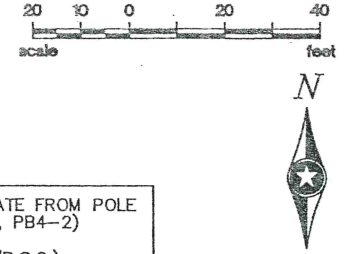


NOTES:

- 1) LOCATION OF NEW LOOP DETECTORS AND PUSH BUTTON STATIONS SHALL BE DETERMINED IN THE FIELD BY ENGINEER.
- 2) NEW LOOP DETECTOR WIRES SHALL BE CROSS-LINKED POLYETHYLENE (XLP) IN 3/4" N.M.C. SEE SPECIAL PROVISIONS.
- 3) ALL HANDHOLES ARE INPLACE AND SHALL BE REUSED AND MAINTAINED INPLACE, EXCEPT AS FOLLOWS: CONTRACTOR SHALL ADJUST HANDHOLES 1, 2, 3, 4, 5, 6, 7, 8, 9, 12, 13, 15, AND 16 TO FINISHED SURROUNDING GRADE AFTER ALL ROAD AND SIDEWALK WORK IS COMPLETED.
- 4) EACH SIGNAL FACE HAS BACKGROUND SHIELD.
- 5) CONTRACTOR SHALL REMOVE INPLACE "HAND/WALKING PERSON" LENSES FROM EACH INPLACE ONE SECTION PEDESTRIAN SIGNAL AND SHALL FURNISH AND INSTALL A NEW COUNTDOWN TIMER LED "HAND/WALKING PERSON" LENS IN ITS PLACE.
- 6) ALL VEHICLE SIGNAL FACES ARE LED AND ARE INPLACE (REUSE AND MAKE OPERATIONAL AS SHOWN).
- 7) NEW PEDESTRIAN PUSH BUTTON STATIONS TO BE FURNISHED AND INSTALLED BY CONTRACTOR SHALL BE IN ACCORDANCE WITH SPECIAL PROVISIONS.
- 8) SEE SPECIAL PROVISIONS REGARDING REMOVAL, SALVAGING, AND INSTALLATION OF INPLACE SIGNAL EQUIPMENT.
- 9) INPLACE ITEMS TO BE REUSED INPLACE AS PART OF REVISE SIGNAL SYSTEM "D" SHALL BE PROTECTED AND MAINTAINED INPLACE. SEE SPECIAL PROVISIONS.
- 10) CONTRACTOR SHALL MAINTAIN OPERATION OF SIGNAL SYSTEM AT ALL TIMES, UNLESS OTHERWISE APPROVED BY ENGINEER FOR THIS SIGNAL SYSTEM TO BE TURNED OFF.
- 11) CONTRACTOR SHALL COORDINATE ALL TRAFFIC SIGNAL WORK WITH ROAD CONSTRUCTION TO BE COMPLETED BY OTHERS AS PART OF ENTIRE PROJECT.
- 12) ALL CABLES, CONDUCTORS, CONDUIT, AND HANDHOLES ARE INPLACE AND SHALL BE REUSED AND MAINTAINED INPLACE UNLESS BOXED IN AND DENOTED OTHERWISE.
- 13) (F & I) = ITEMS TO BE FURNISHED & INSTALLED BY CONTRACTOR. (S & I) = ITEMS TO BE SALVAGED & INSTALLED BY CONTRACTOR.
- 14) CONTRACTOR SHALL COIL AND STORE 25' OF 1-2/c#14 (NEW CABLE 43) IN HANDHOLE 6 (FOR FUTURE APS INSTALLATION BY OTHERS).

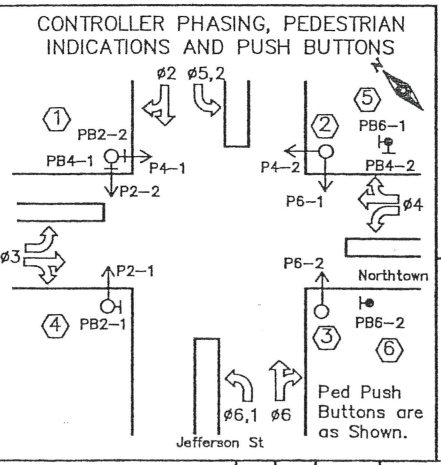
NMC LOOP DETECTORS				
NUMBER	SIZE (FT.)	LOCATION	FUNCTION	STATUS
D1-1	2-6x6	15' & 45'	1	F & I
D1-2	2-6x6	0' & 30'	1	F & I
D2-1	6x6	120'	1	F & I
D3-1	6x6	80'	3,8	F & I
D3-2	6x6	80'	3,8	F & I
D3-3	2-6x6	0' & 15'	1	F & I
D3-4	2-6x6	0' & 15'	1	F & I
D4-1	6x6	65'	3,8	F & I
D4-2	6x6	65'	3,8	F & I
D4-3	2-6x6	0' & 15'	1	F & I
D4-4	2-6x6	0' & 15'	7	F & I
D5-1	2-6x6	15' & 45'	1	F & I
D5-2	2-6x6	0' & 30'	1	F & I
D6-1	6x6	120'	1	F & I

- FUNCTIONS:**
- 1) CALL & EXTEND
 - 3) EXTEND ONLY
 - 7) DELAYED CALL, IMMEDIATE EXTEND
 - 8) CARRY OVER (STRETCH)
- NOTE:** LOCATION-DISTANCE FROM STOP BAR TO FRONT OF LOOP DETECTOR.

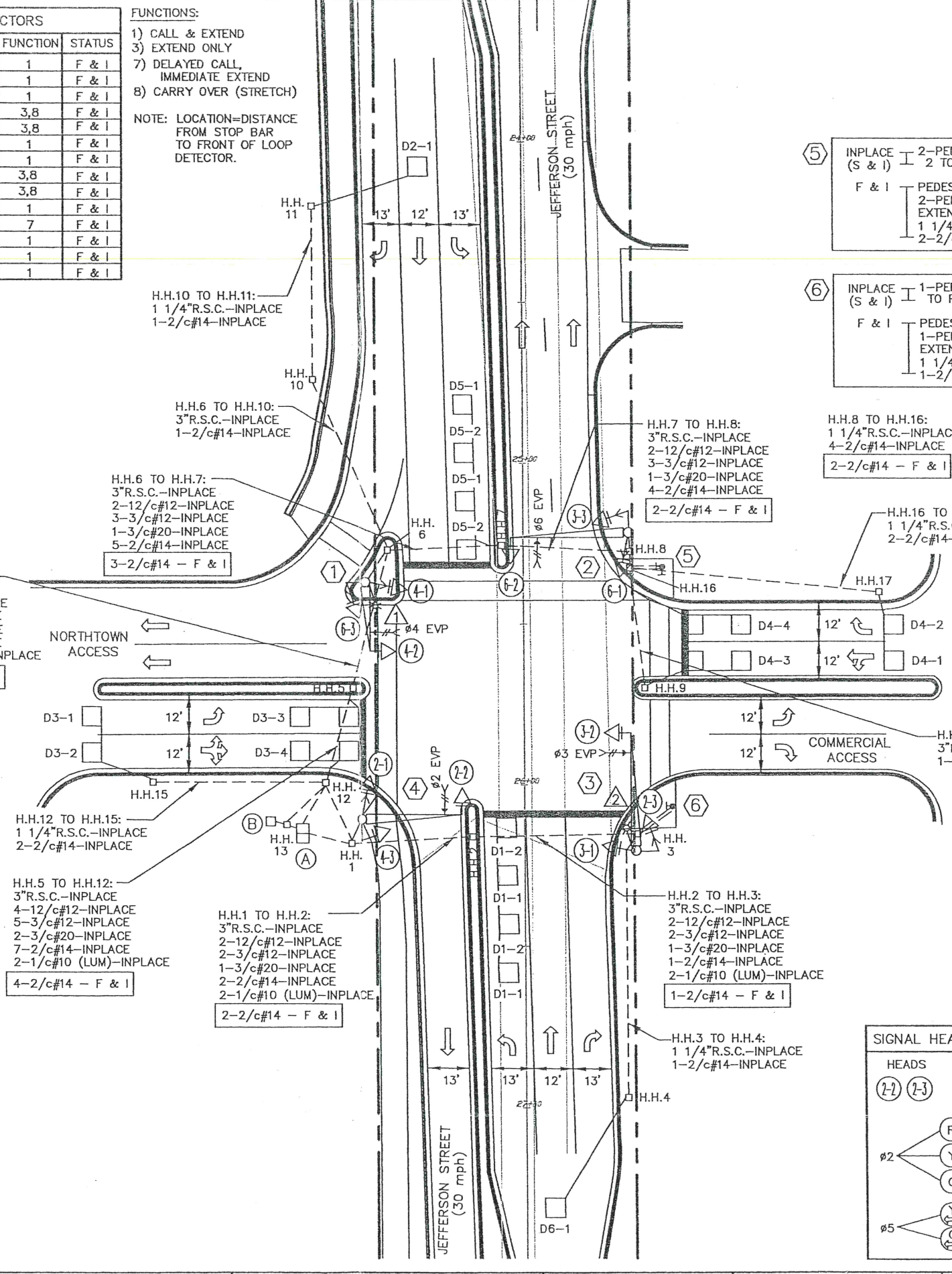


- (A) INPLACE (MAINTAIN INPLACE)** CABINET FOUNDATION CONTROLLER AND CABINET EXTENDED INTO H.H.1:
4"R.S.C.
4-12/c#12
5-3/c#12
2-3/c#20
2-2/c#14
F & I - 2-2/c#14
- INPLACE (MAINTAIN INPLACE)** EXTENDED INTO H.H.12:
4"R.S.C.
4-12/c#12
7-3/c#12
2-3/c#20
10-2/c#14
F & I - 4-2/c#14
- INPLACE (MAINTAIN INPLACE)** EXTENDED INTO H.H.13:
METERED SIGNAL SERVICE
1 1/4"R.S.C.
3-1/c#6

- (B) INPLACE (MAINTAIN INPLACE)** CABINET FOUNDATION SIGNAL SERVICE CABINET EXTENDED INTO H.H.13:
UNMETERED STREET LIGHT SERVICE
1 1/4"R.S.C.
4-1/c#10 (LUM)
METERED SIGNAL SERVICE
1 1/4"R.S.C.
3-1/c#6
EXTENDED TO SOP:
2"R.S.C. STUB OUT (FOR SERVICE BY OTHERS)
BETWEEN H.H.12 AND H.H.13:
1 1/4"R.S.C.
4-1/c#10 (LUM)
BETWEEN H.H.12 AND H.H.1:
1 1/4"R.S.C.
2-1/c#10 (LUM)



- SIGNAL SYSTEM OPERATIONS:**
- SIGNAL SYSTEM FLASH MODE IS ALL RED.
 - NORMAL OPERATION IS 6 PHASE WITH PHASES 1 & 5 BEING PROTECTED/PERMISSIVE LEFT TURN PHASES, AND PHASES 3 & 4 BEING SPLIT PHASES.
 - VEHICLE SIGNAL PHASES 2 AND 6 SHALL OPERATE ON VEHICLE RECALL.



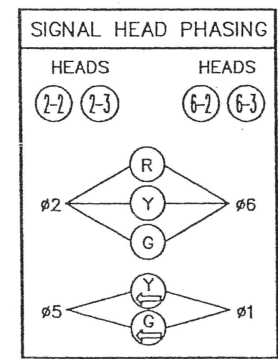
- (5) INPLACE (S & I)** 2-PEDESTRIAN PUSH BUTTONS (RELOCATE FROM POLE 2 TO PUSH BUTTON STATION) (PB6-1, PB4-2)
F & I PEDESTRIAN PUSH BUTTON STATION (4"R.S.C.)
2-PEDESTRIAN INSTRUCTION SIGNS (R10-3e)
EXTEND INTO H.H.16:
1 1/4"R.S.C.
2-2/c#14

- (6) INPLACE (S & I)** 1-PEDESTRIAN PUSH BUTTON (RELOCATE FROM POLE 3 TO PUSH BUTTON STATION) (PB6-2)
F & I PEDESTRIAN PUSH BUTTON STATION (4"R.S.C.)
1-PEDESTRIAN INSTRUCTION SIGN (R10-3e)
EXTEND INTO H.H.3:
1 1/4"R.S.C.
1-2/c#14

- H.H.8 TO H.H.16:
1 1/4"R.S.C.-INPLACE
4-2/c#14-INPLACE
2-2/c#14 - F & I

SEE NEXT SHEET FOR DETAILED POLE NOTES.

- STATUS:**
- 1) = INPLACE, REUSE AND MAINTAIN INPLACE.
- NOTE: ALL LED INDICATIONS ARE INPLACE AND SHALL BE REUSED AS SHOWN.



SIGNAL FACE	ALL SIGNAL FACES ARE 12"					STATUS
	R	Y	G	Y	G	
2-1	○	○	○			1
2-2, 2-3	○	○	○	←	←	1
3-1, 4-1	○	○	○			1
3-2, 3-3	○	○	○	←		1
4-2, 4-3	○	○	○	←		1
6-1	○	○	○			1
6-2, 6-3	○	○	○	←	←	1

S.A.P. 106-115-006
CITY PROJ. NO. 10-10

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

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: May 10, 2011 Name: John M. Gray, PE Lic. No. 22457

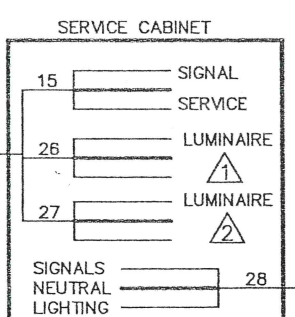
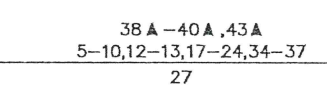
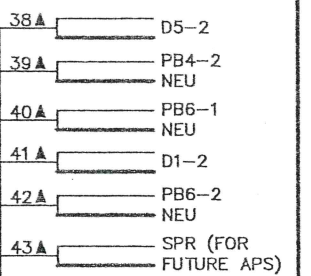
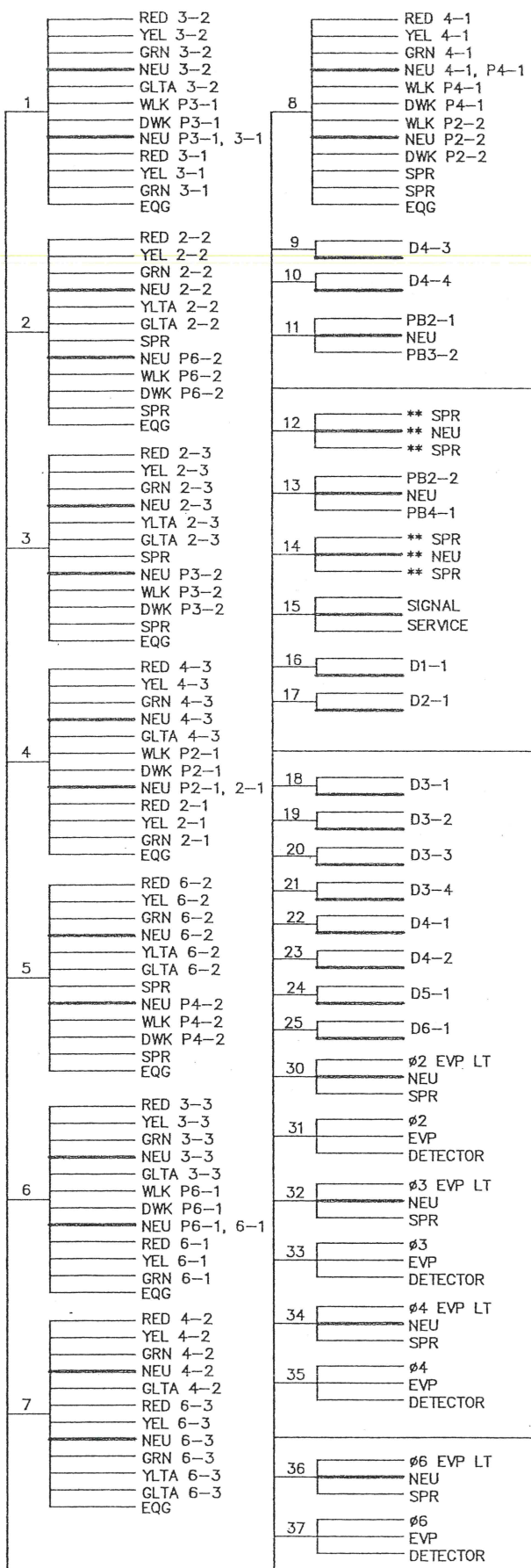
SEH
PHONE: (651) 490-2000
3535 VADNAIS CENTER DR.
ST. PAUL, MN 55110

BLAINE, MINNESOTA

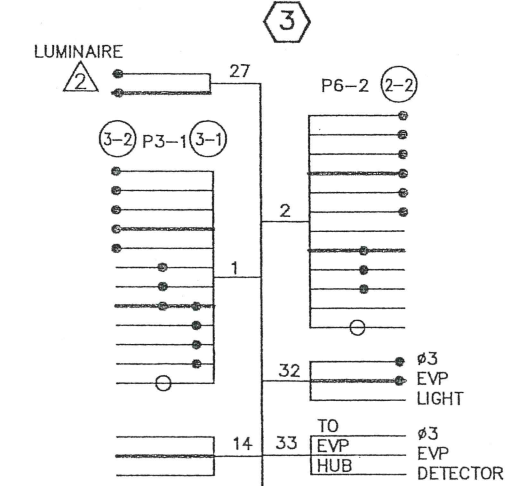
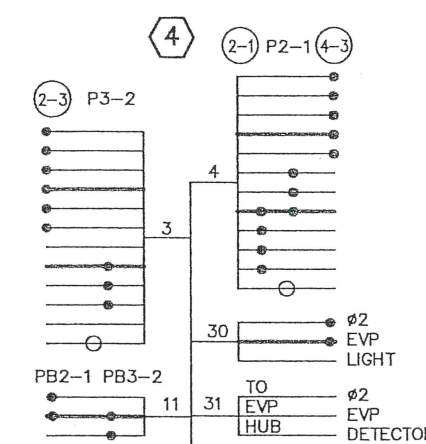
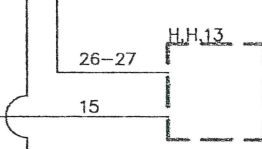
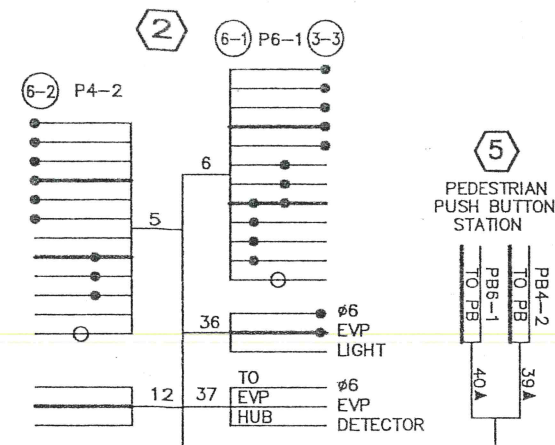
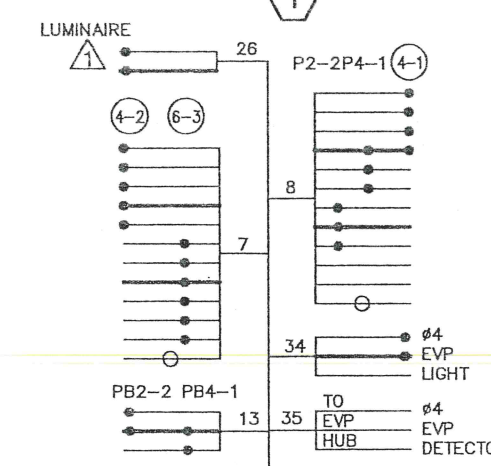
REVISE SIGNAL SYSTEM 'D'
INTERSECTION LAYOUT
JEFFERSON STREET AT NORTHTOWN ACCESS

FILE NO. BLAIN 113737	33
SIGNAL SHEET SG12 OF SG23	

CONTROLLER CABINET



CONTRACTOR SHALL COIL AND STORE 25' OF 1-2/c#14 (CABLE 43) IN HANDHOLE 6 (FOR FUTURE APS SYSTEM BY OTHERS)



- NOTES:
- 1) ALL CABLES AND CONDUCTORS ARE INPLACE AND SHALL BE REUSED AS SHOWN, EXCEPT WHERE DENOTED BY Δ (Δ = NEW CABLES AND CONDUCTORS TO BE FURNISHED & INSTALLED BY THE CONTRACTOR).
 - 2) F & I = LOOP DETECTOR TO BE FURNISHED AND INSTALLED BY THE CONTRACTOR AS PART OF THIS PROJECT.
 - 3) \bullet = DENOTES NEW TERMINATION ON INPLACE OR NEW CABLE.
 - 4) ** DENOTES NEW OR REVISED TERMINATIONS ON INPLACE CABLES.

CONDUCTOR COLOR CODING

R	BLK	2-1/c#6
O	WH	2-1/c#10
BL	R	3/c#12
WH	WH/BLK	BLK
R/BLK	BLK/WH	2/c#14
O/BLK	G/BLK	
BLK/BLK	G	
12/c#12		
R	O	3/c#20
3-1/c#6	BLK	
	YEL	
	BL	

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

S:\A\B\COMMON\TRAFFIC SIGNALS\077H-JEFFERSON BASE FOR SIGNALS.DWG

DRAWN BY: JMG

DESIGNER: JMG

CHECKED BY: JMG

DESIGN TEAM	NO.	BY	DATE

REVISIONS

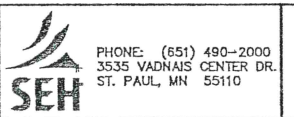
NO.	BY	DATE	DESCRIPTION

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.

John M. Gray

Name: John M. Gray, PE
Lic. No. 22457

Date: May 10, 2014



BLAINE, MINNESOTA

REVISE SIGNAL SYSTEM 'D'
FIELD WIRING DIAGRAM
JEFFERSON STREET AT NORTHTOWN ACCESS

S.A.P. 106-115-006
CITY PROJ. NO. 10-10

FILE NO. BLAIN 113737	35
SIGNAL SHEET SG14 OF SG23	

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