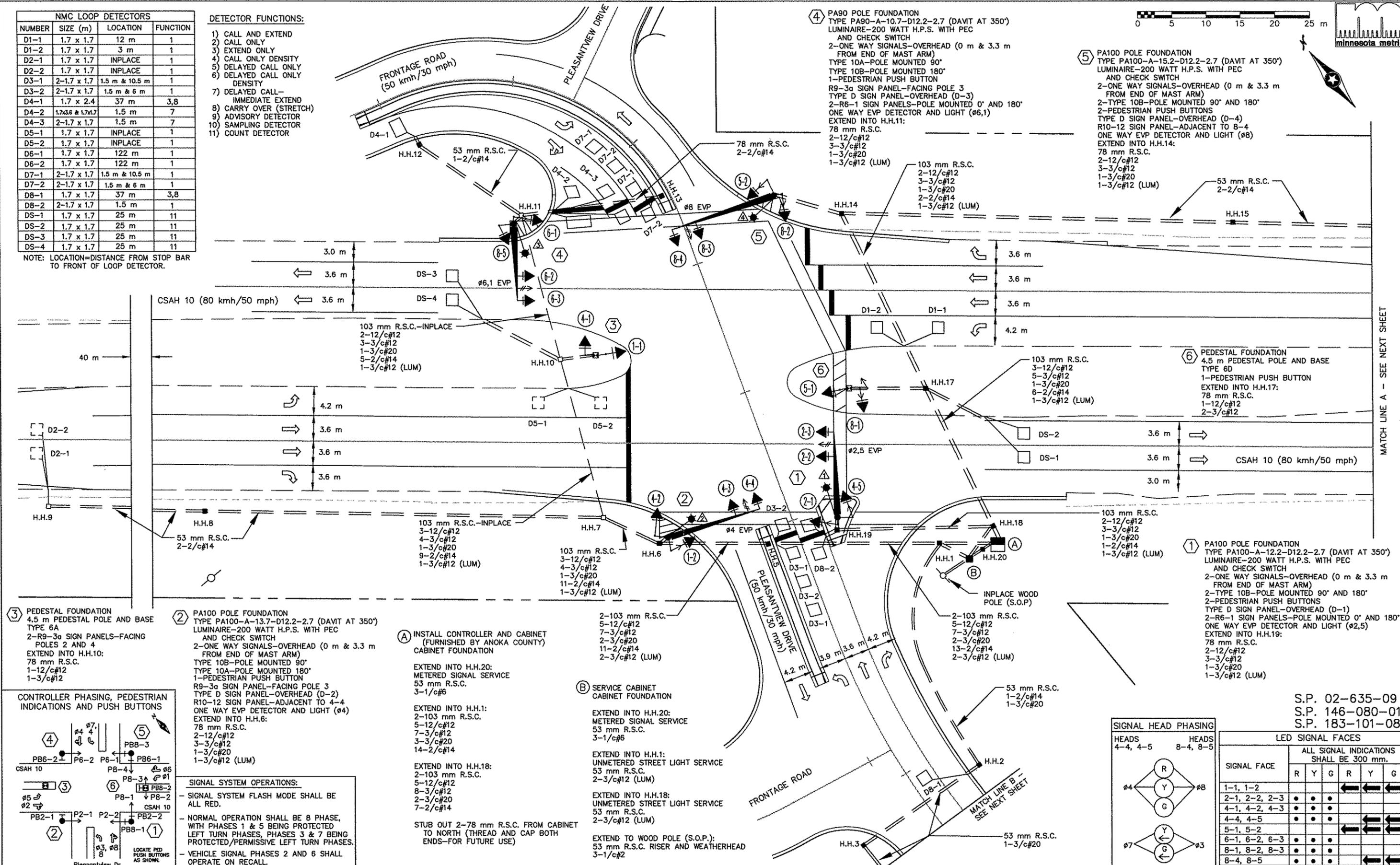


NMC LOOP DETECTORS			
NUMBER	SIZE (m)	LOCATION	FUNCTION
D1-1	1.7 x 1.7	12 m	1
D1-2	1.7 x 1.7	3 m	1
D2-1	1.7 x 1.7	INPLACE	1
D2-2	1.7 x 1.7	INPLACE	1
D3-1	2-1.7 x 1.7	1.5 m & 10.5 m	1
D3-2	2-1.7 x 1.7	1.5 m & 6 m	1
D4-1	1.7 x 2.4	37 m	3,8
D4-2	1.7 x 1.7	1.5 m	7
D4-3	2-1.7 x 1.7	1.5 m	7
D5-1	1.7 x 1.7	INPLACE	1
D5-2	1.7 x 1.7	INPLACE	1
D6-1	1.7 x 1.7	122 m	1
D6-2	1.7 x 1.7	122 m	1
D7-1	2-1.7 x 1.7	1.5 m & 10.5 m	1
D7-2	2-1.7 x 1.7	1.5 m & 6 m	1
D8-1	1.7 x 1.7	37 m	3,8
D8-2	2-1.7 x 1.7	1.5 m	1
DS-1	1.7 x 1.7	25 m	11
DS-2	1.7 x 1.7	25 m	11
DS-3	1.7 x 1.7	25 m	11
DS-4	1.7 x 1.7	25 m	11

- DETECTOR FUNCTIONS:**
- 1) CALL AND EXTEND
 - 2) CALL ONLY
 - 3) EXTEND ONLY
 - 4) CALL ONLY DENSITY
 - 5) DELAYED CALL ONLY
 - 6) DELAYED CALL ONLY DENSITY
 - 7) DELAYED CALL-IMMEDIATE EXTEND
 - 8) CARRY OVER (STRETCH)
 - 9) ADVISORY DETECTOR
 - 10) SAMPLING DETECTOR
 - 11) COUNT DETECTOR

NOTE: LOCATION=DISTANCE FROM STOP BAR TO FRONT OF LOOP DETECTOR.



3 PEDESTAL FOUNDATION
4.5 m PEDESTAL POLE AND BASE
TYPE 6A
2-R9-3a SIGN PANELS-FACING
POLES 2 AND 4
EXTEND INTO H.H.10:
78 mm R.S.C.
1-12/c#12
1-3/c#12

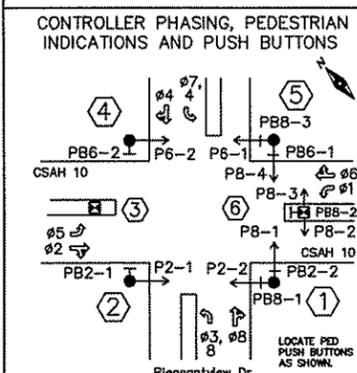
2 PA100 POLE FOUNDATION
TYPE PA100-A-13.7-D12.2-2.7 (DAVIT AT 350°)
LUMINAIRE-200 WATT H.P.S. WITH PEC
AND CHECK SWITCH
2-ONE WAY SIGNALS-OVERHEAD (0 m & 3.3 m
FROM END OF MAST ARM)
TYPE 10A-POLE MOUNTED 90°
TYPE 10A-POLE MOUNTED 180°
1-PEDESTRIAN PUSH BUTTON
R9-3a SIGN PANEL-FACING POLE 3
TYPE D SIGN PANEL-OVERHEAD (D-2)
R10-12 SIGN PANEL-ADJACENT TO 4-4
ONE WAY EVP DETECTOR AND LIGHT (Ø4)
EXTEND INTO H.H.6:
78 mm R.S.C.
2-12/c#12
3-3/c#12
1-3/c#20
1-3/c#12 (LUM)

A INSTALL CONTROLLER AND CABINET
(FURNISHED BY ANOKA COUNTY)
CABINET FOUNDATION
EXTEND INTO H.H.20:
METERED SIGNAL SERVICE
53 mm R.S.C.
3-1/c#6
EXTEND INTO H.H.1:
2-103 mm R.S.C.
5-12/c#12
7-3/c#12
2-3/c#20
3-3/c#20
14-2/c#14
EXTEND INTO H.H.18:
2-103 mm R.S.C.
5-12/c#12
8-3/c#12
2-3/c#20
7-2/c#14
STUB OUT 2-78 mm R.S.C. FROM CABINET
TO NORTH (THREAD AND CAP BOTH
ENDS-FOR FUTURE USE)

B SERVICE CABINET
CABINET FOUNDATION
EXTEND INTO H.H.20:
METERED SIGNAL SERVICE
53 mm R.S.C.
3-1/c#6
EXTEND INTO H.H.1:
UNMETERED STREET LIGHT SERVICE
53 mm R.S.C.
2-3/c#12 (LUM)
EXTEND INTO H.H.18:
UNMETERED STREET LIGHT SERVICE
53 mm R.S.C.
2-3/c#12 (LUM)
EXTEND TO WOOD POLE (S.O.P.):
53 mm R.S.C. RISER AND WEATHERHEAD
3-1/c#2

4 PA90 POLE FOUNDATION
TYPE PA90-A-10.7-D12.2-2.7 (DAVIT AT 350°)
LUMINAIRE-200 WATT H.P.S. WITH PEC
AND CHECK SWITCH
2-ONE WAY SIGNALS-OVERHEAD (0 m & 3.3 m
FROM END OF MAST ARM)
TYPE 10A-POLE MOUNTED 90°
TYPE 10B-POLE MOUNTED 180°
1-PEDESTRIAN PUSH BUTTON
R9-3a SIGN PANEL-FACING POLE 3
TYPE D SIGN PANEL-OVERHEAD (D-3)
2-R6-1 SIGN PANELS-POLE MOUNTED 0° AND 180°
ONE WAY EVP DETECTOR AND LIGHT (Ø6,1)
EXTEND INTO H.H.11:
78 mm R.S.C.
2-12/c#12
3-3/c#12
1-3/c#20
1-3/c#12 (LUM)
103 mm R.S.C.
2-12/c#12
3-3/c#12
1-3/c#20
2-2/c#14
1-3/c#12 (LUM)

5 PA100 POLE FOUNDATION
TYPE PA100-A-15.2-D12.2-2.7 (DAVIT AT 350°)
LUMINAIRE-200 WATT H.P.S. WITH PEC
AND CHECK SWITCH
2-ONE WAY SIGNALS-OVERHEAD (0 m & 3.3 m
FROM END OF MAST ARM)
2-TYPE 10B-POLE MOUNTED 90° AND 180°
2-PEDESTRIAN PUSH BUTTONS
TYPE D SIGN PANEL-OVERHEAD (D-4)
R10-12 SIGN PANEL-ADJACENT TO 8-4
ONE WAY EVP DETECTOR AND LIGHT (Ø8)
EXTEND INTO H.H.14:
78 mm R.S.C.
2-12/c#12
3-3/c#12
1-3/c#20
1-3/c#12 (LUM)
6 PEDESTAL FOUNDATION
4.5 m PEDESTAL POLE AND BASE
TYPE 6D
1-PEDESTRIAN PUSH BUTTON
EXTEND INTO H.H.17:
78 mm R.S.C.
1-12/c#12
2-3/c#12
103 mm R.S.C.
3-12/c#12
5-3/c#12
1-3/c#20
6-2/c#14
1-3/c#12 (LUM)
1 PA100 POLE FOUNDATION
TYPE PA100-A-12.2-D12.2-2.7 (DAVIT AT 350°)
LUMINAIRE-200 WATT H.P.S. WITH PEC
AND CHECK SWITCH
2-ONE WAY SIGNALS-OVERHEAD (0 m & 3.3 m
FROM END OF MAST ARM)
2-TYPE 10B-POLE MOUNTED 90° AND 180°
2-PEDESTRIAN PUSH BUTTONS
TYPE D SIGN PANEL-OVERHEAD (D-1)
2-R6-1 SIGN PANELS-POLE MOUNTED 0° AND 180°
ONE WAY EVP DETECTOR AND LIGHT (Ø2,5)
EXTEND INTO H.H.19:
78 mm R.S.C.
2-12/c#12
3-3/c#12
1-3/c#20
1-3/c#12 (LUM)



SIGNAL SYSTEM OPERATIONS:

- SIGNAL SYSTEM FLASH MODE SHALL BE ALL RED.
- NORMAL OPERATION SHALL BE 8 PHASE, WITH PHASES 1 & 5 BEING PROTECTED LEFT TURN PHASES, PHASES 3 & 7 BEING PROTECTED/PERMISSIVE LEFT TURN PHASES.
- VEHICLE SIGNAL PHASES 2 AND 6 SHALL OPERATE ON RECALL.

SIGNAL HEAD PHASING

HEADS	HEADS
4-4, 4-5	8-4, 8-5

LED SIGNAL FACES

SIGNAL FACE	ALL SIGNAL INDICATIONS SHALL BE 300 mm.					
	R	Y	G	R	Y	G
1-1, 1-2				←	←	←
2-1, 2-2, 2-3	•	•	•			
4-1, 4-2, 4-3	•	•	•			
4-4, 4-5	•	•	•	←	←	←
5-1, 5-2				←	←	←
6-1, 6-2, 6-3	•	•	•			
8-1, 8-2, 8-3	•	•	•			
8-4, 8-5	•	•	•	←	←	←

DRAWN BY: JMG
DESIGNER: JMG
CHECKED BY: JMG
DESIGN TEAM

NO.	BY	DATE	REVISIONS

©SHORT ELLIOTT HENRICKSON 1998. ANY USE OR REUSE OF THIS PLAN/DRAWING AND THE CORRESPONDING COMPUTER AIDED DESIGN/DRAFTING FILES WITHOUT THE EXPRESS WRITTEN CONSENT OF SEH, IS PROHIBITED. SEH SHALL NOT BE RESPONSIBLE FOR ANY UNAUTHORIZED USE OR REUSE OF THESE MATERIALS, OR DAMAGES RESULTING THEREFROM.

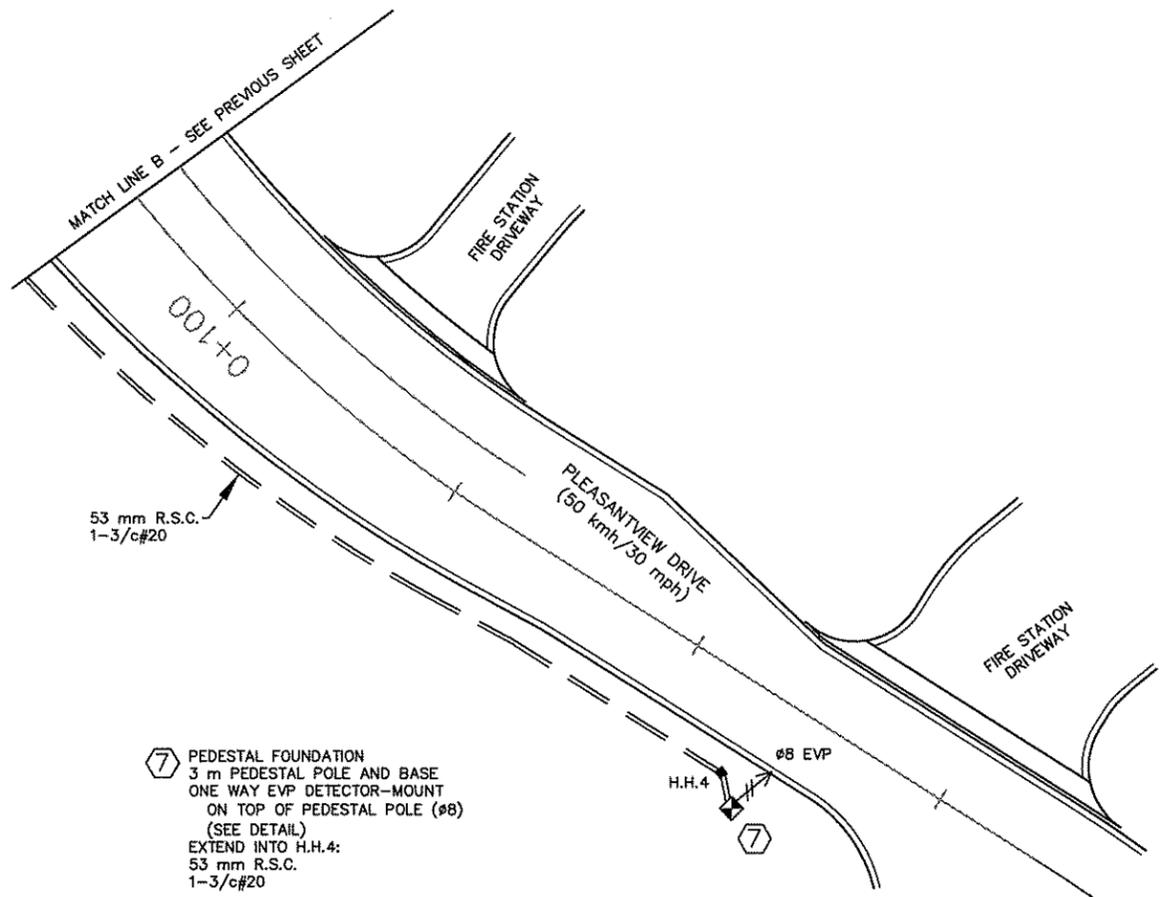
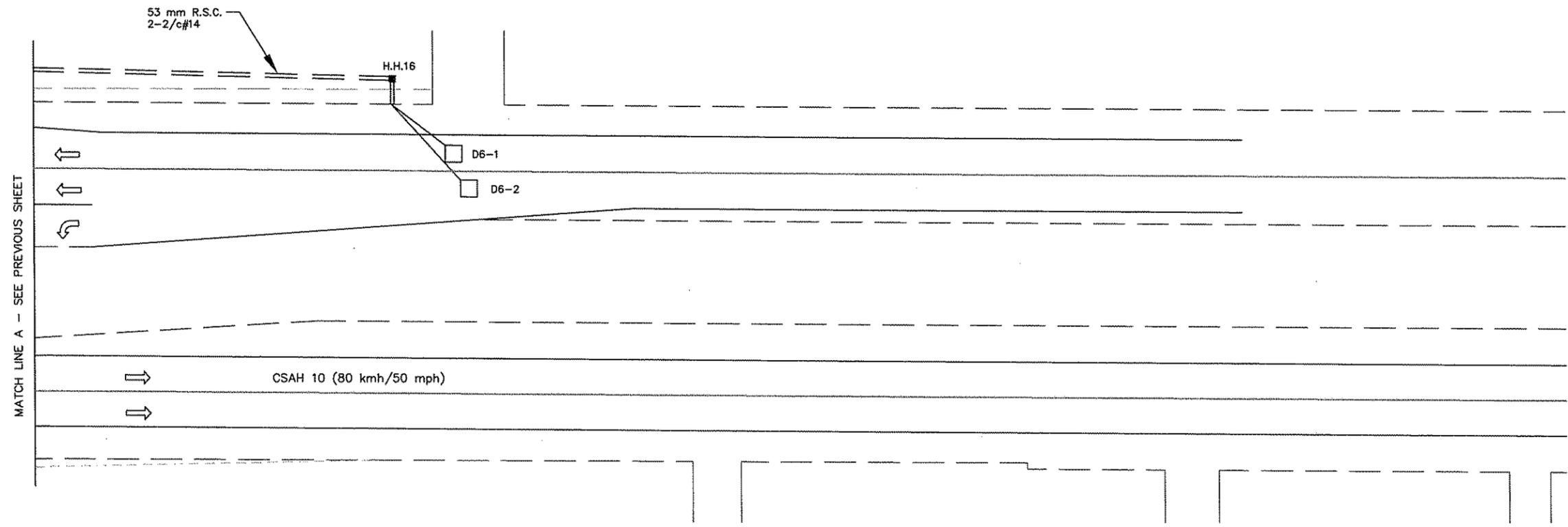
I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
Date: August 27, 2001 Name: John M Gray, P.E. Lic. No. 22457



ANOKA & RAMSEY COUNTIES, MINNESOTA
CITIES OF MOUNDS PARK & SPRING LAKE PARK

TRAFFIC SIGNAL SYSTEM INTERSECTION LAYOUT
CSAH 10 AT PLEASANTVIEW DRIVE

FILE NO. ANOKC0105.00
DATE 08/27/01
47
64



NOTES:

- 1) LOCATION OF POLES, CONTROLLER CABINET, SERVICE CABINET, LOOP DETECTORS AND HANDHOLES SHALL BE DETERMINED IN THE FIELD BY THE ENGINEER.
- 2) SEE SPECIAL PROVISIONS FOR ANOKA COUNTY FURNISHED MATERIALS.
- 3) LOOP DETECTOR WIRES SHALL BE CROSS-LINKED POLYETHYLENE (XLP) IN 19 mm N.M.C. SEE SPECIAL PROVISIONS AND DETAILS.
- 4) NEW HANDHOLES SHALL BE PVC HANDHOLES WITH METAL FRAMES AND COVERS, PER Mn/DOT STANDARD PLATE NO. M8114A.
- 5) EACH SIGNAL FACE SHALL HAVE BACKGROUND SHIELD.
- 6) EACH PEDESTRIAN INDICATION SHALL BE A ONE SECTION HAND/WALKING PERSON INDICATION. SEE SPECIAL PROVISIONS.
- 7) ALL VEHICLE AND PEDESTRIAN SIGNAL INDICATIONS SHALL BE LED. SEE SPECIAL PROVISIONS.
- 8) CONTRACTOR SHALL PROVIDE EXTENDED BRACKETS FOR EACH POLE MOUNTED VEHICLE AND PEDESTRIAN SIGNAL FACE.
- 9) A 21 mm HALF COUPLING, 21 mm PIPE NIPPLE AND CONDUIT OUTLET BODY SHALL BE FURNISHED AND INSTALLED 1.8 m FROM END OF EACH MAST ARM (FOR EVP).
- 10) SEE SPECIAL PROVISIONS, DETAILS AND REMAINDER OF PLANS FOR INFORMATION REGARDING SIGN PANELS, STRIPING AND CONCRETE WALKWAY TO BE FURNISHED AND INSTALLED BY CONTRACTOR.
- 11) CONTRACTOR SHALL COORDINATE INSTALLATION OF ALL TRAFFIC SIGNAL MATERIALS WITH ROAD CONSTRUCTION TO BE COMPLETED BY OTHERS.



7 PEDESTAL FOUNDATION
 3 m PEDESTAL POLE AND BASE
 ONE WAY EVP DETECTOR-MOUNT
 ON TOP OF PEDESTAL POLE (#8)
 (SEE DETAIL)
 EXTEND INTO H.H.4:
 53 mm R.S.C.
 1-3/c#20

S.P. 02-635-09
 S.P. 146-080-01
 S.P. 183-101-08

DRAWN BY: JMG				
DESIGNER: JMG				
CHECKED BY: JMG				
DESIGN TEAM	NO.	BY	DATE	REVISIONS

©SHORT ELLIOTT HENDRICKSON 1998. ANY USE OR REUSE OF THIS PLAN/DRAWING AND THE CORRESPONDING COMPUTER AIDED DESIGN/DRAFTING FILES WITHOUT THE EXPRESS WRITTEN CONSENT OF SEH, IS PROHIBITED. SEH SHALL NOT BE RESPONSIBLE FOR ANY UNAUTHORIZED USE OR REUSE OF THESE MATERIALS, OR DAMAGES RESULTING THEREFROM.

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
 Date: August 27, 2001
 Name: John M Gray, P.E.
 Lic. No. 22457



ANOKA & RAMSEY COUNTIES, MINNESOTA
 CITIES OF MOUNDS VIEW & SPRING LAKE PARK

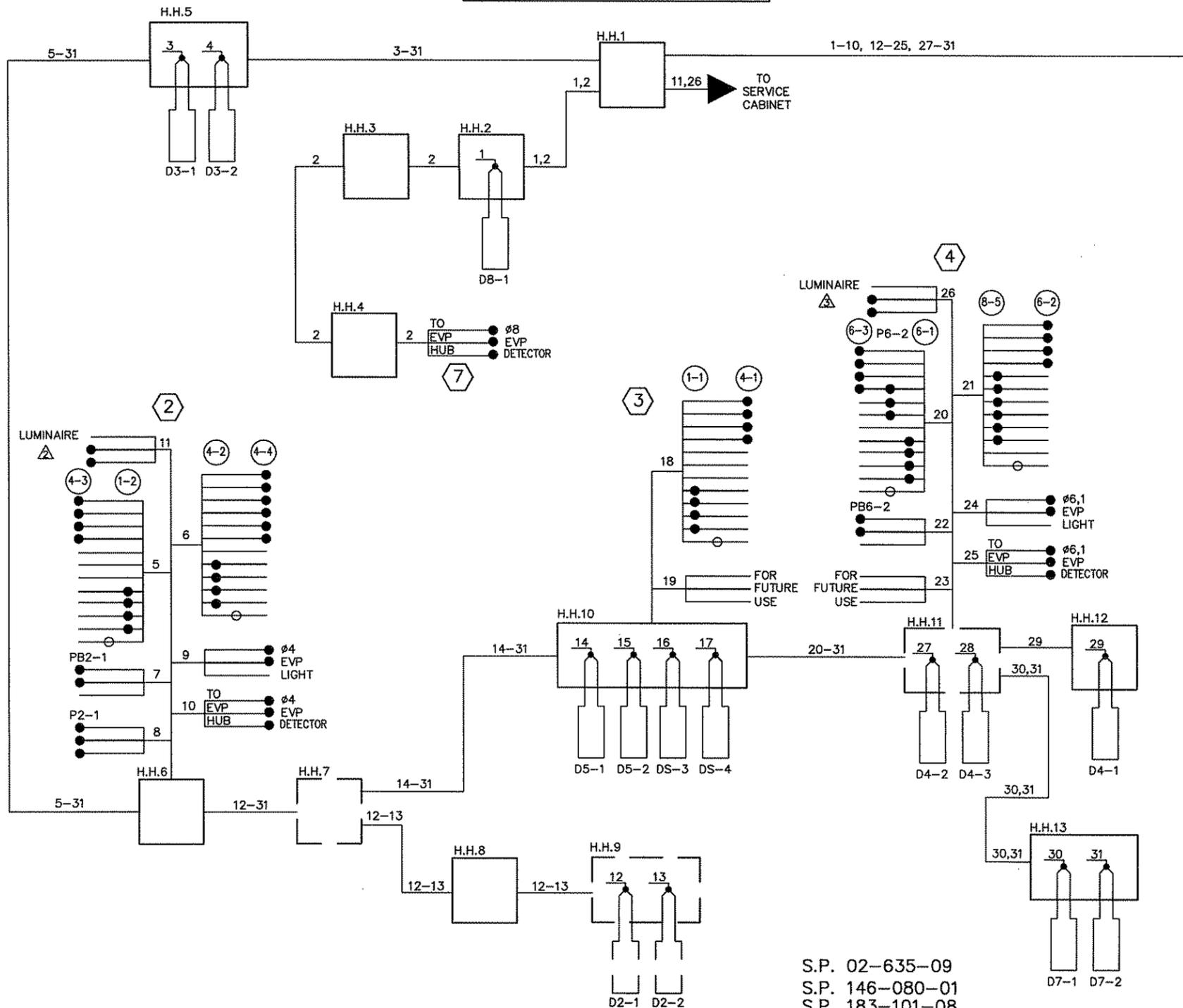
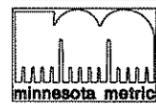
TRAFFIC SIGNAL SYSTEM INTERSECTION LAYOUT
 CSAH 10 AT PLEASANTVIEW DRIVE

FILE NO. AANOKC0105.00	48
DATE 08/27/01	64

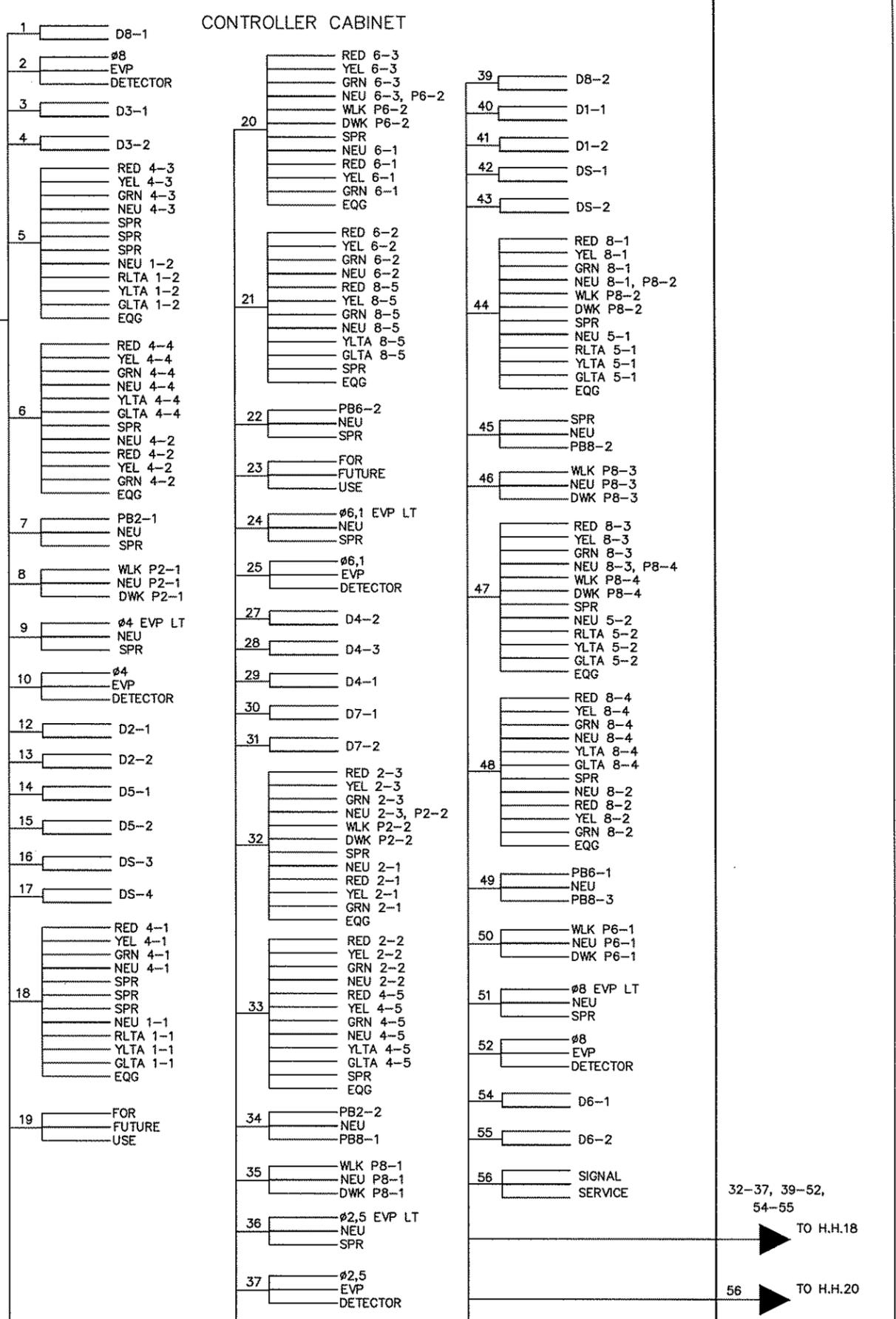
CONDUCTOR COLOR CODING

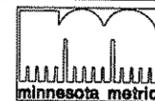
R	BLK	2-1/c#4
O	WH	2-1/c#6
BL	R	3/c#12
R/BLK	WH	3/c#12
O/BLK	BLK	3/c#12
BL/BLK	BLK	3/c#12
BLK/WH	BLK	3/c#12
BLK	BLK	3/c#12
Y/BLK	BLK	3/c#12
Y	CLEAR	2/c#14
WH	Y	3/c#20
G	O	3/c#20

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



S.P. 02-635-09
S.P. 146-080-01
S.P. 183-101-08

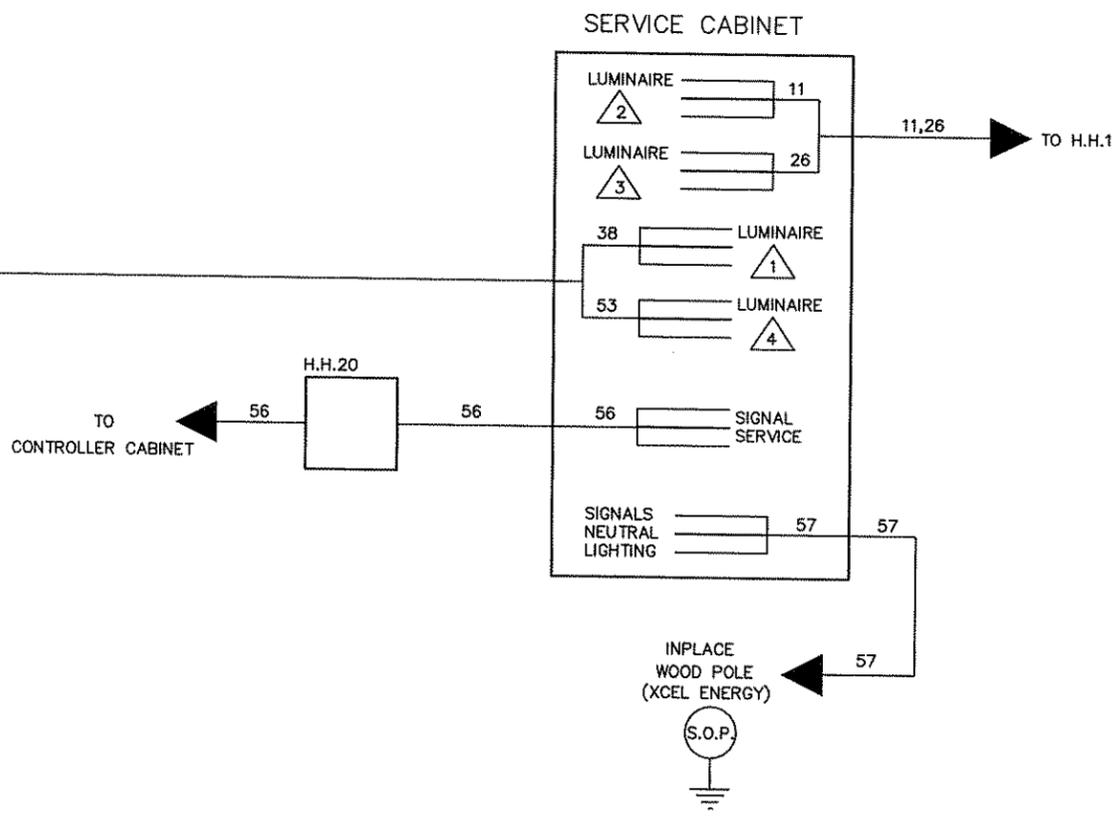
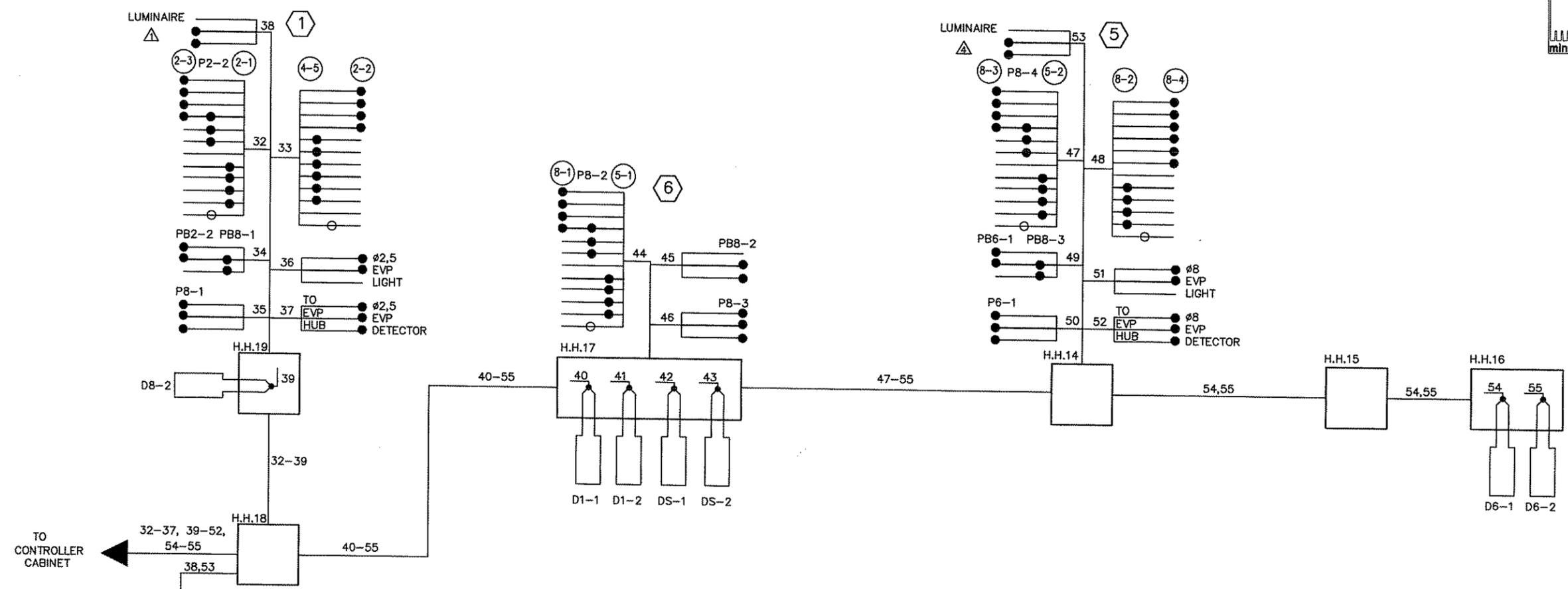




CONDUCTOR COLOR CODING

R	BLK	2-1/c#4
O	WH	2-1/c#6
BL		
R/BLK	R	
O/BLK	WH	3/c#12
BL/BLK	BLK	
BLK/WH		
BLK		
Y/BLK	BLK	2/c#14
Y	CLEAR	
WH		
G		
	Y	
	BL	3/c#20
	O	

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



S.P. 02-635-09
S.P. 146-080-01
S.P. 183-101-08

DRAWN BY:	JMG				
DESIGNER:	JMG				
CHECKED BY:	JMG				
DESIGN TEAM		NO.	BY	DATE	REVISIONS

©SHORT ELLIOTT HENDRICKSON 1998. ANY USE OR REUSE OF THIS PLAN/DRAWING AND THE CORRESPONDING COMPUTER AIDED DESIGN/DRAFTING FILES WITHOUT THE EXPRESS WRITTEN CONSENT OF SEH, IS PROHIBITED. SEH SHALL NOT BE RESPONSIBLE FOR ANY UNAUTHORIZED USE OR REUSE OF THESE MATERIALS, OR DAMAGES RESULTING THEREFROM.

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
Name: John M Gray, P.E.
Lic. No. 22457
Date: August 27, 2001



ANOKA & RAMSEY COUNTIES, MINNESOTA
CITIES OF MOUNDS VIEW & SPRING LAKE PARK

TRAFFIC SIGNAL SYSTEM
FIELD WIRING DIAGRAM
CSAH 10 AT PLEASANTVIEW DRIVE

FILE NO.	AANOKC0105.00	50
DATE	08/27/01	64