

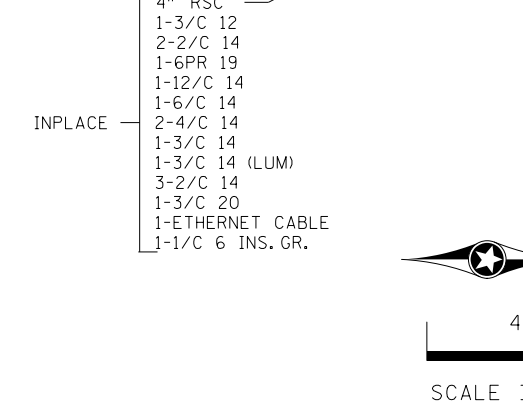
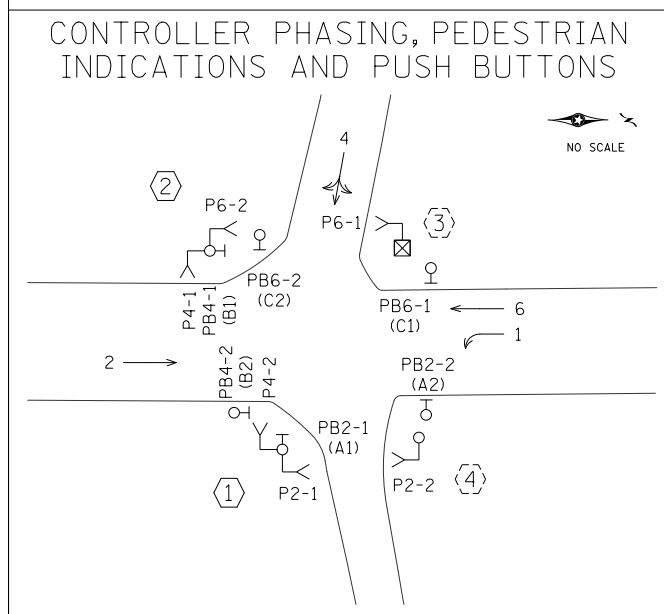
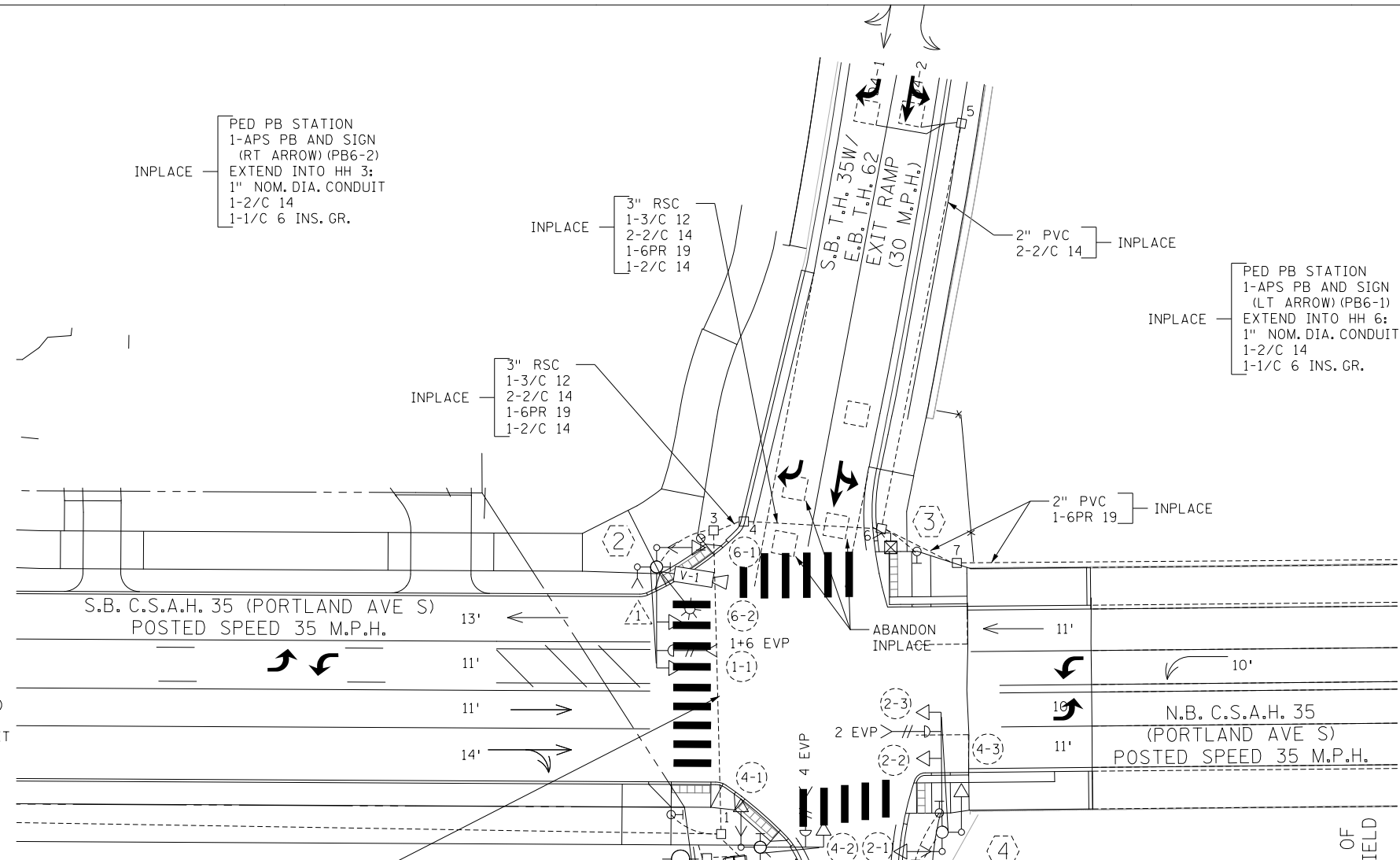
SIGNAL HEAD CHART				
FACE	R	Y	FYA	G
2-1, 2-2, 2-3	○	○		○
4-1, 4-2, 4-3	○	○		○
6-1, 6-2	○	○		○
1-1, 1-2	◀	◀	◀	◀

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

VIDEO DETECTOR CHART			
DESIGNATION	DETECTOR	MOUNT	LOCATION
V1-1, V1-2	V-1	POLE	35' & 5'
V4-3, V4-4	V-1	POLE	35' & 5'
V4-5, V4-6	V-1	POLE	35' & 5'

LOOP DETECTOR CHART			
NUMBER	SIZE (FT)	LOCATION	STATUS
D4-1, D4-2	1-6x6	AS SHOWN	INPLACE

-ALL LOOP DETECTORS SHALL BE PVC UNLESS NOTED OTHERWISE  
 -LOCATION: DISTANCE FROM CROSSWALK/STOP BAR IN FEET



- NOTES:
1. USE PVC OR HDPE FOR ALL NEW CONDUIT.
  2. ALL ITEMS DESIGNATED WITH AN \* ARE TO BE PAID FOR AS PART OF THIS CHANGE ORDER.
  3. ALL ITEMS ARE INPLACE UNLESS OTHERWISE NOTED.
  4. SEE TMS CONSTRUCTION PLANS FOR MORE INFORMATION ON THE FIBER INTERCONNECT SYSTEM.

NO.	DATE	BY	REVISION / SUBMITTAL	APP

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION OR REPORT 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.

*[Signature]*

DATE: 10/16/2020 MIN. LIC. NO. 52242

DESIGN BY: DSN  
 DRAWN BY: DSN  
 CHECK BY: NHV

TSP PLAN LAYOUT  
 TH 62 & PORTLAND AVE (CSAH 35)



STATION  
**PORTLAND AVE SOUTH**  
 TH 62 S RAMP & PORTLAND

SIGNAL ID: 1735515 T.E. 20103

S.A.P. 027-030-053  
 S.P. 027-605-030  
 S.A.P. 141-030-049  
 S.A.P. 107-399-033  
 S.P. 141-030-049

SHEET 416H OF 1735

7th and Oak Lake Ave  
 1:40:03 PM  
 D-Line PENTABLE FOR PRINTING

1

- INPLACE — PA85 POLE FOUNDATION
- INPLACE — TYPE PA85-A-15
- INPLACE — 1-ONE-WAY SIGNAL OVERHEAD (0' FROM END OF MAST ARM) HEAD (4-2)
- INPLACE — TYPE 10B POLE MOUNTED AT 90° HEAD (1-2)
- INPLACE — TYPE 10B POLE MOUNTED AT 180° HEAD (4-1)
- INPLACE — 2-C.D. PED INDS AT 90 AND 180 DEG
- INPLACE — ONE-WAY EVP DETECTOR AND CONFIRMATORY LIGHT (PHASE 4)
- \* INSTALL — 1-TSP ANTENNA
- \* INSTALL — 1-APS PB AND SIGN (LT ARROW) (PB2-1)
- \* INSTALL — 1-APS PB POLE MOUNT ADAPTER
- \* INSTALL — TYPE D SIGN
- INPLACE — 1-R6-1L SIGN (54"X18") POLE MOUNTED AT 0 DEG
- INPLACE — 1-R6-1R SIGN (54"X18") POLE MOUNTED AT 90 DEG
- INPLACE — 3" CONDUIT TO HH 10:
- INPLACE — 1-12/C 14
- INPLACE — 1-6/C 14
- INPLACE — 2-4/C 14
- INPLACE — 1-3/C 14
- INPLACE — 1-2/C 14
- INPLACE — 1-3/C 20
- INPLACE — 1-1/C 6 INS. GR.
- \*F&I — 1-TSP COAXIAL CABLE

2

- INPLACE — PA85 POLE FOUNDATION
- INPLACE — TYPE PA85-A-25-D40-9 (DAVIT AT 350°)
- INPLACE — 1-ONE-WAY SIGNAL OVERHEAD (0' FROM END OF MAST ARM) HEAD (1-1)
- INPLACE — 1-ONE-WAY SIGNAL OVERHEAD (11' FROM END OF MAST ARM) HEAD (6-2)
- INPLACE — TYPE 30A POLE MOUNTED AT 90°
- INPLACE — TYPE 10B POLE MOUNTED AT 180° HEAD (6-1)
- INPLACE — 2-C.D. PED INDS AT 90 AND 180 DEG
- INPLACE — ONE-WAY EVP DETECTOR AND CONFIRMATORY LIGHT (PHASES 1 & 6)
- INPLACE — 1-GRIDSMArt VIDEO DETECTION UNIT POLE MOUNTED (STATE FURNISHED)
- INPLACE — LUMINAIRE-250 WATT H.P.S.
- INPLACE — 1-APS PB AND SIGN (LT ARROW) (PB4-1)
- INPLACE — 1-APS PB POLE MOUNT ADAPTER
- INPLACE — TYPE D SIGN LEFT OF HEAD (6-2)
- INPLACE — 1-R10-X12 SIGN (36"X42") ADJACENT TO HEAD (1-1)
- INPLACE — 1-R3-8AC SIGN (54"X48") RIGHT OF HEAD (6-2)
- INPLACE — 3" CONDUIT TO HH 3:
- INPLACE — 1-12/C 14
- INPLACE — 1-6/C 14
- INPLACE — 2-4/C 14
- INPLACE — 1-3/C 14
- INPLACE — 1-3/C 14 (LUM)
- INPLACE — 1-2/C 14
- INPLACE — 1-3/C 20
- INPLACE — 1-ETHERNET CABLE (VIDEO)
- INPLACE — 1-1/C 6 INS. GR.

3

- INPLACE — PEDESTAL FOUNDATION
- INPLACE — 10' SIGNAL PEDESTAL POLE PLUS BASE
- INPLACE — TYPE 4C
- INPLACE — 1-C.D. PED IND
- INPLACE — 1-R9-3a FACING POLE 4
- INPLACE — EXTEND INTO HH 6:
- INPLACE — 3" RSC
- INPLACE — 1-3/C 12

4

- INPLACE — PA90 POLE FOUNDATION
- INPLACE — TYPE PA90-A-30
- INPLACE — 2-ONE-WAY SIGNALS OVERHEAD (0' AND 11' FROM END OF MASTARM) HEADS (2-2) (2-3)
- INPLACE — TYPE 10A POLE MOUNTED AT 90° HEAD (4-3)
- INPLACE — TYPE 10B POLE MOUNTED AT 180° HEAD (2-1)
- INPLACE — 1-C.D. PED IND AT 180 DEG
- INPLACE — ONE-WAY EVP DETECTOR AND CONFIRMATORY LIGHT (PHASE 2)
- INPLACE — TYPE D SIGN
- INPLACE — 1-R9-3a FACING POLE 3
- INPLACE — 1-TYPE D SIGN (42"X60") ADJACENT TO HEAD (6-3) (SEE PANEL DETAIL BELOW)
- INPLACE — 3" RSC TO HH 9:
- INPLACE — 2-12/C 12
- INPLACE — 1-3/C 12
- INPLACE — 1-3/C 20

A

- INPLACE — EQUIPMENT PAD CABINET
- REMOVE (BY OTHERS) — CONTROLLER
- INSTALL (BY OTHERS) — CONTROLLER & PATCH PANELS
- \* FURNISH — TSP CABINET EQUIPMENT
- INSTALL (BY OTHERS) — SIGNAL SERVICE CABINET
- INPLACE — 4" CONDUIT TO HH 1:
- INPLACE — 1-3/C 12
- INPLACE — 2-2/C 14
- INPLACE — 1-6PR 19
- INPLACE — 1-12/C 14
- INPLACE — 1-6/C 14
- INPLACE — 2-4/C 14
- INPLACE — 1-3/C 14
- INPLACE — 1-3/C 14 (LUM)
- INPLACE — 1-2/C 14
- INPLACE — 1-3/C 20
- INPLACE — 1-ETHERNET CABLE (VIDEO)
- INPLACE — 1-1/C 6 INS. GR.
- INPLACE — 3" NMC STUBOUT
- \*F&I — 1.5" NMC FROM PV1 (INTERNAL TO 3" NMC)
- \*F&I — 2-FO PIGTAILS (6SM)
- INPLACE — 2" RSC STUBBED OUT
- INPLACE — 3/4" PVC STUBBED OUT
- INPLACE — 2" RSC TO SERVICE CABINET
- INPLACE — 2-1/C 6
- INPLACE — 1-1/C 6 INS. GR.
- INPLACE — SERVICE CABINET TO HH 1:
- INPLACE — 2" RSC
- INPLACE — SERVICE CABINET TO HH11:
- INPLACE — 1-3/C 14 (LUM)

- INPLACE — 4" CONDUIT TO HH 10:
- INPLACE — 2-12/C 12
- INPLACE — 2-3/C 12
- INPLACE — 1-3/C 20
- INPLACE — 1-12/C 14
- INPLACE — 1-6/C 14
- INPLACE — 2-4/C 14
- INPLACE — 1-3/C 14
- INPLACE — 1-2/C 14
- INPLACE — 1-3/C 20
- \*F&I — 1-1/C INS. GR.
- \*F&I — 1-TSP COAXIAL CABLE

B

- INPLACE — SOURCE OF POWER
- INPLACE — 120/240V PEDESTAL (BY XCEL)
- INPLACE — 2" NMC TO SERVICE CABINET:
- INPLACE — 3-1/C 2

NOTES:

1. USE PVC OR HDPE FOR ALL NEW CONDUIT.
2. ALL ITEMS DESIGNATED WITH AN \* ARE TO BE PAID FOR AS PART OF THIS CHANGE ORDER.
3. ALL ITEMS ARE INPLACE UNLESS OTHERWISE NOTED.
4. SEE TMS CONSTRUCTION PLANS FOR MORE INFORMATION ON THE FIBER INTERCONNECT SYSTEM.

7th and Oak Lake Ave  
1-4211-60W  
D-Line RENTABLE FOR PRINTING

NO.	DATE	BY	REVISION / SUBMITTAL	APP

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION OR REPORT 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.

*[Signature]*

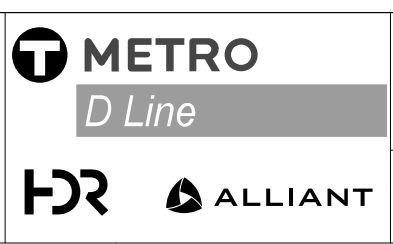
DATE: 10/16/2020 MIN. LIC. NO. 52242

DESIGN BY: DSN

DRAWN BY: DSN

CHECK BY: NHV

**TSP PLAN**  
**EQUIPMENT SCHEDULE**  
**TH 62 & PORTLAND AVE (CSAH 35)**



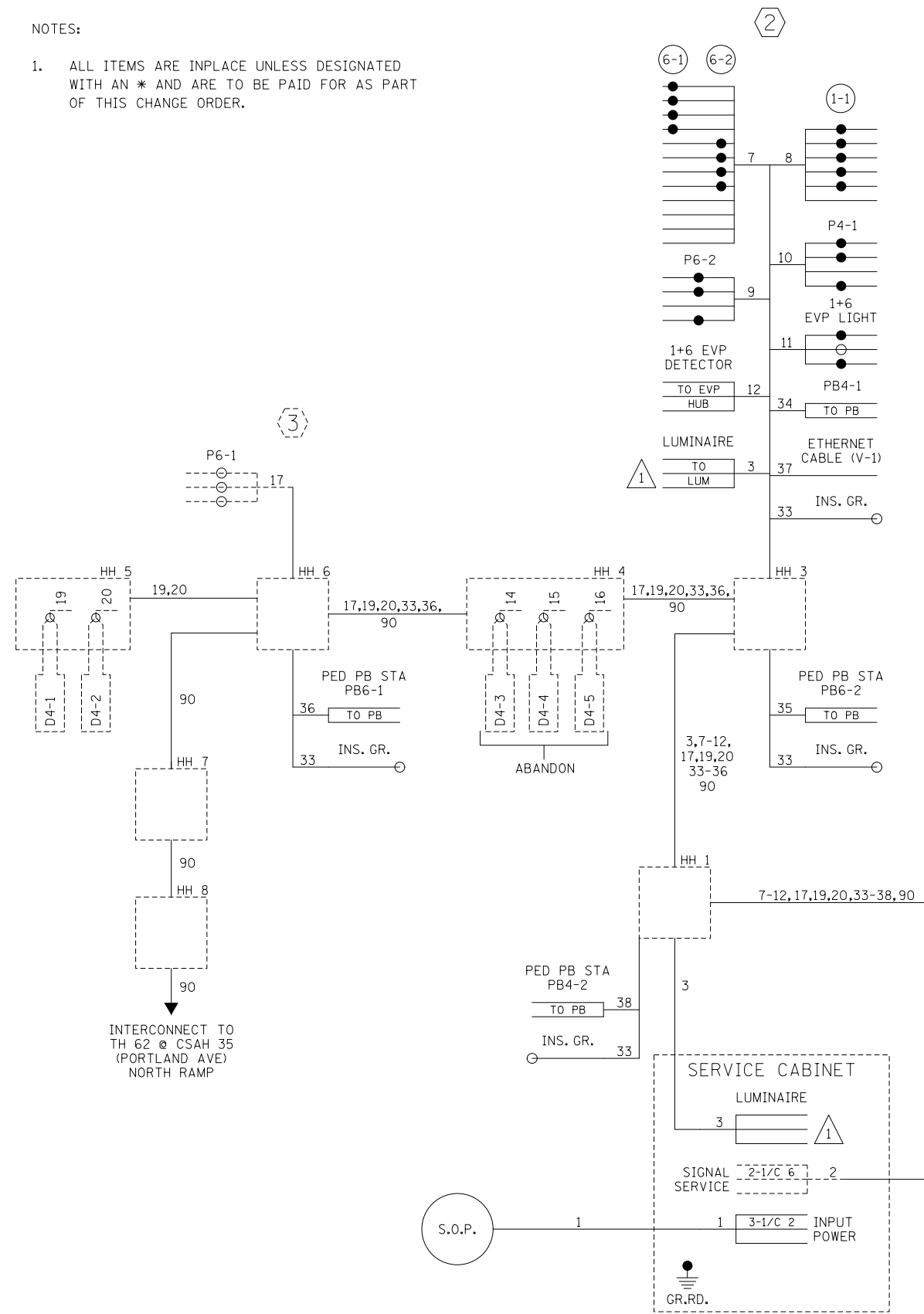
STATION  
**PORTLAND AVE SOUTH**  
TH 62 S RAMP & PORTLAND

SHEET OF  
**4161 1735**

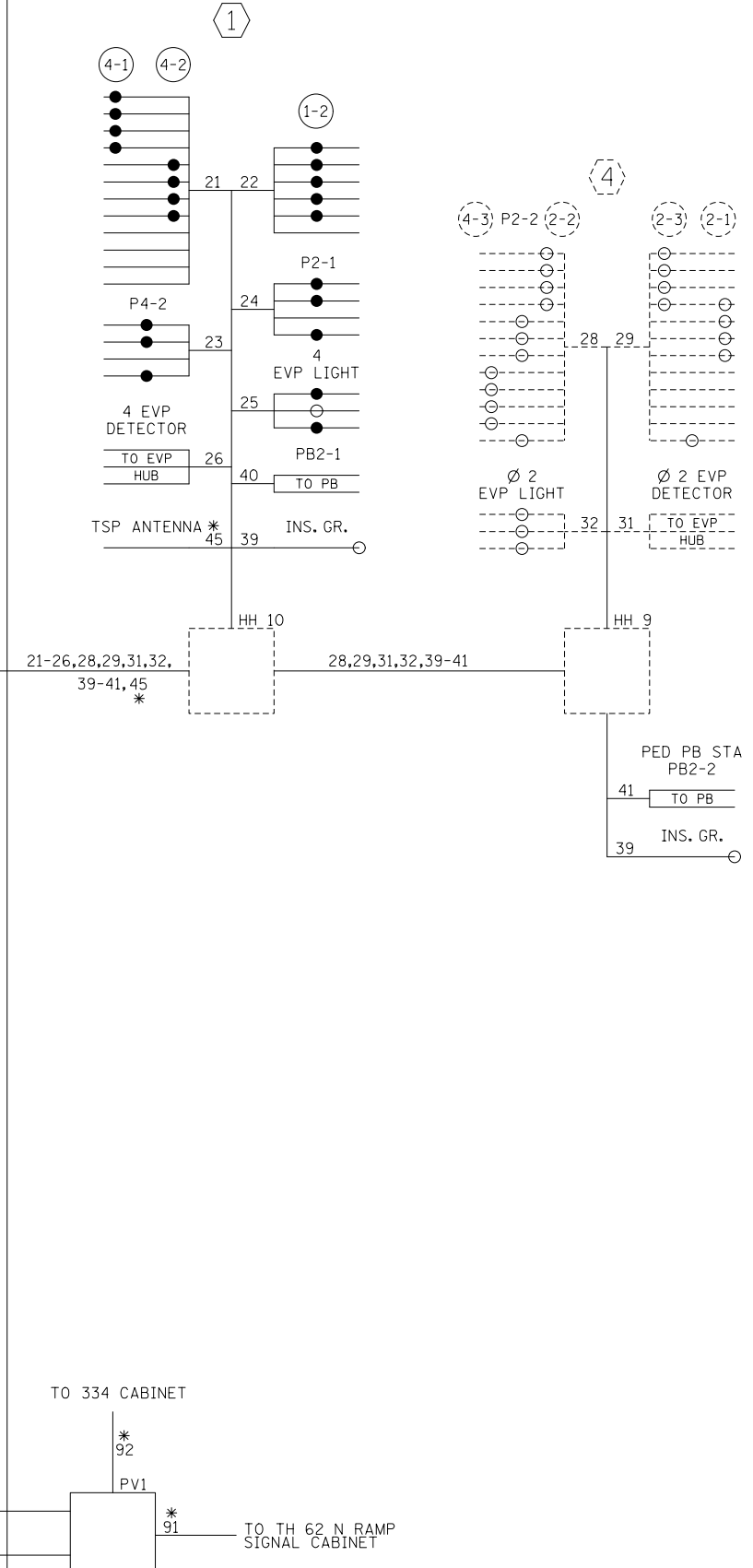
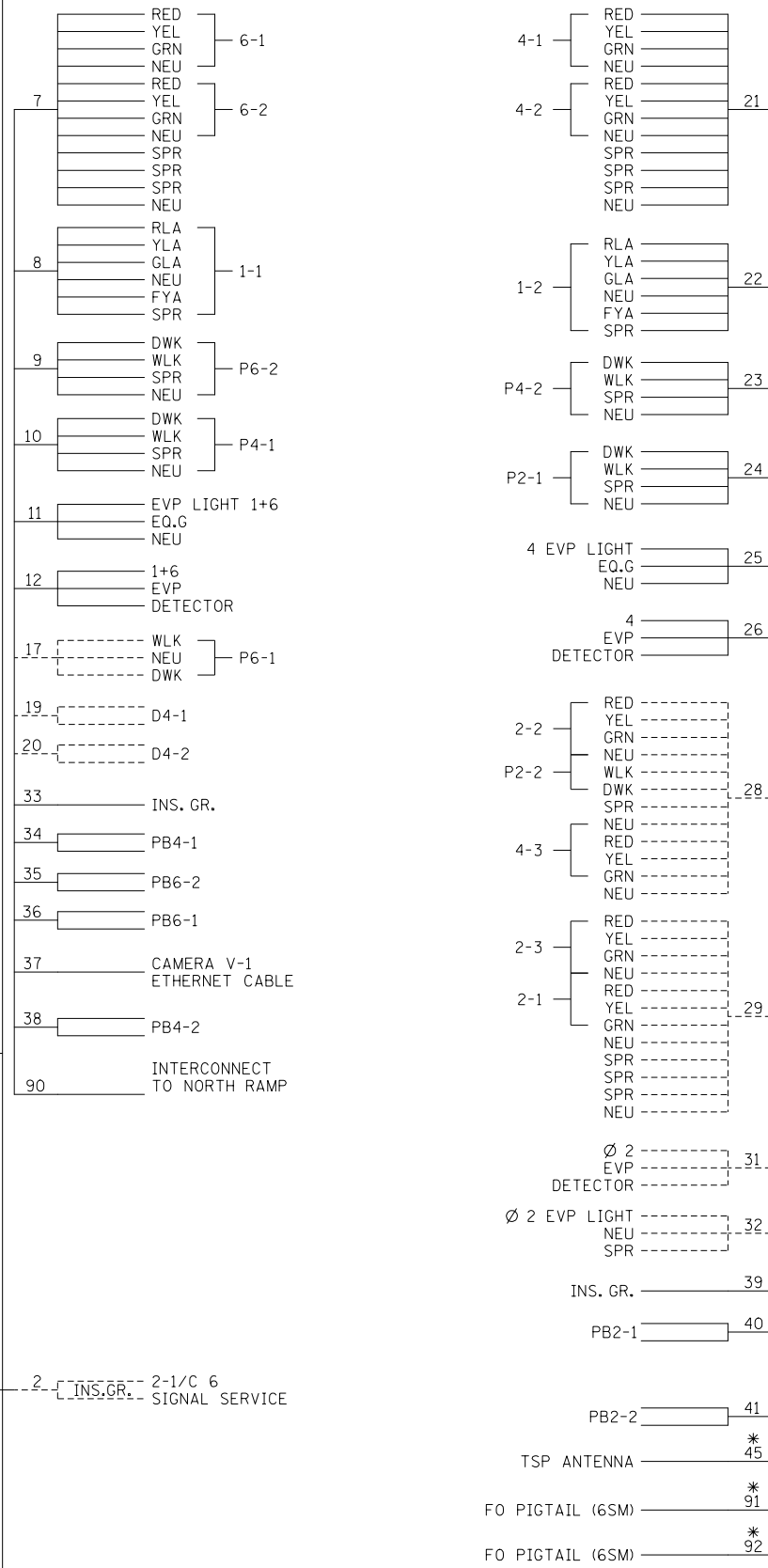
S.A.P. 027-030-053  
S.P. 027-605-030  
S.A.P. 141-030-049  
S.A.P. 107-399-033  
S.P. 141-030-049

NOTES:

1. ALL ITEMS ARE INPLACE UNLESS DESIGNATED WITH AN \* AND ARE TO BE PAID FOR AS PART OF THIS CHANGE ORDER.



CONTROLLER CABINET



NO.	DATE	BY	REVISION / SUBMITTAL	APP

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION OR REPORT 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.

*Rob...*

DATE: 10/16/2020 MIN. LIC. NO. 52242

DESIGN BY: DSN  
 DRAWN BY: DSN  
 CHECK BY: NHV

TSP PLAN  
 WIRING DIAGRAM  
 TH 62 & PORTLAND AVE (CSAH 35)



STATION  
**PORTLAND AVE SOUTH**  
 TH 62 S RAMP & PORTLAND

S.A.P. 027-030-053  
 S.P. 027-605-030  
 S.A.P. 141-030-049  
 S.A.P. 107-399-033  
 S.P. 141-030-049

SHEET OF  
**416J** OF **1735**

7th and Oak Lake Ave  
1:39:22 PM  
D-Line PENTABLE FOR PRINTING

NO.	DATE	BY	REVISION / SUBMITTAL	APP

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION OR REPORT 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.

*[Signature]*

DATE: 10/16/2020 MIN. LIC. NO. 52242

DESIGN BY:  
DSN  
DRAWN BY:  
DSN  
CHECK BY:  
NHV

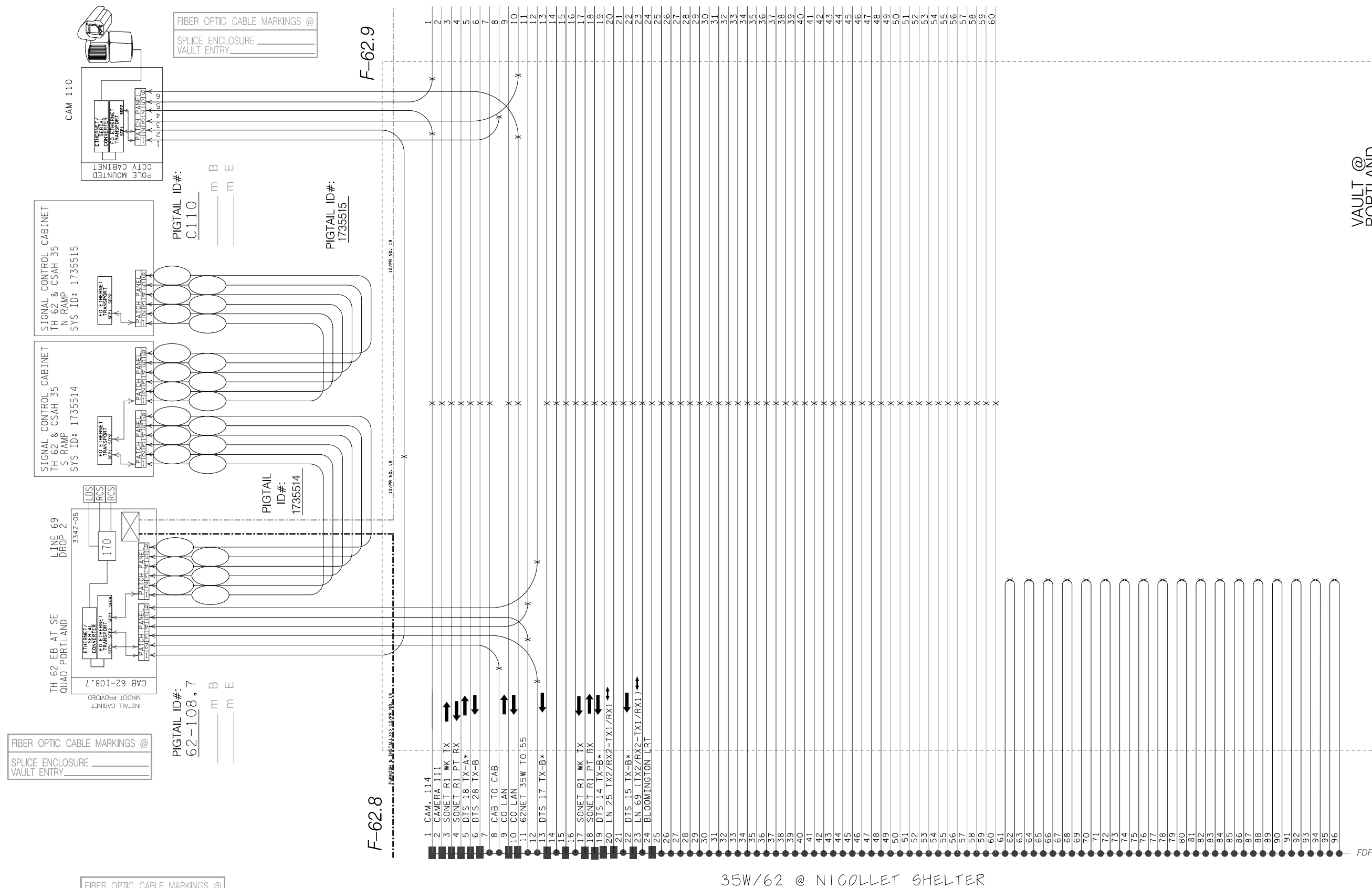
TMS CONSTRUCTION PLAN  
FIBER SCHEMATICS  
DETAILS



STATION  
**PORTLAND AVENUE SOUTH**  
TH 62 & PORTLAND

S.A.P. 027-030-053  
S.P. 027-605-030  
S.A.P. 141-030-049  
S.A.P. 107-399-033  
S.P. 141-030-049

SHEET OF  
**416G** OF **1735**



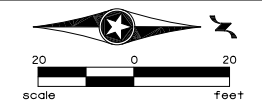
VAULT @  
PORTLAND

PLOTTED/REVISED: 22-FEB-2023

DISTRICT #: Metro  
PLOT NAME: T1735515.sgl  
PATH & FILENAME: Projects\DM\_FOS\0620000\Traffic\Signals\4197\_21084\_Portland\_S\_Ramp\_T1735515.sgl.dgn

LED SIGNAL INDICATIONS				
FACE	R	Y	FYA	G
1-1,1-2	←	←	←	←
2-1,2-2,2-3	●	●	●	●
4-1,4-2,4-3	●	●	●	●
6-1,6-2	●	●	●	●

-ALL VEHICLE SIGNAL INDICATIONS SHALL BE 12"  
-EACH SIGNAL FACE SHALL HAVE A BACKGROUND SHIELD



PVC DETECTOR CHART		
DESIGNATION	NO. & SIZE	LOCATION
D4-1,D4-2	1-6'X6'	120'

-LOCATION:  
DISTANCE FROM CROSSWALK IN FEET

VIDEO DETECTION				
NO.	CAMERA	LOCATION		PHASE
		POLE	MOUNT LOC.	
V-1	360 DEG.	2	LUM EXTENSION	ALL

**2** PA85 POLE FOUNDATION  
TYPE PA85-A-25-D40-9 (DAVIT AT 350°)  
2-ONE-WAY SIGNALS OVERHEAD (0' AND 11' FROM END OF MAST ARM)  
TYPE 30A POLE MOUNTED AT 90°  
TYPE 10B POLE MOUNTED AT 180°  
2-C.D. PED INDS AT 90 AND 180 DEG  
ONE-WAY EVP DETECTOR AND  
1-GRIDSMA RT VIDEO CAMERA  
LUMINAIRE-250 WATT H.P.S.  
1-APS PB & SIGN (PB4-1) (LT ARROW)  
TYPE D SIGN  
1-R10-12 SIGN (36"x48") ADJACENT TO HEAD 6-3  
EXTEND INTO HH-3:  
3" CONDUIT  
1-12/C 14  
1-6/C 14  
2-4/C 14  
1-3/C 14  
1-3/C 14 (LUM)  
1-2/C 14  
1-3/C 20  
1-ETHERNET CABLE  
1-1/C 6

1-PED PUSH BUTTON STA  
1-APS PB & SIGN (PB6-2) (RT ARROW)  
1 1/4" PVC TO HH 4:  
1-2/C #14  
1-1/C 6 INS GR

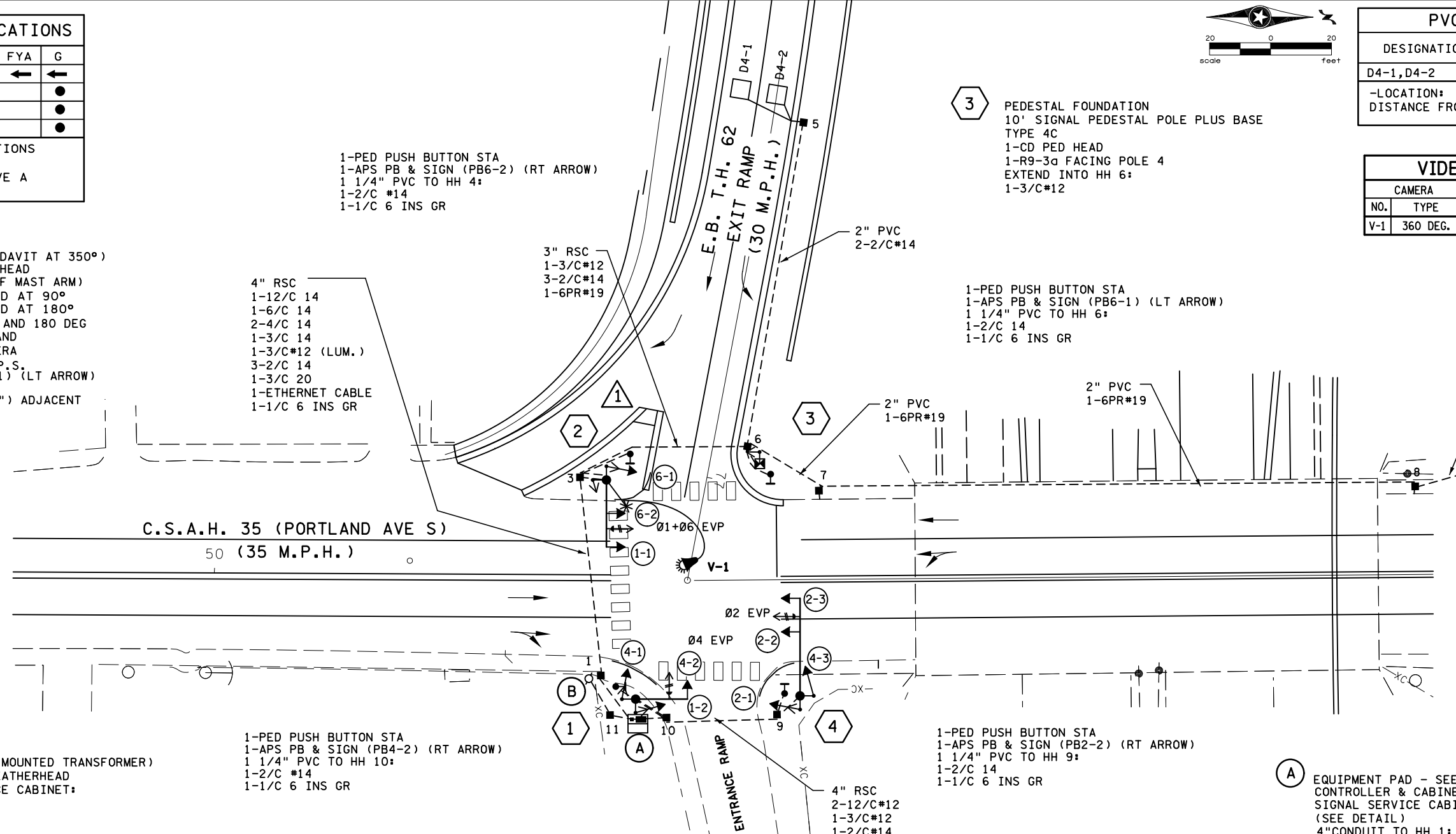
4" RSC  
1-12/C 14  
1-6/C 14  
2-4/C 14  
1-3/C 14  
1-3/C 14 (LUM.)  
3-2/C 14  
1-3/C 20  
1-ETHERNET CABLE  
1-1/C 6 INS GR

3" RSC  
1-3/C#12  
3-2/C#14  
1-6PR#19

**3** PEDESTAL FOUNDATION  
10' SIGNAL PEDESTAL POLE PLUS BASE  
TYPE 4C  
1-CD PED HEAD  
1-R9-3a FACING POLE 4  
EXTEND INTO HH 6:  
1-2/C 14  
1-1/C 6 INS GR

1-PED PUSH BUTTON STA  
1-APS PB & SIGN (PB6-1) (LT ARROW)  
1 1/4" PVC TO HH 6:  
1-2/C 14  
1-1/C 6 INS GR

2" PVC  
1-6PR#19  
INTERCONNECT TO  
T.H. 62 @ CSAH 35  
(PORTLAND AVE) N RAMP



**B** SOURCE OF POWER  
BY XCEL ENERGY  
(EXISTING WOOD POLE MOUNTED TRANSFORMER)  
2" RSC RISER WITH WEATHERHEAD  
AND 2" NMC TO SERVICE CABINET:  
3-1/C#2

1-PED PUSH BUTTON STA  
1-APS PB & SIGN (PB4-2) (RT ARROW)  
1 1/4" PVC TO HH 10:  
1-2/C #14  
1-1/C 6 INS GR

1-PED PUSH BUTTON STA  
1-APS PB & SIGN (PB2-2) (RT ARROW)  
1 1/4" PVC TO HH 9:  
1-2/C 14  
1-1/C 6 INS GR

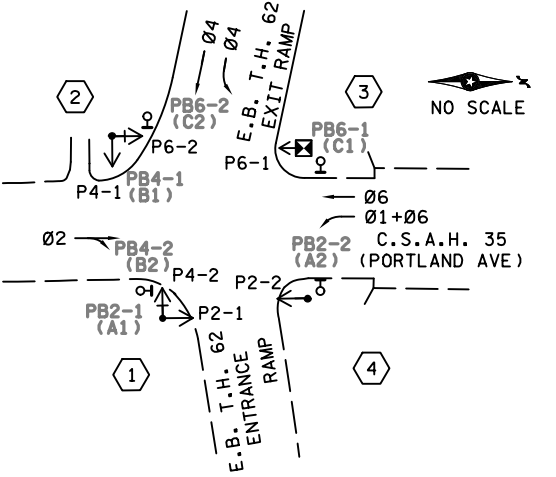
**A** EQUIPMENT PAD - SEE DETAIL  
CONTROLLER & CABINET  
SIGNAL SERVICE CABINET  
(SEE DETAIL)  
4"CONDUIT TO HH 1: 4"CONDUIT TO HH 10:  
1-12/C#14 1-12/C#14  
1-6/C#14 1-6/C#14  
2-4/C#14 2-4/C#14  
1-3/C#14 1-3/C#14  
1-3/C#14 (LUM) 1-2/C#14  
1-2/C#14 1-3/C#20  
1-3/C#20 1-1/C#6 INS GR  
1-ETHERNET CABLE  
1-1/C#6 INS GR  
2" & 3" RSC STUBBED OUT (THREADED AND CAPPED BOTH ENDS)  
3/4" PVC STUBBED OUT  
2" RSC TO SERVICE CABINET  
2-1/C#6  
1-1/C#6 INS.GR.  
SERVICE CABINET TO HH-1 WITH:  
2" RSC  
1-3/C#14 (LUM.)  
SERVICE CABINET TO SOP (VIA HH-11) WITH:  
2" CONDUIT  
3-1/C#2

**1** PA85 POLE FOUNDATION  
TYPE PA85-A-15  
1-ONE-WAY SIGNAL OVERHEAD (0' FROM END OF MAST ARM)  
TYPE 10B POLE MOUNTED AT 90°  
TYPE 10B POLE MOUNTED AT 180°  
2-C.D. PED INDS AT 90 AND 180 DEG  
ONE-WAY EVP DETECTOR AND  
CONFIRMATORY LIGHT (PHASE 4)  
1-APS PB & SIGN (PB2-1) (LT ARROW)  
TYPE D SIGN  
EXTEND INTO HH-10:  
3" RSC  
1-12/C#14  
1-6/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" RSC  
2-12/C#12  
1-3/C#12  
1-2/C#14  
1-3/C#20  
1-COAXIAL CABLE

**4** PA90 POLE FOUNDATION  
TYPE PA90-A-30  
2-ONE-WAY SIGNALS OVERHEAD (0' AND 11' FROM END OF MAST ARM)  
TYPE 10A POLE MOUNTED AT 90  
TYPE 10B POLE MOUNTED AT 180  
1-C.D. PED IND AT 180 DEG  
ONE-WAY EVP DETECTOR AND  
CONFIRMATORY LIGHT (PHASE 2)  
1-R9-3a FACING POLE 3  
TYPE D SIGN  
EXTEND INTO HH-9:  
3" RSC  
2-12/C#12  
1-3/C#12  
1-3/C#14  
1-3-C#20  
1-COAXIAL CABLE

**CONTROLLER PHASING, PEDESTRIAN INDICATIONS & PUSHBUTTON LAYOUT**



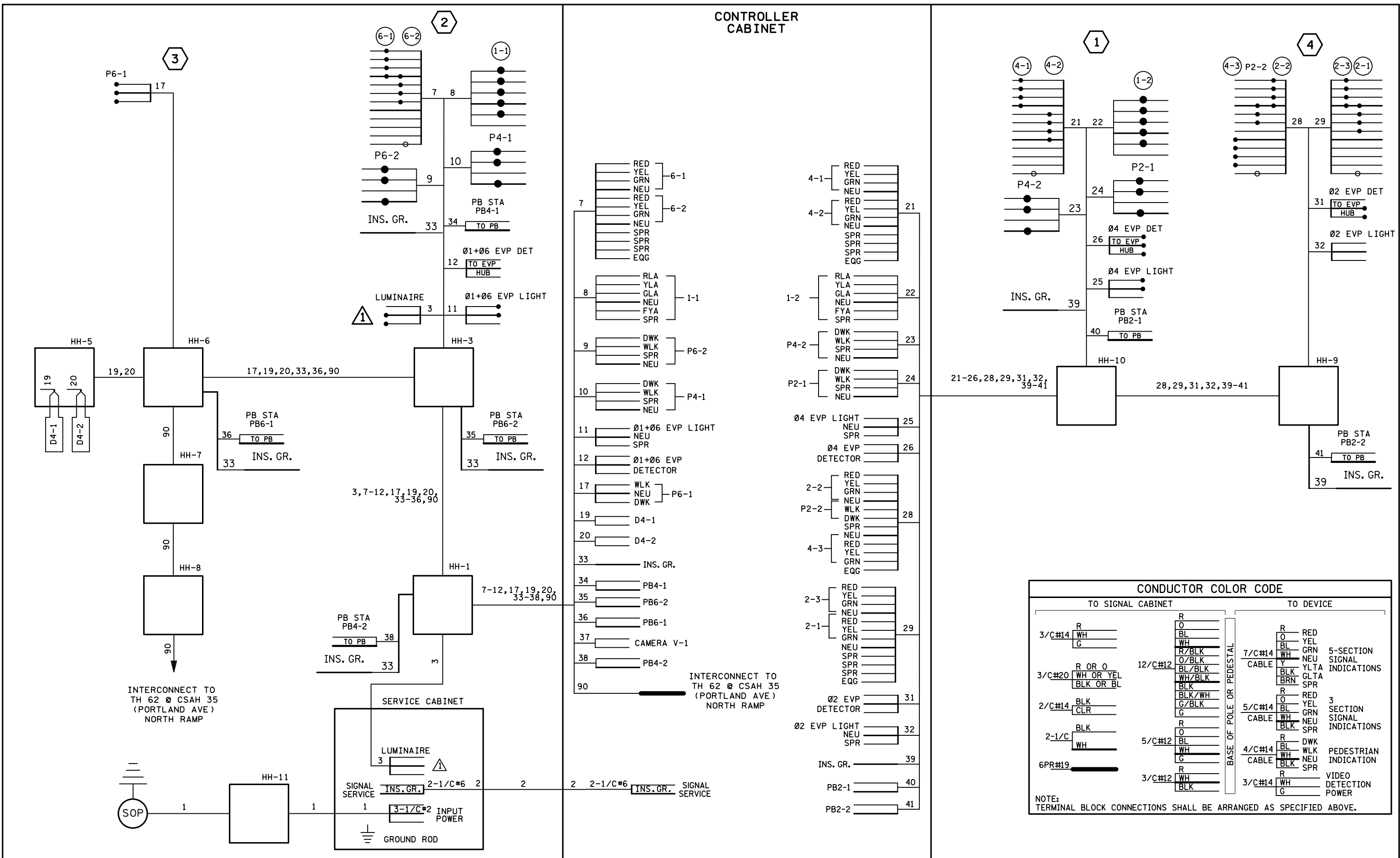
SIGNAL OPERATION NOTES	
-	NORMAL OPERATION IS 4 PHASE
-	Ø1 SHALL BE FLASHING YELLOW ARROWS BY TIME OF DAY
-	Ø2 & Ø6 SHALL BE ON VEHICLE RECALL
-	FLASH MODE SHALL BE ALL RED

BY	DATE	REVISIONS	SYSTEM ID: 1735515	T.E.	S.A.P. NO.	DRAWN BY: MAS	CKD BY: MPG	DATE: 5-24-12
SJK	2/21/23	AS-BUILT PLAN SP 2775-30	METER ADDRESS: 6205 PORTLAND AVE S		CERTIFIED BY _____	LICENSED PROFESSIONAL ENGINEER	LIC. NO. 19863	DATE: 5-31-12
			MASTER ID: T.E.		STATE PROJ.NO.	SHEET NO. 1 OF 2 SHEETS		

**SIGNAL LAYOUT**  
**TRAFFIC CONTROL SIGNAL SYSTEM**  
**TH 62 @ CSAH 35 (PORTLAND AVE) S RAMP**  
**IN RICHFIELD, HENNEPIN COUNTY**

PLOTTED/REVISED: 22-FEB-2023

DISTRICT #: Metro  
 PLOT NAME: T1735515.sgl  
 PATH & FILENAME: Projects\DM\_POS\062\0000\Traffic\Signals\4197\_21084\_Portland\_S\_Ramp\_T1735515.sgl.dgn



BY	DATE	REVISIONS	SYSTEM ID: 1735515	T.E.	S.A.P. NO.	DRAWN BY: MAS	CKD BY: MPG	DATE: 5-24-12
SJK	2/21/23	AS-BUILT PLAN SP 2775-30	METER ADDRESS: 6205 PORTLAND AVE S		CERTIFIED BY _____	LICENSED PROFESSIONAL ENGINEER	LIC. NO. 19863	DATE: 5-31-12
			MASTER ID: _____	T.E.	STATE PROJ. NO. SP 2775-30		SHEET NO. 2 OF 2 SHEETS	

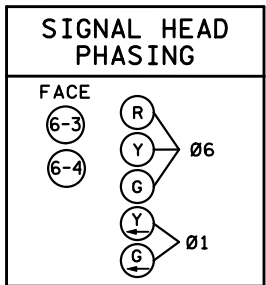
**WIRING DIAGRAM  
 TRAFFIC CONTROL SIGNAL SYSTEM  
 TH 62 @ CSAH 35 (PORTLAND AVE) S RAMP  
 IN RICHFIELD, HENNEPIN COUNTY**

PLOTTED/REVISED: 8/2/2013

DISTRICT #: METRO  
IPLOT NAME: INTERSECTION  
PATH & FILENAME: IP\_PWP-d0781046\T21084\_sgl.dgn

LED SIGNAL INDICATIONS						
FACE	R	Y	G	R	Y	G
2-1,2-2,2-3	●	●	●			
4-1,4-2,4-3	●	●	●			
6-1,6-2	●	●	●			
6-3,6-4	●	●	●	←	←	

-ALL VEHICLE SIGNAL INDICATIONS SHALL BE 12"  
-EACH SIGNAL FACE SHALL HAVE A BACKGROUND SHIELD



PVC DETECTOR CHART		
DESIGNATION	NO. & SIZE	LOCATION
D4-1,D4-2	1-6'X6'	120'
D4-3	2-6'X6'	5',20'
D4-4	1-6'X6'	40'
D4-5	1-6'X6'	10'

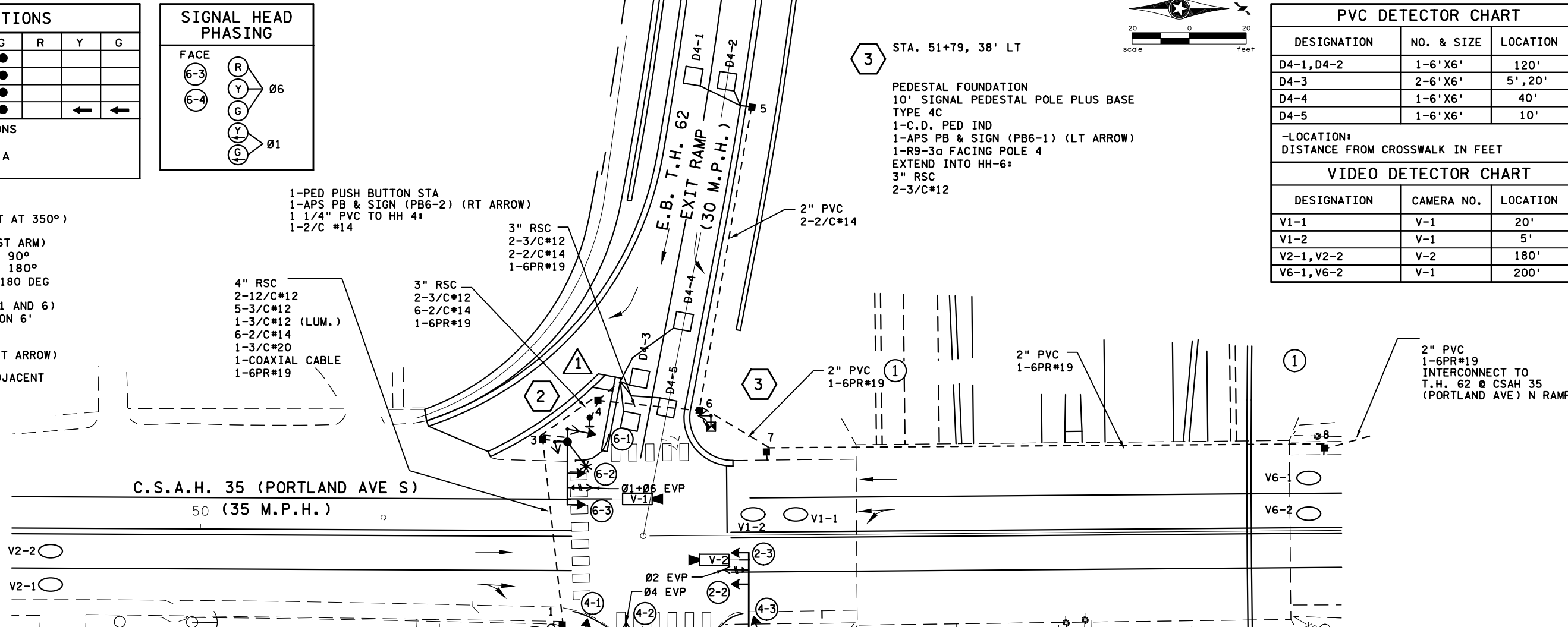
-LOCATION: DISTANCE FROM CROSSWALK IN FEET

VIDEO DETECTOR CHART		
DESIGNATION	CAMERA NO.	LOCATION
V1-1	V-1	20'
V1-2	V-1	5'
V2-1,V2-2	V-2	180'
V6-1,V6-2	V-1	200'

2 STA. 51+29, 33' LT  
PA85 POLE FOUNDATION  
TYPE PA85-A-25-D40-9 (DAVIT AT 350°)  
2-ONE-WAY SIGNALS OVERHEAD (0' AND 11' FROM END OF MAST ARM)  
TYPE 10A POLE MOUNTED AT 90°  
TYPE 10B POLE MOUNTED AT 180°  
2-C.D. PED INDS AT 90 AND 180 DEG  
ONE-WAY EVP DETECTOR AND CONFIRMATORY LIGHT (PHASE 1 AND 6)  
1-VIDEO DETECTION MOUNTED ON 6' EXTENSION ON MAST ARM  
LUMINAIRE-250 WATT H.P.S.  
1-APS PB & SIGN (PB4-1) (LT ARROW)  
TYPE D SIGN  
1-R10-12 SIGN (36"x48") ADJACENT TO HEAD 6-3  
EXTEND INTO HH-3:  
3" RSC  
2-12/C#12  
2-3/C#12  
1-3/C#14  
1-3/C#12 (LUM.)  
1-3/C#20  
1-COAXIAL CABLE

1-PED PUSH BUTTON STA  
1-APS PB & SIGN (PB6-2) (RT ARROW)  
1 1/4" PVC TO HH 4:  
1-2/C #14

3 STA. 51+79, 38' LT  
PEDESTAL FOUNDATION  
10' SIGNAL PEDESTAL POLE PLUS BASE TYPE 4C  
1-C.D. PED IND  
1-APS PB & SIGN (PB6-1) (LT ARROW)  
1-R9-3a FACING POLE 4  
EXTEND INTO HH-6:  
3" RSC  
2-3/C#12



1-PED PUSH BUTTON STA  
1-APS PB & SIGN (PB4-2) (RT ARROW)  
1 1/4" PVC TO HH 10:  
1-2/C #14

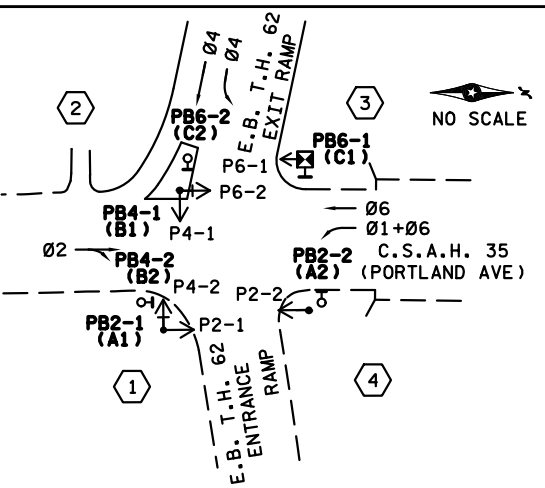
1 STA. 51+38, 39' RT  
PA85 POLE FOUNDATION  
TYPE PA85-A-15  
1-ONE-WAY SIGNAL OVERHEAD (0' FROM END OF MAST ARM)  
TYPE 10B POLE MOUNTED AT 90°  
TYPE 10B POLE MOUNTED AT 180°  
2-C.D. PED INDS AT 90 AND 180 DEG  
ONE-WAY EVP DETECTOR AND CONFIRMATORY LIGHT (PHASE 4)  
1-APS PB & SIGN (PB2-1) (LT ARROW)  
TYPE D SIGN  
EXTEND INTO HH-10:  
3" RSC  
2-12/C#12  
4-3/C#12  
1-3/C#20

A STA. 51+39, 47' RT  
EQUIPMENT PAD - SEE DETAIL  
CONTROLLER & CABINET  
SIGNAL SERVICE CABINET (SEE DETAIL)  
EXTEND 4" RSC INTO HH-1 WITH:  
2-12/C#12  
4-3/C#12  
1-3/C#14  
1-3/C#20  
7-2/C#14  
1-COAXIAL CABLE  
1-6PR#19  
EXTEND 4" RSC INTO HH-10 WITH:  
4-12/C#12  
6-3/C#12  
1-3/C#14  
2-3/C#20  
1-COAXIAL CABLE  
2" & 3" RSC STUBBED OUT (THREADED AND CAPPED BOTH ENDS)  
3/4" PVC STUBBED OUT  
2" RSC TO SERVICE CABINET  
2-1/C#6  
1-1/C#6 INS.GR.  
SERVICE CABINET TO HH-1 WITH:  
2" RSC  
1-3/C#12 (LUM.)  
SERVICE CABINET TO SOP (VIA HH-11) WITH:  
2" RSC  
3-1/C#2

4 STA. 51+92, 38' RT  
PA90 POLE FOUNDATION  
TYPE PA90-A-30  
2-ONE-WAY SIGNALS OVERHEAD (0' AND 11' FROM END OF MAST ARM)  
TYPE 10A POLE MOUNTED AT 90°  
TYPE 10B POLE MOUNTED AT 180°  
1-C.D. PED IND AT 180 DEG  
ONE-WAY EVP DETECTOR AND CONFIRMATORY LIGHT (PHASE 2)  
1-VIDEO DETECTION MOUNTED ON 6' EXTENSION ON MAST ARM  
1-R9-3a FACING POLE 3  
TYPE D SIGN  
EXTEND INTO HH-9:  
3" RSC  
2-12/C#12  
1-3/C#12  
1-3/C#14  
1-3-C#20  
1-COAXIAL CABLE

1-PED PUSH BUTTON STA  
1-APS PB & SIGN (PB2-2) (RT ARROW)  
1 1/4" PVC TO HH 9:  
1-3/C #12

CONTROLLER PHASING, PEDESTRIAN INDICATIONS & PUSHBUTTON LAYOUT



B SOURCE OF POWER  
BY XCEL ENERGY  
(EXISTING WOOD POLE MOUNTED TRANSFORMER)  
2" RSC RISER WITH WEATHERHEAD  
AND 2" RSC TO HH-11 WITH:  
3-1/C#2

SIGNAL OPERATION NOTES	
-	NORMAL OPERATION IS 4 PHASE
-	FLASH MODE SHALL BE ALL RED
-	Ø1 SHALL BE PROTECTED/PERMISSIVE LEFT TURN
-	Ø2 & Ø6 SHALL BE ON VEHICLE RECALL

BY	DATE	REVISIONS
SJK	11-21-11	AS-BUILT PLAN
EJA	01-24-12	CORRECTED SPELLING ERRORS, AND PB CORRECTIONS
EJA	08-02-13	AS-BUILT OF SP 8825-356 (APS)

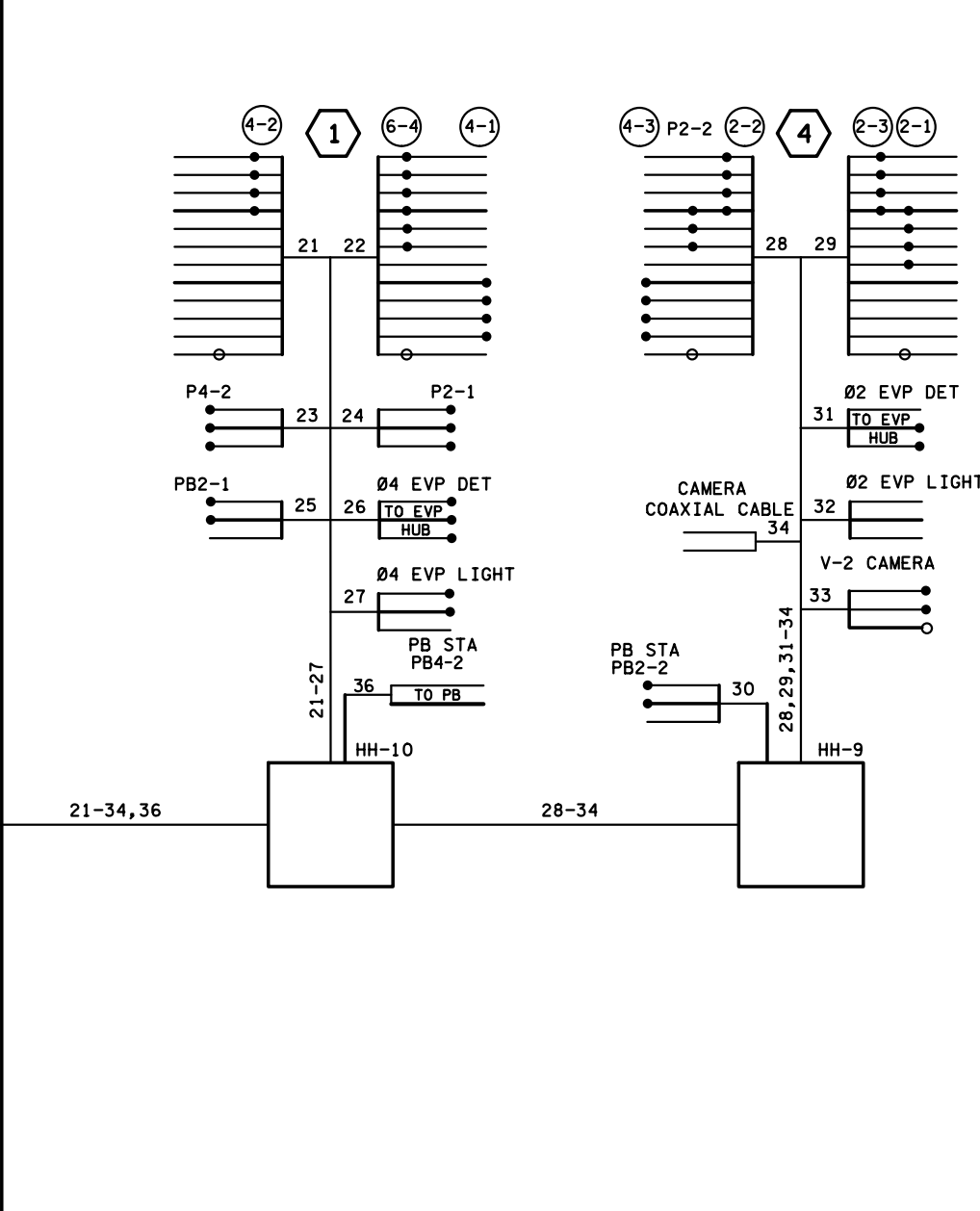
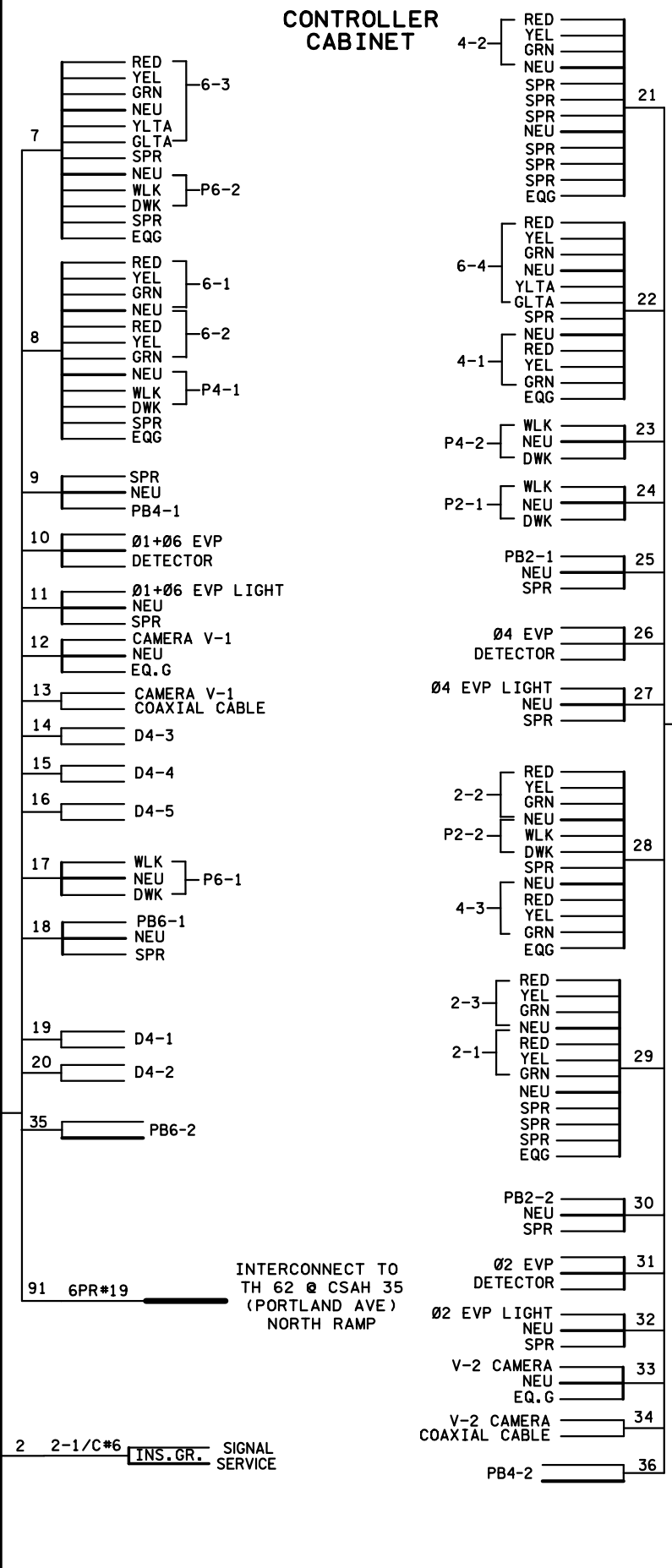
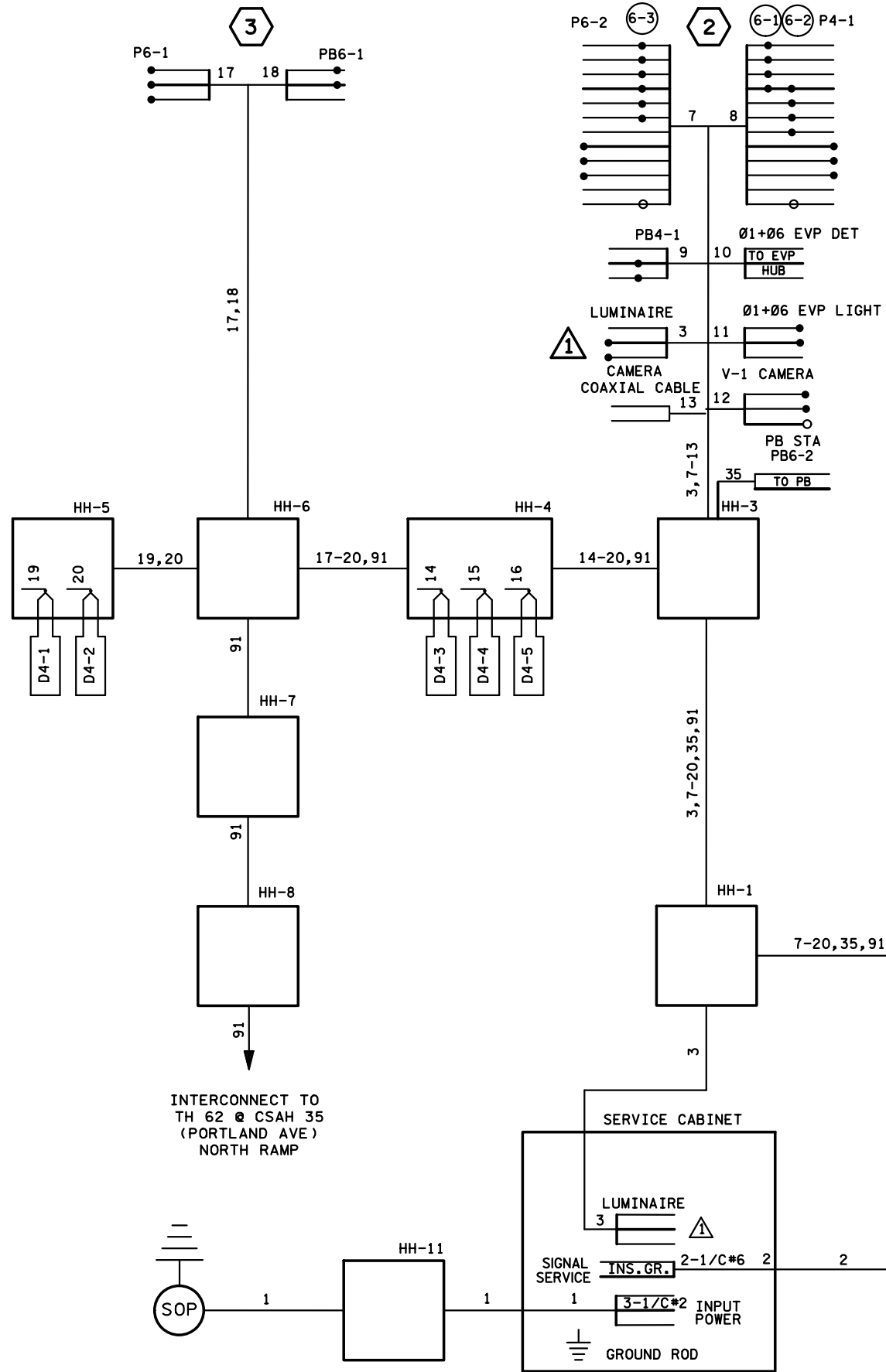
SYSTEM ID: 21084	T.E. 5634
METER ADDRESS: 6205 PORTLAND AVE S	
MASTER ID: 22455	T.E.

SIGNAL LAYOUT  
TRAFFIC CONTROL SIGNAL SYSTEM  
TH 62 @ CSAH 35 (PORTLAND AVE) S RAMP  
IN RICHFIELD, HENNEPIN COUNTY

S.A.P. NO.	DRAWN BY: MAS	CKD BY: MPG	DATE: 5-24-12
CERTIFIED BY: <i>Michael P. Subrany</i>	LIC. NO. 19863	DATE: 5-31-12	
STATE PROJ. NO.	SHEET NO. 1 OF 2 SHEETS		

PLOTTED/REVISED: 8/2/2013

DISTRICT #: METRO  
 IPLOT NAME: WIRING  
 PATH & FILENAME: IP\_PWP-d0781046\T21084\_sgl.dgn



#### CONDUCTOR COLOR CODE

TO SIGNAL CABINET		TO DEVICE	
3/C#14	R WH G	R O BL WH R/BLK O/BLK BL/BLK WH/BLK BLK BLK/WH G/BLK G	R O YEL GRN NEU YLTA GLTA SPR
3/C#20	R OR O WH OR YEL BLK OR BL	BLK BLK/WH G/BLK G	R O YEL GRN NEU SPR
2/C#14	BLK CLR	R O BL WH G	R O YEL GRN NEU SPR
2-1/C	BLK WH	R O BL WH G	R O YEL GRN NEU SPR
6PR#19		R WH BLK	R O YEL GRN NEU SPR

BASE OF POLE OR PEDESTAL

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

BY	DATE	REVISIONS
SJK	11-21-11	AS-BUILT PLAN
EJA	01-24-12	CORRECTED SPELLING ERRORS, AND PB CORRECTIONS
EJA	08-02-13	AS-BUILT OF SP 8825-356 (APS)

SYSTEM ID: 21084 T.E. 5634  
 METER ADDRESS: 6205 PORTLAND AVE S  
 MASTER ID: 22455 T.E.

### WIRING DIAGRAM

#### TRAFFIC CONTROL SIGNAL SYSTEM

#### TH 62 @ CSAH 35 (PORTLAND AVE) S RAMP

#### IN RICHFIELD, HENNEPIN COUNTY

S.A.P. NO. \_\_\_\_\_  
 CERTIFIED BY *Michael P. Lubinsky* L.C. NO. 19863 DATE: 5-31-12  
 LICENSED PROFESSIONAL ENGINEER  
 STATE PROJ. NO. \_\_\_\_\_  
 DRAWN BY: MAS CKD BY: MPG DATE: 5-24-12  
 SHEET NO. 2 OF 2 SHEETS