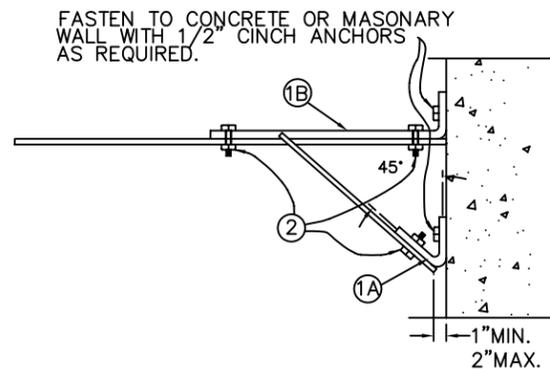
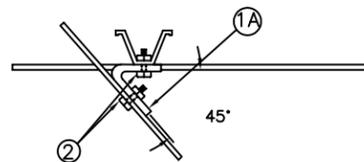
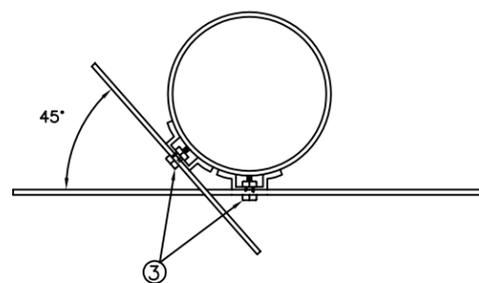
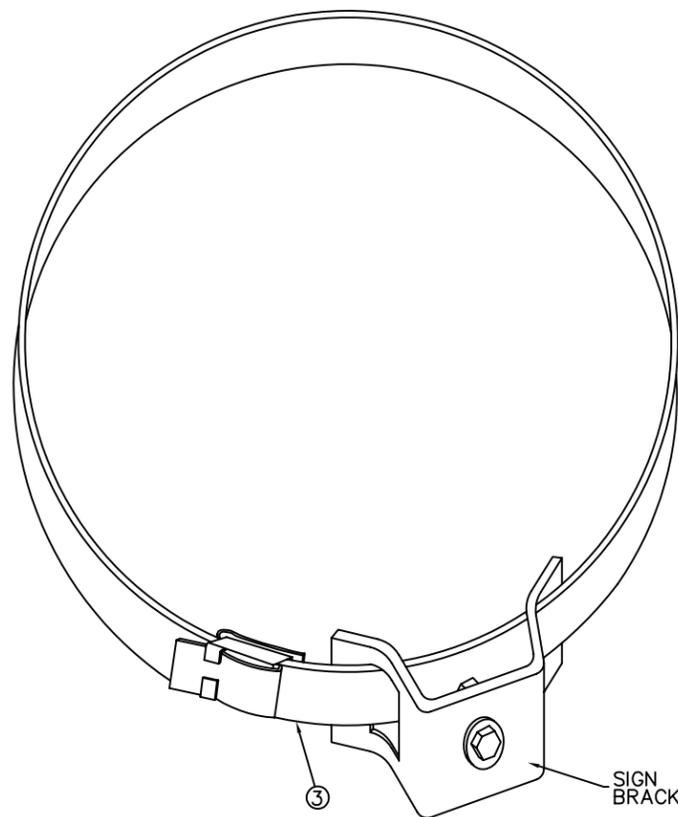


FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
5	OHIO		



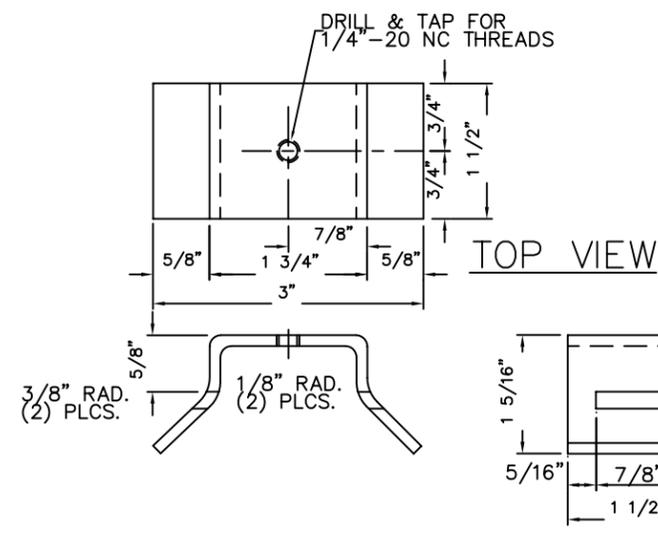
**NOTES**

- ① BRACKET FOR ANGLED SIGN POST OR WALL (SEE ①B) SHALL BE 1/4"x1"x6" LOW CARBON STEEL BENT @ CENTER TO EITHER 45° OR 90° AS REQUIRED.
- ①B BRACKET FOR ANGLED SIGN GREATER THAN 12" IN WIDTH SHALL HAVE A LENGTH OF AT LEAST 1/2 OF SIGN WIDTH PLUS THE 3" MOUNTING LENGTH BENT AT EITHER 45° OR 90° AS REQUIRED. BRACKET SHALL BE 1/4"x1"x (REQUIRED LENGTH) LOW CARBON STEEL.
- ② BOLTS, HEX NUTS & LOCK WASHERS SHALL BE 5/16" x 1" OR 5/16" x 2-1/2" STAINLESS STEEL. FLAT NYLON WASHERS SHALL BE 5/16" & USED ON SIGN FACE ONLY.
- ③ POLE STRAPPING SHALL BE 1/32"x3/4" STAINLESS STEEL WITH STAINLESS STEEL CLIP; STAINLESS STEEL SIGN BRACKET; 5/16" x 3/4" STAINLESS STEEL BOLT, HEXNUT & 5/16" FLAT NYLON WASHER WHICH SHALL BE USED ON SIGN FACE ONLY.
- ④ ALL BRACKETS, ANCHORS, BOLTS, HEX NUTS & WASHERS SHOWN ARE INCIDENTAL TO THE BID ITEMS WHERE APPLICABLE. POLE STRAPPING & ACCESSORIES ARE A SEPARATE BID ITEM WHERE APPLICABLE.
- ⑤ SIGN SIZES SHOWN ARE TYPICAL & SHALL BE THE SIZE AS SHOWN IN THE PLANS OR IN THE CITY STANDARD SIGN LISTING.
- ⑥ VERTICAL CLEARANCE FROM BOTTOM OF SIGN TO GRADE LINE SHALL BE A MINIMUM OF 7' EXCEPT FOR LOW MOUNTED SIGNS (AS NOTED) WHICH SHALL BE A MINIMUM OF 4'.  
HORIZONTAL CLEARANCE FROM SIDE OF SIGN TO CURB FACE SHALL BE FROM A MINIMUM OF 12" TO A MAXIMUM OF 24" EXCEPT AS NOTED.  
IN ORDER TO MAINTAIN THE HORIZONTAL CLEARANCE, SOME SIGNS MAY HAVE TO BE MOUNTED OFF CENTER FROM SIGN POST.
- ⑦ GENERALLY, ALL PARKING AND/OR LOADING RELATED SIGNS ARE MOUNTED @ 45° ANGLE WITH THE CURB. ALL OTHER TYPE SIGNS ARE MOUNTED @ 90° ANGLE WITH THE CURB. SEE THE PLANS FOR SPECIFIC SIGN ORIENTATION.



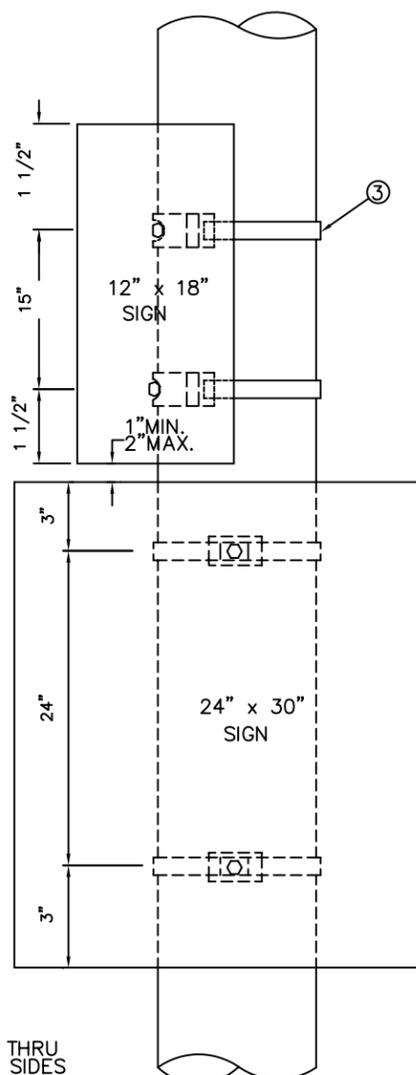
FASTEN TO CONCRETE OR MASONRY WALL WITH 1/2" CINCH ANCHORS AS REQUIRED.

**TYPICAL POLE STRAPPING HARDWARE**

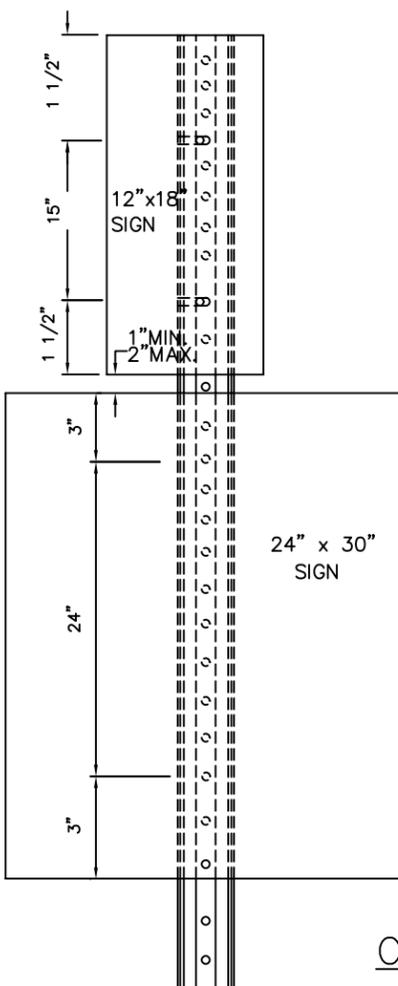


MATERIAL: STAINLESS STEEL

**SIGN BRACKET  
BANDING STANDOFF**  
SCALE: FULL

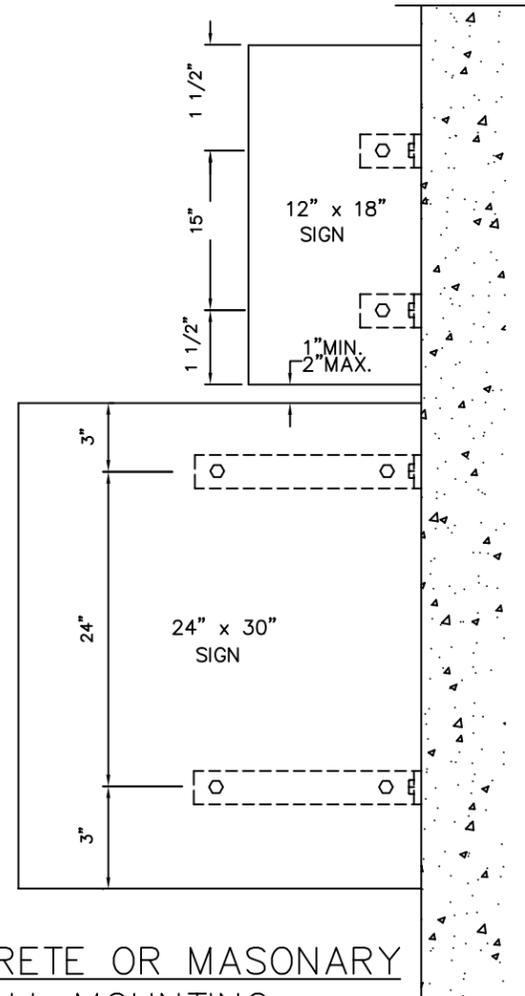


**POLE MOUNTING**



**POST MOUNTING**

**CONCRETE OR MASONRY  
WALL MOUNTING**



**PAVEMENT MARKINGS & SIGNING (ES-6)**

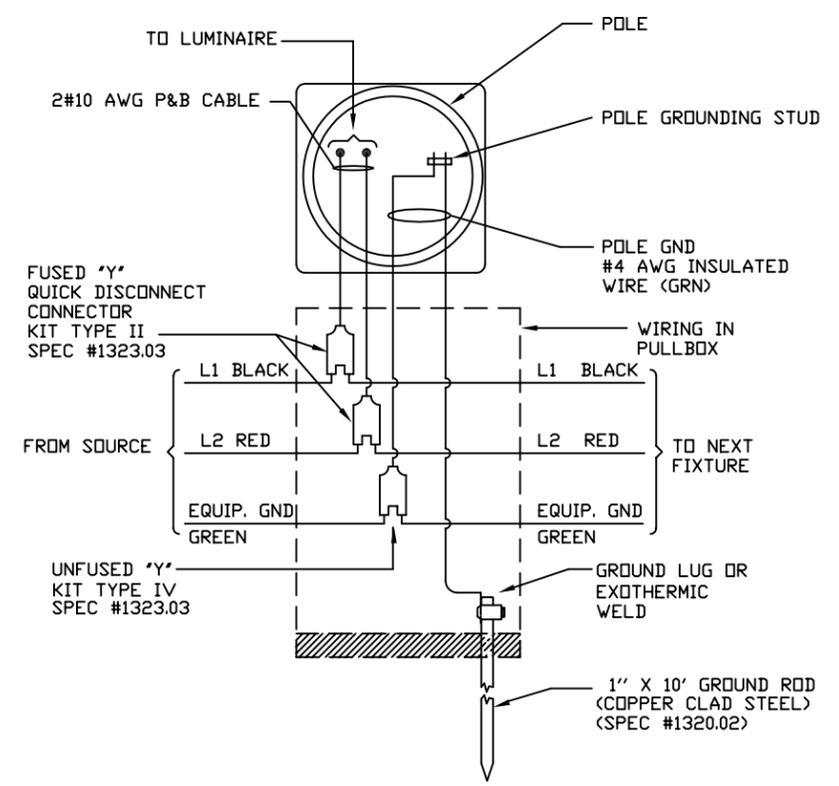
**SIGN MOUNTING DETAIL**

CITY OF CINCINNATI  
DEPT. OF TRANSPORTATION & ENGINEERING  
DIV. OF TRAFFIC ENGR.

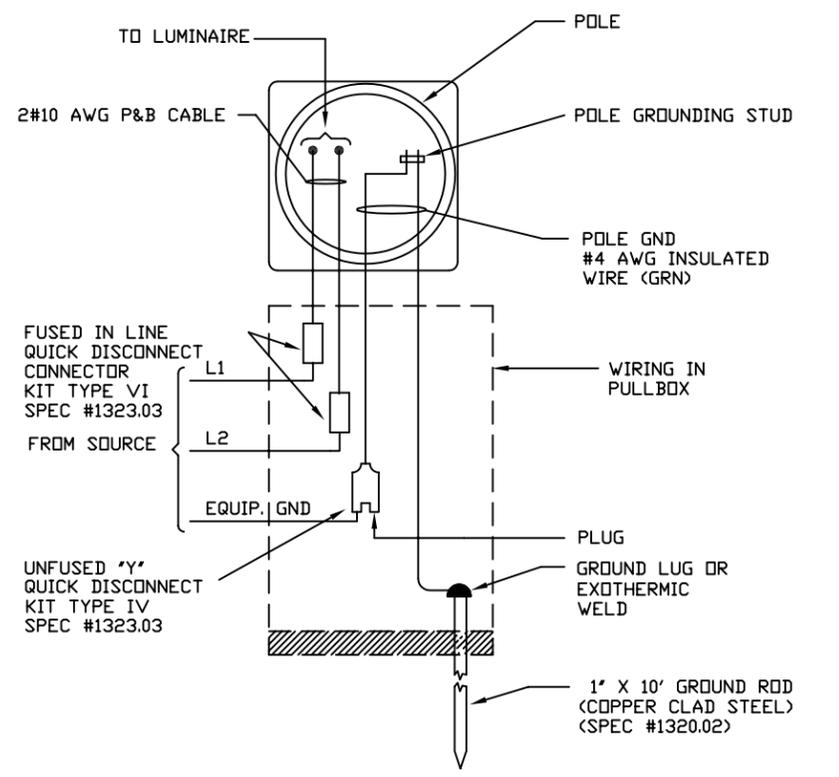
S.C.H.	<i>Steve Bailey</i>	9/2/04	UPDATE	APPROVED	<i>Steve Bailey</i>	DATE	3-4-99
T.E.		3/1/98		DESIGN	REVISION	DATE	WO #
		12/13/94		APPROVED			
				SCALE	SOURCE	DRAWN	FILE NO.
				-		VGRD	ES-6-1



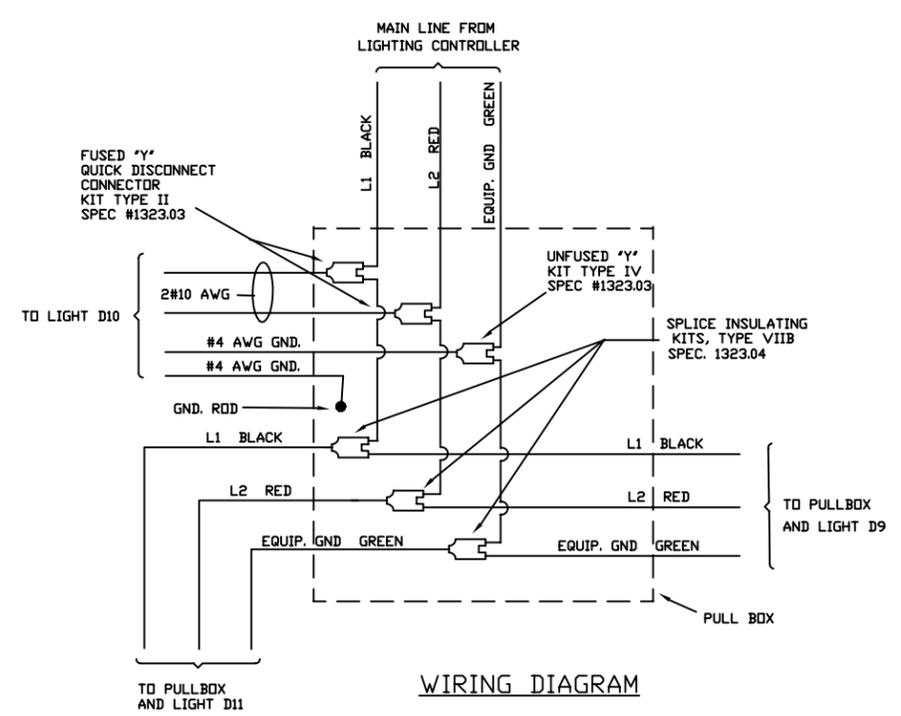
FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR



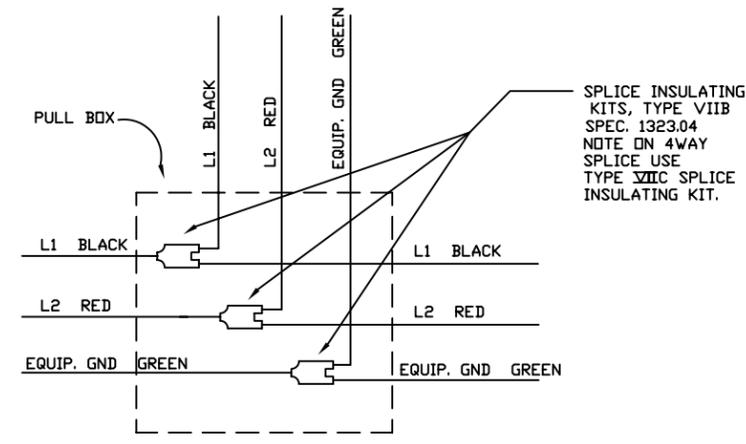
WIRING DIAGRAM  
POLE W/PULLBOX



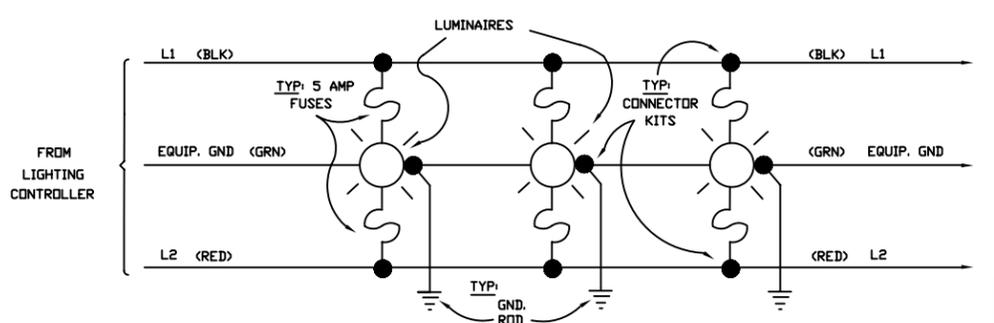
WIRING DIAGRAM  
POLE W/PULLBOX  
END OF LINE



WIRING DIAGRAM



WIRING DIAGRAM  
3 WAY SPLICE IN A PULL BOX



TYPICAL CIRCUIT WIRING SCHEMATIC

### FUSES

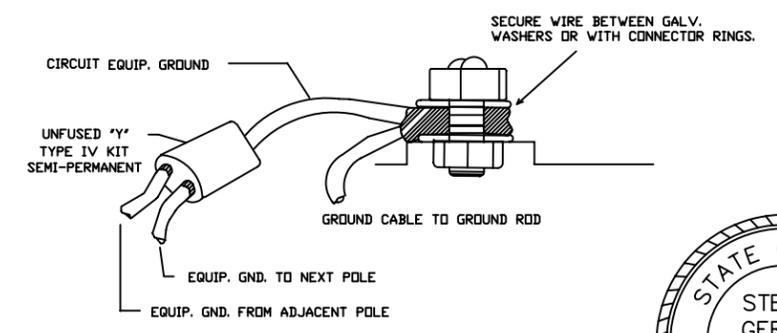
ALL FUSES 200,000 A.I.C. CURRENT LIMITING FUSES FOR LIGHTING CONNECTOR KITS: 15 AMP UL CLASS CC.

FUSES FOR CONTROL LINE, MAIN SERVICE & LIGHTING CABINET (SIZE PER PLAN) UL CLASS RK5 DUAL ELEMENT, TIME DELAY.

### CONNECTOR/SPLICE KITS

- TYPE II UNFUSED Y QUICK DISCONNECT TYPE
- TYPE IV UNFUSE Y TYPE SEMI-PERMANENT
- TYPE VI FUSED IN LINE QUICK DISCONNECT TYPE
- TYPE VIIA IN LINE SPLICE KIT
- TYPE VIIIB Y TYPE SPLICE KIT
- TYPE VIIIC H TYPE SPLICE KIT

SBC-SPLIT BOLT CONNECTOR. COVER WITH ELECTRICAL TAPE AND APPLY LIBERAL COAT OF "SKOTCH KOTE" FOR A WATERTIGHT SPLICE/CONNECTION.



DETAIL  
3-WIRE, EQUIPMENT GROUND  
CONNECTION TO POLE LUG.

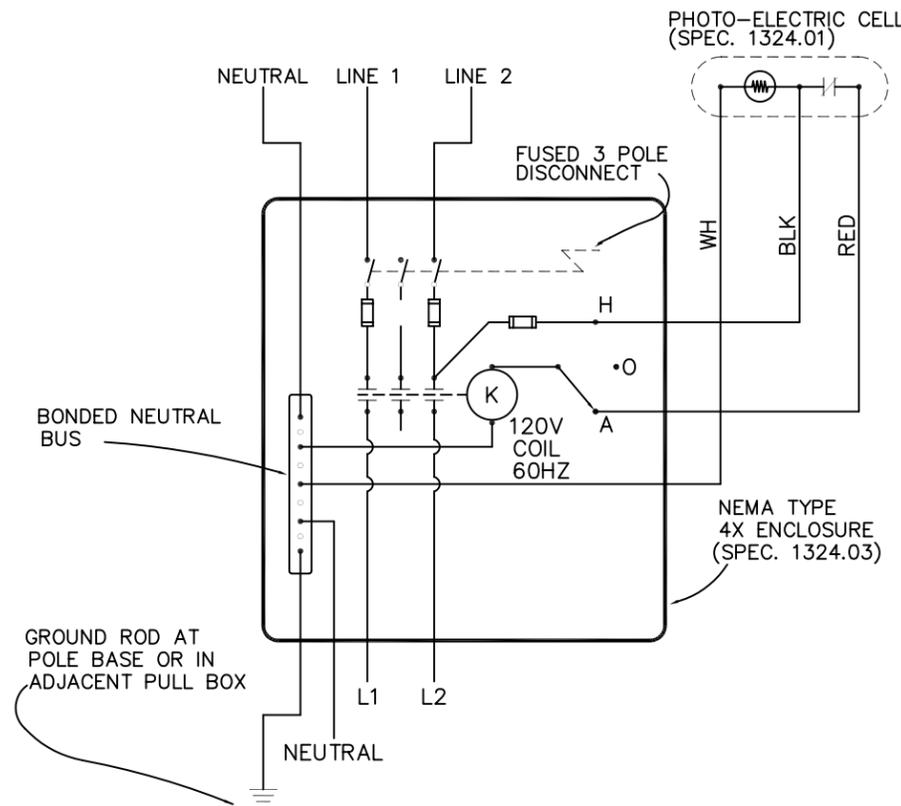


### STREET LIGHTING INSTALLATIONS (ES-7) CONNECTOR KIT INSTALLATION & POLE WIRING DIAGRAMS

CITY OF CINCINNATI  
DEPT. OF TRANSPORTATION & ENGINEERING  
DIV. OF TRAFFIC ENGINEERING

S.C.H.	Steve Bailey	9/15/04	UPDATE	APPROVED	Steve Bailey	DATE	4-27-05
DESIGN	REVISION	DATE	WO #	SCALE	SOURCE	DRAWN	FILE NO.
JEW	APPROVED	5-6-03				RCS	ES-7-3

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR



STREET LIGHTING CONTROLLER, 120/240 VOLT  
SINGLE PHASE, 3 WIRE, GROUNDED NEUTRAL  
(SPEC. 1324.03)

ENCLOSURE:  
NEMA TYPE 4X ENCLOSURE FABRICATED FROM 16 GAGE OR OR HEAVIER AISI TYPE 302, 303 OR 304 ANNEALED STAINLESS STEEL. FULLY WELD ALL SEAMS TO AND ALL FASTENINGS IN THE ASSEMBLY OR MOUNTING OF THE ENCLOSURES TO CONFORM TO ASTM A-320 (AISI-300 SERIES). FOR COMPLETE DETAILS REFER TO SECTION 1324.03 OF THE CONSTRUCTION & MATERIAL SPECIFICATIONS CITY OF CINCINNATI SUPPLEMENT.

LOAD SIZING			
CABINET OR ENCLOSURE SIZE (AMPERES)	POWER CABLE SIZE (AWG)	MAX. FUSE SIZE (AMPS)	POWER SERVICE CONDUIT SIZE (INCHES)
UP TO 50	#6	40	1
50 TO 80	#4	65	1-1/2
80 TO 100	#2	90	1-1/2



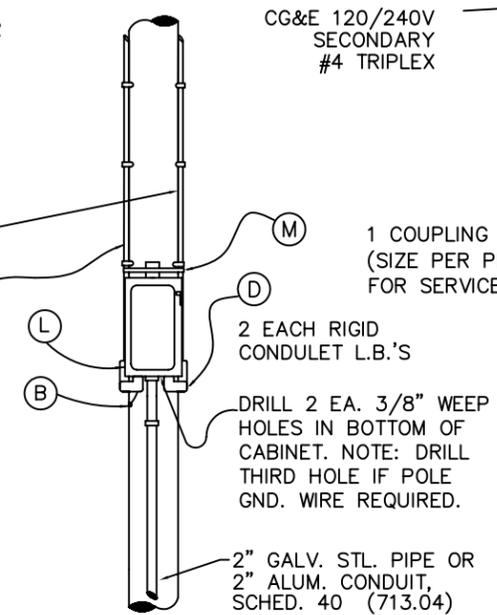
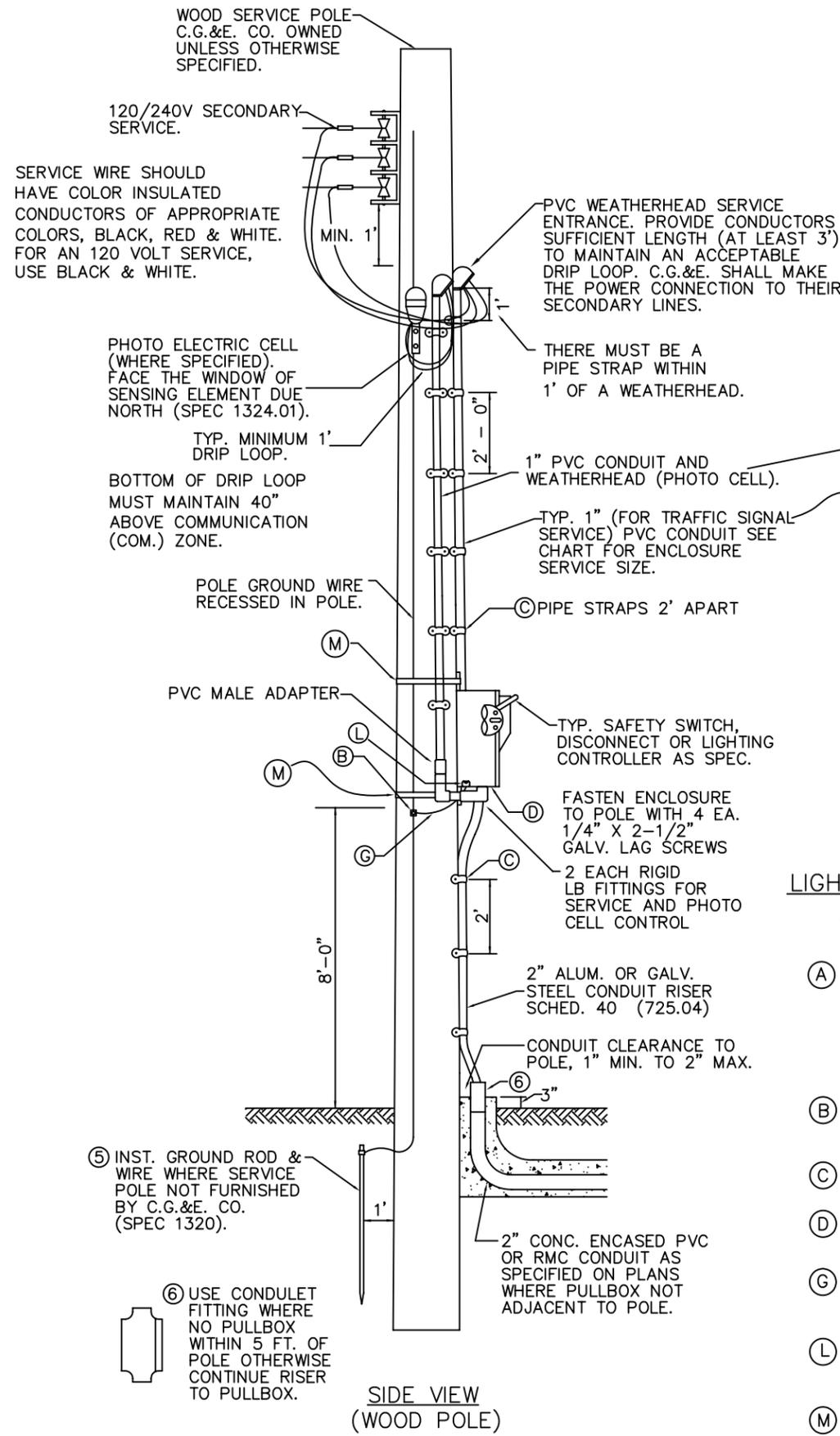
STREET LIGHTING INSTALLATIONS (ES-7)  
STREET LIGHTING CONTROLLER DETAILS  
CITY OF CINCINNATI  
DEPT. OF TRANSPORTATION & ENGINEERING  
DIV. OF TRAFFIC ENGINEERING

S.C.H.	<i>Stone Bailey</i>	9/15/04	UPDATE	APPROVED:	<i>Stone Bailey</i>	DATE:	4/25/05
DESIGN	REVISION APPROVED	DATE	WO #	SCALE	SOURCE	DRAWN	FILE NO.
JEW		5-6-03				JEW	ES-7-2

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR

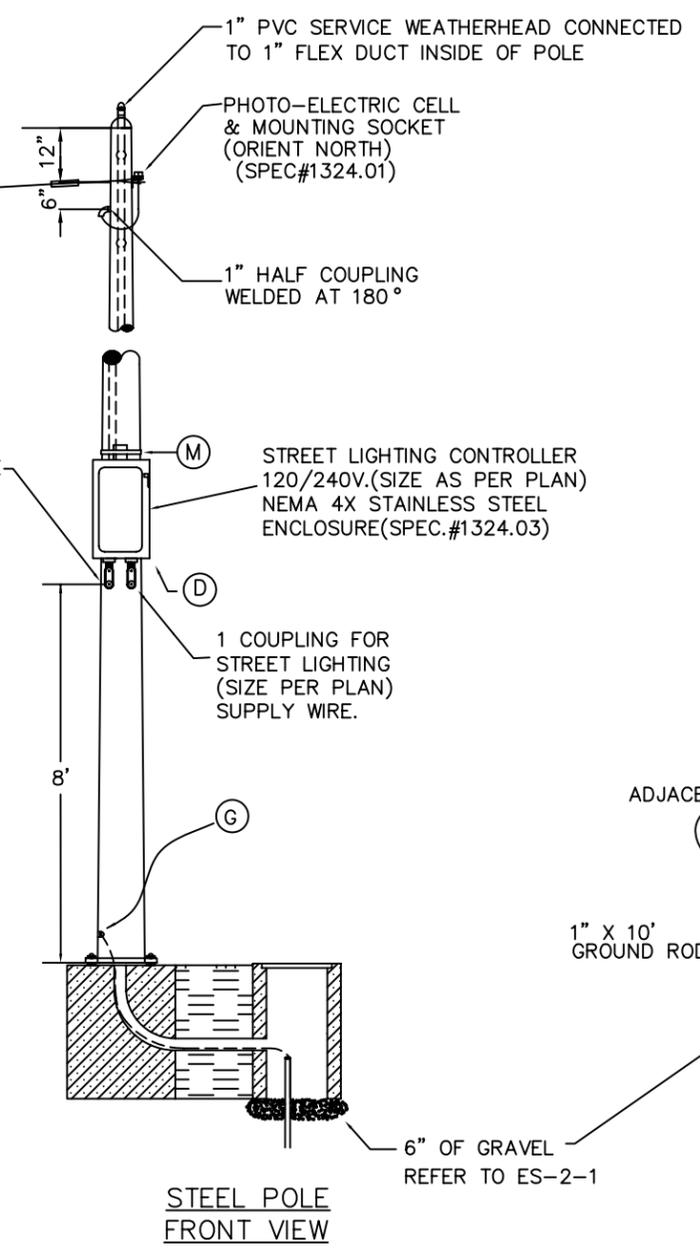


LOAD SIZING			
CABINET OR ENCLOSURE SIZE (AMPERES)	POWER CABLE SIZE (AWG)	MAX. FUSE SIZE (AMPS)	POWER SERVICE CONDUIT SIZE (INCHES)
UP TO 50	#6	40	1
50 TO 80	#4	65	1-1/2
80 TO 100	#2	90	1-1/2



**FRONT VIEW (WOOD POLE)**  
**LIGHTING CONTROL CENTER**  
(SPECS #1312,1321,1324)

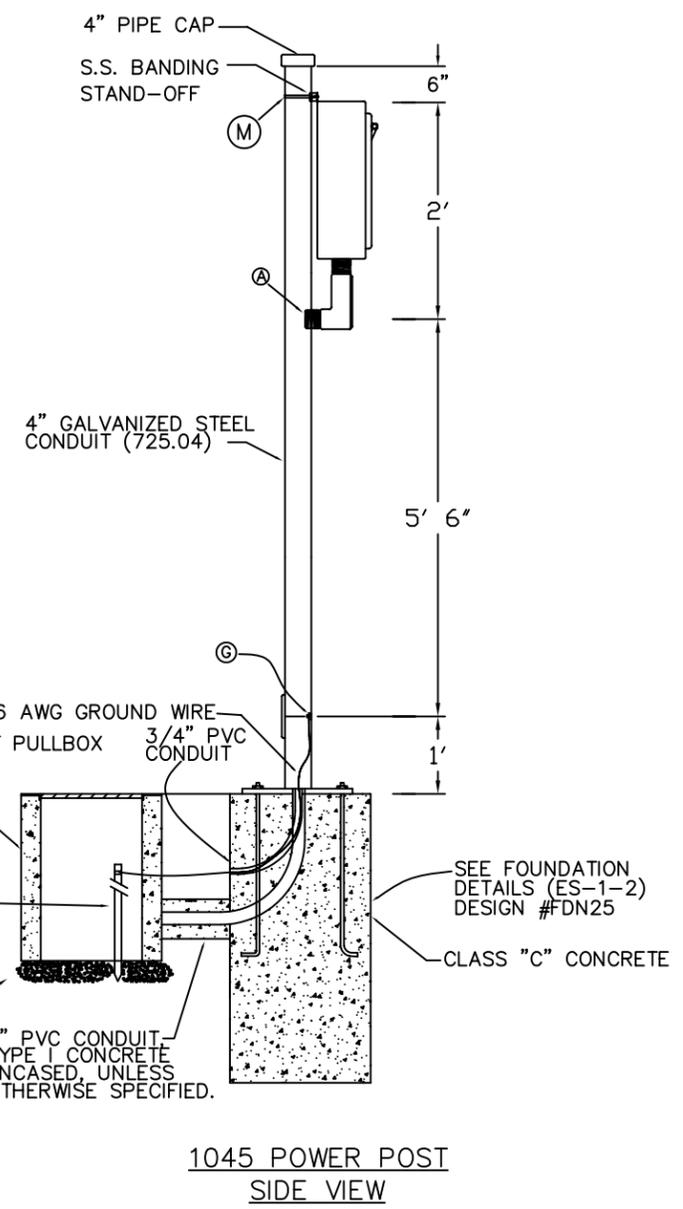
- (A) PROVIDE 2-1" COUPLING WHEN STREET LIGHTING CONTROLLER IS TO BE INSTALLED ON A STEEL POLE. COUPLINGS TO BE INSTALLED 8' FROM POLE BASE PLATE AND AT 180°, (OPPOSITE CURB SIDE) UNLESS SPECIFIED.
- (B) SPLIT BOLT CONNECTOR, DOSSERT, BLACKBURN, MCGRAW-EDISON OR APPROVED EQUAL.
- (C) GALV. OR MALL. IRON CONDUIT 2 HOLE PIPE STRAP.
- (D) DRILL 3/8" DRAIN HOLE IN LOWEST PART OF CABINET AND FITTINGS.
- (G) CONNECT #4 COPPER GROUND TO POLE GROUND LUG WHEN STREET LIGHTING CONTROLLER IS TO BE INSTALLED ON A STEEL POLE.
- (L) GROUNDING LUG LOCATED INSIDE OF CABINET. BLACKBURN L125, T&B SERIES 1300 OR APPROVED EQUAL.
- (M) STAINLESS STEEL BANDING 1/32"x3/4".



(C) CONDUIT CLAMPS USE DOUBLE HOLE TYPE. (PIPE STRAP)



SECURE WITH GALV. NAILS



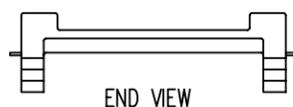
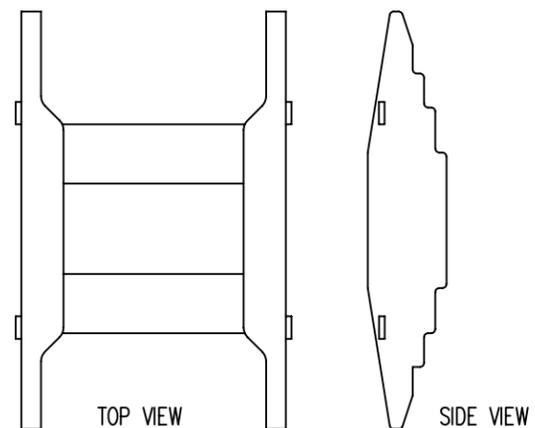
**STREET LIGHTING INSTALLATIONS (ES-7)**  
**STREET LIGHTING CONTROLLER MOUNTING DETAILS**

CITY OF CINCINNATI DEPT. OF TRANSPORTATION & ENGINEERING DIV. OF TRAFFIC ENGR.			
APPROVED: <i>Stone Bailey</i>		DATE: 3-4-99	
DESIGN	REVISION	DATE	WO #
JEW	APPROVED	2/16/99	
SCALE	SOURCE	DRAWN	FILE NO.
NONE		JEW	ES-7-1

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
5	OHIO		



TWO WAY MARKER



SLED TYPE  
MARKER BUTTON

TWO WAY REFLECTORS TO BE EITHER YELLOW/YELLOW OR WHITE/RED AS PER PLANS.

THE MARKER NEAREST TO A FIRE HYDRANT WIL HAVE BLUE/BLUE REFLECTORS.



PAVEMENT MARKINGS & SIGNING (ES-6)  
PAVEMENT MARKER  
BUTTON DETAILS

CITY OF CINCINNATI  
DEPT. OF TRANSPORTATION & ENGINEERING  
DIV. OF TRAFFIC ENGR.

S.C.H.	<i>Steve Bailey</i>	9/7/04	UPDATE				
T.E.		3/1/98		APPROVED	<i>Steve Bailey</i>	DATE	3-4-99
DESIGN	REVISION	DATE	WO #	SCALE	SOURCE	DRAWN	FILE NO.
	APPROVED	12/09/94		-		VGRD	ES-6-3



