

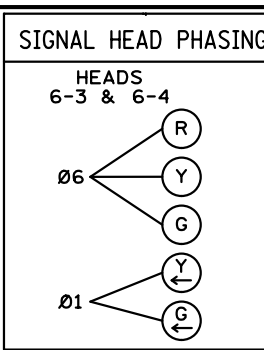
PLOTTED/REVISED: 8/9/2012

DISTRICT #: METRO  
PLOT NAME: layout  
PATH & FILENAME: IP\_PWP-d0780644T21765.sgl.dgn

SIGNAL FACE CHART					
FACE	R	Y	G	YLTA	GLTA
2-1, 2-2	●	●	●		
4-1, 4-2, 4-3	●	●	●		
6-1, 6-2	●	●	●		
6-3, 6-4	●	●	●	←	←

LOOP DETECTOR CHART		
NUMBER	SIZE (FT)	LOCATION
D1-1	2-6x6	20 & 50
D1-2	2-6x6	5 & 35
D2-1, D2-2	6x6	250
D2-3	6x6	-5
D4-1	6x6	400
D4-2, D4-3	6x6	120
D4-4	2-6x6	5 & 35
D4-5	3-6x6	0&5&35
D6-1, D6-2	6x6	200

**(A) EQUIPMENT PAD - SEE DETAIL SERVICE CABINET CONTROLLER AND CABINET**  
 4" CONDUIT TO HH 2: 1-12/C#14, 2-4/C#14  
 4" CONDUIT TO HH 1: 1-12/C#14, 2-4/C#14  
 4-12/C#14, 4-4/C#14, 2-3/C#14, 2-3/C#20, 6-2/C#14, 1-6PR#19, 1-1/C#6 INS.GR.  
 3" CONDUIT STUBBED OUT - CAPPED BOTH ENDS  
 3/4" CONDUIT STUBBED OUT CAPPED FOR TELEPHONE LINE  
 2" CONDUIT TO SERVICE CABINET: 2-1/C#6, 1-1/C#6 INS.GR.  
 SERVICE CABINET TO HH 14: 2" CONDUIT, 3-1/C#2  
 SERVICE CABINET TO HH 1: 2" CONDUIT, 4-3/C#14 (LUM), HH 2 TO HH 1: 2" CONDUIT, 2-3/C#14 (LUM)



**(1) WB STA 702+06, 23' RT PA100 POLE FOUNDATION**  
 TYPE PA100-A-40-D40-9 (DAVIT AT 350 DEG)  
 1-ANGLE MOUNT SIGNAL OVERHEAD AT 0'  
 1-STRAIGHT MOUNT SIGNALS OVERHEAD AT 18'  
 1-ANGLE MOUNT SIGNALS AT 180 DEG  
 2-ANGLE MOUNT C.D. PED IND AT 90 AND 180 DEG  
 1-ONE WAY EVP DETECTOR AND CONFIRMATORY LIGHT (PHASES 1 & 6)  
 LUMINAIRE-250W HPS  
 1-APS PB AND SIGN (LT ARROW PB4-1)  
 1-SIGN D-15 35 S  
 1-SIGN R10-12 (36x48) ADJACENT TO HEAD 6-3  
 3" CONDUIT TO HH 1: 2-12/C#14, 1-4/C#14, 1-3/C#14 (LUM), 1-3/C#14, 1-3/C#20, 1-2/C#14, 1-1/C#6 INS.GR.

**PED PUSH BUTTON STATION**  
 1-APS PEDESTRIAN PUSH BUTTON AND SIGN (RT ARROW PB6-2)  
 EXTEND INTO HH 2:  
 2" CONDUIT  
 1-2/C#14

**(2) WB STA 703+07, 29' RT PEDESTAL FOUNDATION**  
 13' PEDESTAL POLE & BASE  
 1-ANGLE MOUNT C.D. PED IND AT 90 DEG  
 1-APS PB AND SIGN (LT ARROW PB6-1)  
 1-SIGN (R6-1L) ONE WAY  
 1-SIGN (R6-1R) ONE WAY  
 1-SIGN (R9-3a) FACING POLE 3  
 3" RSC TO HH 5:  
 1-4/C#14, 1-2/C#14



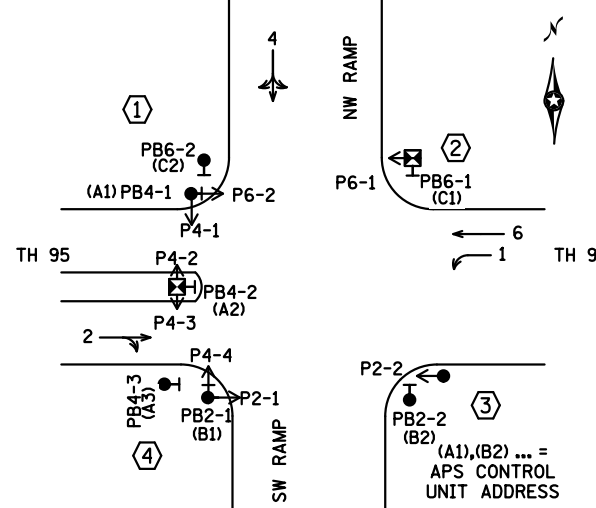
T.H. 95 WB (35 MPH)

T.H. 95 EB (35 MPH)

T.H. 95 WB (35 MPH)

T.H. 95 EB (35 MPH)

**CONTROLLER PHASING, PEDESTRIAN INDICATIONS AND PUSH BUTTONS**



**(5) PEDESTAL FOUNDATION**  
 15' PEDESTAL POLE & BASE  
 2-ANGLE MOUNT C.D. PED IND AT 0 AND 180 DEG  
 1-APS PEDESTRIAN PUSH BUTTON AND SIGN (DBL ARROW PB4-2)  
 3" RSC TO HH 13  
 2-4/C#14, 1-2/C#14, 1-1/C#6 INS.GR.

**(4) EB STA 702+13, 37' RT PA100 POLE FOUNDATION**  
 TYPE PA100-A-45-D40-9 (DAVIT AT 350 DEG)  
 1-ANGLE MOUNT SIGNAL OVERHEAD AT 0'  
 2-ANGLE MOUNT SIGNALS AT 45 AND 225 DEG  
 2-ANGLE MOUNT C.D. PED IND AT 45 AND 225 DEG  
 1-ONE WAY EVP DETECTOR AND CONFIRMATORY LIGHT (PHASES 4)  
 LUMINAIRE-250W HPS  
 1-APS PB AND SIGN (LT ARROW PB2-1)  
 1-SIGN (R6-1L) ONE WAY  
 1-SIGN (R6-1R) ONE WAY  
 3" CONDUIT TO HH 11: 2-12/C#14, 1-4/C#14, 1-3/C#20, 1-1/C#6 INS.GR.

**PED PUSH BUTTON STATION**  
 1-APS PEDESTRIAN PUSH BUTTON AND SIGN (LT ARROW PB2-1)  
 EXTEND INTO HH 1:  
 2" CONDUIT  
 1-2/C#14

**PED PUSH BUTTON STATION**  
 1-APS PEDESTRIAN PUSH BUTTON AND SIGN (RT ARROW PB4-3)  
 EXTEND INTO HH 11:  
 2" CONDUIT  
 1-2/C#14

**SIGNAL SYSTEM OPERATION**

- THE SIGNAL SYSTEM FLASH MODE IS ALL RED.
- NORMAL OPERATION IS 4 PHASE, WITH PHASES 4 AND 6 BEING PROTECTED/PERMISSIVE LEFT TURN PHASE A.
- PHASES 2 AND 6 SHALL BE ON VEHICLE RECALL.

NO	DATE	BY	CHK	REVISIONS
1	10/07/09	MAS	SD	REVISION IN POLE NOTES
2	08-06-12	SJKEJA	AS	BUILT PLAN

Drawn By: M SCHWARTZ  
 Designed By: M SCHWARTZ  
 Checked By: S DELMORE  
 Approved By: S DELMORE

I HEREBY CERTIFY THAT THIS PLAN SHEET 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.  
 SEAN DELMORE  
 DATE: 7 OCTOBER 2009 LIC NO: 40945

SYSTEM ID NO: 21765  
 T.E. NO: 4917

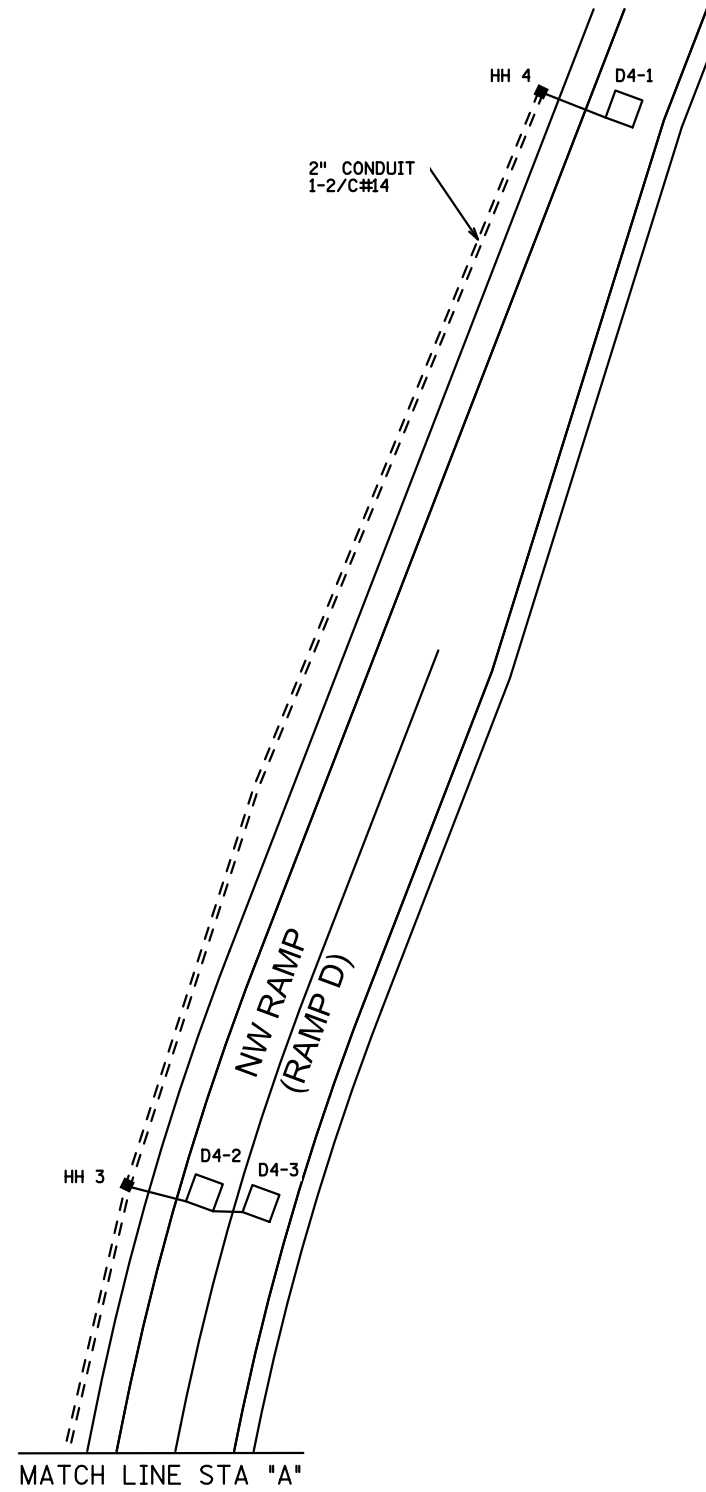


**SIGNAL PLAN**  
 INTERSECTION LAYOUT  
 TH 35 @ TH95 WEST-RAMPS SYSTEM "C"  
 STATE PROJ NO 1307-19 (TH 95), STATE PROJ NO 225-010-04  
 CITY OF NORTH BRANCH PROJ NO 2009-01

SHEET \$s19R OF \$TOT SHEETS

PLOTTED/REVISED: 8/9/2012

DISTRICT #: METRO  
IPLOT NAME: match lines  
PATH & FILENAME: \$\$\$PATH\$\$\$FILENAME: IP\_PWP-d0780644T21765\_sgl.dgn



NO	DATE	BY	CHK	REVISIONS
1	08-06-12	SJKEJA	AS-BUILT PLAN	

Drawn By:  
M SCHWARTZ  
Designed By:  
M SCHWARTZ  
Checked By:  
D SCHMIDT  
Approved By:  
S DELMORE

I HEREBY CERTIFY THAT THIS PLAN SHEET 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.

SEAN DELMORE

DATE: 7 OCTOBER 2009 LIC NO: 40945

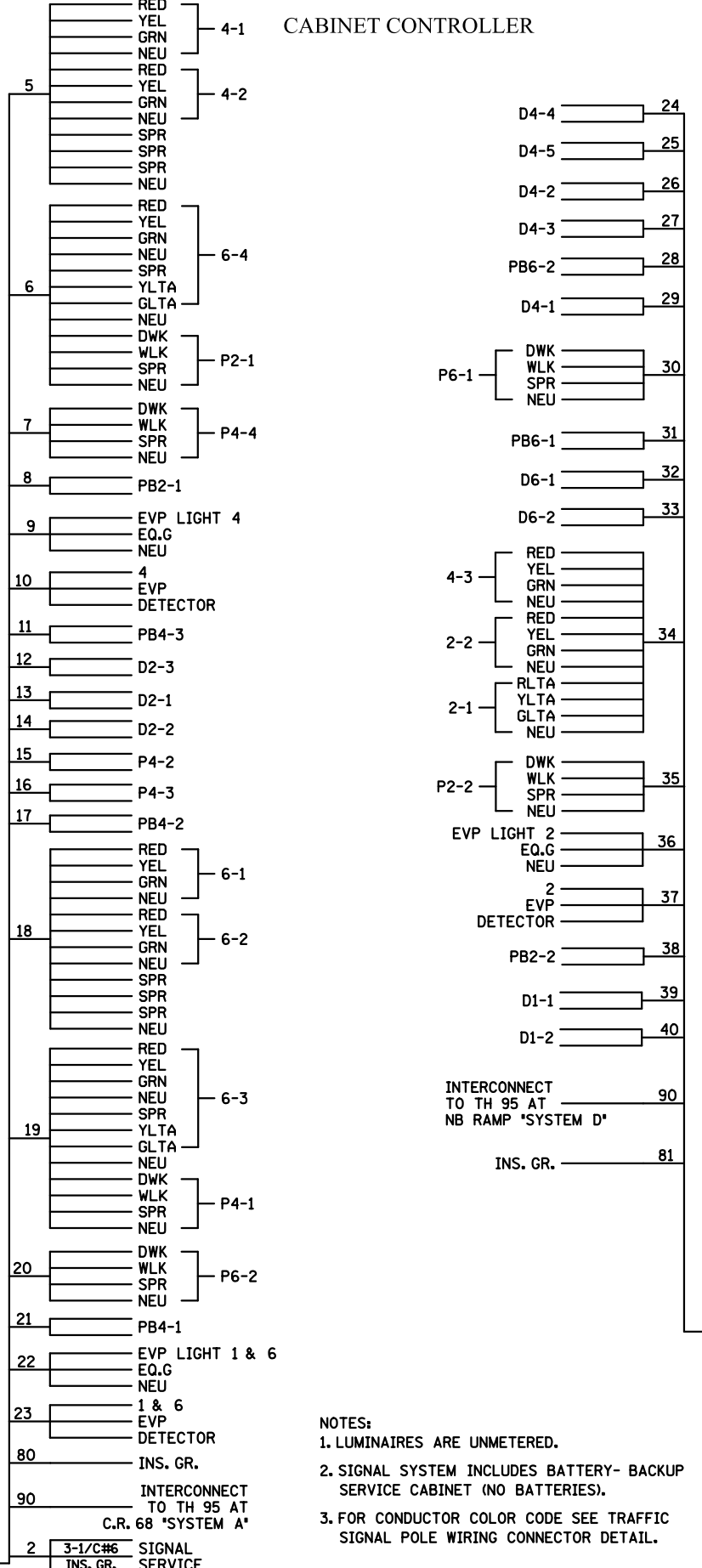
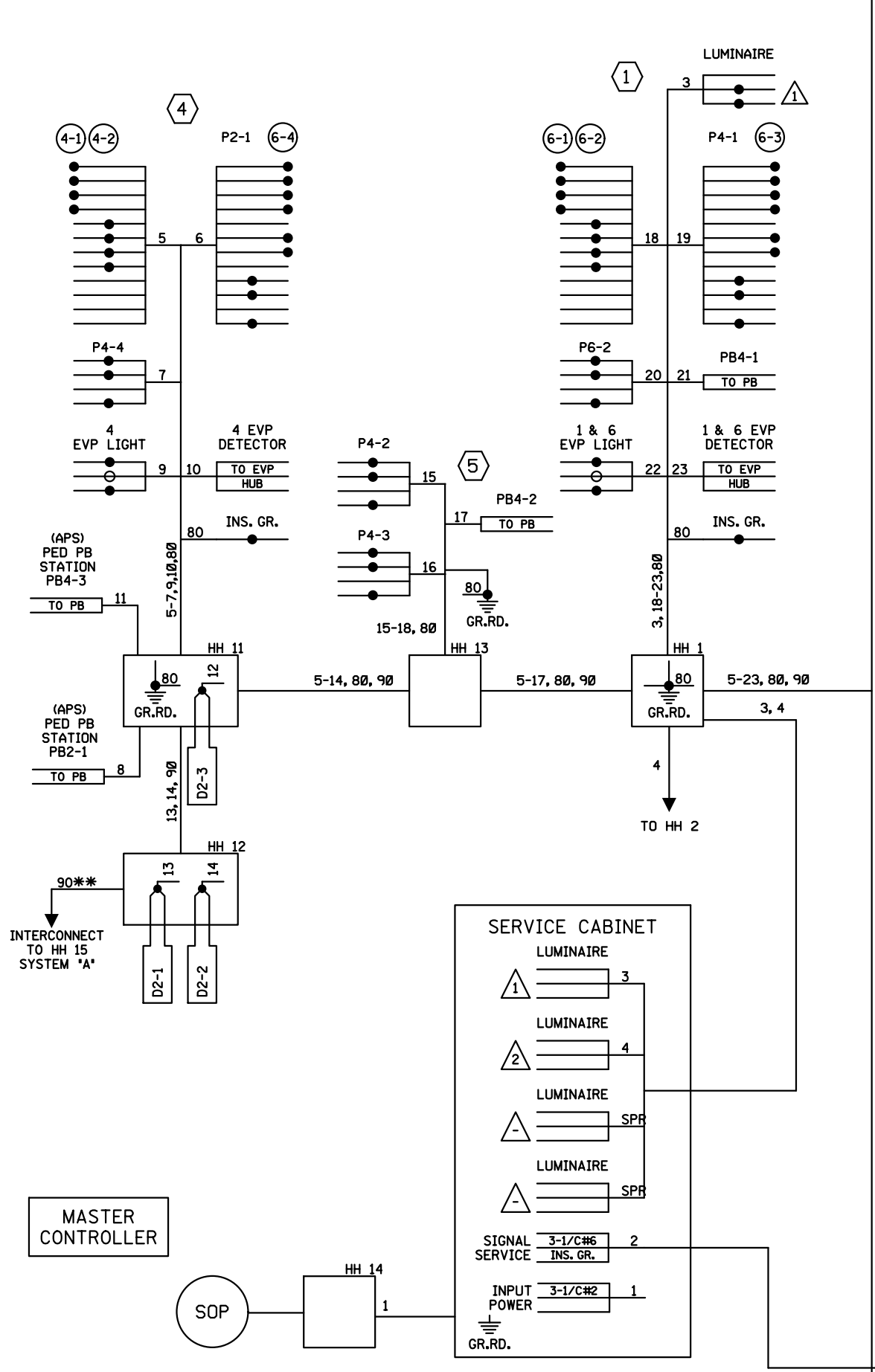
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T.E. NO: 4917



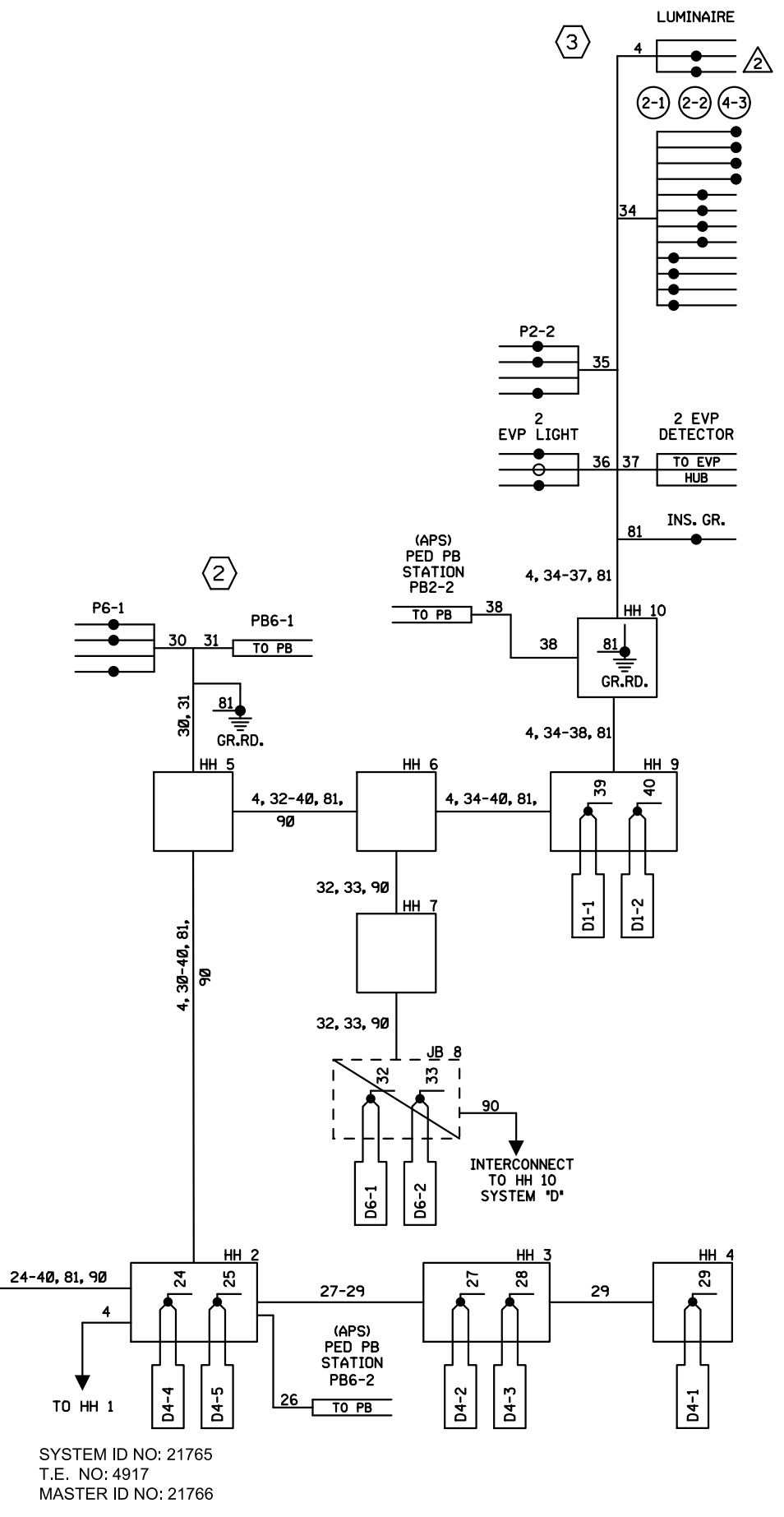
**SIGNAL PLAN**  
INTERSECTION LAYOUT  
TH 35 @ TH95 WEST RAMPS

STATE PROJ NO 1307-19 (TH 95) - STATE PROJ NO 225-010-04  
CITY OF NORTH BRANCH PROJ NO 2009-01

SHEET  
\$s120  
OF  
\$TOT  
SHEETS



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



SYSTEM ID NO: 21765  
 T.E. NO: 4917  
 MASTER ID NO: 21766

NO	DATE	BY	CHK	REVISIONS
1	08-06-12	SJKEJA	AS	BUILT PLAN

Drawn By: M SCHWARTZ  
 Designed By: M SCHWARTZ  
 Checked By: S DELMORE  
 Approved By: S DELMORE

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SEAN DELMORE  
 DATE: 7 OCTOBER 2009 LIC NO: 40945

SYSTEM ID NO: 21765  
 T.E. NO: 4917  
 MASTER ID NO: 21766  
 MASTER T.E. NO: 4918

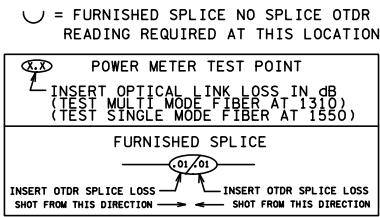


**WSB**  
 Associates, Inc.  
 701 Xenia Avenue South, Suite 300  
 Minneapolis, MN 55416  
 www.wsbeng.com

**SIGNAL PLAN**  
 WIRING DIAGRAM  
 TH 95 AT SB RAMP-SYSTEM "C"

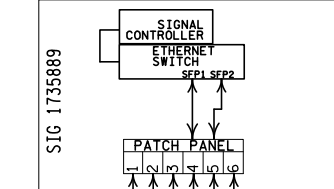
STATE PROJ NO 1307-19 (TH 95) - STATE PROJ NO 225-010-04  
 CITY OF NORTH BRANCH PROJ NO 2009-01

SHEET  
 \$s121  
 OF  
 \$TOT  
 SHEETS



INDEX OF REFRACTION

TH 95 AT TH 35 SB EXIT AND SB ENETERANCE RAMP INTERSECTION

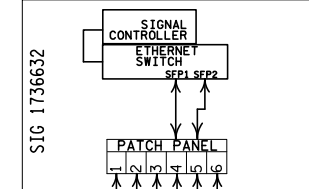


PIGTAIL OTDR LENGTH \_\_\_\_\_ km

PIGTAIL ID#:  
SIG 1735889

TRUNK  
 ID# 95-49

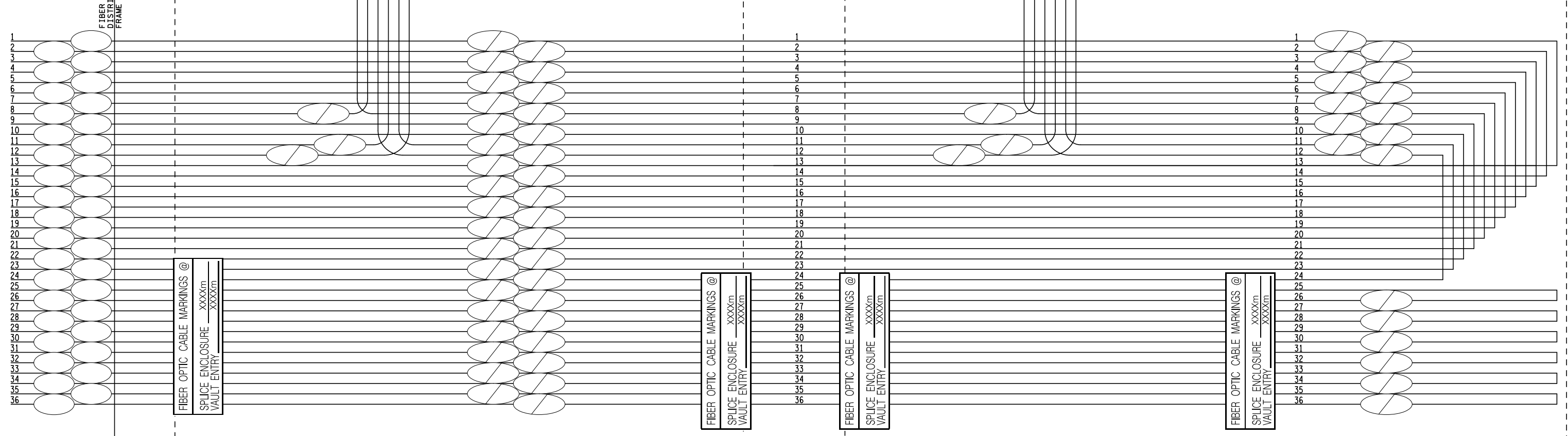
TH 95 AT FALCON AND FLINK INTERSECTION



PIGTAIL OTDR LENGTH \_\_\_\_\_ km

PIGTAIL ID#:  
SIG 1736632

TRUNK  
 ID# 95-50  
 (SHEET 76)



ENCLOSURE TYPE	
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MFG/MODEL	

ENCLOSURE TYPE	
SPLIT CASE	<input type="checkbox"/>
DOME	<input type="checkbox"/>
MFG/MODEL	

TH 95 AT TH 35 SB EXIT AND SB ENETERANCE RAMP INTERSECTION  
 SPLICE VAULT

TH 95 AT FALCON AND FLINK INTERSECTION  
 SPLICE VAULT