

luminaire_att**		
	LT	(LUMINAIRE POLE)
	LTJB	(LUMINAIRE POLE & J.B.)
	LTDD	(DOUBLE DAVIT LUMINAIRE POLE)
	LTPR	(MUNICIPAL LUMINAIRE POLE OR LEASE LIGHT)

sign_post_att **		
	SN	(SIGN POLE)
	SNLT	(SIGN POLE & LUMINAIRE)
	SNLN	(LANE USE SIGN POLE)
	SNLNL	(LANE USE SIGN POLE & LUMINAIRE)

jb_att **		
	JB	(JUNCTION BOX)
	CJB	(CONCRETE JUNCTION BOX)

signal_pole_att**		
	SIG	(SIGNAL POLE, DIMENSION TO SUIT ARM REACH)
	SIGLUM	(SIGNAL POLE WITH LUM, DIMENSION TO SUIT ARM REACH)
	SIGPOST	(SIGNAL POST)

controller_att **	
	TYPE P6
	TYPE S

commands_att **	
<u>ADD:</u>	
<u>INSTALL:</u>	
<u>REMOVE:</u>	
<u>REV. A:</u>	
<u>REPLACE:</u>	

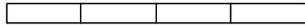
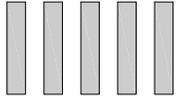
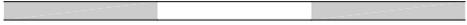
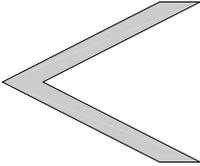
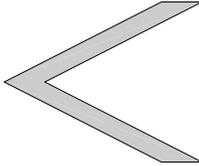
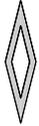
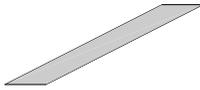
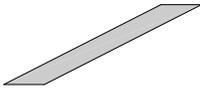
	LTWALL	(WALL MOUNTED LUMINAIRE)
	PPL	(POWER POLE)
	PANEL	(SERVICE PANEL)
	SERDIS	(SERVICE DISCONNECT OR PRE-EMPTION ENCLOSURE)
	OHFB	(FOUR WAY FLASHING BEACON)
	FLASHER	(MEDIAN ISLAND FLASHER)
	OHPS SITE PLAN	(OVERHEAD PEDESTRIAN SIGN WITH FLASHERS)

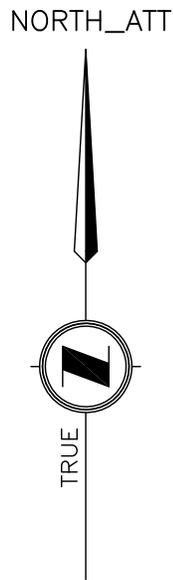
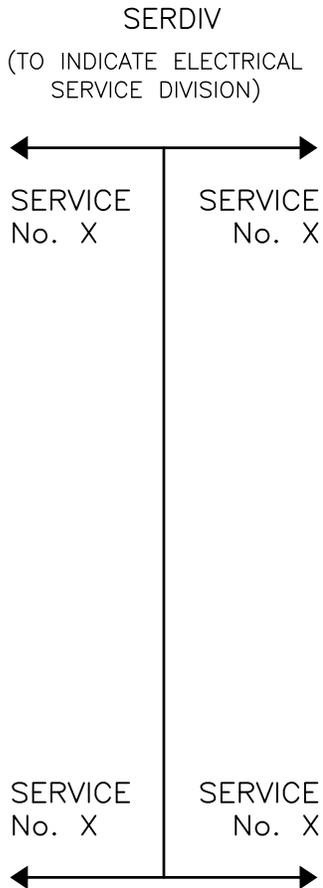
	RRFB SITE PLAN	
	RRFB ELEVATION	
	POLENO	(SIGNAL POLE NUMBER)
	SIGNNO	(SIGN POLE NUMBER)
	A1ARR	(SIGNAL PHASE WITH TURN ARROW INDICATION)
	AR	(TO INDICATE A TURN PHASE)
	AHEAD	(SIGNAL HEAD)
	SNPT	(SIGN ON POST)
	SLD	(SIDEWALK LETDOWN)
	TO XXX TOL	(DESTINATION INDICATORS)
	TO XXX TOR	(DESTINATION INDICATORS)

**\*\* DENOTES BLOCK IS DYNAMIC**

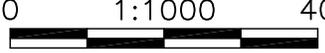
**SITE PLAN SYMBOLS (1:250)**

pav\_mark\_att \*\*

	ARS		BARRIER (CONCRETE BARRIER)
	ARL		ZEBRA
	ARR		
	ARSL		CROSS2
	ARSLR		
	ARSR		RRTRAC (RAILWAY TRACKS)
	ARLS-RND		CHEVRONS (USE TO CREATE PAINT MARKINGS IN GORE AREAS)
	ARRS-RND		
	BUSLANE		BARS (USE TO CREATE PAINT MARKINGS IN MEDIAN AREAS)
			



scales\_att \*\*

	ELEVATIONS	1:75
	SITE PLAN	1:250
	SITE PLAN	1:500
	SITE PLAN	1:1000

ELEVATION\_DETAIL

TYP. ELEVATION  $\frac{1}{1:75}$  (B) XXXW LED - Xm LUMINAIRE POLE

\*\* DENOTES BLOCK IS DYNAMIC

PAVEMENT MARKINGS, SCALES & MISC. SITE PLAN BLOCKS

conduit\_callout\_att \*\*

- ONE
- 1-50mm RPVC
  - 2 No. 6 CONT. PWR.
  - 1 No. 8 BOND
- 2-50mm RPVC (1 EMPTY)
  - XX No.14 SIGNALS
  - 1 No.10 SIG. NEUT.
  - 1 No.12 BOND
- 2-50mm RPVC (1 EMPTY)
  - X-2C SH. LOOPS
  - 1 No.12 BOND

- TWO
- 1-50mm RPVC
  - 2 No. 6 CONT. PWR.
  - 3 No.10 LUM. CCTS. A&B
  - 3 No.10 LUM. CCTS. C&D
  - XX No.14 SIGNALS
  - 1 No. 6 GROUND (TO GND. PLATE)
  - 1 No. 8 BOND

- THREE
- 1-50mm RPVC
  - XX No.14 SIGNALS
  - 1 No.12 BOND

- FOUR
- 1-50mm RPVC
  - 2 No.10 LUM. CCT. X
  - XX No.14 SIGNALS
  - 1 No.12 BOND

- FIVE
- 1-50mm RPVC
  - 3 No.10 LUM. CCTS. A&B
  - XX No.14 SIGNALS
  - 1 No.10 SIG. NEUT.
  - 1 No.12 BOND
- 1-50mm RPVC
  - X-2C SH. LOOPS
  - 1 No.12 BOND

- SIX
- 1-50mm RPVC
  - 3 No.10 LUM. CCTS. A&B
  - 1 No.12 BOND

- SEVEN
- 1-50mm RPVC
  - 3 No.10 LUM. CCTS. A&B
  - 1 No.12 BOND

- EIGHT
- 1-50mm RPVC
  - (EMPTY)

- NINE
- 1-50mm RPVC
  - 2 No.14 IS. FLASH.
  - 1 No.12 BOND

- TEN
- 1-50mm RPVC
  - 2 No.10 LUM. CCT. X
  - 3 No.14 ADV. WARN. FLASH. No. AX
  - 1 No.12 BOND

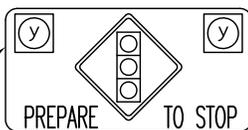
- ELEVEN
- 2-50mm RPVC (EMPTY)
  - (FUTURE COMMUNICATION)

- ELEVEN
- 1-50mm RPVC
  - 3 No. 3 PWR.

AWF

EXTRUDED ALUMINUM  
ADVANCE WARNING SIGN  
c/w 300mm YELLOW FLASHERS

2440 x 1220

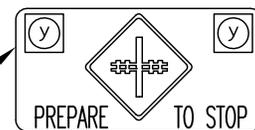


SIGN No. W-012  
(ASTM-11)

AWFR

EXTRUDED ALUMINUM R/R  
ADVANCE WARNING SIGN  
c/w 300mm YELLOW FLASHERS

2440 x 1220



SIGN No. W-010  
(ASTM-11)

G-007 ROAD NAME SIGN (TYP.)

HIGHWAY X G7SN (<70km/h)

G-007 OH ROAD NAME SIGN (TYP.)

HIGHWAY X G7SN (≥70km/h)

G-008 ROAD NAME SIGN (TYP.)

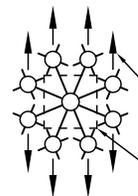
← ROAD X ROAD X → G8SN

NOTES TO DRAFTER

1. STRETCH SYMBOL WIDTH TO SUIT LENGTH OF NAME(S) ON SIGN
2. THESE SYMBOLS FOR USE ON POLE ARMS ONLY



HIMAST1



NOTE TO DRAFTER  
SPECIFY ORIENTATION  
OF OPTICAL SYSTEM  
WITH ARROW

NOTE TO DRAFTER:  
SHOW OUTLINE OF  
CONCRETE BASE

HIMAST2

\*\* DENOTES BLOCK IS DYNAMIC

CONDUIT CALLOUTS, SIGNS & HIMAST



MINISTRY OF TRANSPORTATION  
AND INFRASTRUCTURE  
ELECTRICAL SERVICES DIVISION

2018

DRAFTING STANDARD DRAWING NUMBER

700.1-DS-3

ALL EQUIPMENT IS NEW  
EXCEPT WHERE NOTED

NEW  
(USED WHEN REVISION HAS  
MOSTLY NEW EQUIPMENT BEING  
ADDED. INCLUDED ON ALL  
SHEETS, IF APPLICABLE)

ALL EQUIPMENT IS EXISTING  
EXCEPT WHERE NOTED

EXIST  
(USED WHEN REVISION HAS  
MOSTLY EXISTING EQUIPMENT.  
INCLUDED ON ALL SHEETS, IF  
APPLICABLE)

ALL DIMENSIONS ARE IN MILLIMETERS  
EXCEPT WHERE NOTED

DIM  
(INCLUDED ON ALL SHEETS)

DO NOT USE THIS DRAWING FOR  
PAVEMENT MARKING OR  
SIGNING STANDARDS

PAINT  
(INCLUDED ON ALL SITE PLAN SHEETS)

POSTED SPEED LIMIT X km/h

POST  
(INCLUDED ON ALL SITE PLAN SHEETS)

SEE "STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION"  
FOR APPLICABLE STANDARD DRAWINGS

STAND  
(INCLUDED ON ALL SHEETS)

\*\* DENOTES BLOCK IS DYNAMIC

FOR MINISTRY USE ONLY  
REFER TO DRAWING SERIES TE-X  
FOR CONTINUATION OF LIGHTING

CONTINUE  
(USED IF LIGHTING CONTINUES ON ANOTHER MOTI  
ELECTRICAL DRAWING)

REFER TO SHEET X  
FOR ELEVATIONS

ELEV  
(ON ALL SITE PLAN SHEETS)

X SIGNAL DISPLAYS  
ARE LED

LED

REFER TO SHEET 1 FOR LEGEND

REF1  
(INCLUDED ON ALL SHEETS, EXCEPT SHEET 1)

REFER TO SHEET X FOR NOTES

REF1  
(INCLUDED ON ALL SHEETS, EXCEPT THE ONE WITH  
THE STANDARD NOTE BLOCK)

FOR MINISTRY USE ONLY  
THIS DRAWING SERIES SUPERSEDES  
DRAWING SERIES TE-X

SUPERSED  
(USED WHEN THE PREVIOUS DRAWING SERIES IS  
COMPLETELY SUPERSEDED)

FOR MINISTRY USE ONLY  
REFER TO DRAWING SERIES TE-XXX  
FOR PREVIOUS REVISION

REFREV  
(USED WHEN THE PREVIOUS DRAWING SERIES IS ONLY  
PARTIALLY SUPERSEDED)

NOTE:  
EQUIPMENT SHOWN:  
..... TO BE REMOVED  
----- TO BE ADDED

WDNOTES  
(USED WHEN WIRING DIAGRAM IS MODIFIED)

\*\* DENOTES BLOCK IS DYNAMIC

intersection roadway lighting criteria \*\*

INTERSECTION\_CRITERIA

INTERSECTION LIGHTING DESIGN CRITERIA		
INTERSECTION LOCATION	HWY AT CROSS STREET	
ROAD DESIGNATION	.	
PEDESTRIAN CONFLICT	.	
WATTAGE/TYPE/ LUMINAIRE MANUFACTURER/ MODEL NUMBER		
	RECOMMENDED LUMINANCE	ACHIEVED LUMINANCE
ILLUMINATION LEVEL (AVG.)	X	X
UNIFORMITY RATIO (AVG:MIN)	X:X	X:X

NOTE: BASED ON IESNA RP-8-18 (TABLE 12-1)

ROADWAY\_CRITERIA

ROADWAY LIGHTING DESIGN CRITERIA		
INTERSECTION LOCATION	ROADWAY	
ROAD DESIGNATION	.	
PEDESTRIAN CONFLICT	.	
WATTAGE/TYPE/ LUMINAIRE MANUFACTURER/ MODEL NUMBER		
	RECOMMENDED LUMINANCE	ACHIEVED LUMINANCE
LUMINANCE (AVG)	X	X
VEILING LUMINANCE (MIN:AVG)	X:X	X:X
UNIFORMITY RATIO (AVG:MIN)	X:X	X:X

NOTE: BASED ON IESNA RP-8-18 (TABLE 11-1)

LED\_LIST

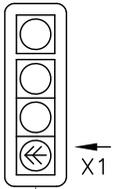
LED LUMINAIRE PRODUCT LIST				
MANUFACTURER	MODEL No.	WATTAGE	DISTRIBUTION TYPE	QUANTITY
XXX	XXXX-X-XXX	XXXW	X	X
XXX	XXXX-X-XXX	XXXW	X	X

LED LUMINAIRE LEGEND

- 
 XXX ← LUMINAIRE NUMBERING  
 XXXW ← WATTAGE  
 LED ← LIGHT SOURCE  
 (RX) ← DISTRIBUTION TYPE (OPTICS)

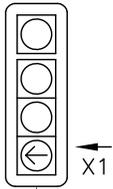
\*ALL NEW LUMINAIRES SHALL BE LED

LIGHTING CRITERIA & LED LIST TABLES



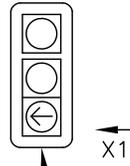
4 x 300mm  
WITH LED HEAD  
(YELLOW/GREEN ARROW)

PLFO  
PLUMBIZER MOUNT



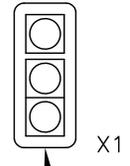
4 x 300mm  
GREEN ARROW LENS

PL4A  
PLUMBIZER MOUNT



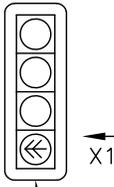
3 x 300mm  
GREEN ARROW LENS

PL3A  
PLUMBIZER MOUNT



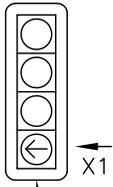
3 x 300mm (TYP.)

PL3  
PLUMBIZER MOUNT



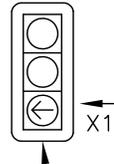
4 x 300mm  
WITH LED HEAD  
(YELLOW/GREEN ARROW)

SCFO



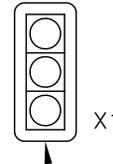
4 x 300mm  
GREEN ARROW LENS

SC4A



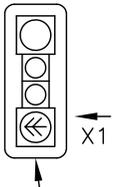
3 x 300mm  
GREEN ARROW LENS

SC3A



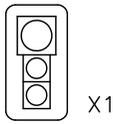
3 x 300mm (TYP.)

SC3

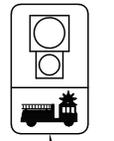


300mm LED HEAD  
(YELLOW/GREEN ARROW)

SCFO2

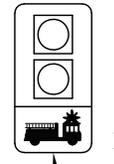


SCHWY



300mm - 200mm  
FIRE SIGNAL HEAD

FIRESN



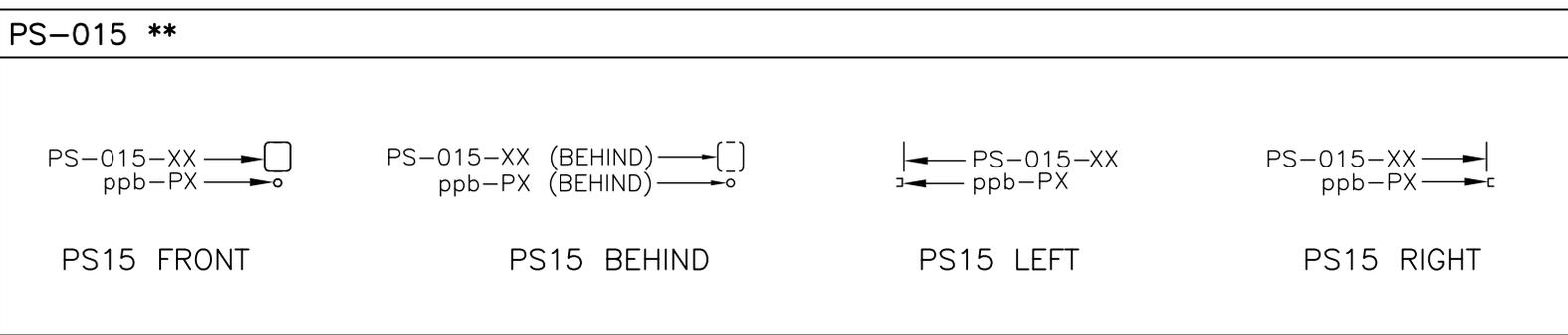
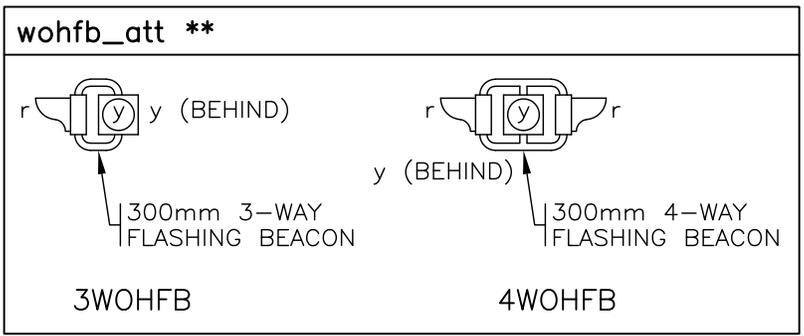
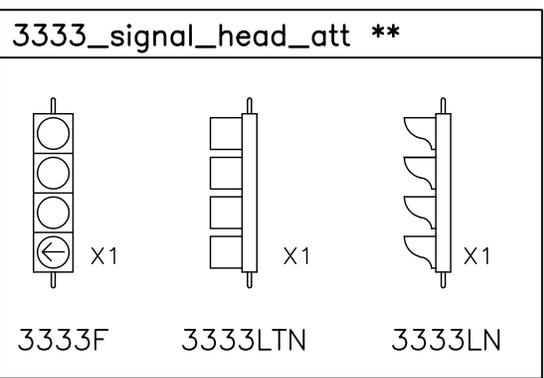
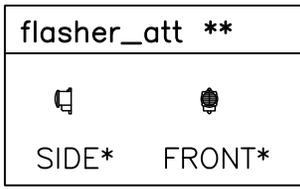
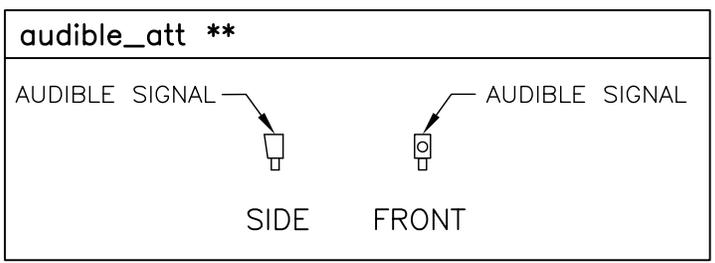
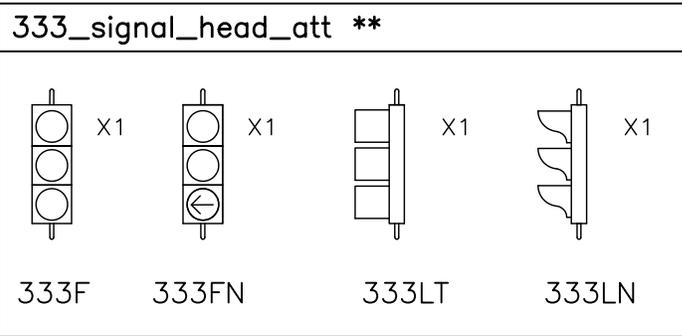
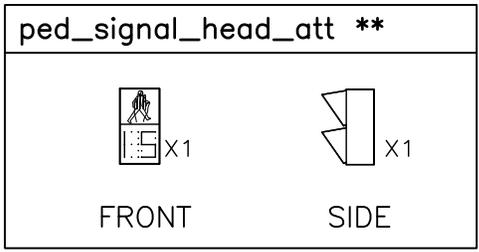
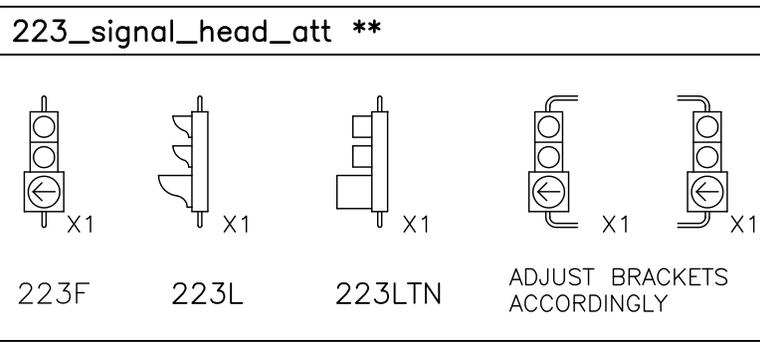
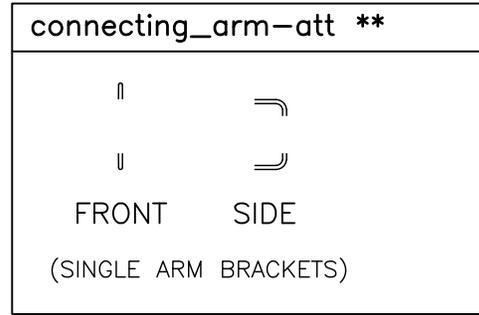
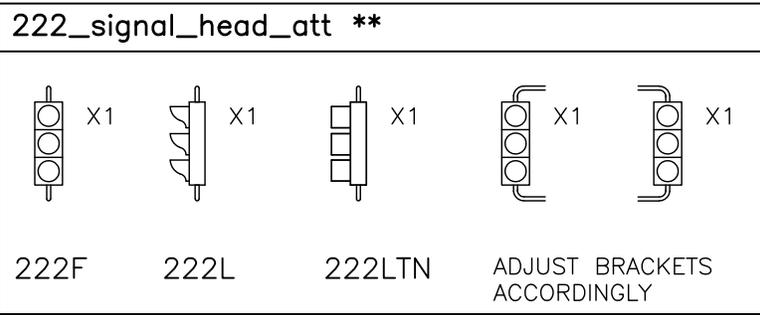
2 x 300mm FIRE  
SIGNAL HEAD

PLFIRESN



OHPS ELEVATION

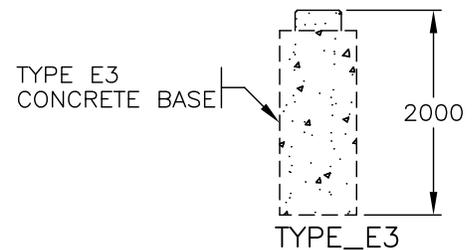
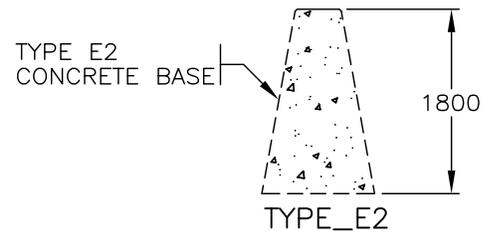
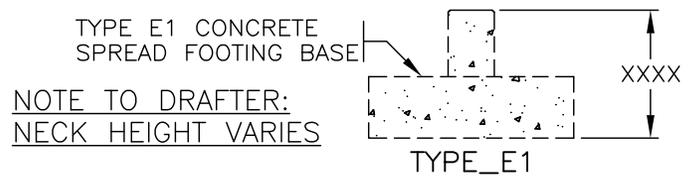
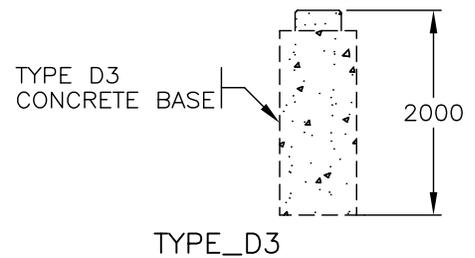
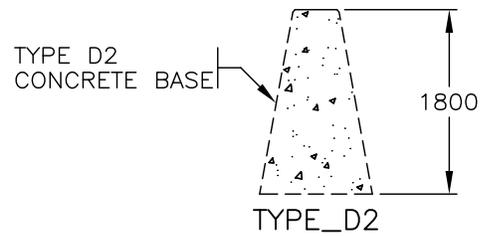
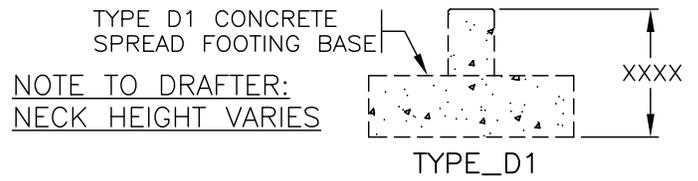
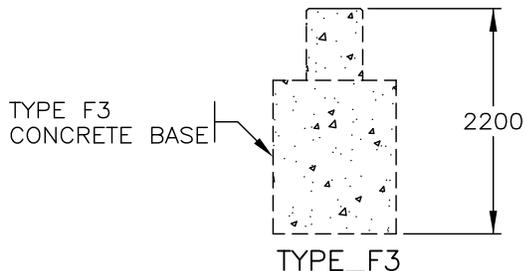
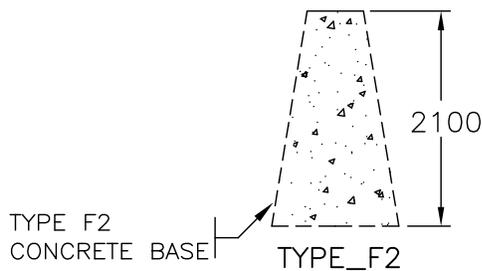
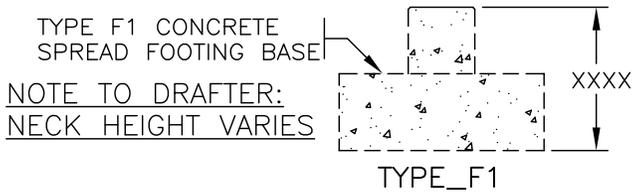
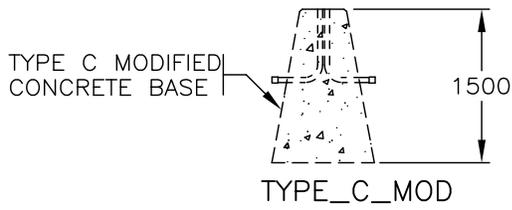
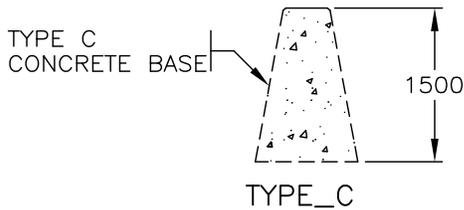
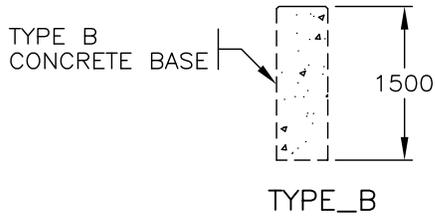
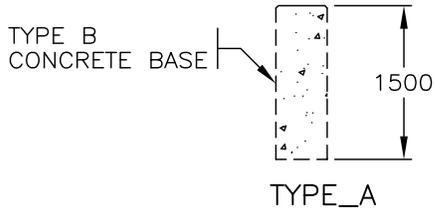
\*\* DENOTES BLOCK IS DYNAMIC



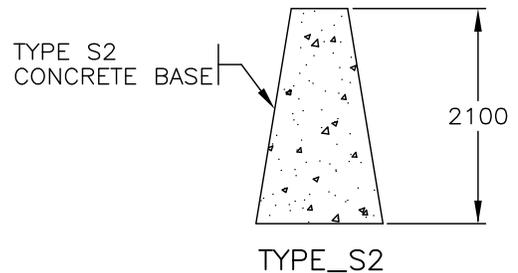
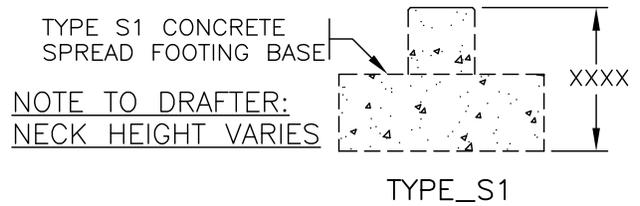
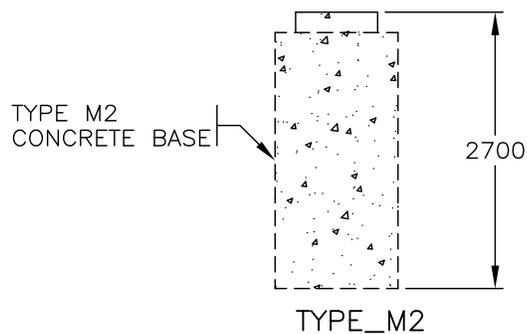
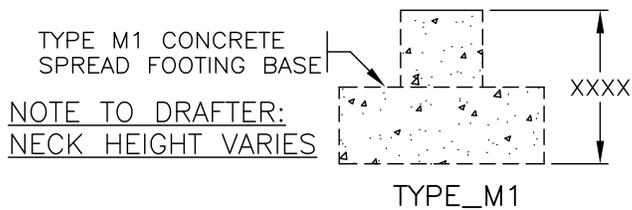
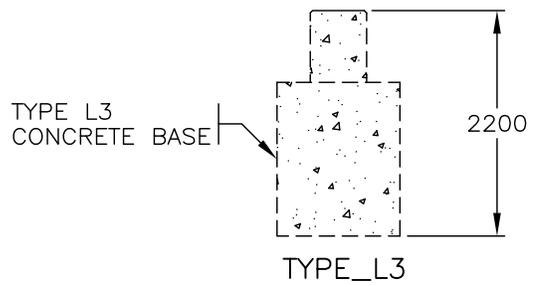
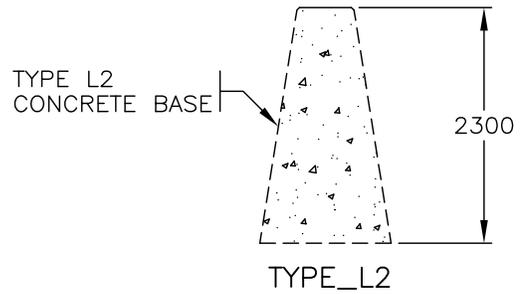
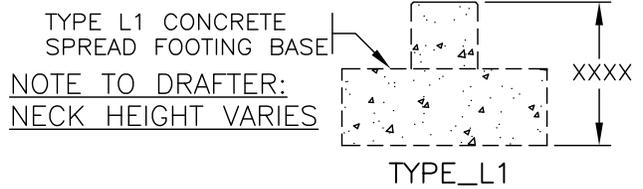
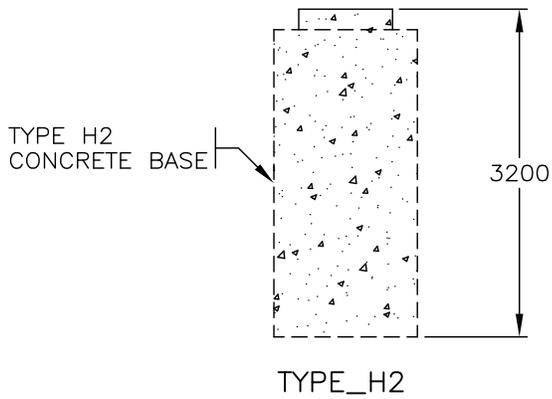
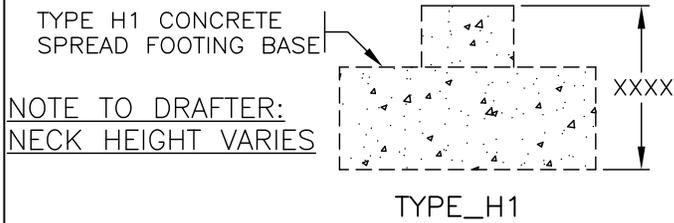
NOTE TO DRAFTER:  
\* INSERTION POINT = BASE OF POLE

\*\* DENOTES BLOCK IS DYNAMIC

SIGNAL HEADS & PED DISPLAYS



\*\* DENOTES BLOCK IS DYNAMIC



\*\* DENOTES BLOCK IS DYNAMIC

CONDUCTOR COLOR CODE	
ITEM	CONDUCTOR COLOR
LUMINAIRE CCT. A LUMINAIRE CCT. B	RED BLACK
ISLAND FLASHER	ORANGE
FLASHING BEACON	BLACK/RED/YELLOW
NEUTRAL	WHITE
GROUND/BOND	GREEN

CC1

CONDUCTOR COLOUR CODE		
ITEM	SIGNAL SECTION	CONDUCTOR COLOUR
A	RED YELLOW GREEN	RED YELLOW BLUE
PB	DON'T WALK WALK PUSH BUTTON	BROWN BLUE PURPLE/PURPLE (BROWN T.T.)
CONTROLLER POWER		BLACK
LUMINAIRE CCT. A LUMINAIRE CCT. B		RED BLACK
ISLAND FLASHER		ORANGE
NEUTRAL		WHITE
GROUND/BOND		GREEN
ADVANCE WARNING FLASHER No. A1		YELLOW BROWN
ADVANCE WARNING FLASHER No. A2		YELLOW(RED T.T.) BROWN

NOTE: T.T. DENOTES TAPE TRACER.

CC2

CONDUCTOR COLOUR CODE		
ITEM	SIGNAL SECTION	CONDUCTOR COLOUR
A1	RED YELLOW GREEN	RED YELLOW BLUE
A2	RED YELLOW GREEN	RED YELLOW (RED T.T.) BLUE
B1	RED YELLOW GREEN	RED BROWN BLUE
B2	RED YELLOW GREEN	RED BROWN (ORANGE T.T.) BLUE
Ax	RED YELLOW GREEN ARROW	RED (BLUE T.T.) YELLOW BLUE (WHITE T.T.)
Ay	RED YELLOW GREEN ARROW	RED (BLUE T.T.) YELLOW (RED T.T.) BLUE (WHITE T.T.)
Bx	RED YELLOW GREEN ARROW	RED (BLUE T.T.) BROWN BLUE (WHITE T.T.)
By	RED YELLOW GREEN ARROW	RED (BLUE T.T.) BROWN (ORANGE T.T.) BLUE (WHITE T.T.)
PA1	DON'T WALK WALK PUSH BUTTON	YELLOW BLUE PURPLE/PURPLE (YELLOW T.T.)
PA2	DON'T WALK WALK PUSH BUTTON	YELLOW (RED T.T.) BLUE PURPLE/PURPLE (RED T.T.)
PB1	DON'T WALK WALK PUSH BUTTON	BROWN BLUE PURPLE/PURPLE (BROWN T.T.)
PB2	DON'T WALK WALK PUSH BUTTON	BROWN (ORANGE T.T.) BLUE PURPLE/PURPLE (ORANGE T.T.)
CONTROLLER POWER		BLACK
LUMINAIRE CCTS. A&B LUMINAIRE CCTS. B&D		RED BLACK
NEUTRAL		WHITE
GROUND/BOND		GREEN

NOTE: T.T. DENOTES TAPE TRACER.

CC3

CONDUCTOR COLOR CODE		
ITEM	SIGNAL SECTION	CONDUCTOR COLOR
A1	RED YELLOW YELLOW ARROW GREEN ARROW	RED YELLOW BLUE ORANGE (WHITE T.T.) BLUE (WHITE T.T.)
A2	RED YELLOW GREEN	RED YELLOW(RED T.T.) BLUE
B1	RED YELLOW YELLOW ARROW GREEN ARROW	RED BROWN BLUE ORANGE (WHITE T.T.) BLUE (WHITE T.T.)
B2	RED YELLOW GREEN	RED BROWN (ORANGE T.T.) BLUE
PA1	DON'T WALK WALK PUSH BUTTON	YELLOW BLUE PURPLE/PURPLE(YELLOW T.T.)
PA2	DON'T WALK WALK PUSH BUTTON	YELLOW(RED T.T.) BLUE PURPLE/PURPLE(RED T.T.)
PB1	DON'T WALK WALK PUSH BUTTON	BROWN BLUE PURPLE/PURPLE (BROWN T.T.)
PB2	DON'T WALK WALK PUSH BUTTON	BROWN (ORANGE T.T.) BLUE PURPLE/PURPLE (ORANGE T.T.)
CONTROLLER POWER		BLACK
LUMINAIRE CCTS. A&G LUMINAIRE CCTS. B&D		RED BLACK
EMERG. PRE-EMPT. CABINET PWR.		BLACK/WHITE
EMERG. INDICATION LIGHT: WHITE EMERG. INDICATION LIGHT: BLUE		RED RED (WHITE T.T.)
NEUTRAL		WHITE
GROUND/BOND		GREEN

NOTE: T.T. DENOTES TAPE TRACER

CC4

\*\* DENOTES BLOCK IS DYNAMIC

CONDUCTOR COLOR CODE		
ITEM	SIGNAL SECTION	CONDUCTOR COLOR
A1	RED YELLOW GREEN	RED YELLOW BLUE
A2	RED YELLOW GREEN	RED YELLOW(RED T.T.) BLUE
B	RED YELLOW GREEN GREEN ARROW	RED BROWN BLUE BLUE (WHITE T.T.)
C	RED YELLOW GREEN GREEN ARROW	RED ORANGE BLUE BLUE (WHITE T.T.)
PA1	DON'T WALK WALK PUSH BUTTON	YELLOW BLUE PURPLE/PURPLE(YELLOW T.T.)
PA2	DON'T WALK WALK PUSH BUTTON	YELLOW(RED T.T.) BLUE PURPLE/PURPLE(RED T.T.)
PB	DON'T WALK WALK PUSH BUTTON	BROWN BLUE PURPLE/PURPLE (BROWN T.T.)
PC	DON'T WALK WALK PUSH BUTTON	BROWN (ORANGE T.T.) BLUE PURPLE/PURPLE (ORANGE T.T.)
CONTROLLER POWER		BLACK
LUMINAIRE CCTS. A&G LUMINAIRE CCTS. B&D		RED BLACK
NEUTRAL		WHITE
GROUND/BOND		GREEN

CONNECT IN  
PARALLEL FROM  
BASE OF POLE  
TO SIGNAL HEAD

CONNECT IN  
PARALLEL FROM  
BASE OF POLE  
TO SIGNAL HEAD

CC5

NOTE: T.T. DENOTES TAPE TRACER

CONDUCTOR COLOR CODE		
ITEM	SIGNAL SECTION	CONDUCTOR COLOR
A1	RED YELLOW GREEN	RED YELLOW BLUE
A2	RED YELLOW GREEN	RED YELLOW(RED T.T.) BLUE
B1	RED YELLOW GREEN	RED BROWN BLUE
B2	RED YELLOW GREEN	RED BROWN(ORANGE T.T.) BLUE
PA1(a)	DON'T WALK WALK PUSH BUTTON	YELLOW BLUE PURPLE/PURPLE(YELLOW T.T.)
PA2(a)	DON'T WALK WALK PUSH BUTTON	YELLOW(RED T.T.) BLUE PURPLE/PURPLE(RED T.T.)
PB1(a)	DON'T WALK WALK PUSH BUTTON	BROWN BLUE PURPLE/PURPLE (BROWN T.T.)
PB2(a)	DON'T WALK WALK PUSH BUTTON	BROWN (ORANGE T.T.) BLUE PURPLE/PURPLE (ORANGE T.T.)
CONTROLLER POWER		BLACK
LUMINAIRE CCTS. A&G LUMINAIRE CCTS. B&D		RED BLACK
NEUTRAL		WHITE
GROUND/BOND		GREEN

CC6

NOTE: T.T. DENOTES TAPE TRACER  
(a) DENOTES AUDIBLE SIGNAL

EMERGENCY PRE-EMPTION CONDUCTOR LABELLING			
ITEM	LABEL	COLOUR	CONDUCTOR TYPE
EMERG. PRE-EMPT. ENCLOSURE PWR.	N/A	BLACK/WHITE	RW90
EMERG. PRE-EMPT. SENSOR ØA1	S1	N/A	BELDEN 8770
EMERG. PRE-EMPT. SENSOR ØA2	S2	N/A	BELDEN 8770
EMERG. PRE-EMPT. SENSOR ØB1	S3	N/A	BELDEN 8770
EMERG. PRE-EMPT. SENSOR ØB2	S4	N/A	BELDEN 8770
WHITE EMERG. INDICATION LIGHT ØA1 BLUE EMERG. INDICATION LIGHT ØA1	PE-A1-WH PE-A1-BL	RED RED (WHITE T.T.)	RW90 RW90
WHITE EMERG. INDICATION LIGHT ØA2 BLUE EMERG. INDICATION LIGHT ØA2	PE-A2-WH PE-A2-BL	RED RED (WHITE T.T.)	RW90 RW90
WHITE EMERG. INDICATION LIGHT ØB1 BLUE EMERG. INDICATION LIGHT ØB1	PE-B1-WH PE-B1-BL	RED RED (WHITE T.T.)	RW90 RW90
WHITE EMERG. INDICATION LIGHT ØB2 BLUE EMERG. INDICATION LIGHT ØB2	PE-B2-WH PE-B2-BL	RED RED (WHITE T.T.)	RW90 RW90
EMERG. PRE-EMPT. INTERTIE ØA1	PE-A1=INT	N/A	BELDEN 9388
EMERG. PRE-EMPT. INTERTIE ØA2	PE-A2=INT	N/A	
EMERG. PRE-EMPT. INTERTIE ØB1	PE-B1=INT	N/A	
EMERG. PRE-EMPT. INTERTIE ØB2	PE-B2=INT	N/A	

NOTE: T.T. DENOTES TAPE TRACER.  
REFER TO SP635-2.5.7 FOR NOTES ON CONDUCTOR LABELLING.

CC7

\*\* DENOTES BLOCK IS DYNAMIC



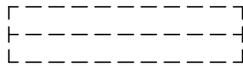
RNDLOOP (ROUND DETECTOR LOOP)



DLOOP (DIAMOND DETECTOR LOOP)



PLOOP (PRE-FORMED DETECTOR LOOP)



QUADLOOP (QUADRAPOLE DETECTOR LOOP; OBSOLETE)



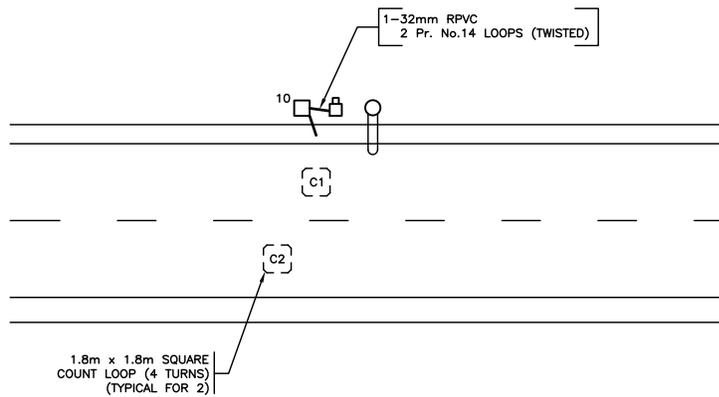
RECLOOP (RECTANGULAR DETECTOR LOOP; STRETCH TO SUIT LANE)



DLL (DETECTOR LOOP LEAD)

NOTE TO DRAFTER:

INSERT SYMBOLS AT HALF SCALE FOR 1:500 SITE PLANS



CNTPOST (COUNT STATION POST)



CNTLOOP (COUNT LOOP)

DETECTOR LOOP SYMBOLS AND DETAILS



DETECTOR LOOP TABLE						
LOOP			INDUCTANCE			PHASE
LOOP No.	SIZE	TURN	LOOP ( $\mu$ h)	LEAD ( $\mu$ h)	TOTAL ( $\mu$ h)	
L1	1.8 x 1.8	4	120	X	X	X
L2	1.8 x 1.8	4	120	X	X	X
L3	1.8 x 1.8	4	120	X	X	X
L4	1.8 x 1.8	4	120	X	X	X
L5	1.8 x 1.8	4	120	X	X	X
L6	1.8 x 1.8	4	120	X	X	X
L7	1.8 x 1.8	4	120	X	X	X
L8	1.8 x 1.8	4	120	X	X	X
L9	1.8 x 1.8	4	120	X	X	X
L10	1.8 x 1.8	4	120	X	X	X
L11	1.8 x 1.8	4	120	X	X	X
L12	1.8 x 1.8	4	120	X	X	X
L13	1.8 x 1.8	4	120	X	X	X
L14	1.8 x 1.8	4	120	X	X	X
L15	1.8 x 1.8	4	120	X	X	X
L16	1.8 x 1.8	4	120	X	X	X
L17	1.8 x 1.8	4	120	X	X	X
L18	1.8 x 1.8	4	120	X	X	X
L19	1.8 x 1.8	4	120	X	X	X
L20	1.8 x 1.8	4	120	X	X	X
L21	1.8 x 1.8	4	120	X	X	X
L22	1.8 x 1.8	4	120	X	X	X
L23	1.8 x 1.8	4	120	X	X	X
L24	1.8 x 1.8	4	120	X	X	X
PL X	1.8 x 1.8	4	120	X	X	X
L X	1.8 DIA.	4	95	X	X	X
FL X						FUTURE
L X	1.8 x 1.8	4	120	X	X	COUNT
L X	1.8 x 1.8	4	120			
L X	1.8 x 7.6	2	207	X	un	X
L X	1.8 x X	X	X	X	X	COUNT

**NOTE:** – ROUND LOOPS MAY BE USED IN PLACE OF DIAMOND LOOPS AT THE DISCRETION OF THE CONTRACTOR  
 – PL DENOTES PREFORMED LOOP  
 – FL DENOTES FUTURE INSTALLATION

**NOTE TO DRAFTER:**  
 THE FIRST 24 LOOPS ARE FOR A TYPICAL INSTALLATION OF DIAMOND LOOPS FOR AN ACTUATED SIGNAL. THE REMAINING ARE EXAMPLES OF SITUATIONS THAT MAY ALSO BE ENCOUNTERED.

## NOTES

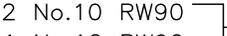
1. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE CURRENT STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION AND THE ELECTRICAL SPECIAL PROVISIONS ISSUED WITH THIS CONTRACT.
2. CONDUCTORS FROM JUNCTION BOX TO LUMINAIRE POLE SHALL BE:
 

2 No.10 RW90	}	50mm RPVC (UNLESS OTHERWISE NOTED)
1 No.12 RW90		
3. ALL CONDUITS FROM JUNCTION BOXES TO BASES ARE TO BE 50mm RPVC.
4. JUNCTION BOXES SHALL BE POSITIONED BEHIND OR, AS AN ALTERNATIVE, TO THE SIDE, BUT NOT IN FRONT OF POLES.
5. EACH SHIELDED CABLE SHALL RUN CONTINUOUS WITH NO SPLICES, FROM THE CONTROLLER TO THE RESPECTIVE LOOP.
6. ALL SIGNAL HEAD SECTIONS SHALL BE WIRED SEPARATELY FROM THE HANDHOLE OF THE POLE TO EACH HEAD INCLUDING A SEPARATE NEUTRAL AND BONDING CONDUCTOR FOR EACH HEAD.
7. LUMINAIRE NUMBERING EXAMPLE:    1A2  
 SERVICE No. – 1      CCT. LETTER – A      LUM. No. – 2
8. WHERE POSSIBLE, POLES SHALL BE POSITIONED WITH THE HANDHOLE IN THE BACK OR IF NOT POSSIBLE, ON THE DOWNSTREAM TRAFFIC SIDE.
9. ALL CONCRETE BASES AND JUNCTION BOX SYMBOLS ARE NOT TO SCALE.
10. THE CONTRACTOR SHALL NOT PRE-DRILL HOLES IN A SIGNAL POLE UNTIL AFTER THE BASE FOR THAT POLE HAS BEEN INSTALLED. THE CONTRACTOR SHALL ADVISE THE MINISTRY REPRESENTATIVE OF ANY ADJUSTMENTS MADE TO THE BASE LOCATION WHICH WILL AFFECT THE LOCATIONS OF HARDWARE TO BE MOUNTED ON THAT POLE PRIOR TO DRILLING.
11. WHERE THREE OR MORE SECONDARY/PEDESTRIAN HEADS ARE BEING MOUNTED ON THE POLE SHAFT, ORIENT THE PEDESTRIAN HEAD MOUNTING BRACKETS WITH THE WIREWAY ON TOP.
12. WHERE TWO OR MORE SECONDARY HEADS ARE BEING MOUNTED IN THE SAME SHAFT, ALL SECONDARY HEADS SHALL HAVE TUNNELS.
13. ALL NEW JUNCTION BOXES SHALL HAVE STEEL LIDS.
14. ALL CONDUCTORS SHALL BE RW90 STRANDED COPPER UNLESS SHOWN OTHERWISE.

NOTES1 (FOR SIGNAL & LIGHTING INSTALLATIONS)

\*\* DENOTES BLOCK IS DYNAMIC

## NOTES

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### NOTES 2 (FOR LIGHTING INSTALLATIONS)

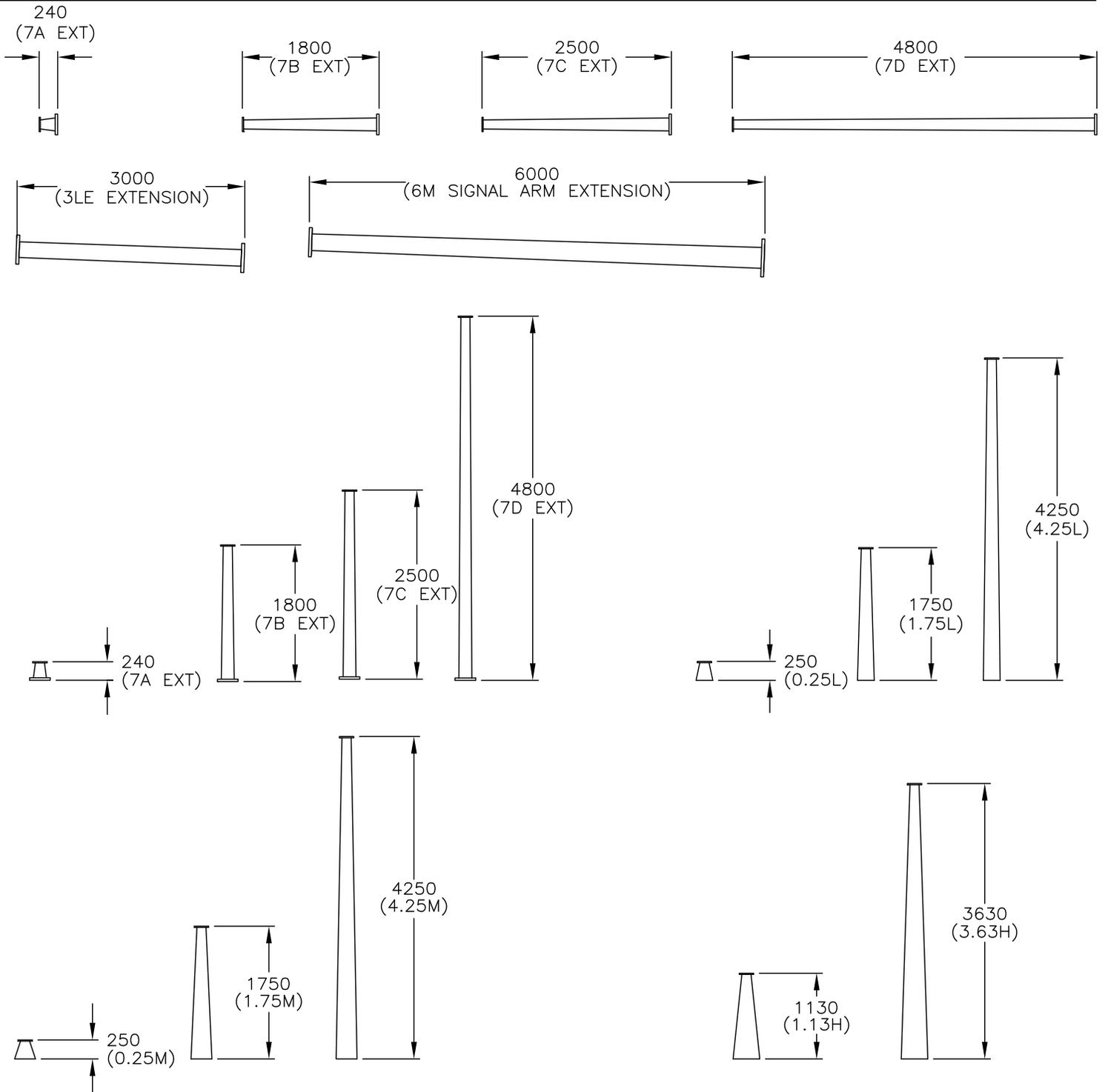
## NOTES

1. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE CURRENT STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION AND THE ELECTRICAL SPECIAL PROVISIONS ISSUED WITH THIS CONTRACT.
2. ALL CONDUITS FROM JUNCTION BOXES TO BASES ARE TO BE 50mm RPVC.
3. JUNCTION BOXES SHALL BE POSITIONED BEHIND OR, AS AN ALTERNATIVE, TO THE SIDE, BUT NOT IN FRONT OF POLES.
4. ALL CONCRETE BASES AND JUNCTION BOX SYMBOLS ARE NOT TO SCALE.
5. ALL NEW JUNCTION BOXES SHALL HAVE STEEL LIDS.

### NOTES 3 (FOR PRE-DUCTING INSTALLATIONS)

\*\* DENOTES BLOCK IS DYNAMIC

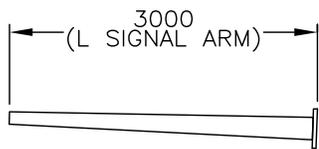
extensions\_att \*\*



\*\* DENOTES BLOCK IS DYNAMIC

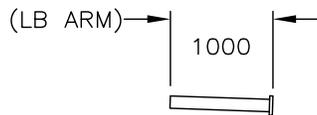
EXTENSIONS

**l\_arm\_att \*\***



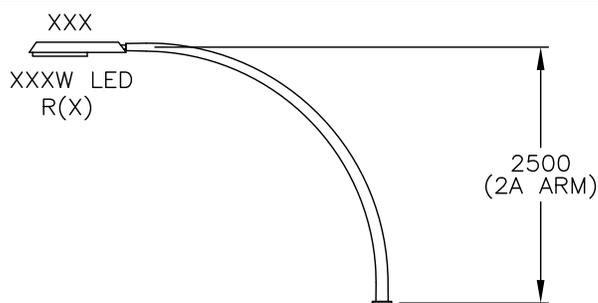
L ARM CAN VARY FROM 3000 TO 11000 IN 1000 INCREMENTS

**lb\_arm\_att\*\***

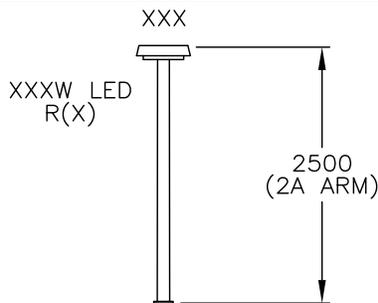


LB ARM CAN VARY FROM 1000, 2000 TO 2200

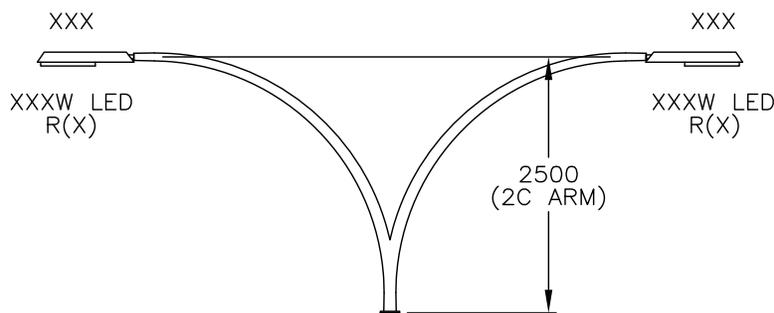
**type2\_arm\_att \*\***



2A\_ARM\_SIDE\_LED

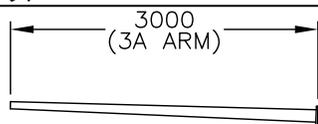


2A\_ARM\_FRONT\_LED

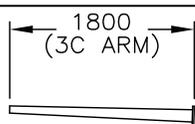


2C\_ARM\_FRONT\_LED

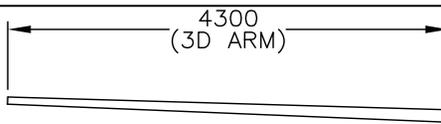
**type3\_arm\_att**



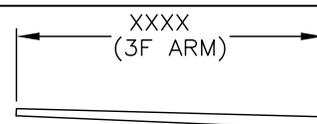
3A\_ARM



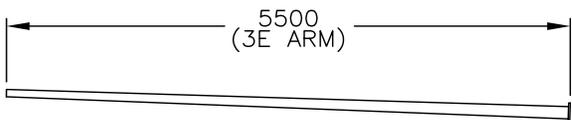
3C\_ARM



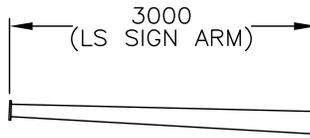
3D\_ARM



3F\_ARM  
(LENGTH VARIES FROM 0.3m TO 3.0m)



3E\_ARM

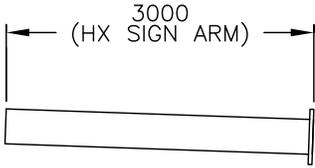


3LS\_ARM

**\*\* DENOTES BLOCK IS DYNAMIC**

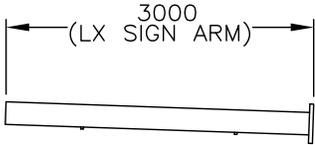
**ARMS**

hx\_arm\_att \*\*



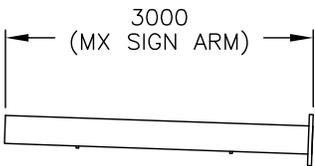
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IN 1000 INCREMENTS  
HX ARM CAN BE EITHER H1 OR H2

lx\_arm\_att \*\*



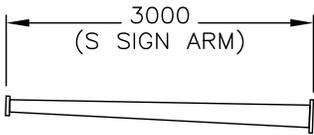
LX ARM CAN VARY FROM 3000 TO 11000  
IN 1000 INCREMENTS

mx\_arm\_att \*\*

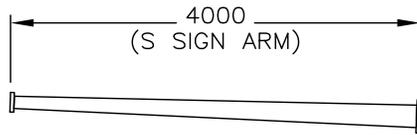


MX ARM CAN VARY FROM 3000 TO 11000  
IN 1000 INCREMENTS  
MX ARM CAN BE EITHER M1 OR M2

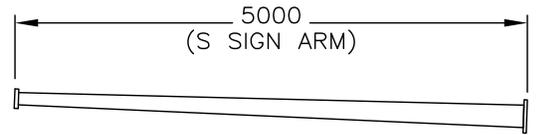
ss\_arm\_att \*\*



3000

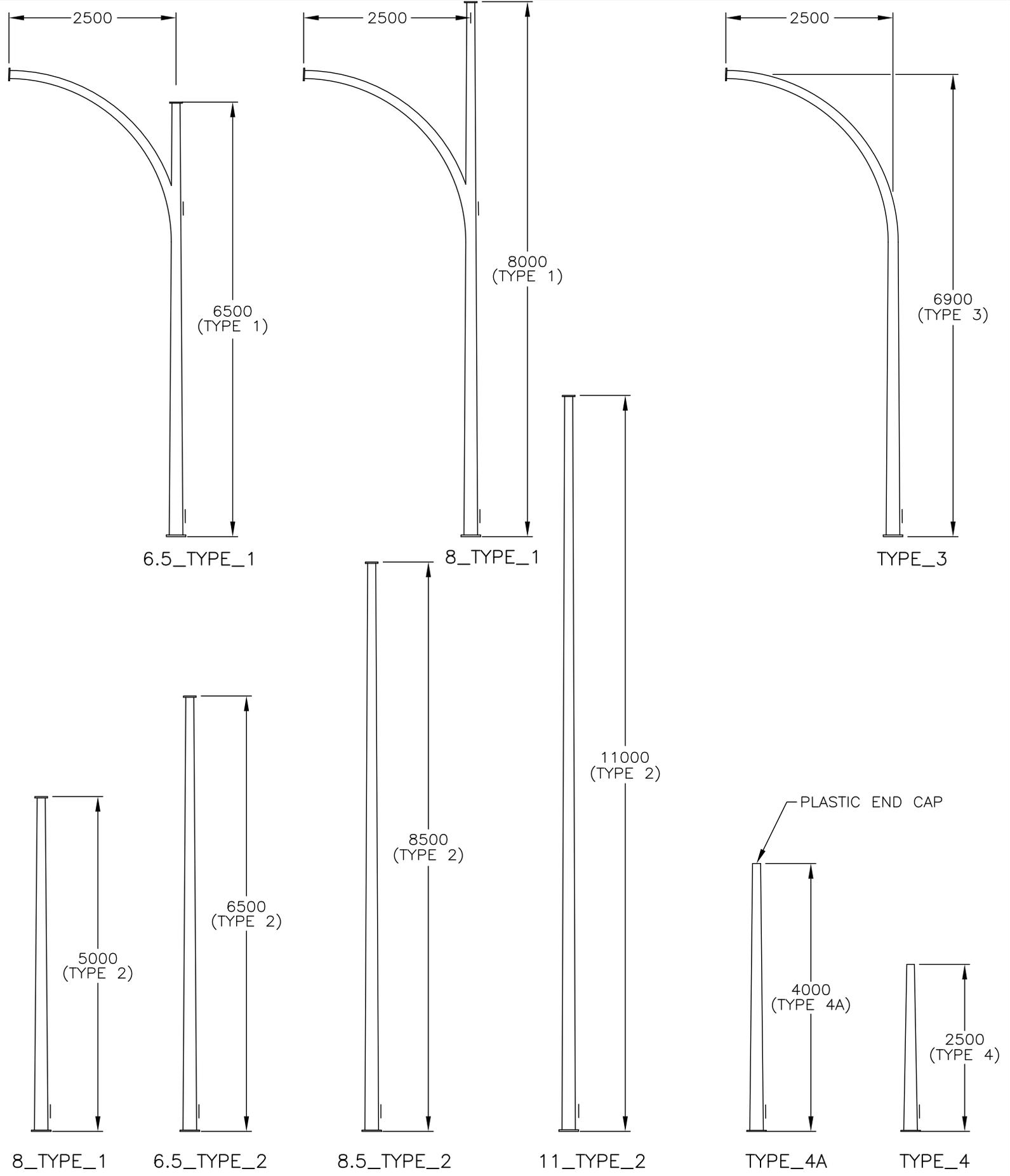


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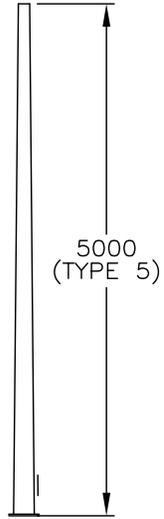
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\*\* DENOTES BLOCK IS DYNAMIC

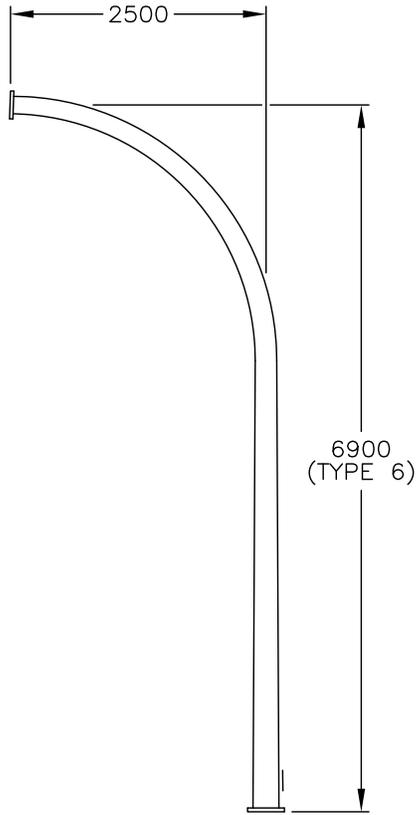


\*\* DENOTES BLOCK IS DYNAMIC

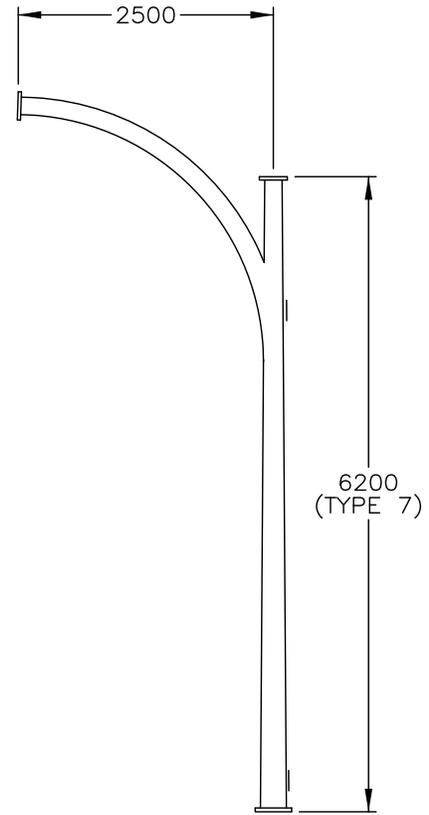
POLE SHAFTS (1 of 2)



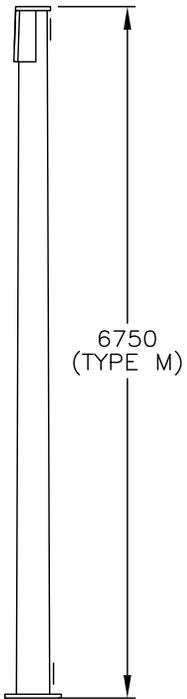
TYPE\_5



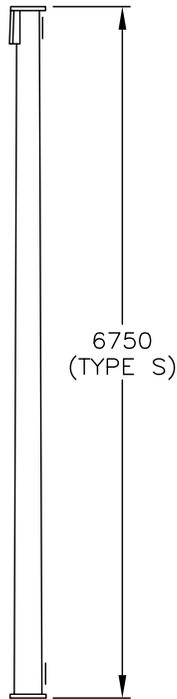
TYPE\_6



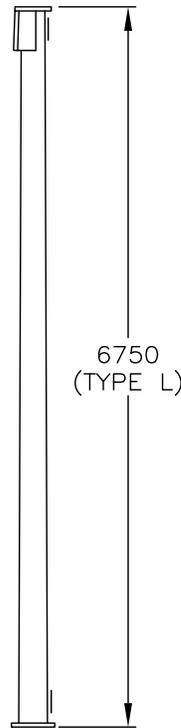
TYPE\_7



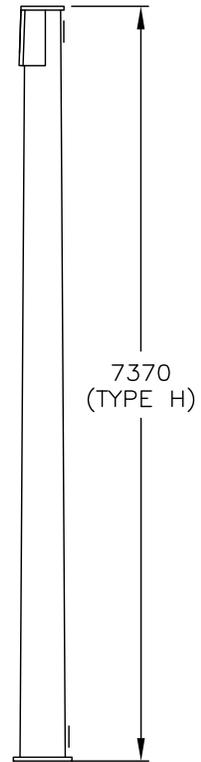
M\_SHAFT



S\_SHAFT



L\_SHAFT



H\_SHAFT

\*\* DENOTES BLOCK IS DYNAMIC

service\_panels\_att \*\*

ORIENT CLEVIS TO  
SUIT POWER SUPPLY

SERVICE PANEL No. 1  
120/240V (METERED)

DISTRIBUTION PANEL No. 1  
120/240V (METERED)

TO SERVICE DISCONNECT

SERVOH

SERVUG

service\_panels\_label \*\*

SERVICE PANEL No. X  
120/240V METER

SERVICE PANEL

DISTRIBUTION PANEL No. X  
120/240V METER

DISTRIBUTION PANEL

webcam\_ele\_att\*\*



PTZ



STATIONARY

SERVICE\_METER\_ATT

S E R V I C E

3 No. 3 - 32mm R.M.C.  
(SERVICE CONDUCTORS BY SERVICE PROVIDER)

SERVICE PROVIDER SERVICE METER

\*\* DENOTES BLOCK IS DYNAMIC

SERVICE PANELS & CAMERAS

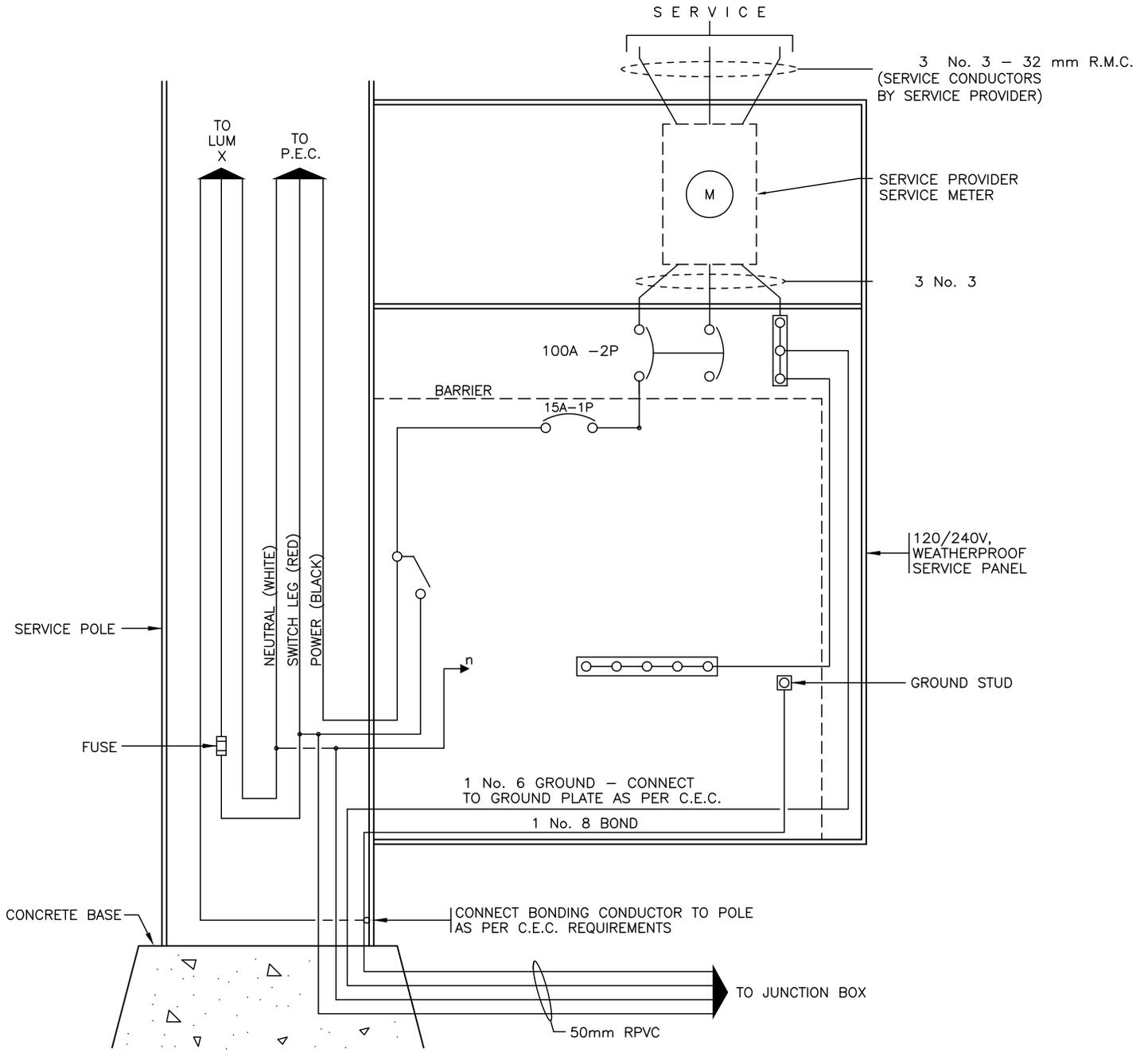


MINISTRY OF TRANSPORTATION  
AND INFRASTRUCTURE  
ELECTRICAL AND ITS ENGINEERING

2018

DRAFTING STANDARD DRAWING NUMBER

700.1-DS-22

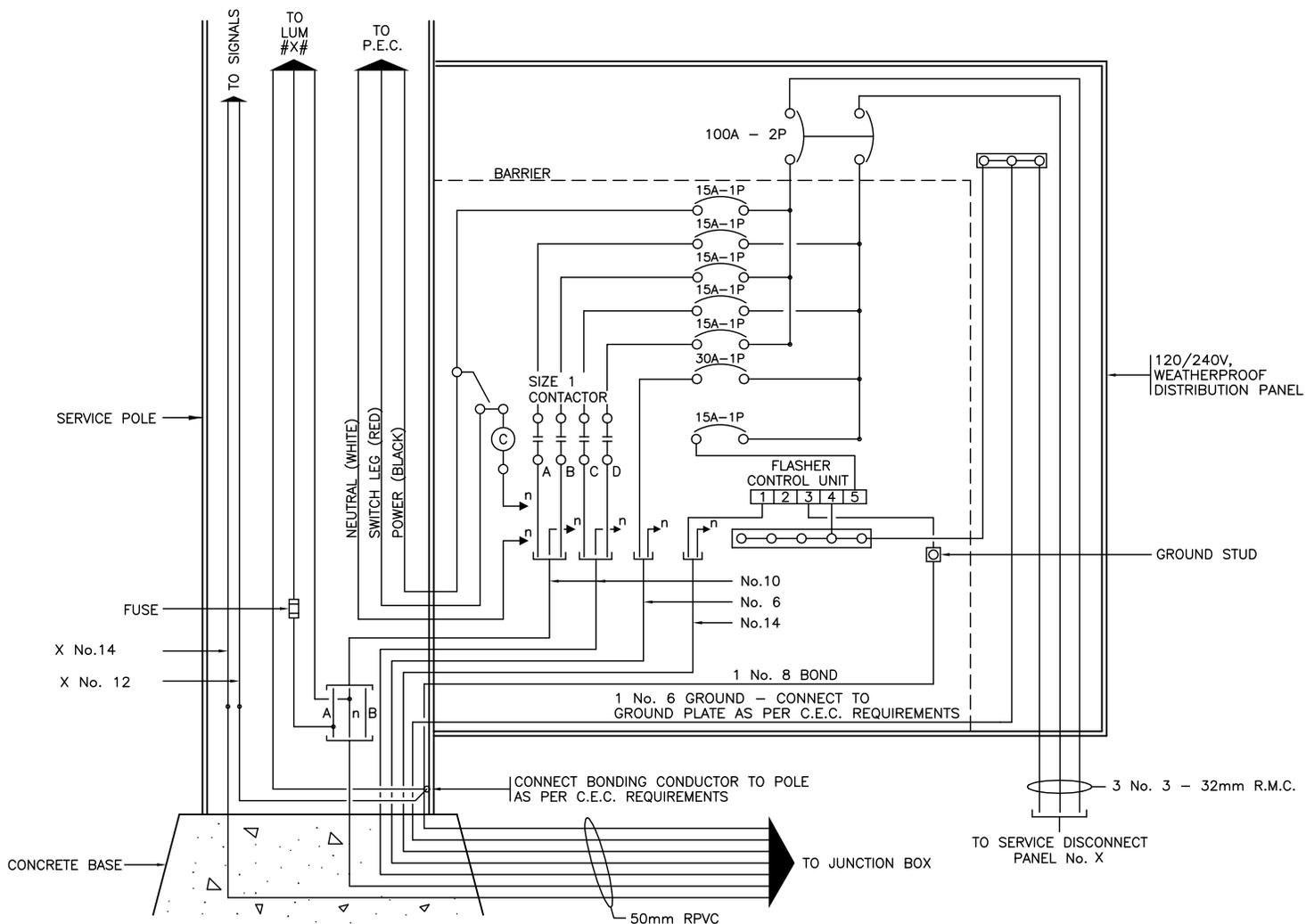


**WIRING DIAGRAM - SERVICE PANEL No.1**  
N.T.S.

WD1

\*\* DENOTES BLOCK IS DYNAMIC



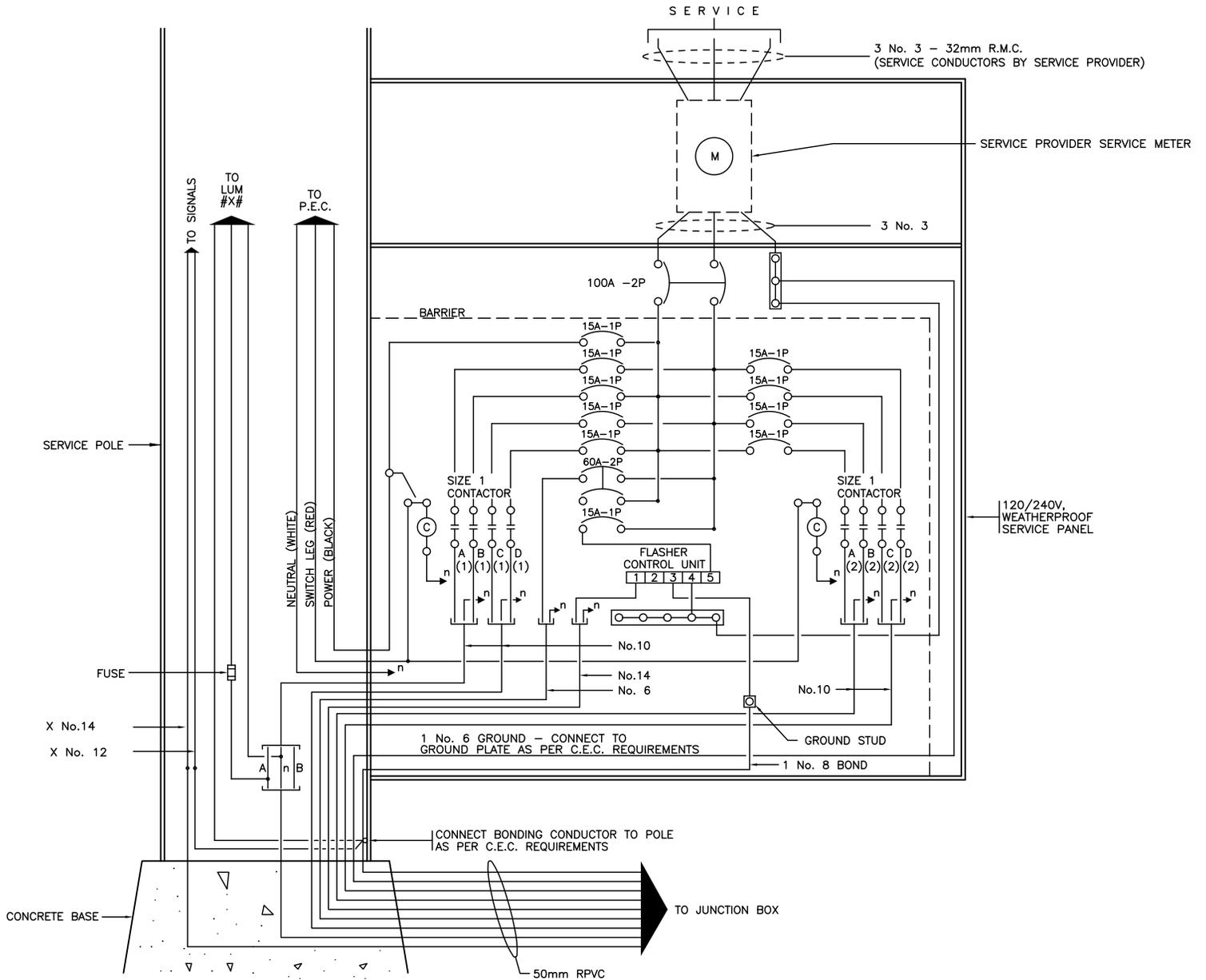


**WIRING DIAGRAM – DISTRIBUTION PANEL No. X**

N.T.S.

WD3

\*\* DENOTES BLOCK IS DYNAMIC

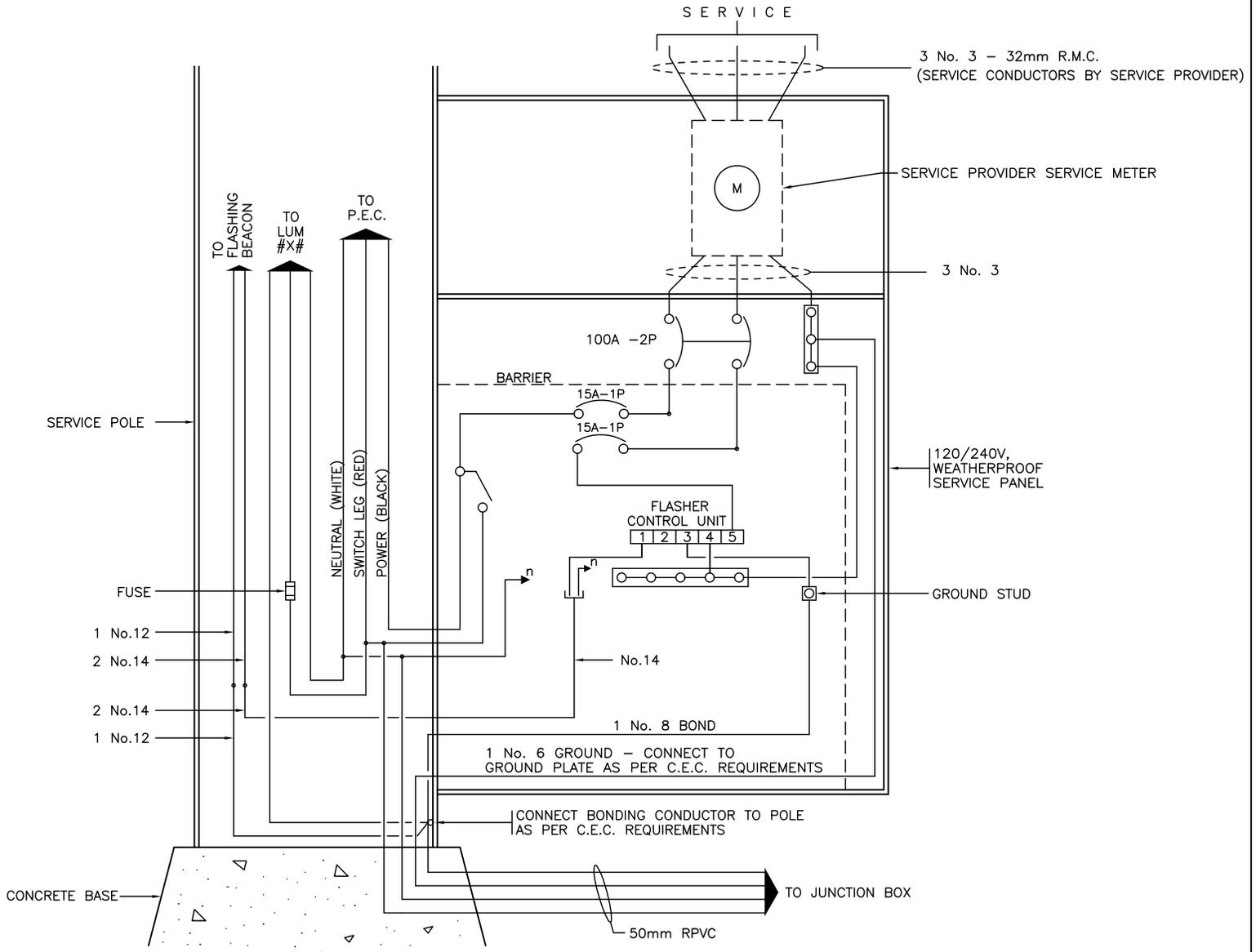


**WIRING DIAGRAM – SERVICE PANEL No. 1**

N.T.S.

WD4

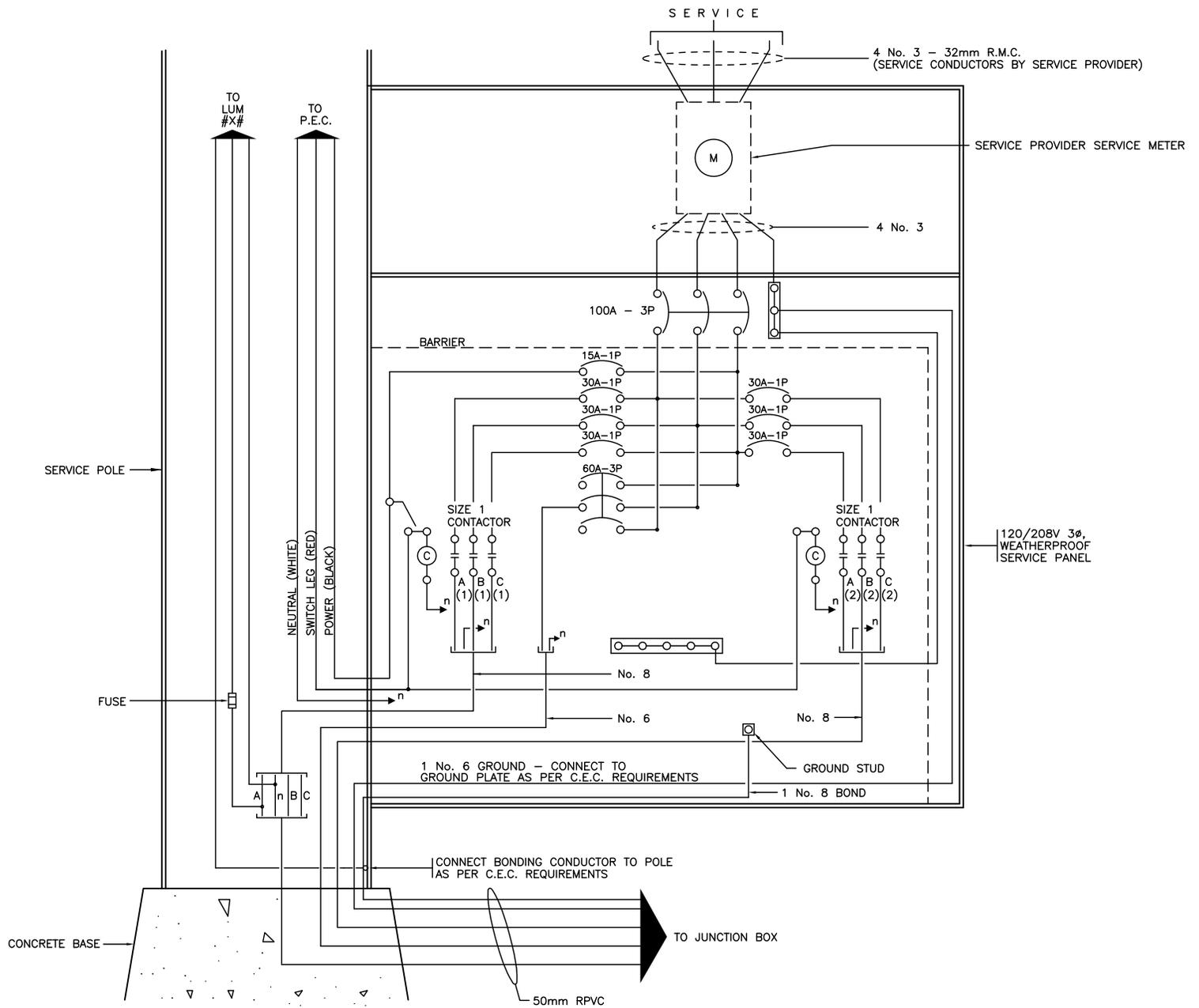
\*\* DENOTES BLOCK IS DYNAMIC



**WIRING DIAGRAM - SERVICE PANEL No. #**  
N.T.S.

WD5

\*\* DENOTES BLOCK IS DYNAMIC

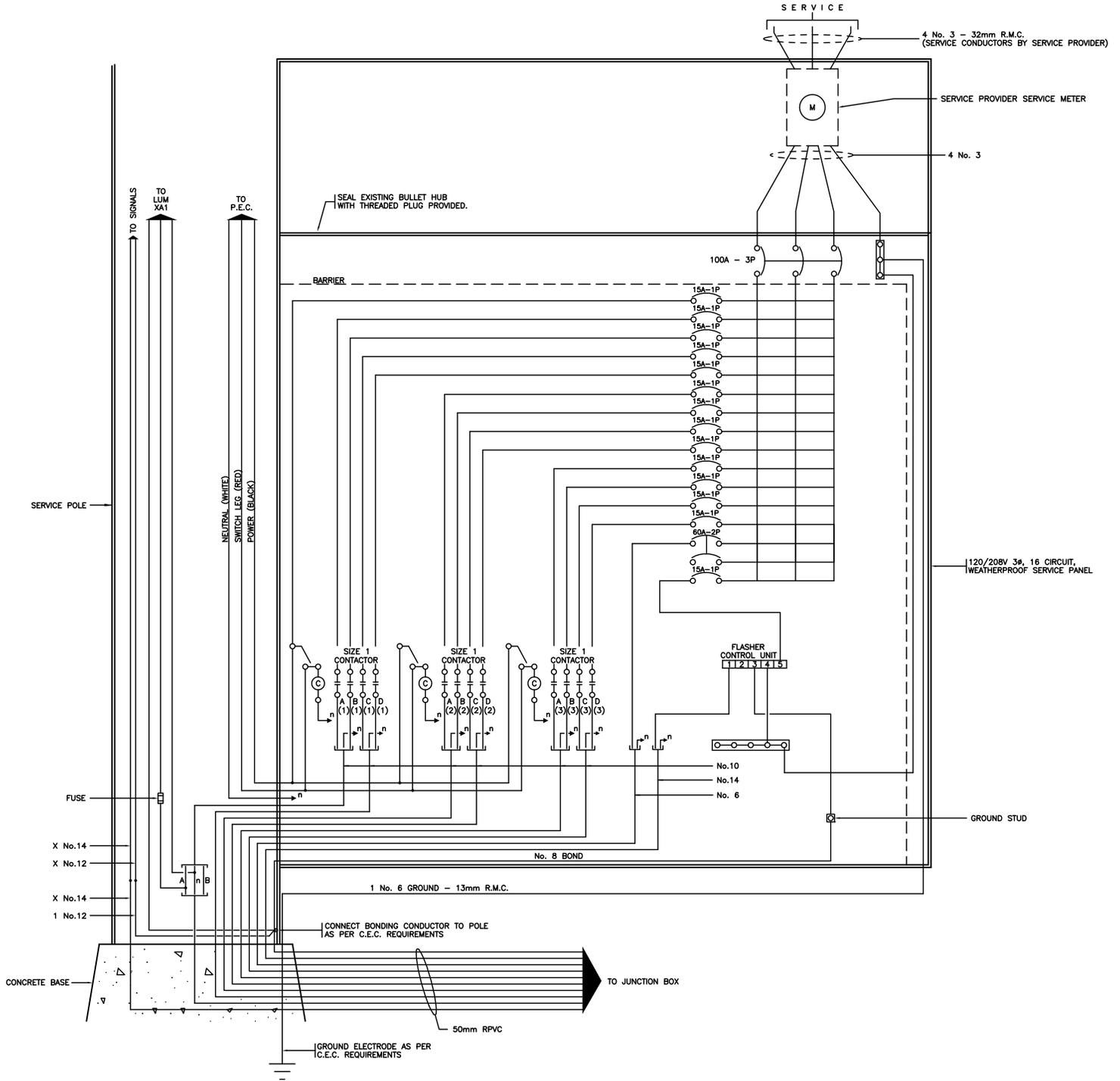


**WIRING DIAGRAM - SERVICE PANEL No. # (120/208V 3Ø)**

N.T.S.

WD6

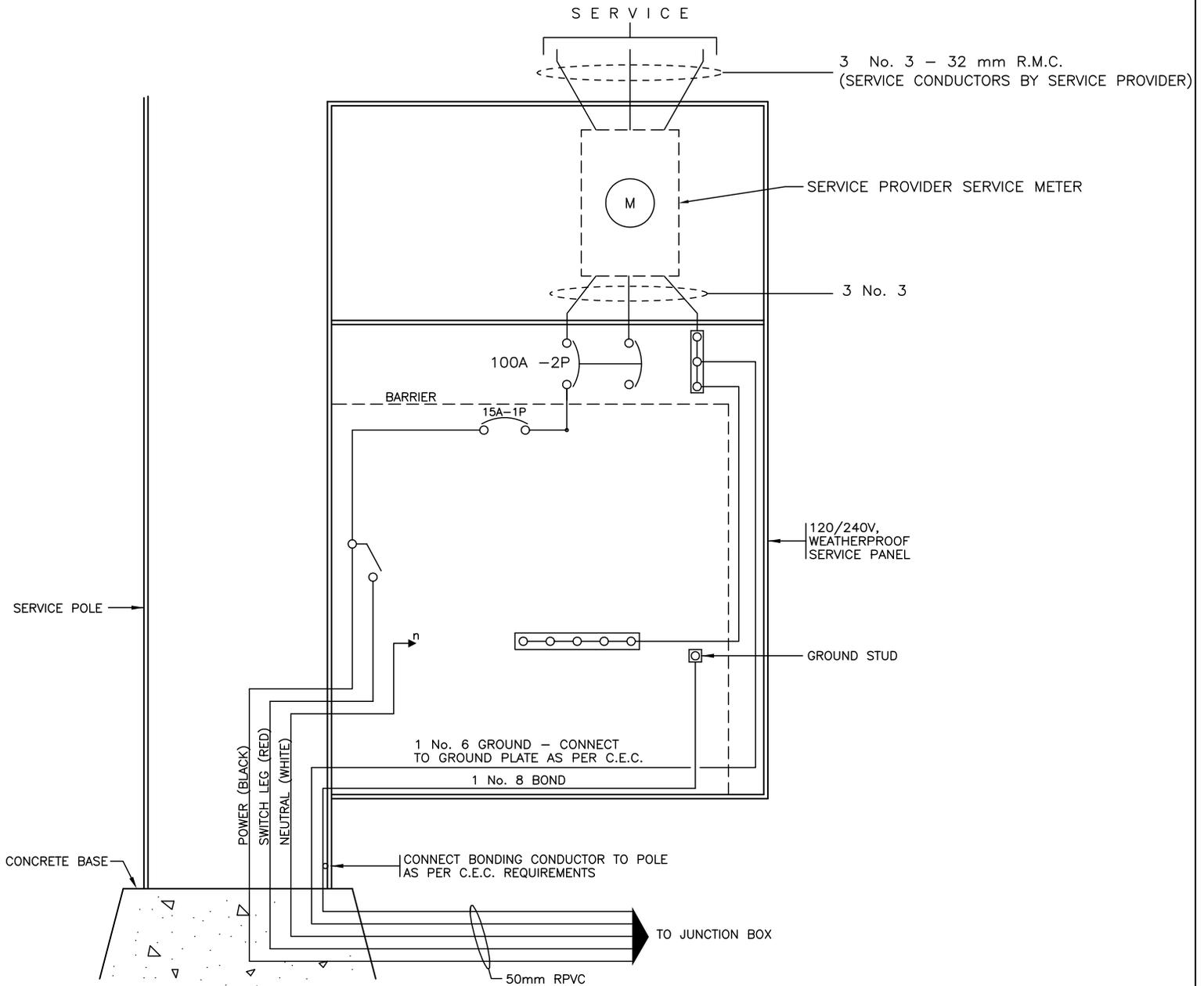
\*\* DENOTES BLOCK IS DYNAMIC



**WIRING DIAGRAM - SERVICE PANEL No. X (120/208 3Ø)**  
N.T.S.

WD7

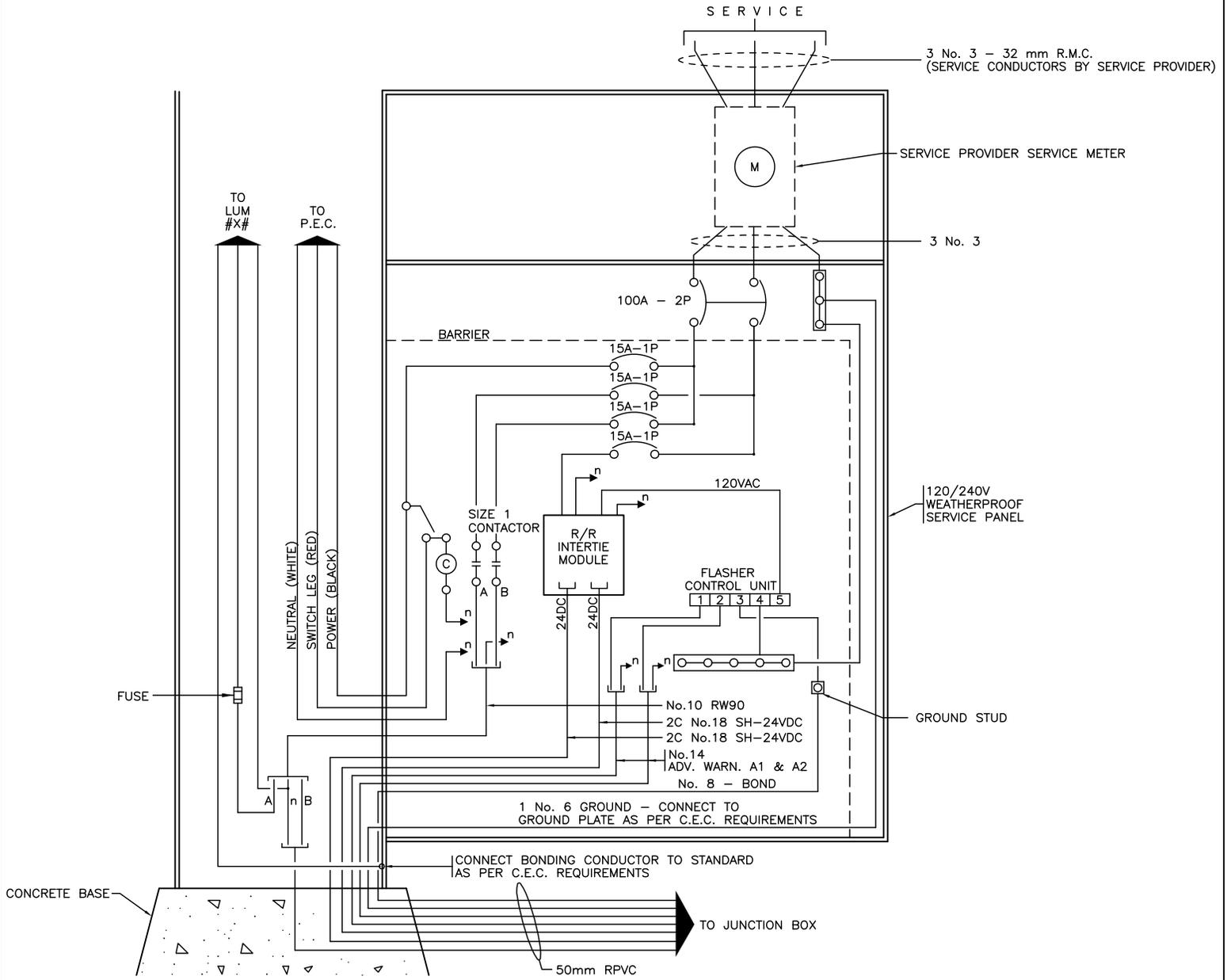
\*\* DENOTES BLOCK IS DYNAMIC



**WIRING DIAGRAM - SERVICE PANEL No. X**  
N.T.S.

WD8

\*\* DENOTES BLOCK IS DYNAMIC

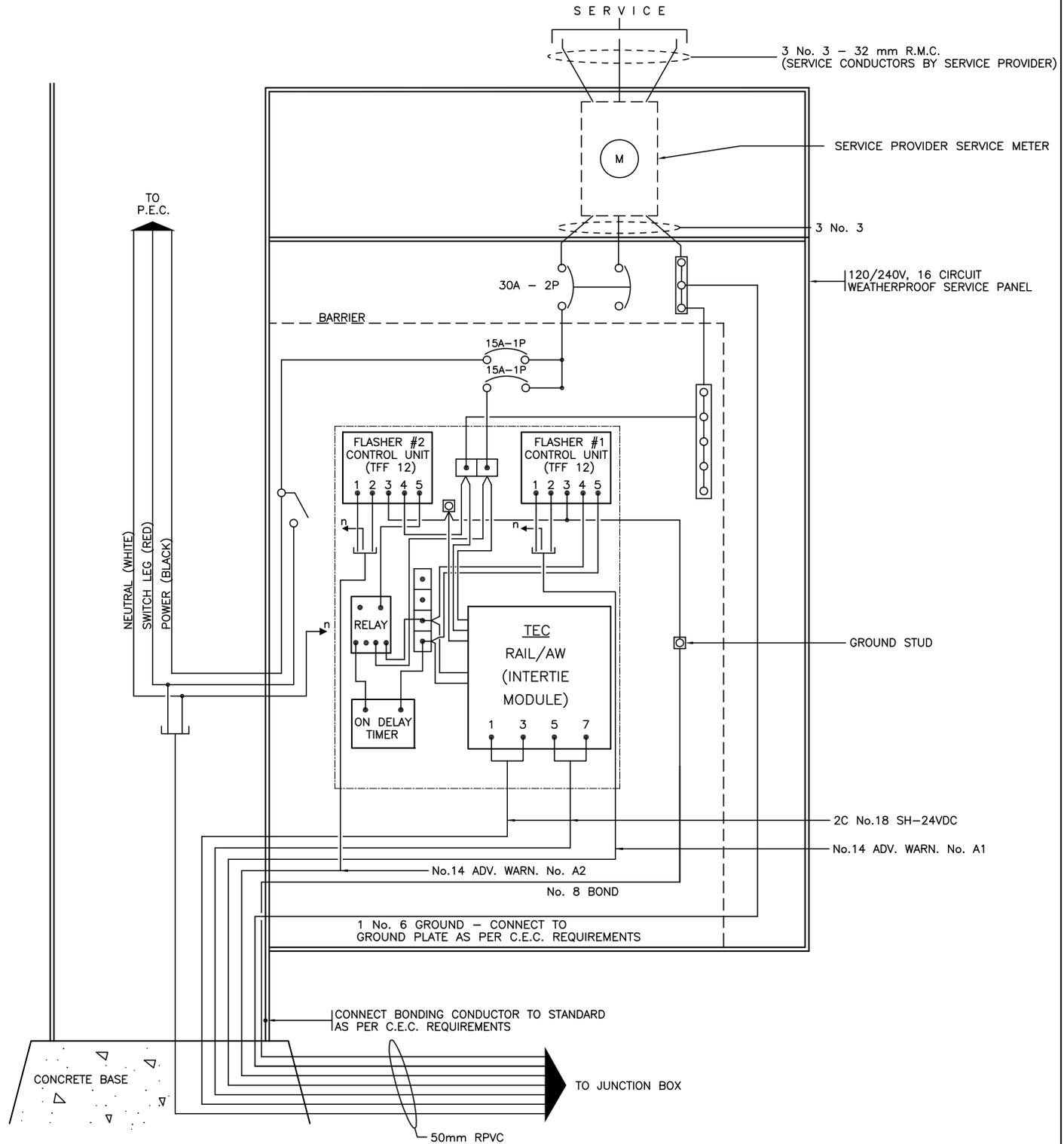


**WIRING DIAGRAM - SERVICE PANEL No. X**

N.T.S.

WD9

\*\* DENOTES BLOCK IS DYNAMIC

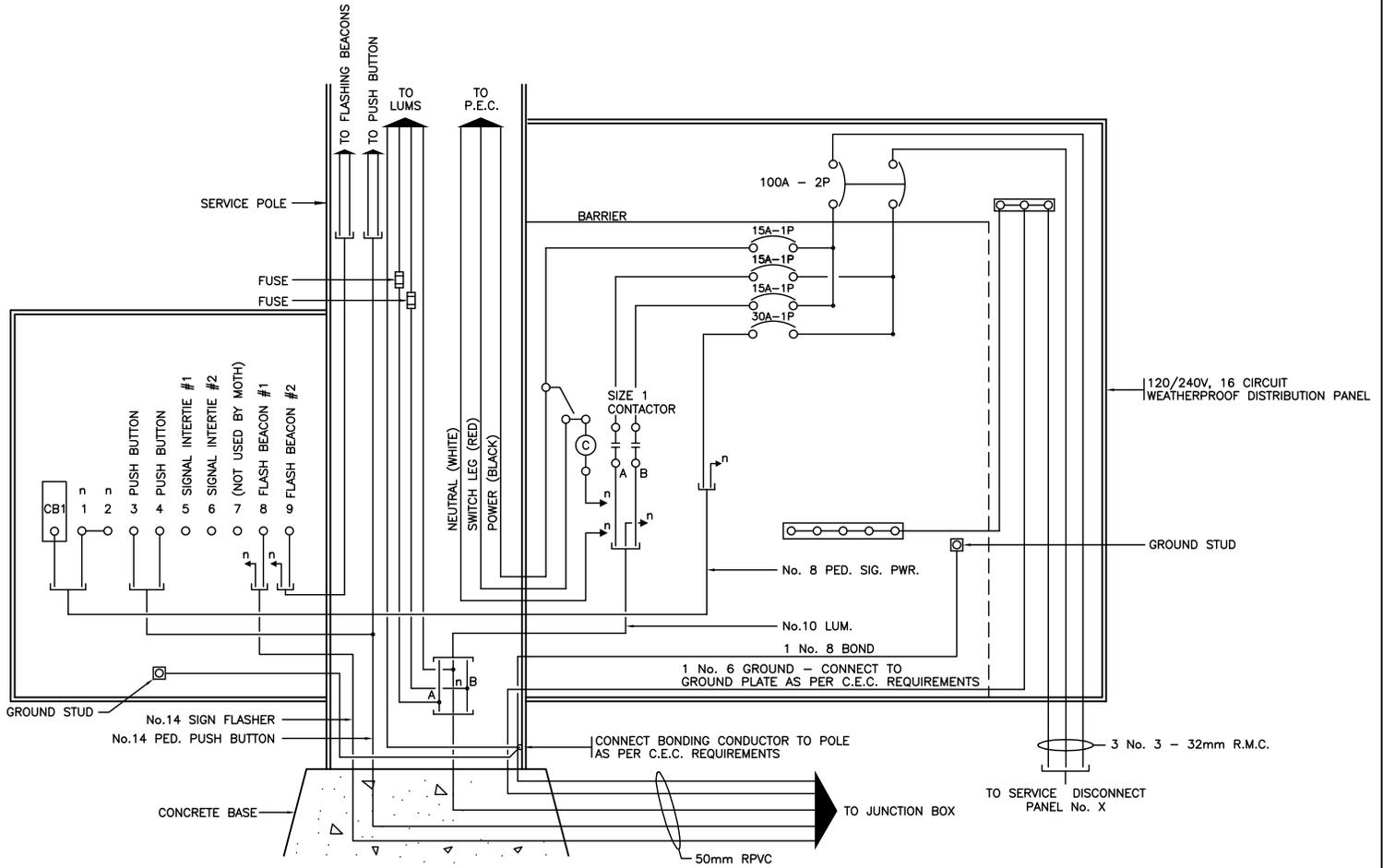


**WIRING DIAGRAM - SERVICE PANEL No. X**  
**CASCADED R/R ADVANCE WARNING SIGNS**

N.T.S.

WD10

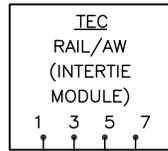
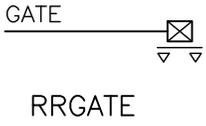
\*\* DENOTES BLOCK IS DYNAMIC



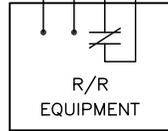
**WIRING DIAGRAM - DISTRIBUTION PANEL  
PED X CONTROLLER  
N.T.S.**

WD11

\*\* DENOTES BLOCK IS DYNAMIC



5 & 7 PRE-EMPTION REQUEST CCT.  
1 & 3 R/R/ INDICATION CCT.  
\* IF R/R INDICATION CCT DOES NOT WORK,  
REVERSE WIRES AT TERMINALS 1 & 3

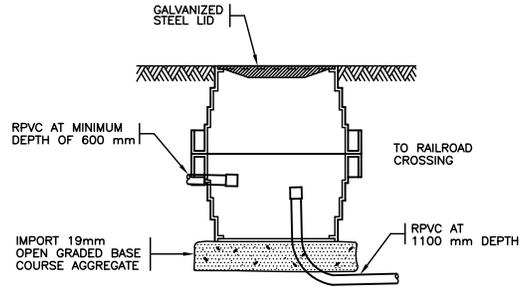


NORMALLY CLOSED (ENERGIZED)  
(OPENED FOR REQUEST)

**R/R INTERTIE DETAIL**

N.T.S.

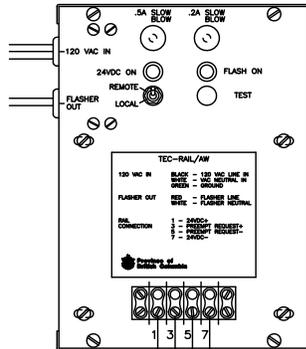
RRDET1



**R/R JUNCTION BOX DETAIL**

1:20

RRJB



5 & 7 PRE-EMPTION REQUEST CCT.  
1 & 3 R/R INDICATION CCT.  
\* IF R/R INDICATION CCT DOES NOT WORK,  
REVERSE WIRES AT TERMINALS 1 & 3

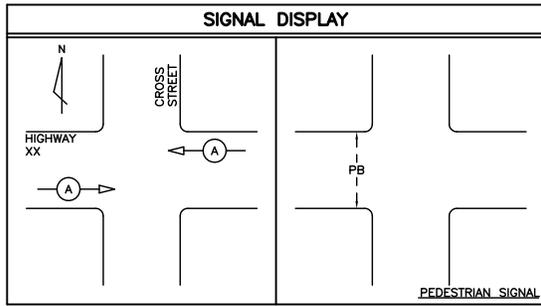


NORMALLY CLOSED (ENERGIZED)  
(OPENED FOR REQUEST)

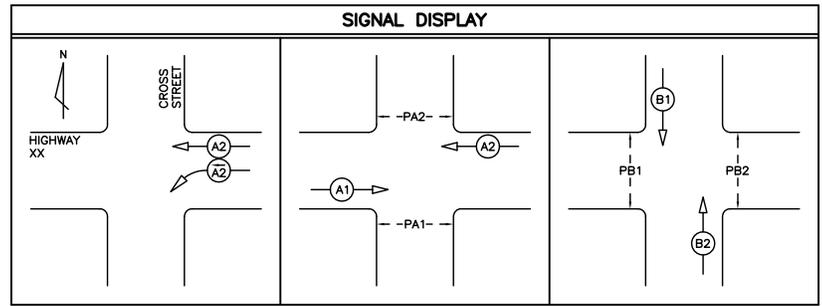
**R/R INTERTIE DETAIL**

N.T.S.

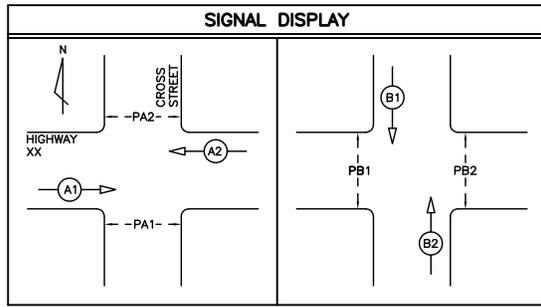
RRDET2



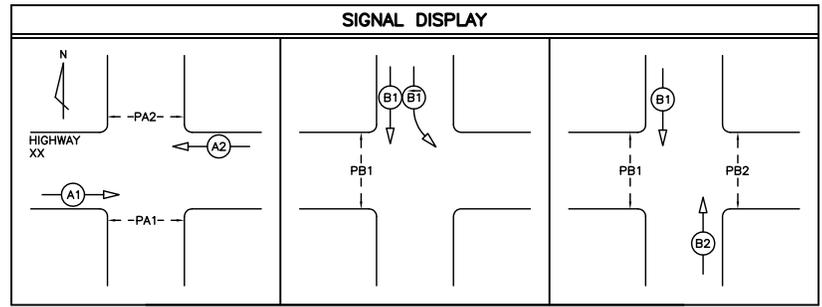
SD1



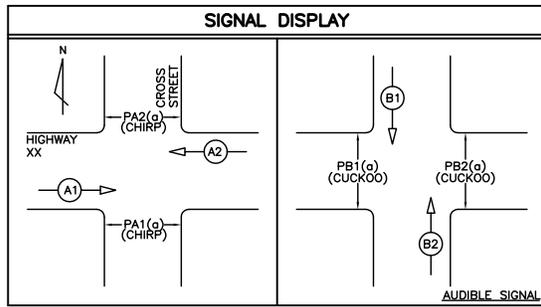
SD5  
(ADVANCE LEFT TURN)



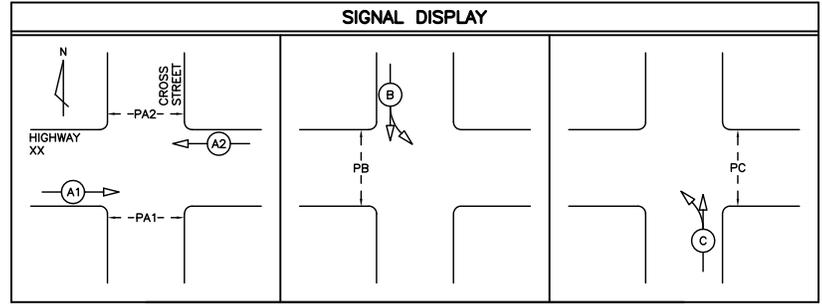
SD2  
(2 PHASE)



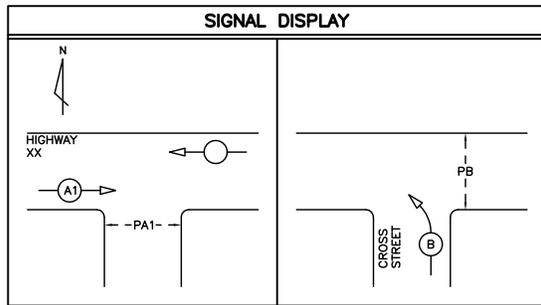
SD6  
(ADVANCE LEFT TURN)



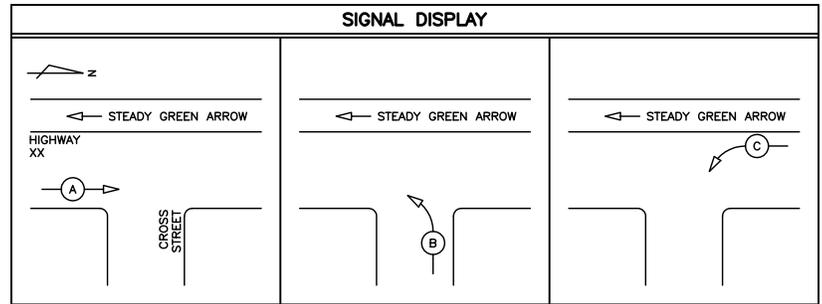
SD3  
(2 PHASE WITH AUDIBLES)



SD7  
(B/C PHASE SPLIT)



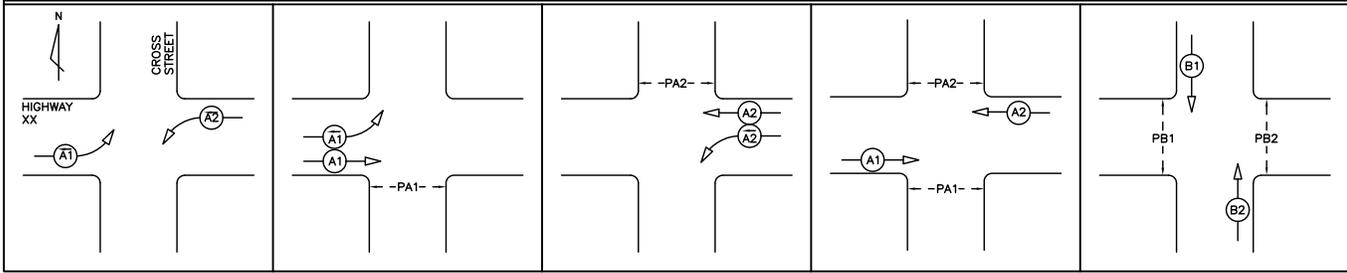
SD4  
(T-INTERSECTION)



SD8

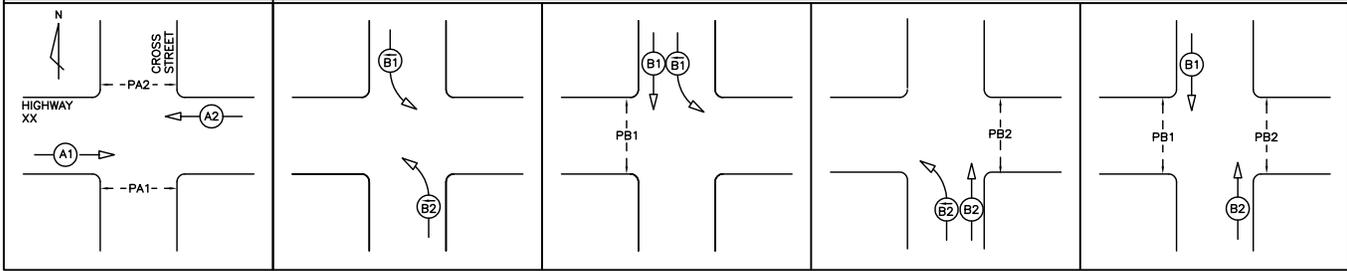
\*\* DENOTES BLOCK IS DYNAMIC

SIGNAL DISPLAY



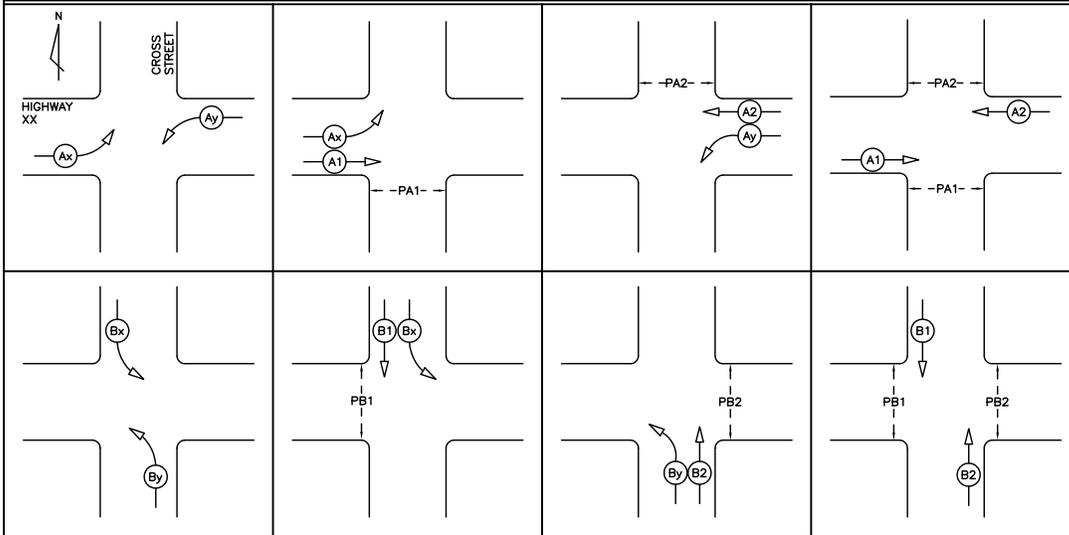
SD9

SIGNAL DISPLAY



SD10

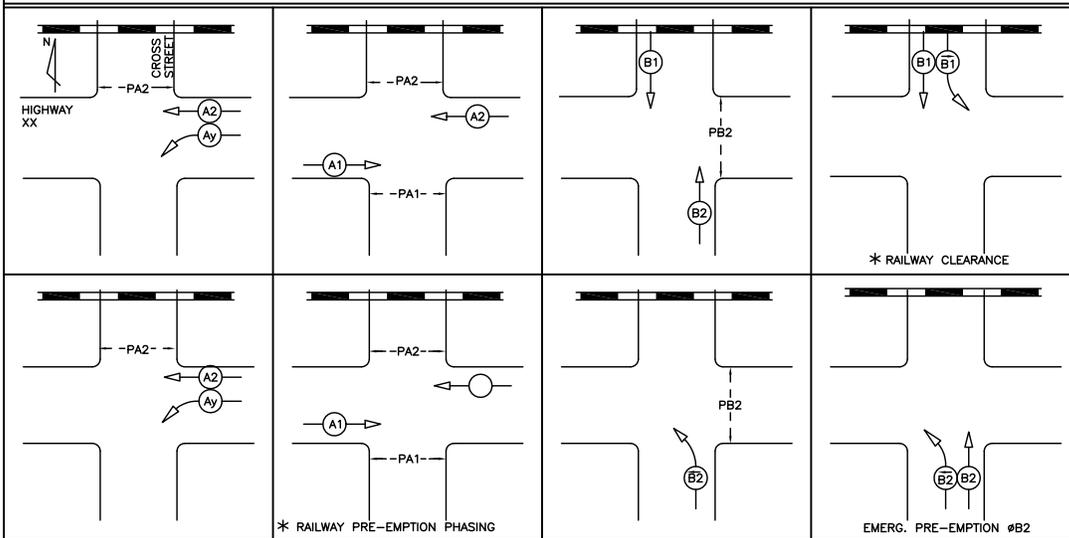
SIGNAL DISPLAY



SD11

\*\* DENOTES BLOCK IS DYNAMIC

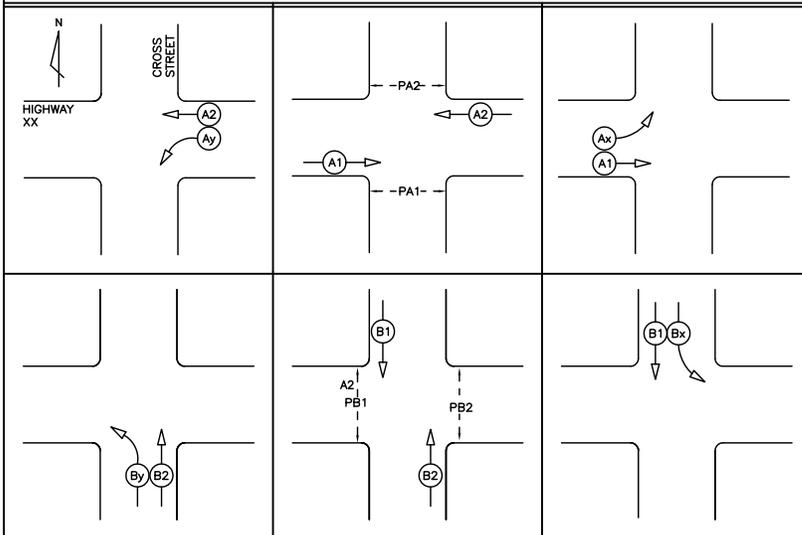
SIGNAL DISPLAY



\* "NO LEFT TURN SIGN" ACTIVATED DURING THESE PHASES

SD12

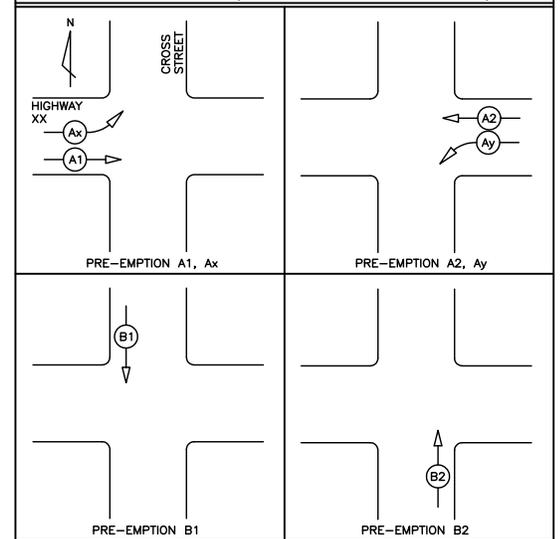
SIGNAL DISPLAY



\* LEAD/LAG PHASING ON CROSS STREET DUE TO GEOMETRIC RESTRICTION.  
\* LEAD/LAG ROUTE X IS CO-ORDINATION BASED.

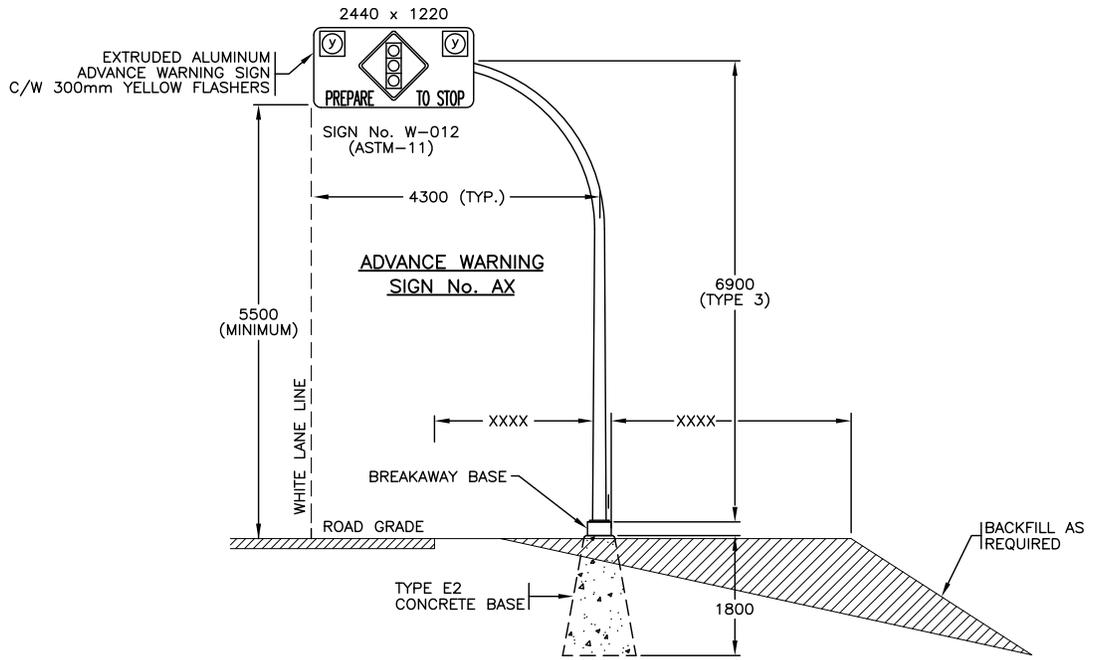
SD13

SIGNAL DISPLAY (EMERGENCY PRE-EMPTION)

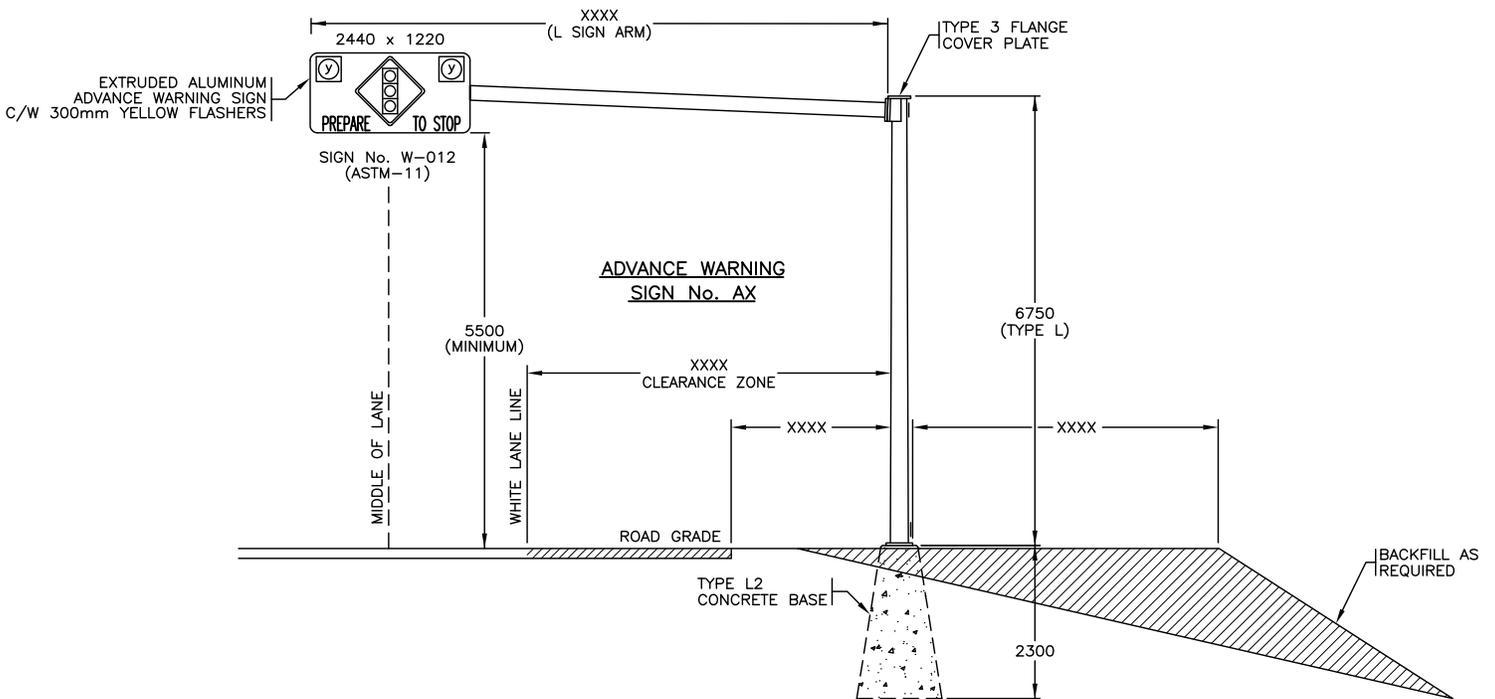


SD14

\*\* DENOTES BLOCK IS DYNAMIC



AWS3



AWSL

ADVANCE WARNING SIGNS ELEVATIONS