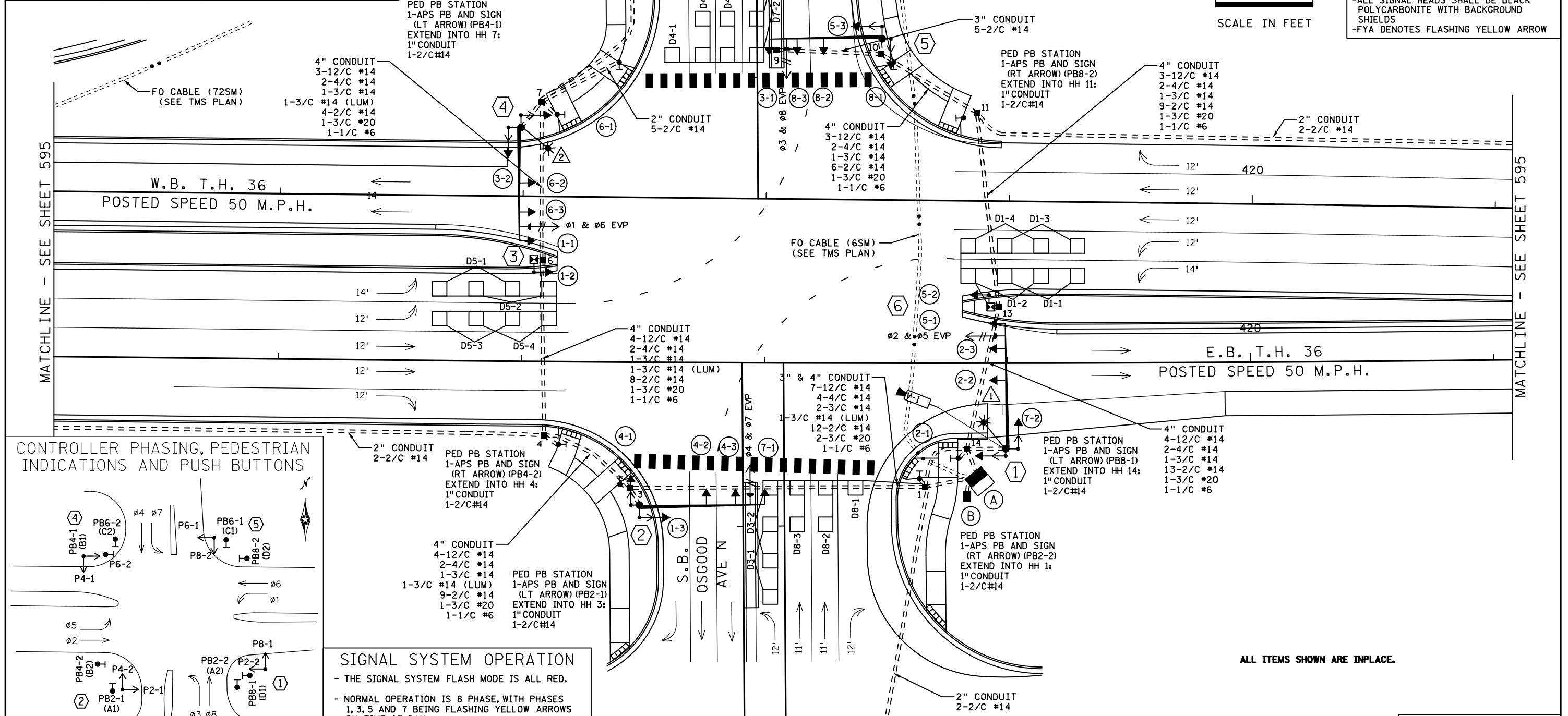


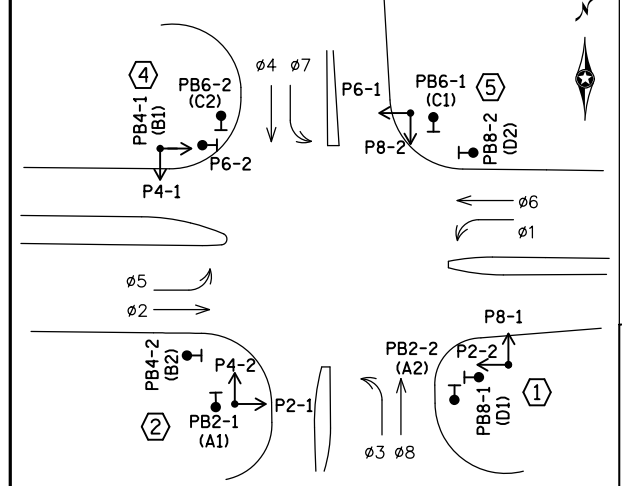
LOOP DETECTOR CHART					
NUMBER	SIZE (FT)	LOCATION	NUMBER	SIZE (FT)	LOCATION
D1-1, D5-1	2-6x6	20 & 50	D4-2, D4-3	2-6x6	5 & 20
D1-2, D5-2	2-6x6	5 & 35	D4-4, D4-5	2-6x6	200
D1-3, D5-3	2-6x6	20 & 50	D6-1, D6-2	6x6	400
D1-4, D5-4	2-6x6	5 & 35	D8-1	6x6	5
D2-1, D2-2	6x6	400	D8-2, D8-3	2-6x6	5 & 20
D3-1, D7-1	2-6x6	5 & 35	D8-4, D8-5	2-6x6	180
D3-2, D7-2	2-6x6	20 & 50			
D3-3	2-6x6	5 & 35	-ALL LOOP DETECTORS SHALL BE PVC UNLESS NOTED OTHERWISE		
D3-4	2-6x6	20 & 50	-LOCATION: DISTANCE FROM CROSSWALK/STOP BAR IN FEET		
D4-1	6x6	5			

SIGNAL FACE CHART					
FACE	R	Y	FYA	G	
1-1, 1-2, 1-3	←	←	←	←	
2-1, 2-2, 2-3	●	●	●	●	
3-1, 3-2	←	←	←	←	
4-1, 4-2, 4-3	●	●	●	●	
5-1, 5-2, 5-3	←	←	←	←	
6-1, 6-2, 6-3	●	●	●	●	
7-1, 7-2	←	←	←	←	
8-1, 8-2, 8-3	●	●	●	●	

-ALL SIGNAL INDICATIONS SHALL BE 12" LED
 -ALL SIGNAL HEADS SHALL BE BLACK POLYCARBONITE WITH BACKGROUND SHIELDS
 -FYA DENOTES FLASHING YELLOW ARROW



CONTROLLER PHASING, PEDESTRIAN INDICATIONS AND PUSH BUTTONS



SIGNAL SYSTEM OPERATION

- THE SIGNAL SYSTEM FLASH MODE IS ALL RED.
- NORMAL OPERATION IS 8 PHASE, WITH PHASES 1, 3, 5 AND 7 BEING FLASHING YELLOW ARROWS BY TIME OF DAY.
- PHASES 2 AND 6 SHALL BE ON VEHICLE RECALL.

PEDESTRIAN PUSH BUTTONS SHALL BE LOCATED AS SHOWN ABOVE

NO	DATE	BY	CKD	APPR	REVISION
0	02/07/14	KAS	RJG	KAS	INITIAL RELEASE FOR CONSTRUCTION - DP T-3
1	06/04/14	KAS	RJG	KAS	NDC 028
2	06/30/14	KAS	RJG	KAS	NDC 032
3	05/27/15	KS	RJG	KAS	NDC 036
4	03/22/16	NSM	TJJ	JWD	RECORD PLAN
5	12/7/18	JBA			BY MNDOT: ADDED TAMS SYSTEM ID*, TO OPERATIONS PLAN

DRAWING NO.: SGL80

RECORD DRAWING NOTE

THESE RECORD DRAWINGS WERE DEVELOPED BASED ON THE PREVIOUS DRAWING REVISIONS AND INFORMATION TRANSMITTED FROM THE FIELD BY OTHERS. THE INFORMATION CONTAINED WITHIN THIS RECORD AS-BUILT PLAN REPRESENTS THE ACTUAL CONDITIONS FOR ALL CHANGES OF WHICH ALLIANT IS AWARE. FUTURE USERS OF THESE DRAWINGS SHOULD VERIFY AS-BUILT CONDITIONS IN THE FIELD IN ALL CIRCUMSTANCES.

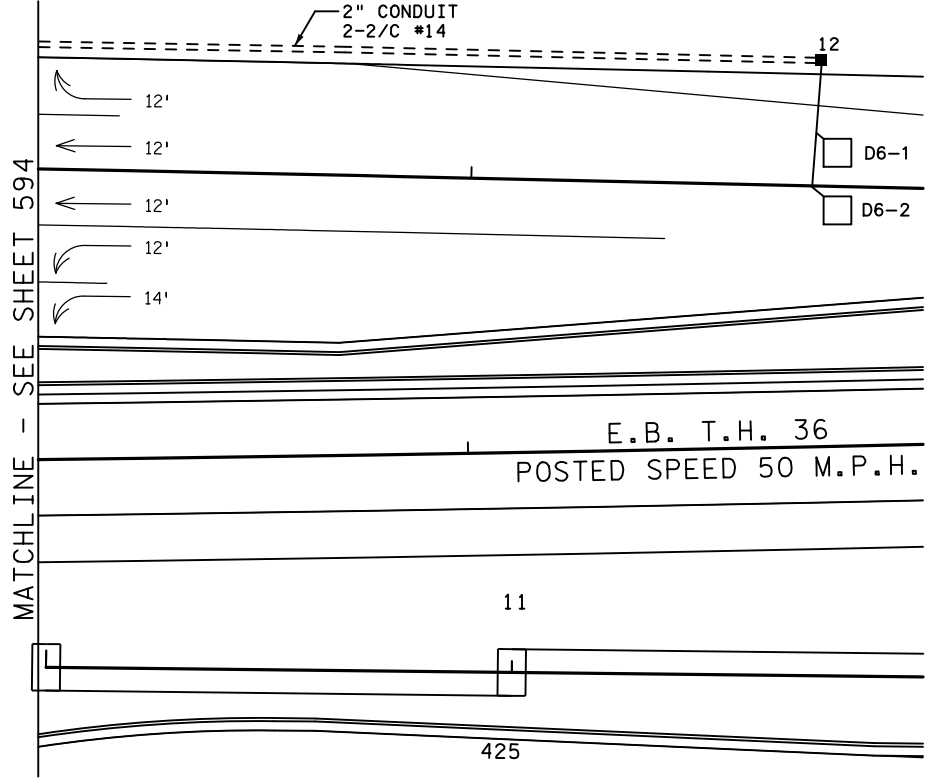
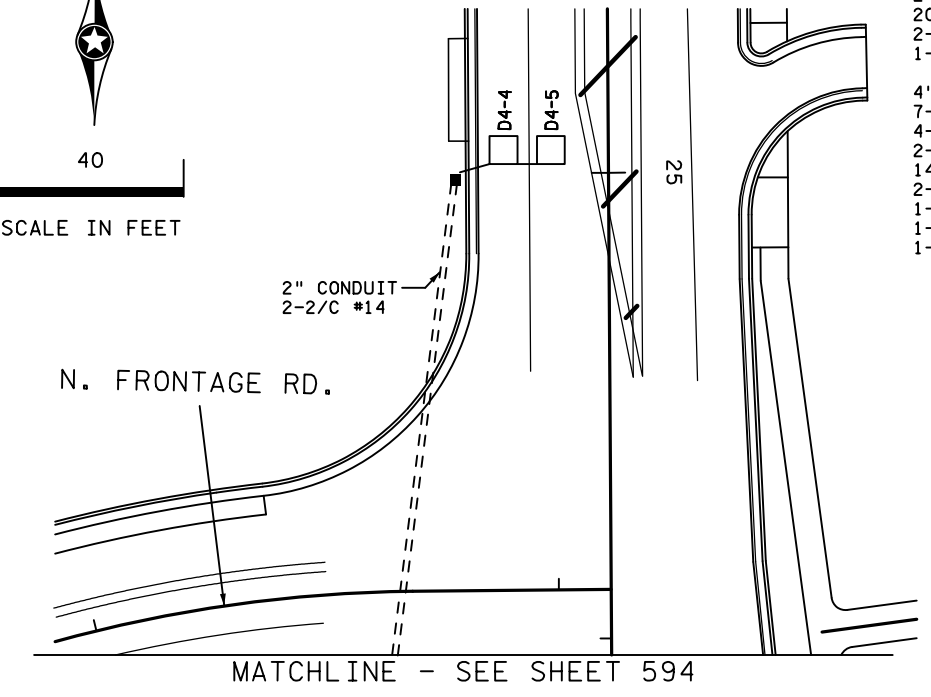
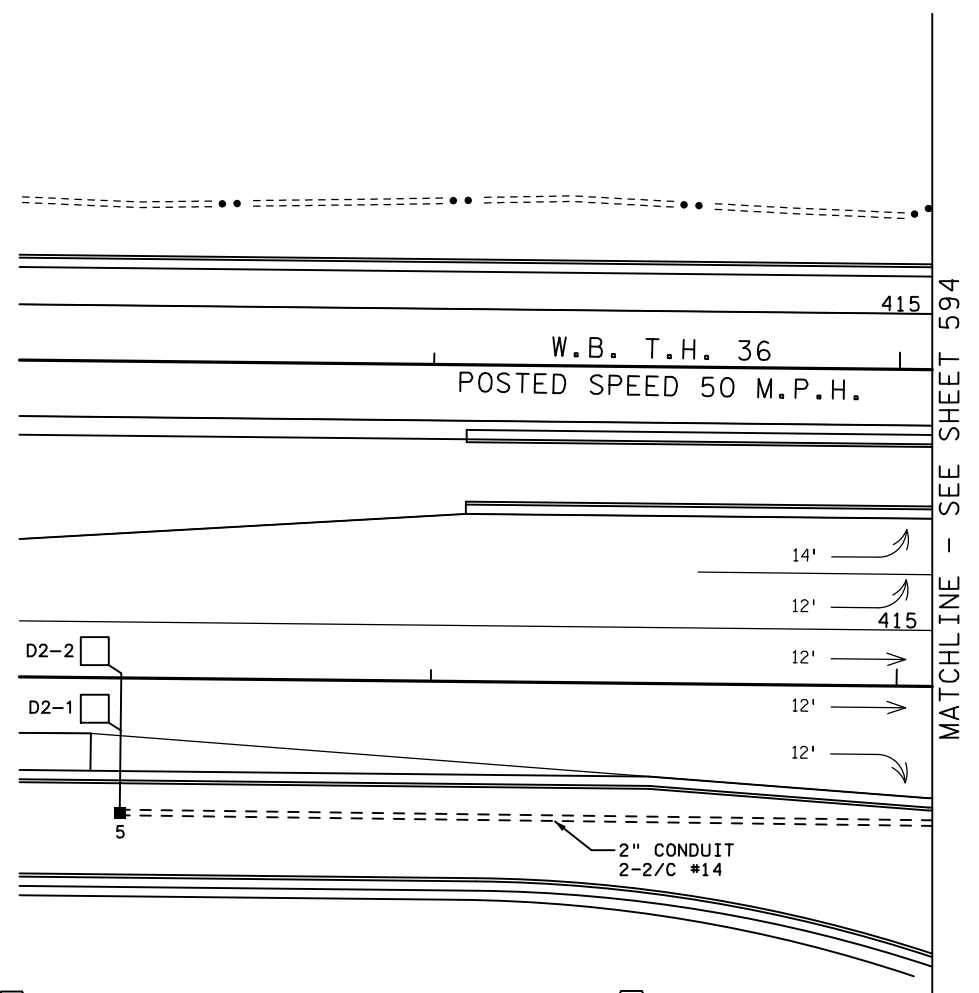
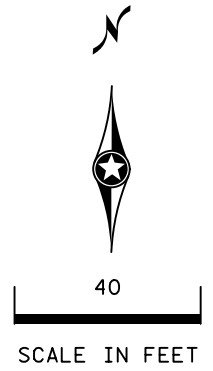


METER ADDRESS: 1735304
 5993 OSGOOD AVE. N
 SYSTEM ID: 20645
 T.E.: 5660

ST. CROIX MN APPROACHES (S.P. 8214-114) SHEET 594
 TRAFFIC CONTROL SIGNAL SYSTEM D OF 628
 INTERSECTION LAYOUT
 T.H. 36 AT C.S.A.H. 24 (OSGOOD AVE)
 IN OAK PARK HEIGHTS & STILLWATER, WASHINGTON COUNTY

(B) SOP-GROUND MOUNTED TRANSFORMER (XCEL ENERGY)
2" CONDUIT INTO SERVICE CABINET:
3-1/C#2

(A) EQUIPMENT PAD (SEE DETAIL SHEET)
SERVICE CABINET (SSB)
CONTROLLER AND CABINET (STATE FURNISHED)
4" CONDUIT & 3" CONDUIT TO HH 1:
7-12/C #14
4-4/C #14
2-3/C #14
20-2/C #14
2-3/C #20
1-1/C #6 INS. GR.
4" CONDUIT TO HH 14:
7-12/C #14
4-4/C #14
2-3/C #14
14-2/C #14
2-3/C #20
1-1/C #6 INS. GR.
1-COM CABLE
1-COAXIAL CABLE
2-2" AND 1-3" CONDUIT STUBBED OUT (CAPPED BOTH ENDS)
1.5" CONDUIT TO TMS VAULT (SEE TMS PLANS)
1-FO PIGTAIL (6SM) WITH PRE-TERMINATED CABLE END (SEE TMS PLANS)
CONTROLLER CABINET TO SERVICE CABINET:
2" CONDUIT
2-1/C#6
1-1/C#6 INS. GR.
CONTROLLER CABINET TO SERVICE CABINET (COMMS):
2" CONDUIT
1-6PR#19
SERVICE CABINET TO GROUND MOUNTED TRANSFORMER:
2" CONDUIT
3-1/C#2
SERVICE CABINET TO HH 14:
2" CONDUIT
2-3/C#14 (LUM)
1-3/C#14 (CAM POWER)
HH 12 TO HH 1:
2" CONDUIT
1-3/C#14 (LUM)



(1) X=506788.15
Y=205687.11
PA100 POLE FOUNDATION
TYPE PA100-A50-X6-350/CAM 400
1-VIDEO CAMERA WITH MOUNT (STATE FURNISHED)
1-ANGLE MOUNT SIGNAL OVERHEAD AT 0'
2-STRAIGHT MOUNT SIGNALS OVERHEAD AT 12' AND 24'
2-ANGLE MOUNT SIGNALS AT 90 AND 180 DEG
2-ANGLE MOUNT C. D. PED HEADS AT 90 AND 180 DEG
1-ONE WAY EVP DETECTOR AND CONFIRMATORY LIGHT (PHASES 2+5)
1-LUMINAIRE-LED
1-R10-X12 SIGN ADJACENT TO HEAD (5-1)
2-TYPE D SIGNS (D-47 & D-48) (SEE SIGN DETAILS)
3" CONDUIT TO HH 14:
3-12/C #14
2-4/C #14
1-3/C #14
1-3/C #14 (LUM)
1-3/C#14 (CAM POWER)
1-3/C #20
1-1/C #6 INS. GR.
1-COM CABLE
1-COAXIAL CABLE
1-7/16 BR. GR.

(2) X=506636.14
Y=205663.92
PA100 POLE FOUNDATION
TYPE PA100-A-50
1-ANGLE MOUNT SIGNAL OVERHEAD AT 0'
2-STRAIGHT MOUNT SIGNALS OVERHEAD AT 12' AND 24'
2-ANGLE MOUNT SIGNALS AT 90 AND 180 DEG
2-ANGLE MOUNT C. D. PED HEADS AT 90 AND 180 DEG
1-ONE WAY EVP DETECTOR AND CONFIRMATORY LIGHT (PHASES 4+7)
1-R10-X12 SIGN ADJACENT TO HEAD (7-1)
1-TYPE D SIGN (D-40) (SEE SIGN DETAILS)
3" CONDUIT TO HH 3:
3-12/C #14
2-4/C #14
1-3/C #14
1-3/C #20
1-1/C #6 INS. GR.

(3) X=506594.15
Y=205765.10
SIGNAL PEDESTAL FOUNDATION
13' SIGNAL PEDESTAL POLE AND BASE
1-STRAIGHT MOUNT SIGNAL
3" CONDUIT TO HH 6:
1-12/C #14
2-1/C #6 INS. GR.

(4) X=506588.15
Y=205819.64
PA100 POLE FOUNDATION
TYPE PA100-A-45-D40-9 (DAVIT AT 350 DEG)
1-ANGLE MOUNT SIGNAL OVERHEAD AT 0'
2-STRAIGHT MOUNT SIGNALS OVERHEAD AT 12' AND 24'
2-ANGLE MOUNT SIGNALS AT 90 AND 180 DEG
2-ANGLE MOUNT C. D. PED HEADS AT 90 AND 180 DEG
1-ONE WAY EVP DETECTOR AND CONFIRMATORY LIGHT (PHASES 1+6)
LUMINAIRE-LED
1-R10-X12 SIGN ADJACENT TO HEAD (1-1)
2-TYPE D SIGNS (D-47 & D-48) (SEE SIGN DETAILS)
3" CONDUIT TO HH 7:
3-12/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.

(5) X=506737.16
Y=205855.71
PA100 POLE FOUNDATION
TYPE PA100-A-45
1-ANGLE MOUNT SIGNAL OVERHEAD AT 0'
2-STRAIGHT MOUNT SIGNALS OVERHEAD AT 12' AND 24'
2-ANGLE MOUNT SIGNALS AT 90 AND 180 DEG
2-ANGLE MOUNT C. D. PED HEADS AT 90 AND 180 DEG
1-ONE WAY EVP DETECTOR AND CONFIRMATORY LIGHT (PHASES 3+8)
1-R10-X12 SIGN ADJACENT TO HEAD (3-1)
1-TYPE D SIGN (D-40) (SEE SIGN DETAILS)
3" CONDUIT TO HH 10:
3-12/C #14
2-4/C #14
1-3/C #14
1-3/C #20
1-1/C #6 INS. GR.

(6) X=506782.00
Y=205745.22
SIGNAL PEDESTAL FOUNDATION
13' SIGNAL PEDESTAL POLE AND BASE
1-STRAIGHT MOUNT SIGNAL
3" CONDUIT TO HH 13:
1-12/C #14
2-1/C #6 INS. GR.

ALL ITEMS SHOWN ARE INPLACE.

1735304

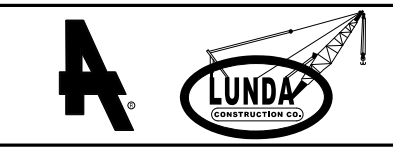
METER ADDRESS:
5993 OSGOOD AVE. N
SYSTEM ID: 20645
T.E.: 5660

NO	DATE	BY	CHK	APPR	REVISION
0	02/07/14	KAS	RJG	KAS	INITIAL RELEASE FOR CONSTRUCTION
1	06/04/14	KAS	RJG	KAS	NDC 028
2	06/30/14	KAS	RJG	KAS	NDC 032
3	03/22/16	NSM	TJJ	JWD	RECORD PLAN
4	12/7/18	JBA			BY MNDOT: ADDED TAMS SYSTEM ID*, TO OPERATIONS PLAN

DRAWING NO.: SGL81

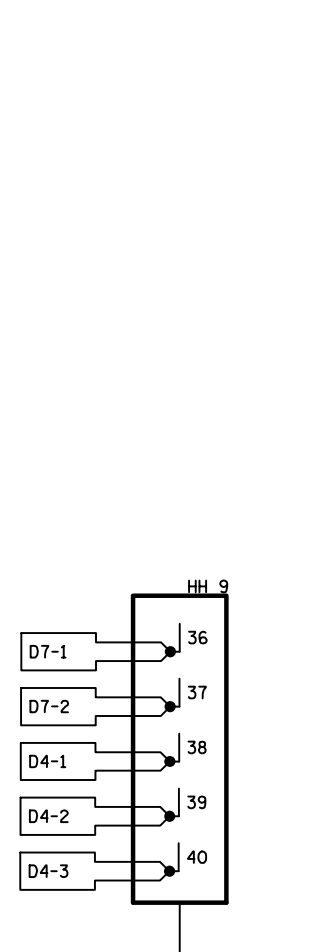
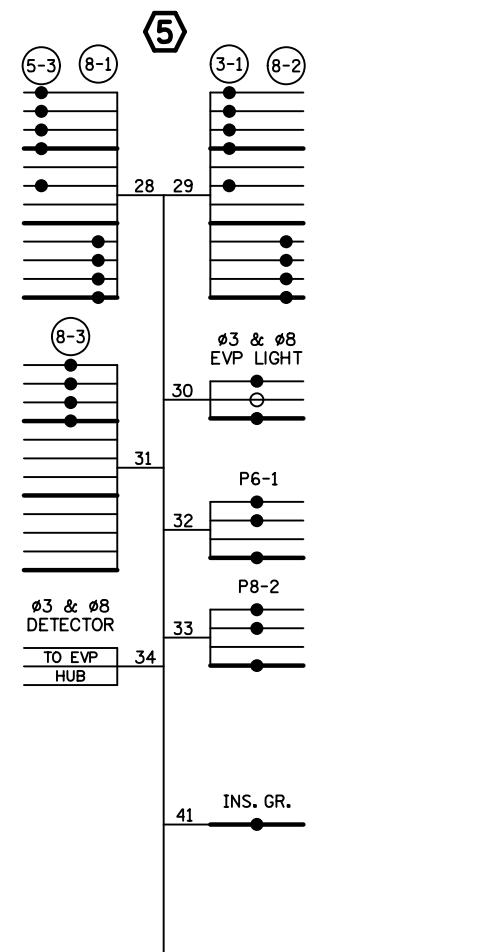
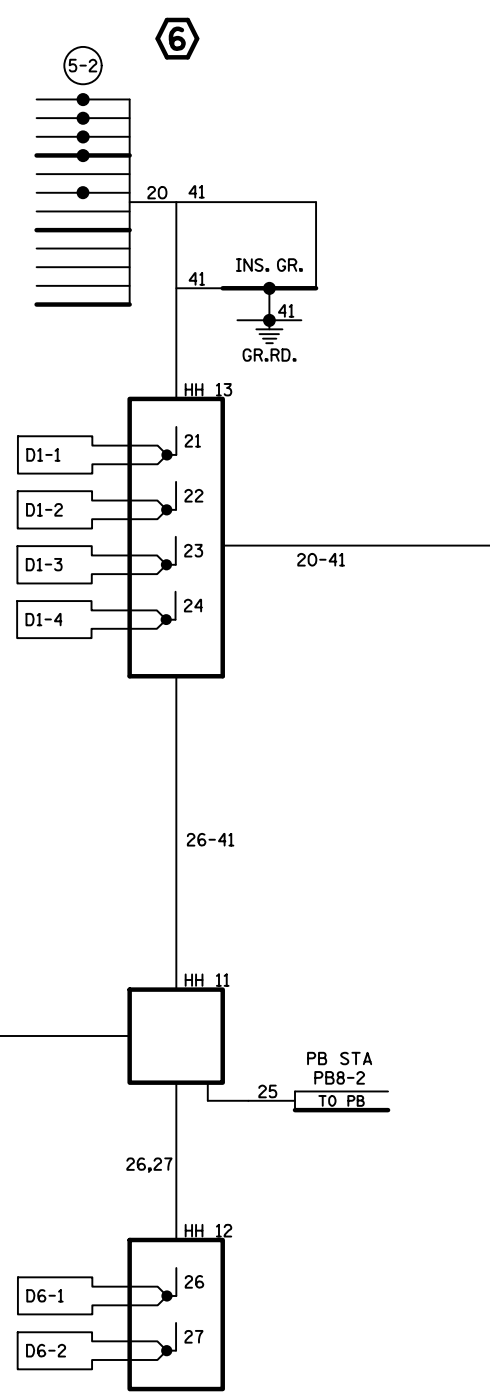
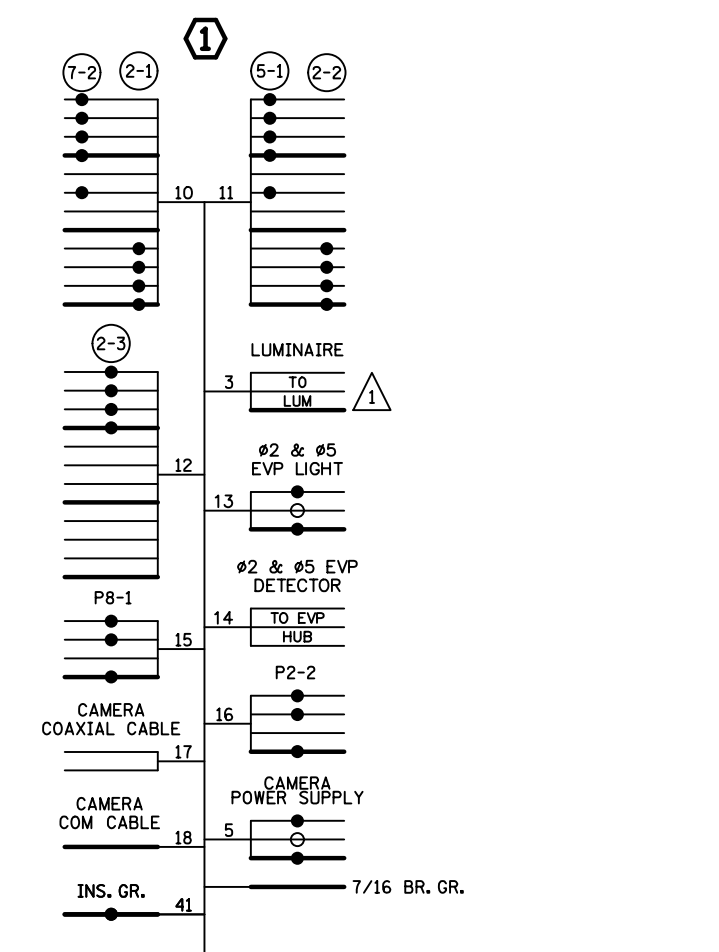
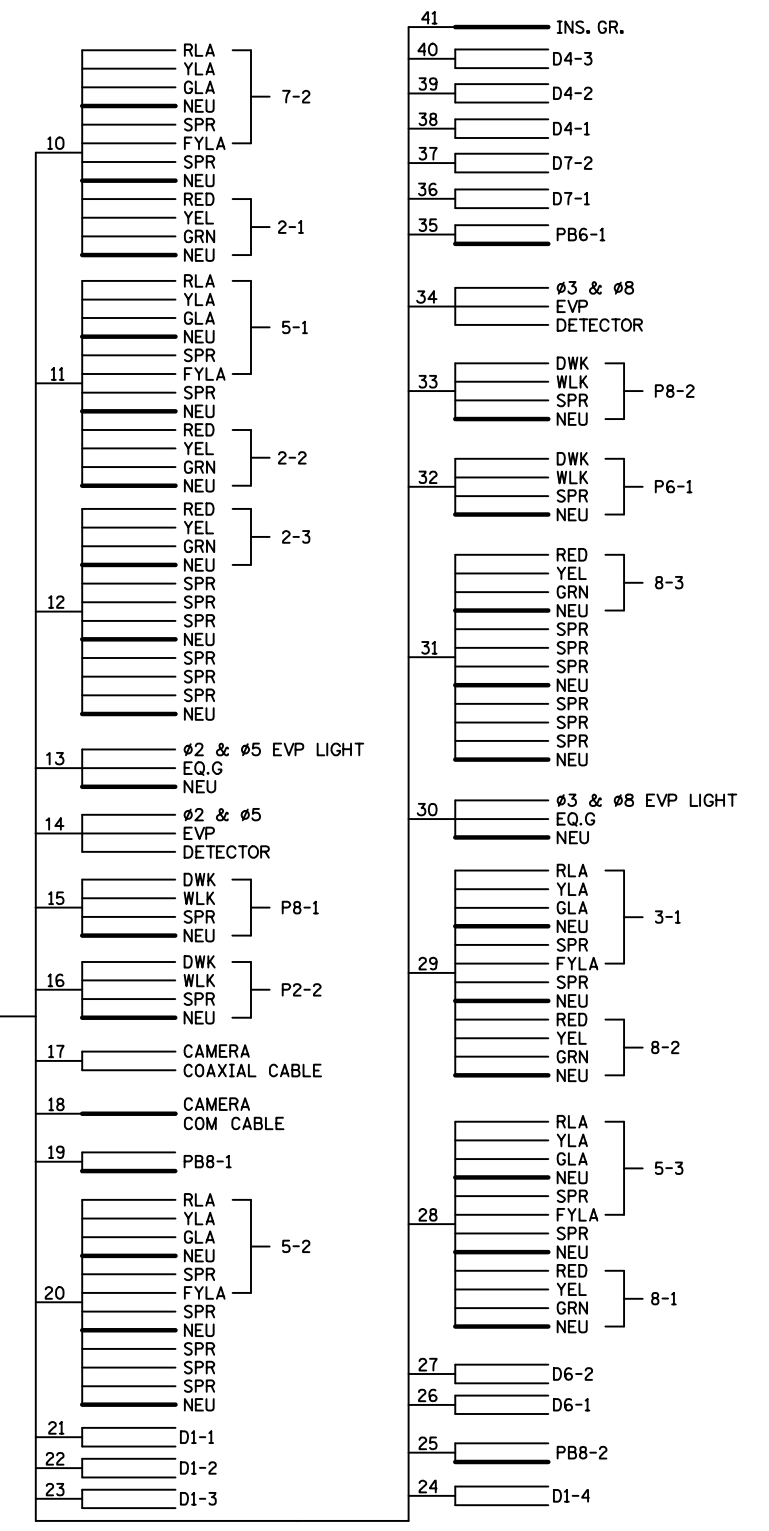
RECORD DRAWING NOTE

THESE RECORD DRAWINGS WERE DEVELOPED BASED ON THE PREVIOUS DRAWING REVISIONS AND INFORMATION TRANSMITTED FROM THE FIELD BY OTHERS. THE INFORMATION CONTAINED WITHIN THIS RECORD AS-BUILT PLAN REPRESENTS THE ACTUAL CONDITIONS FOR ALL CHANGES OF WHICH ALLIANT IS AWARE. FUTURE USERS OF THESE DRAWINGS SHOULD VERIFY AS-BUILT CONDITIONS IN THE FIELD IN ALL CIRCUMSTANCES.



ST. CROIX MN APPROACHES (S.P. 8214-114) SHEET 595
TRAFFIC CONTROL SIGNAL SYSTEM D MATCHLINE LAYOUT AND POLE NOTES OF 628
T.H. 36 AT C.S.A.H. 24 (OSGOOD AVE)
IN OAK PARK HEIGHTS & STILLWATER, WASHINGTON COUNTY

CONTROLLER CABINET



- NOTES:
- SIGNAL SYSTEM INCLUDES BATTERY- BACKUP SERVICE CABINET (NO BATTERIES OR U.P.S.).
 - FOR CONDUCTOR COLOR CODE SEE TRAFFIC SIGNAL POLE WIRING CONNECTOR DETAIL.
 - LUMINAIRES ARE METERED.

ALL ITEMS SHOWN ARE INPLACE.

NO	DATE	BY	CKD	APPR	REVISION
0	02/07/14	KAS	RJG	KAS	INITIAL RELEASE FOR CONSTRUCTION
1	06/04/14	KAS	RJG	KAS	NDC 028
2	06/30/14	KAS	RJG	KAS	NDC 032
3	05/27/15	KS	RJG	KAS	NDC 036
4	03/22/16	NSM	TJJ	JWD	RECORD PLAN
5	12/7/18	JBA			BY MNDOT: ADDED TAMS SYSTEM ID*, TO OPERATIONS PLAN

DRAWING NO.: SGL82

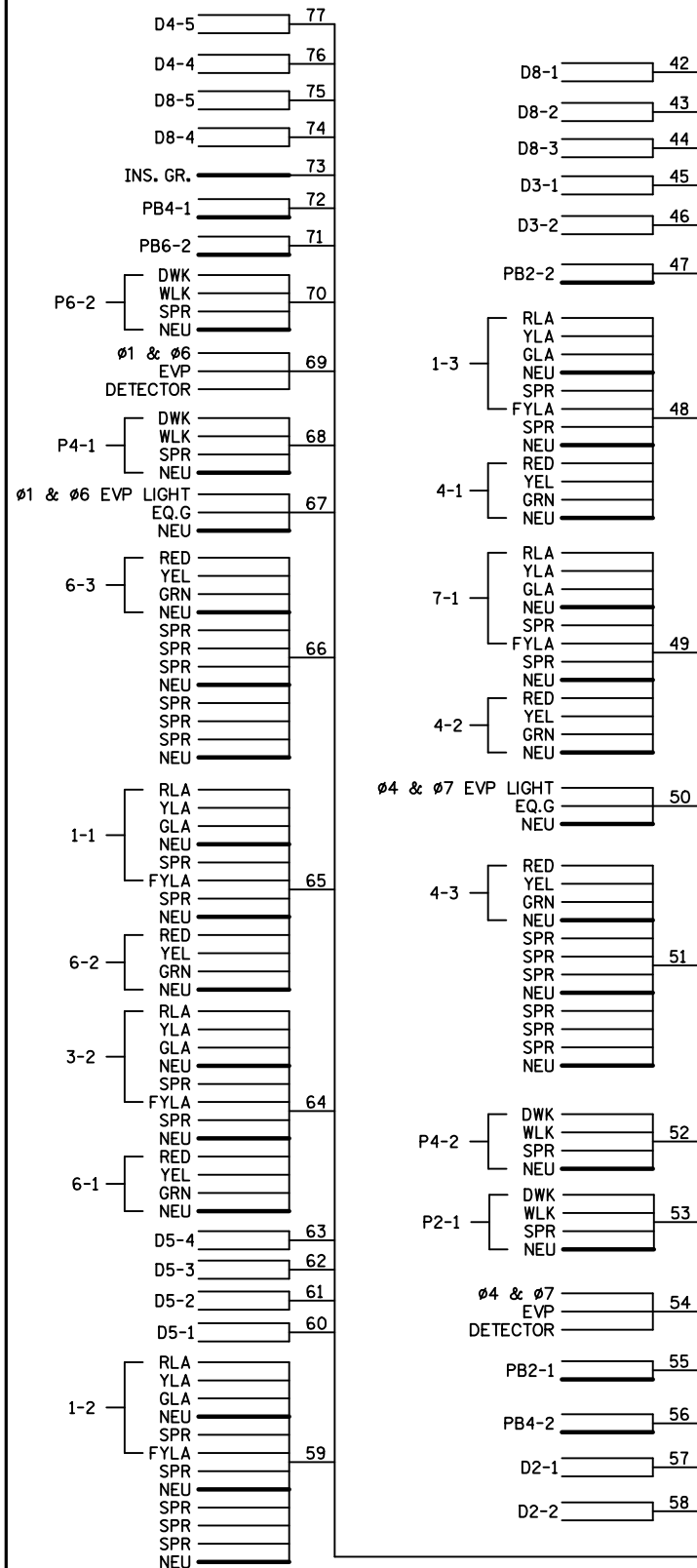
RECORD DRAWING NOTE
 THESE RECORD DRAWINGS WERE DEVELOPED BASED ON THE PREVIOUS DRAWING REVISIONS AND INFORMATION TRANSMITTED FROM THE FIELD BY OTHERS. THE INFORMATION CONTAINED WITHIN THIS RECORD AS-BUILT PLAN REPRESENTS THE ACTUAL CONDITIONS FOR ALL CHANGES OF WHICH ALLIANT IS AWARE. FUTURE USERS OF THESE DRAWINGS SHOULD VERIFY AS-BUILT CONDITIONS IN THE FIELD IN ALL CIRCUMSTANCES.



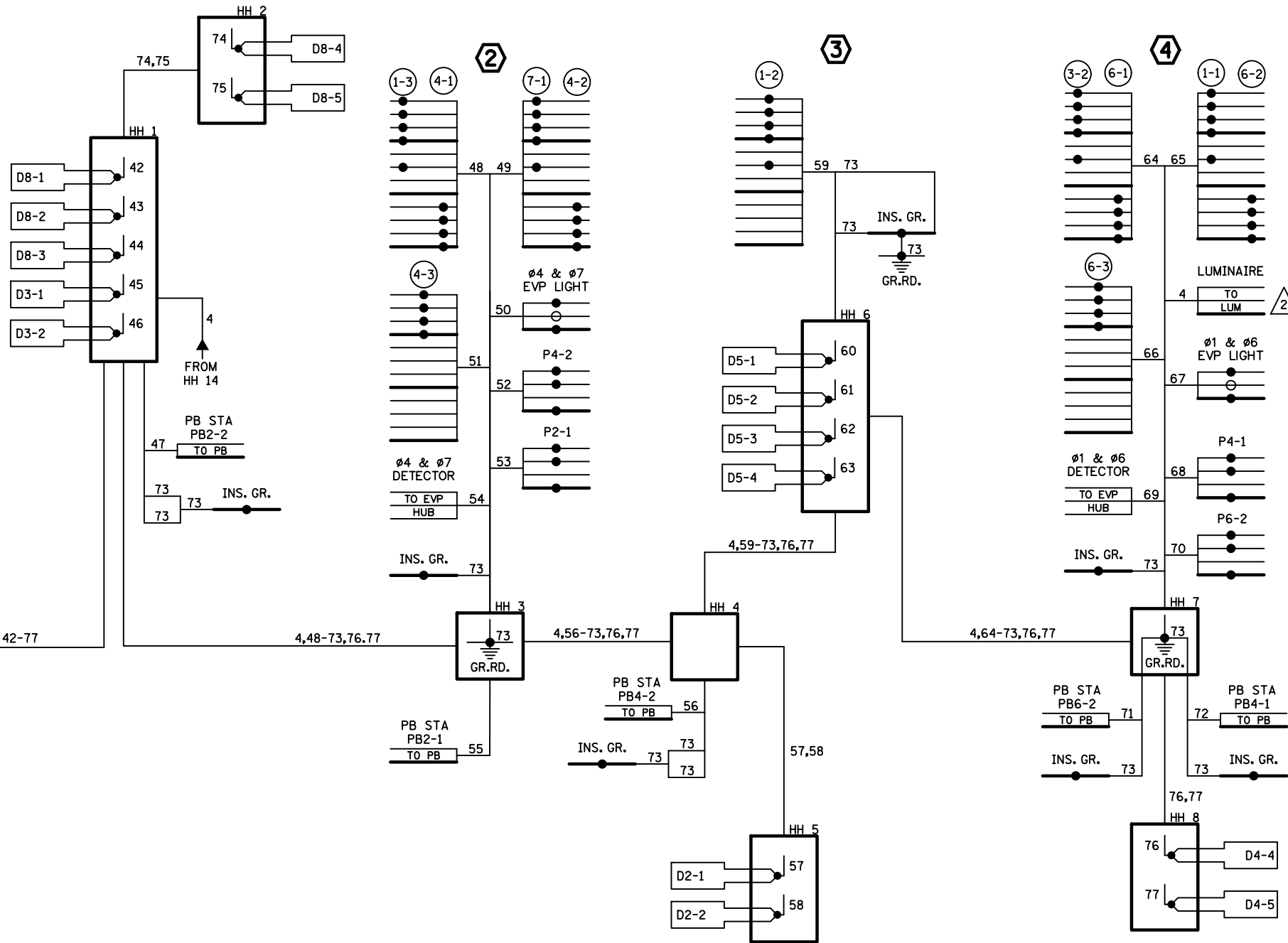
ST. CROIX MN APPROACHES (S.P. 8214-114) SHEET 596
 TRAFFIC CONTROL SIGNAL SYSTEM D OF 628
 FIELD WIRING DIAGRAM (PART 1 OF 2)
 T.H. 36 AT C.S.A.H. 24 (OSGOOD AVE)
 IN OAK PARK HEIGHTS & STILLWATER, WASHINGTON COUNTY

1735304
 METER ADDRESS:
 5993 OSGOOD AVE. N
 SYSTEM ID: 20645
 T.E.: 5660

CONTROLLER CABINET



FIBER OPTIC PIGTAIL 90 TO TMS VAULT 1-FO CABLE (6SM)



NOTES:

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

ALL ITEMS SHOWN ARE INPLACE.

1735304

METER ADDRESS:
5993 OSGOOD AVE. N
SYSTEM ID: 20645
T.E.: 5660

NO	DATE	BY	CHKD	APPR	REVISION
0	02/07/14	KAS	RJG	KAS	INITIAL RELEASE FOR CONSTRUCTION
1	06/04/14	KAS	RJG	KAS	NDC 028
2	06/30/14	KAS	RJG	KAS	NDC 032
3	05/27/15	KS	RJG	KAS	NDC 036
4	03/22/16	NSM	TJJ	JWD	RECORD PLAN
5	12/7/18	JBA			BY MNDOT: ADDED TAMS SYSTEM ID*, TO OPERATIONS PLAN

RECORD DRAWING NOTE

THESE RECORD DRAWINGS WERE DEVELOPED BASED ON THE PREVIOUS DRAWING REVISIONS AND INFORMATION TRANSMITTED FROM THE FIELD BY OTHERS. THE INFORMATION CONTAINED WITHIN THIS RECORD AS-BUILT PLAN REPRESENTS THE ACTUAL CONDITIONS FOR ALL CHANGES OF WHICH ALLIANT IS AWARE. FUTURE USERS OF THESE DRAWINGS SHOULD VERIFY AS-BUILT CONDITIONS IN THE FIELD IN ALL CIRCUMSTANCES.



ST. CROIX MN APPROACHES (S.P. 8214-114)	SHEET 597
TRAFFIC CONTROL SIGNAL SYSTEM D	OF
FIELD WIRING DIAGRAM (PART 2 OF 2)	628
T.H. 36 AT C.S.A.H. 24 (OSGOOD AVE)	
IN OAK PARK HEIGHTS & STILLWATER, WASHINGTON COUNTY	

DATE
NO
BY

DRAWING NO.: SGL83

