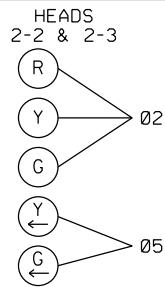


SIGNAL HEAD CHART

FACE NO.	ALL SIGNAL INDICATIONS TO BE 12"				
	R (LED)	Y	G	Y	G
2-1	○	○	○		
2-2, 2-3	○	○	○	◀	◀
6-1, 6-2	○	○	○		
4-1, 4-2, 4-3	○	○	○		

SIGNAL HEAD PHASING



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

(A) EQUIPMENT PAD
SIGNAL SERVICE CABINET (120/240 VOLT)
METER TO HH 14:
2" RSC
3-1/C #2
BETWEEN METER AND LOAD CENTER:
3-1/C #2
BETWEEN LOAD CENTER AND HH 1:
2" RSC
2-3/C #12 (LUM)
SIGNAL CONTROLLER AND CABINET BETWEEN SIGNAL CABINET AND SIGNAL SERVICE CABINET:
2" RSC
2-1/C #6
1-1/C #6 INS. GR.
BETWEEN SIGNAL CABINET AND HH 1:
4" RSC
4-12/C #12
3-3/C #12
1-4/C #14
6-2/C #14
2-3/C #20
1-6PR #19 INTERCONNECT TO MEDICINE LK. RD. AND HILLSBORO AVE.
BETWEEN SIGNAL CABINET AND HH 2:
4" RSC
3-12/C #12
1-3/C #20
1-4/C #18
9-2/C #14
BETWEEN HH 1 AND HH 2:
2" RSC
1-3/C #12 (LUM)
3" RSC STUBBED OUT (FOR FUTURE USE)
2" RSC STUBBED OUT (FOR FUTURE USE)

(B) WOOD POLE INPLACE
120/240 VOLT DISCONNECT ABOVE DISCONNECT
2" RSC RISER AND WEATHERHEAD:
3-1/C #2 FROM POWER CO.
BELOW DISCONNECT
2" RSC RISER TO HH 14:
3-1/C #2

(3) PA85 POLE FOUNDATION
TYPE PA85-A-20-D40-9 (DAVIT AT 350 DEG)
ONE WAY SIGNAL OVERHEAD AT 0'
TYPE 10A AT 90 DEG
TYPE 10B AT 180 DEG
1-CD PED HEAD AT 180 DEG
LUMINAIRE-200W HPS
ONE WAY EVP DETECTOR AND CONFIRMATORY LIGHT (PHASE 6)
1-R9-3 SIGN (FACING POLE 2)
EXTEND INTO HH 7:
3" RSC
2-12/C #12
1-3/C #20
1-3/C #12 (LUM)

PED PB STATION
1-APS PB AND SIGN (RT ARROW) (PB4-2)
EXTEND INTO HH 8:
2" PVC
1-2/C #14

(4) PA90 POLE FOUNDATION
TYPE PA90-A-30
ONE WAY SIGNAL OVERHEAD AT 0'
2-TYPE 10B AT 90 & 180 DEG
2-CD PED HEADS AT 90 & 180 DEG
ONE WAY EVP DETECTOR AND CONFIRMATORY LIGHT (PHASE 4)
2-R6-1 SIGNS
EXTEND INTO HH 8:
3" RSC
2-12/C #12
2-3/C #12
1-4/C #14
1-3/C #20

LOOP DETECTORS

NUMBER	TYPE	SIZE (FEET)	LOCATION
D2-1	MW	TC26 MICROWAVE - DETECTOR UNIT	ON PEDESTAL POLE
D2-2	PVC	6 x 6	35
D5-1	PVC	6 x 6	50
D5-2	PVC	6 X 15	5
D6-1	PVC	6 x 6	200
D6-2	PVC	6 x 6	200
D4-1	SAW-CUT	6 x 6	120
D4-2	SAW-CUT	6 x 6	120
D4-3	PVC	6 x 6	5
D4-4	PVC	6 x 6	0

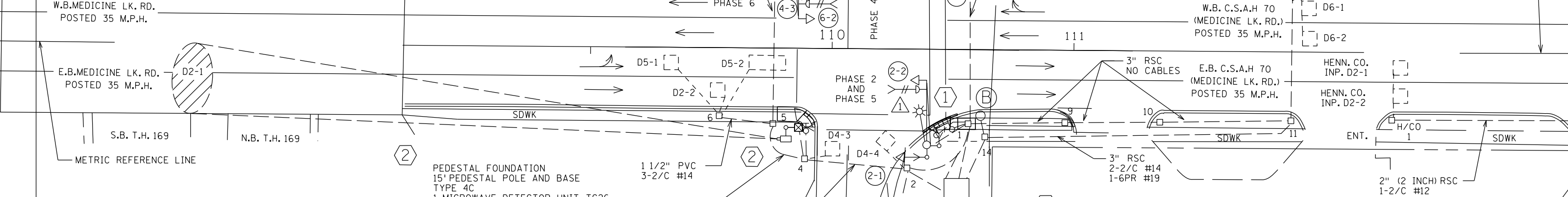
LOCATION = DISTANCE IN FEET FROM STOP LINE/PEDESTRIAN MARKINGS TO FRONT EDGE OF DETECTOR



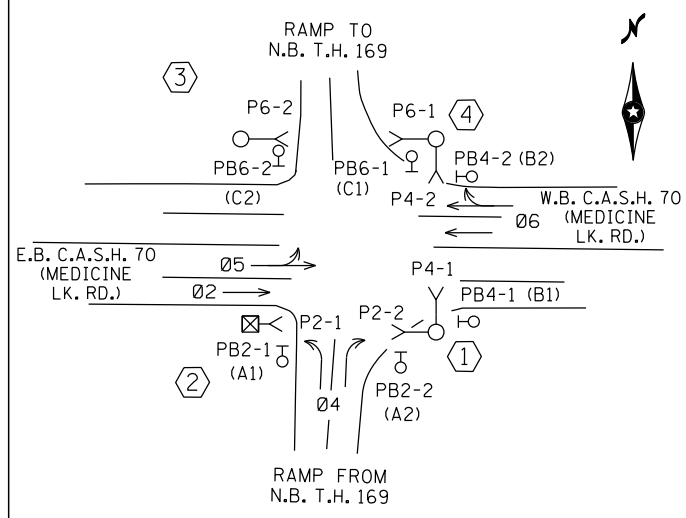
PLOTTED/REVISED: \$\$\$DATE\$\$\$

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

BRIDGE NO. 27536



CONTROLLER PHASING, PEDESTRIAN INDICATIONS AND PUSH BUTTONS



PEDESTAL FOUNDATION
15' PEDESTAL POLE AND BASE
TYPE 4C
1-MICROWAVE DETECTOR UNIT TC26
1-C.D. PED HEAD
1-R9-3 SIGN (FACING POLE 3)
2-R6-1 SIGNS
EXTEND INTO HH 4:
3" RSC
4-2/C #14
1-12/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, WITH PHASE 5 BEING A PERMISSIVE/PROTECTED LEFT TURN PHASE. PHASES 2 AND 6 SHALL BE ON VEHICLE RECALL.

BY	DATE	REVISIONS
EJA	6-23-15	AS-BUILT OF SP 2772-92 APS & CD PEDS ADDED

SYSTEM ID: 22227 T.E. 5794
METER ADDRESS: 9415 MEDECINE LAKE ROAD
MASTER ID: 22235 T.E.

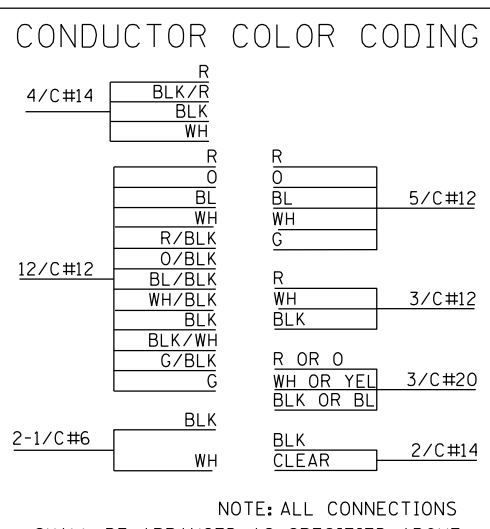
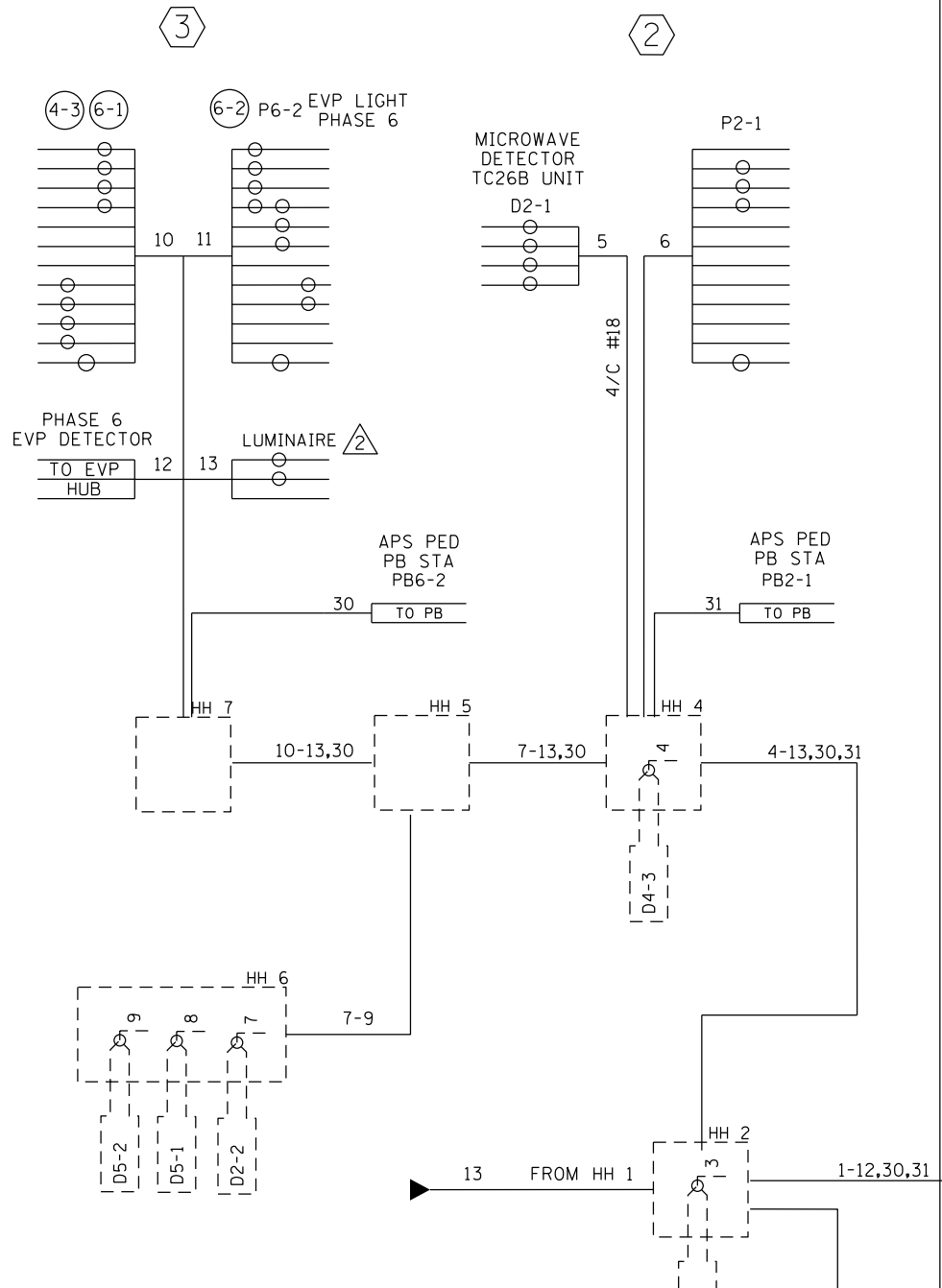
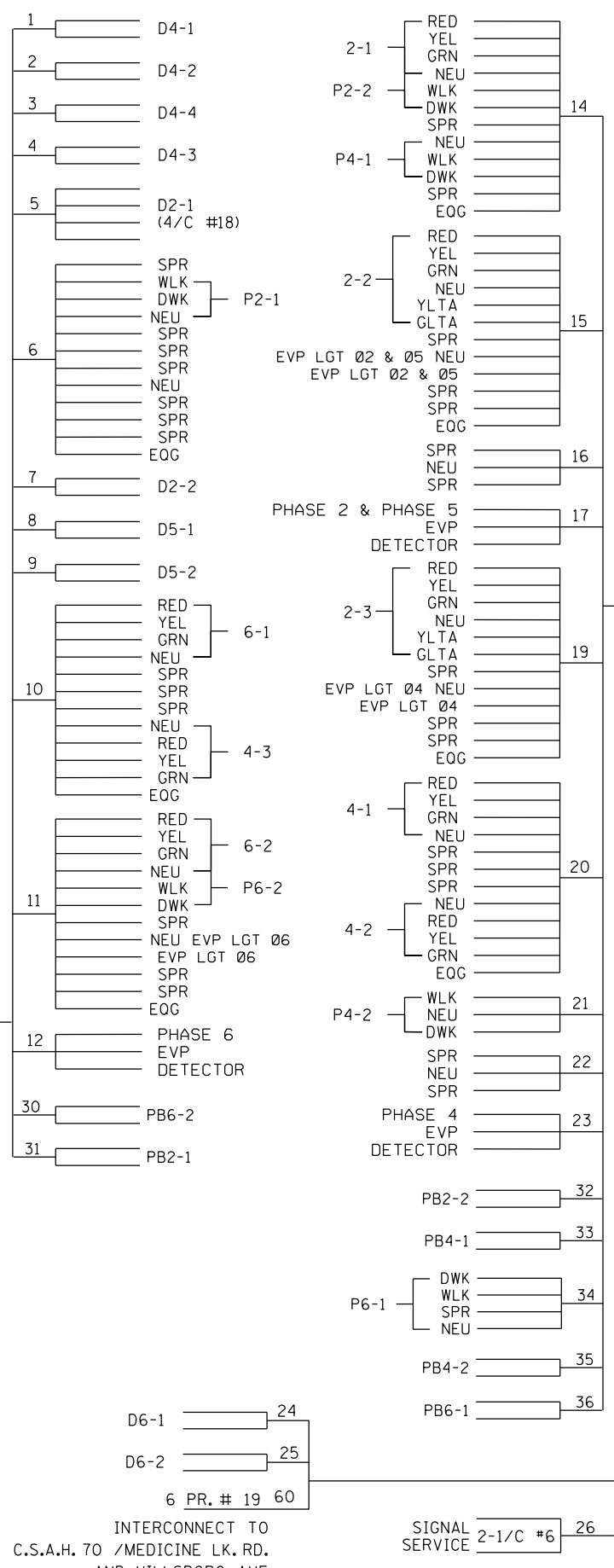
INTERSECTION LAYOUT
TH 169 AT CSAH 70
(MEDICINE LAKE ROAD) EAST RAMP
IN NEW HOPE AND GOLDEN VALLEY,
HENNEPIN COUNTY

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. 1 OF 2 SHEETS	

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

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

CONTROLLER CABINET

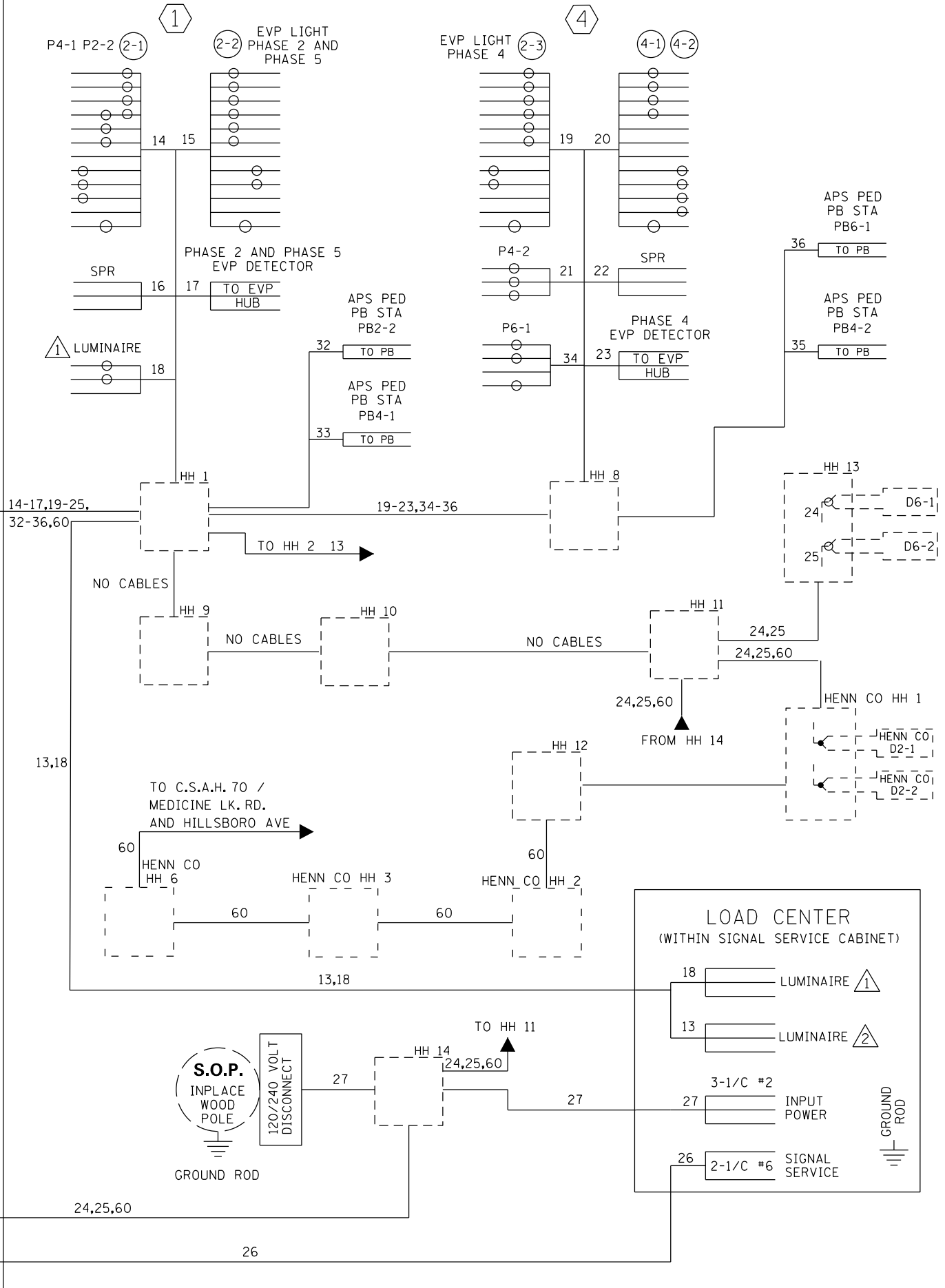


BY	DATE	REVISIONS
EJA	6-23-15	AS-BUILT OF SP 2772-92 APS & CD PEDS ADDED

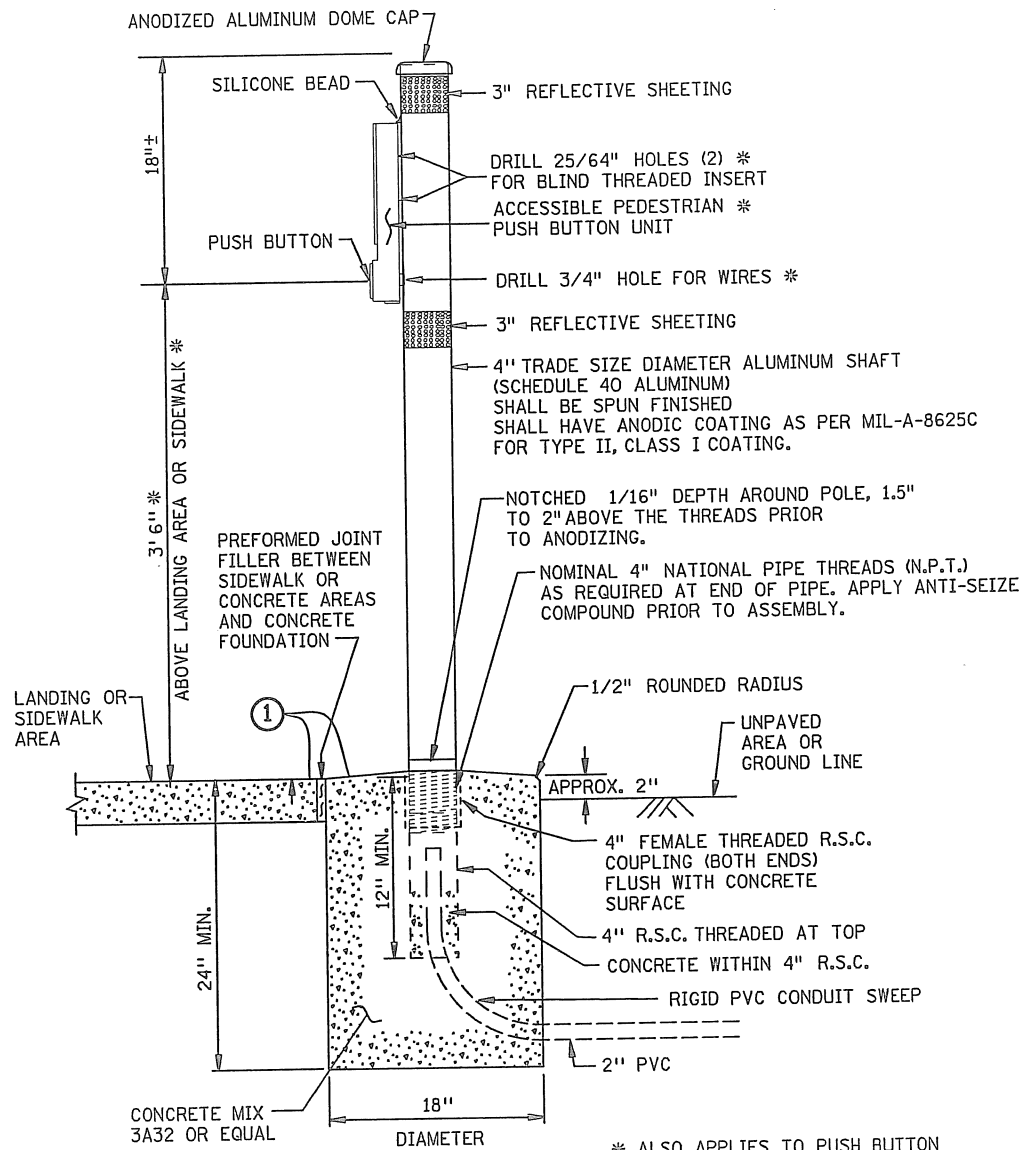
SYSTEM ID: 22227	T.E. 5794
METER ADDRESS: 9415 MEDECINE LAKE ROAD	
MASTER ID: 22235	T.E.

WIRING DIAGRAM
T.H. 169 AT CSAH 70
(MEDICINE LAKE ROAD) EAST RAMP
IN NEW HOPE AND GOLDEN VALLEY,
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



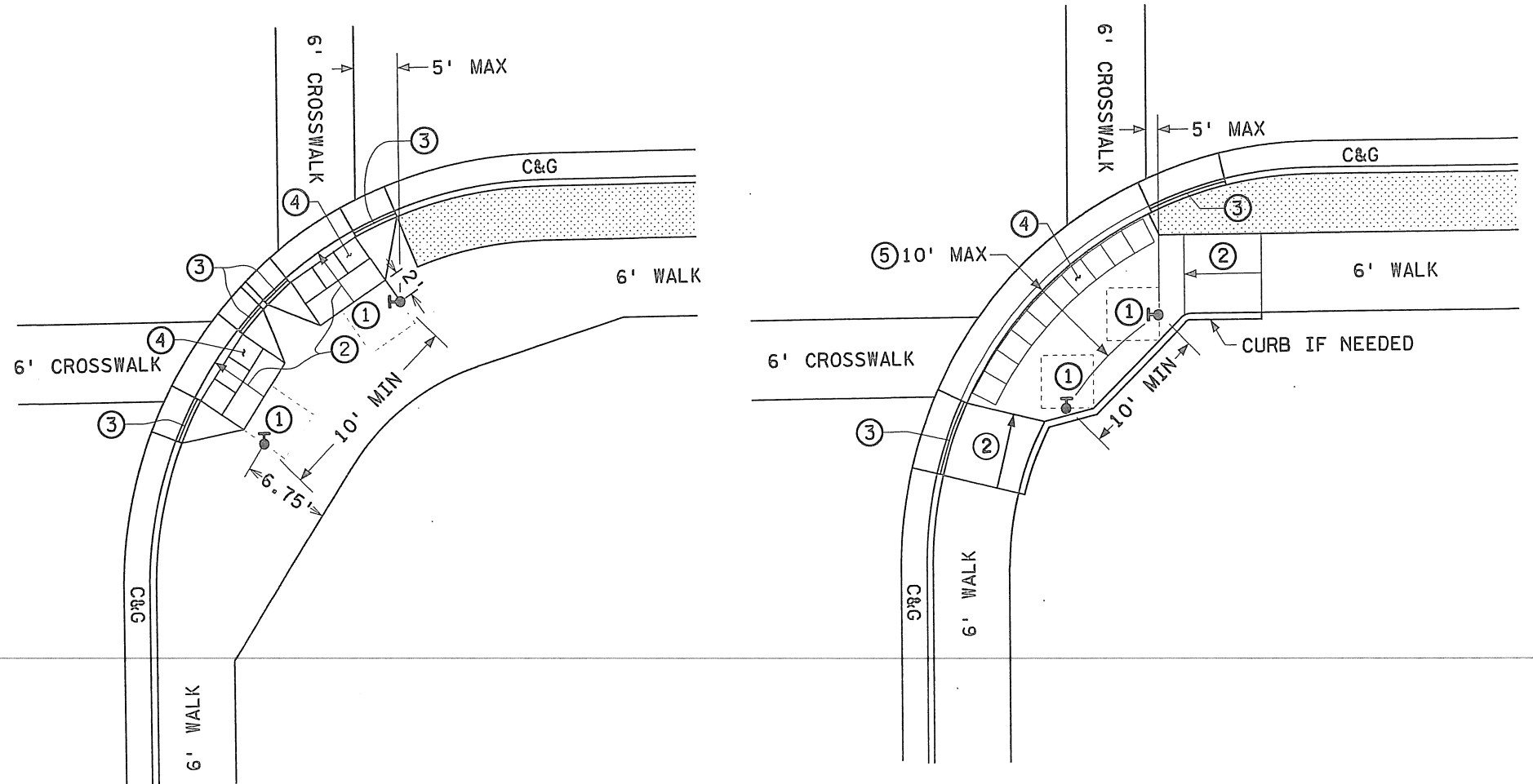
NOTES:

- 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>Origen Kim</i>		LIC. NO. 26829
STATE PROJ. NO. 2772-92 (T.H.169)		DATE: 2/20/13
SHEET NO. SS3 OF SS15 SHEETS		