SPAN	WIRE	POLES
POST	WOOD	STEEL
NUMBER	CLASS IV	(A10 BAS REQUIRED
TOTAL		

		SPAN	WIRE CABLE SPA	NS
SPAN NUMBER	FROM POST	TO POST	SINGLE MESSENGER ASSEMBLY (LIN. FT.)	MESSENGER ASSEMBL' WITH TETHER (LIN. FT.)
		TOTAL		

POST NUMBER PULL BOX NUMBER	APPROACH				.1.				Χ								1 (DST							
POST NUM PULL BOX N			I ,		\ * *	PREFOR	MED (CONC.		TOP MOUNT POST		TYPE	C 8	ፄ CL					TYPE	B & B	L				ĺ
POS-	AFFRIALD	STATION OFFSET	A	В	ETE DS.)	- 2 ~	5 ARD	TYPE A TYPE B	DRAIN TYPE*	POST		SIG	NAL	SIGN	4.50	M I ENOTH		LEFT AF	RM E		RIGHT	ARM K	JDED LE	OPTICOM SPACING	LUMINAIRE* BRACKET ARM
	711 1 113/13/1		8 1013 M M O D	1 3 8 1 0 1 3	CONCRECUL YDS	CLASS CLASS	CLASS 5 CLASS 5 STANDARD	DOUBLE, T	II	1: 1:	ARM LENGTH	SPAC	NAL CING	SIGN SPACING	ARI	M LENGTH	SIG SPAG	SNAL CING	SIGN SPACIN	1G	SIGNAL SPACING	SIGN SPACI	S ² INCLUDED ANGLE	OPT SPA	ARM
				8	0 0				AB	2 8 5	30 40 48 A	ВС	D D'	B C D D'	EK	E K E K	F G	H H' F	GH	H'L	_ M N N′	L M N	_		(FEET)
										1															4 6 8 10 12 15
										\perp															
			+++++							+															
										+ +										1					
			+++++		 																				
			 		+																				
																				1					,
			\bot																						
			+++++																						
			+++++																						
																				1					
																				1					,
			+++++																						
			+++++																						
			SII	BTOTAL											 										
				TOTAL					<u> </u>	X			$\stackrel{\star\star\star}{\times\!\!\!\times\!\!\!\times}$		\										

		SIGNS	S	
QUANTITY	MUTCD SIGN NUMBER	SIZE (INCHES)	AREA (SQ. FT.)	TOTAL AREA EACH SIGN (SQ. FT.)
SU	BTOTAL AREA	ITEM NO. 903	3-50.66	

																			S	IG	ΝΑΙ	L	ΗE	ADS	S																						
	~ ~	RE			I١	ND I	CATI LED	ONS	*				VISO	IRS *					ВАС	KPL	ATE	*	BRAC	KET	*				(ONE	_F	ACE									TWO)-F A	CE				
ABE	POST NUMBER FACE NUMBER	NA I SOD	1	12"	LENS	5	LED	,	12	2" LI	ENS		12" LENS	PED.] L	_OUV	ERS	*		LEN:	SEC		т	YPE						SE	CTI	ON									SEC	CTIO	NS				
N		I Wo		L	ED			OPT	ICA	AL L	IMI	TING	LENS	LED.	<u> </u>												1-			3-		4-			<u> </u>		11-		33		_	4-	35		44-	_	45-
		15	RY	G S	L R	HYL)	YR+	R \	Y G	S L	. R+	YL YR	<u> </u>		Α	ВС	DE	E F	1	2 3	4	5	I	II I	111	T S	s c	В	T S	С	ВТ	S	В	T S	С	В 1	гѕ	ВТ	S	СВ	Ш	S B	S	В	S	В	S E
						+									+						+				+													+	++		++				++	+	
																																						丰	#							#	
						+			+						+						+				+				+									+	+		++				++	+	
																																						丰	#							#	
						+			+						+						+				+				+									+	+		++				++	+	
																																						丰	#								
					+ +	+		+	+						+						+				+				+			++				-	+	+	++		\vdash				++	+	++
																																						丰									
																					+																	+	++		$\frac{1}{1}$				++	_	
																																						士	廿							士	
									+						+						+				+				+								+	+	++		+				++	+	++
																																						士	$\pm \pm$						+	\pm	
																					-				4													\perp	\perp						++		
															+						+																+	+	++		+			++	++	+	
																																						\mp	11							1	
						+									+						+				+				+									+	++		++				++	+	
																																						丰	11							工	
					+	+		+	_	+ +											+	\vdash			+				+							-	++	+	++		\vdash			++	++	_	+
						+									+						+	\Box			+				+			++						+	++		\forall				++	+	
																																						\blacksquare	\Box								
					++	+		+	+	+		_			+						+	\vdash			+				+			++				-	+	+	++		\vdash	\perp		++	++	+	
						+									+						+	\Box			+							++						+	++		\forall				++	+	
																																						工	\Box							#	\perp
	SUBTOTAL													SUBT								1 I T	ED		4													\perp	$\perp \perp \downarrow$		Ш				$\perp \perp$		
	TOTAL													SUBT																								\perp	$\perp \perp$								
														SUBT									& (CON,	<u> </u>													\perp	Ш								
														TOTA	\L	OPT	ICA	\LL	ΥL	IM	ITE	D																									
														TOTA	\L_	CON	IVEN	ITI	ONA	۱L																											
														TOTA	۱L	CON	۱B I N	TAV	10 I	1 01	_ 8	k C	ОΝ\	/																							

REMARKS

ALL LENGTHS AND SPACINGS ARE IN FEET UNLESS OTHERWISE INDICATED.

- * ITEMS FOR WHICH SEPARATE PAYMENT WILL NOT BE MADE.
- ** SEE STANDARD PLANS 902.10 AND 902.30 FOR CONCRETE REQUIREMENTS ON BASES.
- *** USE D3-16 FOR ONE LINE. USE D3-18 FOR TWO LINE.

*** USE D3-16 FOR ONE LINE. USE D3-18 FOR TWO LINE.

SIGNAL STRUCTURES WHICH WILL EXCEED THE DIMENSION LIMITS SHOWN ON STANDARD PLAN SHEETS IN SECTION 902 AND ANY OTHER INSTALLATION WHERE THE DETAILS OF CONSTRUCTION ARE NOT FURNISHED IN THE CONTRACT PLANS, SHALL BE DESIGNED BY A PROFESSIONAL ENGINEER IN ACCORDANCE WITH THE 2001 AASHTO STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS, 4TH EDITION, AND LATEST INTERIMS. THE STRUCTURE SHALL BE DESIGNED AS IMPORTANCE CATEGORY I FOR FATIGUE WITH A 50-YEAR DESIGN LIFE. THE CONTRACTOR SHALL SUBMIT A SET OF SHOP DETAIL DRAWINGS INCLUDING WELD PROCEDURE SPECIFICATIONS AND DESIGN COMPUTATIONS FOR MODOT RECORDS AND REFERENCE. THE SUBMITTED DRAWINGS AND CALCULATIONS SHALL BE SIGNED AND SEALED IN ACCORDANCE WITH THE LAWS RELATING TO ARCHITECTS AND PROFESSIONAL ENGINEERS (CHAPTER 327, RSMO.), AND SHALL INCLUDE A TITLE BLOCK OR SUMMARY SHEET WHICH LISTS AND CERTIFIES THAT THE PRODUCT MEETS ALL OF THE SPECIFIED DESIGN CRITERIA.

LEGEND

- T TOP MOUNT
- S SIDE MOUNT C SPANWIRE MOUNT

B - MAST ARM MOUNT

INTERSECTION

2015 Details



City of

BELTON Missouri

SUMMARY OF QUANTITIES-A

NO SCALE SCALE: DETAIL NO: TRF-001 03-16-15

Note 1							CONDUIT													С	ABLE				
			CENTER	LOOP DET.		TRENCH			MEDIAN	I	ON :					POWER	GROUND	POLE & BRACKET		CONTROL	CLOSED LOOP INTERCONNECT	OPTICOM	VIDEO DETECTION	FIBER	
	FROM	TO	CENTER DISTANCE	1 "	2"	3" 4"	2" 3" 4"	2"	4"		2″	A"	FROM	TO CENTER TO CENTER DISTANCE	2c #12	1c #8	1c #6 (SOLID)	1C #10	2c #14	70 #12 70 #12	3 PAIR #16	3c #20	BELDIN COMM./POWER	SINGLE MULTI MODE MODE	REMARKS
													<u> </u>												
TOTALS																									
TOTALS IN																									
TOTALS																									
		TOTALS																							

INTERSECTION

2015 Details



City of BELTON

Missouri

SUMMARY OF QUANTITIES - B

SCALE: NO SCALE

DETAIL NO: TRF-002

DATE: 03-16-15

					POW	ER SI	JPPLY	,				
LOC	CATION		POWER ASSE		CIRCUIT	BREAKE	R TRIP R	ATING*	LIGHTING	CONTROL *	SERVIC	E POLE
455564611	CTATION.	055057	DRAWING		CONTR		POWER DISCO	SUPPLY INNECT	(ON POWEF		CONTRACT	UTILITY
APPROACH	STATION	UFFSEI	DRAWING 902.15	DRAWING	AUXILIARY BREAKER	SIGNAL LAMPS	MAIN B	1	120 VOLT CONTROL	MAIN BREAKER	FURNISH	COMPANY
							SIGNALS	LIGHTING	CABINET	DIVERNER		

CO	NTROLLE	ER AS	SEMB	LY A	ND AUX	XILIAR'	Y EQU	IPMENT	Γ							
LOCATI	ON		NE		COORE	NOITANI	INTERFA	√CE *	TONE	UNIT *		NEMA C	ARINET	TYDE ¥		
APPROACH	STATION	OFFSET	CONTR MASTER	OLLER	FIBER SWITCH	WIRELESS SWITCH	TIME BASE	CLOSED LOUP	TRANS- MITTER (MASTER)	RECEIVER (LOCAL)	TIME * CLOCK	E E		1	PRE-EMPT : PHASE OPTICAL SELECTOR DETECTOR	TALLY TA TABLE

NOTES:

- 1. THE TRAFFIC SIGNAL CONTROLLER SHALL BE A NEMA SERIES ECONOLITE ASC/3-2100 TS2/NTCIP ACTUATED CONTROLLER LOADED WITH NTCIP FIRMWARE (VERSION 4.01D OR GREATER) AND SHALL BE COMPATIBLE WITH MARC'S "OPERATION GREENLIGHT" CONTROLLERS.
- 2. THE CABINET SHALL BE NEMA TS2 TYPE 2 WITH OPTICOM INTERFACE PANEL.
- 3. VIDEO DETECTION SHALL BE ITERIS EDGE 2. VIDEO DETECTION SHALL BE COMPLETE SYSTEMS INCLUDING BUT NOT LIMITED TO COLOR CAMERAS, PROCESSOR, MONITOR, MOUNTING HARDWARE AND COMMUNICATION CABLE PER MANUFACTURER'S SPECIFICATIONS. PELCO EXTENSION ARMS SHALL BE USED TO MOUNT THE CAMERAS TO THE SIGNAL MAST ARMS UNLESS OTHERWISE NOTED. PROVIDE SPARE CAMERA AND PROCESSOR.
- 4. OPTICOM EQUIPMENT SHALL INCLUDE MOUNTING HARDWARE FOR DETECTION UNIT (MODEL 721), COMMUNICATION CABLE (MODEL 138), PHASE SELECTOR SERIES 750 AND AUXILIARY SIDE MOUNT CABINET. OPTICOM EQUIPMENT SHALL BE INSTALLED IN THE AUXILIARY SIDE MOUNT CABINET. FINAL LOCATION OF THE AUXILIARY SIDE MOUNT CABINET TO BE CONFIRMED BY THE ENGINEER PRIOR TO INSTALLATION. THE CITY OF BELTON WILL MAINTAIN THE OPTICOM SYSTEM.
- 5. TYPE 2 POWER SUPPLY SHALL BE METER SERVICE PEDESTAL.

	DETE	CTOR SCHE	DULE				
			TYPE	-			
DETECTOR NUMBER	APPROACH	PUSH	INDL	ICTION LOOP	(2)	VIDEO	
		BUTTON	STANDARD	DELAY/ EXTEND *	CALL UNIT *	VIDEO	OPTICOM
	TOTAL						

* ITEMS FOR WHICH SEPARATE PAYMENT WILL NOT BE MADE.

** OPTICOM EQUIPMENT WILL BE OWNED AND MAINTAINED BY THE CITY OF BELTON.

ALL PREEMPTION EQUIPMENT AND CABINET SHALL MEET THE CITY OF BELTON

SPECIFICATION AND REQUIREMENTS.

(1) MoDOT "D" PLUG SHALL BE WIRED INTO ALL NEMA CONTROLLERS WITH 7C HARDWIRE OR TONE INTERCONNECT.

TOTAL NUMBER OF DETECTOR CARDS(2-CHANNEL) = (0)

		NEM	A LC	JAD S	SWIT	CH A	ASSI	GNME	ENTS		
1	2	3	4	5	6	7	8	9	10	11	12

2015 Details



City of BELTON

Missouri

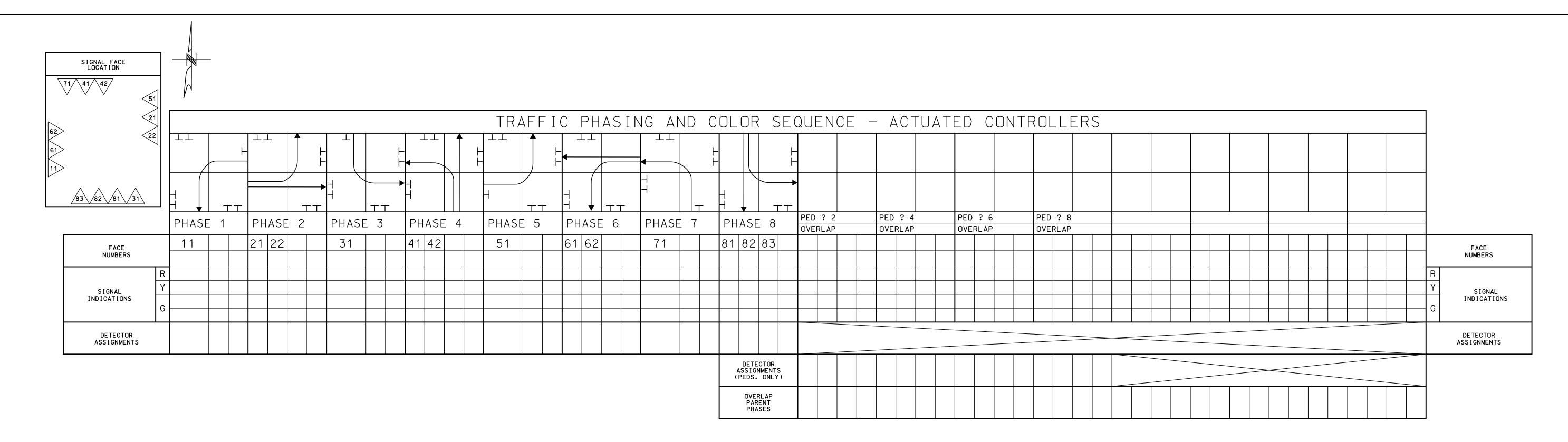
QUANTITIES AND WIRING DETAILS

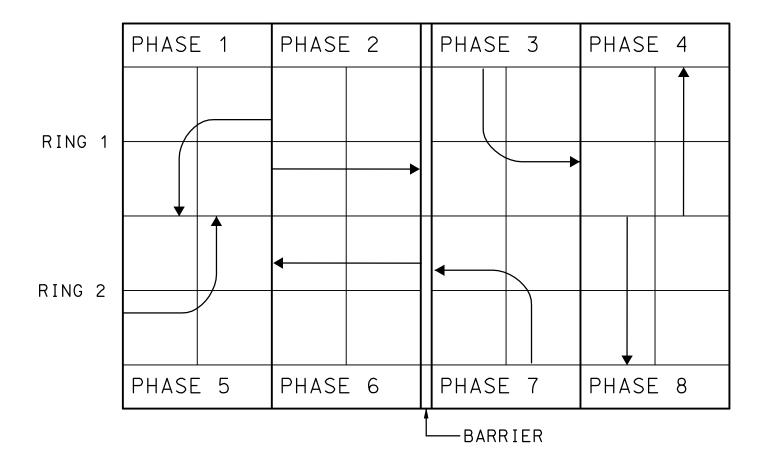
SCALE: NO SCALE

DETAIL NO: TRF-003

DATE: 03-16-15

INTERSECTION





RING STRUCTURE

——>—NON-ACTUATED VEHICULAR MOVEMENT — → ACTUATED PEDESTRIAN MOVEMENT ——— VEHICLE STOPPED FDW-FLASHING DON'T WALK R/W-right of way interval IF CALLED, ALL NON-CONFLICTING PHASES SHALL COMBINE AND TIME CONCURRENTLY. TIME TO BE DETERMINED BY THE ENGINEER AT SIGNAL TURN ON AND SET IN THE CONTROLLER BY THE CONTRACTOR. $\bigcap W$ — DON'T WALK YR+-YELLOW RIGHT ARROW RT_{ullet} - green right arrow $\mathsf{W} - \mathsf{walk}$ Y -YLLOW LEFT ARROW — GREEN LEFT ARROW S — GREEN STRAIGHT AHEAD ARROW G — CIRCULAR GREEN Y - CIRCULAR YELLOW R - CIRCULAR RED $\triangle \bigcirc$ — ALL OTHERS FR -FLASHING RED FY - FLASHING YELLOW

TRAFFIC SIGNAL CONTROL OPERATION

LEGEND

FLASHING OPERATION

- FR
- FY

CONTROLLER TYPE NEMA

BELTON LA SERVICES
RAMS DORTATION
PUBLIC WORKS

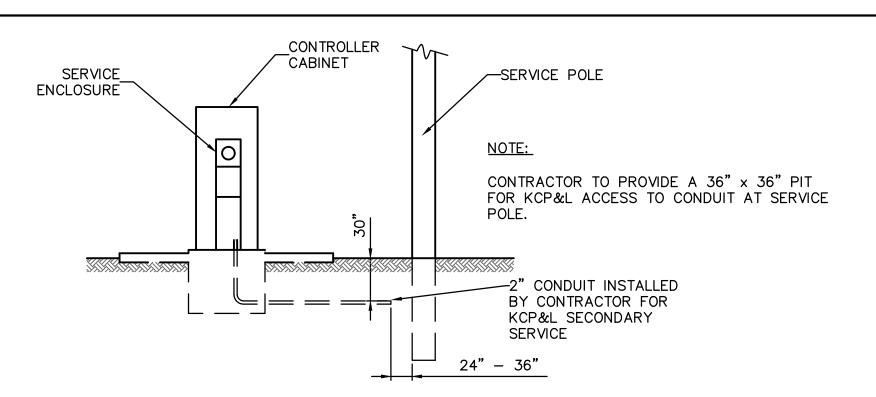
City of

BELTON Missouri

2015 Details

WIRING DETAILS AND TIMING

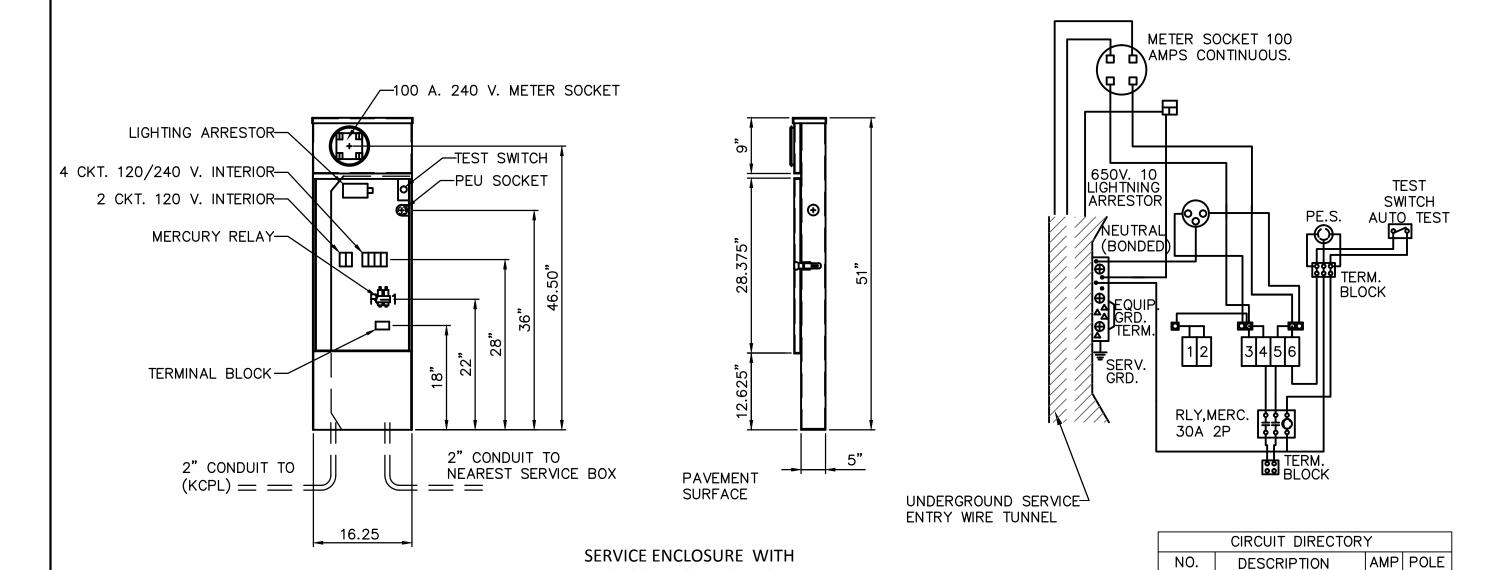
SCALE: NO SCALE
DETAIL NO: TRF-004
DATE: 03-16-15



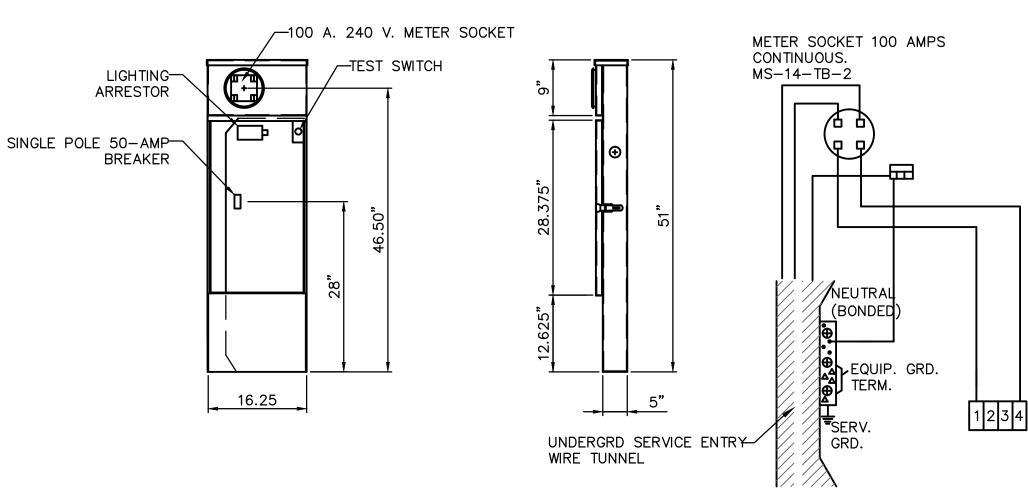
SECONDARY POWER SERVICE NOTES:

- 1. THE CONTRACTOR SHALL INSTALL 2" PVC CONDUIT WITH PULL STRING
- 2. THE CONTRACTOR SHALL INSTALL A MINIMUM 1" DIAMETER WATERTIGHT CONDUIT ENTRANCE BETWEEN THE BREAKER BOX PORTION OF THE SECONDARY SERVICE ENCLOSURE AND THE TRAFFIC SIGNAL CONTROLLER
- 3. THE CONTRACTOR SHALL INSTALL 1c#6 USE SECONDARY SERVICE WIRE TO CONNECT THE BREAKER(S) AND TRAFFIC SIGNAL CABINET.

SECONDARY POWER SERVICE DETAIL



PHOTOCELL STRAIGHT CURB



SERVICE ENCLOSURE

WITHOUT PHOTOCELL

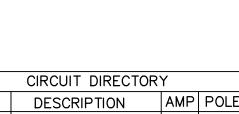
SERVICE ENCLOSURE NOTES:

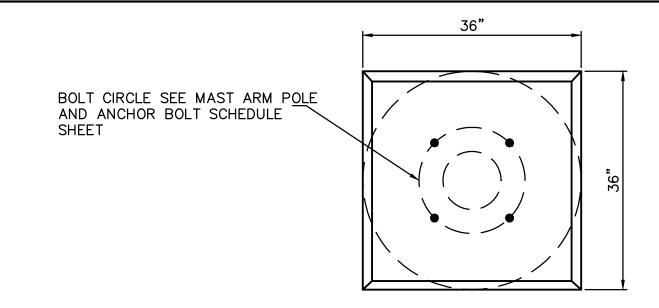
- 1. THE SERVICE ENCLOSURE SHALL BE AN MET2-VLM-LTS
- OR MET2-VLM-TS OR APPROVED EQUAL.

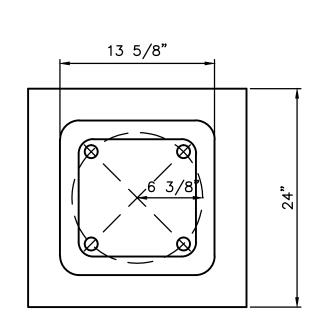
 2. PROVIDE A WATERTIGHT SEAL BETWEEN THE SERVICE
- ENCLOSURE AND THE CONCRETE PAD.

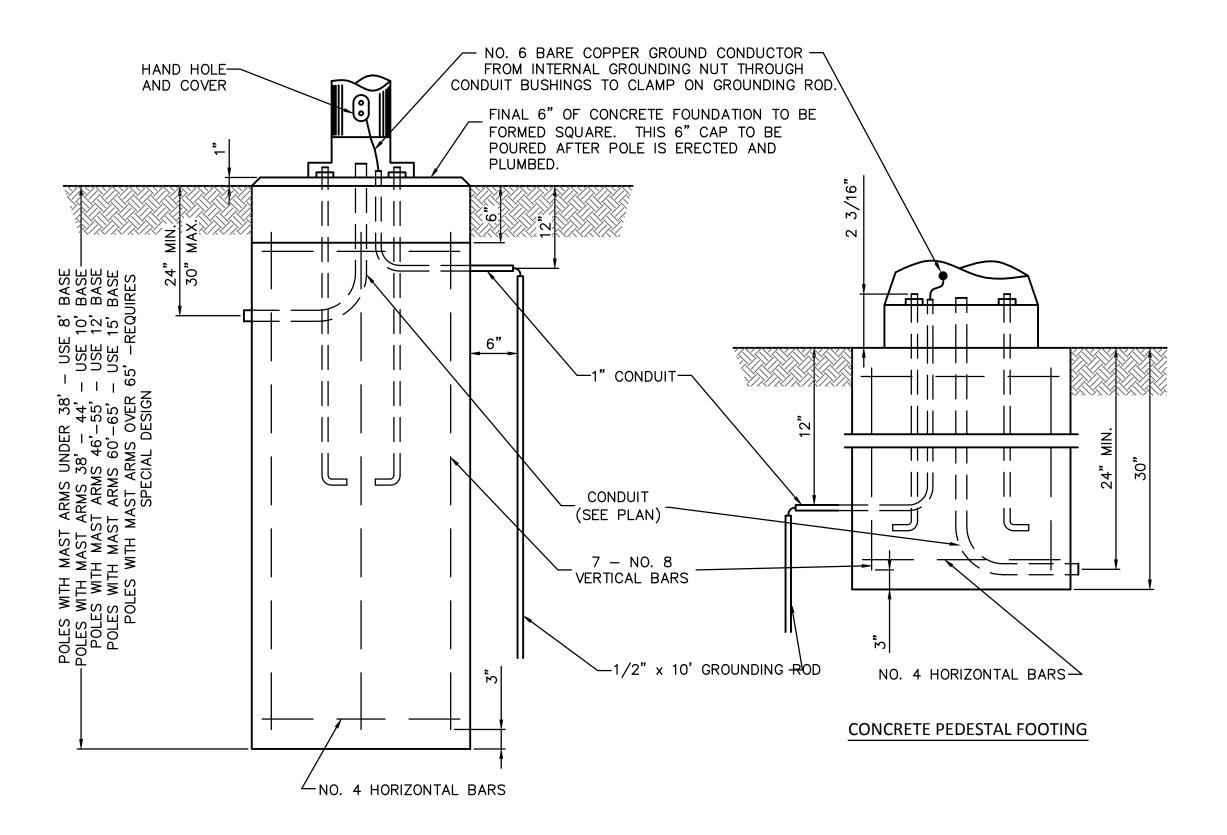
 WHEN STREET LIGHTS MOUNTED TO SIGNAL POLES OR STREET LIGHTS ON LIGHT POLES ARE POWERED THROUGH THE SIGNAL CONTROLLER, THE SERVICE ENCLOSURE SHALL BE A MYERS MET2-VLM-LTS.

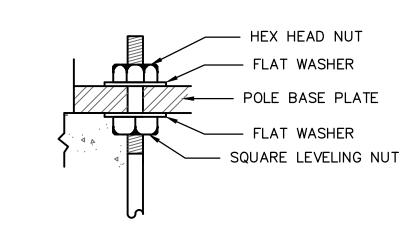
	CIRCUIT DIRECTOR	RY.	
NO.	DESCRIPTION	AMP	POLE
	METERED		
1	SIGNALS	50	1
2	SPACE		
3	SPACE		
4	SPACE		











ANCHOR BOLT DETAIL FOR
COMBINATION LIGHTING / SIGNAL POLE



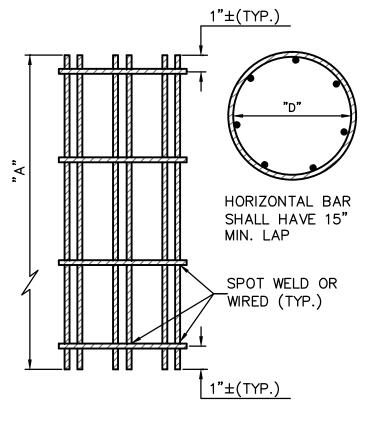
30 2

| 15 | 1

LIGHTING

CONTROL-PE

- 1. ALL CONDUITS AND ANCHOR BOLTS FOR CONTROL PADS AND TRAFFIC SIGNAL POLE BASES SHALL BE RIGIDLY INSTALLED BEFORE CONCRETE IS PLACED. ANCHOR BOLTS SHALL BE SPACED BY MEANS OF A TEMPLATE. THE CENTER OF WHICH SHALL COINCIDE WITH THE CENTER OF THE BASE.
- ATTACH BUSHING TO ALL CONDUIT ENDS.
- 3. WHERE CONCRETE FOOTINGS OR PADS ARE INSTALLED ON A SLOPE, THE TOP ELEVATION SHALL BE ESTABLISHED ONE INCH ABOVE THE HIGHEST ADJACENT POINT AND MINIMUM DEPTHS SHALL BE MEASURED FROM THE LOWEST ADJACENT POINT. CONTRACTOR SHALL PROVIDE APPROVED BACKFILL AND GRADE AROUND FOOTINGS OR PADS AS DIRECTED BY THE ENGINEER.
- 4. CONDUITS EXTENDED INTO CONCRETE FOOTINGS OR PADS SHALL TERMINATE 3 TO 4 INCHES ABOVE THE TOP OF THE FOOTING OR PAD.



REBAR CAGE DETAIL

2015 Details

Missouri

		REBAR SC	HEDULE	
BASE	BASE	REBAR	VERT. REBAR	HOR. REBAR
DIA.	LENGTH	CIRCLE	LENGTH	SPACING
		"D"	"A"	
24"	30"	20"	2' - 0"	12" MAX.
36"	8' - 0"	30"	7' - 8"	12" MAX.
36 "	10' - 0"	30"	9' - 8"	12" MAX.
36"	12' - 0"	30"	11' - 8"	9" MAX.

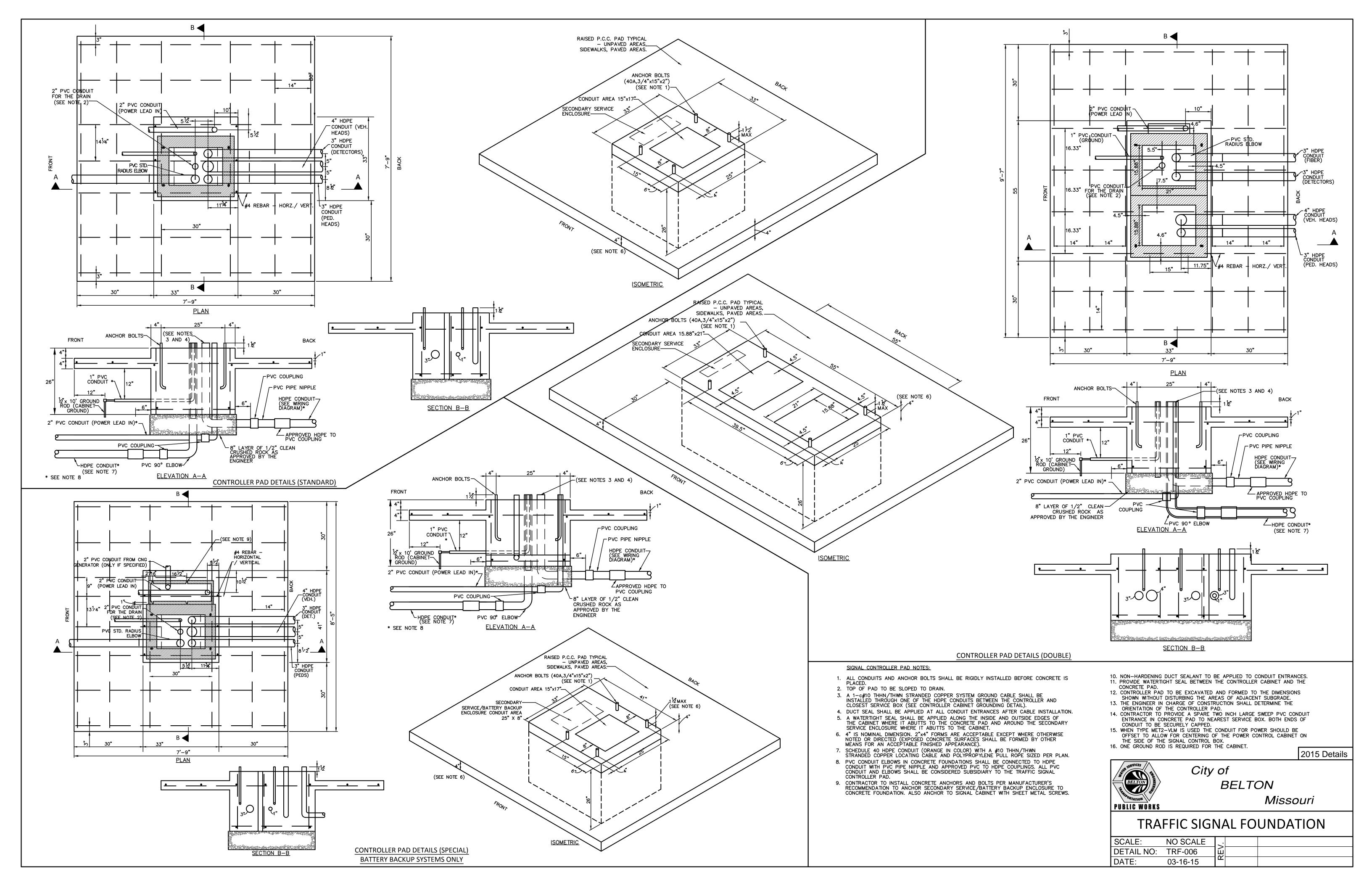
CONCRETE POLE FOOTING

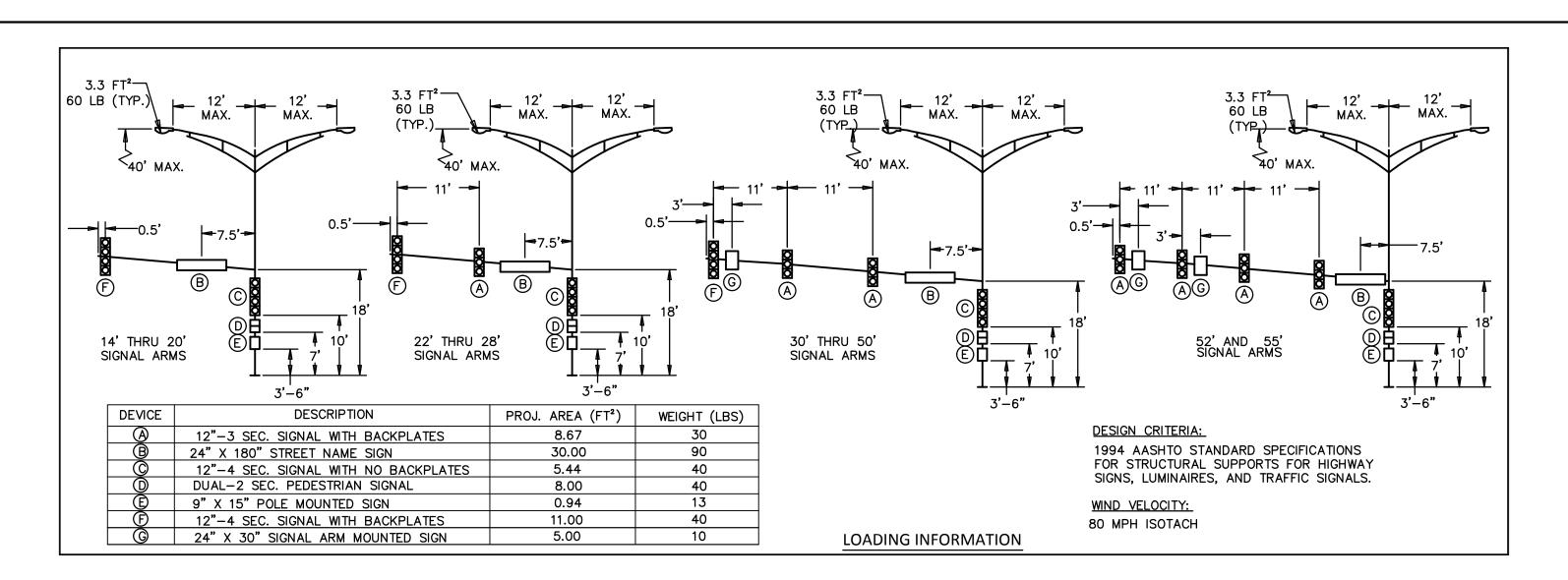


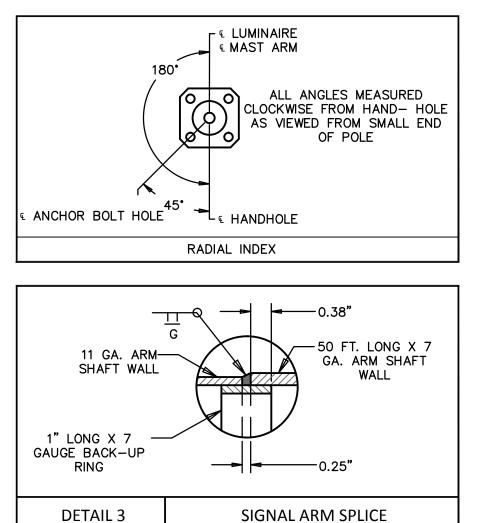
City of BELTON

CONCRETE FOOTING PAD POWER SERVICE

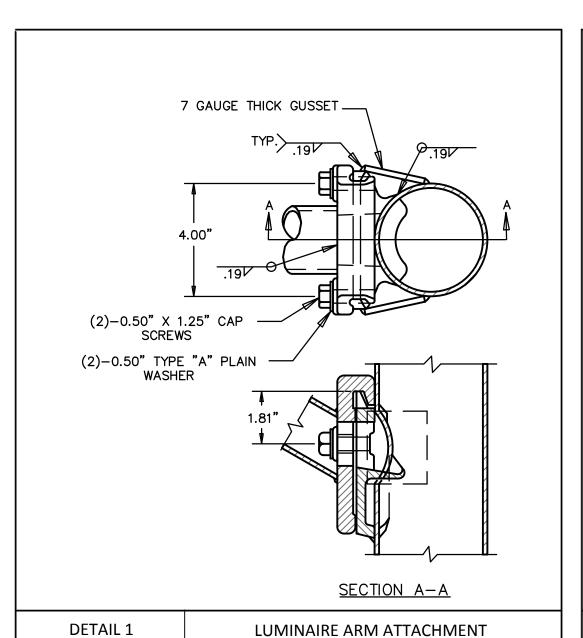
SCALE:	NO SCALE	<u> </u>	
DETAIL NO:	TRF-005] 	
DATE:	03-16-15	۳	

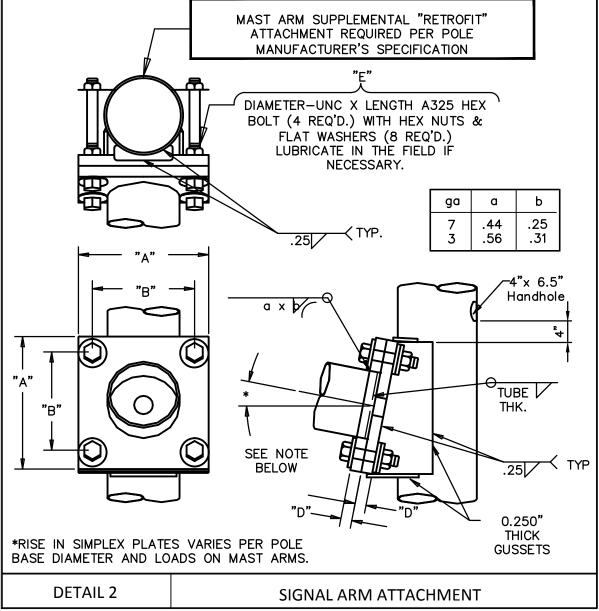






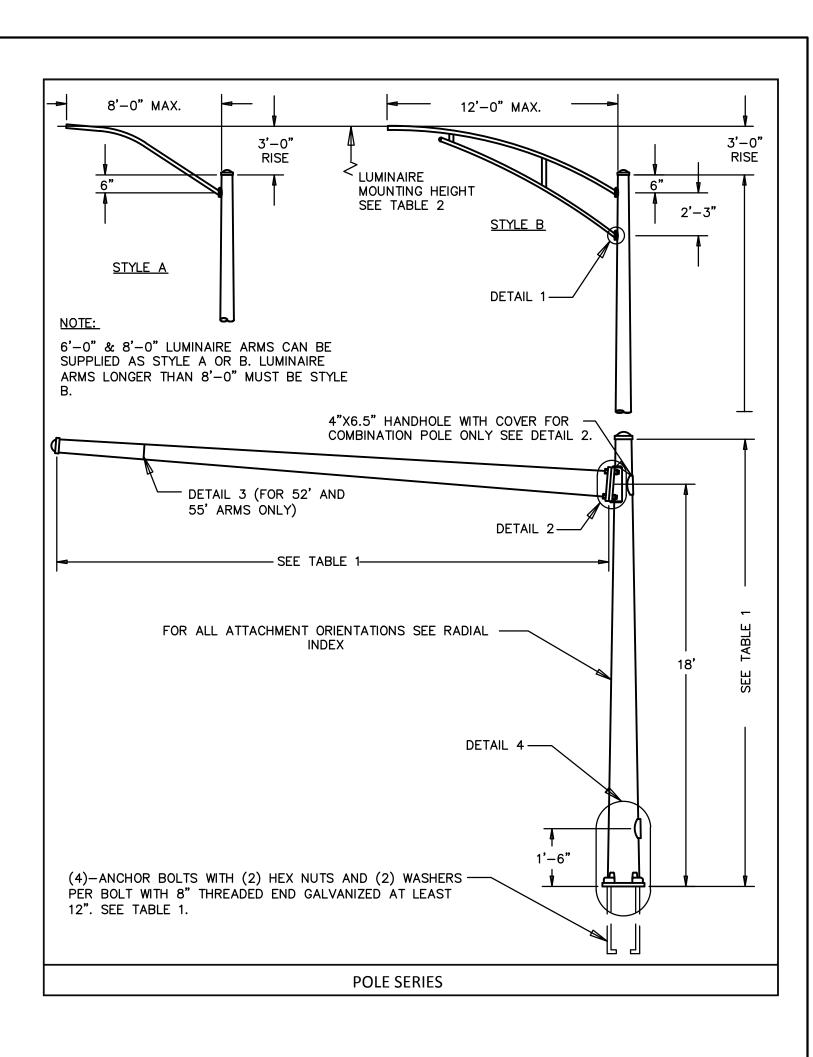
											T.	ABLE 1: POLE AN	ND SIGNAL AR	M DATA									
		DESIGNA	ATION KEY					POLE DATA	\		BASE PLATI	E DATA	ANCHO	R BOLT DAT	·A		SIGNAL	ARM DATA			A	RM ATTACHMENT DATA	
POLE SERIES	SIGNAL ARM SPAN	LUM TYPE	INAIRE ARM (IF ARM 1 STYLE SF	ANY) PAN	ARM STYLE	2 SPAN	BASE DIA.	LENGTH	WALL GAUGE THK.	SQUARE "C"	BOLT CIRCLE "F"	THICKNESS "G"	DIAMETER	LENGTH	ноок	FIXED END DIA.	FREE END DIA.	GAUGE	LENGTH	SQUARE "A"	THICKNESS "D"	BOLT SIZE "E"	BOLT PATTERN "B"
	(FT)		STILE (F	-T)	STILE	(FT)					'												
	14	NL,LR,MR,HR	A OR B 6-	-12	A OR B	6-12	11.00"		7	16.50"	15.00"	1.50"	1.50"	54"	6"	7.00"	5.04"	7	14'-0"	14.25"	1.50"	1.00"-8 UNC X 4.75"	11.50"
	16	NL,LR,MR,HR	A OR B 6-	-12	A OR B	6-12	11.00"	SEE TABLE	7	16.50"	15.00"	1.50"	1.50"	54"	6"	7.00"	4.76"	7	16'-0"	14.25"	1.50"	1.00"-8 UNC X 4.75"	11.50"
	18	NL,LR,MR,HR	A OR B 6-	-12	A OR B	6-12	11.00"	2	7	16.50"	15.00"	1.50"	1.50"	54"	6"	7.00"	4.48"	7	18'-0"	14.25"	1.50"	1.00"-8 UNC X 4.75"	11.50"
	20	NL,LR,MR,HR	A OR B 6-	-12	A OR B	6-12	11.00"		7	16.50"	15.00"	1.50"	1.50"	54"	6"	7.00"	4.20"	7	20'-0"	14.25"	1.50"	1.00"-8 UNC X 4.75"	11.50"
	22	NL,LR,MR,HR	A OR B 6-	-12	A OR B	6-12	12.00"		7	17.00"	1600"	1.50"	1.50"	54"	6"	8.00"	4.92"	7	22'-0"	15.25"	1.50"	1.00"- 8 UNC X 4.75"	12.50"
	24	NL,LR,MR,HR	A OR B 6-	-12	A OR B	6-12	12.00"	SEE TABLE	7	17.00"	16.00"	1.50"	1.50"	54"	6"	8.00"	4.64"	7	24'-0"	15.25"	1.50"	1.00"- 8 UNC X 4.75"	12.50"
	26	NL,LR,MR,HR	A OR B 6-	-12	A OR B	6-12	12.00"	2	7	17.00"	16.00"	1.50"	1.50"	54"	6"	8.00"	4.36"	7	26'-0"	15.25"	1.50"	1.00"- 8 UNC X 4.75"	12.50"
	28	NL,LR,MR,HR	A OR B 6-	-12	A OR B	6-12	12.00"		7	17.00"	16.00"	1.50"	1.50"	54"	6"	8.00"	4.08"	7	28'-0"	15.25"	1.50"	1.00"- 8 UNC X 4.75"	12.50"
	30	NL,LR,MR,HR	A OR B 6-	-12	A OR B	6-12	13.00"		5	18.00"	17.00"	1.50"	1.50"	54"	6"	9.00"	4.80"	7	30'-0"	16.25"	1.50"	1.00"- 8 UNC X 4.75"	13.50"
	32	NL,LR,MR,HR	A OR B 6-	-12	A OR B	6-12	13.00"	SEE TABLE	5	18.00"	17.00"	1.50"	1.50"	54"	6"	9.00"	4.52"	7	32'-0"	16.25"	1.50"	1.00"- 8 UNC X 4.75"	13.50"
	34	NL,LR,MR,HR	A OR B 6-	-12	A OR B	6-12	13.00"	2	5	18.00"	17.00"	1.50"	1.50"	54"	6"	9.00"	4.24"	7	34'-0"	16.25"	1.50"	1.00"- 8 UNC X 4.75"	13.50"
	36	NL,LR,MR,HR	A OR B 6-	-12	A OR B	6-12	13.00"		5	18.00"	17.00"	1.50"	1.50"	54"	6"	9.00"	3.96"	7	36'-0"	16.25"	1.50"	1.00"- 8 UNC X 4.75"	13.50"
	38	NL,LR,MR,HR	A OR B 6-	-12	A OR B	6-12	12.50"		3	18.00"	17.00"	1.75"	1.75"	84"	6"	10.00"	4.68"	7	38'-0"	16.75"	1.50"	1.00"- 8 UNC X 4.75"	14.00"
	40	NL,LR,MR,HR	A OR B 6-	-12	A OR B	6-12	12.50"	SEE TABLE	3	18.00"	17.00"	1.75"	1.75"	84"	6"	10.00"	4.40"	7	40'-0"	16.75"	1.50"	1.00"- 8 UNC X 4.75"	14.00"
	42	NL,LR,MR,HR	A OR B 6-	-12	A OR B	6-12	12.50"	2	3	18.00"	17.00"	1.75"	1.75"	84"	6"	10.00"	4.12"	7	42'-0"	16.75"	1.50"	1.00"- 8 UNC X 4.75"	14.00"
	44	NL,LR,MR,HR	A OR B 6-	-12	A OR B	6-12	12.50"		3	18.00"	17.00"	1.75"	1.75"	84"	6"	10.00"	3.84"	7	44'-0"	16.75"	1.50"	1.00"- 8 UNC X 4.75"	14.00"
	46	NL,LR,MR,HR	A OR B 6-	-12	A OR B	6-12	13.00"	SEE TABLE	3	18.00"	17.50"	1.75"	1.75"	84"	6"	11.00"	4.56"	7	46'-0"	17.75"	1.75"	1.00"- 8 UNC X 5.25"	15.00"
	48	NL,LR,MR,HR	A OR B 6-	-12	A OR B	6-12	13.00"	2	3	18.00"	17.50"	1.75"	1.75"	84"	6"	11.00"	4.28"	7	48'-0"	17.75"	1.75"	1.00"- 8 UNC X 5.25"	15.00"
	50	NL,LR,MR,HR	A OR B 6-	-12	A OR B	6-12	13.00"		3	18.00"	17.50"	1.75"	1.75"	84"	6"	11.00"	4.00"	7	50'-0"	17.75"	1.75"	1.00"- 8 UNC X 5.25"	15.00"
	52	NL,LR,MR,HR		-12	A OR B	6-12	14.00"	SEE TABLE	0.25"	19.00"	19.00"	1.75"	1.75"	84"	6"	12.00"	4.60"	7	52'-0"	18.25"	1.75"	1.00"- 8 UNC X 5.25"	15.50"
	55	NL.LR.MR.HR		-12	A OR B	6-12	14.00"	2	0.25"	19.00"	19.00"	1.75"	1.75"	84"	6"	12.00"	4.18"	7	55'-0"	18.25"	1.75"	1.00"- 8 UNC X 5.25"	15.50"

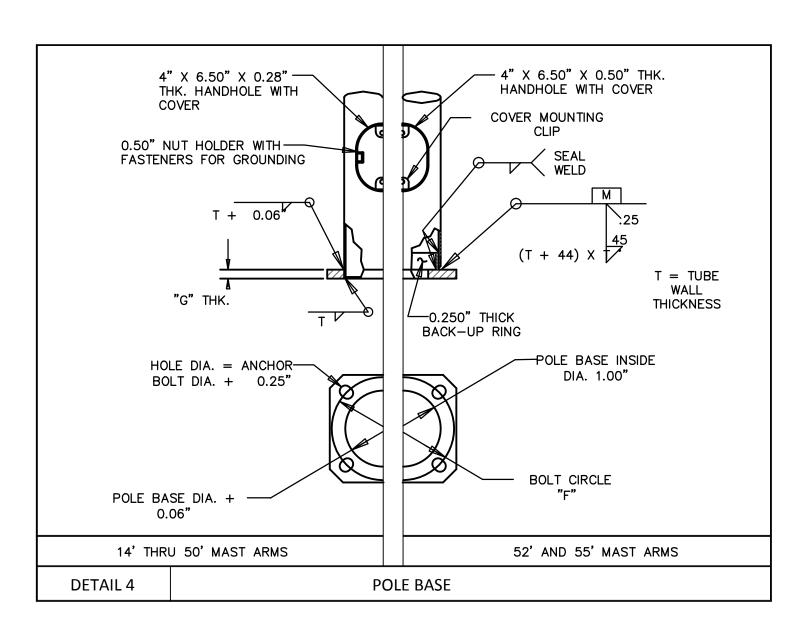




	TABL	.E 2									
		TYPE									
ELEVATIONS	NO LUMINAIRE (NL)	LOW RISE (LR)	MEDIUM RISE (MR)	HIGH RISE (HR)							
LUM. MOUNTING HEIGHT		30'-0"	35'-0"	40'-0"							
POLE LENGTH	19'-0"	27'-0"	32'-0"	37'-0"							

M	ATERIAL DATA	
COMPONENT	ASTM DESIGNATION	MINIMUM YIELI (KSI)
POLE SHAFT 3 GA. & 7 GA.	A595 GR.A	55
POLE SHAFT 0.250" WALL	A572 GR. 65	65
MAST ARM SHAFT	A595 GR.A	55
LUMINAIRE ARM	2" SCHED.40 PIPE	
BASE PLATE-A595 SHAFT	A36	36
BASE PLATE-A572 SHAFT	A572 GR. 42	42
SIMPLEX PLATES	A36	36
GALVANIZING	A123 TUBES A153 ACCESSORIES	NOT APPLICAB





2015 Details

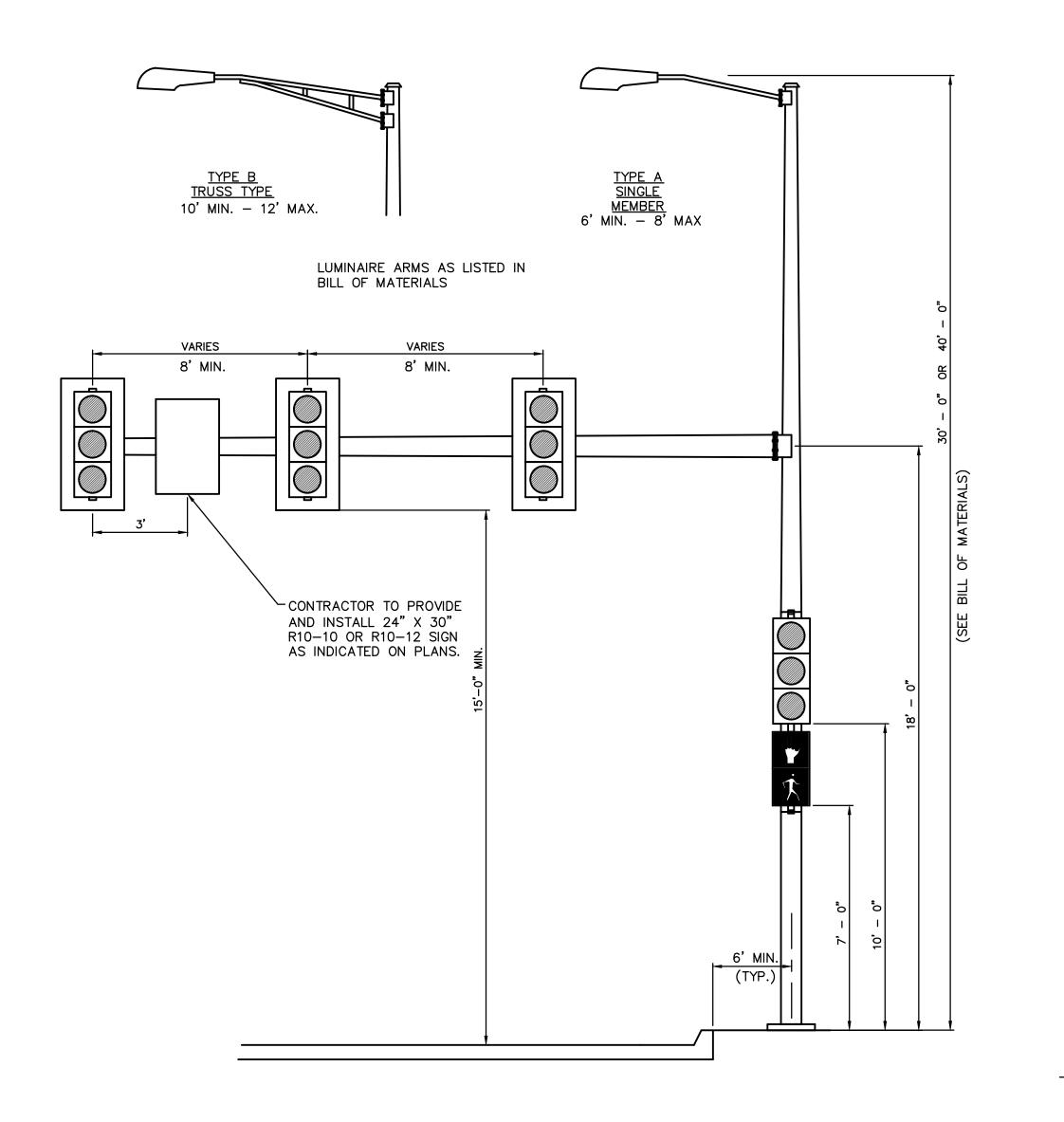


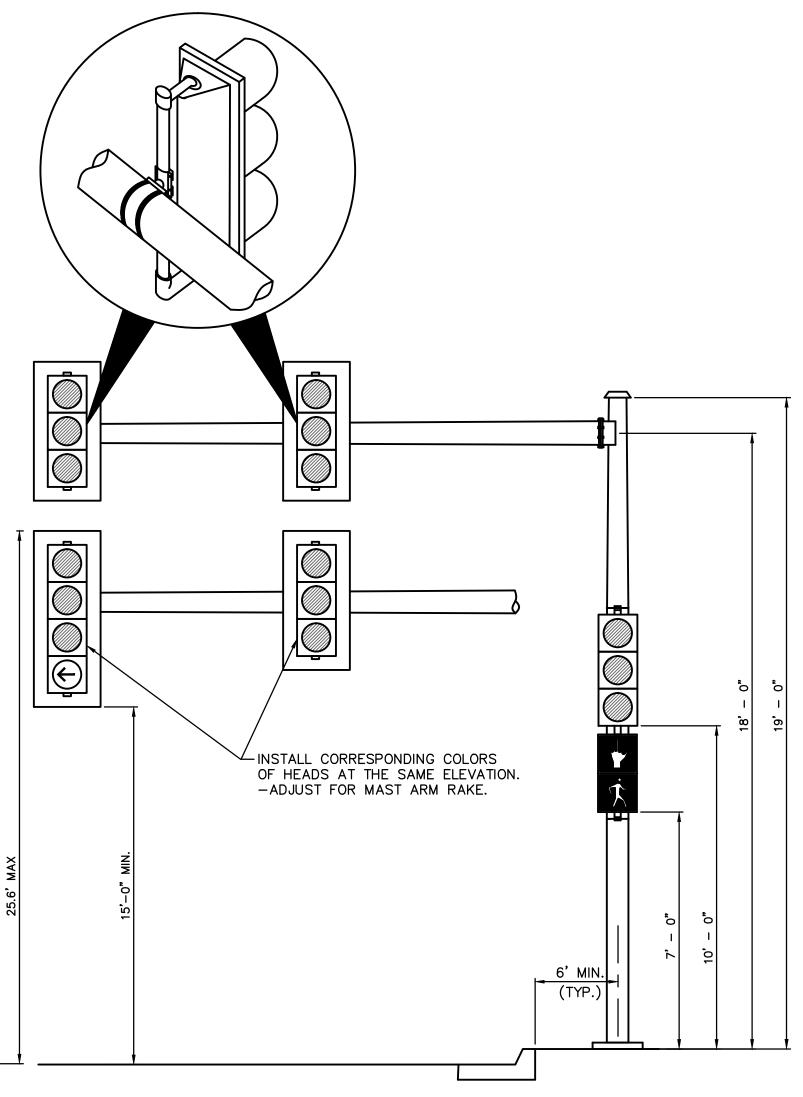
City of BELTON

Missouri

TRAFFIC SIGNAL STRUCTURES

SCALE:	NO SCALE	· .	
DETAIL NO:	TRF-007) E	
DATE:	03-16-15	۳	

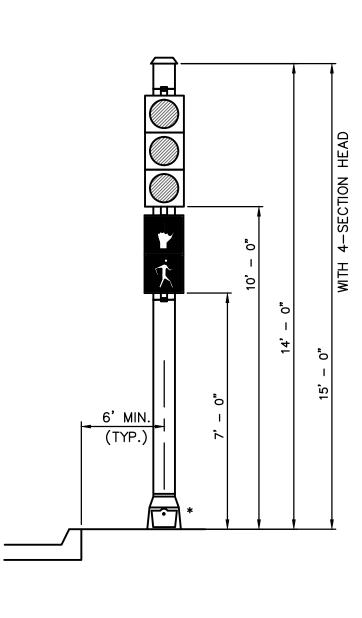




POLE BAND AND CLAMP (TYP.)

VERTICAL BRACKET

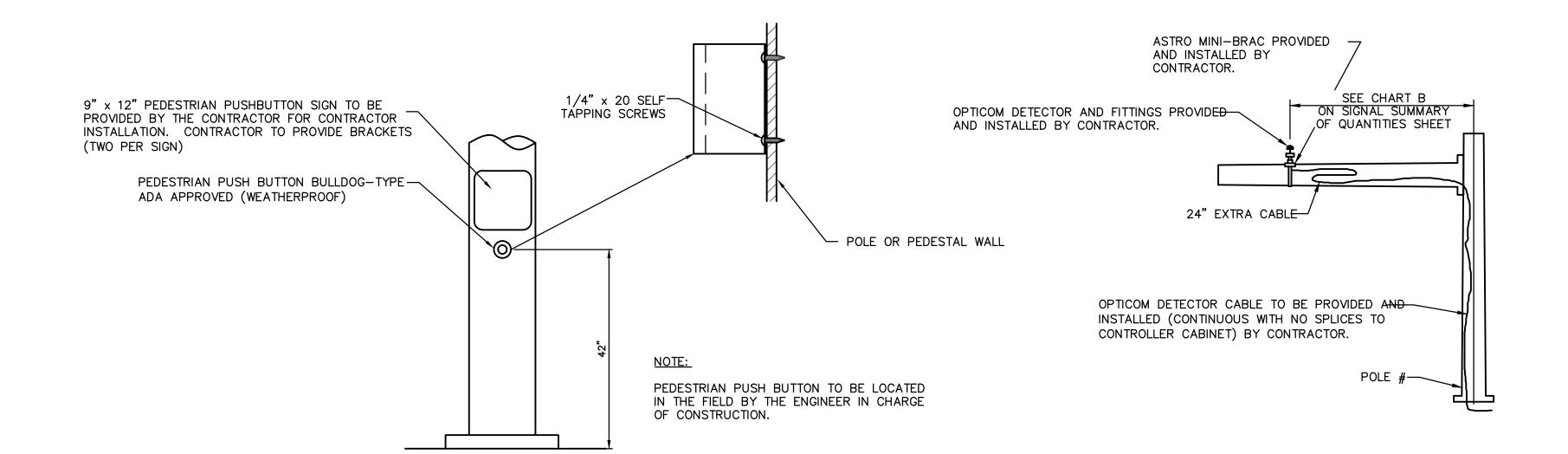
MOUNTING DETAIL



ALUMINUM SIGNAL PEDESTAL

STEEL COMBINATION LIGHTING AND SIGNAL POLE

STEEL SIGNAL POLE



OPTICOM DETAIL

NOTES:

- 1. THE MAST ARM SHALL BE ATTACHED TO THE POLE AFTER THE POLE HAS BEEN ERECTED.
- 2. THE ENGINEER IN CHARGE OF CONSTRUCTION WILL DETERMINE THE ORIENTATION OF SIGNAL HEADS TO BE MOUNTED ON THE SIDES OF POLES.
- 3. EACH SIGNAL HEAD, PUSH BUTTON AND LUMINAIRE SHALL HAVE A SEPARATE RUN(S) OF CABLE FROM THE HANDHOLE IN THE POLE BASE. UNLESS OTHERWISE NOTED IN THE PLANS, THE CABLES SHALL BE SIZED AS FOLLOWS:

VEHICULAR SIGNAL HEAD— ONE 7c PEDESTRIAN SIGNAL HEAD— ONE 7c PUSH BUTTON— ONE 5c LUMINAIRE— ONE 2c

- 4. SPLICES AT THE HANDHOLE SHALL BE MADE WITH WIRE NUTS SECURED WITH ELECTRICAL TAPE. EXCESS CABLE SHALL BE PROVIDED TO ALLOW THE SPLICES TO BE PULLED AT LEAST ONE FOOT OUTSIDE THE HANDHOLE.
- 5. ALL SIGNS SHALL BE MOUNTED WITH ASTRO-BRACKETS.

2015 Details



City of BELTON

Missouri

POLES SIGNAL HEAD PUSH BUTTON

SCALE: NO SCALE

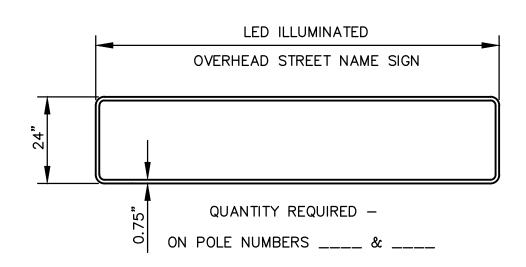
DETAIL NO: TRF-008

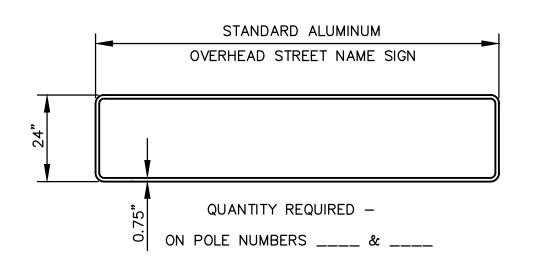
DATE: 03-16-15

TYPICAL DETAIL PEDESTRIAN PUSH BUTTON

REGULATORY SIGNS

OVERHEAD STREET NAME SIGNS





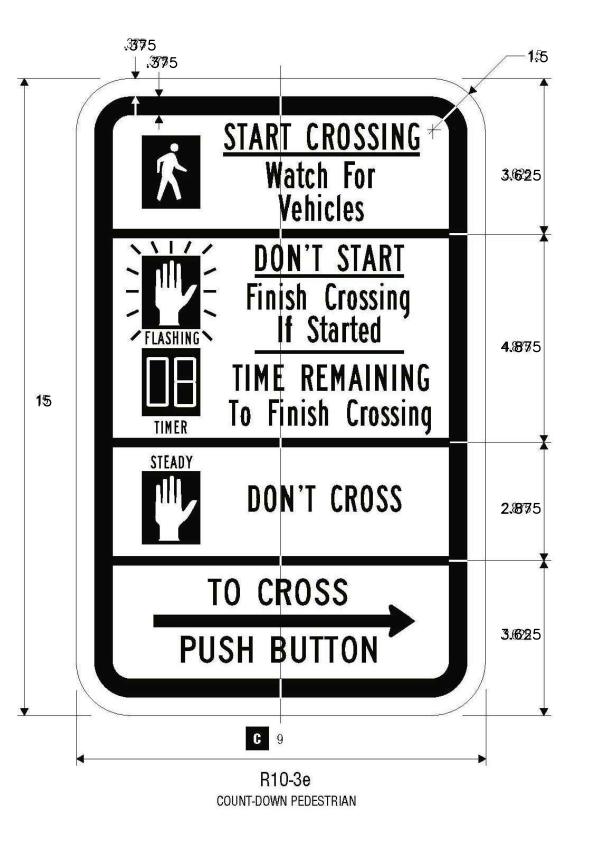
24"

SIGN BLANK DETAILS

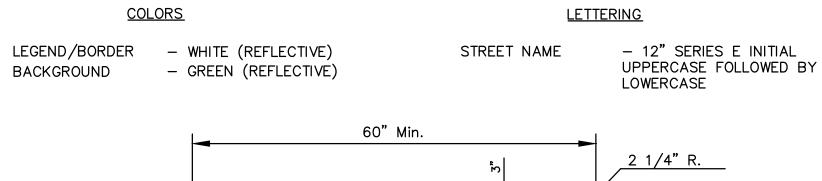
*- DRILL ONE HOLE AT STATED DIMENSIONS. LEVEL SIGN AND DRILL THE SECOND HOLE. MATERIAL - 0.080" THICK ALUMINUM.

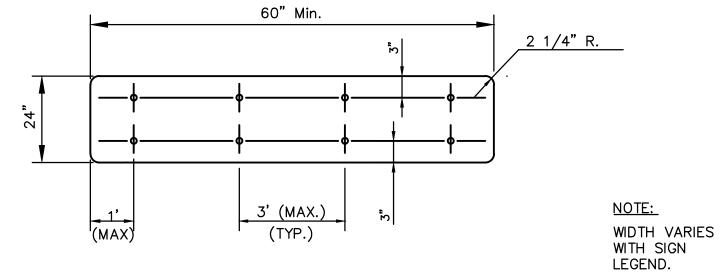
SIGN FACE DETAILS <u>1 1/2" R.</u> 6 1/4" 24" R10-10L <u>COLORS</u>

- BLACK (NON-REFLECTIVE) LEGEND - WHITE (REFLECTIVE) BACKGROUND



SIGN FACE DETAIL

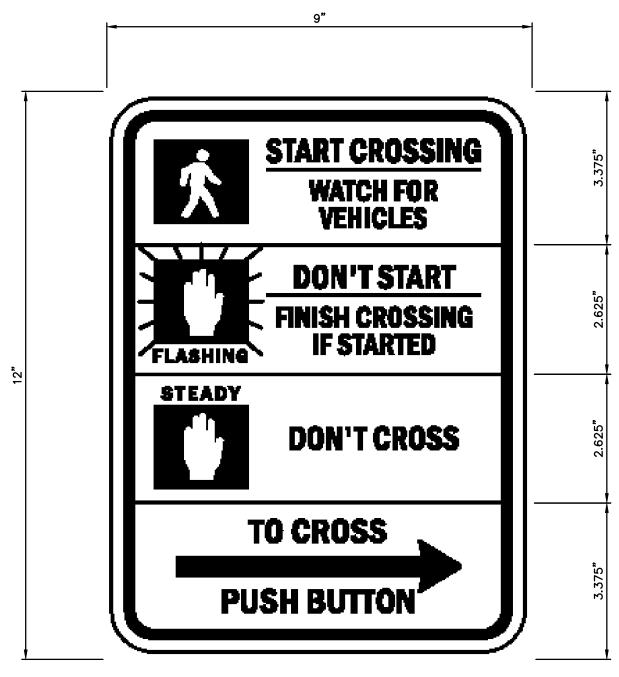




SIGN BLANK MATERIAL -0.125 GAUGE 6061-T6 OR 5052-H38 ALUMINUM SIGN BLANK DETAIL

NOTES:

- 1. OVERHEAD STREET NAME SIGNS AND REGULATORY SIGNS SHALL BE SUBSIDIARY TO "TRAFFIC SIGNAL INSTALLATION".
- 2. ALL SIGN FACE SHEETING SHALL BE HIGH INTENSITY.
- 3. ALL OVERHEAD STREET NAME SIGNS SHALL HAVE LEGENDS CENTERED ON FACE WITH THE LETTERS AND NUMERALS SPACED TO PRODUCE A READABLE, PROFESSIONAL QUALITY SIGN.
- 4. ACTUAL SIZE DRAWINGS OF THE PROPOSED SIGNS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.
- 5. ALL SIGNS SHALL BE MOUNTED TO SIGNAL POLES WITH ASTRO-BRACKETS.
- 6. OVERHEAD STREET NAME SIGNS SHALL BE SIZED ACCORDING TO THE FHWA STANDARD HIGHWAY SIGNS MANUAL.



NOTE: HANDS SHALL BE ORANGE

R10-12

BLACK (NON-REFLECTIVE) WHITE (REFLECTIVE)

GREEN (REFLECTIVE)

PUBLIC WORKS

City of BELTON 2015 Details

Missouri

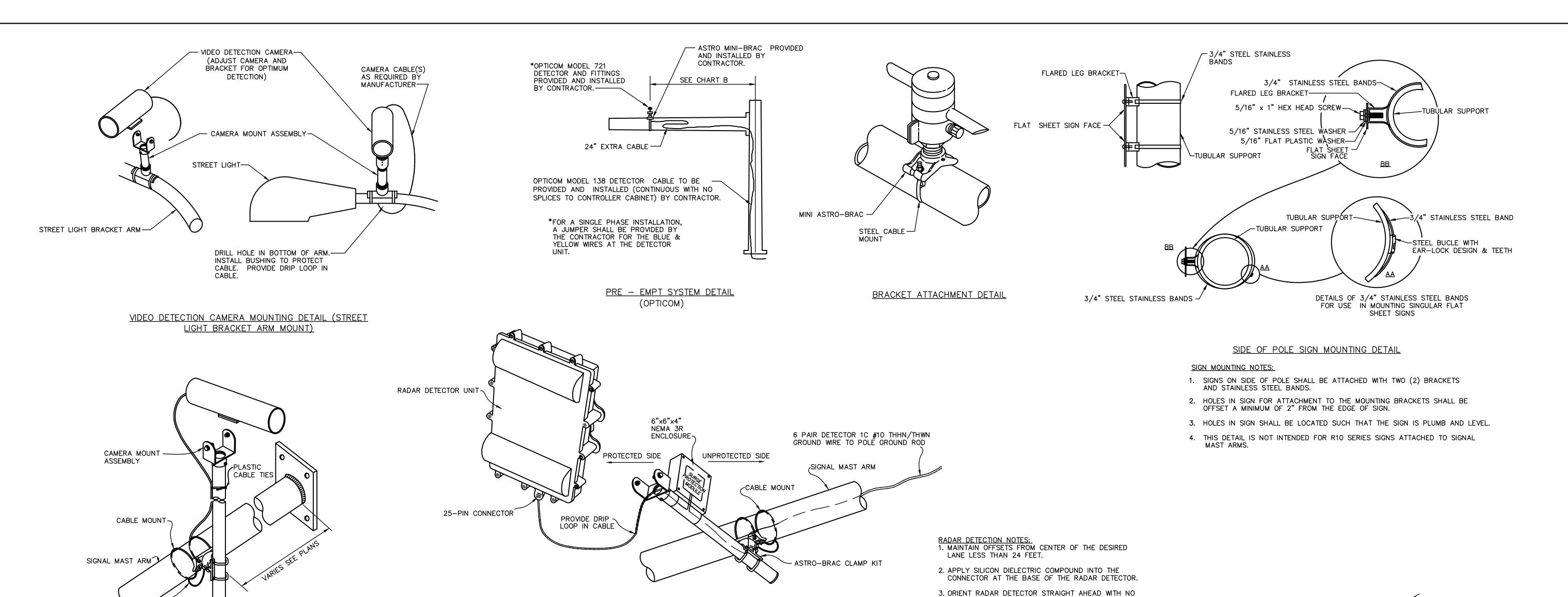
SIGNS FOR TRAFFIC SIGNALS

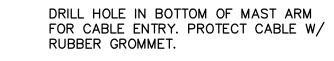
NO SCALE SCALE: DETAIL NO: TRF-009 03-16-15

<u>R10-3b</u>

LEGEND BACKGROUND CIRCULAR SYMBOL

<u>COLORS</u>



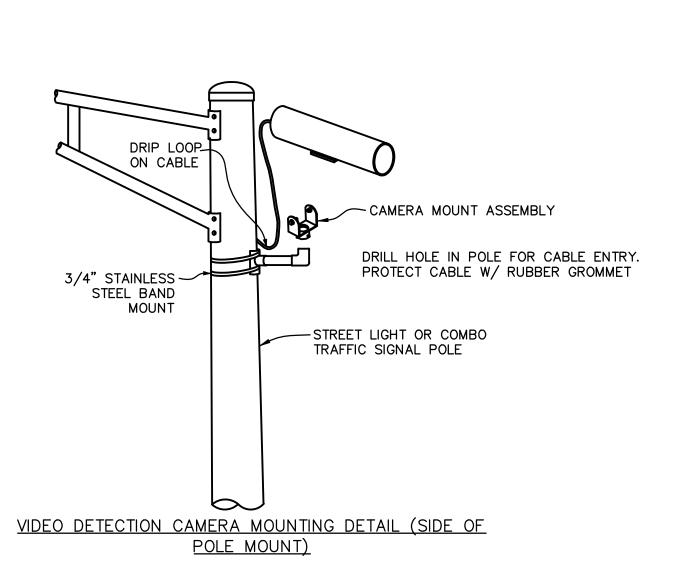


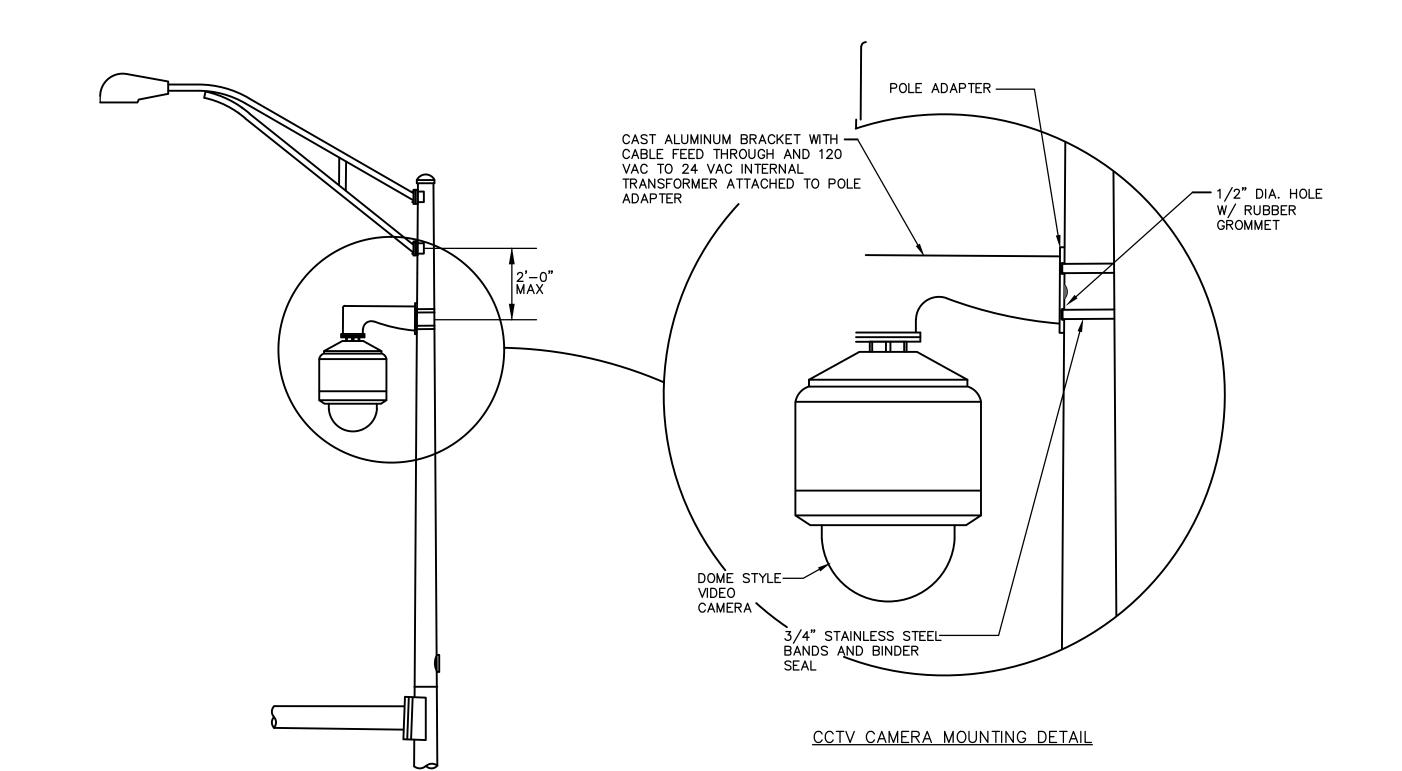
DRIP LOOP ON CABLE

VIDEO DETECTION CAMERA MOUNTING DETAIL (MAST ARM MOUNT)

- ASTRO BRAC CLAMP KIT

W/ 5' TUBE EXTENSION



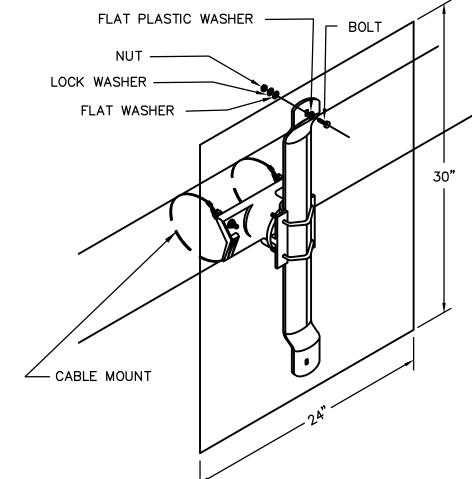


RADAR DETECTION MOUNTING DETAIL (MAST

ARM BRACKET ARM MOUNT)

DOWNWARD TILT. BRACKET ARM SHOULD BE

PARALLEL TO THE ROAD SURFACE.



SIGN MOUNTING BRACKET DETAIL (R10 SERIES)

2015 Details



City of

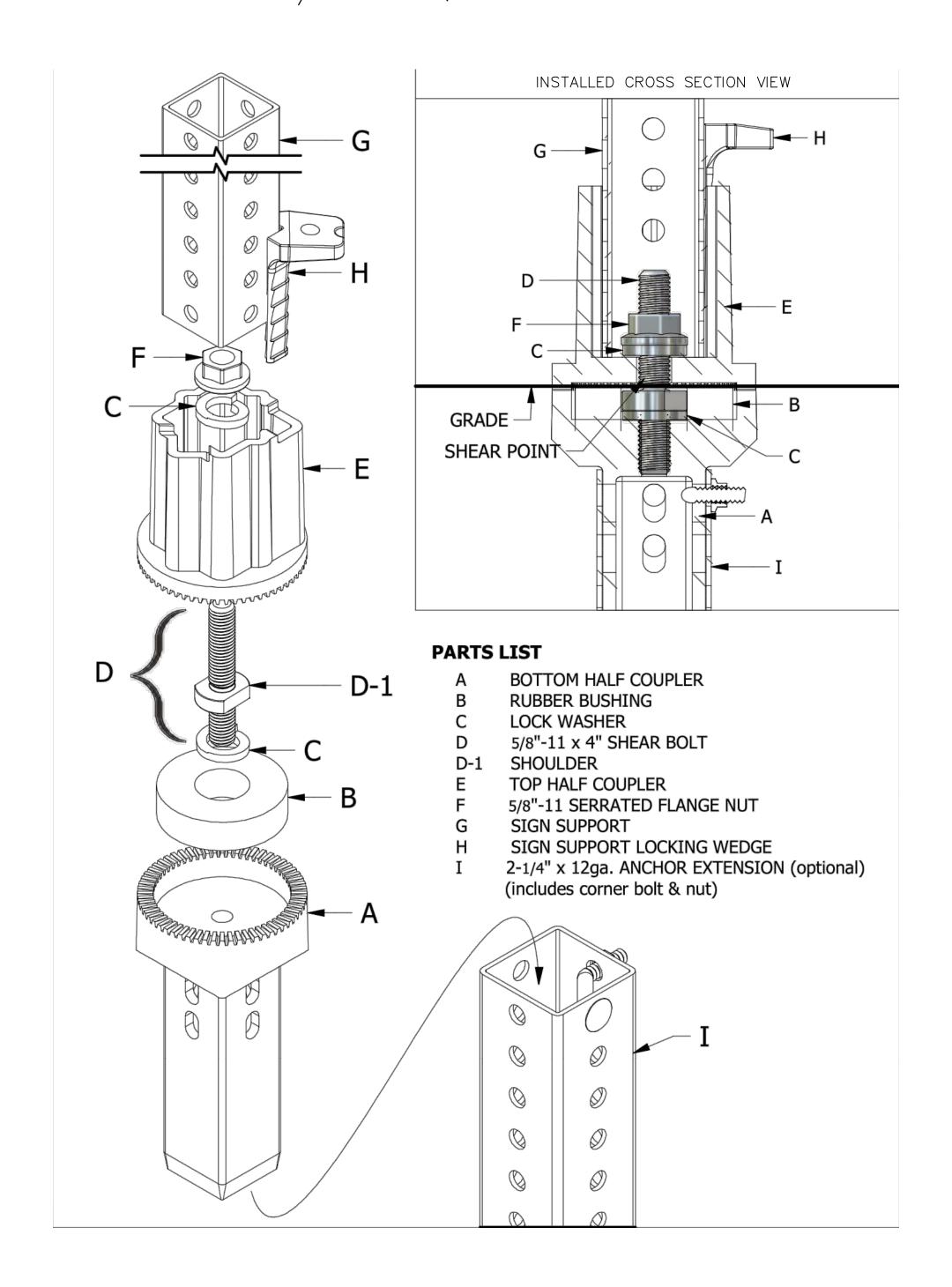
BELTON Missouri

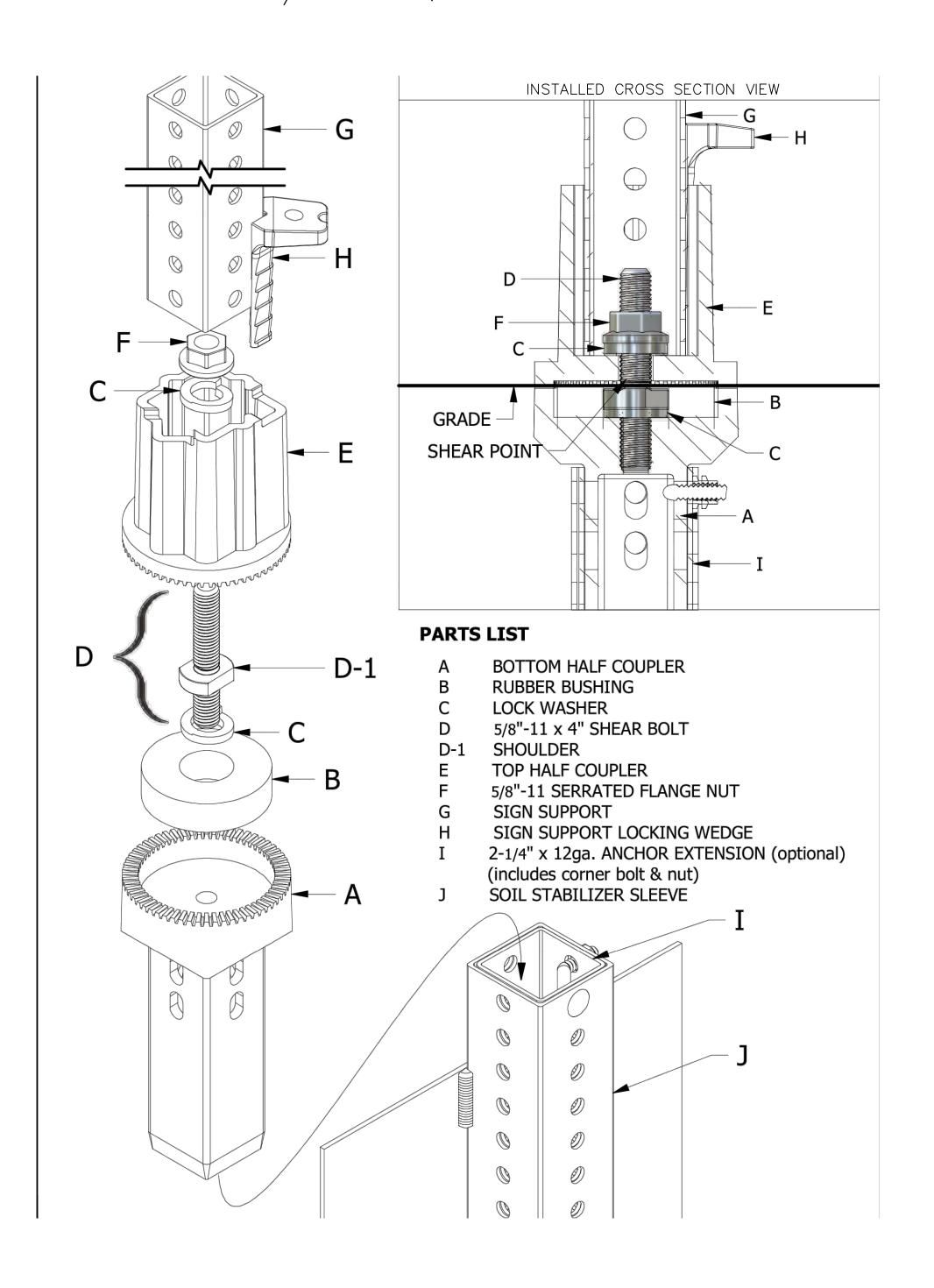
CAMERA OPTICOM & SIGN MOUNTING

SCALE:	NO SCALE	Ţ			
DETAIL NO:	TRF-010][
DATE:	03-16-15	$I^{\mathbf{c}}$			

<u>KLEEN BREAK MODEL 425</u>
<u>FOR CONCRETE INSTALLATIONS *</u>
REFER TO HTTP:/WWW.X-SQRD.COM FOR INSTALLATION DETAILS

KLEEN BREAK MODEL 425 FOR SOIL INSTALLATIONS * REFER TO HTTP: /WWW.X-SQRD.COM FOR INSTALLATION DETAILS





SIGN POST INSTALLATION

City of PUBLIC WORKS

BELTON

Missouri

2015 Details

SIGN POST INSTALLATION

SCALE: NO SCALE DETAIL NO: TRF-011

03-16-15