PLOTTED/REVISED: 10-DEC-2025
PLOTTED/REVISED: 10-DEC-2025

PLOT NAME: sample plan 10282025
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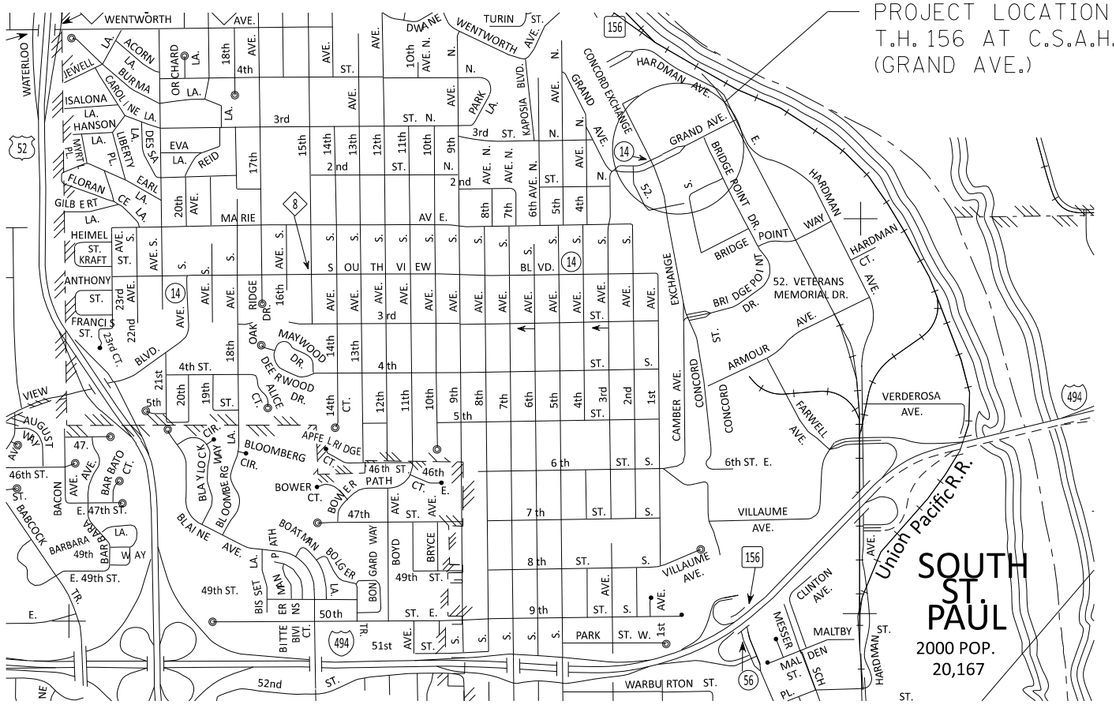
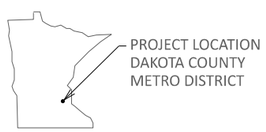
MINNESOTA DEPARTMENT OF TRANSPORTATION

CONSTRUCTION PLAN FOR TRAFFIC CONTROL SIGNAL SYSTEMS, INTERCONNECT AND ADA IMPROVEMENTS

LOCATED AT: T.H. 156 AT C.S.A.H. 14 (GRAND AVE.)





INDEX MAP

2000
SCALE IN FEET

PLAN REVISIONS		
DATE	SHEET NO.	APPROVED BY

STATE PROJECT NO.	CHARGE IDENTIFIER
XXXX-XX	

SYSTEM ID: XXXX T.E. 1234
METER ADDRESS: 9999 GRAND AVE

FED. PROJ. NO. STATE FUNDS

GOVERNING SPECIFICATIONS

THE 2025 EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR CONSTRUCTION" SHALL GOVERN.

ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE MN MUTCD, INCLUDING FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS.

INDEX

1	TITLE SHEET
2	STATEMENT OF ESTIMATED QUANTITIES
3-6	DETAIL SHEETS
7	INTERSECTION LAYOUT
8	MATCH LINE LAYOUT/INTERSECTION NOTES
9-10	FIELD WIRING DIAGRAMS
11	PAVEMENT MARKINGS & SIGNS
12	PEDESTRIAN CURB RAMP DETAIL
13	UTILITIES LAYOUT

THIS PLAN CONTAINS 13 SHEETS

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.

TYPED NAME _____ LIC. NO. XXXXX DATE: _____

DESIGN SQUAD XXXXX

APPROVED _____

RECOMMENDED FOR APPROVAL _____ DATE: _____
CITY OF ENGINEER

RECOMMENDED FOR APPROVAL _____ DATE: _____
COUNTY ENGINEER

OFFICE OF LAND MANAGEMENT APPROVAL _____ DATE: _____
DIRECTOR, LAND MANAGEMENT

APPROVED _____ DATE: _____
STATE DESIGN ENGINEER

_____ DATE: _____
DISTRICT STATE AID ENGINEER: REVIEWED FOR COMPLIANCE WITH STATE AID RULES/POLICY

_____ DATE: _____
APPROVED FOR STATE AID FUNDING: STATE AID ENGINEER

TITLE SHEET T.H. 156 AT C.S.A.H. 14 (GRAND AVE.)	STATE PROJ. NO. 9999-99	SHEET NO.	1
	T.H. 156 - XX	TOTAL SHEETS	13

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STATEMENT OF ESTIMATED QUANTITIES

ITEM NO.	DESCRIPTION	UNIT	TOTAL ESTIMATED QUANTITIES
2021.501	MOBILIZATION	LUMP SUM	
2104.501	REMOVE CURB AND GUTTER	LIN FT	
2104.503	REMOVE CONCRETE WALK	SQ FT	
2104.603	REMOVE AND REPLACE BITUMINOUS PAVEMENT	LIN FT	
2232.603	MILL AND PATCH BITUMINOUS PAVEMENT	LIN FT	
2521.618	CONCRETE WALK	SQ FT	
2531.603	CONCRETE CURB AND GUTTER	LIN FT	
2531.511	CONCRETE CURB DESIGN V	LIN FT	
2531.618	TRUNCATED DOMES	SQ FT	
2563.601	TRAFFIC CONTROL	LUMP SUM	
2565.511	TRAFFIC CONTROL SIGNAL SYSTEM	SIG SYS	
2565.601	EMERGENCY VEHICLE PREEMPTION SYSTEM	LUMP SUM	
2565.601	TRAFFIC CONTROL INTERCONNECTION	LUMP SUM	

THE FOLLOWING STANDARD PLATES APPROVED BY THE MINNESOTA DEPARTMENT OF TRANSPORTATION AND THE FEDERAL HIGHWAY ADMINISTRATION SHALL APPLY ON THIS PROJECT.

STANDARD PLATES

PLATE NO.	DESCRIPTION
7113A	CONCRETE APPROACH NOSE DETAIL
8124A	POLE AND MAST ARM TYPE TS FOR MAST ARM LENGTHS 15' TO 55'
8127E	LIGHTING FOUNDATION
8129A	SHIM AND WASHER

THE FOLLOWING STANDARD PLANS APPROVED BY THE MINNESOTA DEPARTMENT OF TRANSPORTATION AND THE FEDERAL HIGHWAY ADMINISTRATION SHALL APPLY ON THIS PROJECT.

STANDARD PLANS

PLAN NO.	DESCRIPTION
5-297.250	STANDARD PLANS PEDESTRIAN CURB RAMP DETAILS
5-297.730	SIGNING MOUNTING SYSTEMS FOR ROUND SUPPORTS
5-297.731	SIGN MOUNTING DETAILS FOR SIGNAL MAST ARMS
5-297.869	350 ATCC AND SSB CABINET EQUIPMENT PAD
5-297.885	ACCESSIBLE PEDESTRIAN SIGNAL (APS)) PUSHBUTTON STATION AND LOCATION
5-297.861	POLE FOUNDATION TYPE TS
5-297.874	PREFORMED RIGID PVC CONDUIT LOOP DETECTOR
5-297.873	SAW CUT LOOP DETECTORS

FUNDING NOTE

A. STATE 50%
B. COUNTY 25%
C. CITY 25%

DEPARTMENT OF TRANSPORTATION

SYSTEM ID: XXXX T.E. 1234
METER ADDRESS: 9999 GRAND AVE

LICENSED PROFESSIONAL ENGINEER

Will D. Zine
LIC. NO. 999666
DATE: 10-DEC-2025

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.

TITLE SHEET (PAGE 2)
T.H. 156 AT C.S.A.H. 14 (GRAND AVE.)
IN SOUTH ST. PAUL, DAKOTA COUNTY

STATE PROJ. NO. 9999-99
TH.H 156

SHEET NO. 2
TOTAL SHEETS 13

PLOTTED/REVISED: 10-DEC-2025

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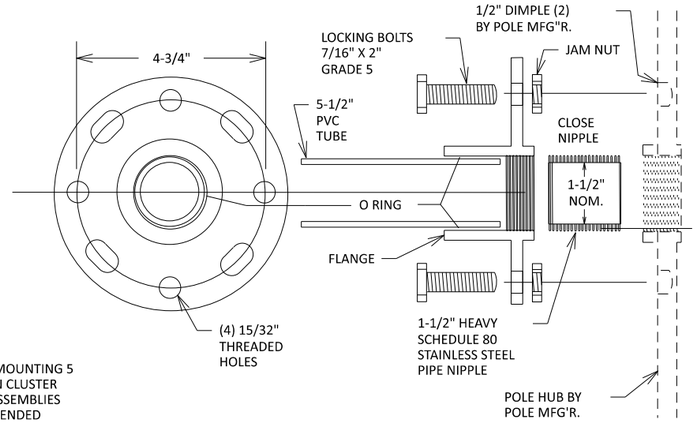
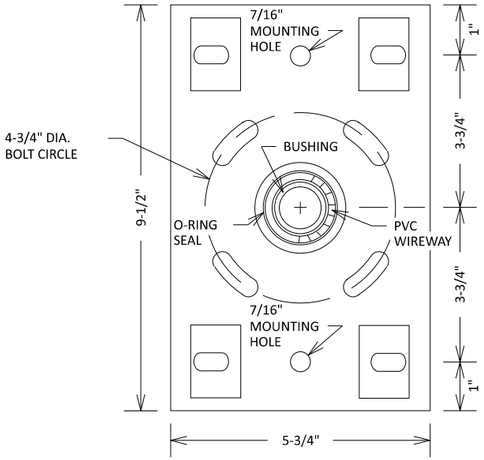
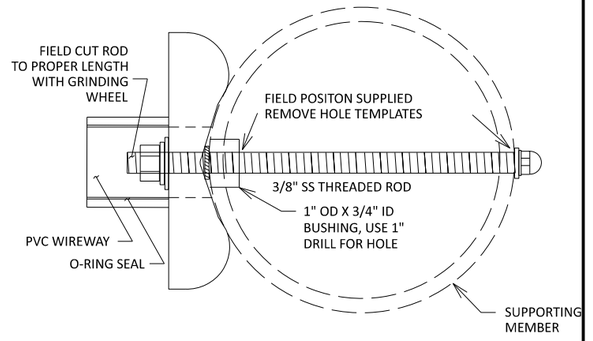


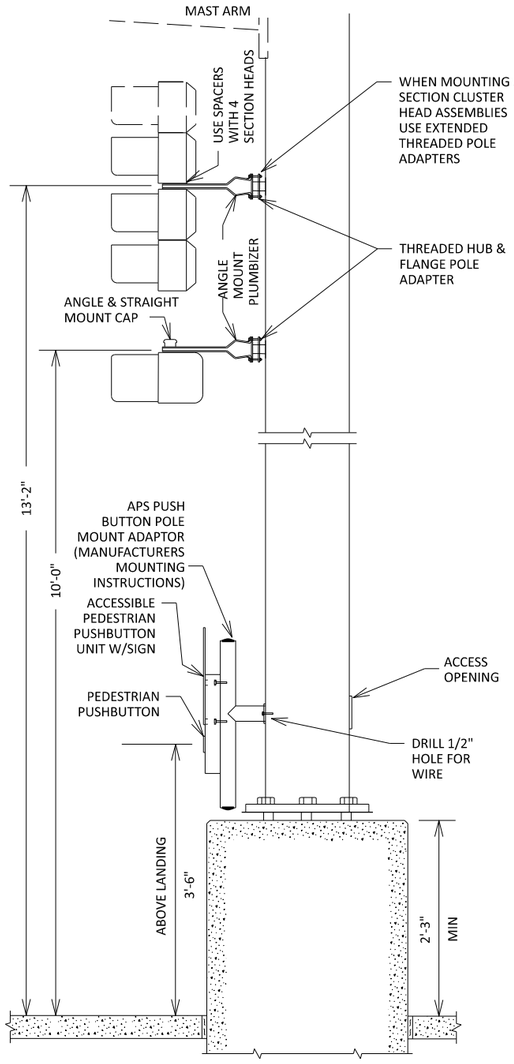
THREADED HUB AND FLANGE POLE ADAPTER



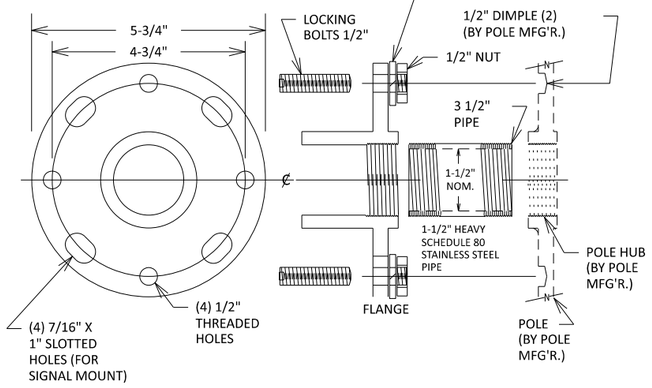
BOLT ON HUB & FLANGE



TOP VIEW



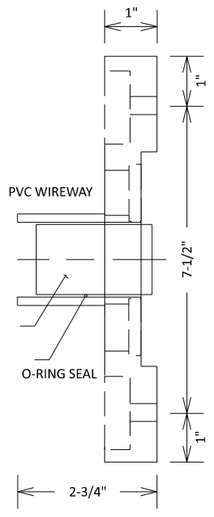
TYPICAL SIGNAL POLE MOUNTING



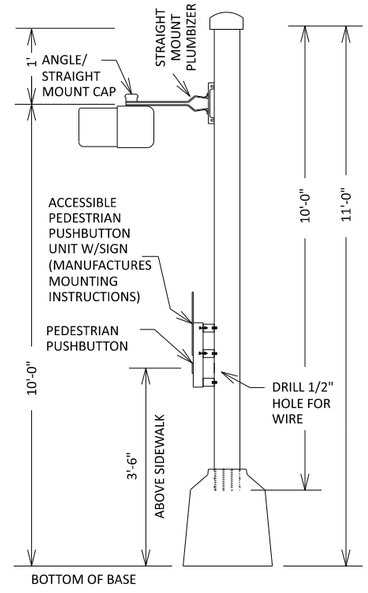
EXTENDED THREADED POLE ADAPTER

NOTES:
SEE STANDARD PLATE NUMBER 8124A FOR ADDITIONAL SIGNAL POLE DETAILS.

USED FOR PED HEAD AND ADVANCED EVP SENSOR

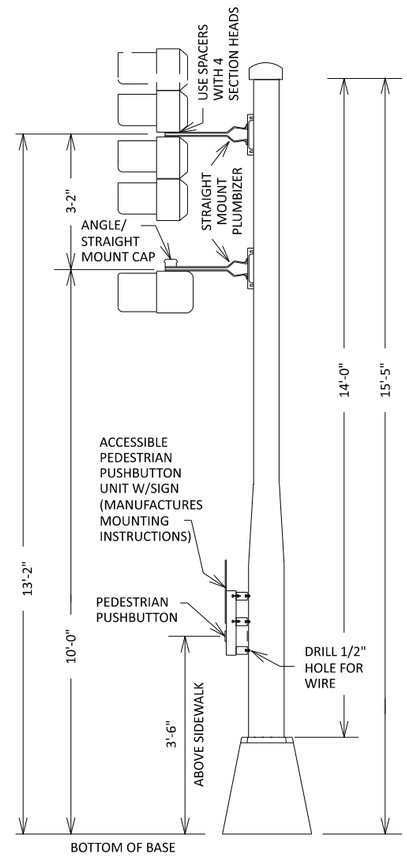


SIDE VIEW



10' PEDESTAL MOUNTING

NOT TO SCALE



14' PEDESTAL MOUNTING

NOT TO SCALE

DEPARTMENT OF TRANSPORTATION	SYSTEM ID: XXXX T.E. 1234 METER ADDRESS: 9999 GRAND AVE	LICENSED PROFESSIONAL ENGINEER	Will D. Zine LIC. NO. 999666 DATE: 10-DEC-2025	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.	POLE MOUNT DETAIL	STATE PROJ. NO. 9999-99 T.H. 156	SHEET NO. 3 TOTAL SHEETS 13

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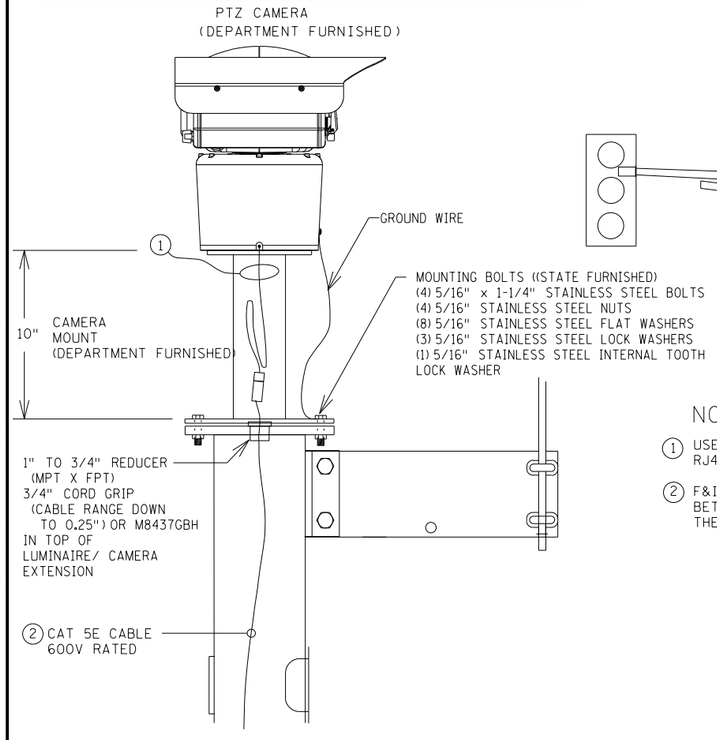
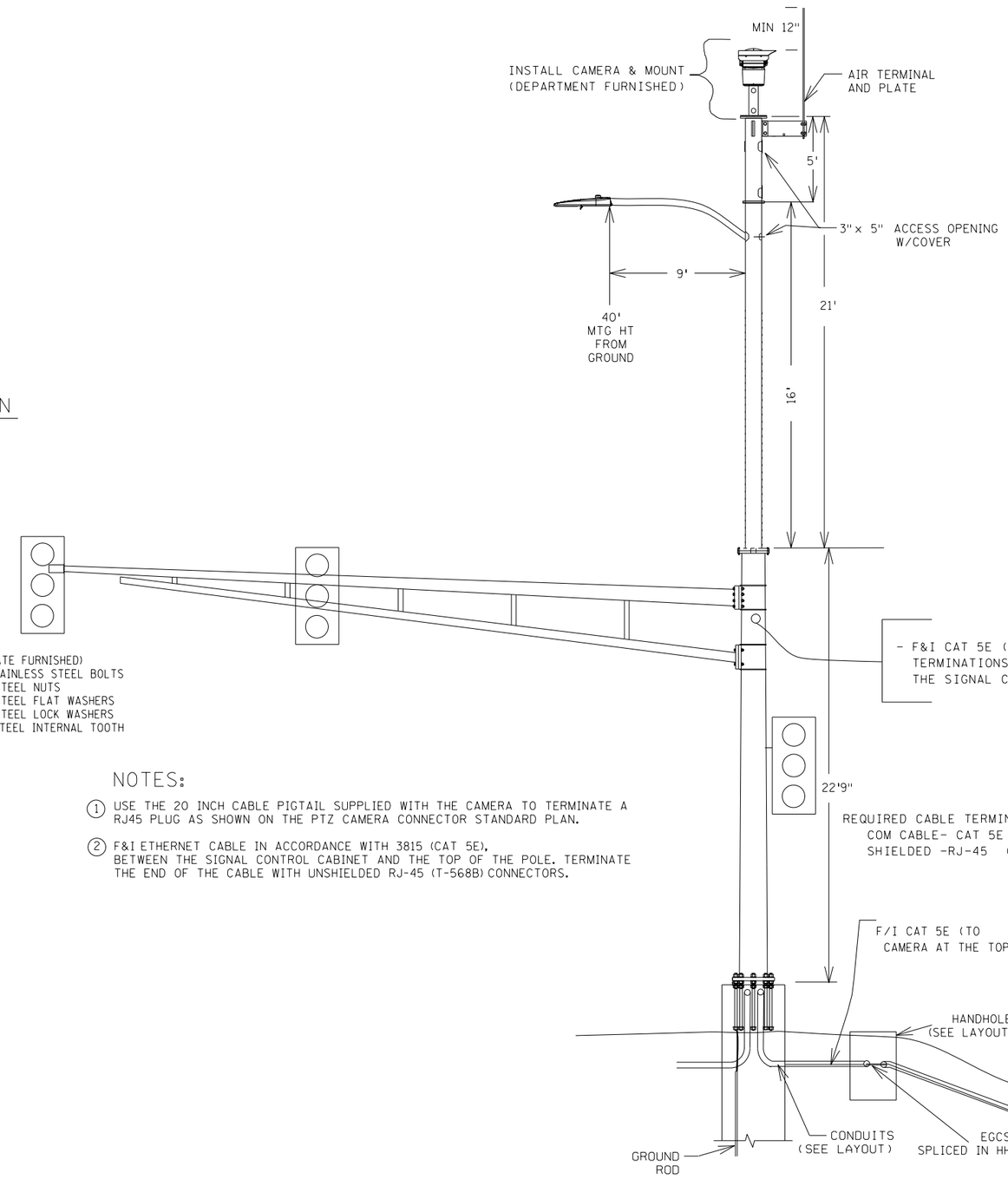
CAMERA & MOUNT AT TOP OF EXTENSION



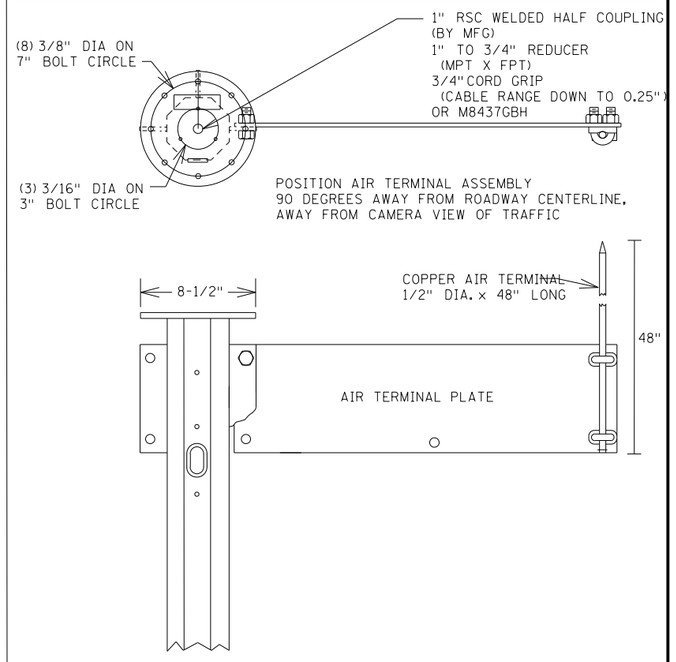
X16-9-40-PTZ



NOTES:

1. USE THE 20 INCH CABLE PIGTAIL SUPPLIED WITH THE CAMERA TO TERMINATE A RJ45 PLUG AS SHOWN ON THE PTZ CAMERA CONNECTOR STANDARD PLAN.
2. F&I ETHERNET CABLE IN ACCORDANCE WITH 3815 (CAT 5E). BETWEEN THE SIGNAL CONTROL CABINET AND THE TOP OF THE POLE. TERMINATE THE END OF THE CABLE WITH UNSHIELDED RJ-45 (T-568B) CONNECTORS.

EXTENSION TOP & LIGHTNING PROTECTION DETAIL

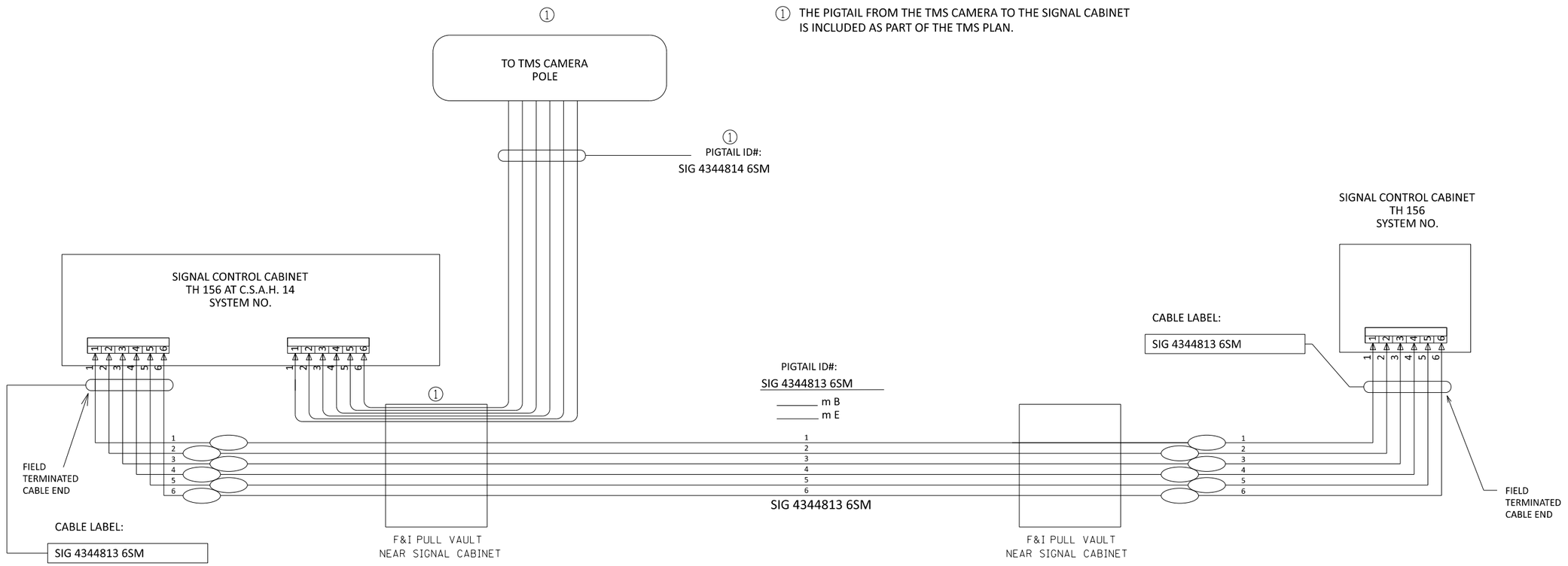


DEPARTMENT OF TRANSPORTATION	SYSTEM ID: XXXX T.E. 1234 METER ADDRESS: 9999 GRAND AVE	LICENSED PROFESSIONAL ENGINEER	Will D. Zine LIC. NO. 999666 DATE: 10-DEC-2025	I HEREBY CERTIFY THAT THIS PLAN SHEET WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.	TS POLE EXTENSION DETAIL LUMINAIRE/CAMERA	STATE PROJ. NO. 9999-99 (T.H. 123)	SHEET NO. 4 TOTAL SHEETS 13

FIBER OPTIC SCHEMATIC

(FOR SIGNAL COMMUNICATIONS)

① THE PIGTAIL FROM THE TMS CAMERA TO THE SIGNAL CABINET IS INCLUDED AS PART OF THE TMS PLAN.



NOTES:

1. FURNISHING, INSTALLING, SPLICING AND TESTING OF THE 6SM FIBER OPTIC CABLE IS INCLUDED IN PAYMENT FOR THE TRAFFIC CONTROL INTERCONNECTION PAY ITEM.

2. COORDINATE WITH RTMC.

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DEPARTMENT OF TRANSPORTATION

SYSTEM ID: XXXX T.E. 1234
METER ADDRESS: 9999 GRAND AVE

LICENSED PROFESSIONAL ENGINEER

Will D. Zine
LIC. NO. 999666
DATE: 10-DEC-2025

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FIBER OPTIC SCHEMATIC

STATE PROJ. NO. 9999-99

T.H. 156

SHEET NO. 5

TOTAL SHEETS 13

CONDUCTOR COLOR CODE

FROM			TO DEVICE
SIGNAL SERVICE	1/C 6	EGC	AS SHOWN ON PLAN
SOP	3-1/C 2	R WH BLK	SIGNAL SERVICE
SIGNAL SERVICE	3-1/C 6	BLK WH G	SIGNAL CABINET
SIGNAL CABINET	(6SM) CABLE		SIGNAL CABINET

SIGNAL CABINET TO DEVICE

6PR 19			AS SHOWN ON PLAN
COAXIAL CABLE			AS SHOWN ON PLAN
4/C 18 CABLE	R BLK WH G		AS SHOWN ON PLAN
2/C 14 CABLE	BLK WH OR CLR		AS SHOWN ON PLAN
3/C 20 CABLE	R OR O WH OR YEL BLK OR BL		AS SHOWN ON PLAN
CAT 5			AS SHOWN ON PLAN

SIGNAL CABINET TO DEVICE

6/C 16 CABLE	R O BL WH BLK/R BLK	RED/RLA YEL/YLA GRN/GLA NEU YLA/FYA GLA	4 AND 5 SECTION SIGNAL HEADS
4/C 16 CABLE	R BLK/R BLK WH	RED/DWK YEL/WLK GRN/SPR NEU	3 SECTION HEAD PED HEADS
7/C 16 CABLE	R O BL WH BLK/R BLK Y	RED YEL GRN NEU FYA YLA GLA	5 SECTION (CLUSTER HEADS ONLY)
3/C 16 CABLE	BLK G WH	EVP LIGHT/AWF LUMINAIRE VIDEO CAMERA ENFORCEMENT LIGHT	

NOTES:
ARRANGE AND TERMINATE CONDUCTORS AND CABLES AS SHOWN WITHOUT SPLICE.
NUMBER ONLY MEANS AWG CONDUCTOR SIZE (e.g. 16=16AWG)
1/C MEANS AN INDIVIDUAL CONDUCTOR NOT PART OF A CABLE ASSEMBLY

CABLE LABELING ABBREVIATIONS

ABBREVIATION	LABEL REFERENCE DSISCRIPTION & EXAMPLE	COMPONENT
X-Y	INDICATION NUMBER 2-1	SIGNAL HEAD
X-Y	LOOP NUMBER D2-1	DETECTOR
X-Y	PUSH BUTTON NUMBER PB2-1	PUSH BUTTON
X-Y	PED INDICATION NUMBER P2-1	PED INDICATION
X-Y	LUMINAIRE NUMBER L1	LUMINAIRE
X-Y	EVP PHASE NUMBER EVP 2+5	EVP DETECTOR
X-Y	EVP LIGHT PHASE NUMBER EVPL 2+5	EVP CON. LIGHT
X-Y	VIDEO DETECTION PHASE V2-1	VIDEO DETECTION
X-Y	RADAR DETECTION PHASE RD2-1	RADAR DETECTION
SS	SIGNAL SERVICE	SERVICE WIRE
CC	CABINET COMMS	COMMS CABLE
FO	FIBER OPTIC	FIBER CABLE
SPARE Y	SPARE WIRE TO POLE NUMB. SPARE1	SPARE WIRE
ELYZ *	ENFORC. LIGHT POLE & DIRECTION	ENFORCEMENT LIGHT
PTZ1	PTZ CAMERA POLE NUMBER PTZ1	PTZ CAMERA
IC	INTERCONNECT CABLE	INTERCONNECT
EGC	EQUIPMENT GROUNDING CONDUCTOR	GROUND

X = SIGNAL SYSTEM PHASE NUMBER; REFER TO THE PLAN
Y = SIGNAL SYSTEM ASSIGNED COMPONENT NUMBER; REFER TO THE PLAN
Z * = DIRECTION
FURNISH AND INSTALL LABELS ON CABLES WITH ABBREVIATIONS SHOWN ON THIS TABLE AND IN ACCORDANCE WITH THE WIRING DIAGRAM.

WIRE COLOR CODE KEY

R	Red
O	Orange
BL	Blue
WH	White
BLK	Black
BRN	Brown
CL	Clear
G	Green
Y	Yellow
R/BLK	Red with Black Stripe
O/BLK	Orange with Black Stripe
BL/BLK	Blue with Black Stripe
WH/BLK	White with Black Stripe
WH/R	White with Red Stripe
BLK/WH	Black with White Stripe
BLK/R	Black with Red Stripe

CONDUCTOR AND CABLE SPECIFICATION CHART

NUMBER OF CONDUCTORS & AWG SIZE	TYPE	Specification Number
1/C 2	INDIVIDUAL SERVICE CONDUCTORS	3815.2B.1
1/C 6	FEEDER AND BRANCH CONDUCTORS	3815.2B.1
1/C 6 INS.GR.	Grounding Conductors	3815.2B.5
2/C 14	Loop Detector Lead-In Cable	3815.2C.4
3/C 16	Signal Control Cable	SPEC. PROV.
4/C 16	Signal Control Cable	SPEC. PROV.
6/C 16	Signal Control Cable	SPEC. PROV.
7/C 16	Signal Control Cable	SPEC. PROV.
4PR 24	Ethernet Cable	3815.2C.6.d
6PR 19	Telephone Cables Outdoor	3815.2C.6.b
3/C 20	EVP Detector Cable	3815.2C.5

FOUNDATION DESIGNATION

① ②③
POLE FOUNDATION TYPE TS45-55 - DS - S

(SEE STANDARD PLAN 5-297.861)
① FOUNDATION TYPE
② DS=DRILLED SHAFT, SF=SPREAD FOOTING
③ S=STANDARD, H=HEAVY

POLE DESIGNATION

① ② ③ ④ ⑤ ⑥
TYPE TS - 45 - X40 - 9 - B6 - PTZ

(SEE STANDARD PLATE 8124 15' TO 55' MAST ARMS)
(SEE STANDARD PLATE 8125 60' TO 80' MAST ARMS)
① POLE TYPE
② SIGNAL MAST ARM LENGTH
③ LUMINAIRE HEIGHT
④ LUMINAIRE MAST ARM LENGTH
⑤ LENGTH OF LUMINAIRE MAST ON BACK SIDE OF POLE
⑥ CAMERA ATTACHMENT (5 FOOT); PTZ = PTZ CAMERA ATTACHMENT; 360 = 360 DEGREE VIDEO ATTACHMENT

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DEPARTMENT OF TRANSPORTATION

SYSTEM ID: XXXX T.E. 1234
METER ADDRESS: 9999 GRAND AVE

LICENSED PROFESSIONAL ENGINEER

Will D. Zine
LIC. NO. 999666
DATE: 10-DEC-2025

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.

COLOR CODE CHART/CABLE ABBREVIATIONS
FOUNDATION/POLE DESIGNATION
DETAIL

STATE PROJ. NO. 9999-99
T.H. 156

SHEET NO. 6
TOTAL SHEETS 13

PLOTTED/REVISED: 17-DEC-2025
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SIGNAL HEAD CHART

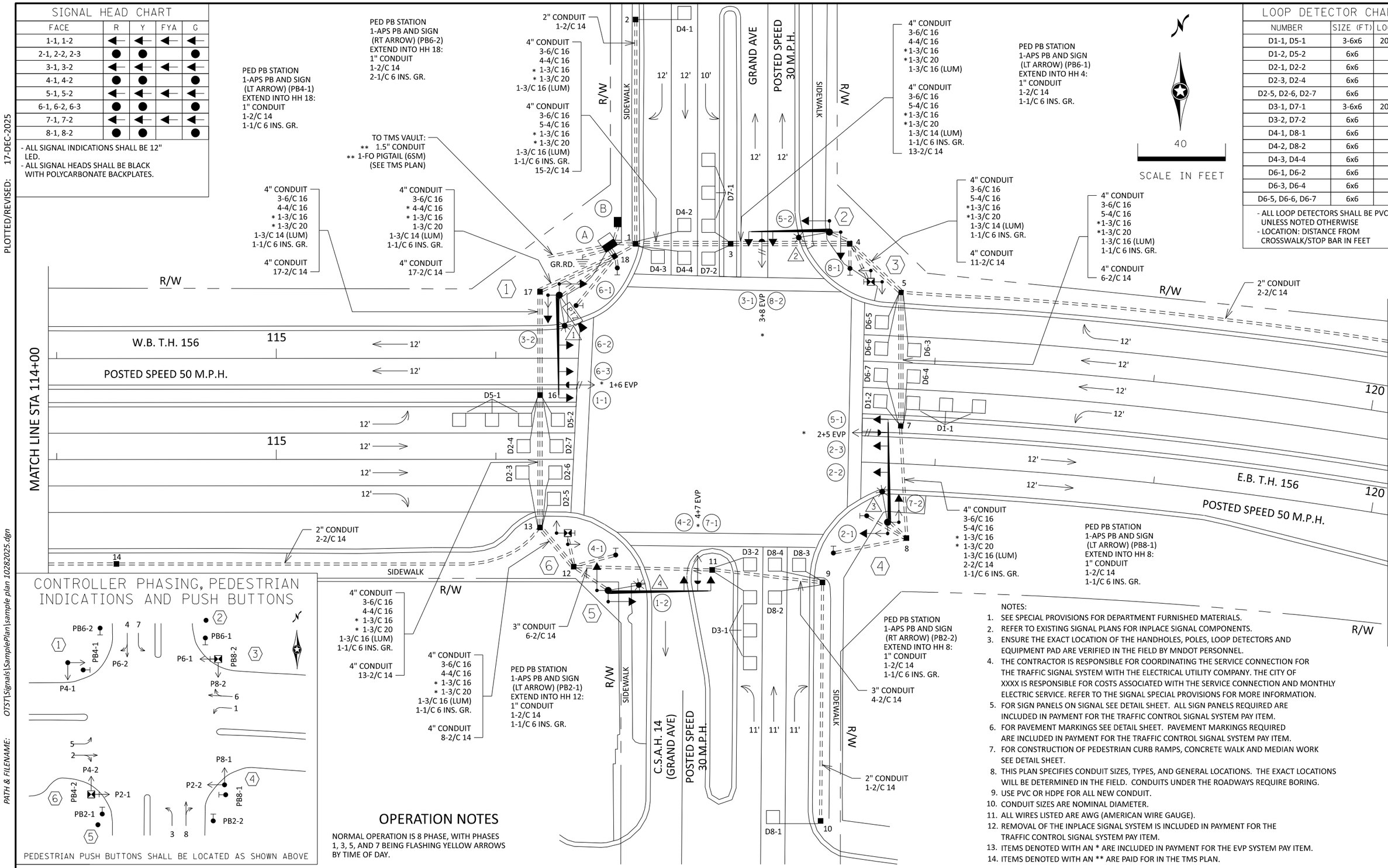
FACE	R	Y	FYA	G
1-1, 1-2	◀	◀	◀	◀
2-1, 2-2, 2-3	●	●		●
3-1, 3-2	◀	◀	◀	◀
4-1, 4-2	●	●		●
5-1, 5-2	◀	◀	◀	◀
6-1, 6-2, 6-3	●	●		●
7-1, 7-2	◀	◀	◀	◀
8-1, 8-2	●	●		●

- ALL SIGNAL INDICATIONS SHALL BE 12" LED.
- ALL SIGNAL HEADS SHALL BE BLACK WITH POLYCARBONATE BACKPLATES.

LOOP DETECTOR CHART

NUMBER	SIZE (FT)	LOCATION
D1-1, D5-1	3-6x6	20, 35, 50
D1-2, D5-2	6x6	5
D2-1, D2-2	6x6	550
D2-3, D2-4	6x6	20
D2-5, D2-6, D2-7	6x6	5
D3-1, D7-1	3-6x6	20, 35, 50
D3-2, D7-2	6x6	5
D4-1, D8-1	6x6	200
D4-2, D8-2	6x6	20
D4-3, D4-4	6x6	5
D6-1, D6-2	6x6	550
D6-3, D6-4	6x6	20
D6-5, D6-6, D6-7	6x6	5

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



CONTROLLER PHASING, PEDESTRIAN INDICATIONS AND PUSH BUTTONS

PEDESTRIAN PUSH BUTTONS SHALL BE LOCATED AS SHOWN ABOVE

OPERATION NOTES

NORMAL OPERATION IS 8 PHASE, WITH PHASES 1, 3, 5, AND 7 BEING FLASHING YELLOW ARROWS BY TIME OF DAY.

NOTES:

1. SEE SPECIAL PROVISIONS FOR DEPARTMENT FURNISHED MATERIALS.
2. REFER TO EXISTING SIGNAL PLANS FOR INPLACE SIGNAL COMPONENTS.
3. ENSURE THE EXACT LOCATION OF THE HANDHOLES, POLES, LOOP DETECTORS AND EQUIPMENT PAD ARE VERIFIED IN THE FIELD BY MNDOT PERSONNEL.
4. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING THE SERVICE CONNECTION FOR THE TRAFFIC SIGNAL SYSTEM WITH THE ELECTRICAL UTILITY COMPANY. THE CITY OF XXXX IS RESPONSIBLE FOR COSTS ASSOCIATED WITH THE SERVICE CONNECTION AND MONTHLY ELECTRIC SERVICE. REFER TO THE SIGNAL SPECIAL PROVISIONS FOR MORE INFORMATION.
5. FOR SIGN PANELS ON SIGNAL SEE DETAIL SHEET. ALL SIGN PANELS REQUIRED ARE INCLUDED IN PAYMENT FOR THE TRAFFIC CONTROL SIGNAL SYSTEM PAY ITEM.
6. FOR PAVEMENT MARKINGS SEE DETAIL SHEET. PAVEMENT MARKINGS REQUIRED ARE INCLUDED IN PAYMENT FOR THE TRAFFIC CONTROL SIGNAL SYSTEM PAY ITEM.
7. FOR CONSTRUCTION OF PEDESTRIAN CURB RAMPS, CONCRETE WALK AND MEDIAN WORK SEE DETAIL SHEET.
8. THIS PLAN SPECIFIES CONDUIT SIZES, TYPES, AND GENERAL LOCATIONS. THE EXACT LOCATIONS WILL BE DETERMINED IN THE FIELD. CONDUITS UNDER THE ROADWAYS REQUIRE BORING.
9. USE PVC OR HDPE FOR ALL NEW CONDUIT.
10. CONDUIT SIZES ARE NOMINAL DIAMETER.
11. ALL WIRES LISTED ARE AWG (AMERICAN WIRE GAUGE).
12. REMOVAL OF THE INPLACE SIGNAL SYSTEM IS INCLUDED IN PAYMENT FOR THE TRAFFIC CONTROL SIGNAL SYSTEM PAY ITEM.
13. ITEMS DENOTED WITH AN * ARE INCLUDED IN PAYMENT FOR THE EVP SYSTEM PAY ITEM.
14. ITEMS DENOTED WITH AN ** ARE PAID FOR IN THE TMS PLAN.

DEPARTMENT OF TRANSPORTATION

SYSTEM ID: XXXX T.E. 1234
METER ADDRESS: 9999 GRAND AVE

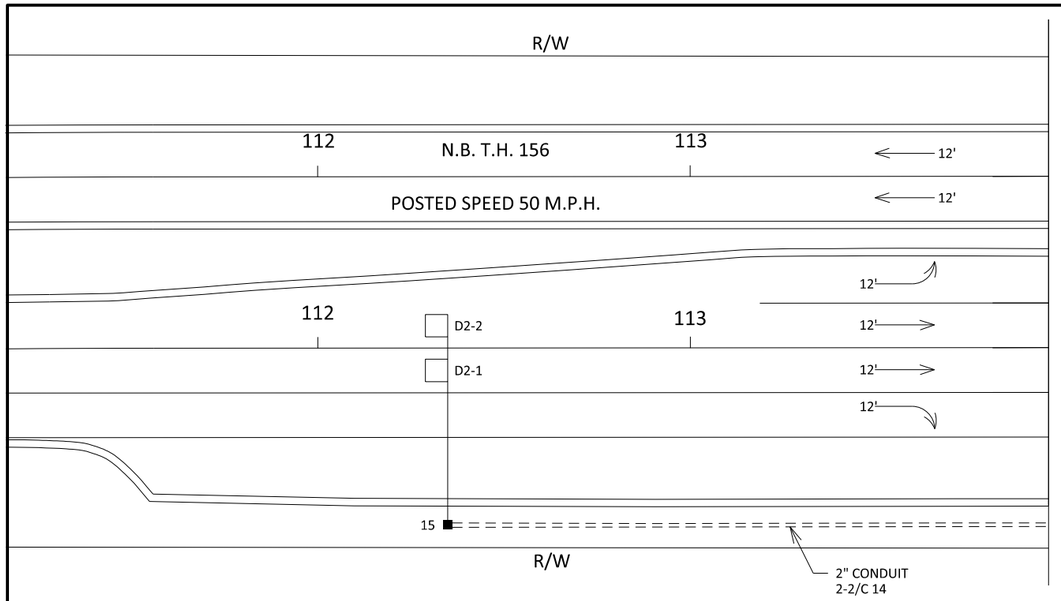
LICENSED PROFESSIONAL ENGINEER

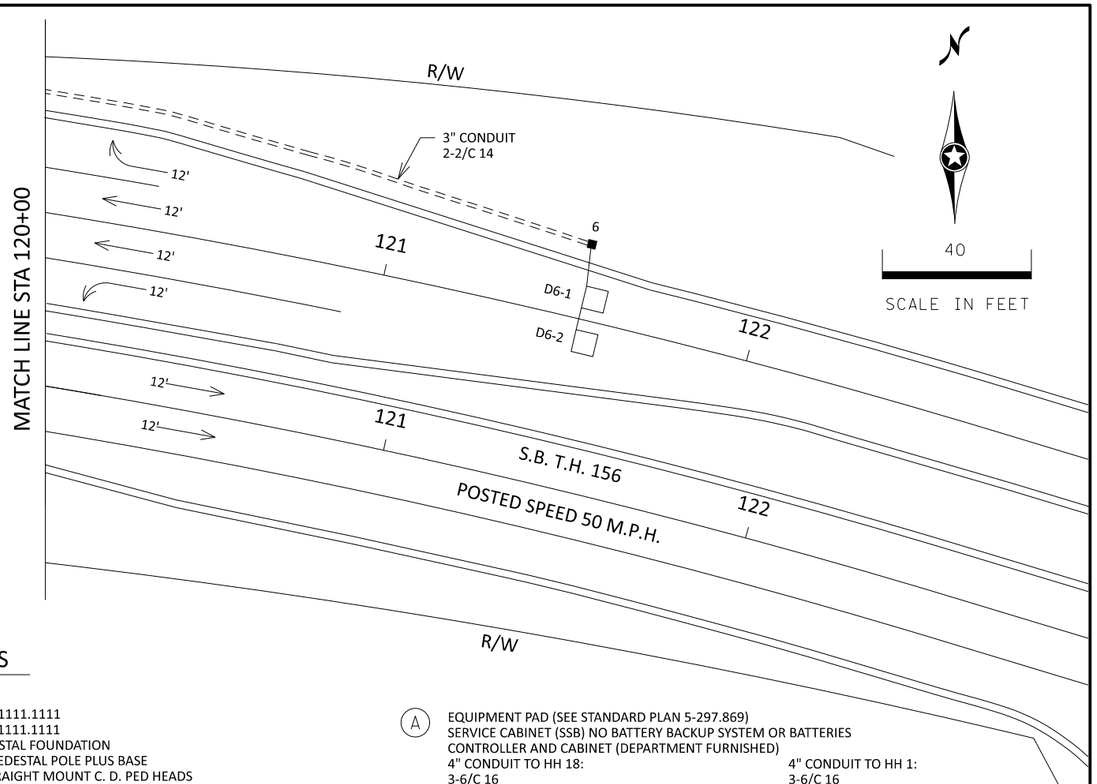
Will D. Zine
LIC. NO. 999666
DATE: 17-DEC-2025

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.

INTERSECTION LAYOUT
T.H. 156 AT C.S.A.H. 14 (GRAND AVE.)
IN SOUTH ST. PAUL, DAKOTA COUNTY

STATE PROJ. NO.	9999-99	SHEET NO.	7
(T.H. 123)		TOTAL SHEETS	13





INTERSECTION NOTES

1
X: 111111.1111
Y: 111111.1111
POLE FOUNDATION TYPE TS45-55 DS S
TYPE TS A 45 X6-350/CAM EXTENSION
(DAVIT AT 345 DEG)
1-TRAFFIC MANAGEMENT CAMERA (C11111)
(STATE FURNISHED) WITH MOUNT
1-PAIR SWING AWAY HINGES
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 (FOR 40' MOUNTING HEIGHT)
1-R10-X12 SIGN ADJACENT TO HEAD (1-1)
1-SIGN (GRAND AVE) (SEE SIGN DETAILS)
3" CONDUIT TO HH 18:
3-6/C 16
5-4/C 16
*1-3/C 16
*1-3/C 20
1-3/C 16 (LUM)
1-1/C 6 INS. GR.
1-CAT 5E TRA MGMT CAM

2
X: 111111.1111
Y: 111111.1111
POLE FOUNDATION TYPE TS35-45 DS S
TYPE TS-A-35 D40-9 (DAVIT AT 345 DEG)
1-ANGLE MOUNT SIGNAL OVERHEAD AT 0'
1-STRAIGHT MOUNT SIGNAL OVERHEAD AT 11'
2-ANGLE MOUNT SIGNALS AT 90 AND 180 DEG
*1-ONE WAY EVP DETECTOR AND
CONFIRMATORY LIGHT (PHASES 3+8)
LUMINAIRE-LED (FOR 40' MOUNTING HEIGHT)
1-R10-X12 SIGN ADJACENT TO HEAD (3-1)
1-SIGN (MN156 DBL) (SEE SIGN DETAILS)
3" CONDUIT TO HH 4:
3-6/C 16
2-4/C 16
*1-3/C 16
*1-3/C 20
1-3/C 16 (LUM)
1-1/C 6 INS. GR.

3
X: 111111.1111
Y: 111111.1111
PEDESTAL FOUNDATION
10' PEDESTAL POLE PLUS BASE
2-STRAIGHT MOUNT C. D. PED HEADS
AT 90 AND 180 DEG
1-APS PB AND SIGN (RT ARROW) (PB8-2)
AND APS PB MOUNTING SPACERS
3" CONDUIT TO HH 4:
2-4/C 16
1-2/C 14
2-1/C 6 INS. GR.

A
EQUIPMENT PAD (SEE STANDARD PLAN 5-297.869)
SERVICE CABINET (SSB) NO BATTERY BACKUP SYSTEM OR BATTERIES
CONTROLLER AND CABINET (DEPARTMENT FURNISHED)

4" CONDUIT TO HH 18:	4" CONDUIT TO HH 1:
3-6/C 16	3-6/C 16
5-4/C 16	4-4/C 16
*1-3/C 16	*1-3/C 16
*1-3/C 20	*1-3/C 20
1-CAT 5E TRA MGMT CAM	
4" CONDUIT TO HH 18:	4" CONDUIT TO HH 1:
3-6/C 16	3-6/C 16
4-4/C 16	5-4/C 16
*1-3/C 16	*1-3/C 16
*1-3/C 20	*1-3/C 20
1-1/C 6 INS. GR.	1-1/C 6 INS. GR.
3" CONDUIT TO HH 18:	3" CONDUIT TO HH 1:
19-2/C 14	19-2/C 14

GROUND WIRE AND GROUND ROD - MIN 8' OUT FROM PAD
2-2" AND 1-3" CONDUIT STUBBED OUT (CAPPED BOTH ENDS)
**1.5" CONDUIT TO TMS VAULT (SEE TMS PLAN)
**1-FO PIGTAIL (6SM) (SEE TMS PLAN)
CONTROLLER CABINET TO SERVICE CABINET:
2" CONDUIT
3-1/C 6
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 18:
2" CONDUIT
4-3/C 16 (LUM)
SERVICE CABINET TO EXTERNAL GR. RD.:
1" CONDUIT
1-1/C 6 INS. GR.
(SEE EQUIPMENT PAD LAYOUT)
HH 18 TO HH 1:
2" CONDUIT
2-3/C 16 (LUM)

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

5
X: 111111.1111
Y: 111111.1111
POLE FOUNDATION TYPE TS45-55 DS S
TYPE TS-A-45 D40-9 (DAVIT AT 345 DEG)
1-ANGLE MOUNT SIGNAL OVERHEAD AT 0'
1-STRAIGHT MOUNT SIGNAL OVERHEAD AT 11'
2-ANGLE MOUNT SIGNALS AT 90 AND 180 DEG
*1-ONE WAY EVP DETECTOR AND
CONFIRMATORY LIGHT (PHASES 4+7)
LUMINAIRE-LED (FOR 40' MOUNTING HEIGHT)
1-R10-X12 SIGN ADJACENT TO HEAD (7-1)
1-SIGN (MN156 DBL) (SEE SIGN DETAILS)
3" CONDUIT TO HH 12:
3-6/C 16
2-4/C 16
*1-3/C 16
*1-3/C 20
1-3/C 16 (LUM)
1-1/C 6 INS. GR.

4
X: 111111.1111
Y: 111111.1111
POLE FOUNDATION TYPE TS45-55 DS S
TYPE TS-A-45 D40-9 (DAVIT AT 345 DEG)
1-PAIR SWING AWAY HINGES
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)
LUMINAIRE-LED (FOR 40' MOUNTING HEIGHT)
1-R10-X12 SIGN ADJACENT TO HEAD (5-1)
1-SIGN (GRAND AVE) (SEE SIGN DETAILS)
3" CONDUIT TO HH 8:
3-6/C 16
5-4/C 16
*1-3/C 16
*1-3/C 20
1-3/C 16 (LUM)
1-1/C 6 INS. GR.

6
X: 111111.1111
Y: 111111.1111
PEDESTAL FOUNDATION
10' PEDESTAL POLE PLUS BASE
2-STRAIGHT MOUNT C. D. PED HEADS
AT 90 AND 180 DEG
1-APS PB AND SIGN (RT ARROW) (PB4-2)
AND APS PB MOUNTING SPACERS
3" CONDUIT TO HH 12:
2-4/C 16
1-2/C 14
1-1/C 6 INS. GR.

PLOT NAME: sample plan 10282025
PATH & FILENAME: OTST\Signals\SamplePlan\sample plan 10282025.dgn
PLOTTED/REVISED: 10-DEC-2025
PLOTTED/REVISED: 10-DEC-2025

DEPARTMENT OF TRANSPORTATION	SYSTEM ID: XXXX T.E. 1234 METER ADDRESS: 9999 GRAND AVE	Will D. Zine LIC. NO. 999666 DATE: 10-DEC-2025 LICENSED PROFESSIONAL ENGINEER	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.	MATCH LINE LAYOUT/INTERSECTION NOTES T.H. 156 AT C.S.A.H. 14 (GRAND AVE.) IN SOUTH ST. PAUL, DAKOTA COUNTY	STATE PROJ. NO. 9999-99 T.H. 156	SHEET NO. 8 TOTAL SHEETS 13

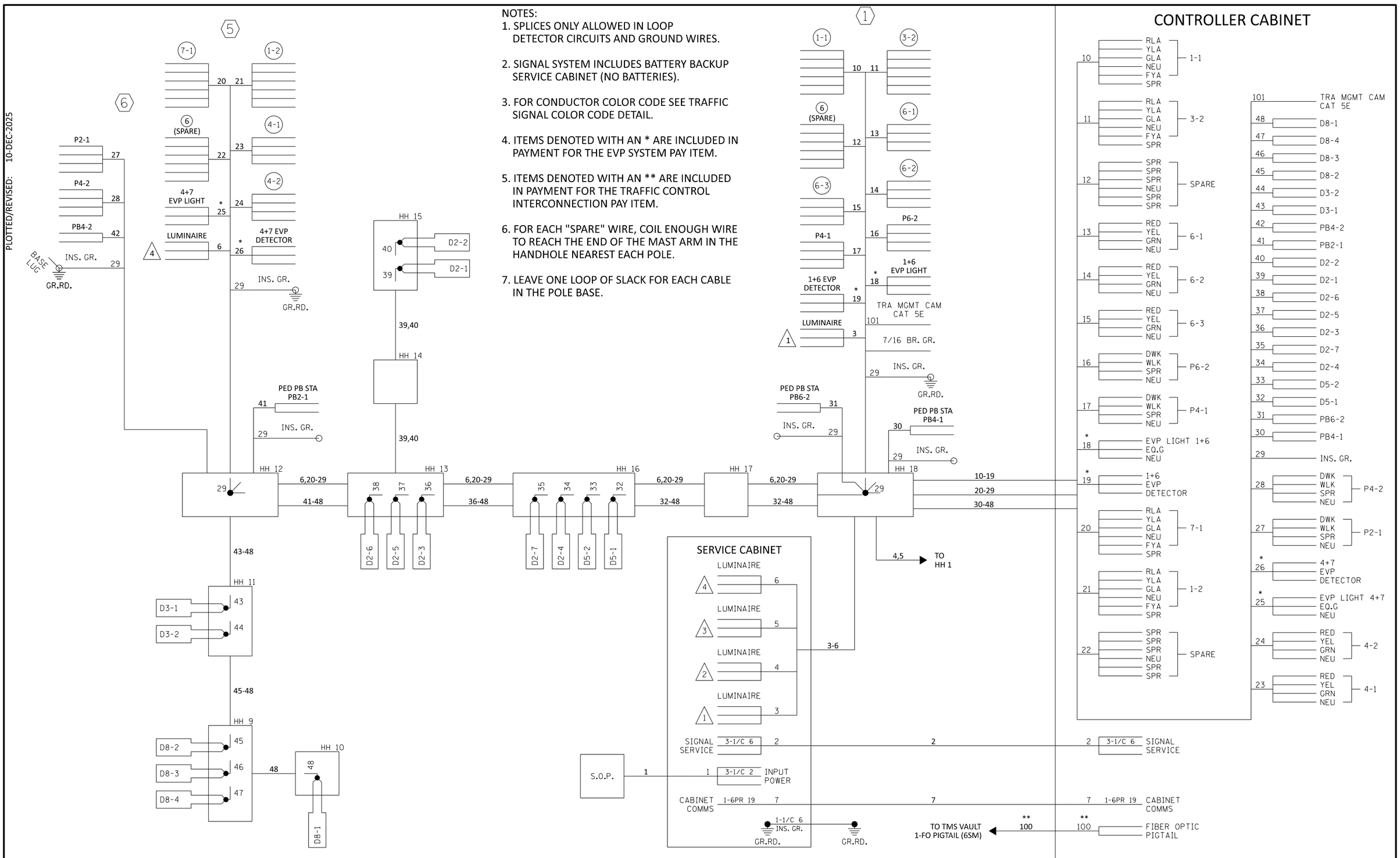
PLOTTED/REVISED: 10-DEC-2025

PLOTTED/REVISED: 10-DEC-2025

PLOT NAME: sample plan 10282025

PATH & FILENAME: OTST\Signals\SamplePlan\sample plan 10282025.dgn

NOTES:
1. SPLICES ONLY ALLOWED IN LOOP DETECTOR CIRCUITS AND GROUND WIRES.
2. SIGNAL SYSTEM INCLUDES BATTERY BACKUP SERVICE CABINET (NO BATTERIES).
3. FOR CONDUCTOR COLOR CODE SEE TRAFFIC SIGNAL COLOR CODE DETAIL.
4. ITEMS DENOTED WITH AN * ARE INCLUDED IN PAYMENT FOR THE EVP SYSTEM PAY ITEM.
5. ITEMS DENOTED WITH AN ** ARE INCLUDED IN PAYMENT FOR THE TRAFFIC CONTROL INTERCONNECTION PAY ITEM.
6. FOR EACH "SPARE" WIRE, COIL ENOUGH WIRE TO REACH THE END OF THE MAST ARM IN THE HANDHOLE NEAREST EACH POLE.
7. LEAVE ONE LOOP OF SLACK FOR EACH CABLE IN THE POLE BASE.



DEPARTMENT OF TRANSPORTATION

SYSTEM ID: XXXX T.E. 1234
METER ADDRESS: 9999 GRAND AVE

LICENSED PROFESSIONAL ENGINEER

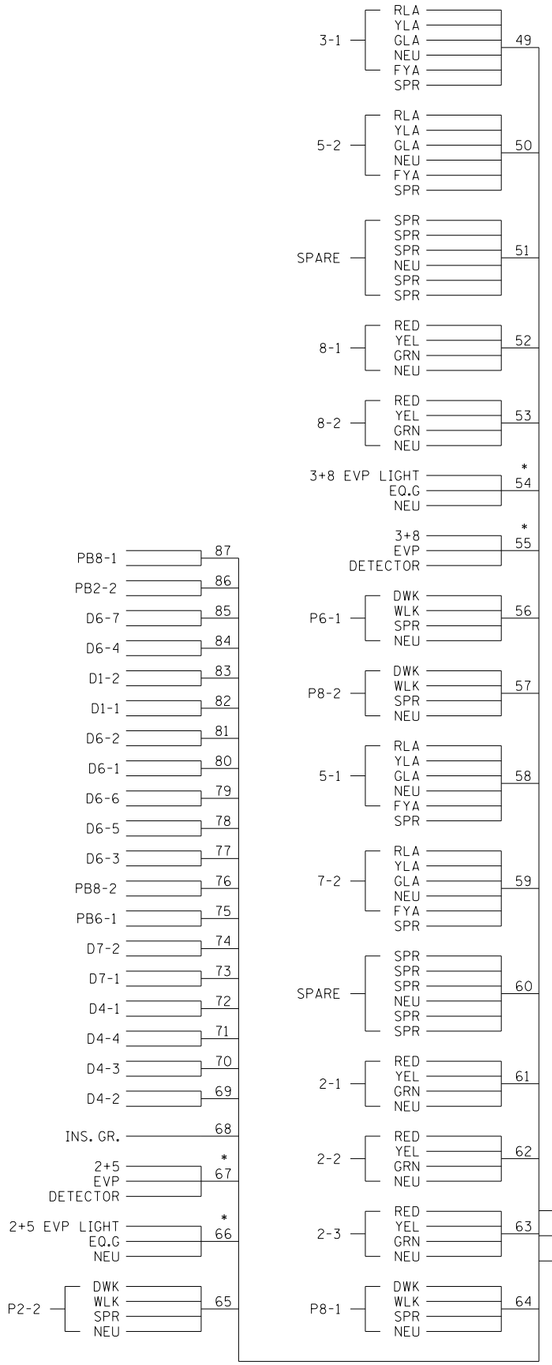
Will D. Zine
LIC. NO. 999666
DATE: 10-DEC-2025

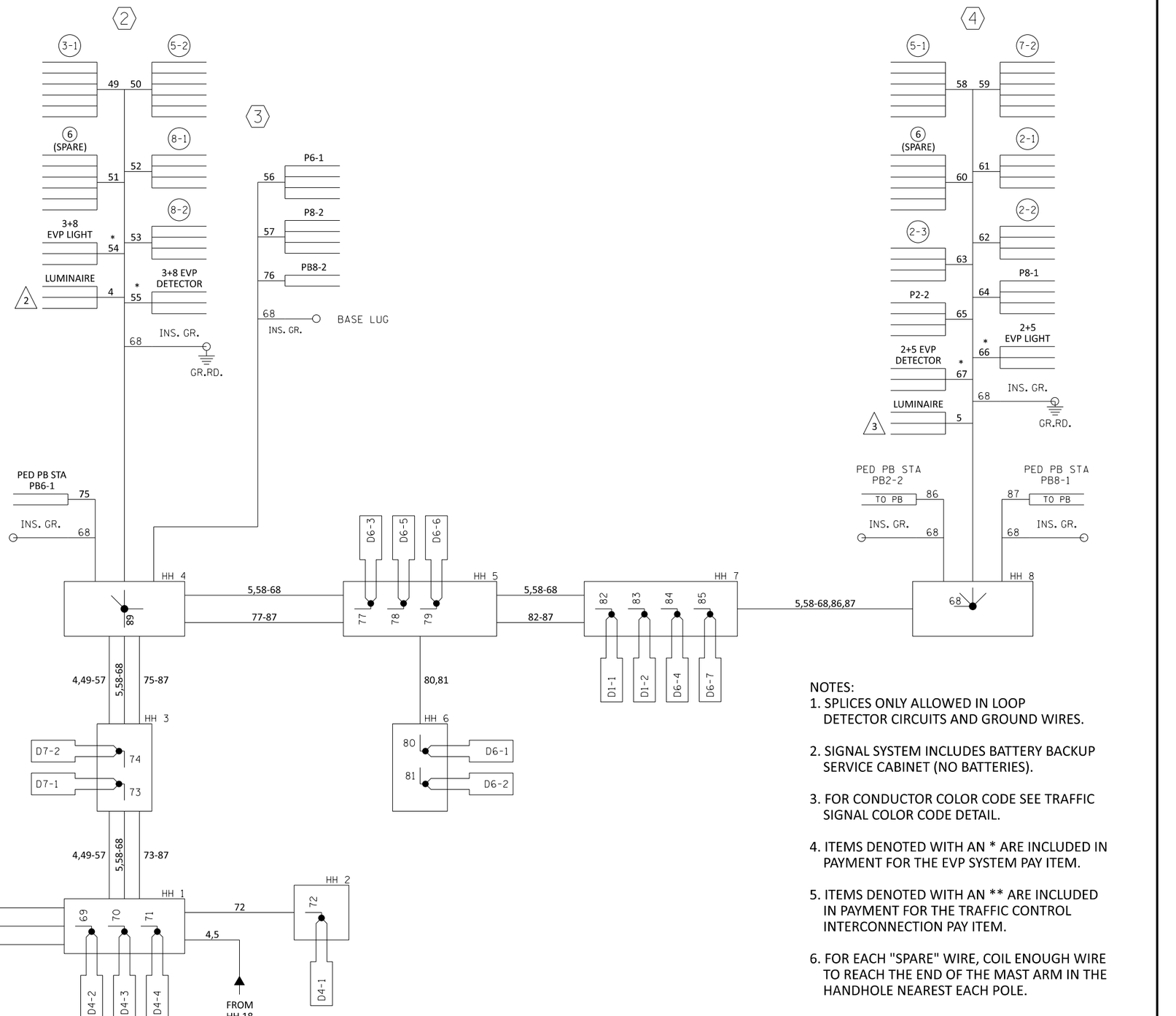
I HEREBY CERTIFY THAT THIS PLAN SHEET WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

FIELD WIRING DIAGRAM (1 OF 2)
T.H. 156 AT C.S.A.H. 14 (GRAND AVE.)
IN SOUTH ST. PAUL, DAKOTA COUNTY

STATE PROJ. NO. 9999-99	SHEET NO. 9
T.H. 156	TOTAL SHEETS 13

CONTROLLER CABINET





NOTES:

1. SPLICES ONLY ALLOWED IN LOOP DETECTOR CIRCUITS AND GROUND WIRES.
2. SIGNAL SYSTEM INCLUDES BATTERY BACKUP SERVICE CABINET (NO BATTERIES).
3. FOR CONDUCTOR COLOR CODE SEE TRAFFIC SIGNAL COLOR CODE DETAIL.
4. ITEMS DENOTED WITH AN * ARE INCLUDED IN PAYMENT FOR THE EVP SYSTEM PAY ITEM.
5. ITEMS DENOTED WITH AN ** ARE INCLUDED IN PAYMENT FOR THE TRAFFIC CONTROL INTERCONNECTION PAY ITEM.
6. FOR EACH "SPARE" WIRE, COIL ENOUGH WIRE TO REACH THE END OF THE MAST ARM IN THE HANDHOLE NEAREST EACH POLE.
7. LEAVE ONE LOOP OF SLACK FOR EACH CABLE IN THE POLE BASE.

PLOTTED/REVISED: 10-DEC-2025

PLOT NAME: sample plan 10282025

PATH & FILENAME: OTST\Signals\SamplePlan\sample plan 10282025.dgn

DEPARTMENT OF TRANSPORTATION

SYSTEM ID: XXXX T.E. 1234
METER ADDRESS: 9999 GRAND AVE

LICENSED PROFESSIONAL ENGINEER

Will D. Zine
LIC. NO. 999666
DATE: 10-DEC-2025

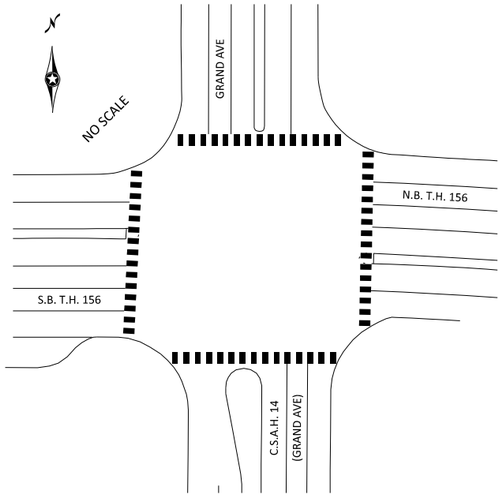
I HEREBY CERTIFY THAT THIS PLAN SHEET WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

FIELD WIRING DIAGRAM (2 OF 2)
T.H. 156 AT C.S.A.H. 14 (GRAND AVE.)
IN SOUTH ST. PAUL, DAKOTA COUNTY

STATE PROJ. NO.	9999-99	SHEET NO.	10
T.H. 156		TOTAL SHEETS	13

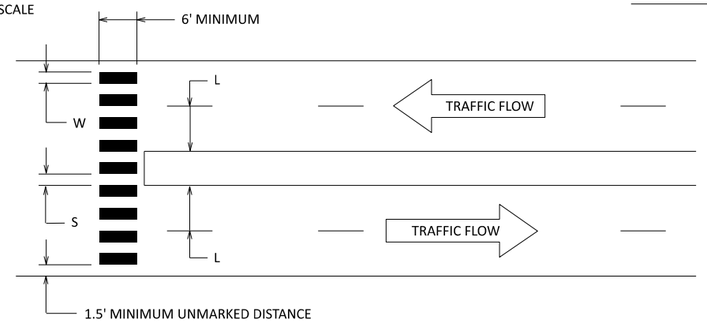
PLOTTED/REVISED: 10-DEC-2025
PLOT NAME: sample plan 10282025
PATH & FILENAME: OTST\Signals\SamplePlan\sample plan 10282025.dgn

PAVEMENT MARKINGS LAYOUT



PAVEMENT MARKINGS DETAIL

NOT TO SCALE



WIDTH OF INSIDE LANE (L)	WIDTH OF TAPED AREA (W)	WIDTH OF SPACE (S)
9'	2.0'	2.5'
10'	2.5'	2.5'
11'	2.5'	3.0'
12'	3.0'	3.0'
13'	3.0'	3.5'

NOTES:
1. F & I PREFORMED THERMOPLASTIC IN ACCORDANCE WITH MnDOT SPEC. 2582
2. CENTER AND ALIGN INSTALLATION ON CENTERLINES AND LANE LINES
3. F & I REFLECTORIZED ENHANCED SKID RESISTANCE PREFORMED THERMOPLASTIC ZEBRA CROSSWALKS. THE BLOCKS SHALL BE PLACED SO THEY ARE NOT LOCATED IN THE WHEEL PATH OF THE VEHICLE.
4. PROVIDE A MINIMUM 1.5 FOOT CLEAR DISTANCE ADJACENT TO THE CURB
5. MAKE SPACING ADJUSTMENTS IN THE DIVIDED ROADWAY MEDIANS FOR INSTALLED AREAS TO ENSURE INSTALLED AREAS ARE MAINTAINED IN THE ROPER LOCATION ACROSS THE TRAVELED PORTION OF THE ROADWAY.
6. ENSURE INSTALLED AREAS REMAIN PARALLEL TO THE LANE LINES AT SKEWED CROSSWALKS.
7. ON TWO LANE TWO WAY STREETS, USE SPACING SHOWN FOR AN 11 FT. INSIDE LANE
8. THE BLOCKS SHALL BE A MINIMUM OF 6' LONG AND AT LEAST AS LONG AS THE TRUNCATED. FOR FANNED TRUNCATED DOMES THE BLOCKS SHALL BE AT LEAST AS LONG AS THE APPROACHING SIDEWALK OR SHARED USE PATH.

SIGN PANEL DETAILS

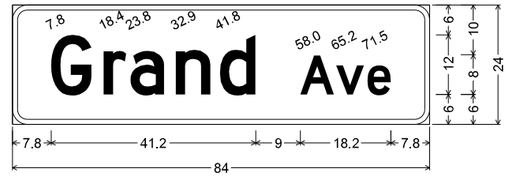
SIGN PANELS ON SIGNALS

POLE NUMBER	"A" DISTANCE (FEET) OR POLE	PANEL			
		CODE NUMBER	LEGEND	SIZE (INCHES)	AREA (SQ FT)
1	0	R10-X12	LEFT TURN YIELD ON FLASHING YELLOW ARROW	42 x 48	14.00
1	27	PX	GRAND AVE	84 x 24	14.00
1	POLE	R6-1R	ONE WAY RIGHT	54 x 18	6.75
1	POLE	R6-1L	ONE WAY LEFT	54 x 18	6.75
2	0	R10-X12	LEFT TURN YIELD ON FLASHING YELLOW ARROW	42 x 48	14.00
2	13	PX	MN156 DBL	48 x 54	18.00
2	POLE	R6-1R	ONE WAY RIGHT	54 x 18	6.75
2	POLE	R6-1L	ONE WAY LEFT	54 x 18	6.75
4	0	R10-X12	LEFT TURN YIELD ON FLASHING YELLOW ARROW	42 x 48	14.00
4	27	PX	GRAND AVE	84 x 24	14.00
4	POLE	R6-1R	ONE WAY RIGHT	54 x 18	6.75
4	POLE	R6-1L	ONE WAY LEFT	54 x 18	6.75
5	0	R10-X12	LEFT TURN YIELD ON FLASHING YELLOW ARROW	42 x 48	14.00
5	13	PX	MN156 DBL	48 x 54	18.00
5	POLE	R6-1R	ONE WAY RIGHT	54 x 18	6.75
5	POLE	R6-1L	ONE WAY LEFT	54 x 18	6.75

SPECIFIC NOTE(S):

GENERAL NOTE(S):
1. SEE MnDOT STANDARD SIGNS AND MARKINGS MANUAL FOR STANDARD SIGN DESIGNS, ARROW DETAILS AND SPLICE PLATE DETAILS.
2. FOR NON STANDARD SIGN DESIGNS, LAYOUTS ARE INCLUDED. SIGN PANEL DIMENSIONS ARE IN INCHES.
3. SEE STANDARD PLAN 5-297.731 FOR SIGN MOUNTING TO MAST ARM.
4. SEE STANDARD PLAN 5-297.730 FOR SIGN MOUNTING TO ROUND POST.
5. MOUNTING HEIGHT OF POLE MOUNTED SIGN PANELS MUST BE 7 FOOT MINIMUM. MOUNTING HEIGHT IS MEASURED FROM BOTTOM OF SIGN PANEL TO SURFACE IMMEDIATELY BELOW THE SIGN PANEL.
6. "A" DISTANCE = DISTANCE FROM THE END OF THE MAST ARM TO THE EDGE OF EACH SIGN PANEL.
7. SEE INTERSECTION LAYOUT FOR SIGN PLACEMENT OF POLE MOUNTED SIGNS.

MN156 DBL
6.0" Radius, 1.3" Border, White on, Green;
State Highway 156 M1-5M;
Double Headed Arrow 5 - 24.0" 0';



Grand Ave;
3.0" Radius, 1.0" Border, White on, Green;
"Grand Ave", D 2K;

NOTE:
THE SIGNS ON THE DETAIL SHEET ARE SIGNS THAT ARE MOUNTED ON THE SIGNAL MAST ARM OR SIGNAL POLES. THESE SIGNS ARE INCLUDED IN THE LUMP SUM PAYMENT FOR THE TRAFFIC CONTROL SIGNAL SYSTEM. ADDITIONAL GROUND MOUNTED SIGNS ARE REQUIRED AND INCLUDED WITH THE SIGNING PLAN AND ARE PAID FAR SEPARATELY AS INDICATED WITH THE SIGNING PLAN.

DEPARTMENT OF TRANSPORTATION

SYSTEM ID: XXXX T.E. 1234
METER ADDRESS: 9999 GRAND AVE

LICENSED PROFESSIONAL ENGINEER

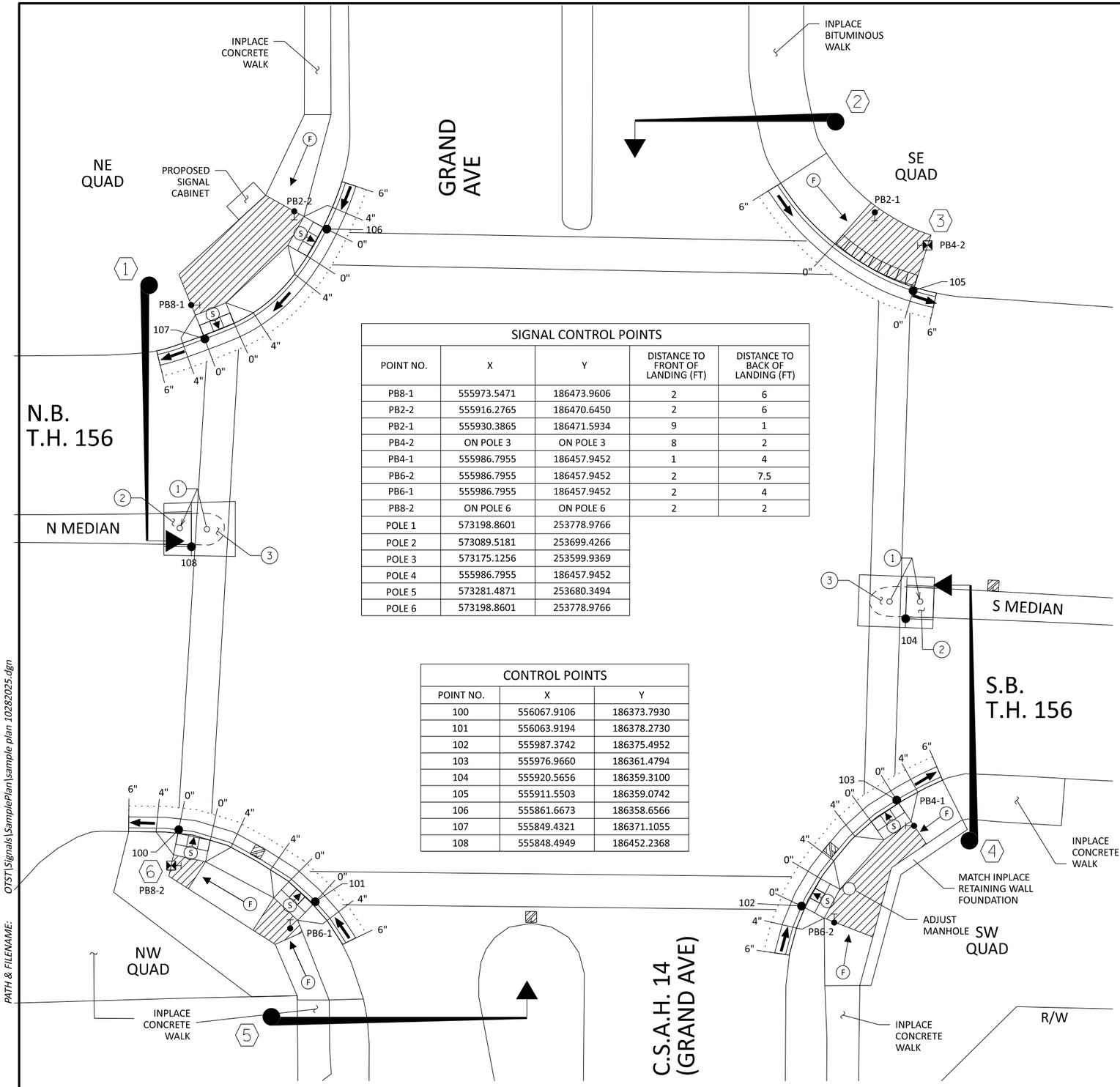
Will D. Zine
LIC. NO. 999666
DATE: 10-DEC-2025

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.

PAVEMENT MARKINGS LAYOUT/ SIGN PANEL DETAIL
T.H. 156 AT C.S.A.H. 14 (GRAND AVE.)
IN SOUTH ST. PAUL, DAKOTA COUNTY

STATE PROJ. NO. 9999-99
T.H. 156

SHEET NO. 11
TOTAL SHEETS 13



SIGNAL CONTROL POINTS				
POINT NO.	X	Y	DISTANCE TO FRONT OF LANDING (FT)	DISTANCE TO BACK OF LANDING (FT)
PB8-1	555973.5471	186473.9606	2	6
PB2-2	555916.2765	186470.6450	2	6
PB2-1	555930.3865	186471.5934	9	1
PB4-2	ON POLE 3	ON POLE 3	8	2
PB4-1	555986.7955	186457.9452	1	4
PB6-2	555986.7955	186457.9452	2	7.5
PB6-1	555986.7955	186457.9452	2	4
PB8-2	ON POLE 6	ON POLE 6	2	2
POLE 1	573198.8601	253778.9766		
POLE 2	573089.5181	253699.4266		
POLE 3	573175.1256	253599.9369		
POLE 4	555986.7955	186457.9452		
POLE 5	573281.4871	253680.3494		
POLE 6	573198.8601	253778.9766		

CONTROL POINTS		
POINT NO.	X	Y
100	556067.9106	186373.7930
101	556063.9194	186378.2730
102	555987.3742	186375.4952
103	555976.9660	186361.4794
104	555920.5656	186359.3100
105	555911.5503	186359.0742
106	555861.6673	186358.6566
107	555849.4321	186371.1055
108	555848.4949	186452.2368

LEGEND

- PROPOSED SIGNAL POLE
- PEDESTRIAN PUSH BUTTON STATION
- PEDESTRIAN PUSH BUTTON
- XXX — CONTROL POINTS AT GUTTER FLOW LINE
- TRUNCATED DOMES (SEE STANDARD PLATE 7038)
- CONSTRUCT CONCRETE CURB & GUTTER
- BITUMINOUS TREATMENT-SEE TABULATIONS
- X" — CURB HEIGHT
- LANDING AREA - 4' X 4' MIN. DIMENSIONS AND MAX 2.0% SLOPE IN ALL DIRECTIONS
- (S) — INDICATES PEDESTRIAN RAMP - SLOPE SHALL BE BETWEEN 5.0% MINIMUM AND 8.3% MAXIMUM IN THE DIRECTION SHOWN AND CROSS SLOPE SHALL NOT EXCEED 2.0%
- (F) — INDICATES PEDESTRIAN RAMP - SLOPE SHALL BE GREATER THAN 2.0% AND LESS THAN 5.0% IN THE DIRECTION SHOWN AND CROSS SLOPE SHALL NOT EXCEED 2.0%
- DRAINAGE FLOW ARROW
- CATCH BASIN

TABULATED QUANTITIES								
LOCATION	REMOVE CONC. WALK	REMOVE CONC. CURB & GUTTER	MILL AND PATCH BITUMINOUS PAVEMENT	CONCRETE WALK	CONCRETE CURB & GUTTER	CONCRETE CURB DESIGN V	TRUNCATED DOMES	
							SQUARE	35' RAD SECTION
	SQ FT	LIN FT	LIN FT	SQ FT	LIN FT	LIN FT	SF	SF
NE QUAD	293	45	45	548	45	-	24	-
SE QUAD	110	31	31	329	31	-	-	40
S MEDIAN	59	26	26	28	26	-	-	-
SW QUAD	-	20	391	129	20	-	24	-
NW QUAD	275	20	592	377	20	-	24	-
N MEDIAN	60	26	-	29	10	-	-	-
TOTALS	797	168	983	1440	136	-	72	40

NOTES:

1. PROVIDE A SAWCUT AT THE REMOVAL LIMIT OR THE NEAREST JOINT OF THE CONCRETE WALK AND CONCRETE CURB & GUTTER.
2. CONNECT LANDINGS TO EXISTING SIDEWALKS MAINTAINING A 4' WIDE (MINIMUM) PEDESTRIAN ACCESS ROUTE WITH A CROSS SLOPE THAT DOES NOT EXCEED 2.0% AND A RUNNING SLOPE THAT DOES NOT EXCEED 8.3%.
3. PERPENDICULAR RAMPS ARE 4' LONG UNLESS OTHERWISE SPECIFIED ELSEWHERE.
4. LOCATE NEW HANDHOLES OUTSIDE OF THE PAR.

(1) SALVAGE AND INSTALL SIGN.

(2) SHORTEN MEDIAN NOSE TO MAKE ROOM FOR NEW CROSSWALK. CONSTRUCT CONCRETE NOSE - SEE STANDARD PLATE 7113.

(3) CONSTRUCT CONCRETE PAVEMENT TO FILL THE AREA WHERE THE CONCRETE MEDIAN NOSE IS TO BE REMOVED. MATCH INPLACE PAVEMENT THICKNESS.

PLOTTED/REVISED: 10-DEC-2025

PLOT NAME: sample plan 10282025
PATH & FILENAME: OTST\Signals\SamplePlan\sample plan 10282025.dgn

DEPARTMENT OF TRANSPORTATION

SYSTEM ID: XXXX T.E. 1234
METER ADDRESS: 9999 GRAND AVE

LICENSED PROFESSIONAL ENGINEER

Will D. Zine
LIC. NO. 999666
DATE: 10-DEC-2025

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.

PEDESTRIAN CROSSWALK DETAILS
T.H. 156 AT C.S.A.H. 14 (GRAND AVE.)
IN SOUTH ST. PAUL, DAKOTA COUNTY

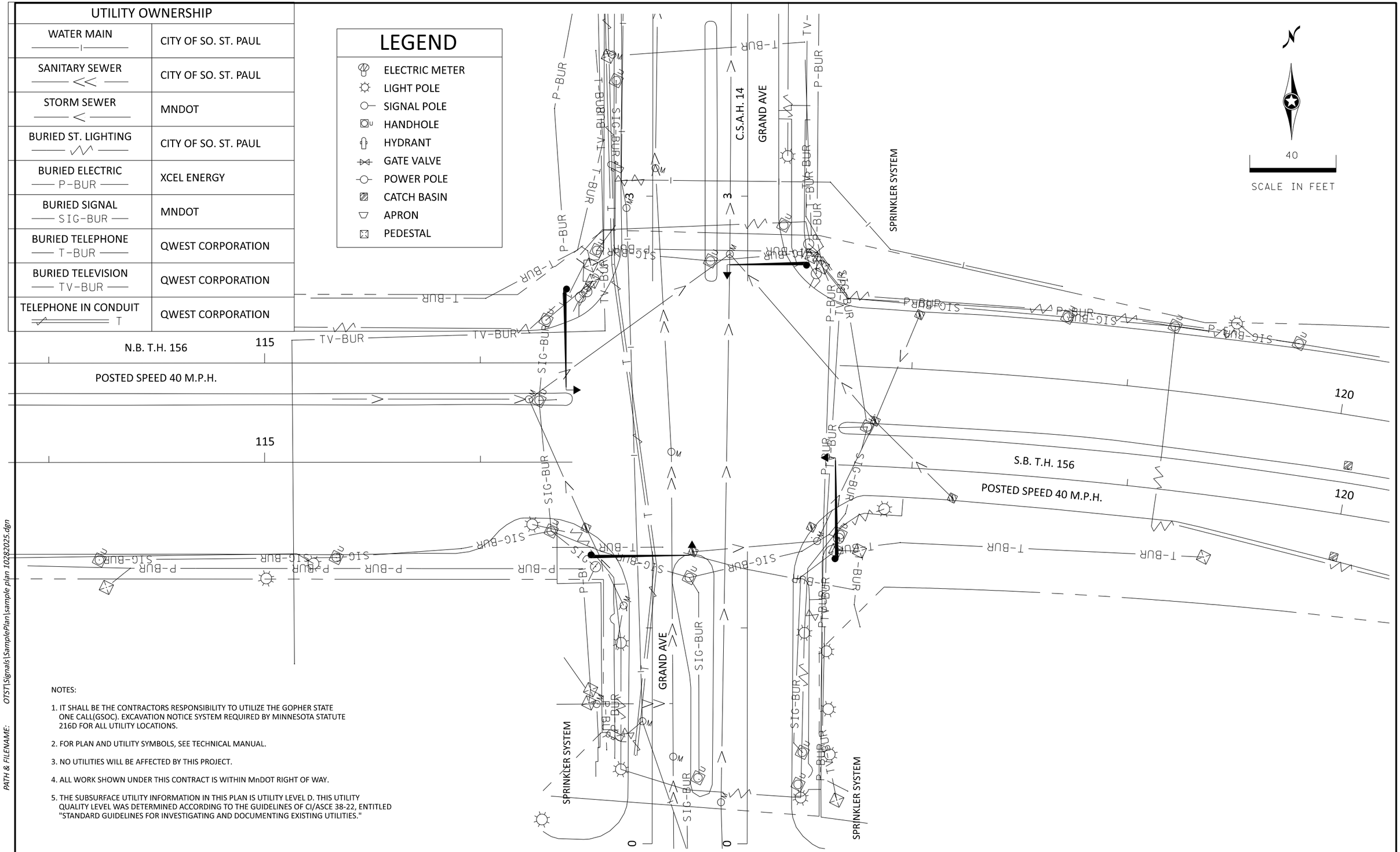
STATE PROJ. NO. 9999-99
T.H. 156

SHEET NO. 12
TOTAL SHEETS 13

UTILITY OWNERSHIP	
WATER MAIN	CITY OF SO. ST. PAUL
SANITARY SEWER	CITY OF SO. ST. PAUL
STORM SEWER	MNDOT
BURIED ST. LIGHTING	CITY OF SO. ST. PAUL
BURIED ELECTRIC P-BUR	XCEL ENERGY
BURIED SIGNAL SIG-BUR	MNDOT
BURIED TELEPHONE T-BUR	QWEST CORPORATION
BURIED TELEVISION TV-BUR	QWEST CORPORATION
TELEPHONE IN CONDUIT T	QWEST CORPORATION

LEGEND

- ELECTRIC METER
- LIGHT POLE
- SIGNAL POLE
- HANDHOLE
- HYDRANT
- GATE VALVE
- POWER POLE
- CATCH BASIN
- APRON
- PEDESTAL



NOTES:

1. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO UTILIZE THE GOPHER STATE ONE CALL(GSOC). EXCAVATION NOTICE SYSTEM REQUIRED BY MINNESOTA STATUTE 216D FOR ALL UTILITY LOCATIONS.
2. FOR PLAN AND UTILITY SYMBOLS, SEE TECHNICAL MANUAL.
3. NO UTILITIES WILL BE AFFECTED BY THIS PROJECT.
4. ALL WORK SHOWN UNDER THIS CONTRACT IS WITHIN MnDOT RIGHT OF WAY.
5. THE SUBSURFACE UTILITY INFORMATION IN THIS PLAN IS UTILITY LEVEL D. THIS UTILITY QUALITY LEVEL WAS DETERMINED ACCORDING TO THE GUIDELINES OF CI/ASCE 38-22, ENTITLED "STANDARD GUIDELINES FOR INVESTIGATING AND DOCUMENTING EXISTING UTILITIES."

PLOTTED/REVISED: 10-DEC-2025

PLOT NAME: sample plan 10282025

PATH & FILENAME: OTST\Signals\SamplePlan\sample plan 10282025.dgn

DEPARTMENT OF TRANSPORTATION

SYSTEM ID: XXXX T.E. 1234
METER ADDRESS: 9999 GRAND AVE

LICENSED PROFESSIONAL ENGINEER

Will D. Zine
LIC. NO. 999666
DATE: 10-DEC-2025

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.

UTILITIES LAYOUT
T.H. 156 AT C.S.A.H. 14 (GRAND AVE.)
IN SOUTH ST. PAUL, DAKOTA COUNTY

STATE PROJ. NO.	9999-99	SHEET NO.	13
T.H. 156		TOTAL SHEETS	13