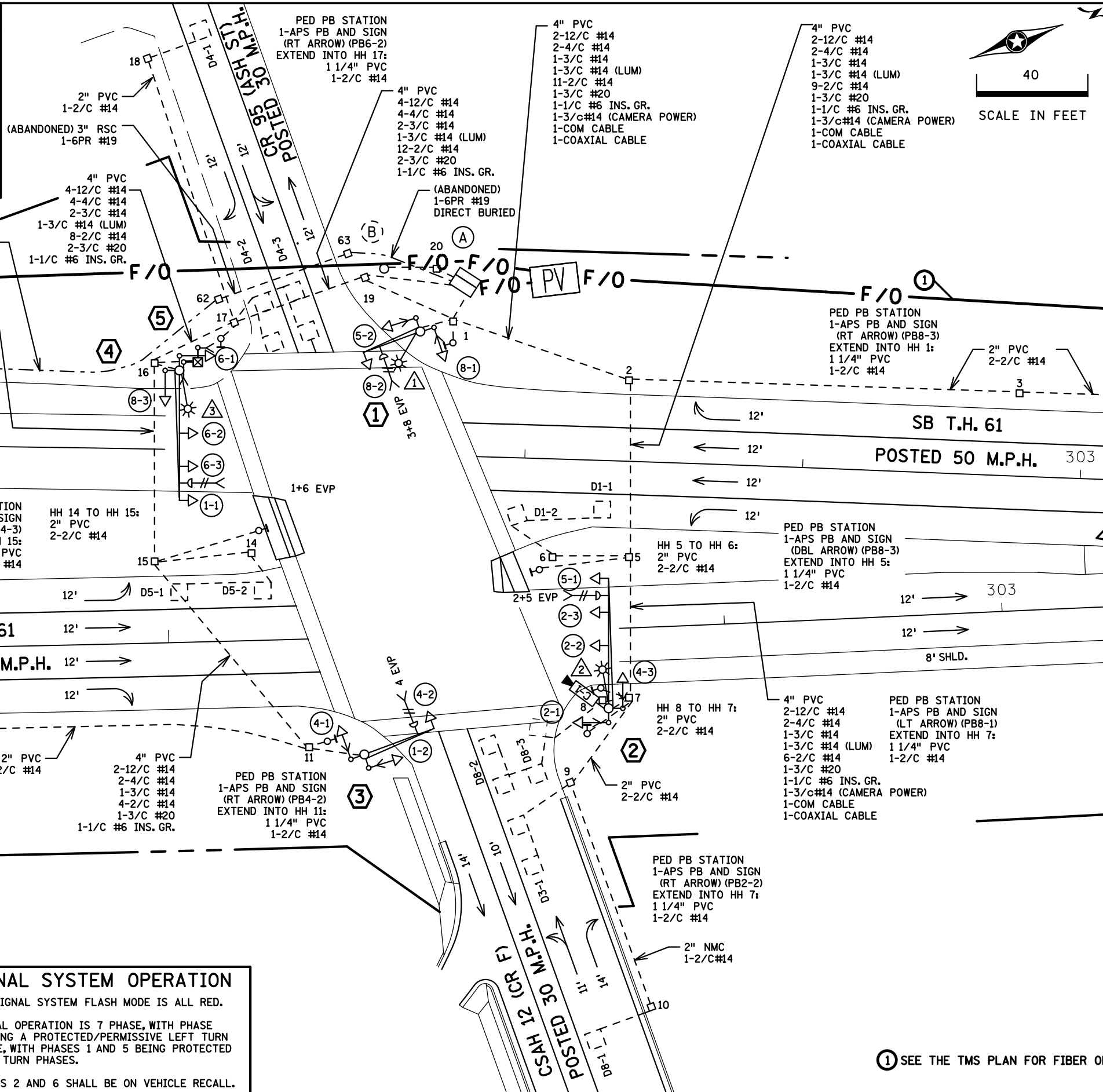
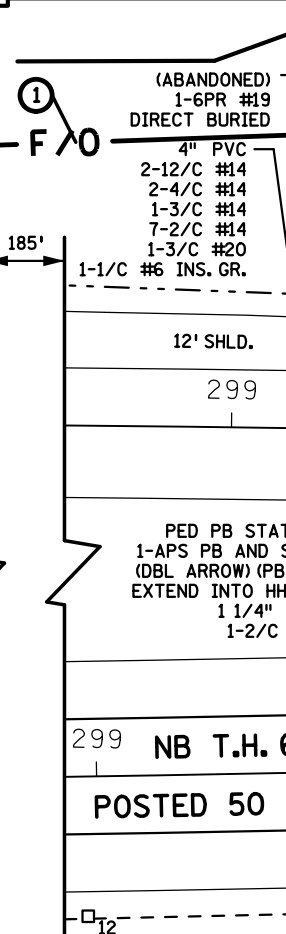
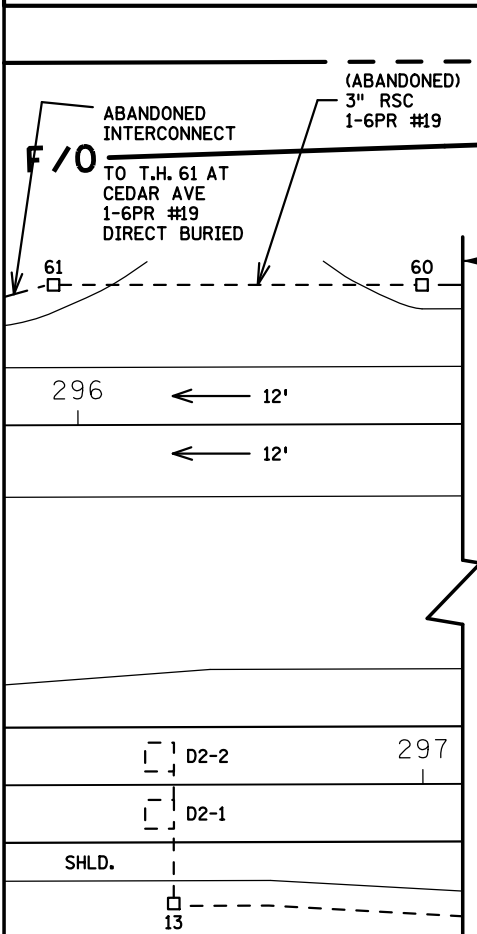
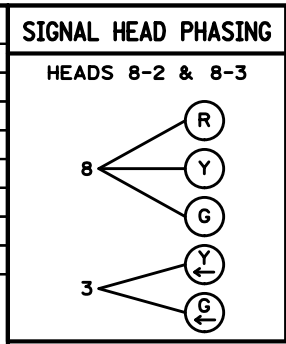


PLOTTED/REVISED: 11/6/2015

DISTRICT #: METRO
IPLOT NAME: LAYOUT
PATH & FILENAME: IP_PWP-d079957Y21043_sgl.dgn

SIGNAL HEAD CHART

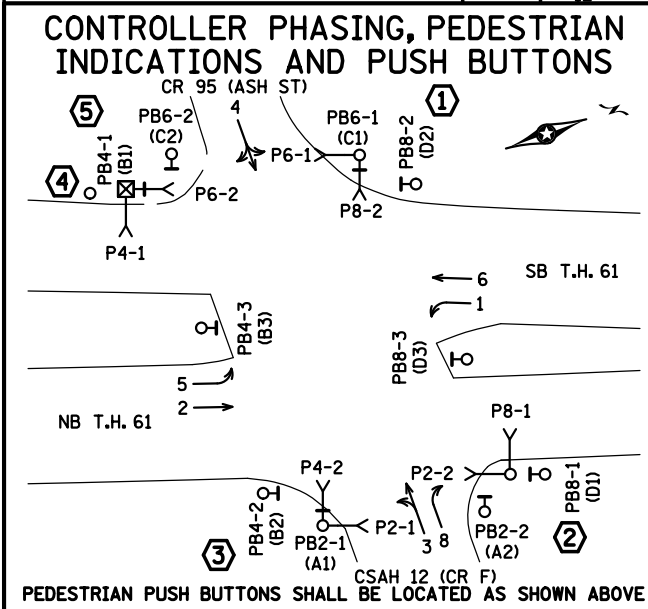
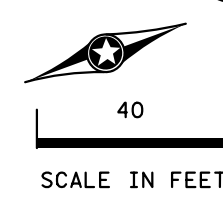
FACE	R	Y	G	Y	G
1-1, 1-2	←	←	←		
2-1, 2-2, 2-3	○	○	○		
4-1, 4-2, 4-3	○	○	○		
5-1, 5-2	←	←	←		
6-1, 6-2, 6-3	○	○	○		
8-1	○	○	○		
8-2, 8-3	○	○	○	←	←



PVC LOOP DETECTOR CHART

NUMBER	SIZE (FT)	LOCATION
D1-1, D1-2	2-6x6	32 & 2
D2-1, D2-2	2-6x6	400
D3-1	2-6x6	35 & 50
D4-1	6x6	120
D4-2	2-6x6	0 & 15
D4-3	2-6x6	5 & 20
D5-1, D5-2	2-6x6	35 & 5
D6-1, D6-2	2-6x6	400
D8-1	6x6	120
D8-2	2-6x6	5 & 20
D8-3	2-6x6	0 & 15

-LOCATION: DISTANCE FROM CROSSWALK/STOP BAR IN FEET



SIGNAL SYSTEM OPERATION

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

① SEE THE TMS PLAN FOR FIBER OPTICS.

BY	DATE	REVISIONS
EJA	11-07-15	AS-BUILT OF SP 6222-168 FIBER & CAMERA

SYSTEM ID: 21043
METER ADDRESS: 4089 HWY 61
MASTER ID: 21047

INTERSECTION LAYOUT
T.H. 61 AT C.S.A.H. 12 (CR F)/CR 95 (ASH ST)
IN WHITE BEAR LAKE, RAMSEY COUNTY

S.A.P. NO.	DRAWN BY: SJK	CKD BY: EJA	DATE: 06-14-12
CERTIFIED BY: _____	LIC. NO. _____	DATE: _____	
STATE PROJ. NO. 6222-168 (T.H.61)		SHEET NO. 1 OF 4 SHEETS	

PLOTTED/REVISED: 11/6/2015

- (A) EQUIPMENT PAD
SERVICE CABINET
CONTROLLER AND CABINET
- | | |
|-------------------|-------------------------|
| 4" PVC TO HH 19: | 4" PVC TO HH 1: |
| 4-12/C #14 | 4-12/C #14 |
| 4-4/C #14 | 4-4/C #14 |
| 2-3/C #14 | 2-3/C #14 |
| 12-2/C #14 | 13-2/C #14 |
| 2-3/C #20 | 2-3/C #20 |
| 1-1/C #6 INS. GR. | 1-1/C #6 INS. GR. |
| | 1-3/c#14 (CAMERA POWER) |
| | 1-COM CABLE |
| | 1-COAXIAL CABLE |

EXTEND INTO HH 63:
1-6PR #19 (ABANDONED)

2" AND 3" PVC STUBBED OUT
(CAPPED BOTH ENDS)
3/4" PVC STUBBED OUT
(CAPPED BOTH ENDS)
SERVICE CABINET TO CONTROLLER CABINET:
2" PVC
2-1/C #6
1-1/C #6 INS. GR.
SERVICE CABINET TO HH 20:
2" PVC
3-1/C #2
SERVICE CABINET TO HH 1:
2" PVC
2-3/C #14 (LUM)
HH 1 TO HH 19:
2" PVC
1-3/C #14 (LUM)

CONTROLLER CABINET TO TMS PULL VAULT
1.5" PVC INSIDE 3" PVC STUBOUT:
1-6SM FIBER OPTIC

- (B) SOP-WOOD POLE (XCEL ENERGY)
2" PVC RISER AND WEATHERHEAD
2" PVC INTO HH 20:
3-1/C #2

- (1) PA85 POLE FOUNDATION
TYPE PA85-A-20-D40-9 (DAVIT AT 350 DEG)
LUMINAIRE-250W HPS
1-ANGLE MOUNT SIGNAL AT 0'
1-R10-12 SIGN ADJACENT TO HEAD (8-2)
1-ONE WAY EVP DETECTOR AND
CONFIRMATORY LIGHT (PHASES 3+8)
2-ANGLE MOUNT SIGNALS AT 90 AND 180 DEG
2-ANGLE MOUNT CD PED HEADS AT 90 AND 180 DEG
1-APS PB AND SIGN (LT ARROW) (PB6-1)
EXTEND INTO HH 1:
3" PVC
2-12/C #14
2-4/C #14
1-3/C #14
1-3/C #14 (LUM)
1-2/C #14
1-3/C #20
1-1/C #6 INS. GR.

- (2) PA100 POLE FOUNDATION
TYPE PA100-A-45-D40-9-X6-350/CAM 400 (X6 AT 350 DEG)
LUMINAIRE-250W HPS
VIDEO CAMERA
2-SWING AWAY HINGES
1-ANGLE MOUNT SIGNAL AT 0'
1-ONE WAY EVP DETECTOR AND
CONFIRMATORY LIGHT (PHASES 2+5)
2-STRAIGHT MOUNT SIGNALS AT 11' AND 23'
2-ANGLE MOUNT SIGNALS AT 90 AND 180 DEG
2-ANGLE MOUNT CD PED HEADS AT 90 AND 180 DEG
1-R6-1R SIGN (ONE WAY)
1-R6-1L SIGN (ONE WAY)
1-TYPE D SIGN
3" PVC TO HH 7:
2-12/C #14
2-4/C #14
1-3/C #14
1-3/C #14 (LUM)
1-3/C #20
1-1/C #6 INS. GR.
1-7/16" GROUNDING BRAID TO GROUND ROD IN H.H.7
1-3/c#14 (CAMERA POWER)
1-COM CABLE
1-COAXIAL CABLE

- (3) PA85 POLE FOUNDATION
TYPE PA85-A-25
1-ANGLE MOUNT SIGNAL AT 0'
1-ONE WAY EVP DETECTOR AND
CONFIRMATORY LIGHT (PHASE 4)
2-ANGLE MOUNT SIGNALS AT 90 AND 180 DEG
2-ANGLE MOUNT CD PED HEADS AT 90 AND 180 DEG
1-APS PB AND SIGN (LT ARROW) (PB2-1)
EXTEND INTO HH 11:
3" PVC
2-12/C #14
2-4/C #14
1-3/C #14
1-2/C #14
1-3/C #20
1-1/C #6 INS. GR.

- (4) PA100 POLE FOUNDATION
TYPE PA100-A-45-D40-9 (DAVIT AT 350 DEG)
LUMINAIRE-250W HPS
2-SWING AWAY HINGES
1-ANGLE MOUNT SIGNAL AT 0'
1-ONE WAY EVP DETECTOR AND
CONFIRMATORY LIGHT (PHASES 1+6)
2-STRAIGHT MOUNT SIGNALS AT 11' AND 23'
2-ANGLE MOUNT SIGNALS AT 90 AND 180 DEG
1-R6-1R SIGN (ONE WAY)
1-R6-1L SIGN (ONE WAY)
1-TYPE D SIGN
3" PVC TO HH 16:
2-12/C #14
1-3/C #14
1-3/C #14 (LUM)
1-3/C #20
1-1/C #6 INS. GR.

- (5) PEDESTAL FOUNDATION
12' PEDESTAL POLE PLUS BASE
2-STRAIGHT MOUNT CD PED HEADS
1-APS PB AND SIGN (LT ARROW) (PB4-1)
3" PVC TO HH 16:
2-4/C #14
1-2/C #14
1-1/C #6 INS. GR.

(1) SEE THE TMS PLAN FOR FIBER OPTICS.

DISTRICT #: METRO
PLOT NAME: POLE NOTES
PATH & FILENAME: IP_PWP-d077995TY21043_sgl.dgn

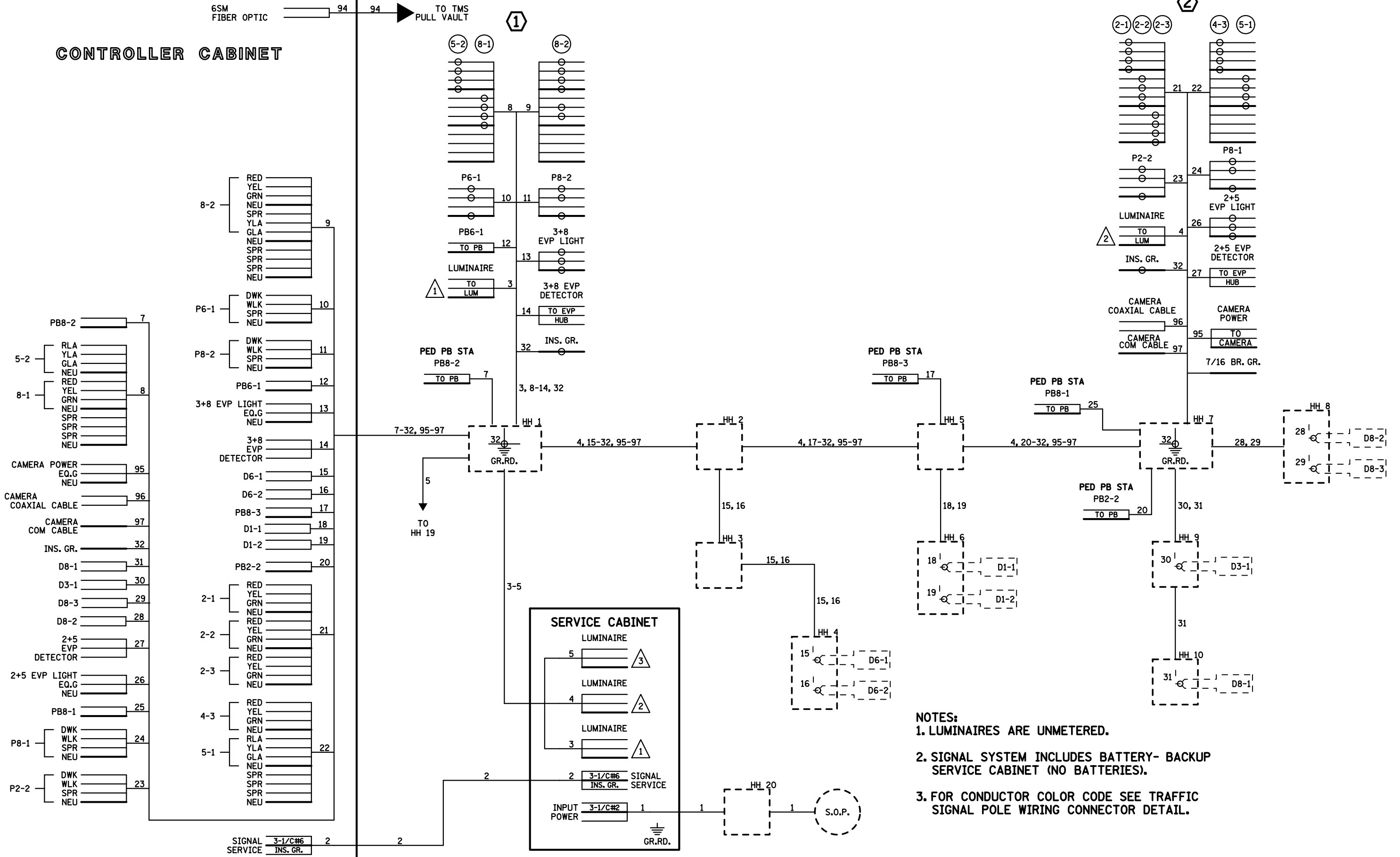
BY	DATE	REVISIONS	SYSTEM ID: 21043	T.E. 5554	POLE NOTES T.H. 61 AT C.S.A.H. 12 (CR F)/CR 95 (ASH ST) IN WHITE BEAR LAKE, RAMSEY COUNTY	S.A.P. NO.	DRAWN BY: SJK	CKD BY: EJA	DATE: 06-14-12
EJA	11-07-15	AS-BUILT OF SP 6222-168 FIBER & CAMERA	METER ADDRESS: 4089 HWY 61			CERTIFIED BY _____	LIC. NO. 19863	DATE: 06-21-12	
			MASTER ID: 21047	T.E.		STATE PROJ. NO. (T.H. 61) SHEET NO. 2 OF 4 SHEETS			

PLOTTED/REVISED: 11/6/2015

DISTRICT #: METRO
IPLOT NAME: WIRING DIAGRAM 1 OF 2
PATH & FILENAME: IP_PWP-d0779957\T21043_sgl.dgn

CONTROLLER CABINET

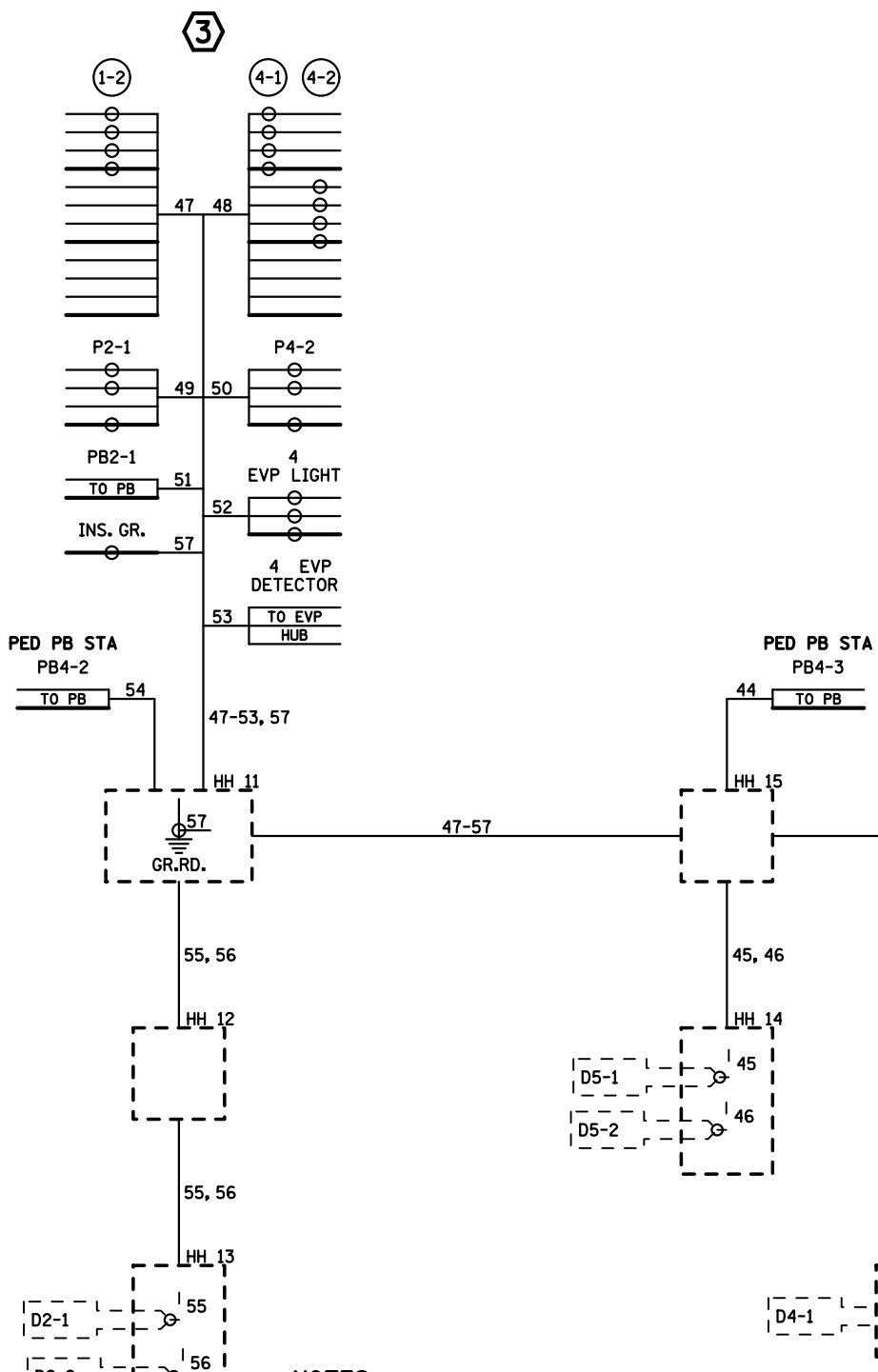
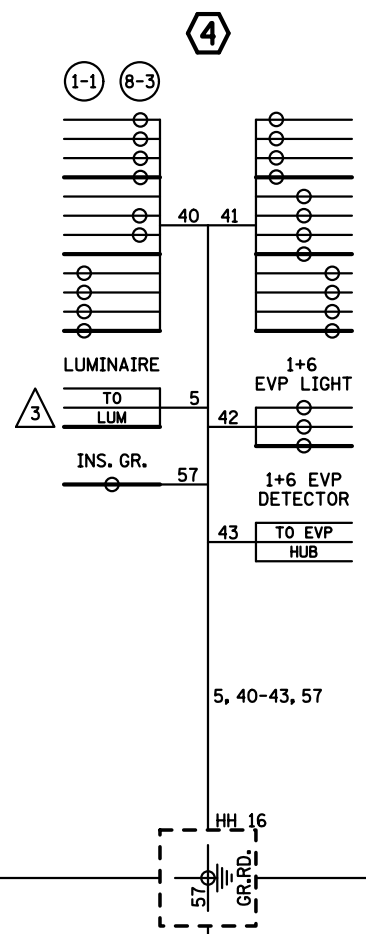
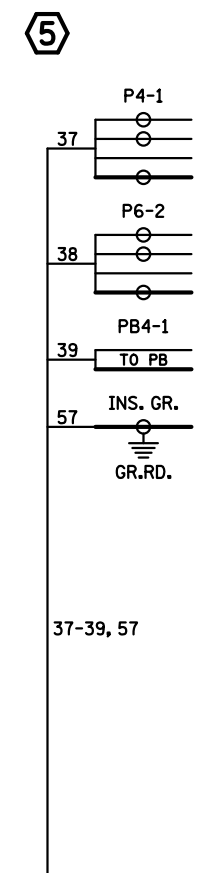
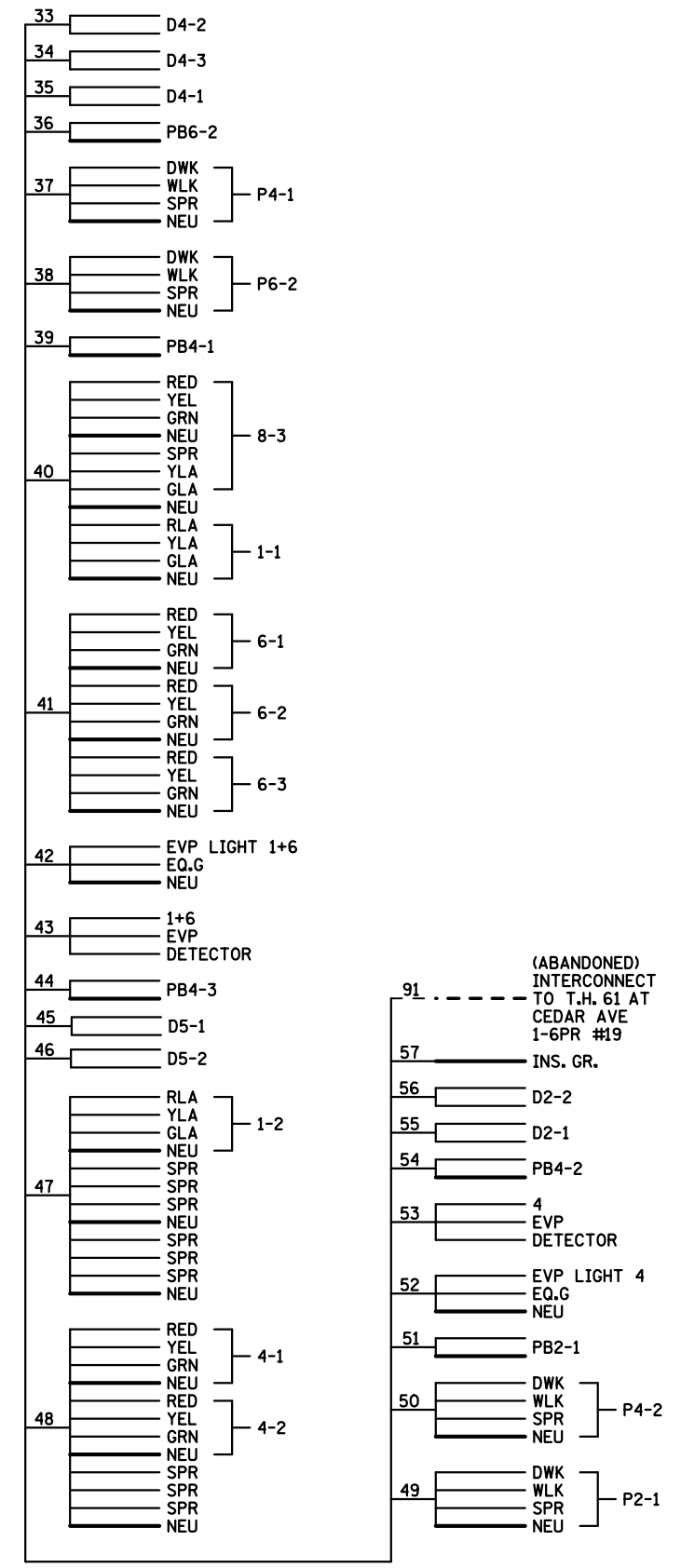
6SM FIBER OPTIC 94 TO TMS PULL VAULT



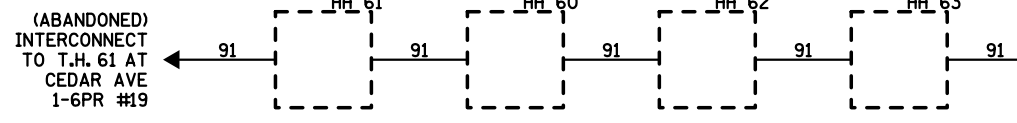
- NOTES:**
1. LUMINAIRES ARE UNMETERED.
 2. SIGNAL SYSTEM INCLUDES BATTERY- BACKUP SERVICE CABINET (NO BATTERIES).
 3. FOR CONDUCTOR COLOR CODE SEE TRAFFIC SIGNAL POLE WIRING CONNECTOR DETAIL.

BY: EJA	DATE: 11-07-15	REVISIONS: AS-BUILT OF SP 6222-168 FIBER & CAMERA	SYSTEM ID: 21043	T.E.	FIELD WIRING DIAGRAM (1 OF 2) T.H. 61 AT C.S.A.H. 12 (CR F)/CR 95 (ASH ST) IN WHITE BEAR LAKE, RAMSEY COUNTY	S.A.P. NO.	DRAWN BY: SJK	CKD BY: EJA	DATE: 06-14-12
			METER ADDRESS: 4089 HWY 61	T.E.		CERTIFIED BY: _____ LIC. NO. _____ DATE: _____	STATE PROJ. NO. (T.H. 61)	SHEET NO. 3 OF 4 SHEETS	

CONTROLLER CABINET



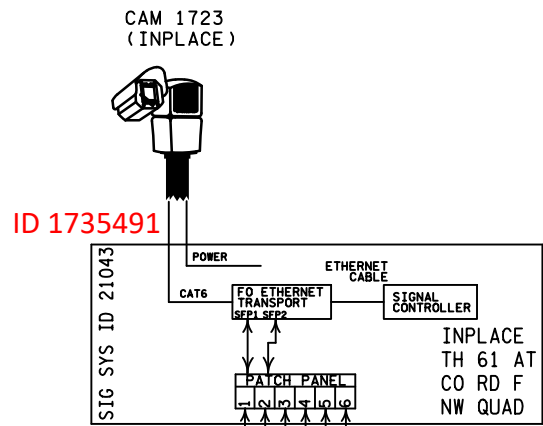
- NOTES:**
1. LUMINAIRES ARE UNMETERED.
 2. SIGNAL SYSTEM INCLUDES BATTERY- BACKUP SERVICE CABINET (NO BATTERIES).
 3. FOR CONDUCTOR COLOR CODE SEE TRAFFIC SIGNAL POLE WIRING CONNECTOR DETAIL.



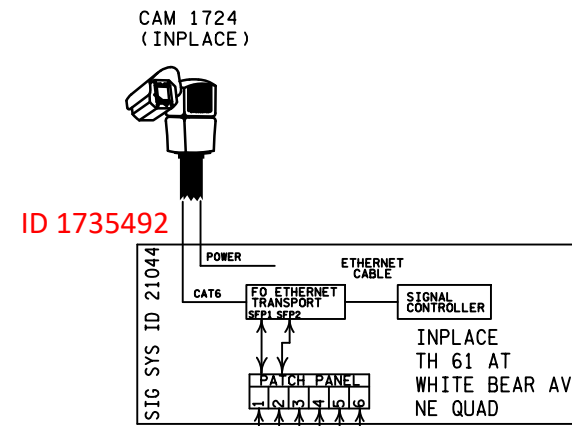
DISTRICT #: METRO
 IPLOT NAME: WIRING DIAGRAM 2 OF 2
 PATH & FILENAME: IP_PWP-d0779957\T21043_sgl.dgn
 PLOTTED/REVISED: 11/6/2015

BY	DATE	REVISIONS	SYSTEM ID: 21043	T.E.	S.A.P. NO.	DRAWN BY: SJK	CKD BY: EJA	DATE: 06-14-12
EJA	11-07-15	AS-BUILT OF SP 6222-168 FIBER & CAMERA	METER ADDRESS: 4089 HWY 61	T.E.	CERTIFIED BY _____	LIC. NO. _____	DATE: _____	
			MASTER ID: 21047	T.E.	STATE PROJ. NO.	(T.H. 61)	SHEET NO.	4 OF 4 SHEETS

FIELD WIRING DIAGRAM (2 OF 2)
T.H. 61 AT C.S.A.H. 12 (CR F)/CR 95 (ASH ST)
IN WHITE BEAR LAKE, RAMSEY COUNTY



NOTE: THIS PLAN SHEET IS BEING PROVIDED FOR INFORMATIONAL PURPOSES. ALL FIBER INTERCONNECT CABLES, CAMERAS, AND VAULTS SHOWN ON THIS PAGE ARE INPLACE AND SHALL BE REUSED AND MAINTAINED INPLACE (EXCEPT FOR FIBER-OPTIC CABLE TESTING AT ALL SPLICE LOCATION TO BE COMPLETED BY THE CONTRACTOR AND PAID FOR UNDER THE "TRAFFIC CONTROL INTERCONNECT" PAY ITEM (ITEM NO. 2565). SEE SPECIAL PROVISIONS.



TRUNK ID# 61-192

TRUNK ID# 61-193

TRUNK ID# 61-194

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FIBER OPTIC CABLE MARKINGS @
SPICE ENCLOSURE VAULT ENTRY

FIBER OPTIC CABLE MARKINGS @
SPICE ENCLOSURE VAULT ENTRY

FIBER OPTIC CABLE MARKINGS @
SPICE ENCLOSURE VAULT ENTRY

FIBER OPTIC CABLE MARKINGS @
SPICE ENCLOSURE VAULT ENTRY

INPLACE
PULL/SPLICE VAULT TH61 AT
CO RD F (CSAH 12) NW QUAD

INPLACE
PULL/SPLICE VAULT TH61 AT
WHITE BEAR AVE (CSAH 65) NE QUAD

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

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.
Certified By: *John M. Gray* Lic. No. 22457
Printed Name: JOHN M. GRAY Date: 12/22/2023



RAMSEY COUNTY, MINNESOTA
T.H. 61
S.P. 6222-197

SIGNAL PLAN
FIBER OPTIC SCHEMATIC
TRUCK HIGHWAY 61 (CSAH 12 TO WHITE BEAR AVE)

SEH FILE NO. ISDWB170688	82
SG14 OF 5627	101