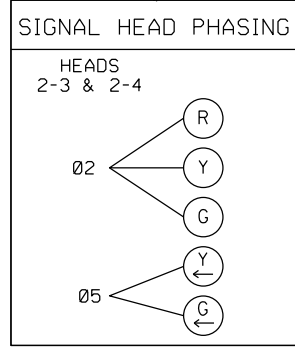


LOOP DETECTORS			SIGNAL HEAD CHART					
NUMBER	SIZE (FEET)	LOCATION	ALL INDICATIONS ARE 12"					
			FACE	RED LED	Y	G	YLTA	GLTA
• D5-1	6 X 15	10						
+ D8-1	2-6 X 6	120	2-1,2-2	○	○	○		
+ D8-2	6 X 6	0	2-3,2-4	○	○	○	←	←
+ D8-3	6 X 6	20	6-1,6-2,6-3	○	○	○		
• D6-1,D6-2	6 X 6	180	8-1	○	○	○		
• D2-21,D2-3	6 X 6	75	8-2,8-3	○	○	○		
* D2-1								

• PVC LOOP DETECTOR,
 † SAW CUT LOOP DETECTOR,
 * MICROWAVE DETECTOR UNIT TC26B

LOCATION = DISTANCE IN FEET FROM STOP BAR/PEDESTRIAN MARKINGS TO FRONT OF DETECTOR



PED PB STATION
 1-APS PB AND SIGN (RT ARROW) (PB6-2)
 EXTEND INTO HH 7:
 2" PVC
 1-2/C #14

③ PA85 POLE FOUNDATION
 TYPE PA85-A-25-D40-9 (DAVIT AT 350 DEG)
 ONE WAY SIGNAL AT 0'
 ONE WAY SIGNAL AT 12'
 (WITH A FREY ADAPTOR)
 TYPE 10A AT 0 DEG
 TYPE 10B AT 270 DEG
 1-CD PED HEAD AT 270 DEG
 LUMINAIRE 200W HPS
 1-R9-3 SIGN (FACING POLE 2)
 LUMINAIRE 200W HPS
 ONE WAY EVP DETECTOR &
 CONFIRMATORY LIGHT (6)
 EXTEND TO HH7:
 3"RSC
 2-12/C#12
 3-3/C#12
 1-3/C#20

PA90 POLE FOUNDATION
 TYPE PA90-A-30
 ONE WAY SIGNAL (OVERHEAD)
 2-TYPE 10B AT 0 AND 180 DEG
 2-CD PED HEADS AT 0 AND 180 DEG
 1-SIGN FACING WEST (R6-1L) ONE WAY
 1-SIGN FACING EAST (R6-1R) ONE WAY
 ONE WAY EVP DETECTOR &
 CONFIRMATORY LIGHT (8)
 EXTEND TO HH 8:
 3"RSC
 2-12/C#12
 2-3/C#12
 1-3/C#20

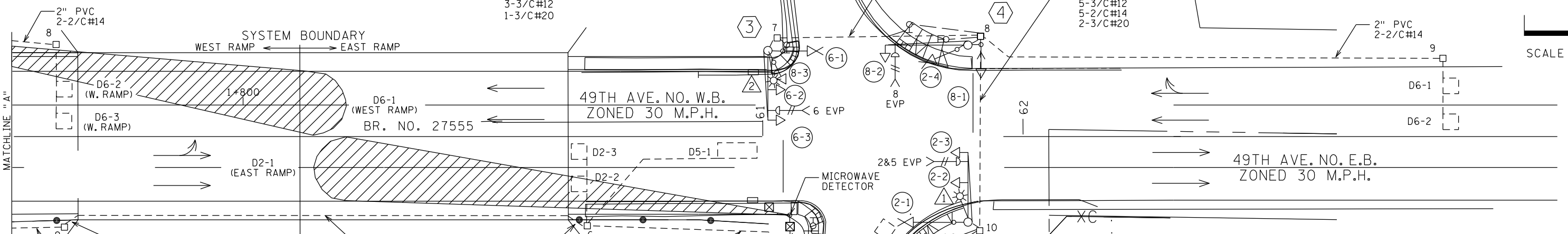
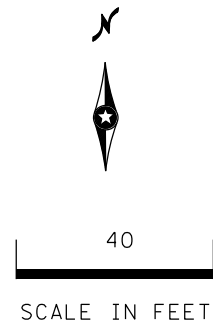
① COMBINED EQUIPMENT PAD
 MASTER CONTROLLER, CONTROLLER AND CABINET
 SERVICE CABINET
 CABINET TO HH 1
 4" RSC
 1-12/C#12
 1-3/C#12
 6-2/C#14
 1-4/C#18
 1-6PR#19
 CABINET TO HH 10
 4" RSC
 6-12/C#12
 6-3/C#12
 7-2/C#14
 3-3/C#20

3" RSC STUBBED OUT OF CONTROLLER CABINET (THREADED & CAPPED BOTH ENDS)
 2" RSC
 2-1/C#6
 1-1/C#6 INS. GR.

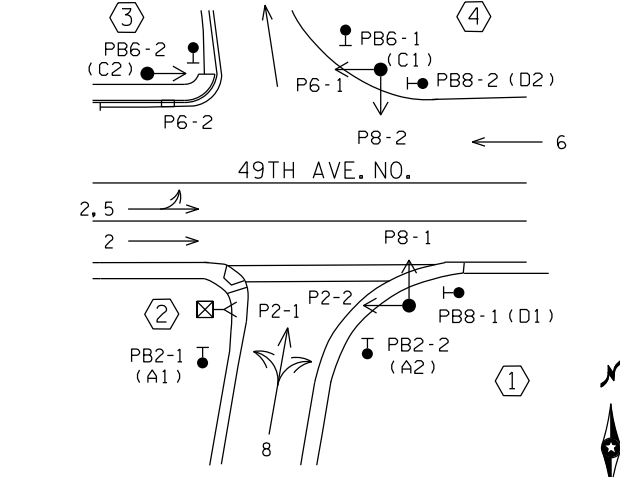
SERVICE CABINET TO CONTROLLER CABINET
 2" RSC
 2-3/C#12 (LUM)

SERVICE CABINET TO HH 3
 2" RSC
 3-1/C#2

HH 1 TO HH 10
 2" RSC (EMPTY)



CONTROLLER PHASING, PEDESTRIAN INDICATIONS AND PUSH BUTTONS



② PEDESTAL FOUNDATION
 15' SIGNAL PEDESTAL POLE PLUS BASE
 TYPE 4C
 1-CD PED HEAD
 1-R9-3 SIGN (FACING POLE 3)
 1-MICROWAVE DETECTOR UNIT (TC26B)
 1-SIGN FACING WEST (R6-1L) ONE WAY
 1-SIGN FACING EAST (R6-1R) ONE WAY
 EXTEND TO HH5:
 3"RSC
 1-12/C#12
 1-3/C#12
 1-4/C#18

PED PB STATION
 1-APS PB AND SIGN (LT ARROW) (PB2-1)
 EXTEND INTO HH 4:
 2" PVC
 1-2/C #14

SIGNAL SYSTEM OPERATION

- THE SIGNAL SYSTEM FLASH MODE IS ALL RED
- NORMAL OPERATION IS 4 PHASE
- PHASE 5 SHALL BE A PROTECTED/PERMISSIVE LEFT TURN
- PHASE 2 AND PHASE 6 SHALL BE ON VEHICLE RECALL

PEDESTRIAN PUSH BUTTONS SHALL BE LOCATED AS SHOWN ABOVE

DISTRICT #: \$@DISTRICT@
 IPLOT NAME: \$@IPLOT\$NAME@
 PATH & FILENAME: \$@PATH\$FILENAME@

PLOTTED/REVISED: \$\$\$\$DATE\$\$\$

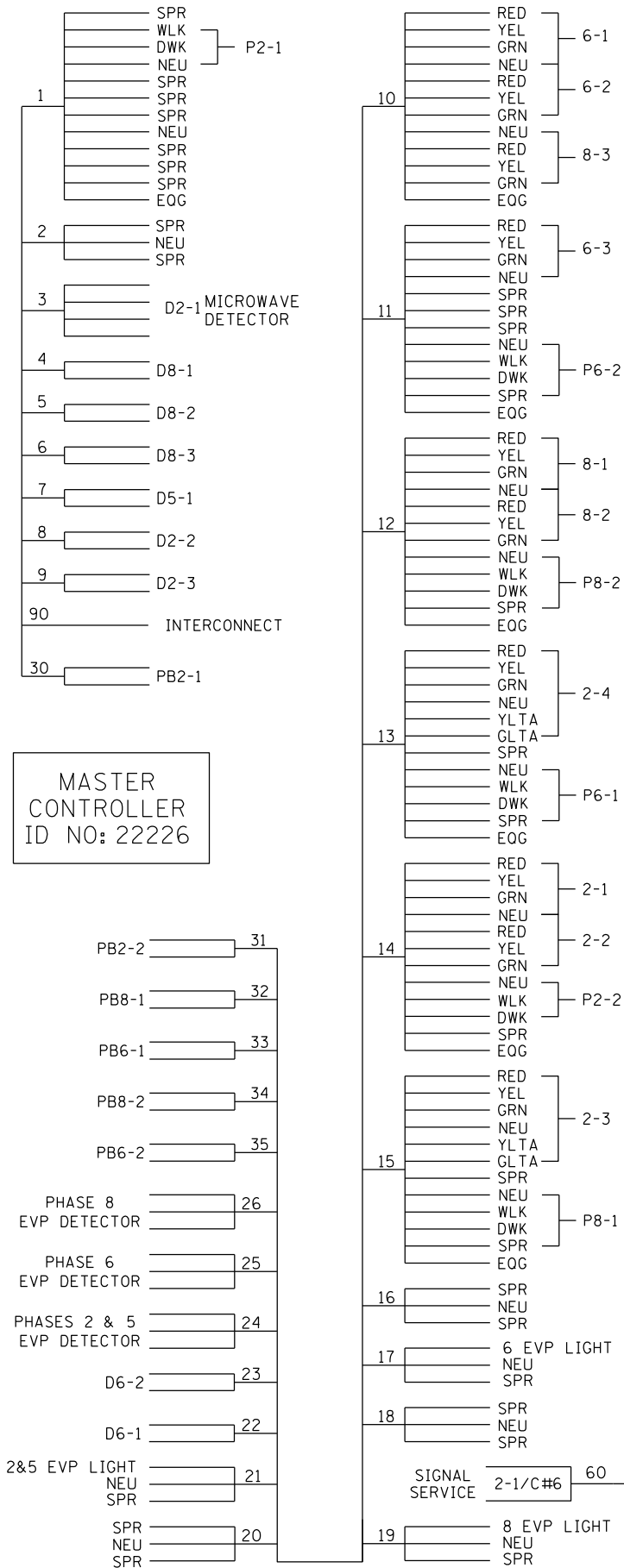
BY	DATE	REVISIONS	SYSTEM ID: 22224	T.E.	S.A.P. NO.	DRAWN BY: MAS	CKD BY: GAK	DATE: 2/19/13
EJA	06-24-15	AS-BUILT OF SP 2772-92 APS AND CD PEDS ADDED	METER ADDRESS: 4890 49th Ave. N.		CERTIFIED BY _____	LIC. NO. _____	DATE: _____	
			MASTER ID: 22226	T.E.	STATE PROJ. NO. (T.H.169)	SHEET NO. 1 OF 2 SHEETS		

INTERSECTION LAYOUT
 T.H. 169 AT 49TH AVE. N., EAST RAMPS
 IN NEW HOPE, HENNEPIN COUNTY

PLOTTED/REVISED: \$\$\$@DATE@\$\$\$

DISTRICT #: @@DISTRICT@
PLOT NAME: @@PLOT\$NAME@
PATH & FILENAME: \$\$\$@PATH\$FILENAME@\$\$\$

CONTROLLER CABINET

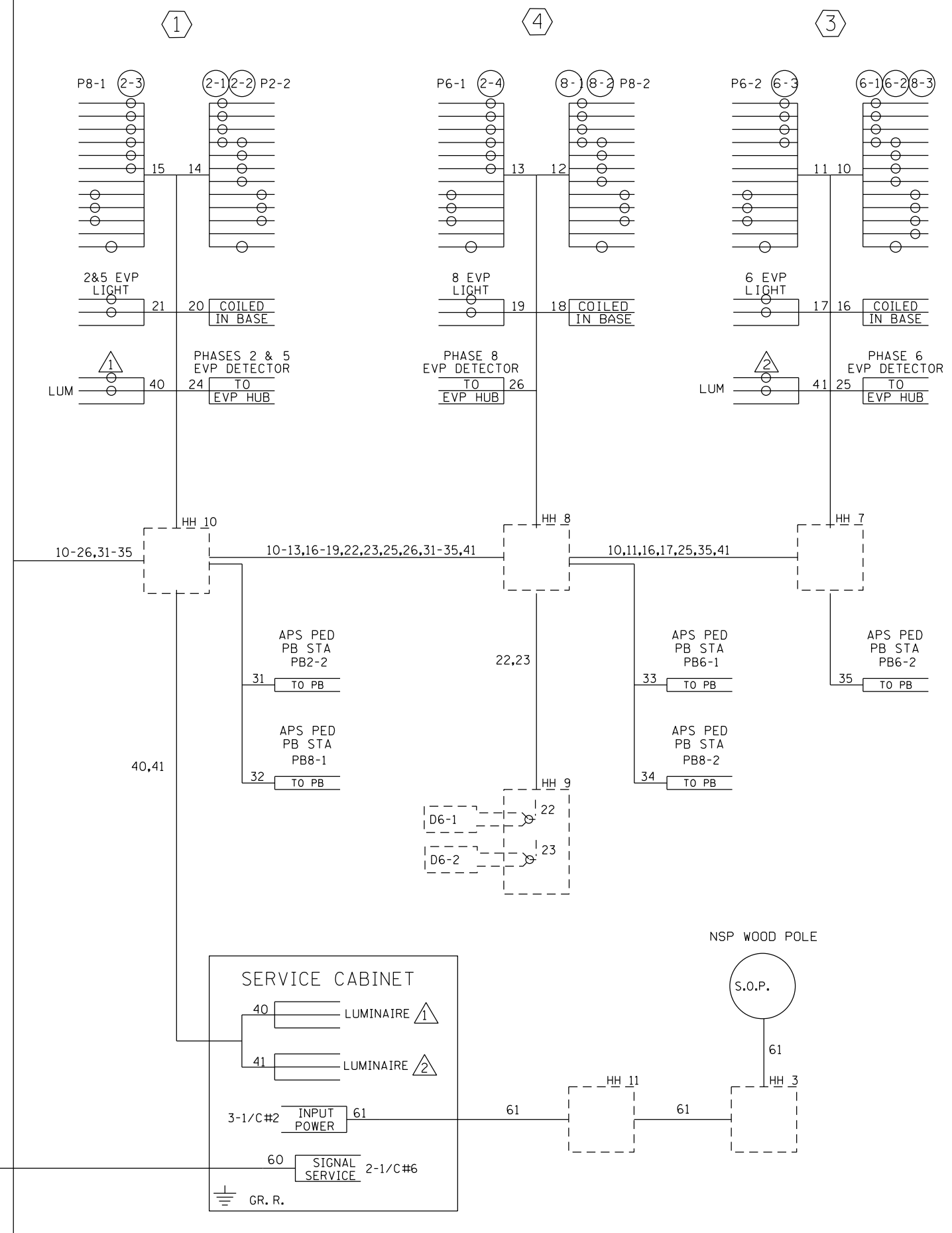
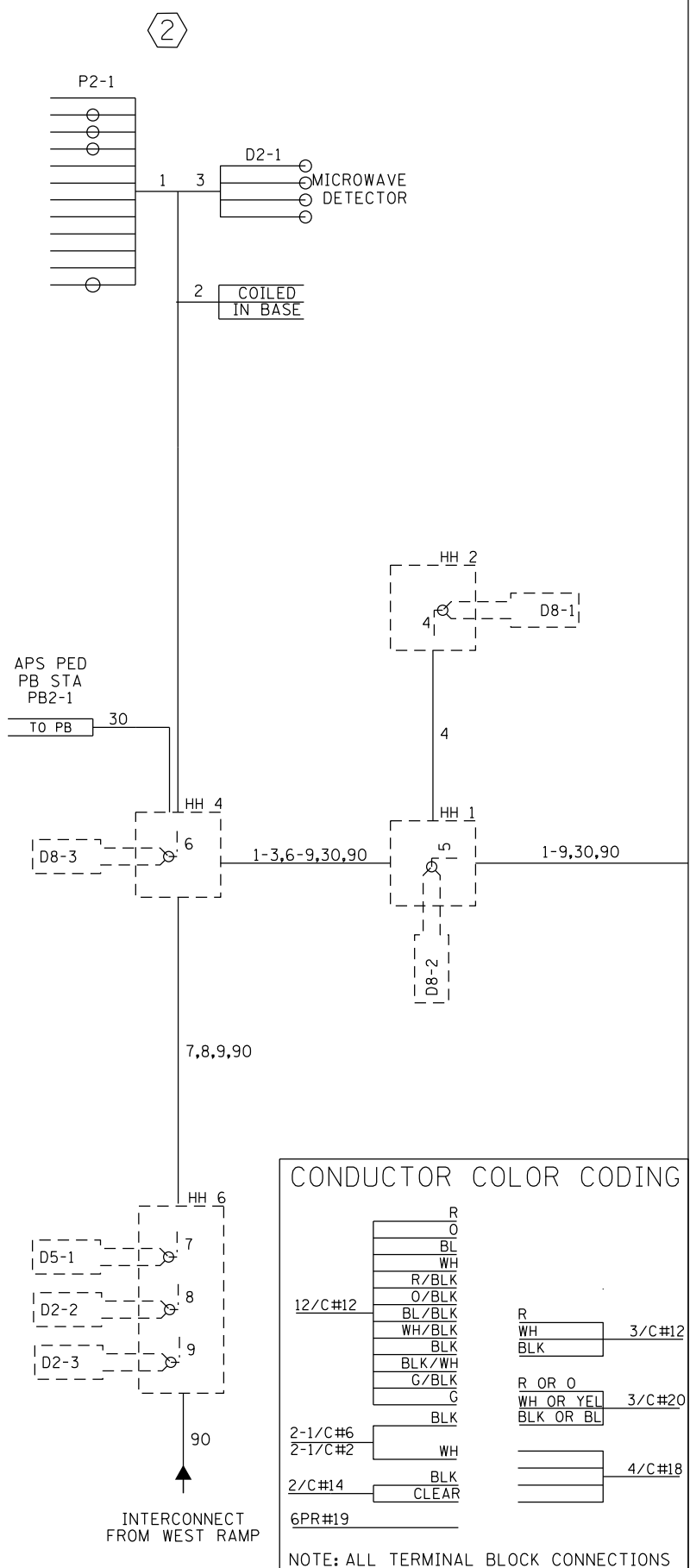


MASTER CONTROLLER
ID NO: 22226

CONDUCTOR COLOR CODING

12/C#12	R	3/C#12	R
	BL		WH
	WH		R/BLK
	R/BLK		O/BLK
	O/BLK		BL/BLK
	BL/BLK		WH/BLK
	WH/BLK		BLK
	BLK		BLK/WH
	BLK/WH		G/BLK
	G/BLK		G
2-1/C#6	BLK	3/C#20	R OR O
2-1/C#2	WH		WH OR YEL
			BLK OR BL
2/C#14	BLK	4/C#18	
	CLEAR		
6PR#19			

NOTE: ALL TERMINAL BLOCK CONNECTIONS SHALL BE ARRANGED AS SPECIFIED ABOVE



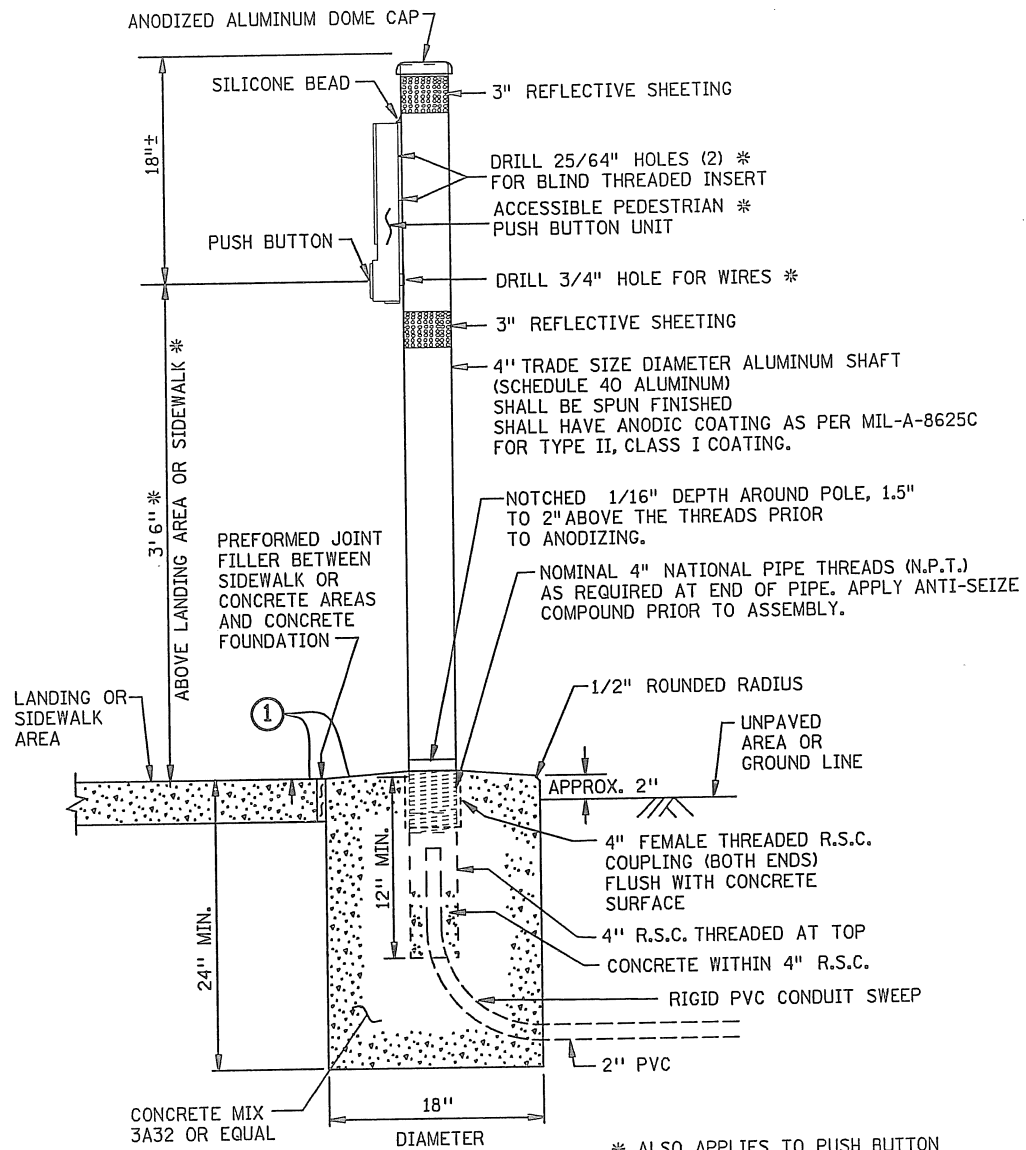
BY	DATE	REVISIONS
EJA	06-24-15	AS-BUILT OF SP 2772-92 APS AND CD PEDS ADDED

SYSTEM ID: 22224	T.E.
METER ADDRESS: 4890 49th Ave. N.	
MASTER ID: 22226	T.E.

WIRING DIAGRAM
T.H. 169 AT 49TH AVE. N., EAST RAMPS
IN NEW HOPE, HENNEPIN COUNTY

S.A.P. NO.	DRAWN BY: MAS	CKD BY: GAK	DATE: 2/19/13
CERTIFIED BY: _____	LIC. NO. _____	DATE: _____	
STATE PROJ. NO.	(T.H. 169)	SHEET NO. 2 OF	2 SHEETS

PEDESTRIAN PUSH BUTTON STATION



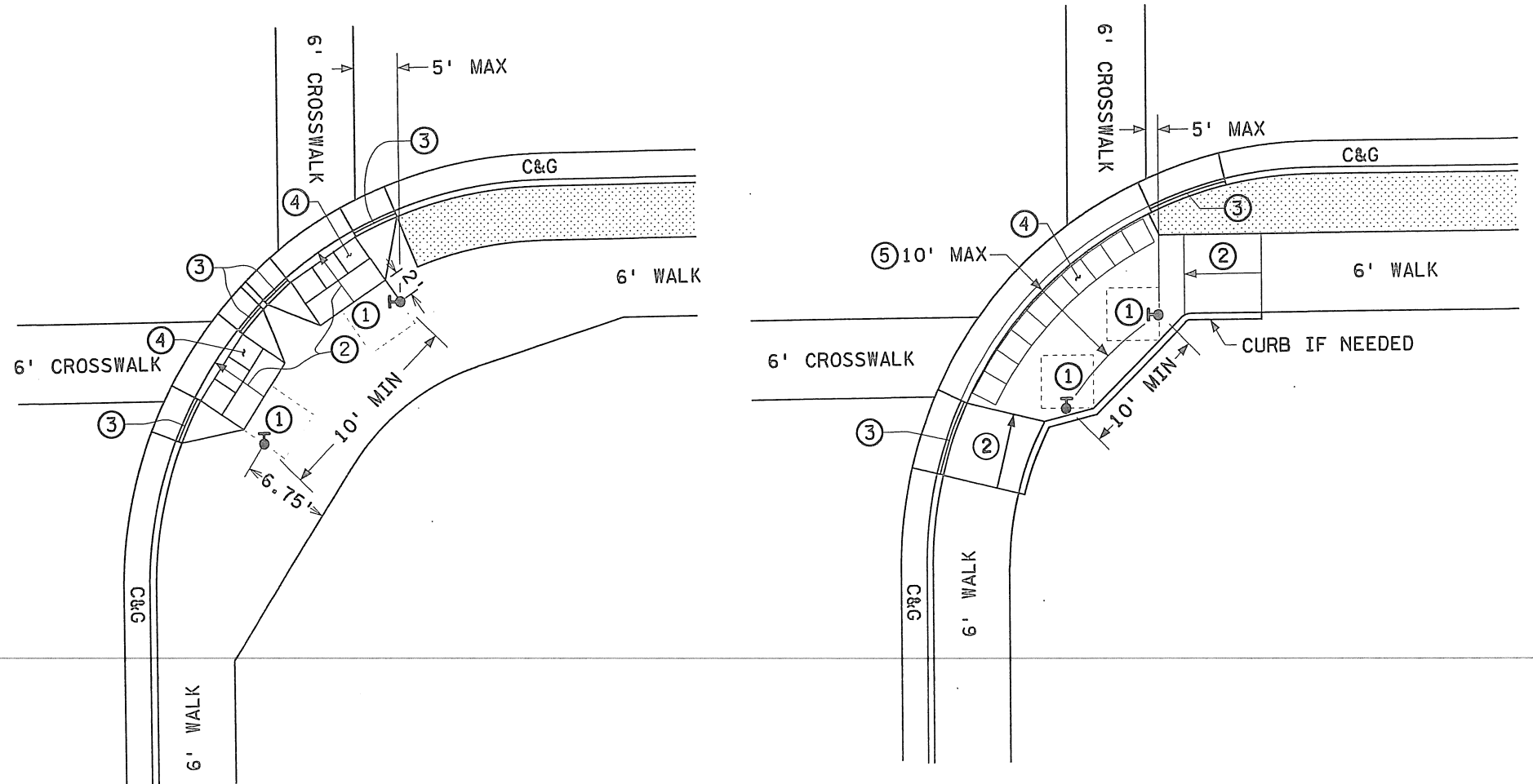
NOTES:

- PLACEMENT AND ORIENTATION OF THE PUSH BUTTON STATION IS CRITICAL. MOUNT THE BUTTON SO THAT THE FACE IS PARALLEL WITH THE ASSOCIATED CROSSWALK. SCREW IN POST TO A TIGHTENED POSITION BEFORE MOUNTING ACCESSIBLE PEDESTRIAN PUSH BUTTON UNIT TO THE POST.
- BLIND THREADED INSERTS (RIVET NUT) MUST BE INSERTED USING MANUFACTURERS SPECIFIC INSTALLATION TOOL. NO OTHER METHOD OF INSTALLATION IS ACCEPTABLE.
- BLIND THREADED INSERTS SHALL BE ZINC PLATED STEEL WITH 1/4 - 20 UNC THREADS. INSERT SHALL BE SUITABLE FOR USE ON A MOUNTING SURFACE WALL THICKNESS OF .337". APPROVED BLIND THREADED INSERTS CAN BE FOUND ON THE MN/DOT QUALIFIED PRODUCTS LIST.
- MOUNTING BOLTS SHALL BE 1/4 - 20 STAINLESS STEEL. APPLY BRUSH ON ANTI SEIZE COMPOUND TO BOLTS PRIOR TO ASSEMBLY.
- APPLY A BEAD OF 100% SILICONE SEALANT ALONG THE TOP OF THE PUSH BUTTON UNIT WHERE IT COMES IN CONTACT WITH THE 4" POST.
- THE REFLECTIVE SHEETING SHALL BE WHITE AT INTERSECTION CORNERS AND SHALL BE YELLOW WHEN USED IN CENTER MEDIANS. SEE MN/DOT SIGNING QUALIFIED PRODUCTS LIST (GPL) FOR APPROVED TUBE DELINEATOR SHEETING.
- ANTI-SEIZE COMPOUND MUST BE USED ON THE MOUNTING BOLTS WHEN THE PEDESTRIAN SIGN IS MOUNTED.

① THE CONCRETE FOUNDATION SHALL BE CAST INPLACE AND CONSTRUCTED FLUSH WITH THE SURROUNDING SIDEWALK.

GUIDELINES FOR LOCATING APS PUSH BUTTONS:

- THIS IS A GENERAL DETAIL INTENDED TO SHOW THE REQUIREMENTS OF APS PUSH BUTTON LOCATION. FOR PROJECT SPECIFIC DETAILS REGARDING PEDESTRIAN RAMP LAYOUT, SEE THE PEDESTRIAN CURB RAMP AND SIDEWALK DETAILS.
- BUTTONS SHALL BE WITHIN 5' OF THE OUTSIDE EDGE OF THE CROSSWALK.
- THE FACE OF THE BUTTON SHALL BE PARALLEL WITH THE CROSSWALK.
- A MIN. 4'X4' LANDING AREA SHALL BE PROVIDED ADJACENT TO EACH BUTTON.
- BUTTONS SHALL BE WITHIN 10' OF THE BACK OF CURB OR EDGE OF ROADWAY.
- BUTTONS SHALL BE AT LEAST 10' APART.



- ① 4'X4' MINIMUM LANDING AREA ADJACENT TO PUSH BUTTON. (2% SLOPE MAX.)
- ② RAMP - SLOPE (5% PREFERRED 8% MAX.)
- ③ CURB TAPER SECTION AT 1:10 (10%) (HEIGHT OF CURB IS TAPERED TO 0").
- ④ DETECTABLE WARNING SURFACE (TRUNCATED DOMES) - RADIUS SECTIONS WHERE SPECIFIED.
- ⑤ DISTANCE FROM THE BACK OF CURB TO PUSH BUTTON STATION.

TYPICAL APS PEDESTRIAN PUSH BUTTON LOCATION

PLOTTED/REVISED: 2/20/2013

DISTRICT #: METRO
PLOT NAME: SS3
PATH & FILENAME: IP_PWP-d1173048SP2772-92DETAILS.dgn

BY	DATE	REVISIONS

SYSTEM ID: 21513, 21979, 21980, 22224, 22225 & 22227

ACCESSIBLE PEDESTRIAN SIGNAL (APS)
PEDESTRIAN PUSH BUTTON STATION
TYPICAL APS PUSH BUTTON LOCATION DETAIL

DRAWN BY: MAS	CKD BY: GAK	DATE: 2/19/13
CERTIFIED BY: <i>Orinay Kim</i>		LIC. NO. 26829
STATE PROJ. NO. 2772-92 (T.H.169)		DATE: 2/20/13
SHEET NO. SS3 OF SS15 SHEETS		