, 18" PULL BOX, 725.08, 24" GROUND ROD	42	
									2 368 1,396 159 10 44 265 304 2 197 1 5 11	2 368 1,396 159 10 44 265 304 2 197 1 5 11 100		625 625 625 625 625 625 625 625 625 625	18100 23000 23306 25400 25500 25902 25902 25902 26252 29000 30700 30706 32000 36011	2 368 1,396 159 10 44 265 304 2 197 1 5 11 100	FT FT FT FT FT FT EACH EACH EACH EACH EACH EACH EACH	4" CONDUIT, TYPE F BRACKET ARM, 12' NO. 4 AWG 600 VOLT DISTRIBUTION CABLE NO. 10 AWG 600 VOLT DISTRIBUTION CABLE CONDUIT, 2", 725.04 CONDUIT, 3", 725.04 CONDUIT, JACKED OR DRILLED, 725.04, 2" CONDUIT, JACKED OR DRILLED, 725.04, 3" CONDUIT, JACKED OR DRILLED, 725.04, 3" CONDUIT, JACKED OR DRILLED, 725.04, 4" LUMINAIRE, CONVENTIONAL, SOLID STATE (LED), 200 WATT TRENCH PULL BOX, 725.08, 18" PULL BOX, 725.08, 24" GROUND ROD UNDERGROUND WARNING/MARKING TAPE, AS PER PLAN ARC FLASH CALCULATIONS AND LABEL (SR 687 / DRESSLER)		
									2 368 1,396 159 10 44 265 304 2 197 1 5 11	2 368 1,396 159 10 44 265 304 2 197 1 5		625 625 625 625 625 625 625 625 625 625	18100 23000 23306 25400 25500 25902 25902 25902 26252 29000 30700 30706 32000 36011 76000	2 368 1,396 159 10 44 265 304 2 197 1	FT FT FT FT FT FT EACH EACH EACH EACH EACH EACH EACH	4" CONDUIT, TYPE F BRACKET ARM, 12' NO. 4 AWG 600 VOLT DISTRIBUTION CABLE NO. 10 AWG 600 VOLT DISTRIBUTION CABLE CONDUIT, 2", 725.04 CONDUIT, 3", 725.04 CONDUIT, JACKED OR DRILLED, 725.04, 2" CONDUIT, JACKED OR DRILLED, 725.04, 3" CONDUIT, JACKED OR DRILLED, 725.04, 4" LUMINAIRE, CONVENTIONAL, SOLID STATE (LED), 200 WATT TRENCH PULL BOX, 725.08, 18" PULL BOX, 725.08, 24" GROUND ROD UNDERGROUND WARNING/MARKING TAPE, AS PER PLAN		
									2 368 1,396 159 10 44 265 304 2 197 1 5 11 100	2 368 1,396 159 10 44 265 304 2 197 1 5 11 100		625 625 625 625 625 625 625 625 625 625	18100 23000 23306 25400 25500 25902 25902 25902 26252 29000 30700 30706 32000 36011	2 368 1,396 159 10 44 265 304 2 197 1 5 11 100	FT FT FT FT FT FT EACH EACH EACH EACH EACH EACH EACH EAC	4" CONDUIT, TYPE F BRACKET ARM, 12' NO. 4 AWG 600 VOLT DISTRIBUTION CABLE NO. 10 AWG 600 VOLT DISTRIBUTION CABLE CONDUIT, 2", 725.04 CONDUIT, 3", 725.04 CONDUIT, JACKED OR DRILLED, 725.04, 2" CONDUIT, JACKED OR DRILLED, 725.04, 4" LUMINAIRE, CONVENTIONAL, SOLID STATE (LED), 200 WATT TRENCH PULL BOX, 725.08, 18" PULL BOX, 725.08, 24" GROUND ROD UNDERGROUND WARNING/MARKING TAPE, AS PER PLAN ARC FLASH CALCULATIONS AND LABEL (SR 687 / DRESSLER) SIGN HANGER ASSEMBLY, MAST ARM		

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S 6 7 8 8 20 21 40 49 53 DUSAFPP OF STANDING EXT TOTAL UNIT DESCRIPTION	43 43 42 42
12 12 12 13 2 2033 12 EACH PEDESTRIAN SIGNAL HEAD LED, TYPE D2, COUNTONN, AS PER PLAN 15 15 15 15 15 15 15	42
15	42
12 12 632 25000 12 EACH COVERING OF PERESTRIAN SIGNAL HEAD 12 12 632 26000 12 EACH PERESTRIAN SIGNAL HEAD 1,983 1,983 632 40200 1,983 FT SIGNAL CABLE, 2 COMDUCTOR, NO. 14 AWG 2,706 2,706 632 40500 2,706 FT SIGNAL CABLE, 5 COMDUCTOR, NO. 14 AWG 2,382 2,382 632 40700 2,382 FT SIGNAL CABLE, 7 COMDUCTOR, NO. 14 AWG 4 4 632 64011 4 EACH SIGNAL SURPLING FOUNDATION, AS PER PLAN 6 6 6 632 64020 6 EACH PEDESTRIAL FOUNDATION, NO. 14 AWG 700 100 632 63900 100 FT POWER CABLE, 3 CONDUCTOR, NO. 4 AWG 8 7 7 7 7 7 7 7 7 7	
1,983	
2,706 2,706 632 40500 2,706 FT SIGNAL CABLE, 5 CONDUCTOR, NO. 14 AWG 2,382 2,382 632 40700 2,382 FT SIGNAL CABLE, 7 CONDUCTOR, NO. 14 AWG 4 632 64070 4 EACH SIGNAL SUPPORT FOUNDATION, AS PER PLAN 6 6 632 64020 6 EACH PDESTAL FOUNDATION FOUNDATION FOUNDATION FT POWER CABLE, 3 CONDUCTOR, NO. 4 AWG 7 POWER CABLE, 3 CONDUCTOR, NO. 4 AWG POWER CABLE, 3 CONDUCTO	
2,382	
2,382	
6 6 632 64920 6 EACH PEDESTAL FOUNDATION 100 100 632 69300 100 FT POWER CABLE, 3 CONDUCTOR, NO. 4 AWG 215 632 69900 215 FT SERVICE CABLE, 3 CONDUCTOR, NO. 4 AWG 1	
100 100 632 69300 100 FT POWER CABLE, 3 CONDUCTOR, NO. 4 AWG	42
215 215 632 69900 215 FT SERVICE CABLE, 3 CONDUCTOR, NO. 4 AWG 1	42
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2 632 89800 2 EACH PEDESTAL, 3', TRANSFORMER BASE 4 632 89904 4 EACH PEDESTAL, 10', TRANSFORMER BASE 1 1 1 632 90101 1 EACH REMOVAL OF TRAFFIC SIGNAL INSTALLATION, AS PER PLAN 1 633 65511 1 EACH CABINET, TYPE TS-2, AS PER PLAN 1 1 633 67101 1 EACH CABINET FOUNDATION, AS PER PLAN 1 1 633 67200 1 EACH CONTROLLER WORK PAD 1 1 633 68511 1 EACH COMMUNICATIONS, AS PER PLAN	
4	
1 1 1 633 65511 1 EACH CABINET, TYPE TS-2, AS PER PLAN 1 1 633 67101 1 EACH CABINET FOUNDATION, AS PER PLAN 1 1 1 633 67200 1 EACH CONTROLLER WORK PAD 1 1 1 633 68511 1 EACH COMMUNICATIONS, AS PER PLAN	42
1 1 1 633 67101 1 EACH CABINET FOUNDATION, AS PER PLAN 1 1 633 67200 1 EACH CONTROLLER WORK PAD 1 1 633 68511 1 EACH COMMUNICATIONS, AS PER PLAN	
1 1 633 67200 1 EACH CONTROLLER WORK PAD 1 1 633 68511 1 EACH COMMUNICATIONS, AS PER PLAN	43
1 1 633 68511 1 EACH COMMUNICATIONS, AS PER PLAN	44
	43
1 1 633 75001 1 EACH UNINTERRUPTIBLE POWER SUPPLY (UPS), 1000 WATT, AS PER PLAN	43
4 4 809 69001 4 EACH ADVANCE RADAR DETECTION, AS PER PLAN	44
4 809 69101 4 EACH STOP LINE RADAR DETECTION, AS PER PLAN 1 1 809 69123 1 EACH ATC CONTROLLER, AS PER PLAN	44
1 1 809 69123 1 EACH ATC CONTROLLER, AS PER PLAN 1 1 809 69201 1 EACH EMERGENCY VEHICLE PREEMPTION, AS PER PLAN	44.
4 809 69211 4 EACH PREEMPT RECEIVING UNIT, AS PER PLAN	44.
302 302 809 69221 302 FT PREEMPT DETECTOR CABLE, AS PER PLAN 4 809 69231 4 EACH PREEMPT PHASE SELECTOR, AS PER PLAN	44,
4 4 809 69231 4 EACH PREEMPT PHASE SELECTOR, AS PER PLAN 4 4 809 69241 4 EACH PREEMPT CONFIRMATION LIGHT, AS PER PLAN	44.
MAINTENANCE OF TRAFFIC 160 160 160 160 160 160 160 160 HOUR LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE	
LS 614 12420 LS DETOUR SIGNING 10 10 10 614 12460 10 EACH WORK ZONE MARKING SIGN	
12 12 12 SNMT PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN	8
0.03 0.03 614 20010 0.03 MILE WORK ZONE LANE LINE, CLASS I, 6"	
0.1 0.1 614 20550 0.1 MILE WORK ZONE LANE LINE, CLASS III, 4", 642 PAINT 0.03 614 21000 0.03 MILE WORK ZONE CENTER LINE, CLASS I	
0.1 0.1 614 21550 0.1 MILE WORK ZONE CENTER LINE, CLASS III, 642 PAINT	
0.27 0.27 614 22010 0.27 MILE WORK ZONE EDGE LINE, CLASS I, 6"	
0.2 O.2 614 22350 O.2 MILE WORK ZONE EDGE LINE, CLASS III, 4", 642 PAINT	
958 958 614 23010 958 FT WORK ZONE CHANNELIZING LINE, CLASS I, 12"	
150 150	
50 50 614 26610 50 FT WORK ZONE STOP LINE, CLASS III, 642 PAINT	
4 614 30650 4 EACH WORK ZONE ARROW, CLASS III, 642 PAINT	
4 616 10000 4 MGAL WATER	
INCIDENTALS	
LS 614 11000 LS MAINTAINING TRAFFIC	
12 619 16010 12 MNTH FIELD OFFICE, TYPE B	
LS 623 10000 LS CONSTRUCTION LAYOUT STAKES AND SURVEYING	
LS 624 10000 LS MOBILIZATION	
	I

THIS ITEM OF WORK SHALL CONSIST OF FURNISHING AND INSTALLING A WAVETRONIX SMARTSENSOR ADVANCE DETECTION UNIT (MODEL SS-200E), OR APPROVED EQUAL. THE DETECTION UNIT SHALL INCLUDE THE FOLLOWING:

- 1. POWER SHALL BE PROVIDED FROM THE TRAFFIC CABINET.
- 2. ALL REQUIRED INPUTS CARDS SHALL BE INCLUDED IN THE TRAFFIC CABINET AND SHALL BE COMPATIBLE WITH CALTRANS, NEMA TSI AND NEMA TS2 DETECTOR RACKS. THE CARDS SHALL PROVIDE TRUE PRESENCE DETECTOR CALLS OR CONTACT CLOSURE TO THE TRAFFIC CONTROLLER.
- 3. THE UNIT SHALL BE MOUNTED DIRECTLY TO A POLE OR MAST ARM, AS RECOMMENDED BY THE MANUFACTURER. CABLE(S) SHALL BE PROVIDED AS REQUIRED AND RECOMMENDED BY THE MANUFACTURER.
- 4. SURGE PROTECTION DEVICES, AS RECOMMENDED BY THE MANUFACTURER SHALL BE INCLUDED BOTH AT THE POLE WHERE THE UNIT IS LOCATED TO PROTECT THE UNIT AND IN THE TRAFFIC CABINET TO PROTECT THE CABINET ELECTRONICS.
- 5. THE MANUFACTURER'S REPRESENTATIVE SHALL BE ON SITE DURING INSTALLATION AND TESTING AND SHALL PROVIDE ONSITE TRAINING ON THE SETUP, OPERATION AND MAINTENANCE OF THE UNIT.
- 6. A SERIAL TO ETHERNET COMMUNICATIONS MODULE AND ETHERNET CABLE (MINIMUM 7 FEET).
- 7. THE POWER SUPPLY AND COMMUNICATION MODULES SHALL BE SECURED TO A SINGLE PANEL THAT CAN BE MOUNTED INTERIOR TO THE TRAFFIC CABINET. THE PANEL SHALL INCLUDE MODULAR-PLUG STYLE CONNECTIONS FOR UP TO FOUR (4) SENSOR CABLES. ADDITIONAL SENSORS MAY BE HARD-WIRED TO THE COMMUNICATION MODULES, AS NECESSARY.
- 8. THE CONTRACTOR SHALL INSTALL THE RADAR DETECTION PRIOR TO MILLING/DISABLING EXISTING LOOPS.
- 9. THE INSTALLATION SHALL INCLUDE ALL CONTROLLER PROGRAMMING FOR COMPLETE INSTALLATION, WHICH INCLUDES MODIFICATIONS FOR REMOVAL OF EXISTING DETECTION.

PAYMENT FOR ITEM 809 ADVANCE RADAR DETECTION, AS PER PLAN SHALL BE MADE AT THE CONTRACT UNIT PRICE FOR EACH UNIT, COMPLETE AND IN PLACE INCLUDING ALL REQUIRED CABINET HARDWARE, MOUNTING BRACKETS, CABLES, CONDUIT, CONNECTIONS TESTED AND ACCEPTED, AND ANY OTHER NECESSARY HARDWARE TO ESTABLISH A FULLY FUNCTIONAL DETECTION SYSTEM.

633 CABINET FOUNDATION. AS PER PLAN

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IN ADDITION TO THE REQUIREMENTS OF ODOT CMS 633, 733 AND SCD TC-83.20, THE CABINET FOUNDATION WILL BE CONSTRUCTED PER THE DETAILS ON THIS SHEET.

809 STOP-LINE RADAR DETECTION. AS PER PLAN

THIS ITEM OF WORK SHALL CONSIST OF FURNISHING AND INSTALLING A WAVETRONIX SMARTSENSOR MATRIX DETECTION UNIT, OR APPROVED EQUAL. THE DETECTION UNIT SHALL INCLUDE THE FOLLOWING:

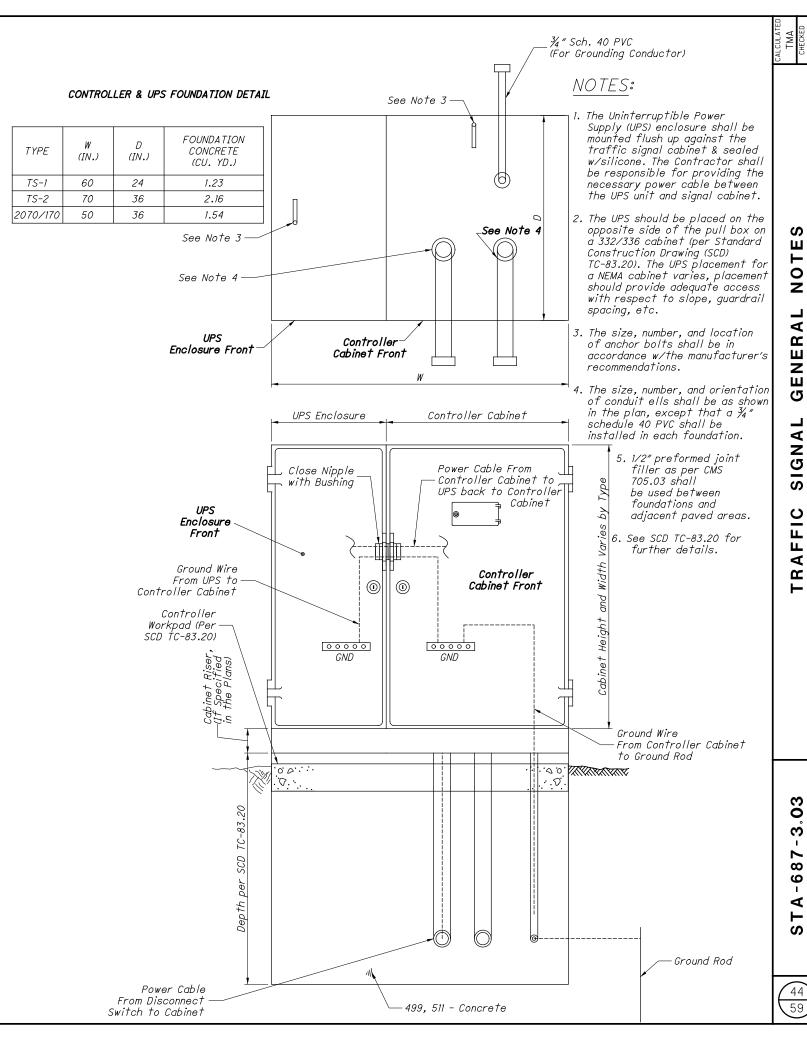
- 1. POWER SHALL BE PROVIDED FROM THE TRAFFIC CABINET.
- 2. ALL REQUIRED INPUTS CARDS SHALL BE INCLUDED IN THE TRAFFIC CABINET AND SHALL BE COMPATIBLE WITH CALTRANS, NEMA TSI AND NEMA TS2 DETECTOR RACKS. THE CARDS SHALL PROVIDE TRUE PRESENCE DETECTOR CALLS OR CONTACT CLOSURE TO THE TRAFFIC CONTROLLER.
- 3. THE UNIT SHALL BE MOUNTED DIRECTLY TO A POLE OR MAST ARM, AS RECOMMENDED BY THE MANUFACTURER. CABLE(S) SHALL BE PROVIDED AS REQUIRED AND RECOMMENDED BY THE MANUFACTURER.
- 4. SURGE PROTECTION DEVICES, AS RECOMMENDED BY THE MANUFACTURER SHALL BE INCLUDED BOTH AT THE POLE WHERE THE UNIT IS LOCATED TO PROTECT THE UNIT AND IN THE TRAFFIC CABINET TO PROTECT THE CABINET ELECTRONICS.
- 5. THE MANUFACTURER'S REPRESENTATIVE SHALL BE ON SITE DURING INSTALLATION AND TESTING AND SHALL PROVIDE ONSITE TRAINING ON THE SETUP, OPERATION AND MAINTENANCE OF THE UNIT.
- 6. A SERIAL TO ETHERNET COMMUNICATIONS MODULE AND ETHERNET CABLE (MINIMUM 7 FEET).
- 7. THE POWER SUPPLY AND COMMUNICATION MODULES SHALL BE SECURED TO A SINGLE PANEL THAT CAN BE MOUNTED INTERIOR TO THE TRAFFIC CABINET. THE PANEL SHALL INCLUDE MODULAR-PLUG STYLE CONNECTIONS FOR UP TO FOUR (4) SENSOR CABLES. ADDITIONAL SENSORS MAY BE HARD-WIRED TO THE COMMUNICATION MODULES, AS NECESSARY.
- 8. THE CONTRACTOR SHALL INSTALL THE RADAR DETECTION PRIOR TO MILLING/DISABLING EXISTING LOOPS.
- 9. THE INSTALLATION SHALL INCLUDE ALL CONTROLLER PROGRAMMING FOR COMPLETE INSTALLATION, WHICH INCLUDES MODIFICATIONS FOR REMOVAL OF EXISTING
- 10. FOR THE NORTHBOUND AND SOUTHBOUND APPROACHES,
 THE STOP BAR RADAR DETECTORS SHALL BE INSTALLED ON
 THE MAST ARM POLE NEAR THE LUMINAIRE BRACKET ARM TO
 MAXIMIZE VISIBILITY OF THE STOP BARS ON THE NORTHBOUND
 AND SOUTHBOUND APPROACHES.

PAYMENT FOR ITEM 809 STOP-LINE RADAR DETECTION, AS PER PLAN SHALL BE MADE AT THE CONTRACT UNIT PRICE FOR EACH UNIT, COMPLETE AND IN PLACE INCLUDING ALL REQUIRED CABINET HARDWARE, MOUNTING BRACKETS, CABLES, CONDUIT AND CONNECTIONS TESTED AND ACCEPTED.

809 ATC CONTROLLER. AS PER PLAN

THE CONTROLLER UNIT SHALL BE FURNISHED AND INSTALLED PER SS 809 AND BE LISTED ON THE TRAFFIC AUTHORIZED PRODUCTS (TAP) LIST.

THE CONTROLLER SHALL BE AN ECONOLITE COBALT, AND COMPATIBLE WITH THE CABINET TYPE BEING INSTALLED.



CALCULATE	PAW	CHECKED	ΔMΤ

SUBSUMMARY

SIGNAL

TRAFFIC

ITEM	ITEM EXTENSION	TOTAL QUANTITY	TINO	ITEM DESCRIPTION	SEE SHEET (NO.)
611	00406	28	FT	4" CONDUIT, TYPE F	
31 ,					
625	18100	2	EACH	BRACKET ARM, 12'	
625	23306	368		NO. 10 AWG, 600 VOLT DISTRIBUTION CABLE	
625	23000	1396		NO. 4 AWG, 600 VOLT DISTRIBUTION CABLE	
625	25400	159		CONDUIT, 2", 725.04	
625	25500	10		CONDUIT, 3", 725.04	
625 625	25902 25902	265		CONDUIT, JACKED OR DRILLED, 725.04, 2"	
625	25902	304		CONDUIT, JACKED OR DRILLED, 725.04, 3" CONDUIT, JACKED OR DRILLED, 725.04, 4"	
625	26252	2		LUMINAIRE, CONVENTIONAL, SOLID STATE (LED), 200 WATT	
625	29000	197		TRENCH	
625	30700	1		PULL BOX, 725.08, 18"	
625	30706	5	EACH	PULL BOX, 725.08, 24"	
625	32000	11	EACH	GROUND ROD	
625	36011	100	FT	UNDERGROUND WARNING/MARKING TAPE, AS PER PLAN	42
625	76000	1	EACH	ARC FLASH CALCULATIONS AND LABEL (SR687/DRESSLER)	42
070	00100	CO 75		CION FLAT CUEFT	
630 630	80100 80500	69.75 4		SIGN, FLAT SHEET SIGN, DOUBLE FACED, STREET NAME	
630	79100	12		SIGN, DOUBLE FACED, STREET NAME SIGN HANGER ASSEMBLY, MAST ARM	
0.50	10100	12	LAUII	OZDA HANDEN ADDEMBET, MADT ANM	
632	05006	6	EACH	VEHICULAR SIGNAL HEAD, (LED), 3-SECTION, 12" LENS, 1-WAY, POLYCARBONATE, BLACK WITH BACKPLATES	
632	05086	8	EACH	VEHICULAR SIGNAL HEAD, (LED), 5-SECTION, 12" LENS, 1-WAY, POLYCARBONATE, BLACK WITH BACKPLATES	
<i>632</i>	20731	12		PEDESTRIAN SIGNAL HEAD (LED), TYPE D2, COUNTDOWN, AS PER PLAN	43
632	25000	15	EACH	COVERING OF VEHICULAR SIGNAL HEAD	
632	25010	12		COVERING OF PEDESTRIAN SIGNAL HEAD	
632	26000	12		PEDESTRIAN PUSHBUTTON	
632 632	40200 40500	1983 2706		SIGNAL CABLE, 2 CONDUCTOR, NO. 14 AWG SIGNAL CABLE, 5 CONDUCTOR, NO. 14 AWG	
632	40700	2382		SIGNAL CABLE, 7 CONDUCTOR, NO. 14 AWG SIGNAL CABLE, 7 CONDUCTOR, NO. 14 AWG	
632	64011	4		SIGNAL SUPPORT FOUNDATION, AS PER PLAN	42
632	64020	6		PEDESTAL FOUNDATION	72
632	69300	100	FT	POWER CABLE, 3 CONDUCTOR, NO. 4 AWG	
632	69900	215		SERVICE CABLE, 3 CONDUCTOR, NO. 4 AWG	
632	70001	1	EACH	POWER SERVICE, AS PER PLAN	42
632	70400	1		CONDUIT RISER, 2" DIAMETER	
632	72110	1		SIGNAL SUPPORT, TYPE TC-81.22, DESIGN 4	
632	72150	1		SIGNAL SUPPORT, TYPE TC-81.22, DESIGN 14	
632	79130	2		COMBINATION SIGNAL SUPPORT, TYPE TC-81.22, DESIGN 12	
632 632	89300 89800	1	EACH	WOOD POLE PEDESTAL, 3', TRANSFORMER BASE	
632 632	89800	2	EACH EACH	PEDESTAL, 10', TRANSFORMER BASE	
632	90101	1		REMOVAL OF TRAFFIC SIGNAL INSTALLATION, AS PER PLAN	42
002	30101	,	LAUIT	THE STATE OF THE TOTAL PROTECTIONS NO LETTERS	16
633	65511	1	EACH	CABINET, TYPE TS-2, AS PER PLAN	43
633	67101	1	EACH	CABINET FOUNDATION, AS PER PLAN	44
633	67200	1		CONTROLLER WORK PAD	
633	68511	1		COMMUNICATIONS, AS PER PLAN	43
633	75001	1	EACH	UNINTERRUPTIBLE POWER SUPPLY (UPS), 1000 WATT, AS PER PLAN	43
000	60001	1	EAC!!	ADVANCE DADAD DETECTION, AS DED DIAM	11
809 809	69001 69101	4		ADVANCE RADAR DETECTION, AS PER PLAN STOP LINE RADAR DETECTION, AS PER PLAN	44
809 809	69123	1 1		ATC CONTROLLER, AS PER PLAN	44
809	69201	1		EMERGENCY VEHICLE PREEMPTION, AS PER PLAN	44A
809	69211	4		PREEMPT RECEIVING UNIT, AS PER PLAN	44A
809	69221	302		PREEMPT DETECTOR CABLE, AS PER PLAN	44A
809	69231	4		PREEMPT PHASE SELECTOR. AS PER PLAN	444

44A 44A

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EACH PREEMPT PHASE SELECTOR, AS PER PLAN

EACH PREEMPT CONFIRMATION LIGHT, AS PER PLAN

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69241

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