

SECTION SUBDIVISION LINE	----
EXISTING R/W	----
NEW R/W	----
TEMP EASE	----
RAILROAD R/W	----
UNSURFACED RD. OR SHLD.	----
EDGE OF LAKE	----
SWAMP BOUNDARY	----
MISCELLANEOUS BOUNDARY	----
CORPORATE OR CITY LIMITS	////
PROPERTY LINE	----
RECREATIONAL TRAIL	----
ALIGNMENT STATIONS	110 + 112
ALIGNMENT POINTS	
RIVER OR CREEK	
DRAINAGE DITCH	
BRIDGE	
RAILROAD (SINGLE TRACK)	
RR CROSSING PAVEMENT MARKING	
RR CROSSING GATE	
RR CROSSBUCK SIGN	
RR CROSSBUCK SIGN W/LIGHTS	
BARBED WIRE FENCE	
CHAIN LINK FENCE	
WOVEN WIRE, COMBINATION WOVEN AND BARB	
WOOD FENCE	
BILLBOARD	
RETAINING WALL	
GUARDRAIL (CABLE)	
GUARDRAIL (PLATE BEAM)	
DRAIN TILE	
CULVERT	
CULVERT WITH APRONS	
WOODS OR BRUSH, NURSERY	
DECIDUOUS TREES	
CONIFER (EVERGREEN) TREES	
HEDGE	
BUSH OR SHRUB	
STUMP	
SWAMP OR MARSH	
MONUMENT (CI, ACT, ACP, BCP, ...)	
CONCRETE OR STONE MONUMENT	
IRON PIPE	
IRON PIN OR REBAR	
IRON PIN WITH BRASS DISK	
NAIL, PK NAIL, SPIKE, SFP, T-BAR, ...	
VERTICAL CONTROL	
HORIZONTAL CONTROL	
POWER POLE	
LIGHT POLE	
LIGHT AND TELEPHONE POLE	
LIGHT, TELEPHONE AND POWER POLE	
GUY POLE	
POLE ANCHOR	
TELEPHONE POLE	
TELEPHONE AND POWER POLE	
UNDERGROUND CABLE PEDESTAL	
TELEPHONE MANHOLE (VAULT)	
ELECTRIC CABLE IN CONDUIT	
TELEPHONE CABLE IN CONDUIT	
BURIED ELECTRIC CABLE	
BURIED TELEPHONE CABLE	
GAS LINE	
WATER LINE	
VALVE	
FIRE HYDRANT	
WATER MANHOLE	
WELL	
LAWN SPRINKLER HEAD	
MANHOLE	
CATCH BASIN	
SEPTIC TANK	
FORCE MAIN LIFT STA.	
SEWER LINE	
PERMANENT BARRICADE	
TRAFFIC SIGNAL LIGHT	
HAND HOLE	
ENTRANCE	
BUILDING	
SATELLITE DISH	
STEEL TOWER	
FLAG POLE	

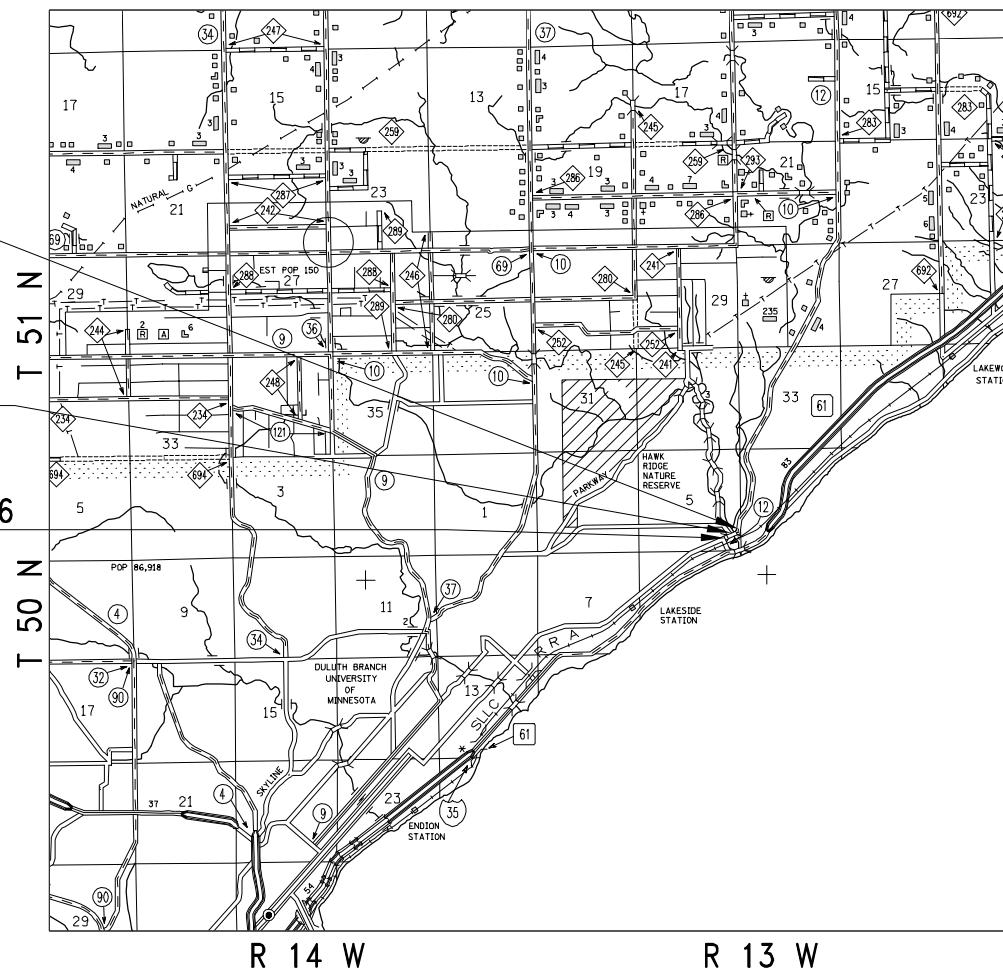
CONSTRUCTION PLAN FOR: APPROACH GRADING AND THE REHABILITATION OF BRIDGE
NO. 69504 (SLC BR. NO. 940)

LOCATED ON FROM THE SOUTHWESTERN TERMINUS OF C.S.A.H. 12 TO 0.16 MILES NORTHEAST, SEC. 04,
T50N, R13W

STATE AID PROJ. NO. 069-612-016

GROSS LENGTH	<u>908.89</u>	FEET	<u>0.172</u>	MILES
BRIDGES-LENGTH	<u>212.01</u>	FEET	<u>0.040</u>	MILES
EXCEPTIONS-LENGTH	<u>—</u>	FEET	<u>—</u>	MILES
NET LENGTH	<u>908.89</u>	FEET	<u>0.172</u>	MILES

WARNING
LOCATION OF UNDERGROUND UTILITIES
TO BE VERIFIED BY CONTRACTOR.
CALL BEFORE DIGGING.
GOPHER STATE ONE CALL
811 OR 1-800-252-1166
REQUIRED BY LAW



END PROJECT: S.A.P. 069-612-016
STA. 59+45.33

RECONSTRUCT BRIDGE NO. 69504
COUNTY BRIDGE NO. 940

BEGIN PROJECT: S.A.P. 069-612-016
STA. 50+36.44



ST. LOUIS COUNTY

SCALES		
PLAN	<u>10 ft.</u>	
PROFILE	<u> </u> ft. HORIZ.	<u> </u> ft. VERT.
INDEX MAP	<u>2500 ft.</u>	



PERFORMANCE
DRIVEN DESIGN.

LHBcorp.com
PROJ. NO. 170150.04

21 W. Superior St., Ste. 500 | Duluth, MN 55802 | 218.727.8446

PLAN REVISIONS		
DATE	SHEET NO.	APPROVED BY

THE 2018 EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION
"STANDARD SPECIFICATIONS FOR CONSTRUCTION" SHALL GOVERN.

<u>SHEET NO.</u>	<u>DESCRIPTION</u>
1	TITLE SHEET AND INDEX MAP
—	ESTIMATED QUANTITIES, STANDARD PLATES AND NOTES
—	TYPICAL SECTIONS
—	CONSTRUCTION DETAILS
— —	BRIDGE APPROACH TREATMENT
—	BRIDGE APPROACH PANEL
—	PAVEMENT JOINT DETAILS
— —	TRAFFIC CONTROL
— —	EROSION CONTROL DETAILS
— —	EXISTING CONDITIONS
— —	PLANNED CONSTRUCTION
— —	CROSS SECTIONS
B01—B —	BRIDGE NO. 69504

- THIS PLAN CONTAINS __ SHEETS -

R VALUE = <u>10</u>	2018 20 =	<u>599,415</u>
ADT (Current Year)	2019 =	<u>5369</u>
ADT (Future Year)	2039 =	<u>3906</u>
D (Directional Distr.)	=	<u>50-50%</u>
T (Heavy Commercial)	=	<u> </u>
Proj. Soil Factor	=	<u>130</u>
Shoulder Width	=	<u>VARIABLE</u>
Design Loading	=	<u>10 TON</u>

Design Speed 30 MPH
Based on STOPPING Sight Distance
Height Of Eye 3.5 ft. Height of object 2.0 ft.
Design Speed not achieved at:
STA. _____ TO STA. _____ MPH ____
STA. _____ TO STA. _____ MPH ____
Classification URBAN MINOR ART.
Traffic Lanes 2 @ 12' Each
Turning Lanes _____

DESIGNERS (LHB) Brad Scott, Gary Vonasek, Jon Siiter (Bridge)

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

Print Name: JOSEPH D. LITMAN

Signature: _____

Date: _____ Reg. #: 21833

Approved: St. Louis County Engineer _____ Date: _____

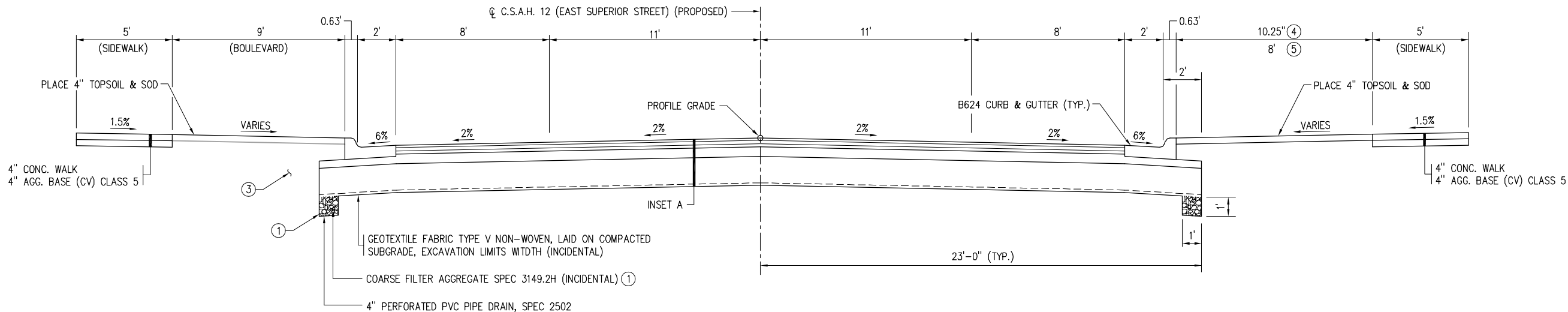
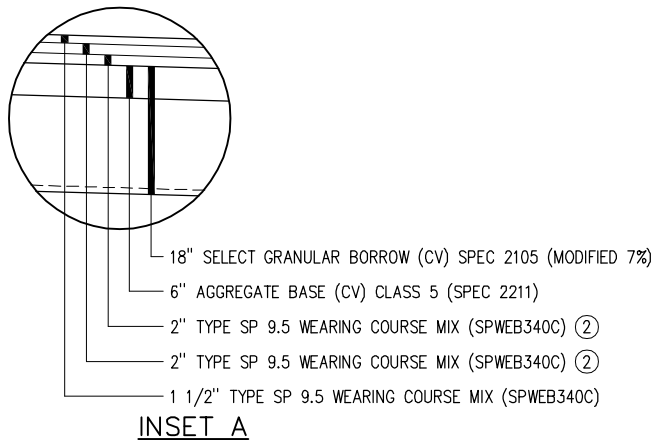
District State Aid Engineer: Reviewed for compliance with State Aid rules/policy _____ Date: _____

Recommended for Approval _____ Date: _____
State Bridge Engineer

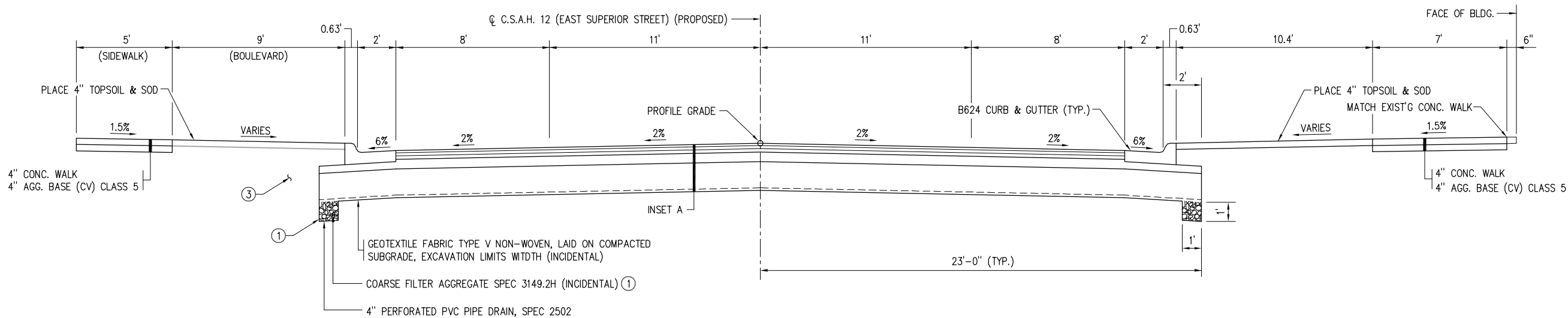
Approved for State Aid Funding _____ Date: _____
State Aid Engineer

STATE AID PROJECT NO. 069-612-016 C.P. 0012-287571 SHEET C01 OF ____ SHEETS

- KEY NOTES:
- ① WRAP COARSE FILTER AGGREGATE WITH TYPE 1 GEOTEXTILE FABRIC. (INCIDENTAL). OVERLAP JOINTS 1' MIN.
 - ② PLACE TACK COAT BETWEEN COARSE – SPEC. 2357 (INCIDENTAL).
 - ③ SELECT GRADING MATERIAL FROM EXCAVATION (INCIDENTAL).
 - ④ STA. 51+35.00 TO 52+68.08.
 - ⑤ STA. 52+68.08 TO 54+82.00.



TYPICAL SECTION
(STA. 51+00.37 TO 54+82.00)



TYPICAL SECTION
(STA. 50+36.44 TO 51+00.37)

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.

SIGNATURE

TYPED NAME

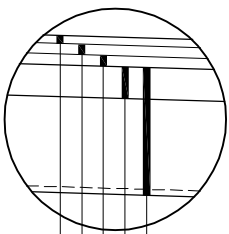
DATE

REG. NO.

S.A.P. 069-612-216 C.P. 0012-287571

TYPICAL SECTIONS AND DETAILS

SHEET 1 OF 2 SHEETS

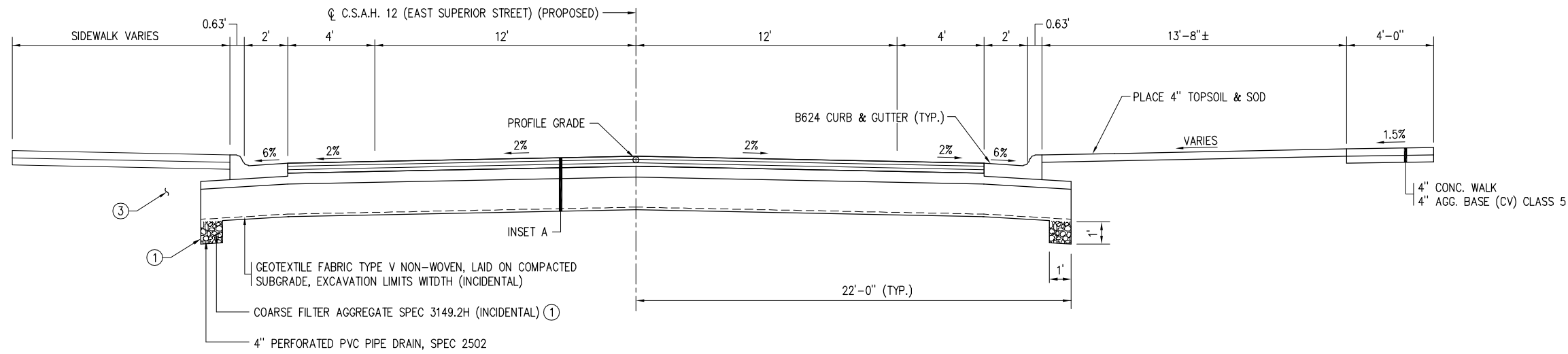


- 18" SELECT GRANULAR BORROW (CV) SPEC 2105 (MODIFIED 7%)
- 6" AGGREGATE BASE (CV) CLASS 5 (SPEC 2211)
- 2" TYPE SP 9.5 WEARING COURSE MIX (SPWEB340C) ②
- 2" TYPE SP 9.5 WEARING COURSE MIX (SPWEB340C) ②
- 1 1/2" TYPE SP 9.5 WEARING COURSE MIX (SPWEB340C)

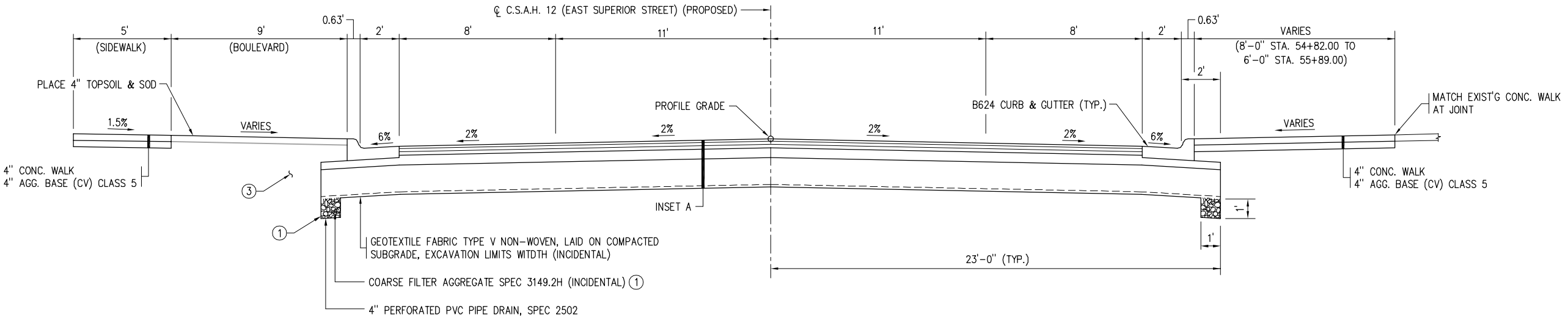
INSET A

KEY NOTES:

- ① WRAP COARSE FILTER AGGREGATE WITH TYPE 1 GEOTEXTILE FABRIC. (INCIDENTAL). OVERLAP JOINTS 1' MIN.
- ② PLACE TACK COAT BETWEEN COARSE - SPEC. 2357 (INCIDENTAL).
- ③ SELECT GRADING MATERIAL FROM EXCAVATION (INCIDENTAL).
- ④ VARIES, SEE PLAN SHEETS.



TYPICAL SECTION
(STA. ___+___ TO ___+___)



TYPICAL SECTION
(STA. 54+82.00 TO 55+89.50)

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.

SIGNATURE TYPED NAME

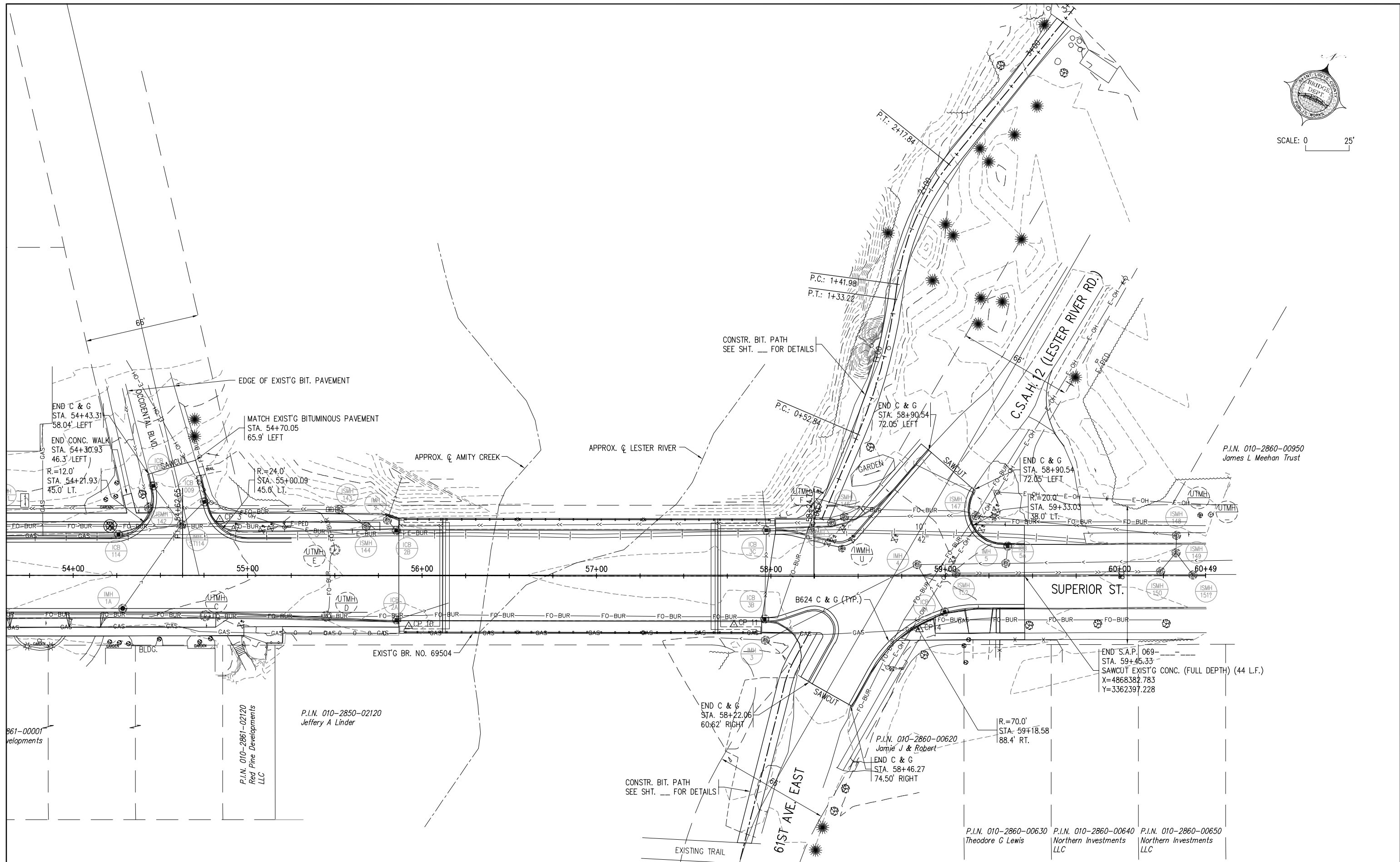
DATE
REG. NO.

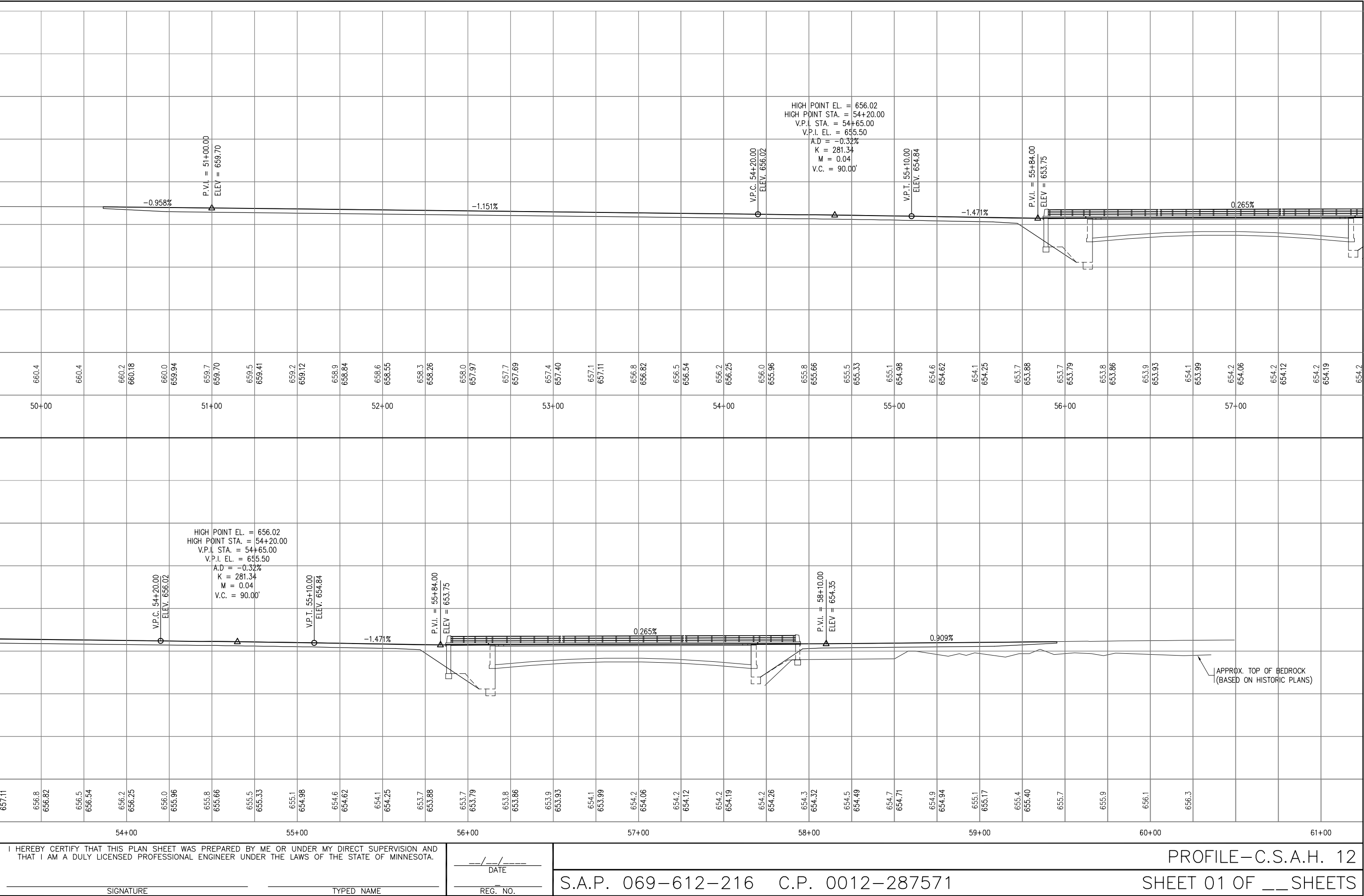
S.A.P. 069-612-216 C.P. 0012-287571

TYPICAL SECTIONS AND DETAILS
SHEET 2 OF 2 SHEETS



SCALE: 0 25'





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.

SIGNATURE _____ TYPED NAME _____

DATE _____
REG. NO. _____

S.A.P. 069-612-216 C.P. 0012-287571

PROFILE-C.S.A.H. 12
SHEET 01 OF __ SHEETS