

LOOP DETECTOR CHART

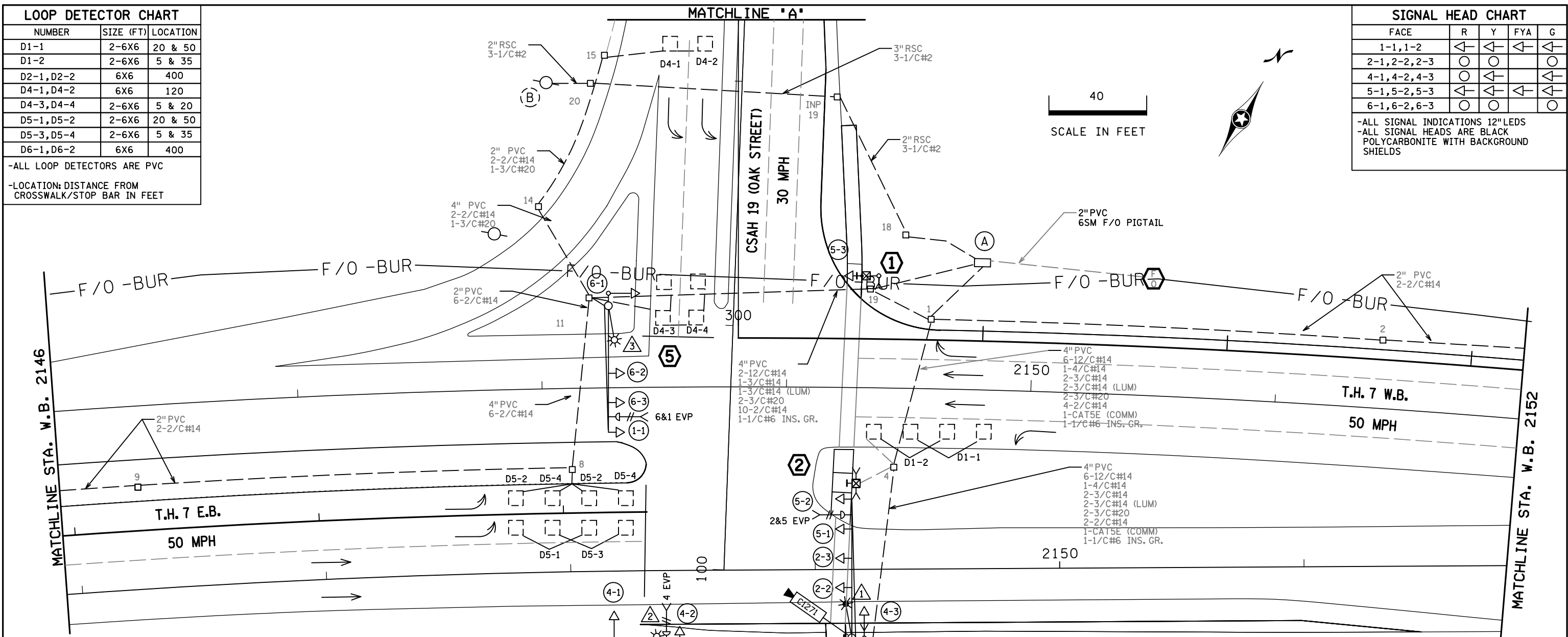
NUMBER	SIZE (FT)	LOCATION
D1-1	2-6X6	20 & 50
D1-2	2-6X6	5 & 35
D2-1, D2-2	6X6	400
D4-1, D4-2	6X6	120
D4-3, D4-4	2-6X6	5 & 20
D5-1, D5-2	2-6X6	20 & 50
D5-3, D5-4	2-6X6	5 & 35
D6-1, D6-2	6X6	400

-ALL LOOP DETECTORS ARE PVC
 -LOCATION: DISTANCE FROM CROSSWALK/STOP BAR IN FEET

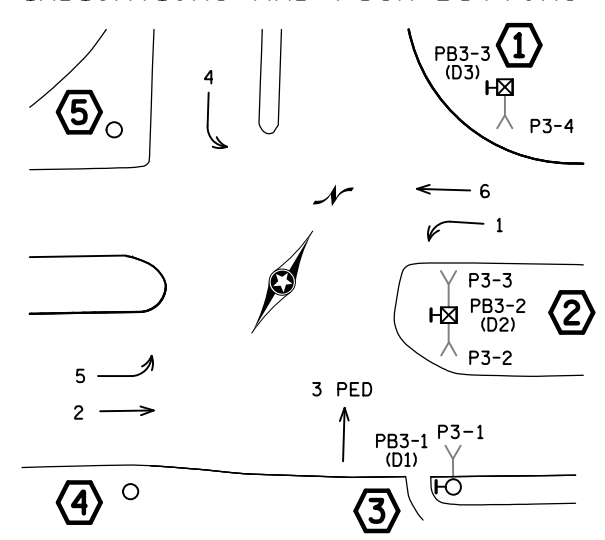
SIGNAL HEAD CHART

FACE	R	Y	FYA	G
1-1, 1-2	←	←	←	←
2-1, 2-2, 2-3	○	○	○	○
4-1, 4-2, 4-3	○	←	←	←
5-1, 5-2, 5-3	←	←	←	←
6-1, 6-2, 6-3	○	○	○	○

-ALL SIGNAL INDICATIONS 12" LEDS
 -ALL SIGNAL HEADS ARE BLACK POLYCARBONITE WITH BACKGROUND SHIELDS



CONTROLLER PHASING, PEDESTRIAN INDICATIONS AND PUSH BUTTONS



SIGNAL SYSTEM OPERATION

- THE SIGNAL SYSTEM FLASH MODE IS ALL RED.
- NORMAL OPERATION IS 5 PHASE, WITH PHASES 1 AND 5 BEING FLASHING YELLOW ARROW LEFT TURN PHASES BY TIME OF DAY.
- PHASES 2 AND 6 SHALL BE ON VEHICLE RECALL.

BY	DATE	REVISIONS
SJK	5/1/23	PTZ CAMERA UPGRADE SP 8825-890

SYSTEM ID: 1734989 T.E.
 METER ADDRESS: 400 OAK STREET
 MASTER ID: T.E.

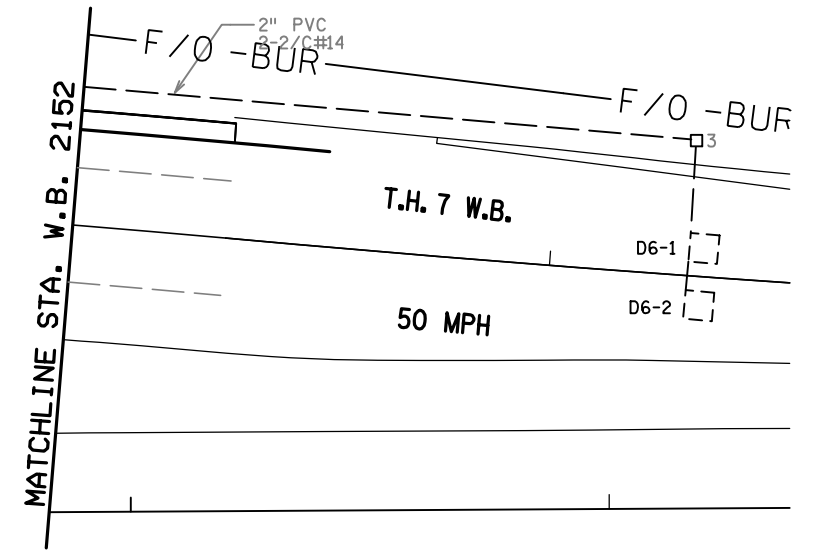
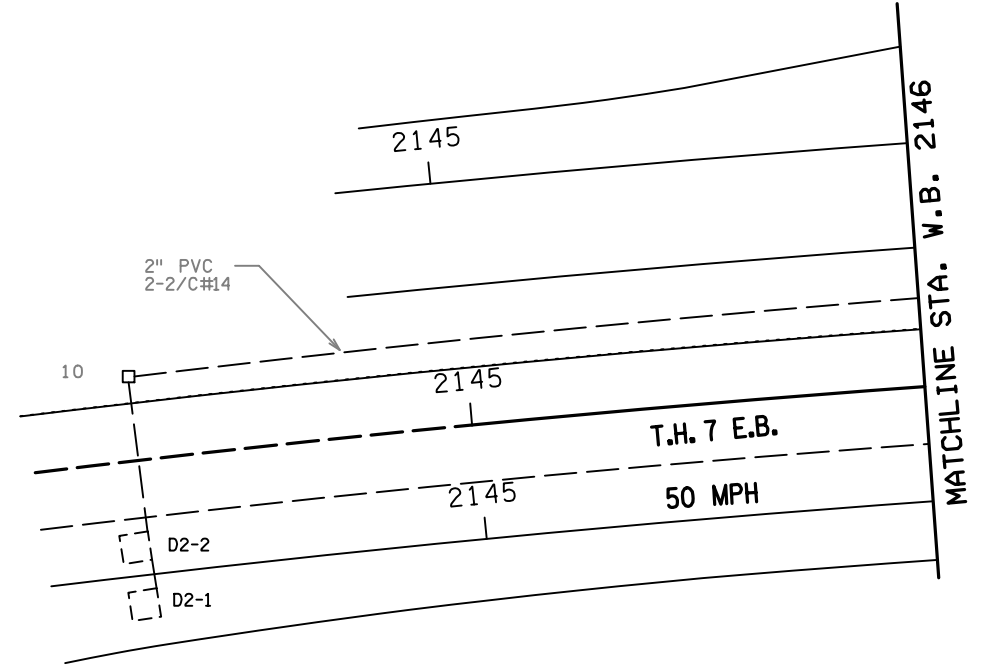
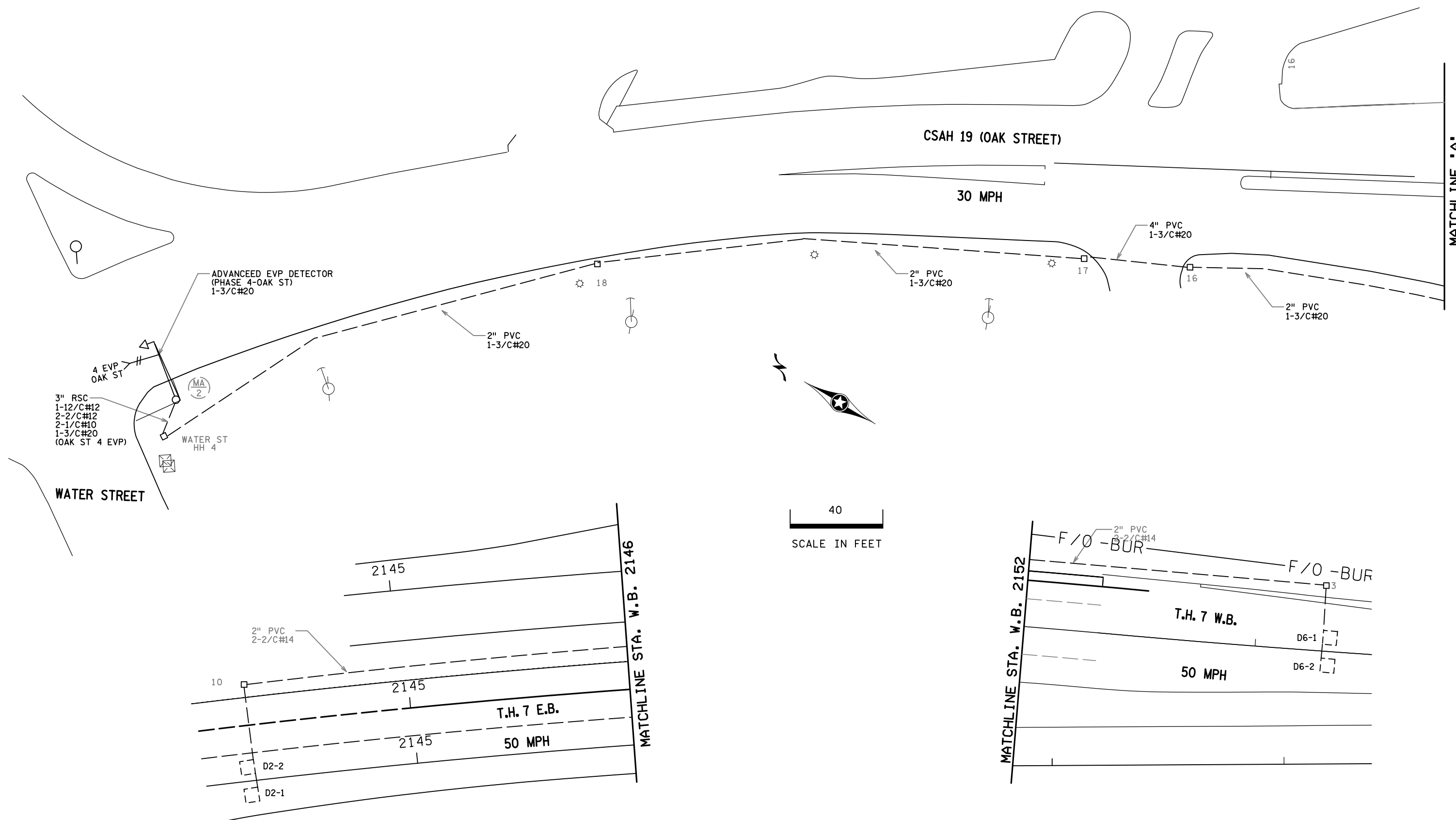
INTERSECTION LAYOUT
 T.H. 7 AT CSAH 19 (OAK STREET)
 IN EXCELSIOR, HENNEPIN COUNTY

CERTIFIED BY _____	LIC. NO. _____	DATE: _____
STATE PROJ. NO. _____	(T.H. 7)	SHEET NO. 1 OF 5 SHEETS

DISTRICT #: Metro
 PLOT NAME: layout
 PATH & FILENAME: Projects\DM_POS\007\0000\Traffic\Signdis\8272 TH7 @ (9) OAK ST 1734989\T1734989_sgl.dgn
 PLOTTED/REVISED: MAY-2023

PLOTTED/REVISED: 1-MAY-2023

DISTRICT #: Metro
I/PLOT NAME: match lines
PATH & FILENAME: Projects\DM_POS\007\0000\Traffic\Signal\8272 TH7 @ (9) OAK ST 1734989\1734989_sgl.dgn



BY	DATE	REVISIONS	SYSTEM ID: 1734989 T.E.	DRAWN BY: MAS CKD BY: GAK DATE: 11-5-13	
SJK	5/1/23	PTZ CAMERA UPGRADE	METER ADDRESS: 400 OAK STREET	CERTIFIED BY _____ LIC. NO. _____ DATE: _____	
			MASTER ID: _____ T.E.	STATE PROJ. NO. (T.H.7) SHEET NO. 2 OF 5 SHEETS	

DISTRICT #: Metro
 IPLOT NAME: pole notes
 PATH & FILENAME: Projects\DM_POS\007\0000\Traffic\Signal\8272 TH7 @ (9) OAK ST 1734989\1734989_sgl.dgn
 PLOTTED/REVISED: H-MAY-2023

1 PEDESTAL FOUNDATION
 13' PEDESTAL POLE PLUS BASE
 1-STRAIGHT MOUNT SIGNAL AT 90 DEG
 1-STRAIGHT MOUNT CD HEAD IND AT 270 DEG
 1-APS PB AND SIGN (RT ARROW) (PB3-3)
 1-R9-3 SIGN (FACING POLE 5)
 3" PVC TO HH 19:
 1-12/C#14
 1-4/C#14
 1-2/C#14
 2-1/C#6 INS. GR.

2 PEDESTAL FOUNDATION
 13' PEDESTAL POLE PLUS BASE
 2-STRAIGHT MOUNT CD PED HEADS AT 90 & 270 DEG
 1-APS PB AND SIGN (DOUBLE ARROW) (PB3-2)
 3" PVC TO HH 4:
 1-12/C#14
 1-2/C#14
 2-1/C#6 INS. GR.

3 PA100 POLE FOUNDATION
 TYPE PA100-A-55-X6-350/CAM 400(AT 350 DEG)
 1-LUMINAIRE-LED
 1-PTZ CAMERA (C1271)
 1-ANGLE MOUNT SIGNAL OVERHEAD AT 0'
 3-STRAIGHT MOUNT SIGNALS OVERHEAD
 AT 11' 23' AND 35'
 2-ANGLE MOUNT SIGNALS AT 90 AND 180 DEG
 1-ANGLE MOUNT CD PED HEAD AT 90 DEG
 1-CAMERA POWER SUPPLY AT 270 DEG
 1-APS PB AND SIGN (LT ARROW) (PB3-1)
 1-ONE WAY EVP DETECTOR AND
 CONFIRMATORY LIGHT (PHASES 2&5)
 1-R10-X12 SIGN ADJACENT TO HEAD (5-2)
 1-TYPE D SIGN (D-2)
 3" PVC TO HH 6:
 3-12/C #14
 1-4/C #14
 1-3/C #14
 1-3/C #14 (LUM)
 1-3/C #20
 1-CAT5E (COMM)
 1-1/C #6 INS. GR.

4 PA85 POLE FOUNDATION
 TYPE PA85-A-20-D40-9 (DAVIT AT 350 DEG)
 1-LUMINAIRE-LED
 1-ANGLE MOUNT SIGNAL OVERHEAD AT 0'
 2-ANGLE MOUNT SIGNALS AT 90 AND 180 DEG
 1-ONE WAY EVP DETECTOR AND
 CONFIRMATORY LIGHT (PHASE 4)
 1-TYPE D SIGN (D-1)
 1-TYPE R9-3 SIGN(FACING POLE 5)
 3" PVC TO HH 7:
 2-12/C #14
 1-3/C #14
 1-3/C #14 (LUM)
 1-3/C #20
 1-1/C #6 INS. GR.

5 PA100 POLE FOUNDATION
 TYPE PA100-A-50-D40-9 (DAVIT AT 350 DEG)
 1-LUMINAIRE-LED
 1-ANGLE MOUNT SIGNAL OVERHEAD AT 0'
 2-STRAIGHT MOUNT SIGNALS OVERHEAD
 AT 11' AND 23'
 1-ANGLE MOUNT SIGNAL AT 180 DEG
 1-ONE WAY EVP DETECTOR AND
 CONFIRMATORY LIGHT (PHASES 6+1)
 1-R10-X12 SIGN ADJACENT TO HEAD (1-1)
 1-TYPE D SIGN (D-2) (SEE SIGN DETAILS)
 2-TYPE R9-3 SIGNS(FACING POLES 1 AND 3)
 3" PVC TO HH 11:
 2-12/C #14
 1-3/C #14
 1-3/C#14 (LUM)
 1-3/C #20
 1-1/C #6 INS. GR.

A EQUIPMENT PAD
 SERVICE CABINET (SSB)
 CONTROLLER AND CABINET
 4" PVC TO HH 1:
 6-12/C#14
 1-4/C#14
 2-3/C#14
 6-2/C#14
 2-3/C#20
 1-CAT5E (COMM)
 1-1/C#6 INS. GR.
 4" PVC TO HH 19:
 3-12/C#14
 1-4/C#14
 1-3/C#14
 11-2/C#14
 2-3/C#20
 1-1/C#6 INS. GR.

1-2" AND 1-3" PVC STUBBED OUT (CAPPED BOTH ENDS)
 3/4" PVC STUBBED OUT (FOR TELEPHONE LINE)

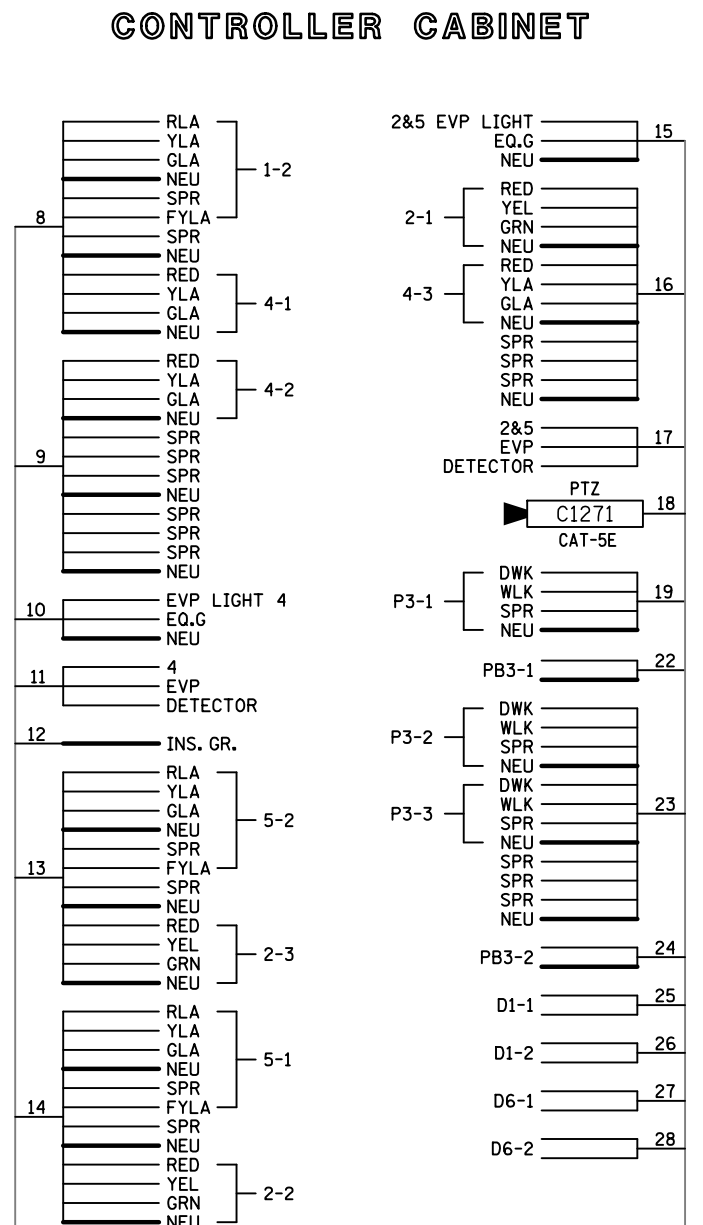
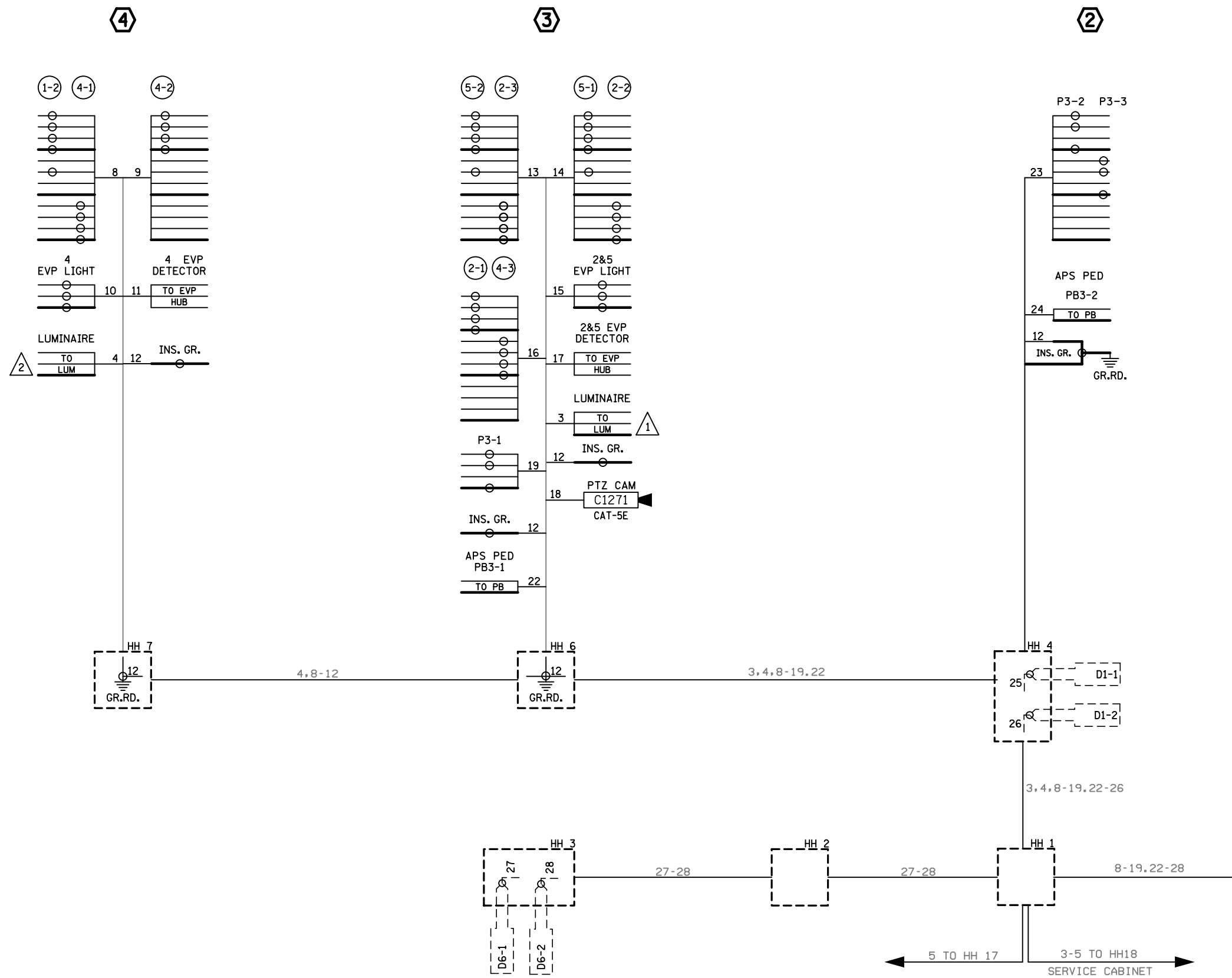
CONTROLLER CABINET TO SERVICE CABINET:
 2" PVC
 2-1/C#6
 1-1/C#6 INS. GR.
 CONTROLLER CABINET TO SERVICE CABINET (COMMS):
 2" PVC
 1-6PR #19
 SERVICE CABINET TO INP HH 18:
 2" PVC
 3-1/C #2
 SERVICE CABINET TO HH 1:
 2" PVC
 3-3/C#14 (LUM)
 HH 1 TO HH 19:
 2" PVC
 1-3/C #14 (LUM)
 CONTROLLER CABINET TO TMS VAULT:
 2" PVC
 1-6SM F/O PIGTAIL

B SOP-WOOD POLE
 (BY XCEL ENERGY)

BY	DATE	REVISIONS	SYSTEM ID: 1734989 T.E.	POLE NOTES T.H. 7 AT CSAH 19 (OAK STREET) IN EXCELSIOR, HENNEPIN COUNTY	DRAWN BY: MAS	CKD BY: GAK	DATE: 11-5-13
SJK	5/1/23	PTZ CAMERA UPGRADE	METER ADDRESS: 400 OAK STREET		CERTIFIED BY _____ LIC. NO. _____ DATE: _____		
			MASTER ID: T.E.		STATE PROJ. NO. (T.H.7)	SHEET NO. 3 OF	5 SHEETS

PLOTTED/REVISED: H-MAY-2023

DISTRICT #: Metro
I-PLOT NAME: wiring 1
PATH & FILENAME: Projects\DM_POS\007\0000\Traffic\Signal\8272 TH7 @ (19) OAK ST 1734989\1734989_sgl.dgn

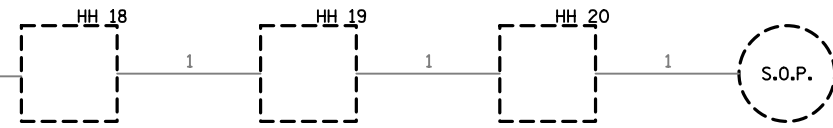
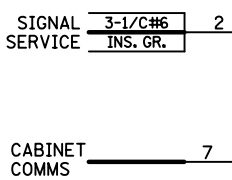
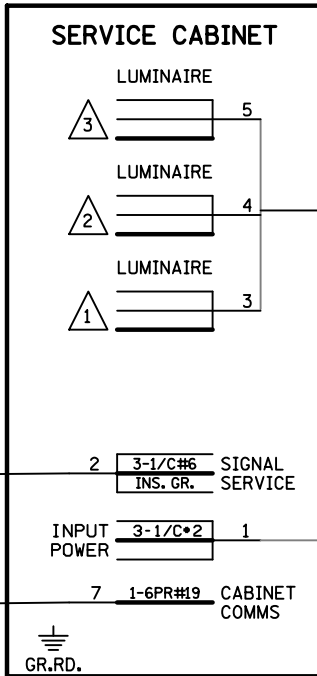
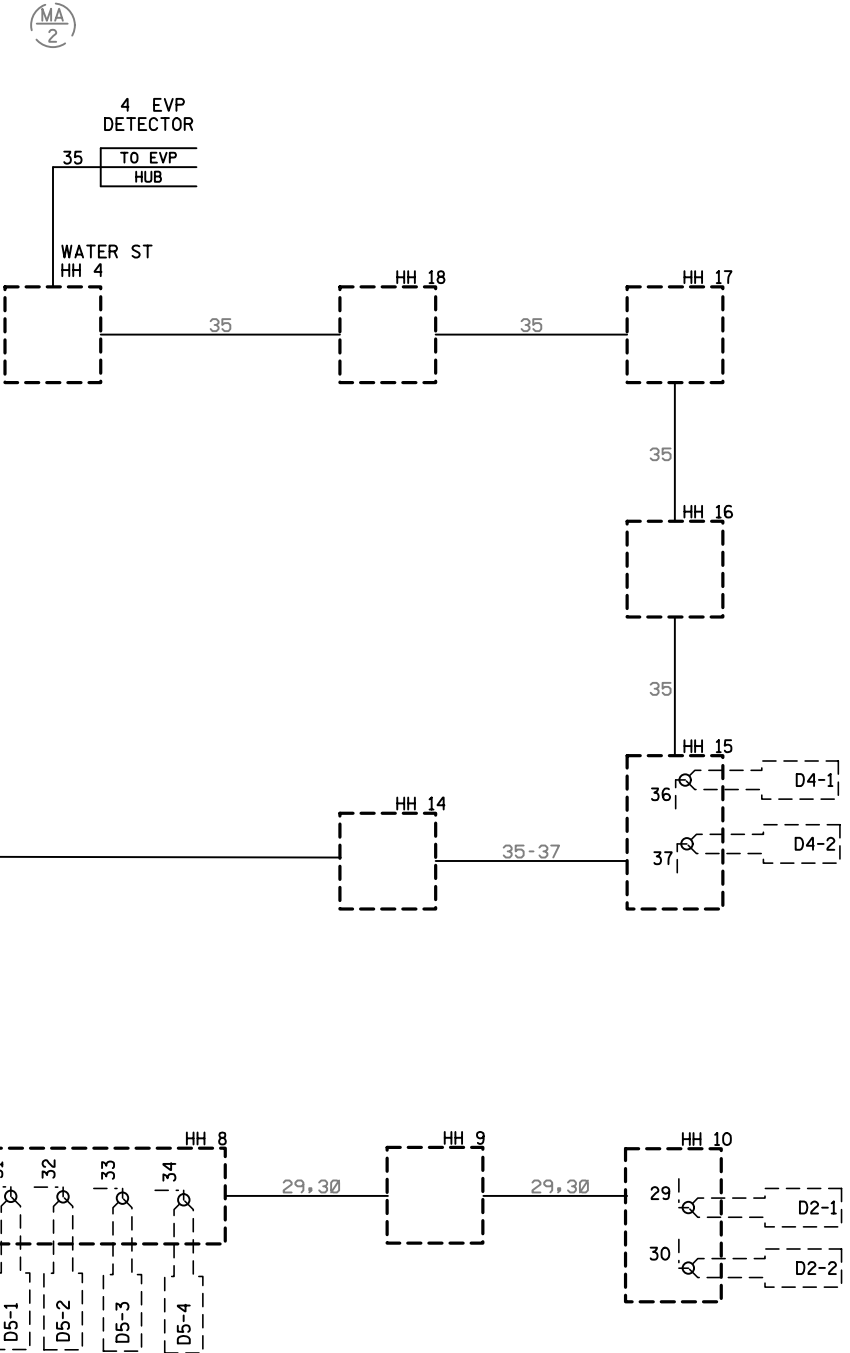
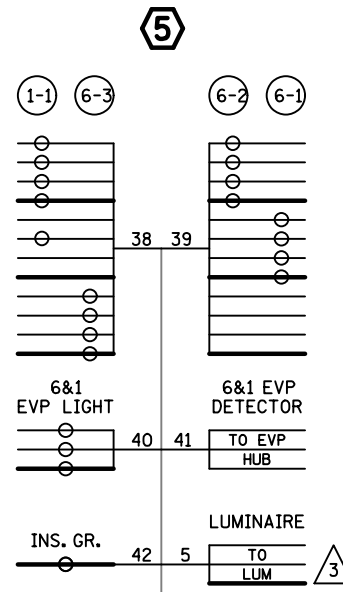
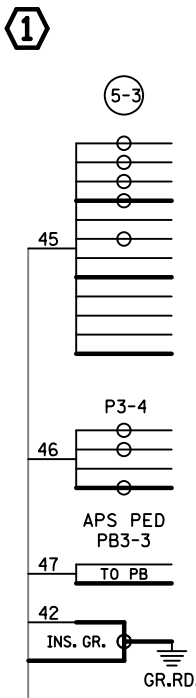
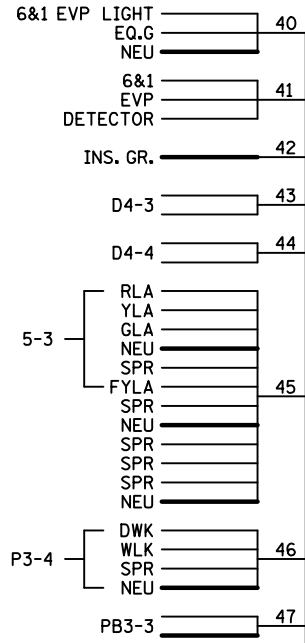
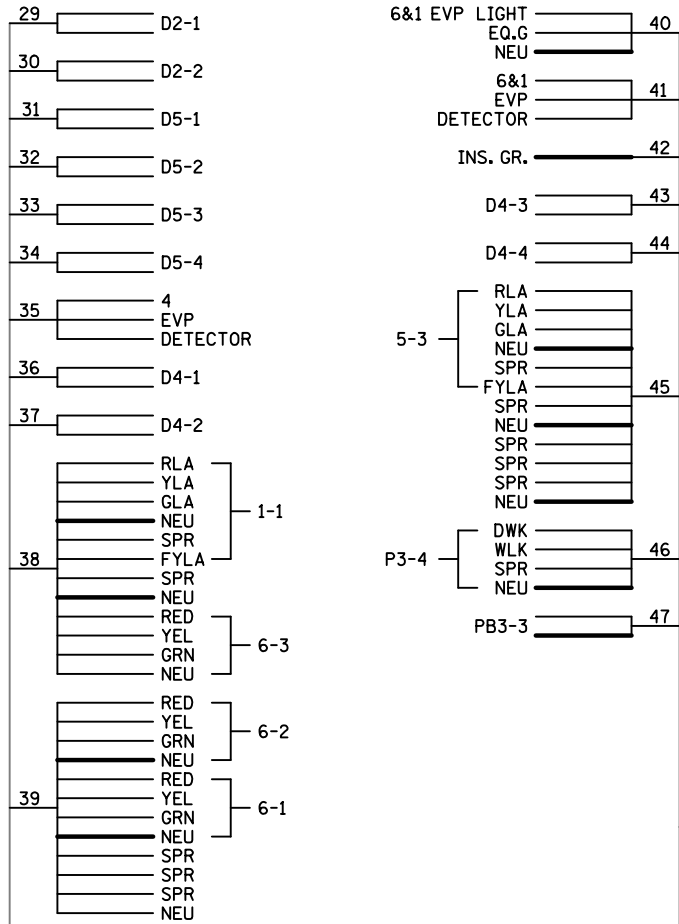


- NOTES:**
- 1. LUMINAIRES ARE METERED.
 - 2. SIGNAL SYSTEM INCLUDES BATTERY- BACKUP SERVICE CABINET (NO BATTERIES).
 - 3. FOR CONDUCTOR COLOR CODE SEE TRAFFIC SIGNAL POLE WIRING CONNECTOR DETAIL.

BY	DATE	REVISIONS	SYSTEM ID: 1734989 T.E.	S.A.P. NO. 027-619-024	DRAWN BY: MAS	CKD BY: GAK	DATE: 11-5-13
SJK	5/1/23	PTZ CAMERA UPGRADE	METER ADDRESS: 400 OAK STREET	CERTIFIED BY _____	LIC. NO. _____	DATE: _____	
			MASTER ID: T.E.	STATE PROJ. NO. (T.H.7)	SHEET NO. 4 OF 5 SHEETS		

**WIRING DIAGRAM (1 OF 2)
T.H. 7 AT CSAH 19 (OAK STREET)
IN EXCELSIOR, HENNEPIN COUNTY**

CONTROLLER CABINET



- NOTES:**
1. LUMINAIRES ARE METERED.
 2. SIGNAL SYSTEM INCLUDES BATTERY- BACKUP SERVICE CABINET (NO BATTERIES).
 3. FOR CONDUCTOR COLOR CODE SEE TRAFFIC SIGNAL POLE WIRING CONNECTOR DETAIL.

DISTRICT #: Metro
 IPLOT NAME: wiring 2
 PATH & FILENAME: Projects\DM_POS\007\0000\Traffic\Signal\8272 TH7 @ (9) OAK ST 1734989\1734989_sgl.dgn
 PLOTTED/REVISED: MAY-2023

BY	DATE	REVISIONS	SYSTEM ID: 1734989 T.E.	WIRING DIAGRAM (2 OF 2) T.H. 7 AT CSAH 19 (OAK STREET) IN EXCELSIOR, HENNEPIN COUNTY	DRAWN BY: MAS	CKD BY: GAK	DATE: 11-5-13
SJK	5/1/23	PTZ CAMERA UPGRADE	METER ADDRESS: 400 OAK STREET		CERTIFIED BY _____	LIC. NO. _____	DATE: _____
			MASTER ID: _____ T.E.		STATE PROJ. NO. _____	(T.H. 7)	SHEET NO. 5 OF 5 SHEETS

LOOP DETECTOR CHART		
NUMBER	SIZE (FT)	LOCATION
D1-1	2-6X6	20 & 50
D1-2	2-6X6	5 & 35
D2-1, D2-2	6X6	400
D4-1, D4-2	6X6	120
D4-3, D4-4	2-6X6	5 & 20
D5-1, D5-2	2-6X6	20 & 50
D5-3, D5-4	2-6X6	5 & 35
D6-1, D6-2	6X6	400

-ALL LOOP DETECTORS ARE PVC

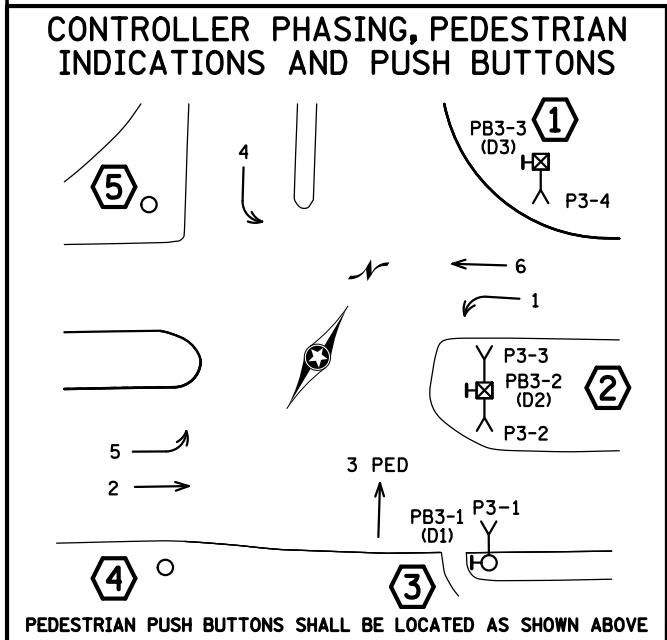
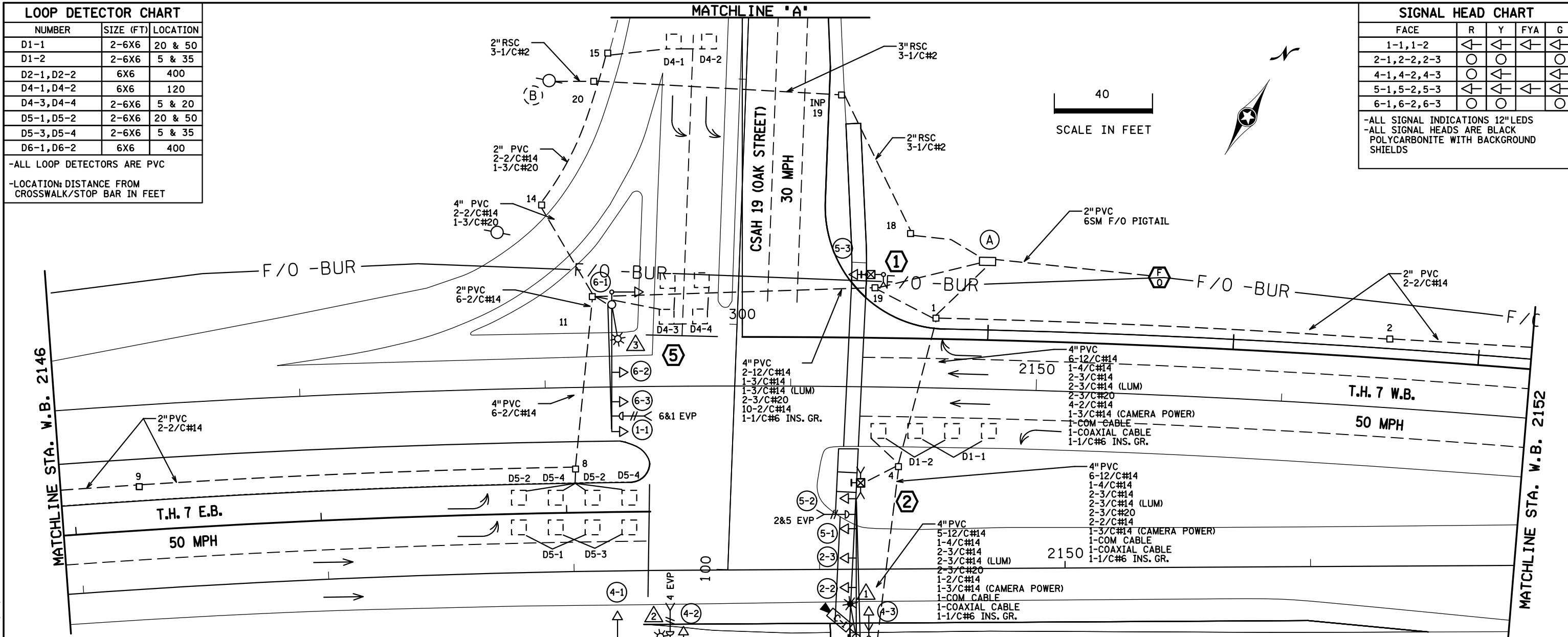
-LOCATION: DISTANCE FROM CROSSWALK/STOP BAR IN FEET

SIGNAL HEAD CHART				
FACE	R	Y	FYA	G
1-1, 1-2	←	←	←	←
2-1, 2-2, 2-3	○	○		○
4-1, 4-2, 4-3	○	←		←
5-1, 5-2, 5-3	←	←	←	←
6-1, 6-2, 6-3	○	○		○

-ALL SIGNAL INDICATIONS 12" LEDS
-ALL SIGNAL HEADS ARE BLACK POLYCARBONITE WITH BACKGROUND SHIELDS

PLOTTED/REVISED: 3/9/2015

DISTRICT #: METRO
IPLOT NAME: S54INTERSECTION
PATH & FILENAME: IP_PWP-d07980NEWNEWINT20133_sgl.dgn



SIGNAL SYSTEM OPERATION

- THE SIGNAL SYSTEM FLASH MODE IS ALL RED.
- NORMAL OPERATION IS 5 PHASE, WITH PHASES 1 AND 5 BEING FLASHING YELLOW ARROW LEFT TURN PHASES BY TIME OF DAY.
- PHASES 2 AND 6 SHALL BE ON VEHICLE RECALL.

BY: EJA	DATE: 03-09-15	REVISIONS: AS-BUILT OF SP 2706-225	SYSTEM ID: 20133	T.E.: 5142	INTERSECTION LAYOUT T.H. 7 AT CSAH 19 (OAK STREET) IN EXCELSIOR, HENNEPIN COUNTY	DRAWN BY: MAS	CKD BY: GAK	DATE: 11-5-13
			METER ADDRESS: 400 OAK STREET			CERTIFIED BY: _____	LIC. NO. _____	DATE: _____
			MASTER ID: _____	T.E. _____	STATE PROJ. NO. _____	(T.H. 7)	SHEET NO. 1 OF 5 SHEETS	

PLOTTED/REVISED: 3/9/2015

DISTRICT #: METRO
IPLOT NAME: SSI6APOLENOTES
PATH & FILENAME: IP_PWP-d077980NEWINWNT20133_sgl.dgn

① PEDESTAL FOUNDATION
 13' PEDESTAL POLE PLUS BASE
 1-STRAIGHT MOUNT SIGNAL AT 90 DEG
 1-STRAIGHT MOUNT CD HEAD IND AT 270 DEG
 1-APS PB AND SIGN (RT ARROW) (PB3-3)
 1-R9-3 SIGN (FACING POLE 5)
 3" PVC TO HH 19:
 1-12/C#14
 1-4/C#14
 1-2/C#14
 2-1/C#6 INS. GR.

② PEDESTAL FOUNDATION
 13' PEDESTAL POLE PLUS BASE
 2-STRAIGHT MOUNT CD PED HEADS AT 90 & 270 DEG
 1-APS PB AND SIGN (DOUBLE ARROW) (PB3-2)
 3" PVC TO HH 4:
 1-12/C#14
 1-2/C#14
 2-1/C#6 INS. GR.

③ PA100 POLE FOUNDATION
 TYPE PA100-A-55-X6-350/CAM 400(AT 350 DEG)
 1-LUMINAIRE-LED
 1-VIDEO CAMERA
 1-ANGLE MOUNT SIGNAL OVERHEAD AT 0'
 3-STRAIGHT MOUNT SIGNALS OVERHEAD
 AT 11' 23' AND 35'
 2-ANGLE MOUNT SIGNALS AT 90 AND 180 DEG
 1-ANGLE MOUNT CD PED HEAD AT 90 DEG
 1-CAMERA POWER SUPPLY AT 270 DEG
 1-APS PB AND SIGN (LT ARROW) (PB3-1)
 1-ONE WAY EVP DETECTOR AND
 CONFIRMATORY LIGHT (PHASES 2&5)
 1-R10-X12 SIGN ADJACENT TO HEAD (5-2)
 1-TYPE D SIGN (D-2)
 3" PVC TO HH 6:
 3-12/C #14
 1-4/C #14
 1-3/C #14
 1-3/C #14 (LUM)
 1-3/C #20
 1-3/C#14 (CAMERA POWER)
 1-COM CABLE
 1-COAXIAL CABLE
 1-1/C #6 INS. GR.

④ PA85 POLE FOUNDATION
 TYPE PA85-A-20-D40-9 (DAVIT AT 350 DEG)
 1-LUMINAIRE-LED
 1-ANGLE MOUNT SIGNAL OVERHEAD AT 0'
 2-ANGLE MOUNT SIGNALS AT 90 AND 180 DEG
 1-ONE WAY EVP DETECTOR AND
 CONFIRMATORY LIGHT (PHASE 4)
 1-TYPE D SIGN (D-1)
 1-TYPE R9-3 SIGN(FACING POLE 5)
 3" PVC TO HH 7:
 2-12/C #14
 1-3/C #14
 1-3/C #14 (LUM)
 1-3/C #20
 1-1/C #6 INS. GR.

⑤ PA100 POLE FOUNDATION
 TYPE PA100-A-50-D40-9 (DAVIT AT 350 DEG)
 1-1-LUMINAIRE-LED
 1-ANGLE MOUNT SIGNAL OVERHEAD AT 0'
 2-STRAIGHT MOUNT SIGNALS OVERHEAD
 AT 11' AND 23'
 1-ANGLE MOUNT SIGNAL AT 180 DEG
 1-ONE WAY EVP DETECTOR AND
 CONFIRMATORY LIGHT (PHASES 6+1)
 1-R10-X12 SIGN ADJACENT TO HEAD (1-1)
 1-TYPE D SIGN (D-2) (SEE SIGN DETAILS)
 2-TYPE R9-3 SIGNS(FACING POLES 1 AND 3)
 3" PVC TO HH 11:
 2-12/C #14
 1-3/C #14
 1-3/C#14 (LUM)
 1-3/C #20
 1-1/C #6 INS. GR.

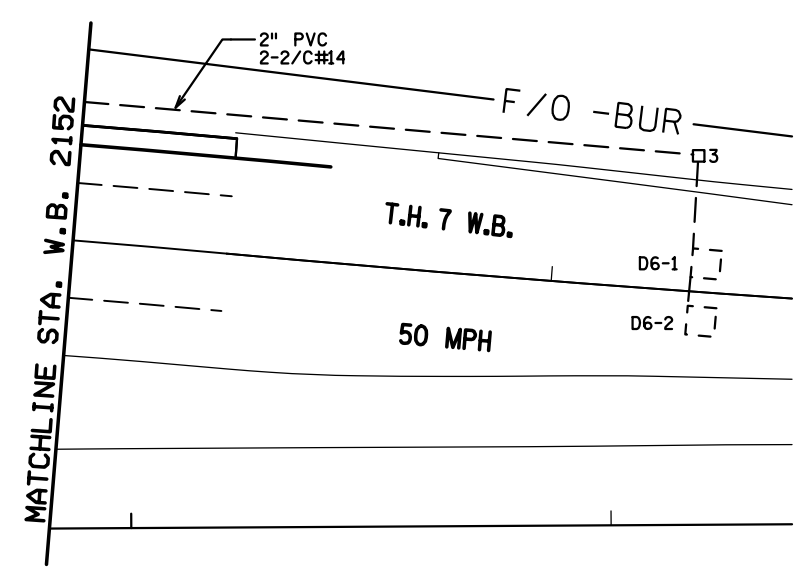
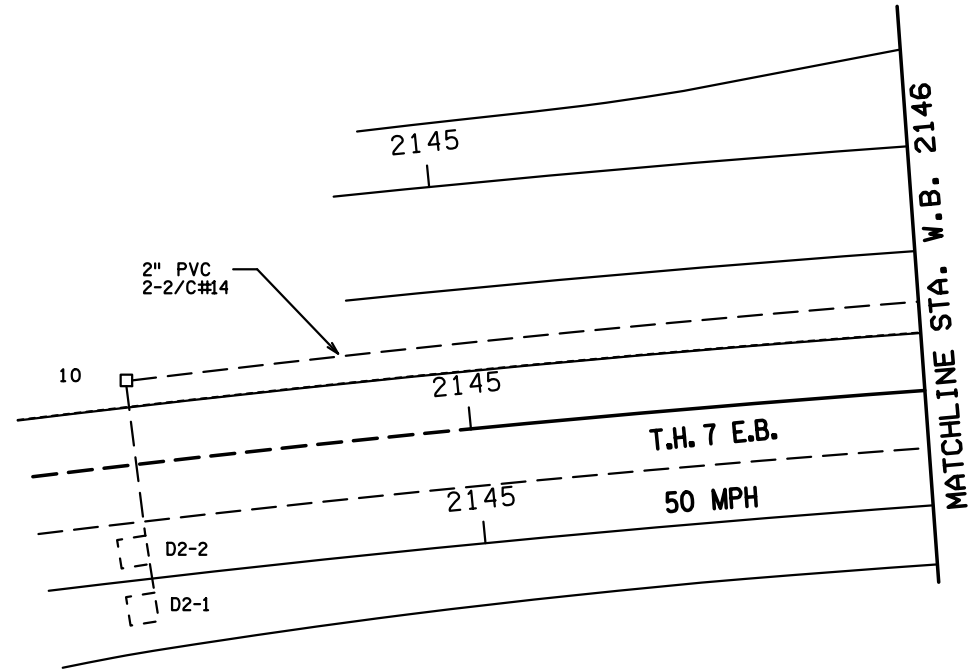
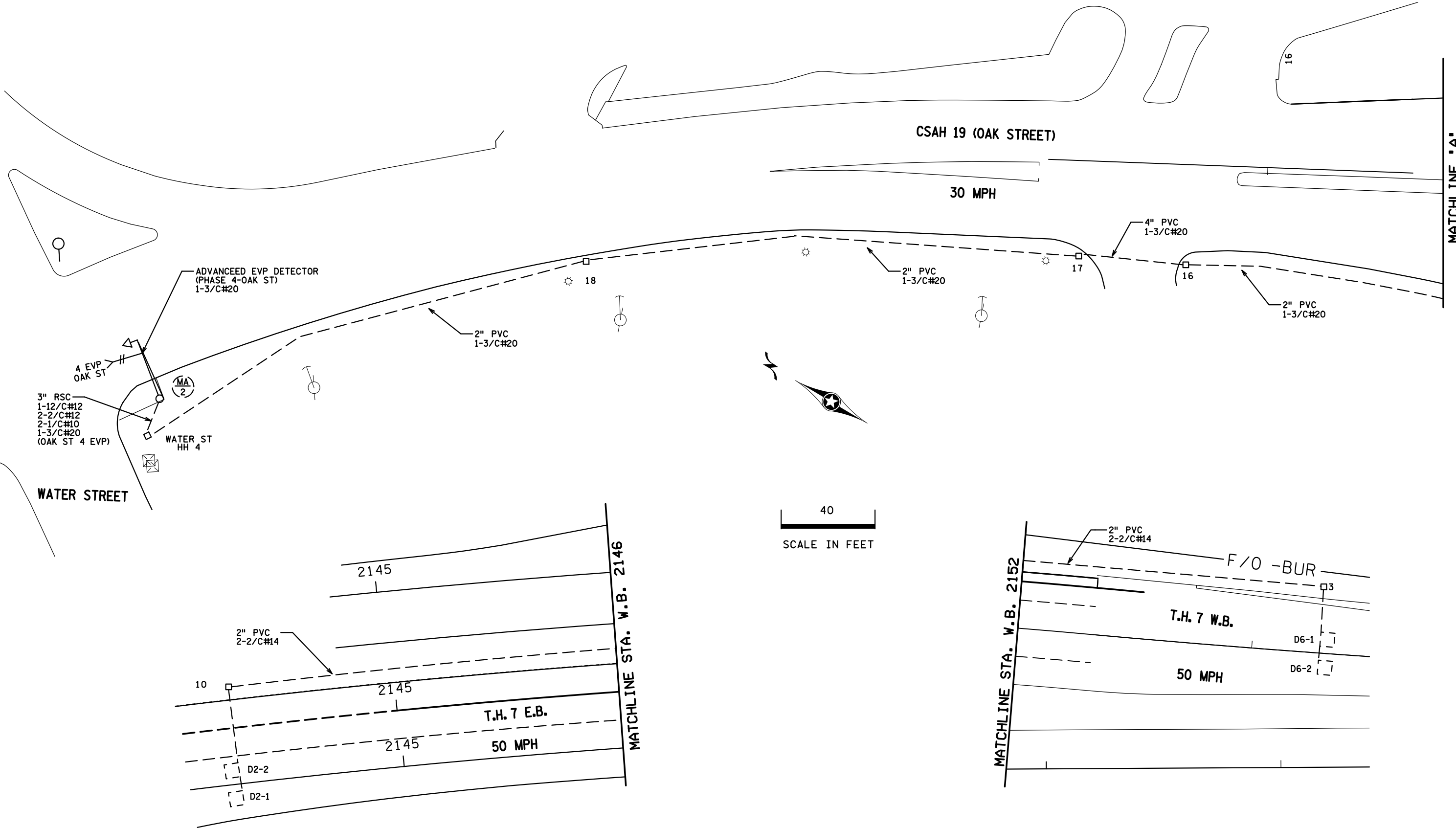
Ⓐ EQUIPMENT PAD
 SERVICE CABINET (SSB)
 CONTROLLER AND CABINET
 4"PVC TO HH 1: 4"PVC TO HH 19:
 6-12/C#14 3-12/C#14
 1-4/C#14 1-4/C#14
 2-3/C#14 1-3/C#14
 6-2/C#14 11-2/C#14
 2-3/C#20 2-3/C#20
 1-COM CABLE 1-1/C#6 INS. GR.
 1-COAXIAL CABLE
 1-1/C#6 INS. GR.
 1-2" AND 1-3" PVC STUBBED OUT (CAPPED BOTH ENDS)
 3/4"PVC STUBBED OUT (FOR TELEPHONE LINE)
 CONTROLLER CABINET TO SERVICE CABINET:
 2"PVC
 2-1/C#6
 1-1/C#6 INS. GR.
 CONTROLLER CABINET TO SERVICE CABINET (COMMS):
 2"PVC
 1-6PR #19
 SERVICE CABINET TO INP HH 18:
 2"PVC
 3-1/C #2
 SERVICE CABINET TO HH 1:
 2"PVC
 3-3/C#14 (LUM)
 1-3/C#14 (CAMERA POWER)
 HH 1 TO HH 19:
 2"PVC
 1-3/C #14 (LUM)
 CONTROLLER CABINET TO TMS VAULT:
 2"PVC
 1-6SM F/O PIGTAIL

Ⓑ SOP-WOOD POLE
 (BY XCEL ENERGY)

BY	DATE	REVISIONS	SYSTEM ID: 20133	T.E. 5142	POLE NOTES T.H. 7 AT CSAH 19 (OAK STREET) IN EXCELSIOR, HENNEPIN COUNTY	DRAWN BY: MAS	CKD BY: GAK	DATE: 11-5-13
EJA	03-09-15	AS-BUILT OF SP 2706-225	METER ADDRESS: 400 OAK STREET			CERTIFIED BY _____	LIC. NO. _____	DATE: _____
			MASTER ID:	T.E.		LICENSED PROFESSIONAL ENGINEER		
						STATE PROJ. NO.	(T.H.7)	SHEET NO. 3 OF

PLOTTED/REVISED: 3/9/2015

DISTRICT #: METRO
IPLOT NAME: SSI6BMATCHLINES
PATH & FILENAME: IP_PWP-d077980NEWINEWT20133_sgl.dgn



BY	DATE	REVISIONS
EJA	03-09-15	AS-BUILT OF SP 2706-225

SYSTEM ID: 20133	T.E. 5142
METER ADDRESS: 400 OAK STREET	
MASTER ID:	T.E.

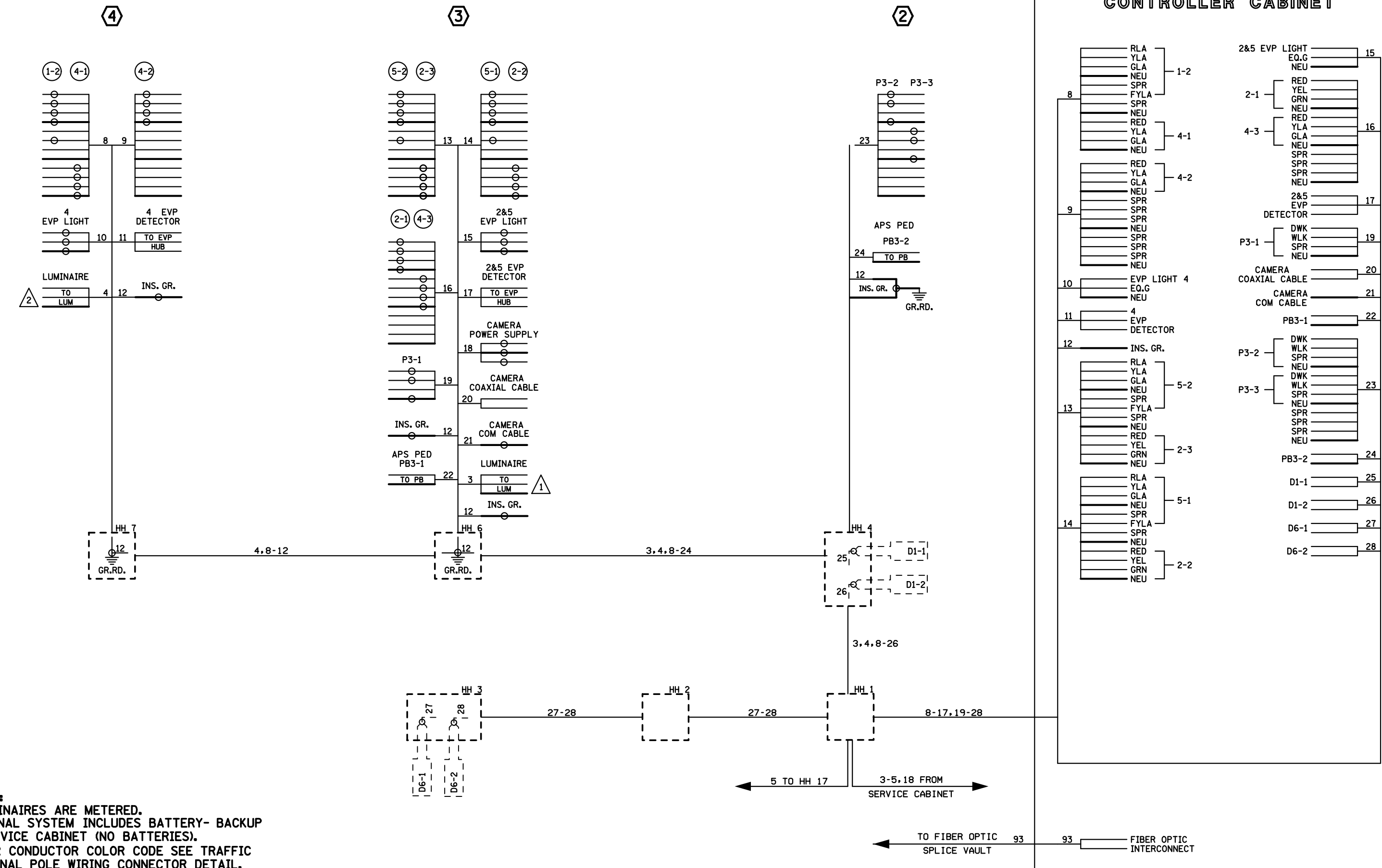
**MATCHLINE LAYOUT
T.H. 7 AT CSAH 19 (OAK STREET)
IN EXCELSIOR, HENNEPIN COUNTY**

DRAWN BY: MAS	CKD BY: GAK	DATE: 11-5-13
CERTIFIED BY: _____	LIC. NO. _____	DATE: _____
STATE PROJ. NO. _____	(T.H. 7)	SHEET NO. 2 OF 5 SHEETS

PLOTTED/REVISED: 3/9/2015

DISTRICT #: METRO
 IPLOT NAME: SSGIMI
 PATH & FILENAME: IP_PWP-d077980NEWINEWT20133_sgl.dgn

CONTROLLER CABINET



- NOTES:**
1. LUMINAIRES ARE METERED.
 2. SIGNAL SYSTEM INCLUDES BATTERY- BACKUP SERVICE CABINET (NO BATTERIES).
 3. FOR CONDUCTOR COLOR CODE SEE TRAFFIC SIGNAL POLE WIRING CONNECTOR DETAIL.

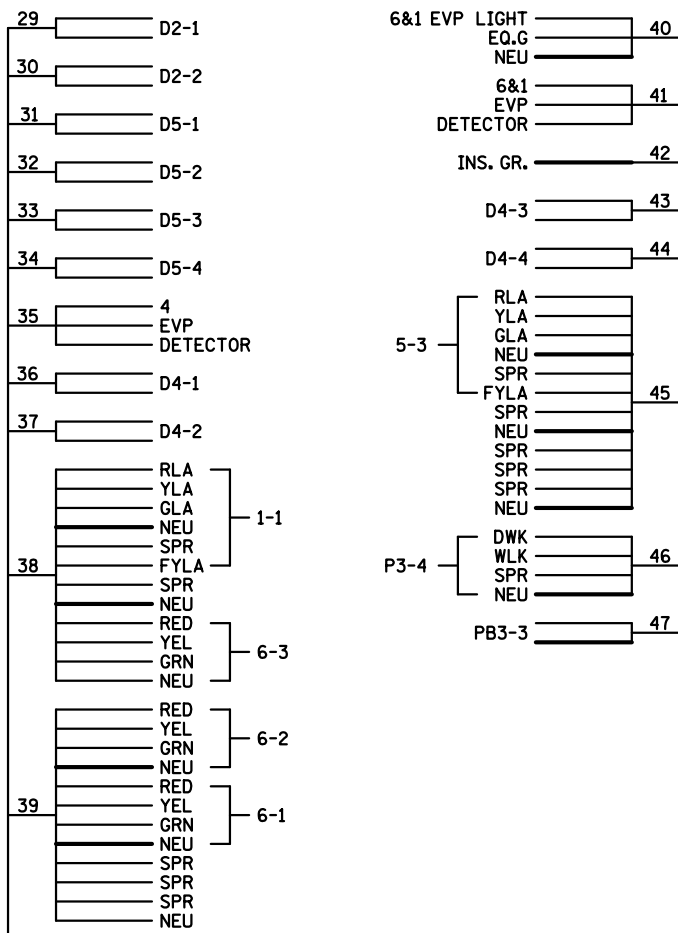
BY	DATE	REVISIONS
EJA	03-09-15	AS-BUILT OF SP 2706-225

SYSTEM ID: 20133	T.E. 5142
METER ADDRESS: 400 OAK STREET	
MASTER ID:	T.E.

WIRING DIAGRAM (1 OF 2)
T.H. 7 AT CSAH 19 (OAK STREET)
IN EXCELSIOR, HENNEPIN COUNTY

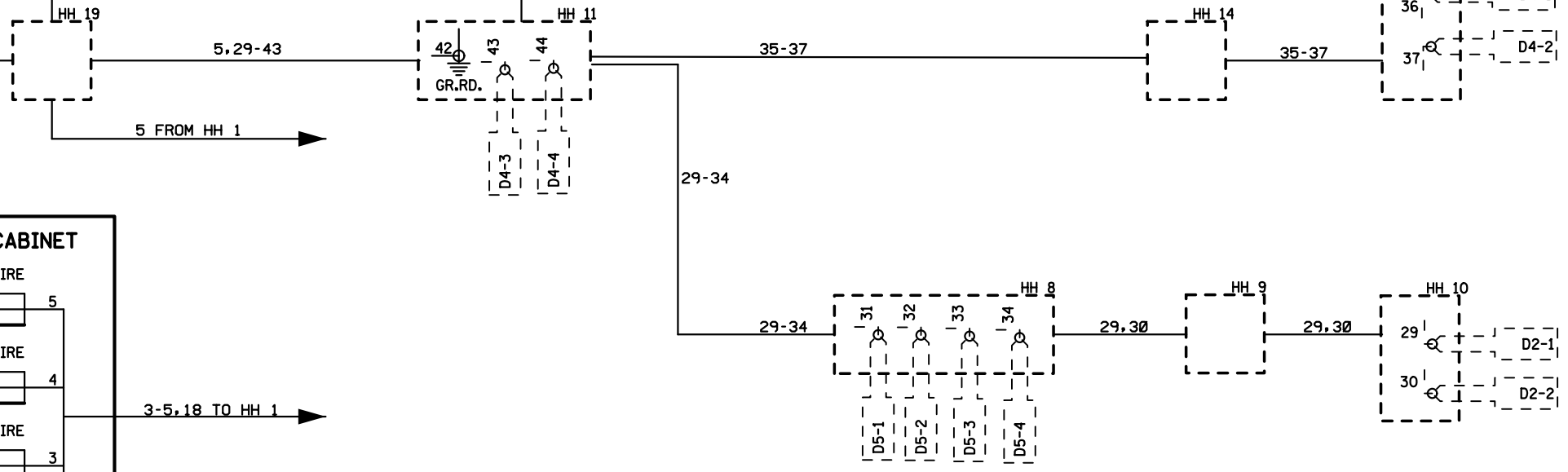
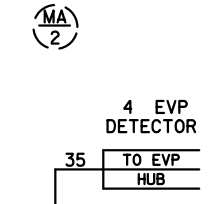
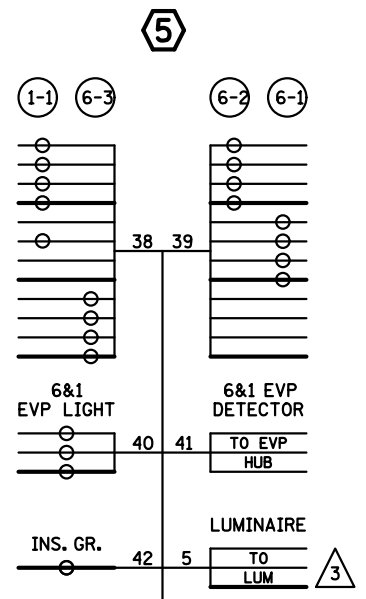
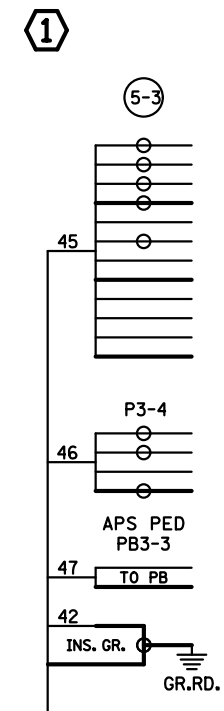
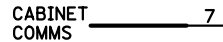
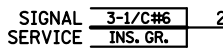
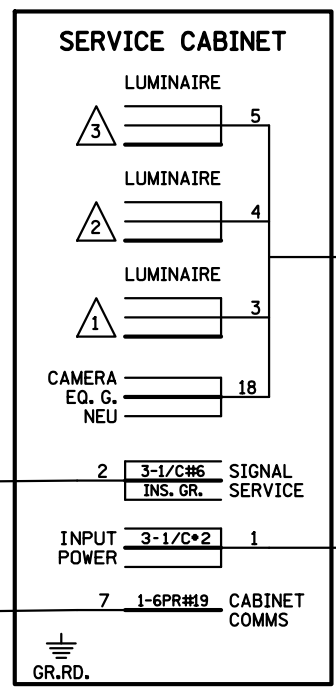
S.A.P. NO. 027-619-024	DRAWN BY: MAS	CKD BY: GAK	DATE: 11-5-13
CERTIFIED BY _____	LIC. NO. _____	DATE: _____	
STATE PROJ. NO. _____	(T.H. 7)	SHEET NO. 4 OF	5 SHEETS

CONTROLLER CABINET



PLOTTED/REVISED: 3/9/2015

DISTRICT #: METRO
 IPLOT NAME: S57M2
 PATH & FILENAME: IP_PWP-d07980NEWNEWINT20133_sgl.dgn



- NOTES:**
- LUMINAIRE ARE METERED.
 - SIGNAL SYSTEM INCLUDES BATTERY- BACKUP SERVICE CABINET (NO BATTERIES).
 - FOR CONDUCTOR COLOR CODE SEE TRAFFIC SIGNAL POLE WIRING CONNECTOR DETAIL.

BY	DATE	REVISIONS
EJA	03-09-15	AS-BUILT OF SP 2706-225

SYSTEM ID: 20133	T.E. 5142
METER ADDRESS: 400 OAK STREET	
MASTER ID:	T.E.

WIRING DIAGRAM (2 OF 2)
 T.H. 7 AT CSAH 19 (OAK STREET)
 IN EXCELSIOR, HENNEPIN COUNTY

DRAWN BY: MAS	CKD BY: GAK	DATE: 11-5-13
CERTIFIED BY: _____	LIC. NO. _____	DATE: _____
STATE PROJ. NO. _____	(T.H. 7)	SHEET NO. 5 OF 5 SHEETS