Anoka County
MINNESOTA
Respectful, Innovative, Fiscally Responsible

ANOKA COUNTY TRANSPORTATION DIVISION

1440 BUNKER LAKE BLVD NW
ANDOVER, MN 55304
763-324-3176
highwaypermits@anokacountymn.gov

PERMIT NUMBER
25-325

RIGHT OF WAY x

COMMERCIAL ACCESS

CSAH 12

APPLICATION FOR PERMIT FOR INSTALLATION OF UTILITIES OR PLACING OBSTRUCTIONS ON THE COUNTY HIGHWAY SYSTEM
ALL APPLICANTS MUST BE REGISTERED PRIOR TO PERMIT APPROVAL

APPLICANT NAME Dresel Contracting

CONTACT PERSON Craig Meyer

ADDRESS 24044 July ave.

CITY Chisago City

PHONE NUMBER 6123281478

EMAIL CRAIG@DRESELCONTRACTING.COM

COMPANY OR INDIVIDUAL PERFORMING WORK Dresel Contracting

CONTACT PERSON Craig Meyer

EMAIL craig@dreselcontracting.com

PHONE NUMBER 612-328-1478

PERMIT WORK TO START 06/09/2025

PERMIT WORK TO BE COMPLETED 09/30/2025

DURATION OF JOB 3 months

ARE YOU BEING ASKED TO RELOCATE DUE TO A COUNTY PROJECT? Yes

ANOKA COUNTY PROJECT NUMBER SAP 002-612-035

WORK SITE ADDRESS 109th from CSAH 17 to CR53

CITY Blaine

METHOD OF INSTALLATION/CONSTRUCTION Overlays/Mucking

NATURE OF WORK Muck out the road bed, sand gravel and pave

Per approved plan on file at ACHD.

SURFACE TO BE DISTURBED

- x DITCH/BLVD
- x GRAVEL
- x BITUMINOUS
- x CONCRETE
- NONE

SITE PLAN

IF THE ROADWAY IS ENCROACHED, YOU MUST ATTACH A TRAFFIC CONTROL PLAN AND/OR REFERENCE THE MOST CURRENT VERSION OF THE MN TEMPORARY TRAFFIC CONTROL FIELD MANUAL (3+ DAYS REQUIRES PLANS TO BE SIGNED BY A LICENSED PE).

Per approved plan on file at ACHD.

IS SIGNING AND STRIPING REQUIRED? Yes

DEPTH FROM SURFACE NA
(60" minimum under county roads)

SIZE AND KIND OF PIPE/CABLE NA

NUMBER OF EXCAVATIONS 1

SIZE OF EXCAVATIONS 17 to 53
(Length, width, and depth)

LOCATION OF EXCAVATIONS ALL EXCAVATIONS ARE TO BE PROTECTED AT ALL TIMES AND THEN BACKFILLED WHEN UNATTENDED AND/OR OVERNIGHT

Specific written descriptions of excavations - if shown on attached drawing, drawing shall be specific with depth and distance from centerline, curb, or other distinguishable location. Traffic control plans cannot be approved without specific excavation descriptions.

excavate out muck and rebuild the rd.

Per approved plan on file at ACHD.

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GENERAL INFORMATION
One permit must be approved for each county road on which work will be performed prior to any work within the right of way by any utility/contractor. Emergency conditions which threaten the safety of the public and require immediate repair are exceptions to this rule. Under those circumstances, the utility/contractor is permitted to begin and/or complete the necessary repairs. The Anoka County Transportation Division (ACTD) shall be notified of emergency repairs as soon as feasible and a written permit is to be completed within two business days of occurrence.
A license-permit bond is generally required of the contractor as part of the registration process, the amount of which will be determined by the nature of the utility work.
A sketch or drawing shall accompany each permit application which will show the location of the proposed work/utility with reference to the county highway center line and right of way line. A complete set of plans is required for all sewer/water projects.
It shall be the responsibility of the applicant to determine which of the special conditions apply to each permit.
ACTD reserves the right to revoke any utility permit and halt work, if, upon inspection of any job site, the special conditions are not met, and/or a hazard exists for the applicant or public safety is threatened. **The failure to comply with the terms and conditions of any applicable Federal, State, Regional, and local laws, rules and regulations, including any provision of Anoka County's Right-of-Way Ordinance shall be cause for immediate revocation of a permit.**
The applicant shall notify ACTD immediately upon completion of project so that the ACTD can inspect the site to determine if restoration has been satisfactorily completed.
The undersigned hereby accepts the terms and conditions of this permit and the regulations of Anoka County, and agrees to fully comply therewith to the satisfaction of the ACTD. The county of Anoka, its officials, employees, and agents, shall be held harmless, by the applicant/permittee, from any demands, claims, lawsuits, or damages relating to the work described in this permit.

APPLICANT'S SIGNATURE	DocuSigned by: craig meyer 57F0146483CA482...	DATE 5/27/2025

AUTHORIZATION OF PERMIT
In consideration of the applicant's agreement to comply in all respects with the regulations of the ACTD covering such operations, permission is hereby granted for the work to be done as described in the above application. Said work to be done in accordance with the general conditions listed above and the special conditions required as hereby stated. It is expressly understood that this permit is conditioned upon replacement or restoration of the county highway and its right of way to their original or to a satisfactory condition. It is further understood that this permit is issued subject to the approval of local city or township authorities having joint supervision over said street or highway.

APPROVED BY:	DocuSigned by: Susan Burgmeier C5E91FE15CD44EE...	DATE 5/28/2025
TITLE: Traffic Technician		

NOT VALID UNLESS SIGNED BY ANOKA COUNTY

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SPECIAL CONDITIONS

TRAFFIC CONTROL

1) Detours
   a) Detailed detour layouts shall be submitted to the traffic engineer for approval.
   b) No detours shall be permitted without prior approval of the Anoka county traffic engineer.
   c) A ten day notice must be given prior to the installation of any detour.
   d) It shall be the responsibility of the applicant to notify Anoka county central communications, local government bodies, and any affected bus companies ten days prior to any road closures/detours.
   e) Immediately upon completion of work and/or detours, all posts, barricades, and signs shall be removed from the right of way.
2) Traffic control devices
   a) All traffic control devices, barricades, flashers, etc., shall be furnished by the applicant and shall be in accordance with the most recent edition of the Minnesota manual on uniform traffic control devices and temporary traffic control zone layouts – field manual of the same manual.

CONSTRUCTION REQUIREMENTS

1) Open cutting of bituminous or concrete surfaced roads will be allowed only at the discretion of the county engineer.
2) Neither supplies nor excavation materials shall be placed on the bituminous or concrete surface at any time.
3) No trenches will be allowed to remain open overnight.
4) Materials removed from the trench shall be used as backfill insofar as they are suitable. All backfill material shall conform to MNDOT specifications for compaction. The use of heavy equipment on top of trench, slapping with backhoe bucket and/or back casting to achieve compaction is prohibited. Any additional material required to back fill to the original grade shall be furnished by the applicant at no expense to the ACTD. All the base and surface courses damaged during construction operations shall be restored to a condition equal to or better than before operations began. The applicant shall be responsible for and restore any settlement.
5) All culverts, ditches, shoulders, and backslopes shall be restored to their original condition unless otherwise directed by the ACTD. Shoulders which have been previously constructed or reconstructed with special materials shall be replaced in kind. Restoration of signs, guardrails, guard posts, etc., are the sole responsibility of the applicant and shall be restored to their original condition.
6) All roadway maintenance required within the limits of the utility project that is related to the applicant's activities shall be the sole responsibility of the applicant for one year after completion of the project. Upon completion of the restoration work, the applicant shall request a final inspection by the ACTD. The ACTD's approved completion date shall be the starting date of the applicant's one-year responsibility.

HORIZONTAL BORING AND JACKING

1) All hard surface roadways shall be jacked or bored.
2) All crossings of Anoka County maintained roadbeds, shall be made by boring inside a casing or carrier pipe, or by jacking unless otherwise directed by the Anoka County Engineer. The auger shall lead the casing or carrier pipe by at least six inches whenever possible and never lead the carrier pipe by more than one inch.
3) The use of pneumatic devices to facilitate the roadbed crossings will be allowed in most cases with prior approval. In the event approval is not granted and applicant uses a pneumatic device to cross a roadbed and encounters an obstruction and/or unstable subbase material which makes forward or reverse motion of pneumatic device impossible, said pneumatic device then becomes part of the roadway subbase and permission to excavate to retrieve device will not be granted.
4) If a pneumatic device is used for the work permitted herein, the installation must be kept to a minimum of four feet below the surface of the roadway if the pneumatic device is less than two inches in diameter, and a minimum of five feet below the surface of the roadway if the pneumatic device is two inches in diameter or larger.

BITUMINOUS RESTORATION

1) The locations and dimensions of all openings to be made in the bituminous surface shall be approved by the ACTD prior to any cutting or any surface opening operations.
2) All openings in bituminous surfaces shall be cut in a straight line with the sides smooth and vertical. No ragged edges will be permitted. Cutting shall be done with a concrete saw.
3) All necessary dust control operations shall be carried out by the applicant at no expense to Anoka County.
4) The minimum requirement for subgrade replacement shall be the upper twelve inches of material and shall meet MNDOT specifications for class five placed in six inch layers compacted to one hundred percent of optimum density.
5) All manhole casings, gate valves, and other utility structures shall be set one quarter inch below the top of the finished surface.
6) Bituminous tack coat materials and application thereof shall conform to MNDOT specification 2357.
7) All bituminous surfacing shall be replaced as soon as practicable after the base construction. All bituminous surfacing shall be machine laid. Any exceptions must be approved by the ACTD. Bituminous surfacing shall be replaced to original pavement depth or to a minimum of six inches of bituminous mixture (2360), whichever is greater. Bituminous mixtures must be placed in lifts not exceeding three inches in thickness for base and binder courses and not exceeding two inches for the wear course.
8) All surface restoration regardless of size shall conform to existing grades.
9) Any unnecessary or negligent damage to bituminous surface in conjunction with the installation and/or repair of a utility shall be cut out and replaced in kind as directed by the ACTD.

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CONCRETE RESTORATION

1) Curb and gutter, sidewalks, and driveways shall be restored in accordance with MNDOT specifications 2531 and 2521.

UTILITY LINES

1) There shall be only a single pole line on the county right of way on either side of the center line thereof.
2) Exact locations of longitudinal installations on county highways shall be located as directed by the ACTD.

SECTION CORNER MONUMENTS

1) Utility locations shall not interfere with the location of any section, quarter, witness, or right of way monuments. For assistance in locations, contact the Anoka County Surveyor's Office.
2) The applicant shall be responsible for replacement of any existing property irons disturbed during construction.
3) The applicant shall notify the Anoka County Surveyor's Office three working days in advance of any anticipated disturbance of any section, quarter, witness, or right of way monuments.
4) Any monument disturbed during the course of construction, shall be reset by the Anoka County Surveyor's Office at the expense of the applicant.

ATTACHING TO BRIDGES/STRUCTURES

1) No utility is permitted to be hung from, or otherwise attached to, any bridge or structure without having detailed plans approved by the Anoka County Engineer. These plans are to show approaches to the structure, method of installation, type, and dimension of housing for the utility.

ADDITIONAL PROVISIONS

1) All subcontractors, installers, and crew shall possess a physical or electronic copy of all documents in relation to the approved permit prior to the commencement of work and be kept on site. This includes, but it not limited to the following:
   a) Approved permit
   b) Any/all traffic control plans and/or layouts
2) Shall notify Anoka County Permits at 763-324-3176 or highwaypermits@anokacountymn.gov
   a) At least 36 hours prior to the commencement of work
   b) With time frame of proposed of work
   c) Anticipated traffic control
   d) When work is complete - including restorations - to request a final inspection
3) No work during inclement weather or when plows are out in any capacity
4) All traffic control shall be in accordance with the most current version of the MnDOT Temporary Traffic Control Field Manual
5) For staking of right-of way or proposed infrastructure, contact Chris Osterhus at 763-324-3189 a minimum of 48 hours prior to the commencement of work.

INITIAL	DS

No additional comments.

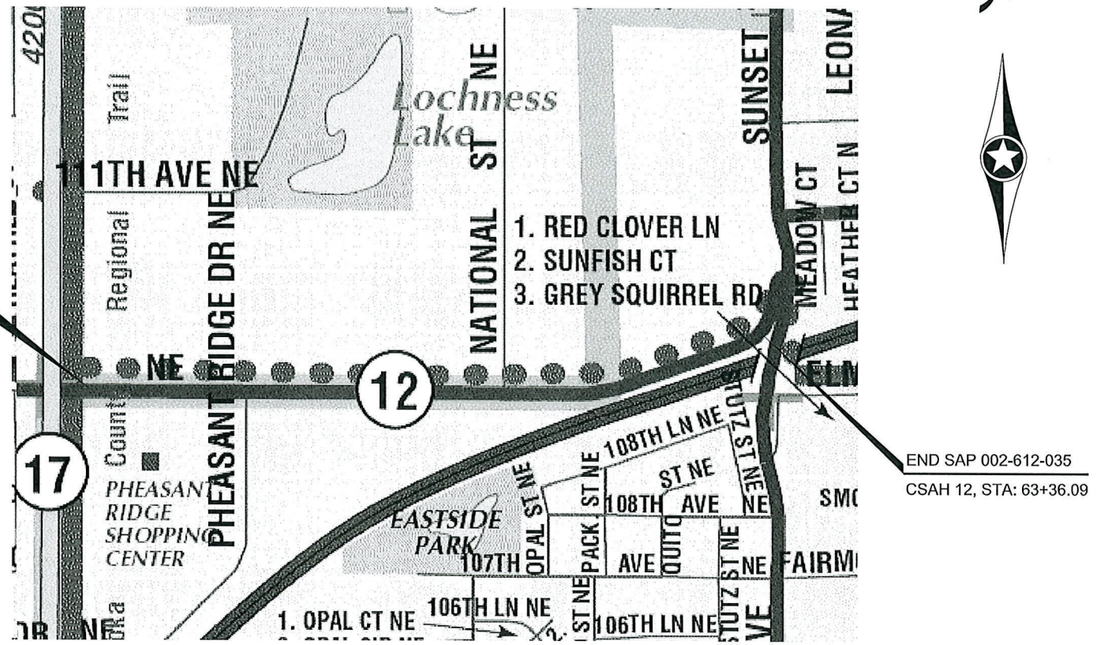
MINNESOTA DEPARTMENT OF TRANSPORTATION
ANOKA COUNTY

CONSTRUCTION PLAN FOR RECONDITIONING, MILL BITUMINOUS, BITUMINOUS RECLAMATION, BITUMINOUS SURFACING
STORM SEWER REPAIRS, SHOULDER / RIGHT TURN LANE & AND BYPASS LANE CONSTRUCTION

LOCATED ON CSAH 12 BETWEEN LEXINGTON AVE NE AND 1000' W. OF SUNSET AVE NE

CSAH 12

GROSS LENGTH	4980.09	FEET	0.943 MILES
EXCEPTIONS-LENGTH	0.00	FEET	0.000 MILES
NET LENGTH	4980.09	FEET	0.943 MILES

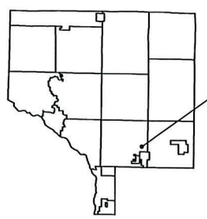


The subsurface utility information in this plan is utility quality level "D". This utility quality level was determined according to the guidelines of CI/ASCE 38-02, entitled "Standard Guidelines for the Collection and depiction of Existing Subsurface Utility Data."

WARNING
HIGH-PRESSURE PIPELINE(S)
Excavation and/or Construction Prohibited
Without compliance with State One-Call, AND
Without Written Permission From
MAGELLAN PIPELINE COMPANY, L.P.

DESIGN DESIGNATION (CSAH 12)

ESAL 20	815,618	FUNCTIONAL CLASSIFICATION	A-MINOR EXPANDER
R VALUE	35	NO. OF TRAFFIC LANES	2
ADT (2025)	6904	NO. OF PARKING LANES	0
PROJ. ADT (2045)	6904	DESIGN SPEED	55 MPH
TON DESIGN	10	STOPPING SIGHT DISTANCE BASED ON:	
		HEIGHT OF EYE	3.5'
		HEIGHT OF OBJECT	2.0'
		DESIGN SPEED NOT ACHIEVED AT :	
		STA. 48+50 TO STA. 56+50 MPH	45



PROJECT LOCATION

CITY OF BLAINE
ANOKA COUNTY
MN/DOT TRANSPORTATION DISTRICT - METRO
SECTION 13,24
TOWNSHIP 31 NORTH
RANGE 22,23 WEST

PLAN SYMBOLS

COUNTY LINE
TOWNSHIP OR RANGE LINE
SECTION LINE
QUARTER LINE
SIXTEENTH LINE
RIGHT OF WAY LINE
SLOPE EASEMENT
EXISTING RIGHT OF WAY
PROPERTY LINE
CORPORATE OR CITY LIMITS
RETAINING WALL
RAILROAD
RAILROAD RIGHT OF WAY
RIVER OR CREEK
DRAINAGE DITCH
CULVERT
DROP INLET
GUARD RAIL
BARBED WIRE FENCE
WOVEN WIRE FENCE
CHAIN LINK FENCE
WOOD FENCE
STONE WALL OR FENCE
HEDGE
LOWLAND
TIMBER
ORCHARD
BRUSH
NURSERY
CATTLE GUARD
OVERPASS (Highway Over)
UNDERPASS (Highway Under)
BRIDGE
BUILDING (One Story Frame) 1-S-F
F-FRAME C-CONCRETE
S-STONE T-TILE
B-BRICK ST-STUCCO
RAILROAD CROSSING BELL
RAILROAD CROSSING GATE
MANHOLE M.H.
CATCH BASIN C.B.
FIRE HYDRANT
CAST IRON MONUMENT
IRON PIN
GRAVEL PIT Ⓖ
SAND PIT Ⓢ
BORROW PIT Ⓑ
ROCK QUARRY Ⓠ

UTILITY SYMBOLS

POWER POLE LINE
TELEPHONE OR TELEGRAPH POLE LINE
JOINT TELEPHONE & POWER ON POWER POLES
ON TELEPHONE POLES
ANCHOR
STEEL TOWER
STREET LIGHT
PEDESTAL (Cable Terminal)
GAS MAIN
WATERMAIN
TELEPHONE CABLE IN CONDUIT
ELECTRIC CABLE IN CONDUIT
TELEPHONE MANHOLE
ELECTRIC MANHOLE
BURIED TELEPHONE CABLE T-BUR
BURIED ELECTRIC CABLE P-BUR
OVERHEAD UTILITY CABLE OHU
SEWER (Sanitary or Storm)
SEWER MANHOLE

SCALES

PLAN 0'
PROFILE HORIZONTAL 0'
VERTICAL 0'
X-SECTIONS HORIZONTAL 0'
VERTICAL 0'
INDEX MAP 0' 2000'

GOVERNING SPECIFICATIONS

THE 2020 EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR CONSTRUCTION" SHALL GOVERN.

ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE LATEST EDITION OF THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, INCLUDING THE LATEST FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS.

INDEX

THIS PLAN CONTAINS 110 SHEETS

Approved Joseph MacPherson Digitally signed by Joseph MacPherson Date: 2025.03.28 13:18:57 -05'00' ,20__
ANOKA COUNTY ENGINEER

Approved Daniel Schluender 3.29 ,20 25
CITY OF BLAINE ENGINEER

Dan Erickson Digitally signed by Dan Erickson Date: 2025.04.03 13:59:42 -05'00' ,20__
DISTRICT STATE AID ENGINEER: REVIEWED FOR COMPLIANCE WITH STATE AID RULES/POLICY

Dan Erickson Digitally signed by Dan Erickson Date: 2025.04.03 14:00:03 -05'00' ,20__
FOR STATE AID ENGINEER: APPROVED FOR STATE AID FUNDING

NO	DATE	BY	CKD	APPR	REVISION	01/30/2025	7:03:55 AM
1	1/29/2025	JF	ND		REMOVED "SUPPLEMENTAL SPEC" FROM GOVERNING SPECS		
2	1/29/2025	JF	ND		ADDED "FOR " BEFORE STATE AID ENGINEER		
3	1/29/2025	JF	ND		MATCHED INDEX NAMES TO PAGE NAMES		
4	1/29/2025	JF	ND		REMOVED MAP BOARDER		

NAME: P:\002-612-035 17 to 53\Plan\002612035_TS.dgn

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: NICHOLAS J DOBDA
SIGNATURE:
DATE: 01/30/2025 LICENSE NO. 49046

DRAWN BY JJF DATE 12/01/24
DESIGN BY JJF DATE 12/01/24
CHECKED BY NJD DATE 01/28/25

ANOKA COUNTY HIGHWAY DEPT.

SAP 002-612-035

TITLE SHEET

Sheet 1 of 110 Sheets

STATEMENT OF ESTIMATED QUANTITIES 002-612-035

TAB	NOTE	ITEM NO.		ITEM DESCRIPTION	UNIT	TOTAL PROJECT QUANTITIES ESTIMATED
		2021.501	00010	MOBILIZATION	LUMP SUM	1
A		2101.505	00020	CLEARING	ACRE	0.185
A		2101.505	00030	GRUBBING	ACRE	0.185
		2104.502	00910	REMOVE DRAINAGE STRUCTURE	EACH	1
M		2104.502	01240	REMOVE SIGN TYP C	EACH	22
M		2104.502	01690	REMOVE SIGN PANEL TYPE C	EACH	3
B,C		2104.503	00195	SAWING CONCRETE PAVEMENT (FULL DEPTH)	LIN FT	165
B,C		2104.503	00205	SAWING BITUMINOUS PAVEMENT (FULL DEPTH)	LIN FT	697
E		2104.503	00255	REMOVE PIPE CULVERTS	LIN FT	90
B,C		2104.503	00315	REMOVE CURB AND GUTTER	LIN FT	223
B,C	10	2104.504	00120	REMOVE BITUMINOUS PAVEMENT	SQ YD	7768
B,C		2104.518	00140	REMOVE CONCRETE WALK	SQ FT	120
C		2104.518	00220	REMOVE CONCRETE MEDIAN	SQ FT	160
AA,CC		2106.507	00010	EXCAVATION-COMMON	CU YD	1055
AA,CC	34	2106.507	00080	SELECT GRANULAR EMBANKMENT (CV)	CU YD	9696
AA,CC		2106.507	00130	COMMON EMBANKMENT (CV)	CU YD	2036
DD	32	2106.507	00050	EXCAVATION CHANNEL AND POND(EV) (FLOODPLAIN MITIGATION)	CU YD	338
	33	2106.601	00015	DEWATERING	LUMP SUM	1
AA,CC	34	2106.607	00030	EXCAVATION SPECIAL	CU YD	8642
	3	2123.510	00020	MOTOR GRADER	HOUR	30
	4	2123.510	00130	DOZER	HOUR	30
	5	2130.523	00010	WATER	M GALLON	20
BB		2211.507	00170	AGGREGATE BASE (CV) CLASS 5	CU YD	1276
F	6	2211.509	00070	AGGREGATE BASE CLASS 5	TON	29
B	7	2215.504	00010	FULL DEPTH RECLAMATION	SQ YD	9511
B	8	2215.507	00010	HAUL FULL DEPTH RECLAMATION (LV)	CU YD	507
BB		2221.507	00160	SHOULDER BASE AGGREGATE (CV) CLASS 5	CU YD	133
B	9,11	2232.504	00060	MILL BITUMINOUS SURFACE (2.0")	SQ YD	8873
G		2301.602	00071	DRILL AND GROUT REINF BAR (EPOXY COATED)	EACH	17
F		2357.506	00010	BITUMINOUS MATERIAL FOR TACK COAT	GALLON	1878
C	12	2360.509	20100	TYPE SP 12.5 BITUMINOUS MIXTURE FOR PATCHING	TON	19
F		2360.509	23205	TYPE SP 12.5 NON-WEARING COURSE MIXTURE (3;B)	TON	832
F		2360.509	23300	TYPE SP 12.5 WEARING COURSE MIXTURE (3;C)	TON	5689
F	13	2360.509	23300	TYPE SP 12.5 WEARING COURSE MIXTURE (3;C)	TON	134
E		2501.502	23018	18" CS SAFETY APR & GRATE DES 3128	EACH	2
		2501.502	44018	18" RC SAFETY APRON	EACH	2
E		2501.503	12018	18" CS PIPE CULVERT	LIN FT	22
		2501.503	13185	18" RC PIPE CULVERT CLASS V	LIN FT	50
		2501.602	57018	SAFETY GRATE FOR 18" RC APRON	EACH	2
C	14,15	2504.602	00033	ADJUST GATE VALVE	EACH	4
C	16	2506.502	06000	CASTING ASSEMBLY	EACH	18
C	17	2506.503	02420	CONSTRUCT DRAINAGE STRUCTURE DESIGN 48-4020	LIN FT	4
C	18	2506.602	06040	GROUT CATCH BASIN OR MANHOLE	EACH	21
E,G,H		2511.509	00012	RANDOM RIPRAP CLASS II	TON	26
G	20	2521.518	00040	4" CONCRETE WALK	SQ FT	60
G		2521.618	00400	CONCRETE CURB RAMP WALK	SQ FT	123
C		2531.503	02061	CONCRETE CURB AND GUTTER DESIGN B412 (MODIFIED)	LIN FT	70
C,G		2531.503	02120	CONCRETE CURB AND GUTTER DESIGN B424	LIN FT	133
G		2531.604	00100	CONCRETE DRAINAGE FLUME	SQ YD	14
G		2531.618	00010	TRUNCATED DOMES	SQ FT	40
J	19	2550.602	10000	LOOP DETECTOR DESIGN NMC	EACH	4
		2563.601	00001	TRAFFIC CONTROL SUPERVISOR	LUMP SUM	1
	1,21,22,23	2563.601	00010	TRAFFIC CONTROL	LUMP SUM	1
K	24	2563.613	01100	PORTABLE CHANGEABLE MESSAGE SIGN	UNIT DAY	20
M	31	2564.502	00113	INSTALL SIGN PANEL TYPE C	EACH	3
M	30	2564.502	00213	INSTALL SIGN TYP C	EACH	23
M		2564.518	00130	SIGN PANELS TYP C	SQ FT	188
M		2564.602	02340	DELINEATOR / MARKER	EACH	5
		2573.501	00030	EROSION CONTROL SUPERVISOR	LUMP SUM	1
C	25	2573.502	00110	STORM DRAIN INLET PROTECTION	EACH	38
E		2573.502	00140	CULVERT END CONTROLS	EACH	2
H		2573.503	00023	SILT FENCE, TYPE MS	LIN FT	6084
H	2, 26	2574.507	00100	COMMON TOPSOIL BORROW	CU YD	905
H		2574.508	00013	FERTILIZER TYPE 3	POUND	594
H		2575.504	00325	ROLLED EROSION PREVENTION CATEGORY 25	SQ YD	9624
H		2575.505	00021	SEEDING	ACRE	1.988
H		2575.508	25121	SEED MIXTURE 25-121	POUND	103.6
H		2575.508	33261	SEED MIXTURE 33-261	POUND	10.1
H	27	2575.508	40003	HYDRAULIC REINFORCED FIBER MATRIX	POUND	7753
H		2575.523	00020	RAPID STABILIZATION METHOD 3	M GALLON	11.9
	28, 35	2581.503	00004	4" REMOVABLE PREFORMED PAVEMENT MARKING TAPE	LIN FT	2428
L	29, 35	2582.503	30104	4" SOLID LINE MULTI-COMP	LIN FT	18521
L	29, 35	2582.503	30204	4" BROKEN LINE MULTI-COMP	LIN FT	700
L	29, 35	2582.503	30308	8" DOTTED LINE MULTI-COMP	LIN FT	36
L	29, 35	2582.503	30404	4" DBLE SOLID LINE MULTI-COMP	LIN FT	4114
L	35	2582.503	76124	24" SOLID LINE PREF THERMO GR IN	LIN FT	103
L	35	2582.518	04000	PAVT MSSG PREF THERMO (ARROWS)	SQ FT	207.36
L	35	2582.518	08000	CROSSWALK PREF THERMO	SQ FT	523

CONSTRUCTION NOTES

1	THE CONTRACTOR SHALL AFTER THE AWARD OF CONTRACT AND A MINIMUM OF 7- DAYS PRIOR TO THE PROJECT PRECON, SUBMIT A COMPLETE "TEMPORARY TRAFFIC CONTROL PLAN" (CONSTRUCTION SIGNING, TEMPORARY PAVEMENT MARKINGS AND RELATED ITEMS) PRODUCED AND SIGNED BY A "LICENSED PROFESSIONAL ENGINEER" THAT SHALL INCLUDE LAYOUTS AND QUANTITIES FOR THE COUNTY TO REVIEW AND APPROVE BEFORE ANY WORK SHALL TAKE PLACE. A DETOUR PLAN AND DETOUR QUANTITES HAVE BEEN INCLUDED WITH THIS PLAN, QUANTITIES FOR THE DETOUR SHALL BE INCLUDED AND PAID FOR UNDER ITEM 2563.601 TRAFFIC CONTOL. THE DETOUR MAY NOT BE INSTALLED PRIOR TO JUNE 16TH AND MUST BE OPEN TO TRAFFIC BY SEPT 1ST. THIS DETOUR MAY NOT BE INPLACE FOR MORE THEN 8 WEEKS FROM WHEN IT IS INSTALLED. CONTRACTOR RESPONSIBLE TO CONTACT ANOKA COUNTY, CITY OF BLAINE, CITY OF BLAINE EMERGENCY RESPONSE FIRE AND POLICE AND POSTAL SERVICE A MINIMUM OF 7 DAYS PRIOR TO DETOUR BEING INSTALLED.
2	EXISTING TOPSOIL AND EXCAVATED MATERIALS MUST NOT BE PUSH OUT BEYOND CONSTRUCTION LIMITS AND MUST REMAIN INSIDE THE CONSTRUCTION LIMITS DUE TO WETLAND IMPACTS AND THREATENED AND ENDANGERD BOTANICAL AREAS OF CONCERN.
3	ITEM USED TO MOVE EXCESS RECLAIM MATERIAL AT THE RECLAIM AREA LIMITS TO CREATE A SMOOTH TRANSITION BETWEEN THE PROPOSED AND EXISTING PAVEMENT AND FOR SUPERELEVATION / GRADE CORRECTION.
4	TO BE USED FOR DITCH GRADING AND FOR DRESSING DISTURBED AREAS.
5	WATER TO BE USED FOR DUST CONTROL AS DIRECTED BY THE ENGINEER.
6	ITEM TO BE USED AS BASE FOR CATCH BASIN REPAIRS AND NATIONAL STREET GRAVEL BASE STREET APPROACH.
7	THIS WORK INCLUDES SPREADING, WATERING, COMPACTING, SHAPING, AND MAINTAINING THE BLENDED RECLAIMED MATERIAL TO THE SPECIFIC PROFILE AND CROSS SECTION.
8	ITEM USED TO HAUL EXCESS RECLAIM FROM TIE-IN POINTS AND REUSED ON SITE. USED FOR PROFILE CORRECTION AREAS. ITEM INCLUDES PLACEMENT, SHAPING, COMPACTION, AND MAINTENANCE OF MATERIAL.
9	ITEM INCLUDES 2" DEEP MILL WEST END OF PROJECT STA 13+56 TO 24+25, PAVED ST APPROACHES AND END OF PROJECT STA 63+36; SEE DETAILS FOR DIMENSIONS.
10	BITUMINOUS REMOVAL AREA FROM STA 25+25 TO 32+90 WILL REQUIRE THE MILLED AND OR RECLAIMED BITUMINOUS MATERIAL TO BE REMOVED FULL DEPTH FOR PLACEMENT OF NEW BITUMINOUS. THIS REMOVED MATERIAL IS TO BE USED AS BASE MATERIAL ON THIS PROJECT AND MUST MEET SPECIFICATIONS FOR AGGREGATE BASE SPEC 2211.
11	DETAIL MILLING AROUND MANHOLES, CATCH BASINS, GATE VALVES, AND ALONG CURB LINE IS INCIDENTAL TO THIS ITEM.
12	ITEM INCLUDES BITUMINOUS PATCHING AROUND NEW CURB, STORM STRUCTURE REPAIRS, AND ANY POTHOLES.
13	NATIONAL ST & PHEASANT ST APPRACHES SHALL BE PAVED AFTER MAINLINE, AND BEFORE FINAL STRIPING.
14	GATE VALVES TO BE ADJUSTED ONLY AS NECESSARY AS DETERMINED BY THE ENGINEER.
15	EACH ADJUST GATE VALVE INCLUDES TEMPORARY ADJUSTMENT BELOW RECLAIM / AGGREGATE BASE ELEVATION PRIOR TO OR IN CONJUNCTION WITH RECLAIMING OPERATION, AND FINAL ADJUSTMENT TO FINISH GRADE BETWEEN PAVING BASE AND WEAR LIFTS
16	ITEM INCLUDES FULL REPLACEMENT OF CASTING ADJUSTMENT RINGS. SEE STORM TABULATIONS FOR RING HEIGHTS. CASTINGS IN ROADWAY SHALL BE INSTALLED BETWEEN BASE AND WEAR LIFT PAVING
17	PAY HEIGHT IS MEASURED FROM INVERT OF OUTLET PIPE TO TOP OF PRECAST CONCRETE STRUCTURE PLUS AN ALLOWANCE OF 0.70 FEET FOR THE DEPTH OF THE CONCRETE BASE, REGARDLESS OF ITS ACTUAL THICKNESS. CONCRETE ADJUSTMENT RINGS ARE INCIDENTAL. CONNECTIONS TO EXISTING STORM SEWER ARE INCIDENTAL.
18	ITEM INCLUDES GROUTING OF INVERTS, DOGHOUSES, RINGS, STRUCTURES AND CASTINGS AS DIRECTED BY PLAN AND ENGINEER. SEE DRAINAGE TAB.
19	LOOP REPLACEMENT REQUIRED ONLY IF DAMAGED DURING CONSTRUCTION OPERATIONS BUT NOT EXPECTED. EXISTING SIGNAL PLANS ARE INCLUDED AT THE END OF THIS PLAN FOR EXISTING LOOP LOCATIONS.
20	ITEM ALSO USED FOR CONCRETE MEDIAN.
21	CONTRACTOR SHALL FURNISH, INSTALL, AND MAINTAIN TEMPORARY SIGNAGE WHENEVER EXISTING SIGNAGE IS REMOVED. TEMPORARY SIGNAGE SHALL BE INCIDENTAL TO TRAFFIC CONTROL.
22	ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO, AND BE INSTALLED IN ACCORDANCE WITH, THE MOST CURRENT REVISION OF THE "MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES". "DO NOT PASS, PASS WITH CARE, NO CENTER STRIPE, AND STOP HERE ON RED SIGNS SHALL BE INPLACE WHENEVER PERMANENT PAVEMENT MARKINGS ARE NOT PRESENT.
23	DO NOT PASS, PASS WITH CARE AND NO CENTER STRIPE SIGNS MUST BE INPLACE DURING MILLING, RECLAIMING OR PAVING OPERATIONS.
24	2 MESSAGE BOARDS, ONE ON THE EACH END OF PROJECT, SHALL BE INSTALLED 10 DAYS PRIOR TO ANY CONSTRUCTION; REFERENCE DETUR PLAN FOR DETAILS.
25	ALL DRAINAGE STRUCTURES AFFECTED BY THIS PROJECT MUST HAVE INLET PROTECTION.
26	ITEM USED FOR INSLOPE SHAPING FROM GRAVEL SHOULDER TO DITCH BOTTOM AS DIRECTED BY THE ENGINEER.
27	TYPE 3 FERTILIZER AND TYPE 25-121 SEED ARE INCIDENTAL TO THIS ITEM. SEE "BASIS OF PLANNED QUANTITIES" FOR APPLICATION RATES.
28	CENTERLINE AND LANE DESIGNATION SKIPS TO BE APPLIED AS SOON AS POSSIBLE ON MILLED SURFACE AND EACH NEW LIFT OF PAVEMENT; SKIPS MUST BE INPLACE BEFORE THE CONTRACTOR LEAVES FOR THE DAY. CONTRACTOR IS TO REMOVE PRIOR TO FINAL STRIPING.
29	FINAL STRIPING SHALL BE INSTALLED WITHIN 72 HOURS OF COMPLETION OF MAINLINE WEAR COURSE PAVING. CANNOT BE INSTALLED SOONER THAN 48 HOURS.
30	ALL EXISTING MEDIAN SIGNS SHALL HAVE THE MEDIAN BASE REPLACED WITH "KLEEN BREAK" CONCRETE MEDIAN BASE MOUNTS. CONTRACTOR TO NOTE PAYMENT FOR THESE KLEEN BREAK MOUNTS AND INSTALLATION SHALL BE INCIDENTALL TO ITEM 2564.502 "INSTALL SIGN TYPE C ". DETAIL FOR KLEEN BREAK MOUNTS CAN BE FOUND IN DETAILS, PLAN SHEET 31 AND PLAN SHEET 71.
31	ALL EXISTING "RIGHT TURN LANE" & "LEFT TURN LANE" SIGNS SHALL BE REPLACED WITH "RIGHT LANE MUST TURN RIGHT" & "LEFT LANE MUST TURN LEFT" SIGNS.
32	EXCAVATION COMMON "FLOOD PLANE" USED TO CREATE FLOOD PLANE ON COUNTY OWNED PROPERTY SEPARATE FROM ROADWAY QUANTITIES. SEE TAB DD. EXCESS MATERIAL EXCAVATED CAN BE USED OUTSIDE OF ROADWAY CONSTRUCTION AT THE DISCRETION OF THE ENGINEER. EXCESS QUANTITIES FOLLOWING THAT SHALL BE PUSHED TO A LOCATION NEARBY THE EXCAVATION, AND DETERMINED BY THE ENGINEER.
33	DEWATERING IS EXPECTED TO BE NEEDED TO ACHIEVE COMPACTION FOR THE WIDENING AREAS EXCAVATED TO ADD SHOULDERS , RTL AND BYPASS LANE. SEE GEOTECH REPORT IN THE SPECIAL PROVISIONS. CONTRACTOR IS RESPONSIBLE TO OBTAIN DEWATERING PERMIT, SEE SWPPP.
34	EXCAVATION SPECIAL SHALL BE THE EXCAVATED AREA BELOW THE COMMON EXCAVATION IN THE SHOULDER/ RTL & BYPASS LANE WIDENING AREAS OF WET OR UNSUITABLE MATERIALS - SEE CROSS SECTIONS & GEOTECH REPORT. THIS AREA SHALL BE REPLACED WITH COMPACTED SELECT GRANULAR BORROW.
35	ALL PAVEMENT MARKINGS WILL BE TESTED POST INSTALLATION BY ANOKA COUNTY. ANY PAVEMENT MARKINGS THAT DO NOT MEET RETRCREFLECTIVITY PER MNDOT SPEC. 2582.3C.3, CONTRACTOR IS RESPONSIBLE FOR REPLACING PAVEMENT MARKINGS AT ENGINEERS REQUEST AT NO COST TO ANOKA COUNTY.

NO	DATE	BY	CKD	APPR	REVISION
1	4/01/25	JF	ND		UPDATED EARTHWORK ITEM NUMBERS AND TAB LETTERS

NAME: P:\002-612-035 17 to 53\Plan\002612035_SEQ_TABS.dgn 04/03/2025 10:40:47 AM

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: NICHOLAS J DOBDA

SIGNATURE:

DATE: 04/03/2025 LICENSE NO. 49046

DRAWN BY JJF DATE 12/01/24

DESIGN BY JJF DATE 12/01/24

CHECKED BY NJD DATE 01/28/25

ANOKA COUNTY

ANOKA COUNTY HIGHWAY DEPT.

SAP 002-612-035

STATEMENT OF ESTIMATED QUANTITIES

Sheet 2 of 110 Sheets

THE FOLLOWING STANDARD PLATES, APPROVED BY THE FEDERAL HIGHWAY ADMINISTRATION, SHALL APPLY ON THIS PROJECT

MNDOT STANDARD PLATES

PLATE NO.	DESCRIPTION
3007F	SHEAR REINFORCEMENT FOR PRECAST DRAINAGE STRUCTURES
4011E	PRECAST CONCRETE BASE
4020J	MANHOLE OR CATCH BASIN (FOR USE WITH OR WITHOUT TRAFFIC LOADS) (2 SHEETS)
4024A	48" DIA. PRECAST SHALLOW DEPTH CATCH BASIN - DESIGN SD
4026B	CONCRETE ENCASED CONCRETE ADJUSTING RINGS
4108F	ADJUSTING RINGS FOR CATCH BASINS AND MANHOLES
4110F	COVER CASTING FOR MANHOLE (FOR USE IN ALL TRAFFIC AREAS) – CASTING NO. 715 AND 716
4134A	CURB BOX CASTING FOR CATCH BASIN (FOR DESIGN B CURBS)- CASTING NO. 825
7100H	CONCRETE CURB AND GUTTER (DESIGN B AND DESIGN V)
7111J	INSTALLATION OF CATCH BASIN CASTINGS (CONCRETE CURB AND GUTTER)
8000K	TEMPORARY CHANNELIZERS (3 SHEETS)

BASIS OF PLANNED QUANTITIES

2357	BITUMINOUS MATERIAL FOR TACK COAT	0.05 GAL / SQ YD
2360	ALL BITUMINOUS PAVEMENT	115 LBS / SQ YD / IN
2581	REMOVABLE PREFORM PAVEMENT MARKING TAPE	2' AT 50' INTERVALS
2574	FERTILIZER TYPE 3	350 LBS./ ACRE
2575	SEED MIXTURE 25-121	61 LBS./ ACRE
2575	SEED MIXTURE 33-261	35 LBS./ ACRE
2575	HYDRAULIC REINFORCED FIBER MATRIX	3900 LBS./ ACRE
2575	RAPID STABILIZATION METHOD 3	6 MGAL / ACRE
2580	INTERIM PAVEMENT MARKINGS	PROJECT LENGTH X LANES X LIFTS / 50 X 3'

INDEX OF TABULATION CHARTS

SOILS NOTES

1. TOP OF THE GRADING SUBGRADE (GRADING GRADE) IS DEFINED AS THE BOTTOM OF THE CLASS 5 AGGREGATE BASE LAYER.
2. BOTTOM OF THE SUBBASE GRADE SHALL BE DEFINED AS THE BOTTOM OF THE 1' SUBGRADE EXCAVATION (SEE CROSS-SECTIONS FOR DETAILS).
3. CONSTRUCT EMBANKMENTS IN ACCORDANCE WITH SPECIFICATION 2106 AND THE MnDOT ROAD DESIGN MANUAL. ALL EMBANKMENT CORE-WIDENING MATERIAL SHALL BE SELECT GRADING MATERIAL OR COMMON EMBANKMENT (CV) IN ACCORDANCE WITH OTHER REQUIREMENTS PROVIDED IN SPEC. 2106.
4. SELECT GRANULAR MATERIAL SHALL MEET THE REQUIREMENTS OF MnDOT SPEC. 3149.2B2.
5. ALL TOPSOIL STRIPPING WILL BE CONSIDERED TO BE A PART OF EXCAVATION - COMMON. TOPSOIL SHALL BE DEFINED AS EXISTING SOILS WHICH MEET MnDOT SPEC. 3877 THAT WOULD BE SUITABLE FOR REUSE. STRIP ALL TOPSOIL AND INPLACE SLOPE DRESSING WHERE PRESENT IN AREAS TO BE DISTURBED BY CONSTRUCTION AND REUSE AS SLOPE DRESSING. FOR ESTIMATING PURPOSES, THE DEPTH OF TOPSOIL AVAILABLE IS CONSIDERED TO BE 4 INCHES. CONTRACTOR SHALL VERIFY PRIOR TO PLACING BID.
6. SUITABLE GRADING MATERIAL SHALL BE USED TO BACK FILL THE EMBANKMENT UNDER THE NEW ROADWAY CORE, UP TO THE BOTTOM OF THE GRADING SUBGRADE.
7. SLOPE DRESSING ON THE PROJECT IS DEFINED AS THE TOPSOIL OR OTHER SOIL PLACED DURING PREVIOUS CONSTRUCTION TO PROVIDE A MEDIUM FOR ESTABLISHING TURF.
8. UNSUITABLE SOILS ARE DEFINED AS SOILS WHICH DO NOT MEET OR ARE NOT MANUFACTURED TO MEET ANY OF THE ABOVE DEFINED CATEGORIES, AND ARE THEREFORE NOT REUSABLE AS STRUCTURAL BACKFILL OR EMBANKMENT WITHIN THE ROADWAY CORE.
9. SUITABLE GRADING MATERIAL OBTAINED FROM COMMON EXCAVATION NOT MEETING THE REQUIREMENTS OF MnDOT SPEC. 3149.2B1 SHALL BE USED OUTSIDE THE ROADWAY CORE ON THE PROJECT AS APPROVED BY THE ENGINEER.
10. UNSUITABLE MATERIALS ARE TOPSOIL, PAVEMENT OR CONCRETE DEBRIS, PEAT, MUCK AND ORGANIC OR OTHER UNSTABLE SOILS.
11. UNLESS OTHERWISE SPECIFICALLY ALLOWED OR REQUIRED BY THE CONTRACT, BITUMINOUS AND CONCRETE ITEMS DISTURBED BY CONSTRUCTION SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE RECYCLED TO THE EXTENT ALLOWED IN BASE AND SURFACING ITEMS OR DISPOSED OF OUTSIDE THE RIGHT OF WAY IN ACCORDANCE WITH SPEC. 2104.3C3.
12. WHERE CONNECTING TO THE INPLACE ROADWAYS AT THE TERMINI OF PROPOSED NEW CONSTRUCTION, CUT VERTICALLY TO THE BOTTOM OF THE INPLACE SURFACING OR TO THE BOTTOM OF THE NEW SURFACING DESIGN, WHICHEVER IS DEEPER, THEN AT A 1:20 TAPER TO THE BOTTOM OF THE RECOMMENDED SUBGRADE EXCAVATION.
13. WHERE MATCHING INTO INPLACE CROSSROADS, CUT VERTICALLY TO THE BOTTOM OF THE INPLACE SURFACING OR TO THE BOTTOM OF NEW SURFACING DESIGN, WHICHEVER IS DEEPER, THEN AT A 1:4 TAPER TO THE BOTTOM OF THE RECOMMENDED SUBGRADE EXCAVATION.
14. WHERE WIDENING ADJACENT TO EXISTING PAVEMENT, CUT VERTICALLY TO THE BOTTOM OF THE CLASS 5 AGGREGATE BASE AND THEN AT A 1V:1/2H SLOPE TO THE BOTTOM OF THE RECOMMENDED SUBGRADE EXCAVATION (AS SHOWN ON THE TYPICAL SECTIONS AND THE CROSS SECTIONS). BACKFILL PROMPTLY TO AVOID UNDERMINING THE EXISTING PAVEMENT.
15. CONTRACTOR SHALL PROVIDE A FULL DEPTH SAWCUT WHERE PLACING NEW PAVEMENT ADJACENT TO INPLACE PAVEMENT TO ENSURE A UNIFORM JOINT. IF NO ITEM FOR THIS WORK IS SPECIFICALLY CALLED OUT, THEN THE WORK SHALL BE INCIDENTAL WITH NO DIRECT COMPENSATION.
16. CONTRACTOR SHALL PROVIDE A UNIFORM BITUMINOUS TACK COAT BETWEEN ALL BITUMINOUS LAYERS AND PRIOR TO PLACING ANY BITUMINOUS MIXTURES ON EXISTING PAVEMENT IN ACCORDANCE WITH SPEC. 2357.
17. EMBANKMENT QUANTITIES SHOWN ON THE EARTHWORK TABULATION REPRESENT ALL EARTHWORK QUANTITIES BELOW THE PROPOSED GRADING GRADE OF ALL PERMANENT ROADWAYS AND TOPSOIL DRESSING. QUANTITIES REQUIRED ABOVE THE GRADING GRADE ARE PROVIDED IN DETAIL ON THE BITUMINOUS SUMMARY TAB.
18. THE CONSTRUCTION LIMITS AS SHOWN IN THE PLANS REPRESENT THE POINT OF INTERSECTION BETWEEN THE REQUIRED FILL OR CUT SLOPE AND THE EXISTING GROUND LINE AS DEPICTED ON THE CROSS SECTIONS. THE CONSTRUCTION LIMITS DO NOT INCLUDE AREAS REQUIRED FOR SLOPE ROUNDING.
19. DITCH BOTTOMS, TOE OF FILL, CUT RUNOUTS AND THE TOP EDGE OF BACKSLOPES SHALL BE ROUNDED REGARDLESS OF THE SECTION USED ON THE CROSS SECTION SHEETS.
20. ANY DEBRIS WHICH MAY BE ENCOUNTERED DURING GRADING SHALL BE DISPOSED OF BY THE CONTRACTOR OFF THE PROJECT RIGHT OF WAY IN A SUITABLE DISPOSAL AREA AS APPROVED BY THE ENGINEER.
21. UNSUITABLE SOILS NOT USED ON THE PROJECT SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED FROM THE PROJECT AND DISPOSED OF IN ACCORDANCE WITH MnDOT SPECIFICATIONS.
22. INPLACE BITUMINOUS PAVEMENT THICKNESS SHOWN IN TYPICALS FOR INFORMATION ONLY, NO WARRANTY IS MADE OR IMPLIED WITH THIS INFORMATION. CONTRACTOR MAY VERIFY PAVEMENT DEPTH PRIOR TO PLACING BID.
23. COMPACTION OF AGGREGATE BASE SHOULD BE IN ACCORDANCE WITH MnDOT "MODIFIED PENETRATICN INDEX METHOD." COMPACTION OF SELECT GRANULAR MATERIAL SHOULD BE IN ACCORDANCE WITH MnDOT "SPECIFIED DENSITY METHOD."
24. COMPACTION OF THE MAINLINE BASE AND BINDER BITUMINOUS LIFTS SHALL BE BY THE "SPECIFIED DENSITY METHOD." COMPACTION OF MAINLINE WEAR AND ENTRANCES SHALL BE BY THE "QUALITY COMPACTION METHOD."
25. NO OVER-EXCAVATION WILL BE ALLOWED INSIDE THE COUNTY'S RIGHT OF WAY OR POND LOCATIONS FOR THIS PROJECT.

NO	DATE	BY	CKD	APPR	REVISION
1	1/29/25	JF	ND		UPDATED PLATE INFO, REMOVED PLATE 8132B
1	4/01/25	JF	ND		UPDATED INDEX WITH TAB LETTERS AND SHEET NUMBERS

NAME: P:\002-612-035 17 to 53\Plan\002612035_SEQ_TABS.dgn 04/01/2025 2:24:27 PM

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: NICHOLAS J DOBDA

SIGNATURE: [signature]

DATE: 04/03/2025 LICENSE NO. 49046

DRAWN BY JJF DATE 12/01/24

DESIGN BY JJF DATE 12/01/24

CHECKED BY NJD DATE 01/28/25

ANOKA COUNTY

ANOKA COUNTY HIGHWAY DEPT.

SAP 002-612-035

STANDARD PLATES, BASIS OF QUANTITIES, INDEX & SOILS NOTES

Sheet 3 of 110 Sheets

CLEARING & GRUBBING — A

NOTE	STATION		STATION	OFFSET			CLEARING	GRUBBING
							ACRE	ACRE
	40+80	-	43+00	250 RT	-	100 RT	0.185	0.185
						TOTAL	0.185	0.185

GENERAL NOTES:
TREES IN FLOODPLAIN MITIGATION AREA WERE CLEARED DURING THE WINTER PRIOR TO CONTRACT.
THESE TREES SHALL BE GRUBBED AND REMOVED ALONG WITH THE TREES THAT HAD BEEN CUT DOWN IN THE WINTER AND GRADED TO FLOODPLAIN MITIGATION ELEVATION

REMOVALS — B

ALI	LOCATION	STATION	TO	STATION	MILLING	RECLAIM		SAWING		REMOVE		
					2" MILL	FULL DEPTH RECLAIMATION	HAUL FULL DEPTH RECLAIMATION	CONCRETE FULL DEPTH	BITUMINOUS FULL DEPTH	CONCRETE CURB & GUTTER	CONCRETE WALK	BITUMINOUS PAVEMENT
					SQ YD	SQ YD	CU YD	LIN FT	LIN FT	LIN FT	SQ FT	SQ YD
ALIRD5	MAINLINE EB	13+56		24+25	3815							
	MAINLINE WB	13+78		24+25	5036							
	MAINLINE EB	24+25							47			
	MAINLINE WB	24+25							30			
	MAINLINE	24+25		32+90								7231
	PHEASENT S.	26+13		27+96					72			322
	PHEASENT N.	26+45		27+78					96			153
	S.W. PED RAMP	26+57						12	27	23	60	5
	MAINLINE	32+90		63+37		9511	600					
	NATIONAL ST	45+00		45+73	11				24			
	END PROJECT	63+36			11				41			
				TOTAL	8873	9511	600	12	337	23	60	7711

REMOVALS GENERAL NOTES:
ADDITIONAL REMOVAL ITEMS CAN BE FOUND IN TAB C "STORM SEWER" AND TAB E "CULVERTS".

NO	DATE	BY	CKD	APPR	REVISION

NAME: P:\002-612-035 17 to 53\Plan\002612035_SEQ_TABS.dgn 01/30/2025 7:04:00 AM

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: NICHOLAS J DOBDA
SIGNATURE:
DATE: 01/30/2025 LICENSE NO. 49046

DRAWN BY JJF DATE 12/01/24
DESIGN BY JJF DATE 12/01/24
CHECKED BY NJD DATE 01/28/25

ANOKA COUNTY HIGHWAY DEPT.

SAP 002-612-035

TABULATIONS

Sheet 4 of 110 Sheets

STORM SEWER

C

NO.	STA.	O/S	TYPE	ACTION	NEW CASTING TYPE	RING HEIGHT (INCIDENTAL)	CASTING ASSEMBLY	STORM DRAIN INLET PROTECTION	SAWING CONCRETE FULL DEPTH	SAWING BITUMINOUS FULL DEPTH	REMOVE DRAINAGE STRUCTURE	REMOVE CURB & GUTTER	REMOVE CONCRETE WALK	REMOVE CONCRETE MEDIAN	REMOVE BITUMINOUS PAVEMENT	CONCRETE CURB & GUTTER DESIGN B412 (MOD)	CONCRETE CURB & GUTTER DESIGN B424	TYPE SP 12.5 BITUMINOUS MIXTURE FOR PATCHING	GROUT CATCH BASIN OR MANHOLE	CONSTRUCT DRAINAGE STRUCTURE DESIGN 48"	CONNECT TO EXISTING STORM SEWER (INCIDENTAL)	ADJUST GATE VALVE	NOTES
						LIN FT	EACH	EACH	LIN FT	LIN FT	EACH	LIN FT	SQ FT	SQ FT	SQ YD	LIN FT	LIN FT	TON	EACH	LIN FT	EACH	EACH	
100	15+87	-67	CB	GROUT				1											1				
101	16+30	-6	CB	RE-RING	A	0.6	1	1	14	14		10		20	3	10		1					GROUT DOGHOUSE
102	16+31	-1	CB	RE-RING	A	0.9	1	1	14	14		10		20	3	10		1					
103	15+88	30	CB	RE-RING	C	0.9	1	1	5	14		10			3		10	1					
104	17+47	-62	CB	RE-RING	C	0.2	1	1	5	14		10			3		10	1					
105	17+33	-6	CB	RE-RING	A	0.5	1	1	14	14		10		20	3	10		1					GROUT DOGHOUSE
106	17+31	-1	CB	GROUT				1											1				GROUT DOGHOUSE
107	17+47	30	CB	RE-RING	C	0.6	1	1	5	14		10			3		10	1					
108	17+87	-6	CB	RE-RING	A	0.4	1	1	14	14		10		20	3	10		1					
109	17+87	-1	CB	GROUT				1											1				
110	18+54	-61	CB	GROUT				1											1				
111	18+71	30	CB	RECON.	C	0.5	1	1	5	14	1	10			3		10	1		4.0	2		24" WEST 4.4 INV., 24" EAST 4.4' INV.
112	20+38	-61	CB	RE-RING	C	0.9	1	1	5	14		10			3		10	1					
113	20+39	-27	CB	GROUT				1											1				
114	20+38	-1	CB	RE-RING	A	0.4	1	1	14	14		10		20	3	10		1					
115	20+38	30	CB	RE-RING	C	0.4	1	1	5	14		10			3		10	1					
116	22+37	-58	CB	GROUT				1											1				
117	22+37	-25	CB	RE-RING	A	0.7	1	1	14	14		10		20	3	10		1					
118	22+37	-3	CB	GROUT				1											1				
119	22+37	31	CB	GROUT				1											1				GROUT DOGHOUSE
120	24+37	-53	CB	GROUT				1											1				
121	24+38	-20	CB	GROUT				1											1				
122	24+38	-11	CB	GROUT				1											1				GROUT DOGHOUSE
123	24+38	37	CB	GROUT				1											1				
124	26+13	37	CB	RE-RING	C	0.2	1	1	5	14		10	60		3		10	1					
125	26+66	-101	CB	GROUT				1											1				
126	27+43	-104	CB	GROUT				1											1				
127	28+11	-57	CB	RE-RING	C	0.8	1	1	5	30		30			6		10	2					
128	29+71	-56	CB	RE-RING	C	0.6	1	1	5	14		10			3		10	1					
129	29+71	-6	CB	RE-RING	A	1.0	1	1	14	14		10		20	3	10		1					
130	29+71	0	CB	GROUT				1											1				
131	29+71	31	CB	RE-RING	C	0.6	1	1	5	14		10			3		10	1					
132	31+86	-43	CB	GROUT				1											1				GROUT DOGHOUSE
133	31+86	-9	CB	GROUT				1											1				
134	31+86	0	CB	GROUT				1											1				
135	31+86	31	CB	RE-RING	C	0.8	1	1	5	14		10		20	3		10	1					CLEAN
136	32+57	-6	CB	GROUT				1											1				GROUT DOGHOUSE / CLEAN
137	32+57	0	CB	GROUT				1											1				GROUT DOGHOUSE / CLEAN
200	17+88	28	MH	GROUT															1				GROUT DOGHOUSE
500	26+58	46	GV	ADJUST																		1	
501	27+00	48	GV	ADJUST																		1	
502	26+99	52	GV	ADJUST																		1	
503	27+84	-53	GSV	ADJUST																		1	ADJUST GAS VALVE SEE NOTE (1)
					TOTAL	11.0	18	38	153	268	1	200	60	160	57	70	110	19	21	4.0	2	4	

NOTE: CATCH BASIN REPAIRS WITHIN THE BITUMINOUS REMOVAL AREA STA 24+25 - STA 32+90 ARE SHOWN AND QUANTIFIED WITH SAWCUTS / BITUMINOUS PATCHING ETC. THESE STRUCTURES MUST BE REPAIRED PRIOR TO FINAL PAVING. IF THE STRUCTURES ARE REPAIRED PRIOR TO EXISTING BITUMINOUS REMOVAL, FOLLOW DETAIL SHEET PAGE 29. *NOTE: IF THE BITUMINOUS IS REMOVED PRIOR TO REPAIRS, ITEMS SHOWN ON THE DETAIL SHEET PAGE 29 THERE WILL BE NO PAYMENT FOR THESE ITEMS AT THESE LOCATIONS.

(1) CONTRACTOR TO CONTACT GAS COMPANY TO ARRANGE GAS COMPANY TO ADJUST VALVE OR GET APPROVAL TO ADJUST FROM GAS COMPANY PRIOR TO ANY MODIFICATION.

NO	DATE	BY	CKD	APPR	REVISION

NAME: P:\002-612-035 17 to 53\Plan\002612035_SEQ_TABS.dgn 01/30/2025 7:04:01 AM

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: NICHOLAS J DOBDA

SIGNATURE:

DATE: 01/30/2025 LICENSE NO. 49046

DRAWN BY JJF DATE 12/01/24

DESIGN BY JJF DATE 12/01/24

CHECKED BY NJD DATE 01/28/25

ANOKA COUNTY

ANOKA COUNTY HIGHWAY DEPT.

SAP 002-612-035

TABULATIONS

Sheet 5 of 110 Sheets

CASTING ASSEMBLIES SUMMARY — D

ASSEMBLY	RING OR FRAME CASTING	COVER OR GRATE CASTING	CURB BOX	DESCRIPTION	NOTES	QUANTITY
A	NEENAH R-3030	L	YES	NEENAH R-3030-L		7
C	NEENAH R-3250-DVSP	V	YES	NEENAH R-3250-DVSP		11

ALL CASTING HEIGHTS ARE TO BE VERIFIED IN THE FIELD

ALL MANHOLE COVERS SHOULD BE LABELED AS STORM OR SANITARY

NEW MANHOLE CASTINGS TO BE INSTALLED FLUSH WITH THE MILLED ASPHALT SURFACE.

ALL MANHOLES TO BE WRAPPED WITH INFI- SHIELD. THIS WORK IS INCIDENTAL TO THE CASTING ASSEMBLEY.

ADJUSTING RINGS TO BE INSTALLED AND GLUED DURING THE PAVING OPERATION.

ADJUSTING RINGS TO BE RECESSED 1/4" FROM TOP OF FINISHED MAT

CULVERTS — E

ALI	LOCATION	STA	OFFSET	INV	TO	STA	OFFSET	INV	REMOVE PIPE CULVERTS	INSTALL 18" RC SAFETY APRON	INSTALL 18" RC PIPE CULVERT CLASS V	INSTALL 18" SAFETY GRATE FOR RC APRON	INSTALL 18" CS SAFETY APR & GRATE DES 3128	INSTALL 18" CS PIPE CULVERT	INSTALL CULVERT END CONTROLS	INSTALL RANDOM RIPRAP CLASS II
									LIN FT	EACH	LIN FT	EACH	EACH	LIN FT	EACH	TON
ALIRD5	NATIONAL ST	44+95	-42	898.50		45+72	-46	899.00	60	2	50	2			1	7
	FIELD ENT	51+30	-33	901.85		51+60	-33	902.05	30				2	22	1	7
								TOTAL	90	2	50	2	2	22	2	14

BITUMINOUS AND AGGREGATE SUMMARY — F

ALI	LOCATION	STA	TO	STA	BASE CLASS 5	4" PREFORMED REMOVABLE TAPE	BITUMINOUS MATERIAL FOR TACK COAT	TYPE SP 12.5 NON-WEAR (3,B)	TYPE SP 12.5 WEAR (3,C)	TYPE SP 12.5 WEAR ST APPROACH (3,C)
					TON	LIN FT	GALLON	TON	TON	TON
ALIRD5	MAINLINE EB	13+55		24+24		321	191		439	
	MAINLINE WB	13+78		24+24		321	252		579	
	MAINLINE	24+24		32+90		689	723	832	1663	
	PHEASANT S.	26+13		27+96	7		32			74
	PHEASANT N.	26+45		27+78	7		15			35
	MAINLINE	32+90		63+37		1097	654		3008	
	NATIONAL ST	45+00		45+73	15		11			24
				TOTAL	29	2428	1878	832	5689	134

BITUMINOUS AND AGGREGATE NOTES:
ADDITIONAL BITUMINOUS AND AGGREGATE ITEMS CAN BE FOUND IN TAB C "STORM SEWER".

CONCRETE — G

ALI	LOCATION	STA	TO	STA	OFFSET	CONCRETE CURB & GUTTER DESIGN B424	4" CONCRETE WALK	CONCRETE CURB RAMP WALK	TRUNCATED DOMES	DRILL AND GROUT REINF BAR (EPOXY COATED)	CONCRETE DRAINAGE FLUME
						LIN FT	SQ FT	SQ FT	SQ FT	EACH	SQ YD
ALIRD5	S.W. QUAD PHEASANT	26+08		26+18	RT		60				
	S.W. QUAD PHEASANT	26+42		26+52	RT	23		123	40	17	
	FLUME LWB SHOULDER	63+10		63+37	LT						7
	FLUME LEB SHOULDER	63+10		63+37	RT						7
					TOTAL	23	60	123	40	17	14

CONCRETE NOTES:
ADDITIONAL CONCRETE ITEMS CAN BE FOUND IN TAB C "STORM SEWER".

TURF ESTABLISHMENT & EROSION CONTROL — H

ALI	LOCATION	STA	TO	STA	SILT FENCE TYPE MACHINE SLICED	ROLLED EROSION PREVENTION CAT 25	FERTILIZER TYPE 3	COMMON TOPSOIL BORROW	SEEDING	SEED MIXTURE 25-121	SEED MIXTURE 33-261	HYDRAULIC REINFORCED FIBER MATRIX	RAPID STABILIZATION METHOD 3	RANDOM RIPRAP CLASS II
					LIN FT	SQ YD	POUND	CU YD	ACRE	POUND	POUND	POUND	MGAL	TON
ALIRD5	LWB	33+00	-	45+21	1248	2120	153	233	0.438	26.7		1708	2.6	
	LEB	33+00	-	63+35	3052	3961	286	436	0.818	49.9		3190	4.9	
	LWB	45+45	-	63+35	1784	2142	155	236	0.442	27.0		1724	2.7	
	LWB FLUME	63+06												6
	LEB FLUME	63+06												6
	FLOODPLAIN MIT. N&S					1401			0.290		10.1	1131	1.7	
				PROJECT	6084	9624	594	905	1.988	103.6	10.1	7753	11.9	12

TURF ESTABLISHMENT & EROSION CONTROL NOTES:
ADDITIONAL RIPRAP QUANTITIES CAN BE FOUND IN TAB E "CULVERTS".

LOOPS — I

LOOP DETECTOR DESIGN NMC 6'X6'
EACH
4

ITEM SPECIFIC NOTES-
[1] ITEM INCLUDED AND INTENDED TO BE USED FOR REPLACEMENT OF ANY DAMAGED OR DESTROYED SIGNAL LOOPS DUE TO MILLING OR RECLAIMING OPERATIONS. ITEM WILL ONLY BE USED IF DAMAGE OCCURS, BUT IS NOT EXPECTED.

[2] SIGNAL MUST BE MAINTAINED AND IN OPERATION DURING CONSTRUCTION AND ANY LOOP REPLACEMENTS. CONTRACTOR MUST COORDINATE WITH ANOKA COUNTY SIGNAL DEPARTMENT FOR REMOVALS AND INSTALLATION.

UTILITY OWNERS / CONTACTS — J

ANOKA COUNTY SIGNALS MARK LEKSON MARK.LEKSON@ANOKACOUNTYMN.GOV PH 763-324-3139	**MAGELLAN MIDSTREAM PIPELINE** CLAIR MADSEN CLAIR.MADSEN@ONEOK.COM PH 612-750-1806	**CENTER POINT ENERGY** AUSTIN SOWERS AUSTIN.SOWERS@CENTERPOINTENERGY.COM PH 612-321-5421
CITY OF BLAINE DAN SCHLUENDER DSCHLUENDER@BLAINEMN.GOV PH 763-785-6158	**XCEL ENERGY** CRYSTAL CHRISTIANSON CRYSTAL.A.CHRISTIANSON@XCELENERGY.COM	**LUMEN / CENTURYLINK** CHUCK DAHER CDAHER@CONGRUEX.COM PH 612-298-2825
MNDOT FIBER ROBERT MELCHER ROBERT .MELCHER@STATE.MN.US PH 651-366-5750		

NO	DATE	BY	CKD	APPR	REVISION

NAME: P:\002-612-035 17 to 53\Plan\002612035_SEQ_TABS.dgn 01/30/2025 7:04:03 AM

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: NICHOLAS J DOBDA
SIGNATURE:
DATE: 01/30/2025 LICENSE NO. 49046

DRAWN BY JJF DATE 12/01/24
DESIGN BY JJF DATE 12/01/24
CHECKED BY NJD DATE 01/28/25

ANOKA COUNTY HIGHWAY DEPT.

SAP 002-612-035

TABULATIONS

Sheet 6 of 110 Sheets

STATION	LENGTH (FT)	EXCAVATION END AREAS			EXCAVATION VOLUMES			EXCAVATION TOTALS	
		TOPSOIL	COMMON	EXCAVATION SPECIAL	TOPSOIL	COMMON	EXCAVATION SPECIAL	COMMON [1]	EXCAVATION SPECIAL [2]
		SF	SF	SF	CY	CY	CY	CY	CY
33+00.00		0.56	0.37	0.00					
33+50.00	50.00	0.93	0.33	0.00	1.38	0.65	0.00	2.03	0.00
34+00.00	50.00	5.85	0.12	0.00	6.28	0.42	0.00	6.69	0.00
34+50.00	50.00	5.53	0.24	0.00	10.54	0.33	0.00	10.87	0.00
35+00.00	50.00	8.21	0.02	28.12	12.72	0.24	26.04	12.96	26.04
35+50.00	50.00	8.77	0.03	34.57	15.72	0.05	58.05	15.77	58.05
36+00.00	50.00	7.09	0.03	33.85	14.69	0.06	63.35	14.74	63.35
36+50.00	50.00	6.94	0.01	34.75	12.99	0.04	63.52	13.03	63.52
37+00.00	50.00	6.83	0.01	34.91	12.75	0.02	64.50	12.77	64.50
37+50.00	50.00	4.83	0.05	35.00	10.80	0.06	64.73	10.85	64.73
38+00.00	50.00	5.64	0.06	34.66	9.69	0.10	64.50	9.80	64.50
38+50.00	50.00	5.39	0.05	35.06	10.21	0.10	64.56	10.31	64.56
39+00.00	50.00	5.29	0.05	34.78	9.89	0.09	64.67	9.98	64.67
39+50.00	50.00	8.21	0.04	69.70	12.50	0.08	96.74	12.58	96.74
40+00.00	50.00	9.41	0.03	70.90	16.31	0.06	130.19	16.38	130.19
40+50.00	50.00	10.92	0.03	76.25	18.82	0.06	136.25	18.88	136.25
41+00.00	50.00	11.61	0.03	75.37	20.86	0.06	140.39	20.92	140.39
41+50.00	50.00	11.70	0.04	75.23	21.58	0.06	139.44	21.65	139.44
42+00.00	50.00	11.87	0.02	118.85	21.82	0.06	179.70	21.88	179.70
42+50.00	50.00	21.96	0.02	115.71	31.32	0.04	217.19	31.36	217.19
43+00.00	50.00	20.31	0.03	110.08	39.14	0.05	209.06	39.19	209.06
43+50.00	50.00	11.97	0.02	117.11	29.89	0.05	210.36	29.94	210.36
44+00.00	50.00	11.52	0.04	107.80	21.75	0.06	208.25	21.81	208.25
44+50.00	50.00	10.56	0.02	107.19	20.44	0.06	199.06	20.50	199.06
45+00.00	50.00	14.63	0.09	108.71	23.32	0.10	199.91	23.43	199.91
45+50.00	50.00	19.34	4.83	123.16	31.45	4.56	214.69	36.01	214.69
46+00.00	50.00	15.06	0.02	155.77	31.85	4.49	258.27	36.34	258.27
46+50.00	50.00	11.92	0.18	160.74	24.98	0.19	293.06	25.17	293.06
47+00.00	50.00	12.93	0.18	159.73	23.01	0.33	296.73	23.34	296.73
47+50.00	50.00	13.68	0.01	163.91	24.64	0.18	299.67	24.81	299.67
48+00.00	50.00	11.45	0.01	116.56	23.27	0.02	259.69	23.29	259.69
48+50.00	50.00	11.05	0.01	112.53	20.83	0.02	212.12	20.85	212.12
49+00.00	50.00	10.68	0.02	113.34	20.12	0.03	209.14	20.15	209.14
49+50.00	50.00	9.71	0.00	109.14	18.88	0.02	206.00	18.90	206.00
50+00.00	50.00	10.78	0.01	112.96	18.97	0.01	205.65	18.98	205.65
50+50.00	50.00	8.37	0.02	72.84	17.73	0.03	172.04	17.76	172.04
51+00.00	50.00	8.19	0.02	73.30	15.33	0.04	135.31	15.37	135.31
51+50.00	50.00	7.61	0.01	72.04	14.63	0.03	134.57	14.66	134.57
52+00.00	50.00	7.90	0.01	69.65	14.36	0.02	131.19	14.38	131.19
52+50.00	50.00	7.73	0.02	63.46	14.47	0.03	123.25	14.50	123.25
53+00.00	50.00	8.48	0.04	70.74	15.01	0.06	124.26	15.06	124.26
53+50.00	50.00	8.31	0.04	70.31	15.55	0.07	130.60	15.62	130.60
54+00.00	50.00	8.15	0.05	70.92	15.24	0.08	130.77	15.32	130.77
54+50.00	50.00	8.39	0.04	72.22	15.31	0.08	132.54	15.40	132.54
55+00.00	50.00	8.20	0.04	72.53	15.36	0.07	134.03	15.44	134.03
55+50.00	50.00	8.10	0.01	71.44	15.09	0.05	133.31	15.14	133.31
56+00.00	50.00	8.28	0.02	72.39	15.17	0.03	133.18	15.19	133.18
56+50.00	50.00	8.02	0.01	73.60	15.09	0.03	135.18	15.12	135.18
57+00.00	50.00	8.43	0.01	74.09	15.23	0.02	136.75	15.25	136.75
57+50.00	50.00	9.04	0.01	82.61	16.18	0.02	145.09	16.19	145.09
58+00.00	50.00	8.69	0.01	74.87	16.42	0.02	145.81	16.44	145.81
58+50.00	50.00	8.90	0.03	76.42	16.29	0.04	140.08	16.32	140.08
59+00.00	50.00	8.57	0.02	76.17	16.18	0.05	141.29	16.22	141.29
59+50.00	50.00	8.58	0.02	75.72	15.88	0.04	140.64	15.92	140.64
60+00.00	50.00	8.29	0.02	79.28	15.62	0.04	143.52	15.66	143.52
60+50.00	50.00	8.16	0.03	79.08	15.23	0.05	146.63	15.28	146.63
61+00.00	50.00	8.43	0.30	77.88	15.36	0.31	145.33	15.67	145.33
61+50.00	50.00	8.07	0.03	73.81	15.28	0.31	140.45	15.58	140.45
62+00.00	50.00	7.63	0.03	74.43	14.54	0.06	137.26	14.59	137.26
62+50.00	50.00	7.32	0.04	74.95	13.84	0.06	138.31	13.91	138.31
63+00.00	50.00	6.80	0.02	71.16	13.07	0.06	135.29	13.13	135.29
SUB TOTAL					1040.91	14.36	8642.17	**1055.27**	**8642.17**

EXCAVATION NOTES:
[1] INCLUDES TOPSOIL

[2] ROADCORE EXCAVATION FOR SELECT EMBANKMENT.

NO	DATE	BY	CKD	APPR	REVISION
1	4/01/25	JF	ND		ADDED NOTES

NAME: P:\002-612-035 17 to 53\Plan\002612035_EW.dgn 04/01/2025 2:25:36 PM

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: NICHOLAS J DOBDA

SIGNATURE:

DATE: 04/03/2025 LICENSE NO. 49046

DRAWN BY JJF DATE 12/01/24

DESIGN BY JJF DATE 12/01/24

CHECKED BY NJD DATE 01/28/25

ANOKA COUNTY

ANOKA COUNTY HIGHWAY DEPT.

SAP 002-612-035

EARTHWORK

Sheet 7 of 110 Sheets

STATION	LENGTH (FT)	EMBANKMENT END AREAS					EMBANKMENT VOLUMES				AGGREGATE VOLUMES	
		TOPSOIL	FILL OUTSIDE CORE	SELECT GRANULAR	AGGREGATE SUBBASE	AGGREGATE SHOULDERING	TOPSOIL	FILL OUTSIDE CORE	COMMON [3]	SELECT GRANULAR [4]	AGGREGATE SUBBASE	AGGREGATE SHOULDERING
		SF	SF	SF	SF	SF	CY	CY	CY	CY	CY	CY
33+00.00	50.00	0.81	0.00	0.00	0.00	1.20						
33+50.00	50.00	0.57	0.00	0.00	0.00	1.20	1.28	0.00	1.28	0.00	0.00	2.22
34+00.00	50.00	6.35	4.25	0.00	0.00	1.20	6.41	3.94	10.34	0.00	0.00	2.22
34+50.00	50.00	6.05	2.37	0.00	0.00	1.20	11.48	6.13	17.61	0.00	0.00	2.22
35+00.00	50.00	8.66	7.63	25.71	3.94	1.20	13.62	9.26	22.88	23.81	3.65	2.22
35+50.00	50.00	8.83	12.42	34.10	4.99	1.20	16.19	18.56	34.76	55.38	8.27	2.22
36+00.00	50.00	6.56	10.87	34.33	3.54	1.20	14.25	21.56	35.81	63.36	7.90	2.22
36+50.00	50.00	6.28	9.67	31.89	5.27	1.20	11.89	19.02	30.91	61.31	8.16	2.22
37+00.00	50.00	6.24	7.35	31.13	5.29	1.20	11.59	15.76	27.35	58.35	9.78	2.22
37+50.00	50.00	3.83	4.15	33.50	5.20	1.20	9.32	10.65	19.97	59.84	9.71	2.22
38+00.00	50.00	5.14	5.08	35.40	5.16	1.20	8.31	8.55	16.85	63.80	9.59	2.22
38+50.00	50.00	4.98	5.47	36.70	5.17	1.20	9.37	9.77	19.14	66.76	9.56	2.22
39+00.00	50.00	4.71	4.99	36.42	3.96	1.20	8.97	9.69	18.66	67.70	8.45	2.22
39+50.00	50.00	7.06	9.57	70.26	10.40	1.20	10.90	13.48	24.38	98.78	13.30	2.22
40+00.00	50.00	8.70	13.55	74.39	10.33	1.20	14.59	21.41	36.00	133.94	19.19	2.22
40+50.00	50.00	10.62	19.52	85.91	7.45	1.20	17.89	30.62	48.51	148.43	16.46	2.22
41+00.00	50.00	11.31	21.51	89.56	10.98	1.20	20.31	37.99	58.30	162.47	17.06	2.22
41+50.00	50.00	11.42	22.61	87.36	10.99	1.20	21.05	40.85	61.90	163.81	20.34	2.22
42+00.00	50.00	8.99	19.49	147.88	16.34	1.20	18.90	38.98	57.88	217.81	25.31	2.22
42+50.00	50.00	7.45	16.69	135.70	16.24	1.20	15.22	33.50	48.72	262.57	30.17	2.22
43+00.00	50.00	6.97	12.68	118.19	16.57	1.20	13.35	27.19	40.55	235.08	30.38	2.22
43+50.00	50.00	6.81	15.61	125.03	16.60	1.20	12.76	26.19	38.95	225.20	30.71	2.22
44+00.00	50.00	6.86	12.87	125.65	16.12	1.20	12.66	26.37	39.03	232.11	30.30	2.22
44+50.00	50.00	7.51	15.21	132.35	15.78	1.20	13.31	26.00	39.31	238.89	29.54	2.22
45+00.00	50.00	8.71	14.03	137.09	16.43	1.20	15.02	27.07	42.09	249.48	29.82	2.22
45+50.00	50.00	4.60	17.68	154.78	41.45	0.60	12.32	29.36	41.69	270.25	53.59	1.67
46+00.00	50.00	10.54	29.35	220.87	21.74	1.20	14.02	43.55	57.56	347.82	58.51	1.67
46+50.00	50.00	10.36	28.54	222.53	21.84	1.20	19.35	53.60	72.95	410.56	40.35	2.22
47+00.00	50.00	9.36	24.46	210.19	11.00	1.20	18.26	49.07	67.33	400.67	30.41	2.22
47+50.00	50.00	8.53	23.14	199.50	22.13	1.20	16.56	44.07	60.64	379.34	30.68	2.22
48+00.00	50.00	8.20	16.62	141.16	16.81	1.20	15.49	36.81	52.31	315.43	36.06	2.22
48+50.00	50.00	7.69	13.61	130.30	16.70	1.20	14.71	27.99	42.70	251.35	31.03	2.22
49+00.00	50.00	7.18	12.48	128.45	16.61	1.20	13.77	24.16	37.93	239.58	30.84	2.22
49+50.00	50.00	5.90	9.91	119.11	16.51	1.20	12.11	20.73	32.84	229.22	30.67	2.22
50+00.00	50.00	7.21	12.47	127.95	16.68	1.20	12.14	20.72	32.86	228.76	30.73	2.22
50+50.00	50.00	6.68	8.94	77.23	11.22	1.20	12.86	19.82	32.69	189.98	25.83	2.22
51+00.00	50.00	6.46	9.79	81.53	11.14	1.20	12.17	17.34	29.51	147.00	20.70	2.22
51+50.00	50.00	5.61	9.43	69.97	11.14	1.20	11.18	17.80	28.97	140.28	20.63	2.22
52+00.00	50.00	5.91	8.05	73.75	11.40	1.20	10.67	16.19	26.85	133.07	20.87	2.22
52+50.00	50.00	6.31	8.31	67.84	5.47	1.20	11.31	15.15	26.46	131.10	15.62	2.22
53+00.00	50.00	6.82	10.15	78.67	11.13	1.20	12.16	17.09	29.25	135.66	15.37	2.22
53+50.00	50.00	6.59	8.21	73.80	11.16	1.20	12.42	17.00	29.42	141.18	20.64	2.22
54+00.00	50.00	6.41	8.16	74.80	11.38	1.20	12.04	15.16	27.19	137.59	20.87	2.22
54+50.00	50.00	6.77	9.68	77.41	11.11	1.20	12.20	16.52	28.72	140.94	20.82	2.22
55+00.00	50.00	6.49	8.44	75.69	11.23	1.20	12.28	16.78	29.06	141.76	20.69	2.22
55+50.00	50.00	6.44	8.58	74.45	11.13	1.20	11.97	15.76	27.73	139.02	20.70	2.22
56+00.00	50.00	6.70	8.61	75.16	11.21	1.20	12.17	15.92	28.08	138.53	20.69	2.22
56+50.00	50.00	6.30	7.80	74.10	11.37	1.20	12.04	15.19	27.23	138.20	20.91	2.22
57+00.00	50.00	6.83	8.69	73.75	11.44	1.20	12.16	15.27	27.43	136.90	21.12	2.22
57+50.00	50.00	7.53	12.80	84.56	11.68	1.20	13.30	19.90	33.19	146.58	21.41	2.22
58+00.00	50.00	5.37	11.01	77.03	11.44	1.20	11.94	22.05	33.99	149.62	21.41	2.22
58+50.00	50.00	7.46	10.96	80.89	11.45	1.21	11.88	20.34	32.22	146.22	21.19	2.23
59+00.00	50.00	7.01	9.51	80.33	11.48	1.30	13.40	18.95	32.35	149.28	21.23	2.32
59+50.00	50.00	7.00	8.90	78.55	11.49	1.38	12.97	17.05	30.02	147.11	21.27	2.48
60+00.00	50.00	6.62	9.40	83.46	11.49	1.20	12.61	16.94	29.56	150.01	21.28	2.39
60+50.00	50.00	6.50	9.26	82.88	11.38	1.20	12.15	17.28	29.43	154.02	21.18	2.22
61+00.00	50.00	6.86	9.39	81.95	11.39	1.50	12.37	17.27	29.64	152.62	21.08	2.50
61+50.00	50.00	6.43	7.97	77.04	9.67	1.20	12.31	16.07	28.38	147.21	19.50	2.50
62+00.00	50.00	5.81	6.55	72.88	11.39	1.20	11.33	13.44	24.78	138.81	19.50	2.22
62+50.00	50.00	5.51	6.70	73.00	11.29	1.20	10.48	12.27	22.75	135.07	21.00	2.22
63+00.00	50.00	5.25	5.85	63.27	10.33	1.20	9.96	11.62	21.58	126.18	20.02	2.22
							SUB TOTAL	769.69	1266.79	**2036.47**	**9695.82**	**1276.05**	**133.31**

EMBANKMENT NOTES:
[3] INCLUDES TOPSOIL AND FILL OUTSIDE CORE.

[4] SELECT GRANLAR EMBANKMENT IN ROADWAY CORE

NO	DATE	BY	CKD	APPR	REVISION
1	4/01/25	JF	ND		ADDED NOTES

NAME: P:\002-612-035 17 to 53\Plan\002612035_EW.dgn 04/01/2025 2:25:57 PM

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: NICHOLAS J DOBDA

SIGNATURE:

DATE: 04/03/2025 LICENSE NO. 49046

DRAWN BY JJF DATE 12/01/24

DESIGN BY JJF DATE 12/01/24

CHECKED BY NJD DATE 01/28/25

ANOKA COUNTY HIGHWAY DEPT.

SAP 002-612-035

EARTHWORK

Sheet 8 of 110 Sheets

EARTHWORK SUMMARY				AA
STATION	EXCAVATION TOTALS		EMBANKMENT	
	COMMON	EXCAVATION SPECIAL	COMMON	SELECT GRANULAR
	[1]	[2]	[3]	[4]
	CY	CY	CY	CY
33+00.00				
33+50.00	2	0	1	0
34+00.00	7	0	10	0
34+50.00	11	0	18	0
35+00.00	13	26	23	24
35+50.00	16	58	35	55
36+00.00	15	63	36	63
36+50.00	13	64	31	61
37+00.00	13	65	27	58
37+50.00	11	65	20	60
38+00.00	10	65	17	64
38+50.00	10	65	19	67
39+00.00	10	65	19	68
39+50.00	13	97	24	99
40+00.00	16	130	36	134
40+50.00	19	136	49	148
41+00.00	21	140	58	162
41+50.00	22	139	62	164
42+00.00	22	180	58	218
42+50.00	31	217	49	263
43+00.00	39	209	41	235
43+50.00	30	210	39	225
44+00.00	22	208	39	232
44+50.00	21	199	39	239
45+00.00	23	200	42	249
45+50.00	36	215	42	270
46+00.00	36	258	58	348
46+50.00	25	293	73	411
47+00.00	23	297	67	401
47+50.00	25	300	61	379
48+00.00	23	260	52	315
48+50.00	21	212	43	251
49+00.00	20	209	38	240
49+50.00	19	206	33	229
50+00.00	19	206	33	229
50+50.00	18	172	33	190
51+00.00	15	135	30	147
51+50.00	15	135	29	140
52+00.00	14	131	27	133
52+50.00	15	123	26	131
53+00.00	15	124	29	136
53+50.00	16	131	29	141
54+00.00	15	131	27	138
54+50.00	15	133	29	141
55+00.00	15	134	29	142
55+50.00	15	133	28	139
56+00.00	15	133	28	139
56+50.00	15	135	27	138
57+00.00	15	137	27	137
57+50.00	16	145	33	147
58+00.00	16	146	34	150
58+50.00	16	140	32	146
59+00.00	16	141	32	149
59+50.00	16	141	30	147
60+00.00	16	144	30	150
60+50.00	15	147	29	154
61+00.00	16	145	30	153
61+50.00	16	140	28	147
62+00.00	15	137	25	139
62+50.00	14	138	23	135
63+00.00	13	135	22	126
PROJECT TOTAL	1055	8642	2036	9696

AGG SUMMARY		BB
STATION	AGGREGATE VOLUMES	
	AGGREGATE SUBBASE	AGGREGATE SHOULDERING
	[5]	[6]
	CY	CY
33+00.00		
33+50.00	0	2
34+00.00	0	2
34+50.00	0	2
35+00.00	4	2
35+50.00	8	2
36+00.00	8	2
36+50.00	8	2
37+00.00	10	2
37+50.00	10	2
38+00.00	10	2
38+50.00	10	2
39+00.00	8	2
39+50.00	13	2
40+00.00	19	2
40+50.00	16	2
41+00.00	17	2
41+50.00	20	2
42+00.00	25	2
42+50.00	30	2
43+00.00	30	2
43+50.00	31	2
44+00.00	30	2
44+50.00	30	2
45+00.00	30	2
45+50.00	54	2
46+00.00	59	2
46+50.00	40	2
47+00.00	30	2
47+50.00	31	2
48+00.00	36	2
48+50.00	31	2
49+00.00	31	2
49+50.00	31	2
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50+50.00	26	2
51+00.00	21	2
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52+50.00	16	2
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59+00.00	21	2
59+50.00	21	2
60+00.00	21	2
60+50.00	21	2
61+00.00	21	3
61+50.00	20	3
62+00.00	20	2
62+50.00	21	2
63+00.00	20	2
PROJECT TOTAL	1276	133

SUMMARY NOTES:

[1] INCLUDES TOPSOIL

[2] ROADCORE EXCAVATION FOR SELECT EMBANKMENT.

[3] INCLUDES TOPSOIL AND FILL OUTSIDE CORE.

[4] SELECT GRANLAR EMBANKMENT IN ROADWAY CORE

[5] UNDER PAVED SHOULDERS, RIGHT TURN LANE, BYPASS LANE AND NATIONAL STREET APPROACH

[6] 1.0' GRAVEL SHOULDER OUTSIDE PAVED SHOULDER.

NO	DATE	BY	CKD	APPR	REVISION
1	4/01/25	JF	ND		REMOVED EARTHWORK TABULATION TOTAL, ADDED NOTES

NAME: P:\002-612-035 17 to 53\Plan\002612035_EW.dgn 04/01/2025 2:26:24 PM

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.

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DESIGN BY JJF DATE 12/01/24

CHECKED BY NJD DATE 01/28/25

ANOKA COUNTY HIGHWAY DEPT.

SAP 002-612-035

EARTHWORK

Sheet 9 of 110 Sheets

EARTHWORK TABULATION TOTAL				CC
	EXCAVATION TOTALS		EMBANKMENT VOLUMES	
	COMMON	EXCAVATION SPECIAL	COMMON	SELECT GRANULAR
	CY	CY	CY	CY
PROJECT TOTAL	1,055	8,642	2,036	9,696

FLOODPLAIN MITIGATION	DD
LOCATION	EXCAVATION TOTALS
	EXCAVATION CHANNEL AND POND
	CU YDS
MITIGATION SITE SOUTH	246
MITIGATION SITE NORTH	92
PROJECT TOTAL	338

NO	DATE	BY	CKD	APPR	REVISION
1	4/01/25	JF	ND		REMOVED EARTHWORK BALANCE
1	4/01/25	JF	ND		ADDED EARTHWORK TAB AND FLOODPLAIN TAB

NAME: P:\002-612-035 17 to 53\Plan\002612035_EW.dgn 04/01/2025 2:26:54 PM

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.

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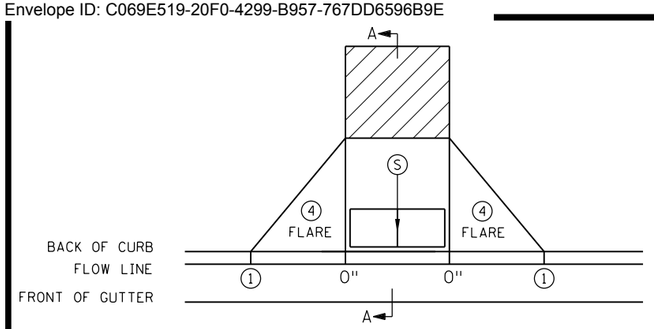
ANOKA COUNTY

ANOKA COUNTY HIGHWAY DEPT.

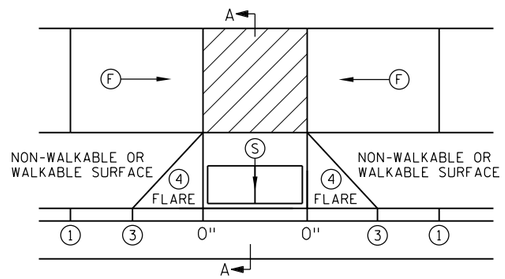
SAP 002-612-035

EARTHWORK

Sheet 10 of 110 Sheets



PERPENDICULAR



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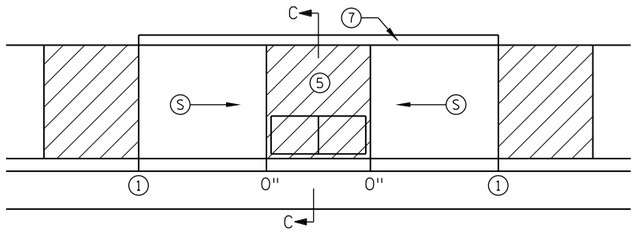
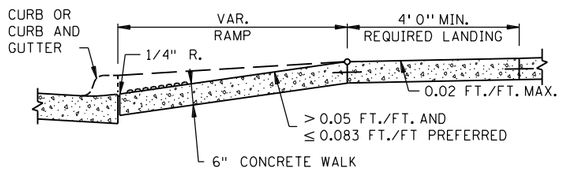
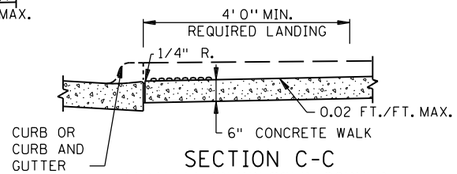


PARALLEL



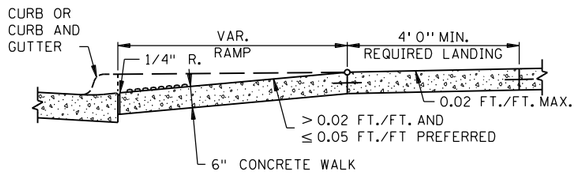
SECTION A-A

PERPENDICULAR/TIERED/DIAGONAL



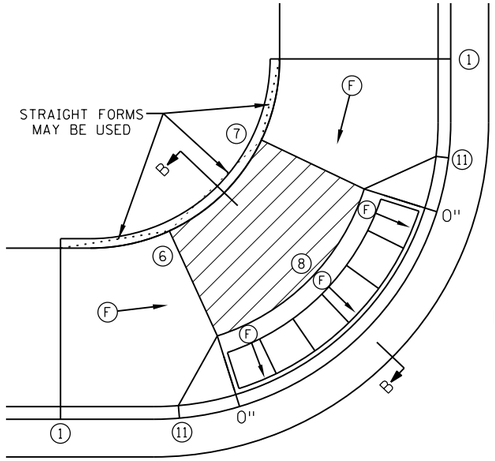
SECTION C-C

PARALLEL/DEPRESSED CORNER

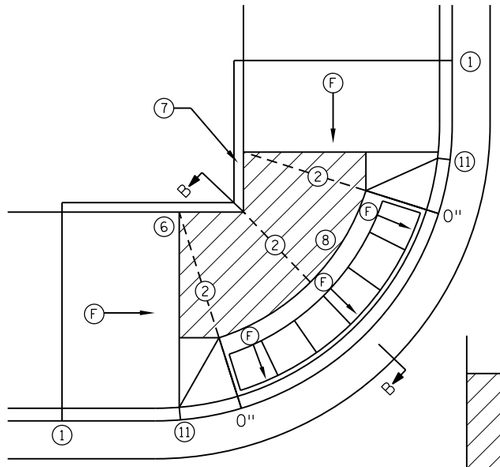


SECTION B-B

FAN

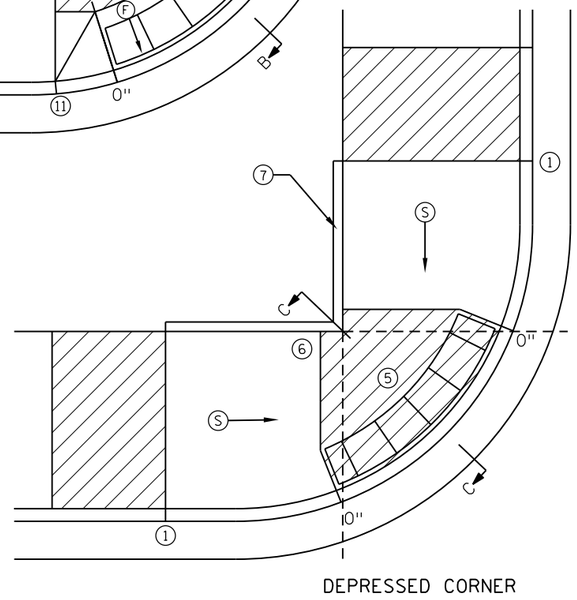


FAN (10)



MODIFIED FAN (10)

USED WHEN RIGHT-OF-WAY IS CONSTRAINED



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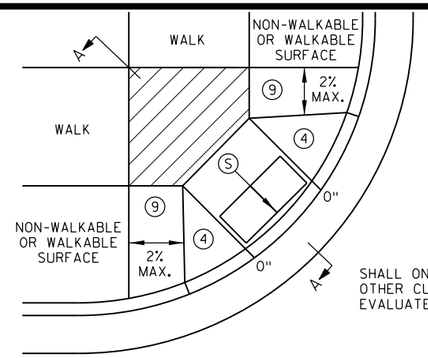


DIAGONAL

SHALL ONLY BE USED AFTER ALL OTHER CURB RAMP TYPES HAVE BEEN EVALUATED AND DEEMED IMPRACTICAL

NOTES:

LANDINGS SHALL BE LOCATED ANYWHERE THE PEDESTRIAN ACCESS ROUTE (PAR) CHANGES DIRECTION, AT THE TOP OF RAMPS THAT HAVE RUNNING SLOPES GREATER THAN 5.0%, AND IF THE APPROACHING WALK IS INVERSE GRADE GREATER THAN 2%.

INITIAL CURB RAMP LANDINGS SHALL BE CONSTRUCTED WITHIN 15' FROM THE BACK OF CURB, WITH 6' FROM THE BACK OF CURB BEING THE PREFERRED DISTANCE, ONLY APPLICABLE WHEN THE INITIAL RAMP RUNNING SLOPE IS OVER 5.0%.

SECONDARY CURB RAMP LANDINGS ARE REQUIRED FOR EVERY 30" OF VERTICAL RISE WHEN THE LONGITUDINAL RUNNING SLOPE IS GREATER THAN 5.0%.

CONTRACTION JOINTS SHALL BE CONSTRUCTED ALONG ALL GRADE BREAKS WITHIN THE PAR. 1/4" DEEP VISUAL JOINTS SHALL BE USED AT THE TOPS OF CONCRETE FLARES ADJACENT TO WALKABLE SURFACES.

ALL GRADE BREAKS WITHIN THE PAR SHALL BE PERPENDICULAR TO THE PATH OF TRAVEL, THUS BOTH SIDES OF A SLOPED WALKING SURFACE MUST BE EQUAL LENGTH. (EXCEPT AS STATED IN (6) BELOW.

TO ENSURE RAMPS AND LANDINGS ARE PROPERLY CONSTRUCTED, ALL INITIAL LANDINGS AT A TOP OF A RAMPED SURFACE (RUNNING SLOPE GREATER THAN 2%) SHALL BE FORMED AND PLACED SEPARATELY IN AN INDEPENDENT CONCRETE POUR. FOLLOW SIDEWALK REINFORCEMENT DETAILS ON SHEET 6 OF 6 FOR ALL SEPARATELY POURED INITIAL LANDINGS.

WHEN SIDEWALK IS AT BACK OF CURB, TOP OF CURB SHALL MATCH PROPOSED ADJACENT WALK GRADE.

MAINTAIN POSITIVE BOULEVARD DRAINAGE TO TOP OF CURB.

ALL RAMP TYPES SHOULD HAVE A MINIMUM 3' LONG RAMP LENGTH.

4' MINIMUM WIDTH OF DETECTABLE WARNING IS REQUIRED FOR ALL RAMPS. DETECTABLE WARNINGS SHALL CONTINUOUSLY EXTEND FOR A MIN. OF 24" IN THE PATH OF TRAVEL. DETECTABLE WARNING TO COVER THE ENTIRE PAR WIDTH OF SHARED-USE PATHS AND THE ENTIRE PAR WIDTH OF THE WALK WITH THE EXCEPTION OF 3" MAXIMUM ON EACH OUTSIDE EDGE WHICH ENSURES THE DETECTABLE WARNINGS ARE ENCASED IN CONCRETE WHEN ADJACENT TO TURF. WHEN ADJACENT TO CONCRETE FLARES 0" - 3" OFFSET IS ALLOWED.

WHEN DESIGNING OR ORDERING RECTANGULAR DETECTABLE WARNING SURFACES SHOULD BE 6" LESS THAN THE INCOMING PAR. ARC LENGTH OF THE RADIAL DETECTABLE WARNINGS SHOULD NOT BE GREATER THAN 20 FEET.

RECTANGULAR DETECTABLE WARNINGS SHALL BE SETBACK 3" FROM THE BACK OF CURB. RADIAL DETECTABLE WARNINGS SHALL BE SETBACK 3" MINIMUM TO 6" MAXIMUM FROM THE BACK OF CURB.

(1) MATCH FULL HEIGHT CURB.

(2) 4' MINIMUM DEPTH LANDING REQUIRED ACROSS TOP OF RAMP.

(3) 3" HIGH CURB WHEN USING A 3' LONG RAMP, 4" HIGH CURB WHEN USING A 4' LONG RAMP.

(4) SEE SHEET 4 OF 6, TYPICAL SIDE TREATMENT OPTIONS, FOR DETAILS ON FLARES AND RETURNED CURBS.

(5) DETECTABLE WARNINGS MAY BE PART OF THE 4' X 4' MIN. LANDING AREA IF IT IS NOT FEASIBLE TO CONSTRUCT THE LANDING OUTSIDE OF THE DETECTABLE WARNING AREA.

(6) THE GRADE BREAK SHALL BE PERPENDICULAR TO THE BACK OF WALK. THIS WILL ENSURE THAT THE GRADE BREAK IS PERPENDICULAR TO THE DIRECTION OF TRAVEL. (TYPICAL FOR ALL)

(7) WHEN ADJACENT TO GRASS, GRADING SHALL ALWAYS BE USED WHEN FEASIBLE. V CURB, IF USED, SHALL BE PLACED OUTSIDE THE SIDEWALK LIMITS WHEN RIGHT OF WAY ALLOWS. WHEN ADJACENT TO PARKING LOTS, CONCRETE OR BITUMINOUS TAPERS LESS THAN 5% RUNNING SLOPE SHOULD BE USED OVER V CURB TO REDUCE TRIPPING HAZARDS AND FACILITATE SNOW & ICE REMOVAL.

(8) A 7' MIN TOP RADIUS GRADE BREAK IS REQUIRED TO BE CONSTRUCTIBLE.

(9) PAVE FULL WALK WIDTH.

(10) "S" SLOPES ON FANS SHALL ONLY BE USED WHEN ALL OTHER FEASIBLE OPTIONS HAVE BEEN EVALUATED AND DEEMED IMPRACTICAL.

(11) INTERMEDIATE CURB HEIGHTS TAPER SHALL RISE AT 8-10% TO A MINIMUM 3" CURB HEIGHT. REDUCE INTERMEDIATE CURB HEIGHT TO 2+ INCHES IF NECESSARY TO MATCH ADJACENT BOULEVARD OR SIDEWALK GRADES.

LEGEND

THESE LONGITUDINAL SLOPE RANGES SHALL BE THE STARTING POINT. IF SITE CONDITIONS WARRANT, LONGITUDINAL SLOPES UP TO 8.3% OR FLATTER ARE ALLOWED.

(S) INDICATES PEDESTRIAN RAMP - SLOPE SHALL BE BETWEEN 5.0% MINIMUM AND 8.3% MAXIMUM IN THE DIRECTION SHOWN AND THE 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%.

LANDING AREA - 4' X 4' MIN. (5' X 5' MIN. PREFERRED) DIMENSIONS AND MAX 2.0% SLOPE IN ALL DIRECTIONS. LANDING SHALL BE FULL WIDTH OF INCOMING PARS.

X" CURB HEIGHT

REVISION:

APPROVED: 11-04-2021
JEFFREY PERKINS
OPERATIONS DIVISION

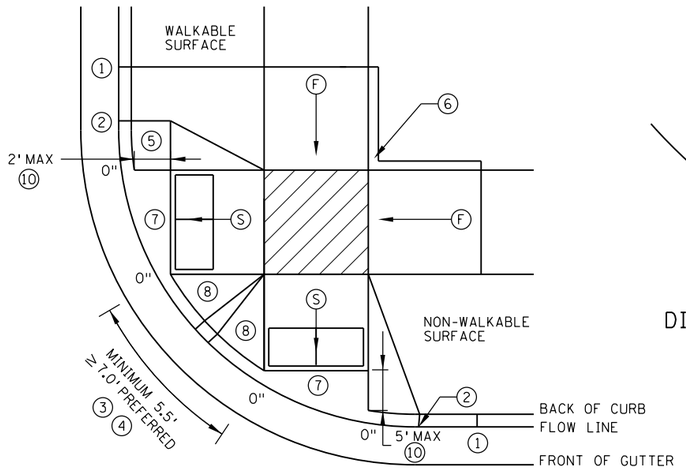
MINNESOTA DEPARTMENT OF TRANSPORTATION

STANDARD PLAN 5-297.250 | 1 OF 6

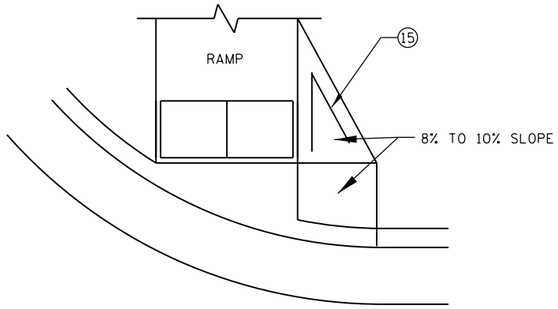
APPROVED: 11-04-2021
REVISED:
THOMAS STYRBICKI
STATE DESIGN ENGINEER

PEDESTRIAN CURB RAMP DETAILS

STATE PROJ. NO. SAP 002-612-035 SHEET NO. 11 OF 110 SHEETS

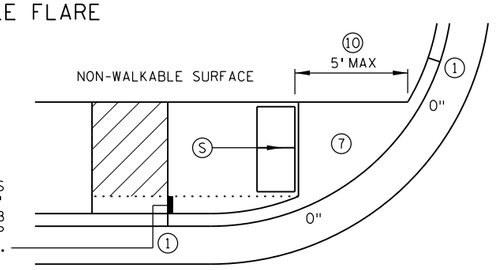


COMBINED DIRECTIONAL

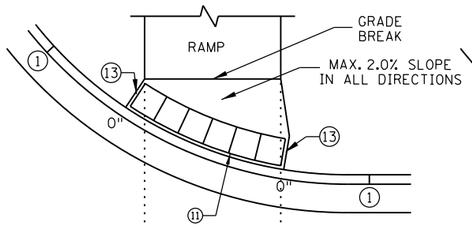


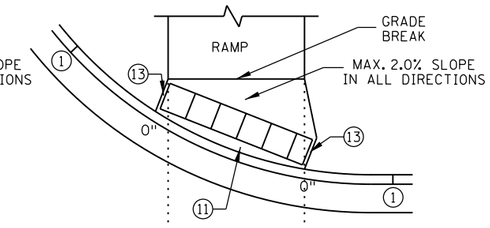
DIRECTIONAL RAMP WALKABLE FLARE

IF NON-CONCRETE BLVD. IS CONSTRUCTED AND IS LESS THAN 2' IN WIDTH AT TOP OF CURB TRANSITION, PAVE CONCRETE RAMP WIDTH TO ADJACENT BACK OF CURB.



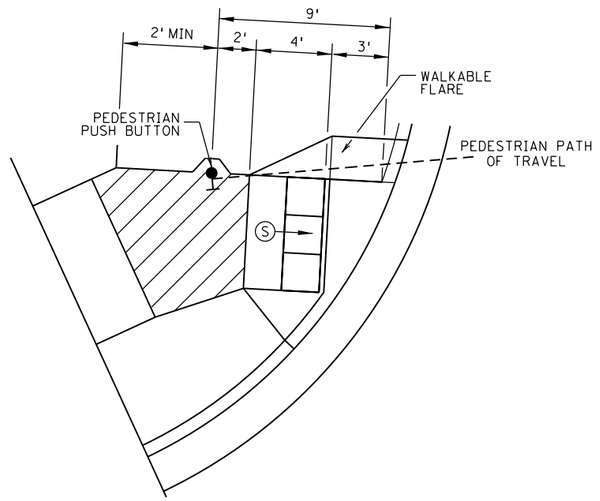
STANDARD ONE-WAY DIRECTIONAL ⑨





DETECTABLE WARNING PLACEMENT WHEN SETBACK CRITERIA IS EXCEEDED ⑫

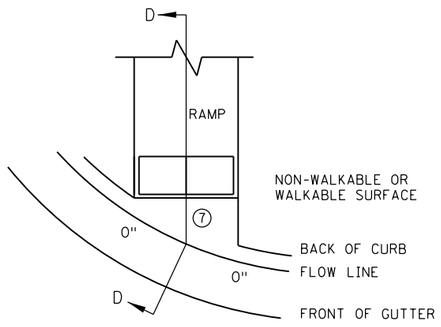
ONE-WAY DIRECTIONAL WITH DETECTABLE WARNING AT BACK OF CURB

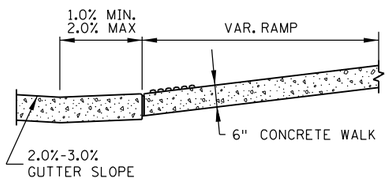


SEMI-DIRECTIONAL RAMP ③④⑨

3' DOME SETBACK, 4' LONG RAMP AND PUSH BUTTON 9' FROM THE BACK OF CURB

PRIMARILY USED FOR APS APPLICATIONS WHERE THE PAR DOES NOT CONTINUE PAST THE PUSH BUTTON (DEAD-END SIDEWALK)





SECTION D-D

CURB FOR DIRECTIONAL RAMPS ⑭

NOTES:

LANDINGS SHALL BE LOCATED ANYWHERE THE PEDESTRIAN ACCESS ROUTE (PAR) CHANGES DIRECTION, AT THE TOP OF RAMPS THAT HAVE RUNNING SLOPES GREATER THAN 5.0%, AND IF THE APPROACHING WALK IS INVERSE GRADE.

INITIAL CURB RAMP LANDINGS SHALL BE CONSTRUCTED WITHIN 15' FROM THE BACK OF CURB, WITH 6' FROM THE BACK OF CURB BEING THE PREFERRED DISTANCE, ONLY APPLICABLE WHEN THE INITIAL RAMP RUNNING SLOPE IS OVER 5.0%.

SECONDARY CURB RAMP LANDINGS ARE REQUIRED FOR EVERY 30" OF VERTICAL RISE WHEN THE LONGITUDINAL SLOPE IS GREATER THAN 5.0%.

CONTRACTION JOINTS SHALL BE CONSTRUCTED ALONG ALL GRADE BREAKS WITHIN THE PAR. 1/4" DEEP VISUAL JOINTS SHALL BE USED AT THE TOP GRADE BREAK OF CONCRETE FLARES ADJACENT TO WALKABLE SURFACES.

ALL GRADE BREAKS WITHIN THE PAR SHALL BE PERPENDICULAR TO THE PATH OF TRAVEL. THUS BOTH SIDES OF A SLOPED WALKING SURFACE MUST BE EQUAL LENGTH.

TO ENSURE INITIAL RAMPS AND INITIAL LANDINGS ARE PROPERLY CONSTRUCTED, LANDINGS SHALL BE CAST SEPARATELY. FOLLOW SIDEWALK REINFORCEMENT DETAILS ON SHEET 6 AND THE ADA SPECIAL PROVISION (PROSECUTION OF WORK).

TOP OF CURB SHALL MATCH PROPOSED ADJACENT WALK GRADE.

WHEN THE BOULEVARD IS 4' WIDE OR LESS, THE TOP OF CURB TAPER SHALL MATCH THE RAMP SLOPES TO REDUCE NEGATIVE BOULEVARD SLOPES FROM THE TOP BACK OF CURB TO THE PAR.

ALL RAMP TYPES SHOULD HAVE A MINIMUM 3' LONG RAMP LENGTH.

4' MINIMUM WIDTH OF DETECTABLE WARNING IS REQUIRED FOR ALL RAMPS. DETECTABLE WARNINGS SHALL CONTINUOUSLY EXTEND FOR A MIN. OF 24" IN THE PATH OF TRAVEL. DETECTABLE WARNING TO COVER THE ENTIRE PAR WIDTH OF SHARED-USE PATHS AND THE ENTIRE PAR WIDTH OF THE WALK WITH THE EXCEPTION OF 3" MAXIMUM ON EACH OUTSIDE EDGE WHICH ENSURES THE DETECTABLE WARNINGS ARE ENCASED IN CONCRETE WHEN ADJACENT TO TURF. WHEN ADJACENT TO CONCRETE FLARES 0" - 3" OFFSET IS ALLOWED.

WHEN DESIGNING OR ORDERING RECTANGULAR DETECTABLE WARNING SURFACES SHOULD BE 6" LESS THAN THE INCOMING PAR. ARC LENGTH OF THE RADIAL DETECTABLE WARNINGS SHOULD NOT BE GREATER THAN 20 FEET.

RADIAL DETECTABLE WARNINGS SHALL BE SETBACK 3" MINIMUM TO 6" MAXIMUM FROM THE BACK OF CURB. SEE NOTES ⑩ & ⑪ FOR INFORMATION REGARDING RECTANGULAR DETECTABLE WARNING PLACEMENT.

① MATCH FULL CURB HEIGHT.

② 3" HIGH CURB WHEN USING A 3' LONG RAMP
4" HIGH CURB WHEN USING A 4' LONG RAMP.

③ 3" MINIMUM CURB HEIGHT (5.5' MIN. DISTANCE REQUIRED BETWEEN DOMES)
4" PREFERRED (7' MIN. DISTANCE REQUIRED BETWEEN DOMES).

④ THE "BUMP" IN BETWEEN THE RAMPS SHOULD NOT BE IN THE PATH OF TRAVEL FOR COMBINED DIRECTIONAL RAMPS. IF THIS OCCURS MODIFY THE RAMP LOCATION OR SWITCH RAMP TO A FAN/DEPRESSED CORNER.

⑤ WHEN USING CONCRETE PAVED FLARES ON THE OUTSIDE OF DIRECTIONAL RAMPS, AND ADJACENT TO A WALKABLE SURFACE, DIRECTIONAL RAMP FLARES SHALL BE USED. SEE THE DETAIL ON THIS SHEET.

⑥ GRADING SHALL ALWAYS BE USED WHEN FEASIBLE. V CURB, IF USED, SHALL BE PLACED OUTSIDE THE SIDEWALK LIMITS WHEN RIGHT OF WAY ALLOWS. WHEN ADJACENT TO PARKING LOTS, CONCRETE OR BITUMINOUS TAPERS SHOULD BE USED OVER V CURB TO REDUCE TRIPPING HAZARDS AND FACILITATE SNOW & ICE REMOVAL.

⑦ MAX. 2.0% SLOPE IN ALL DIRECTIONS IN FRONT OF GRADE BREAK AND DRAIN TO FLOW LINE. SHALL BE CONSTRUCTED INTEGRAL WITH CURB AND GUTTER.

⑧ 8% TO 10% WALKABLE FLARE.

⑨ PLACE DOMES AT THE BACK OF CURB WHEN ALLOWABLE SETBACK CRITERIA IS EXCEEDED.

⑩ FRONT EDGE OF DETECTABLE WARNING SHALL BE SET BACK 2' MAXIMUM WHEN ADJACENT TO WALKABLE SURFACE, AND 5' MAXIMUM WHEN ADJACENT TO NON-WALKABLE SURFACE WITH ONE CORNER SET 3" FROM BACK OF CURB. A WALKABLE SURFACE IS DEFINED AS A PAVED SURFACE ADJACENT TO A CURB RAMP WITHOUT RAISED OBSTACLES THAT COULD MISTAKENLY BE TRAVERSED BY A USER WHO IS VISUALLY IMPAIRED.

⑪ RECTANGULAR DETECTABLE WARNINGS MAY BE SETBACK UP TO 9" FROM THE BACK OF CURB WITH CORNERS SET 3" FROM BACK OF CURB. IF 9" SETBACK IS EXCEEDED USE RADIAL DETECTABLE WARNINGS.

⑫ FOR DIRECTIONAL RAMPS WITH THE DETECTABLE WARNINGS PLACED AT THE BACK OF CURB, THE DETECTABLE WARNINGS SHALL COVER THE ENTIRE WIDTH OF THE WALK/PATH. THIS ENSURES A DETECTABLE EDGE AND HELPS ELIMINATE THE CURB TAPER OBSTRUCTING THE PATH OF PEDESTRIAN TRAVEL.

⑬ THE CONCRETE WALK SHALL BE FORMED AND CONSTRUCTED PERPENDICULAR TO THE BACK OF CURB. MAINTAIN 3" BETWEEN EDGE OF DOMES AND EDGE OF CONCRETE.

⑭ TO BE USED FOR ALL DIRECTIONAL RAMPS, EXCEPT WHERE DOMES ARE PLACED ALONG THE BACK OF CURB.

⑮ PLACE 2 NO. 4 BARS 4 INCHES FROM SIDE OF FORMS WITH A MINIMUM 2 INCHES OF CONCRETE COVER ALONG EACH SIDE OF FLARE (INCIDENTAL).

LEGEND

THESE LONGITUDINAL SLOPE RANGES SHALL BE THE STARTING POINT. IF SITE CONDITIONS WARRANT, LONGITUDINAL SLOPES UP TO 8.3% OR FLATTER ARE ALLOWED.

(S) INDICATES PEDESTRIAN RAMP - SLOPE SHALL BE BETWEEN 5.0% MINIMUM AND 8.3% MAXIMUM IN THE DIRECTION SHOWN AND THE 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%.

LANDING AREA - 4' X 4' MIN. (5' X 5' MIN. PREFERRED) DIMENSIONS AND MAX 2.0% SLOPE IN ALL DIRECTIONS. LANDING SHALL BE FULL WIDTH OF INCOMING PARS.

X" CURB HEIGHT

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OPERATIONS DIVISION

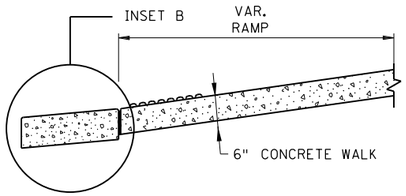
MINNESOTA DEPARTMENT OF TRANSPORTATION

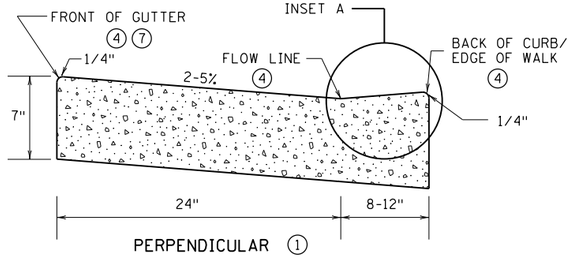
STANDARD PLAN 5-297.250 | 2 OF 6

APPROVED: 11-04-2021
REVISED:
THOMAS STYRBICKI
STATE DESIGN ENGINEER

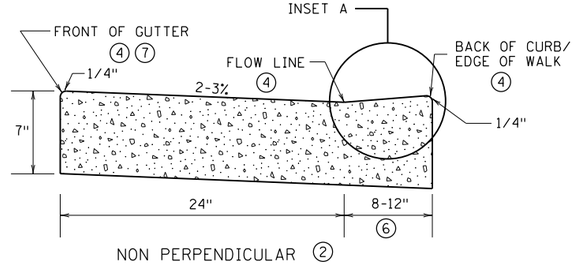
PEDESTRIAN CURB RAMP DETAILS

STATE PROJ. NO. SAP 002-612-035 SHEET NO. 12 OF 110 SHEETS

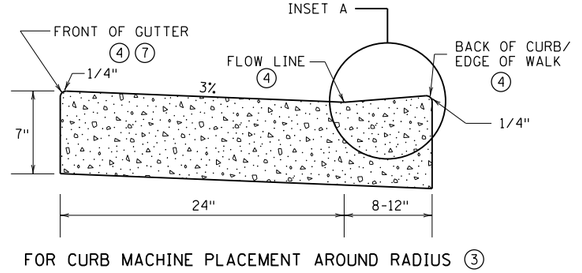




PERPENDICULAR (1)

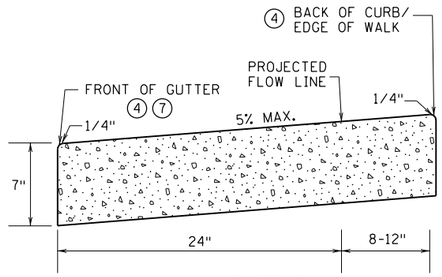


NON PERPENDICULAR (2)

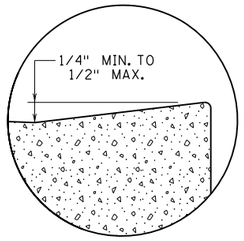


FOR CURB MACHINE PLACEMENT AROUND RADIUS (3)
(REGARDLESS OF RAMP TYPE)

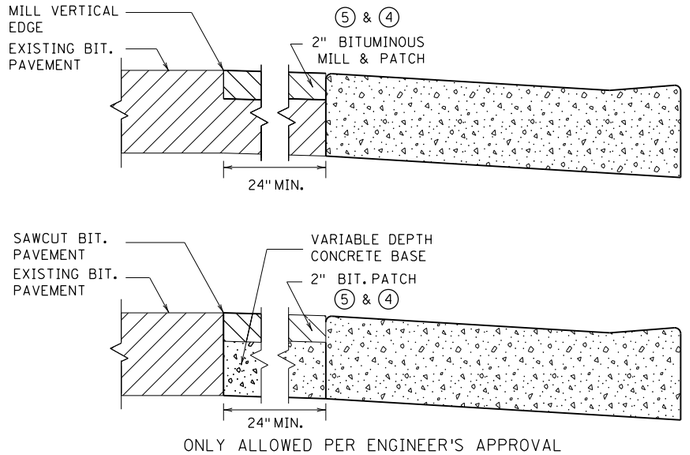
PEDESTRIAN ACCESS ROUTE CURB & GUTTER DETAIL



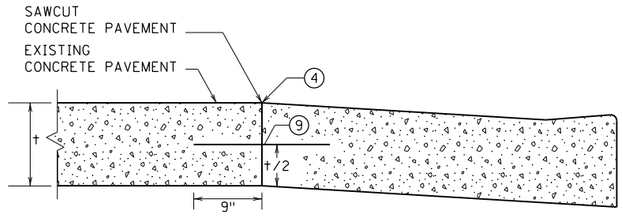
INSET B
OUTFLOW GUTTER (8)



INSET A

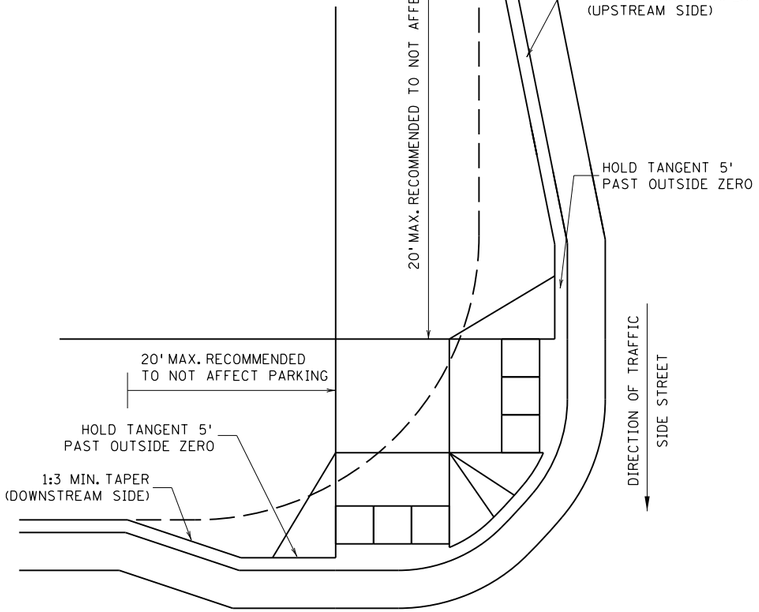


ONLY ALLOWED PER ENGINEER'S APPROVAL

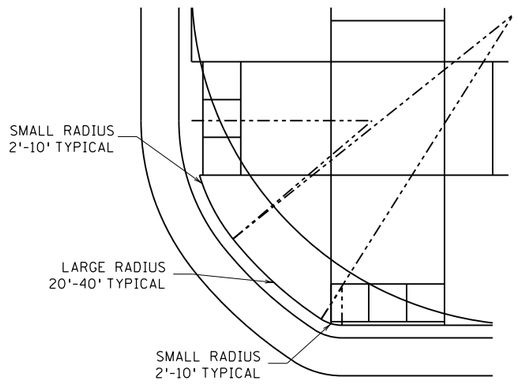


PAVEMENT TREATMENT OPTIONS IN FRONT OF CURB & GUTTER

FOR USE ON CURB RAMP RETROFITS



ADA CURB EXTENSION WITH COMPOUND RADIUS (BUMP OUT) (11)



COMBINED DIRECTIONAL (10)
(COMPOUND RADIUS)

NOTES:

POSITIVE FLOW LINE DRAINAGE SHALL BE MAINTAINED THROUGH THE PEDESTRIAN ACCESS ROUTE (PAR) AT A 2% MAXIMUM.

NO PONDING SHALL BE PRESENT IN THE PAR.

ANY VERTICAL LIP THAT OCCURS AT THE FLOW LINE SHALL NOT BE GREATER THAN 1/4 INCH.

(1) FOR USE AT CURB CUTS WHERE THE PEDESTRIAN'S PATH OF TRAVEL IS ASSUMED PERPENDICULAR TO THE GUTTER FLOW LINE. RAMP TYPES INCLUDE: PERPENDICULAR, TIERED PERPENDICULAR, PARALLEL, AND DIAGONAL RAMPS.

(2) FOR USE AT CURB RAMPS WHERE THE PEDESTRIAN'S PATH OF TRAVEL IS ASSUMED NON PERPENDICULAR TO THE GUTTER FLOW LINE. RAMP TYPES INCLUDE: FANS & DEPRESSED CORNERS.

(3) BEGIN GUTTER SLOPE TRANSITION 10' OUTSIDE OF ALL CURB RAMPS.

(4) THERE SHALL BE NO VERTICAL DISCONTINUITIES GREATER THAN 1/4".

(5) ELEVATION CHANGE TAKES PLACE FROM THE EXISTING TO NEW FRONT OF GUTTER. PATCH IS USED TO MATCH THE NEW GUTTER FACE INTO THE EXISTING ROADWAY.

(6) VARIABLE WIDTH FOR DIRECTIONAL CURB APPLICATIONS. SEE SHEET 2 FOR DIRECTIONAL CURB SLOPE REQUIREMENTS.

(7) TOP FRONT OF GUTTER SHALL BE CONSTRUCTED FLUSH WITH PROPOSED ADJACENT PAVEMENT ELEVATION. TOP 1.5" OF THE GUTTER FACE MUST BE A FORMED EDGE. PAR GUTTER SHALL NOT BE OVERLAID.

(8) SHOULD BE USED AT VERTICALLY CONSTRAINED AREAS WHEN AT A DRAINAGE HIGH POINT OR SUPER ELEVATED ROADWAY SEGMENTS.

(9) DRILL AND GROUT NO. 4 EPOXY-COATED 18" LONG TIE BARS AT 30" CENTER TO CENTER INTO EXISTING CONCRETE PAVEMENT 1' MINIMUM FROM ALL JOINTS.

(10) HELPS PROVIDE TWO SEPARATE RAMPS, REDUCES THE DOME SETBACK LENGTH AND MINIMIZES DIRECTIONAL CURB. THIS RADIUS DESIGN CLOSELY FOLLOWS THE TURNING VEHICLE PATH WHILE OPTIMIZING CURB RAMP LENGTH.

(11) CURB EXTENSIONS SHOULD BE USED IN VERTICALLY CONSTRAINED AREAS, USUALLY IN DOWNTOWN ROADWAY SEGMENTS WHERE ON-STREET PARKING IS AVAILABLE. CURB EXTENSIONS SHOULD BE CONSIDERED FOR APS INTERSECTIONS WHERE SPACE IS LIMITED. PUSH BUTTONS MUST MEET APS CRITERIA AS DESCRIBED IN THE PUSH BUTTON LOCATION DETAIL SHEET.

PLOTTED/REVISED: 01/30/2025
DISTRICT #:
PLOT NAME: $$@IPLOT$NAME@$$
PATH & FILENAME: P:\002-612-035 17 to 53\Plan\002612035_MNDOT SHEETS COMB.dgn

REVISION:

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JEFFREY PERKINS
OPERATIONS DIVISION

MINNESOTA DEPARTMENT OF TRANSPORTATION

STANDARD PLAN 5-297.250 | 3 OF 6

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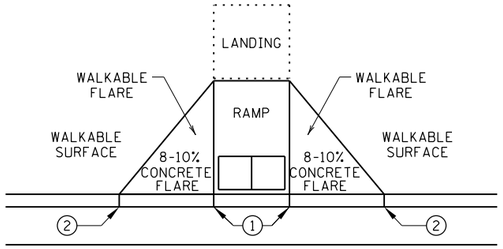
REVISED:

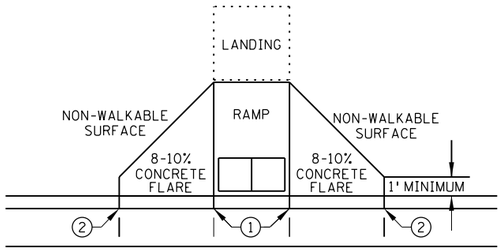
THOMAS STYRBICKI
STATE DESIGN ENGINEER

PEDESTRIAN CURB RAMP DETAILS

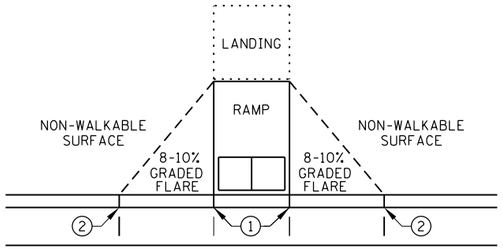
STATE PROJ. NO. SAP 002-612-035 SHEET NO. 13 OF 110 SHEETS



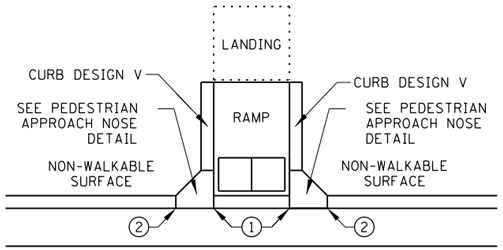
PAVED FLARES
ADJACENT TO WALKABLE SURFACE



PAVED FLARES
ADJACENT TO NON-WALKABLE SURFACE

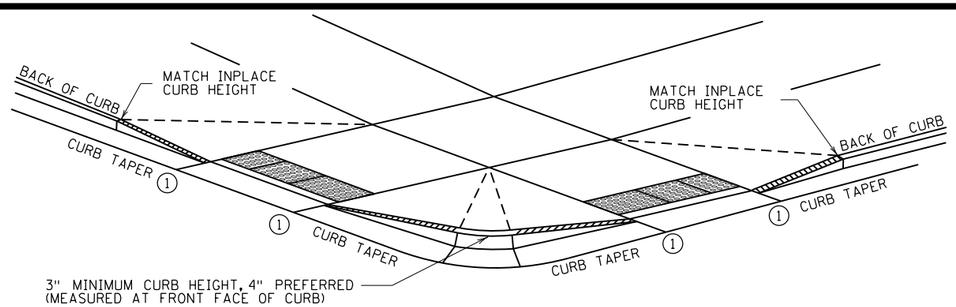


GRADED FLARES

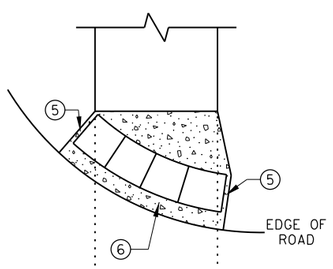


RETURNED CURB ④

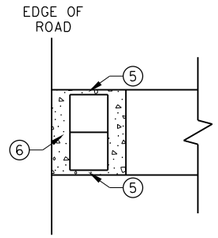
TYPICAL SIDE TREATMENT OPTIONS ③ ⑩



DETECTABLE EDGE WITH ⑦
CURB AND GUTTER

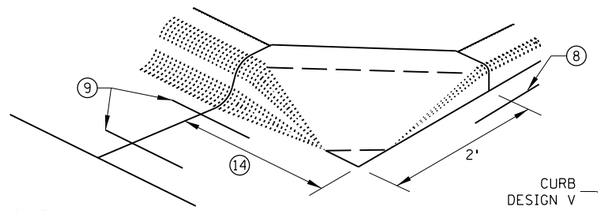


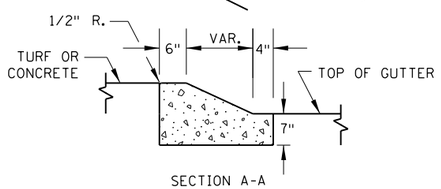
RADIAL DETECTABLE WARNING



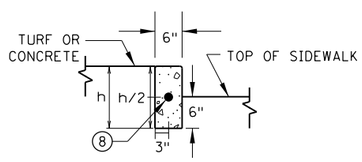
RECTANGULAR DETECTABLE WARNING

DETECTABLE EDGE WITHOUT CURB AND GUTTER

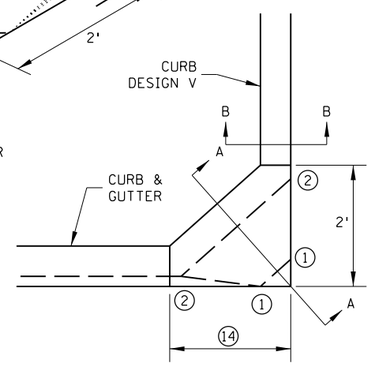




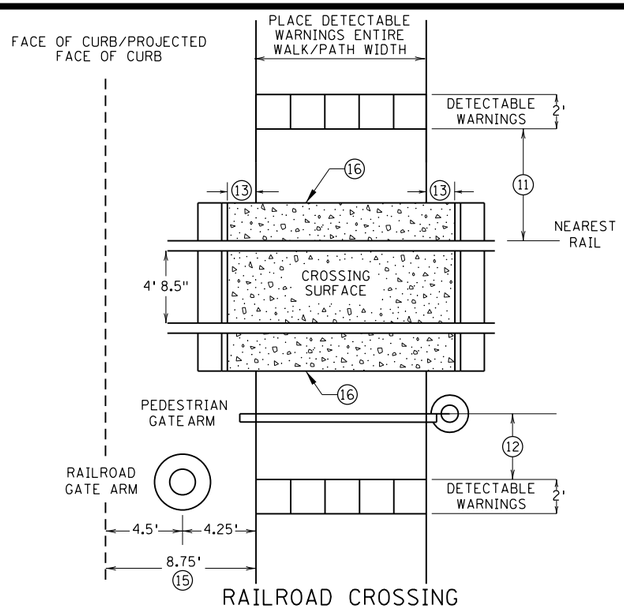
SECTION A-A



SECTION B-B



PEDESTRIAN APPROACH
NOSE DETAIL
(FOR RETURNED CURB
SIDE TREATMENT)



RAILROAD CROSSING
PLAN VIEW

NOTES:

INTERMEDIATE CURB HEIGHTS TAPER SHALL RISE AT 8-10% TO A MINIMUM 3 INCH CURB HEIGHT. INCREASE CURB TAPER LENGTH AT LESS THAN 8% OR REDUCE INTERMEDIATE CURB HEIGHT TO 2+ INCHES IF NECESSARY TO MATCH ADJACENT BOULEVARD OR SIDEWALK GRADES.

SEE STANDARD PLATE 7038 AND THIS SHEET FOR ADDITIONAL DETAILS ON DETECTABLE WARNING.

A WALKABLE SURFACE IS DEFINED AS A PAVED SURFACE ADJACENT TO A CURB RAMP WITHOUT RAISED OBSTACLES THAT COULD MISTAKENLY BE TRAVERSED BY A USER WHO IS VISUALLY IMPAIRED.

CONCRETE FLARE LENGTHS ADJACENT TO NON-WALKABLE SURFACES SHOULD BE LESS THAN 8' LONG MEASURED ALONG THE RAMPS FROM THE BACK OF CURB.

① 0" CURB HEIGHT. SEE INSET A ON SHEET 3 OF 6.

② FULL CURB HEIGHT.

③ SIDE TREATMENTS ARE APPLICABLE TO ALL RAMP TYPES AND SHOULD BE IMPLEMENTED AS NEEDED AS FIELD CONDITIONS DICTATE. THE ENGINEER SHALL DETERMINE THE RAMP SIDE TREATMENTS BASED ON MAINTENANCE OF BOTH ROADWAY AND SIDEWALK, ADJACENT PROPERTY CONSIDERATIONS, AND MITIGATING CONSTRUCTION IMPACTS.

④ TYPICALLY USED FOR MEDIANS AND ISLANDS.

⑤ WHEN NO CONCRETE FLARES ARE PROPOSED, THE CONCRETE WALK SHALL BE FORMED AND CONSTRUCTED PERPENDICULAR TO THE EDGE OF ROADWAY. MAINTAIN 3" MAX. BETWEEN EDGE OF DOMES AND EDGE OF CONCRETE.

⑥ IF NO CURB AND GUTTER IS PLACED IN RURAL SECTIONS, DETECTABLE WARNINGS SHALL BE PLACED 1' FROM THE EDGE OF BITUMINOUS ROADWAY AND/OR BITUMINOUS SHARED-USE PATH TO PROVIDE VISUAL CONTRAST.

⑦ ALL CONSTRUCTED CURBS MUST HAVE A CONTINUOUS DETECTABLE EDGE FOR THE VISUALLY IMPAIRED. THIS DETECTABLE EDGE REQUIRES DETECTABLE WARNINGS WHEREVER THERE IS ZERO-INCH HIGH CURB. CURB TAPERS ARE CONSIDERED A DETECTABLE EDGE WHEN THE TAPER STARTS WITHIN 3" OF THE EDGE OF THE DETECTABLE WARNINGS, AND UNIFORMLY RISES TO A 3-INCH MINIMUM CURB HEIGHT. ANY CURB NOT PART OF A CURB TAPER AND LESS THAN 3 INCHES IN HEIGHT IS NOT CONSIDERED A DETECTABLE EDGE AND THEREFORE IS NOT COMPLIANT WITH ACCESSIBILITY STANDARDS.

⑧ DRILL AND GROUT 1 - NO. 4 12" LONG REINFORCEMENT BAR (EPOXY COATED) WITH 3" MIN. COVER. REINFORCEMENT BARS ARE NOT NEEDED IF THE APPROACH NOSE IS POURED INTEGRAL WITH THE V CURB.

⑨ DRILL AND GROUT 2 - NO. 4 12" LONG REINFORCEMENT BARS (EPOXY COATED) WITH 3" MIN. COVER. REINFORCEMENT BARS ARE NOT NEEDED IF THE APPROACH NOSE IS POURED INTEGRAL WITH THE CURB AND GUTTER.

⑩ SIDE TREATMENT EXAMPLES SHOWN ARE WHEN THE INITIAL LANDING IS APPROXIMATELY LEVEL WITH THE FULL HEIGHT CURB (I.E. 6' LONG RAMP FOR 6" HIGH CURB). WHEN THE INITIAL LANDING IS MORE THAN 1" BELOW FULL HEIGHT CURB REFER TO SHEETS 1 & 2 TO MODIFY THE CURB HEIGHT TAPERS AND MAINTAIN POSITIVE BOULEVARD DRAINAGE. CONSTRUCT THESE TAPERS AT 0"-3" AT 8-10%, THEN LESS THAN 5% FROM 3" CURB TO FULL CURB HEIGHT.

⑪ NEAREST EDGE OF DETECTABLE WARNING SURFACES SHALL BE PLACED 12' MINIMUM TO 15' MAXIMUM FROM THE NEAREST RAIL. FOR SKEWED RAILWAYS IN NO INSTANCE SHALL THE DETECTABLE WARNING BE CLOSER THAN 12' MEASURED PERPENDICULAR TO THE NEAREST RAIL.

⑫ WHEN PEDESTRIAN GATES ARE PROVIDED, DETECTABLE WARNING SURFACES SHALL BE PLACED ON THE SIDE OF THE GATES OPPOSITE THE RAIL, 2' FROM THE APPROACHING SIDE OF THE GATE ARM. THIS CRITERIA GOVERNS OVER NOTE ⑪.

⑬ CROSSING SURFACE SHALL EXTEND 2' MINIMUM PAST THE OUTSIDE EDGE OF WALK OR SHARED-USE PATH.

⑭ 3' FOR MEDIANS AND SPLITTER ISLANDS. NOSE CAN BE REDUCED TO 2' ON FREE RIGHT ISLANDS.

⑮ SIDEWALK TO BE PLACED 8.75' MIN. FROM THE FACE OF CURB/PROJECTED FACE OF CURB. THIS ENSURES MIN. CLEARANCE BETWEEN THE SIDEWALK AND GATE ARM COUNTERWEIGHT SUPPORTS.

⑯ CONSTRUCT WITH EXPANSION MATERIAL PER MNDOT SPECIFICATION 3702 TYPES A-E. EXPANSION MATERIAL SHALL MATCH FULL HEIGHT OF ADJACENT CONCRETE.

PLOTTED/REVISED: 01/30/2025

DISTRICT #:
PLOT NAME: $$@PLOT$NAME@$$
PATH & FILENAME: P:\002-612-035 17 to 53\Plan\002612035_MNDOT SHEETS COMB.dgn

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OPERATIONS DIVISION

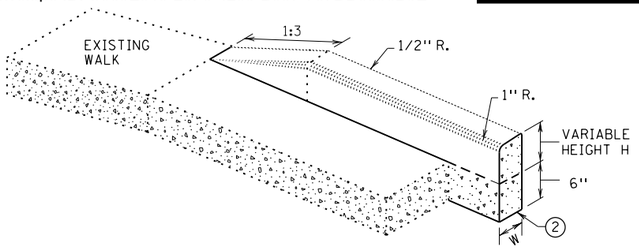
MINNESOTA DEPARTMENT OF TRANSPORTATION

STANDARD PLAN 5-297.250 | 4 OF 6

APPROVED: 11-04-2021
REVISED:
THOMAS STYRBICKI
STATE DESIGN ENGINEER

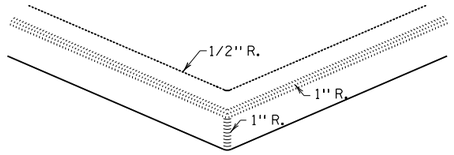
PEDESTRIAN CURB RAMP DETAILS

STATE PROJ. NO. SAP 002-612-035 SHEET NO. 14 OF 110 SHEETS



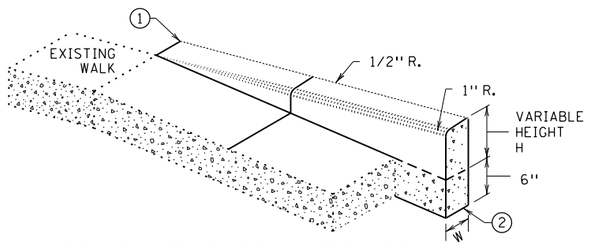
V CURB ADJACENT TO LANDSCAPE

CURB WITHIN SIDEWALK LIMITS



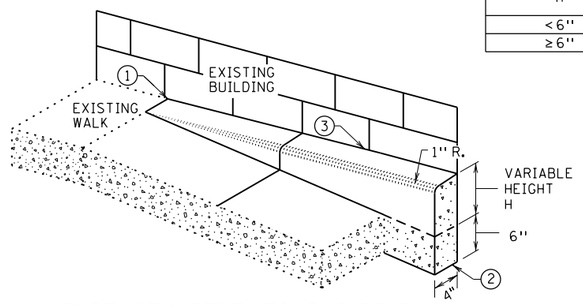
V CURB INTERSECTION

CONCRETE CURB DESIGN V	
CURB HEIGHT H	CURB WIDTH W
< 6"	4"
≥ 6"	6"

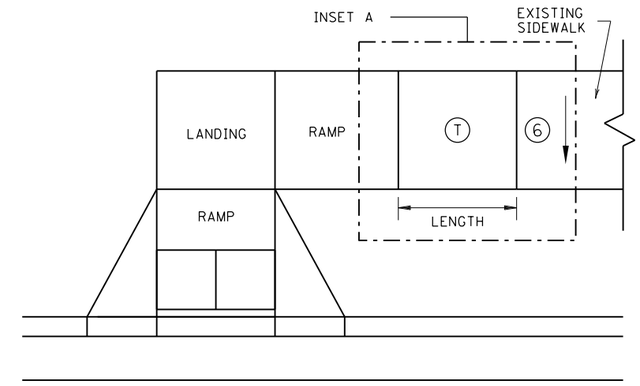


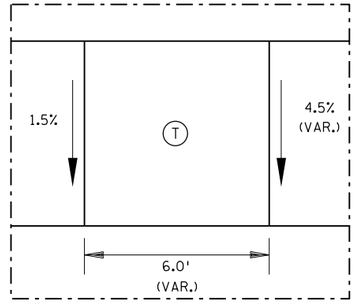
V CURB ADJACENT TO LANDSCAPE

CURB OUTSIDE SIDEWALK LIMITS



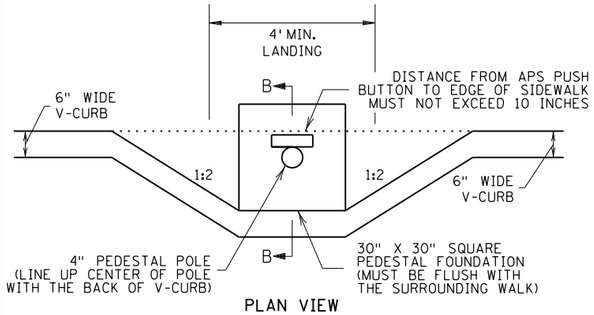
V CURB ADJACENT TO BUILDING OR BARRIER



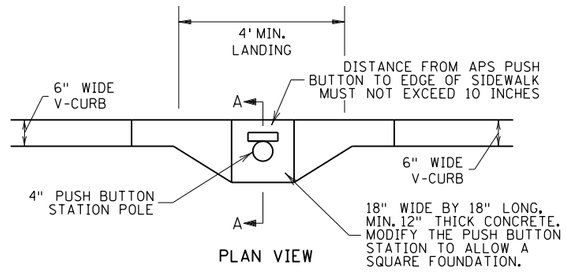


TRANSITION PANEL ④⑤

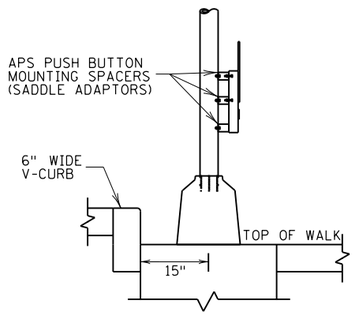
INSET A



PLAN VIEW

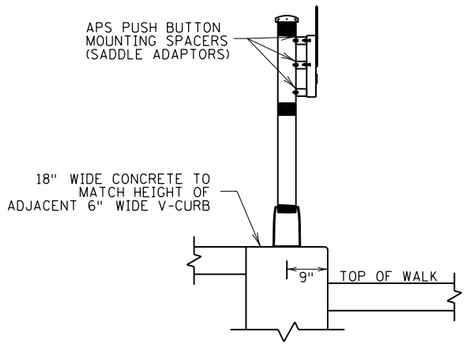


PLAN VIEW



SECTION B-B

SIGNAL PEDESTAL & PUSH BUTTON (V-CURB)



SECTION A-A

PUSH BUTTON STATION (V-CURB)

NOTES:

A WALKABLE FLARE IS AN 8-10% CONCRETE FLARE THAT IS REQUIRED WHEN THE FLARE IS ADJACENT TO A WALKABLE SURFACE, OR WHEN THE PEDESTRIAN PATH OF TRAVEL OF A PUSH BUTTON TRAVERSES THE FLARE.

ALL V CURB CONTRACTION JOINTS SHALL MATCH CONCRETE WALK JOINTS.

WHERE RIGHT-OF-WAY ALLOWS, USE OF V CURB SHOULD BE MINIMIZED. GRADING ADJACENT TURF OR SLOPING ADJACENT PAVEMENT IS PREFERRED.

V CURB SHALL BE PLACED OUTSIDE THE SIDEWALK LIMITS WHEN RIGHT OF WAY ALLOWS.

V CURB NEXT TO BUILDING SHALL BE A 4" WIDTH AND SHALL MATCH PREVIOUS TOP OF SIDEWALK ELEVATIONS.

① END TAPERS AT TRANSITION SECTION SHALL MATCH INPLACE SIDEWALK GRADES.

② ALL V CURB SHALL MATCH BOTTOM OF ADJACENT WALK.

③ CONSTRUCT USING APPROVED EXPANSION MATERIAL PER MNDOT TYPE A-E EXPANSION. LEAVE A MINIMUM ½" TOP GAP AND SEAL WITH MNDOT APPROVED SILICONE PER MNDOT SPEC 3722.

④ THE MAX. RATE OF CROSS SLOPE TRANSITIONING IS 1' LINEAR FOOT OF SIDEWALK PER HALF PERCENT CROSS SLOPE. WHEN PAR WIDTH IS GREATER THAN 6' OR THE RUNNING SLOPE IS GREATER THAN 5%, DOUBLE THE CALCULATED TRANSITION LENGTH.

⑤ TRANSITION PANELS ARE TO ONLY BE USED AFTER THE RAMP, OR IF NEEDED, LANDING ARE AT THE FULL CURB HEIGHT (TYPICAL SECTION).

⑥ EXISTING CROSS SLOPE GREATER THAN 2.0%.

LEGEND

THESE LONGITUDINAL SLOPE RANGES SHALL BE THE STARTING POINT. IF SITE CONDITIONS WARRANT, LONGITUDINAL SLOPES UP TO 8.3% OR FLATTER ARE ALLOWED.

Ⓢ INDICATES PEDESTRIAN RAMP - SLOPE SHALL BE BETWEEN 5.0% MINIMUM AND 8.3% MAXIMUM IN THE DIRECTION SHOWN AND THE CROSS SLOPE SHALL NOT EXCEED 2.0%.

LANDING AREA - 4' X 4' MIN. (5' X 5' MIN. PREFERRED) DIMENSIONS AND MAX 2.0% SLOPE IN ALL DIRECTIONS. LANDING SHALL BE FULL WIDTH OF INCOMING PARS.

Ⓣ TRANSITION PANEL(S) - TO BE USED FOR TRANSITIONING THE CROSS-SLOPE OF A RAMP TO THE EXISTING WALK CROSS-SLOPE. RATE OF TRANSITION SHOULD BE 0.5% PER 1 LINEAR FOOT OF WALK. SEE THIS SHEET FOR ADDITIONAL INFORMATION.

REVISION:

APPROVED: 11-04-2021

JEFFREY PERKINS
OPERATIONS DIVISION

MINNESOTA DEPARTMENT OF TRANSPORTATION

STANDARD PLAN 5-297.250 | 5 OF 6

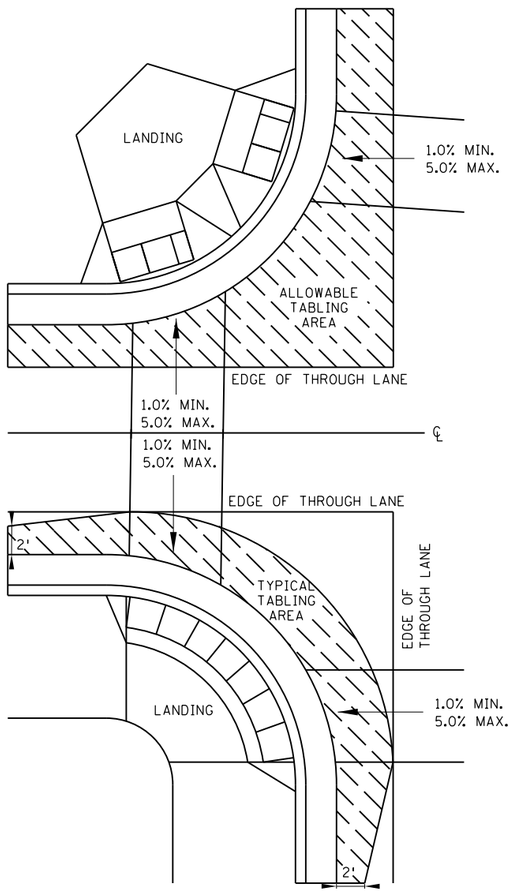
APPROVED: 11-04-2021
REVISED:

THOMAS STYRBICKI
STATE DESIGN ENGINEER

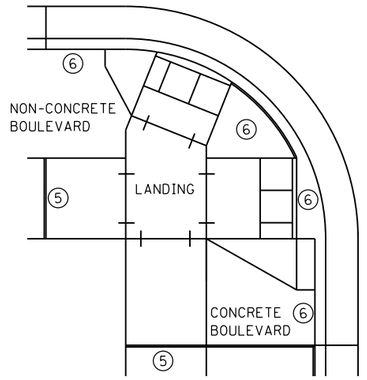
PEDESTRIAN CURB RAMP DETAILS

STATE PROJ. NO. SAP 002-612-035 SHEET NO. 15 OF 110 SHEETS

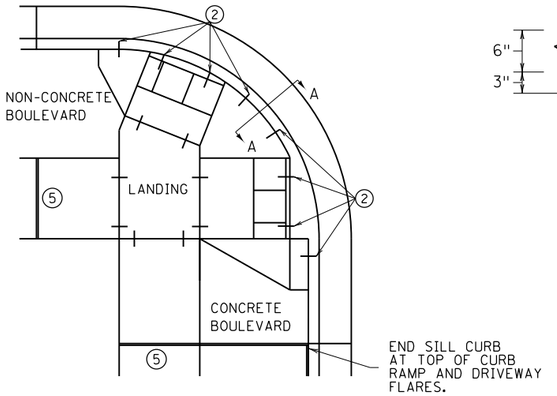
DISTRICT #:
PLOT NAME: $$@PLOT$NAME@$$
PATH & FILENAME: P:\002-612-035 17 to 53\Plan\002612035_MNDOT SHEETS COMB.dgn
PLOTTED/REVISED: 01/30/2025



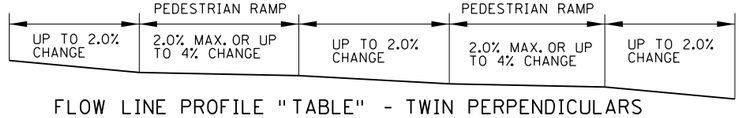
CURB LINE AND ROAD CROSSING ADJUSTMENTS



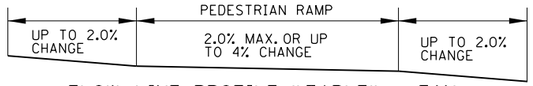
EXPANSION MATERIAL PLACEMENT
FOR CONCRETE ROADWAYS



CURB LINE REINFORCEMENT ④
PLACEMENT ON BITUMINOUS ROADWAYS



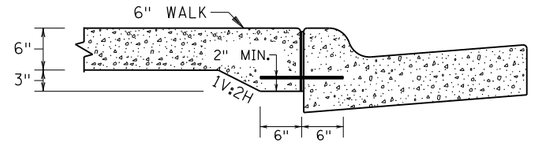
FLOW LINE PROFILE "TABLE" - TWIN PERPENDICULARS



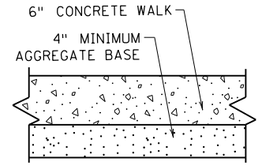
FLOW LINE PROFILE "TABLE" - FAN

FLOW LINE PROFILE RAISE - TWIN PERPENDICULARS

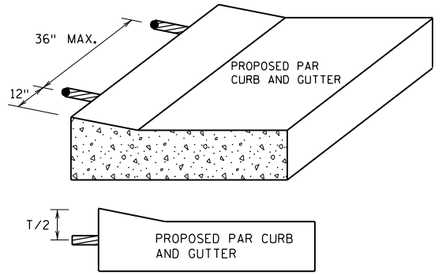
FLOW LINE PROFILE RAISE - FAN

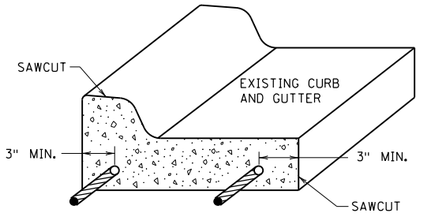


SECTION VIEW A-A
THICKENED SECTION
THROUGH CURB RAMP FLARES



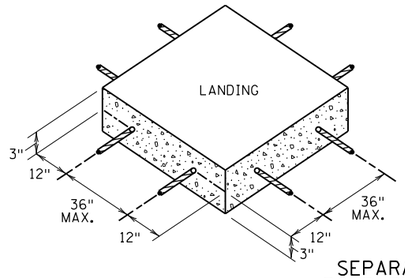
TYPICAL SIDEWALK SECTION
WITHIN INTERSECTION CORNER

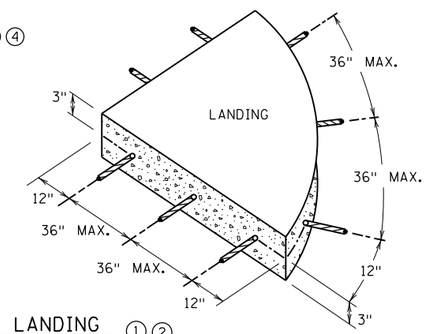




CURB AND GUTTER
REINFORCEMENT ③

CURB RAMP REINFORCEMENT DETAILS ②④





SEPARATE LANDING
POUR REINFORCEMENT ①②

GENERAL NOTES:

"TABLING" OF CROSSWALKS MEANS MAINTAINING LESS THAN 2% CROSS SLOPE WITHIN A CROSSWALK, IS REQUIRED WHEN A ROADWAY IS IN A STOP OR YIELD CONDITION AND THE PROJECT SCOPE ALLOWS.

RECONSTRUCTION PROJECTS: ON FULL PAVEMENT REPLACEMENT PROJECTS "TABLING" OF ENTIRE CROSSWALK SHALL OCCUR WHEN FEASIBLE.

MILL & OVERLAY PROJECTS: "TABLING" OF FLOW LINES, IN FRONT OF THE PEDESTRIAN RAMP, IS REQUIRED WHEN THE EXISTING FLOW LINE IS GREATER THAN 2%. WARPING OF THE BITUMINOUS PAVEMENT CAN NOT EXTEND INTO THE THROUGH LANE. TABLE THE FLOW LINE TO 2% OR AS MUCH AS POSSIBLE WHILE ADHERING TO THE FOLLOWING CRITERIA;
1) 1.0% MIN. CROSS-SLOPE OF THE ROAD
2) 5.0% MAX. CROSS-SLOPE OF THE ROAD
3) "TABLE" FLOW LINE UP TO 4% CHANGE FROM EXISTING SLOPE IN FRONT OF PEDESTRIAN RAMP
4) UP TO 2% CHANGE IN FLOW LINE FROM EXISTING SLOPE BEYOND THE PEDESTRIAN CURB RAMP

STAND-ALONE ADA RETROFITS: FOLLOW MILL & OVERLAY CRITERIA ABOVE HOWEVER ALL PAVEMENT WARPING IS DONE WITH BITUMINOUS PATCHING ON BITUMINOUS ROADWAYS AND FULL-DEPTH APRON REPLACEMENT ON CONCRETE ROADWAYS.

RAISING OF CURB LINES SHOULD OCCUR IN VERTICALLY CONSTRAINED AREAS. RAISE THE CURB LINES ENOUGH TO ALLOW COMPLIANT RAMPS OR AS MUCH AS POSSIBLE WHILE ADHERING TO THE FOLLOWING CRITERIA;
1) 1.0% MIN. AND 5.0% MAXIMUM CROSS-SLOPE OF THE ROAD
2) 1.0% MIN. FLOW LINE (ON EITHER SIDE OF PEDESTRIAN RAMP) TO MAINTAIN POSITIVE DRAINAGE
3) 5.0% RECOMMENDED MAX. FLOW LINE
4) LONGITUDINAL THROUGH LANE ROADWAY TAPERS SHOULD BE 1" VERTICAL PER 15' HORIZONTAL

NOTES:

① TO ENSURE RAMPS AND LANDINGS ARE PROPERLY CONSTRUCTED, ALL INITIAL LANDINGS AT A TOP OF A RAMPED SURFACE (RUNNING SLOPE GREATER THAN 2%) SHALL BE FORMED AND PLACED SEPARATELY IN AN INDEPENDENT CONCRETE POUR. FOLLOW SIDEWALK REINFORCEMENT DETAILS ON THIS SHEET FOR ALL SEPARATELY POURED INITIAL LANDINGS.

② DRILL AND GROUT NO. 4 12" LONG REINFORCEMENT BARS (EPOXY COATED) AT 36" MAXIMUM CENTER TO CENTER MINIMUM 12" SPACING FROM CONSTRUCTION JOINTS. BARS TO BE ADJUSTED TO MATCH RAMP GRADE. BARS TO BE PAID BY EACH.

③ DRILL AND GROUT 2 - NO. 4 X 12" LONG (6" EMBEDDED) REINFORCEMENT BARS (EPOXY COATED). REINFORCEMENT REQUIRED FOR ALL CONSTRUCTION JOINTS. BARS TO BE PAID BY EACH.

④ THIS CURB LINE REINFORCEMENT DETAIL SHALL BE USED ON BITUMINOUS ROADWAYS. FOR CONCRETE ROADWAYS, SEE NOTE 6.

⑤ CONSTRUCT WITH EXPANSION MATERIAL PER MNDOT SPECIFICATION 3702 TYPES A-E. EXPANSION MATERIAL SHALL MATCH FULL HEIGHT OF ADJACENT CONCRETE.

⑥ USE AN APPROVED TYPE F (1/4 INCH THICK) SEPARATION MATERIAL. SEPARATION MATERIAL SHALL MATCH FULL HEIGHT DIMENSION OF ADJACENT CONCRETE.

REVISION:

APPROVED: 11-04-2021
JEFFREY PERKINS
OPERATIONS DIVISION

MINNESOTA DEPARTMENT OF TRANSPORTATION

THOMAS STYRBICKI
STATE DESIGN ENGINEER

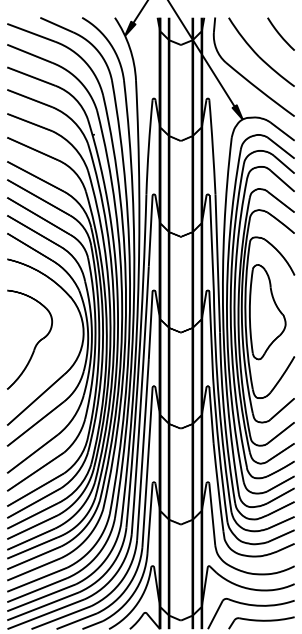
STANDARD PLAN 5-297.250	6 OF 6
APPROVED: 11-04-2021	
REVISED:	

PEDESTRIAN CURB RAMP DETAILS

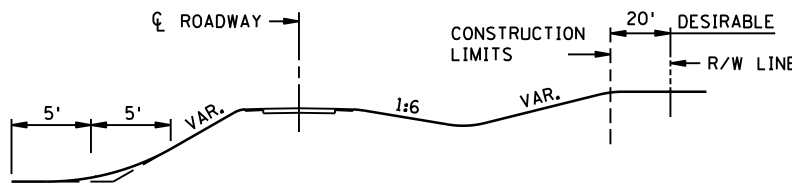
STATE PROJ. NO.	SAP 002-612-035	SHEET NO. 16 OF 110 SHEETS

PLOTTED/REVISED: 01/30/2025

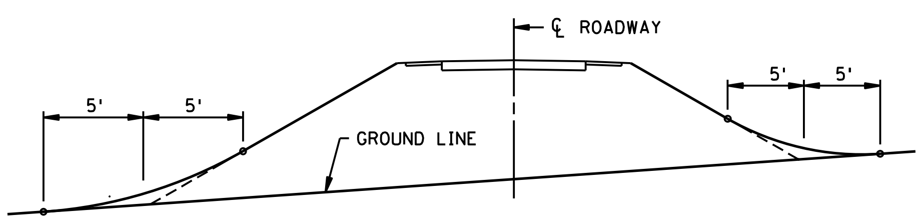
DISTRICT #:
IPLOT NAME: $$@IPLOT$NAME@$$
PATH & FILENAME: P:\002-612-035 I7 to 53\Plan\0026I2035_MNDOT SHEETS COMB.dgn



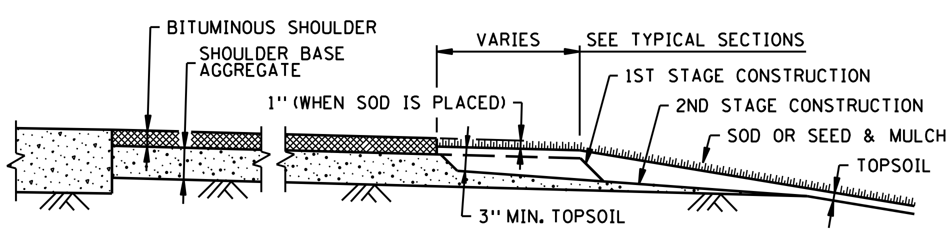
CONTOURING ROAD CUTS



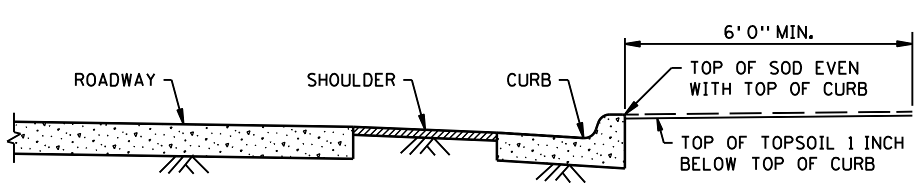
ROUNDING SHOULDERS AND BACKSLOPES



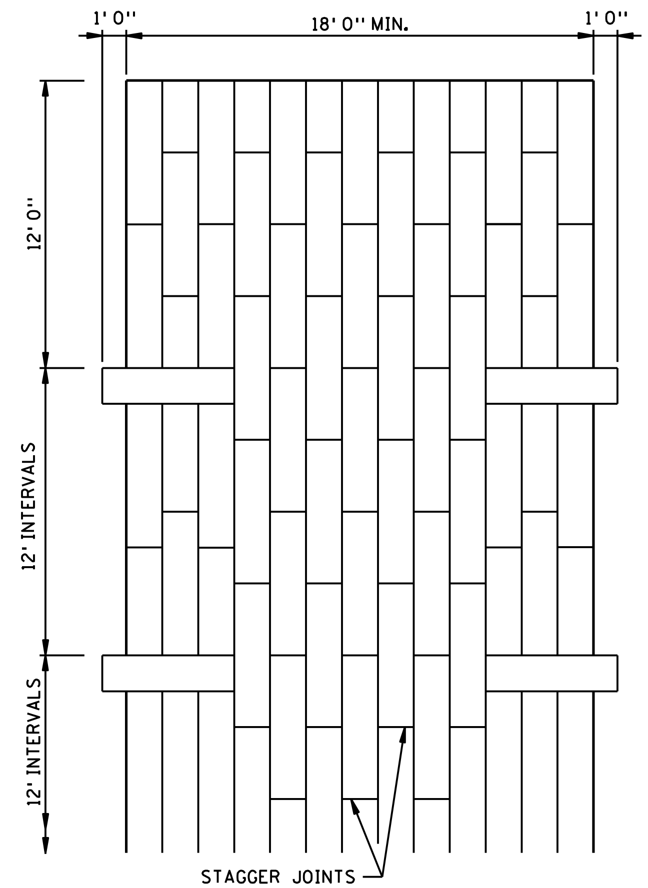
SHAPING FOR DRAINAGE ALONG THE TOE OF FILL SLOPES



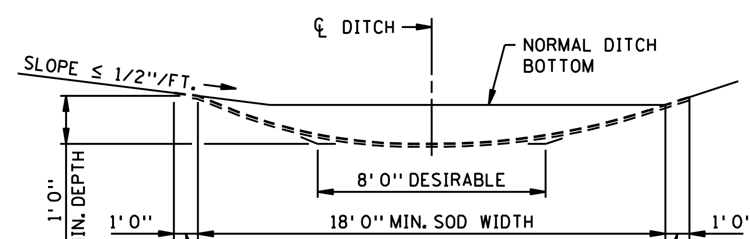
SHAPING AND TOPSOILING INSLOPES



SHAPING ADJACENT TO CURBS WHEN SOD IS PLACED

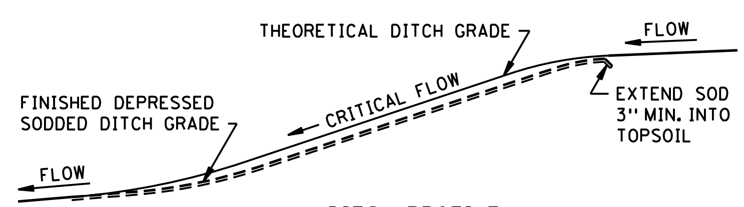


PLAN VIEW



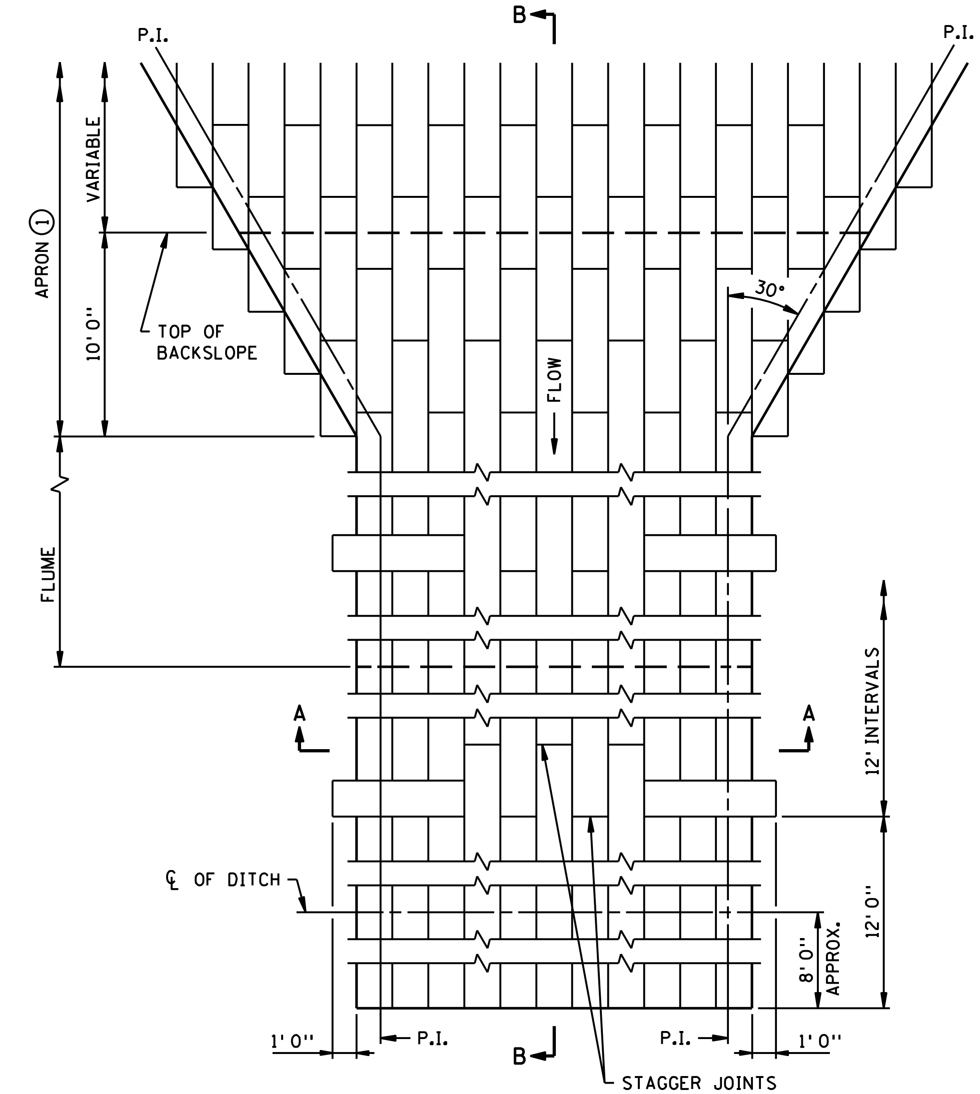
SODDED DITCH CROSS SECTION

WHERE FRONT OR BACK SLOPE IS FLAT (LESS THAN 1/2''/FT.), FIRST NOTCH DITCH AND THEN PROVIDE ROUNDING.

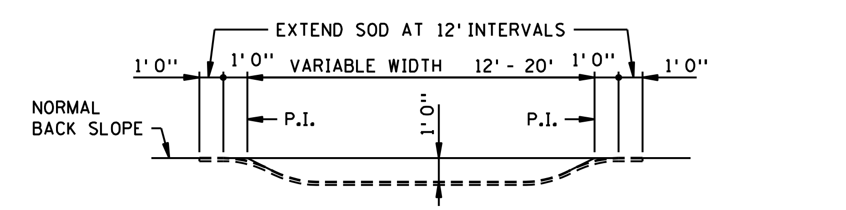


DITCH PROFILE

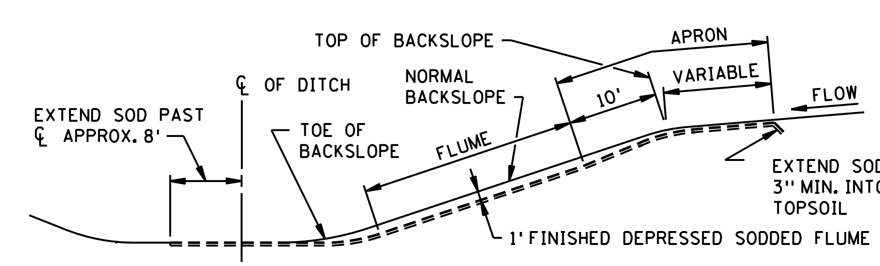
SODDED DITCH DETAILS



PLAN VIEW



SECTION A-A



SECTION B-B

SODDED FLUME DETAILS

NOTES:

SEE SPEC. 2575.3 FOR ADDITIONAL INFORMATION.

① CONSTRUCT TAPER AS DIRECTED BY THE ENGINEER.

REVISION

APPROVED: 2-28-2017

[illegible]

STATE AID ENGINEER

MINNESOTA DEPARTMENT OF TRANSPORTATION

STANDARD PLAN 5-297.404 | 1 OF 3

[illegible]

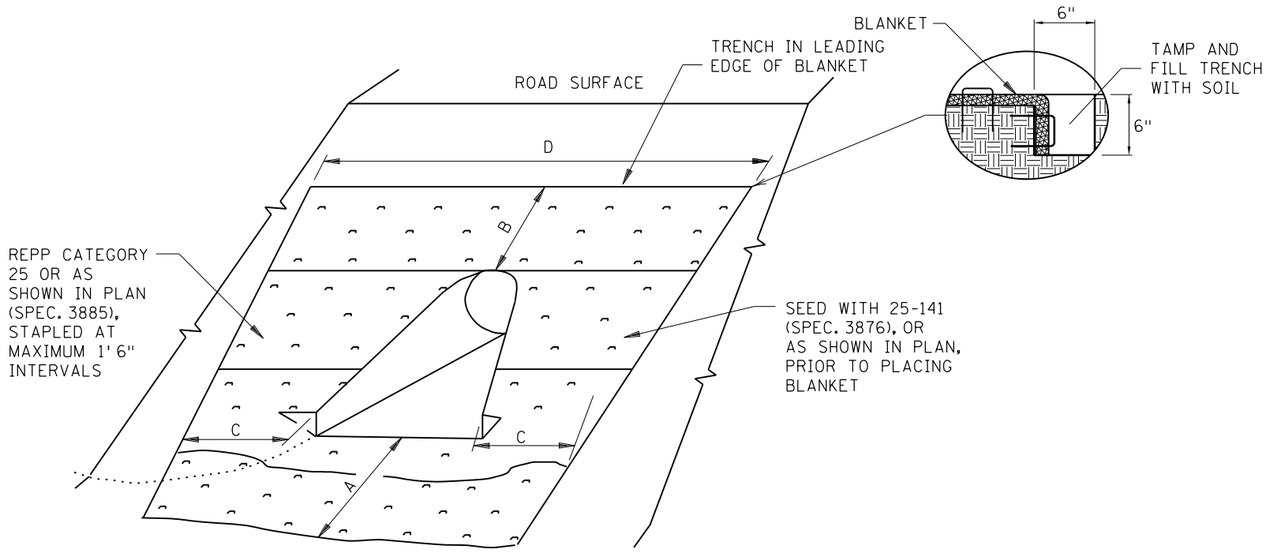
STATE DESIGN ENGINEER

APPROVED: 2-28-2017
REVISED:

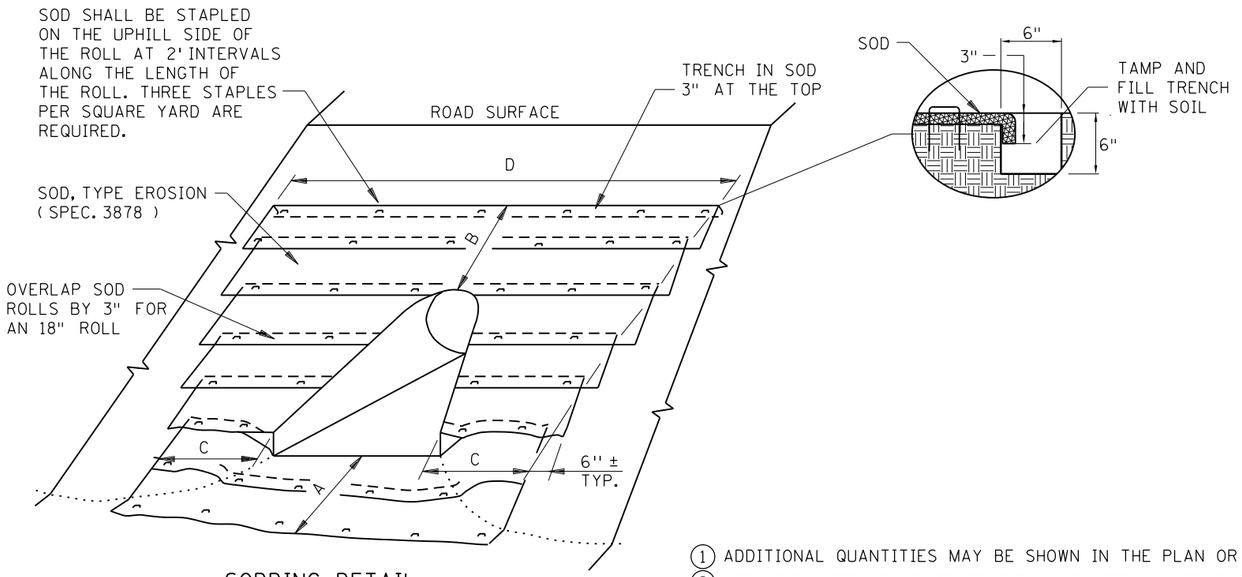
PERMANENT EROSION CONTROL

ALONG ROADWAYS, DITCHES AND FLUMES

STATE PROJ. NO. SAP 002-612-035 SHEET NO. 17 OF 110 SHEETS



ROLLED EROSION PREVENTION PRODUCT (BLANKET) & SEED DETAIL



SODDING DETAIL

CULVERT INLET APRON ①										
CULVERT DIAMETER ②	SOD OR REPP (SQ. YDS.)						"A"	"B"	"C"	"D"
	CIRCULAR AND ARCH PIPE METAL APRON (PLATE 3123, PLATE 3122)	CIRCULAR AND ARCH PIPE CONCRETE APRON (PLATE 3100, PLATE 3110)	CIRCULAR AND ARCH PIPE METAL SAFETY APRON 1:4 SLOPE (PLATE 3148)	CIRCULAR AND ARCH PIPE METAL SAFETY APRON 1:6 SLOPE (PLATE 3148)	CIRCULAR CORRUGATED METAL PIPE SAFETY APRON 1:6 SLOPE (PLATE 3128)	CIRCULAR CORRUGATED METAL PIPE SAFETY APRON 1:4 SLOPE (PLATE 3128)				
15"	9	9	8	8	N/A	N/A	3'	1.5'	3'	13'
18"	13	12	12	14	16	N/A	3'	3'	3'	16'
21"	14	14	14	16	18	14	3'	3'	3'	17'
24"	16	15	16	19	21	17	3'	3'	3'	18'
27"	N/A	20	N/A	N/A	N/A	N/A	3'	4.5'	3'	20'
30"	23	22	25	30	32	N/A	3'	4.5'	3'	22'
36"	34	34	39	48	51	37	4.5'	4.5'	4.5'	27'
42"	43	40	51	64	N/A	N/A	4.5'	6'	4.5'	30'
48"	54	50	66	82	N/A	N/A	4.5'	7.5'	4.5'	34'
54"	65	58	81	102	N/A	N/A	4.5'	9'	4.5'	37'
60"	69	59	91	115	N/A	N/A	4.5'	9'	4.5'	39'
66"	69	63	N/A	N/A	N/A	N/A	4.5'	9'	4.5'	39'
72"	78	72	99	122	N/A	N/A	4.5'	10.5'	4.5'	41'

CULVERT OUTLET APRON ①										
CULVERT DIAMETER ②	SOD OR REPP (SQ. YDS.)						"A"	"B"	"C"	"D"
	CIRCULAR AND ARCH PIPE METAL APRON (PLATE 3123, PLATE 3122)	CIRCULAR AND ARCH PIPE CONCRETE APRON (PLATE 3100, PLATE 3110)	CIRCULAR AND ARCH PIPE METAL SAFETY APRON 1:4 SLOPE (PLATE 3148)	CIRCULAR AND ARCH PIPE METAL SAFETY APRON 1:6 SLOPE (PLATE 3148)	CIRCULAR CORRUGATED METAL PIPE SAFETY APRON 1:6 SLOPE (PLATE 3128)	CIRCULAR CORRUGATED METAL PIPE SAFETY APRON 1:4 SLOPE (PLATE 3128)				
15"	10	10	9	10	N/A	N/A	4.5'	1.5'	3'	13'
18"	13	13	12	14	15	N/A	6'	1.5'	3'	14'
21"	16	14	16	18	19	15	6'	1.5'	3'	15'
24"	18	18	18	21	22	18	7.5'	1.5'	3'	16'
27"	N/A	19	N/A	N/A	N/A	N/A	7.5'	1.5'	3'	17'
30"	23	23	24	28	29	N/A	9'	1.5'	3'	18'
36"	36	35	38	47	48	37	10.5'	1.5'	4.5'	23'
42"	43	40	47	58	N/A	N/A	12'	1.5'	4.5'	25'
48"	50	46	57	70	N/A	N/A	13.5'	1.5'	4.5'	27'
54"	57	50	67	84	N/A	N/A	15'	1.5'	4.5'	29'
60"	74	63	90	113	N/A	N/A	16.5'	1.5'	6'	33'
66"	75	67	N/A	N/A	N/A	N/A	16.5'	1.5'	6'	33'
72"	77	70	92	114	N/A	N/A	16.5'	1.5'	6'	34'

NOTES:

REPP = ROLLED EROSION PREVENTION PRODUCT.

AREA SHOWN IN SQUARE YARDS IS FOR ONE CULVERT END.

QUANTITIES ARE CALCULATED TO INCLUDE SOD REQUIRED TO PROVIDE A 3" OVERLAP ON ALL 18" WIDE ROLLS. THIS ALLOWS FOR SHRINKAGE OF THE SOD.

FOR PIPE ARCHES USE EQUIVALENT PIPE DIAMETER TO APPROXIMATE AREA.

FOR CORRUGATED POLYETHYLENE PIPE METAL APRON (PLATE 3129), USE THE METAL APRON COLUMN (PLATE 3123).

AREAS AND DIMENSIONS ARE APPROXIMATE AND ARE BASED ON APRON SIDE SLOPES OF NO STEEPER THAN 1:2, UNLESS INDICATED AS FOR SAFETY APRONS.

CARE SHOULD BE TAKEN IN SELECTING SOD TO STABILIZE THE APRON. RIP-RAP SHOULD BE USED FOR FLOW VELOCITIES GREATER THAN 6 FPS.

① ADDITIONAL QUANTITIES MAY BE SHOWN IN THE PLAN OR REQUIRED BY THE ENGINEER.

② FOR ARCH PIPE USE CLOSEST CIRCULAR PIPE DIAMETER AND APRON SLOPE. DIAMETERS LARGER THAN 72" REQUIRE SPECIAL DESIGNS.

PLOTTED/REVISED: 01/30/2025
DISTRICT *:
IPLOT NAME: $$@IPLOT$NAME@$$
PATH & FILENAME: P:\002-612-035 I7 to 53\Plan\0026\2035_MNDOT SHEETS COMB.dgn

REVISION:

APPROVED: JANUARY 8, 2020
MARNI KARNOWSKI
CHIEF ENVIRONMENTAL OFFICER

MINNESOTA DEPARTMENT OF TRANSPORTATION

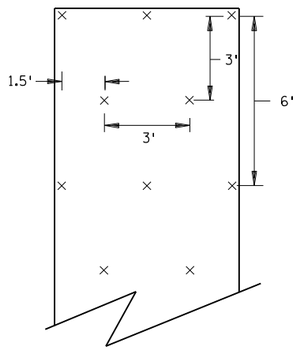
STANDARD PLAN 5-297.404 | 2 OF 3

APPROVED: 1-8-2020
REVISED:
THOMAS STYRBICKI
STATE DESIGN ENGINEER

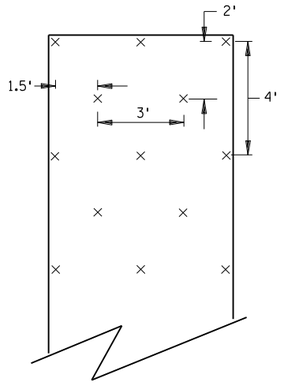
PERMANENT EROSION CONTROL

TURF ESTABLISHMENT DETAIL AT CULVERT ENDS

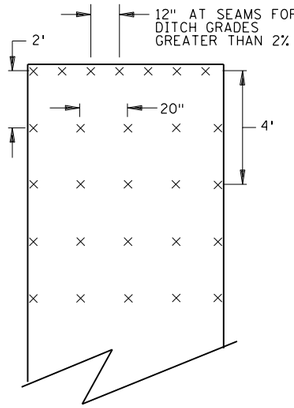
STATE PROJ. NO. SAP 002-612-035 SHEET NO. 18 OF 110 SHEETS



SLOPES FLATTER THAN 1:2
120 STAPLES PER 100 SQ YD

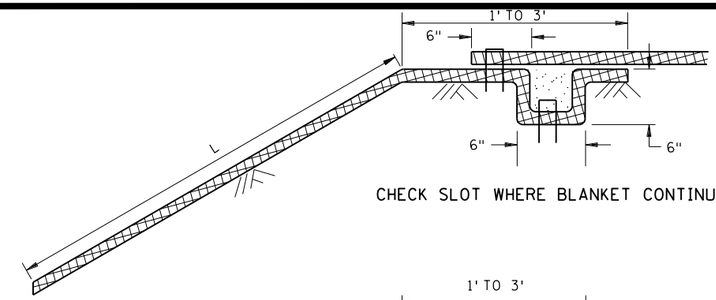


SLOPES 1:2 TO 1:1
170 STAPLES PER 100 SQ YD

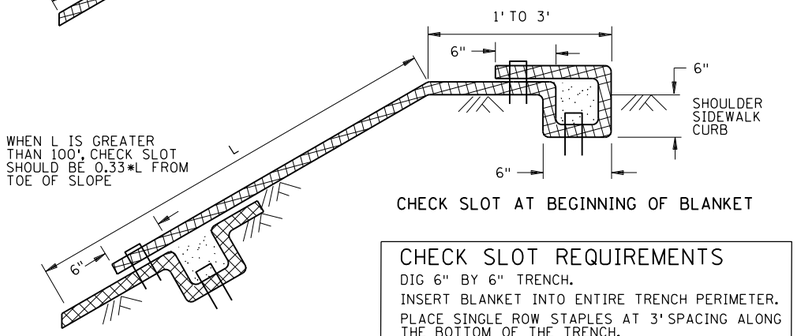


CHANNEL AND DITCH APPLICATIONS
350 STAPLES PER 100 SQ YD

BLANKET STAPLE PATTERN



CHECK SLOT WHERE BLANKET CONTINUES



CHECK SLOT AT BEGINNING OF BLANKET

CHECK SLOT REQUIREMENTS

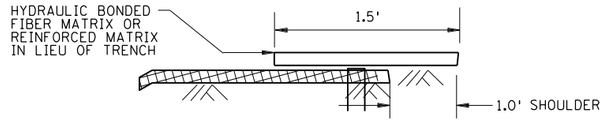
DIG 6" BY 6" TRENCH.

INSERT BLANKET INTO ENTIRE TRENCH PERIMETER.

PLACE SINGLE ROW STAPLES AT 3' SPACING ALONG THE BOTTOM OF THE TRENCH.

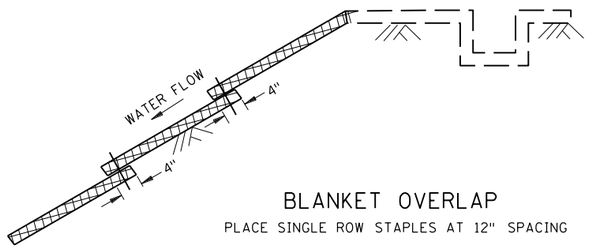
BACKFILL TRENCH WITH SOIL AND TAMP.

PLACE SINGLE ROW STAPLES AT 3' SPACING ON OVERLAP.

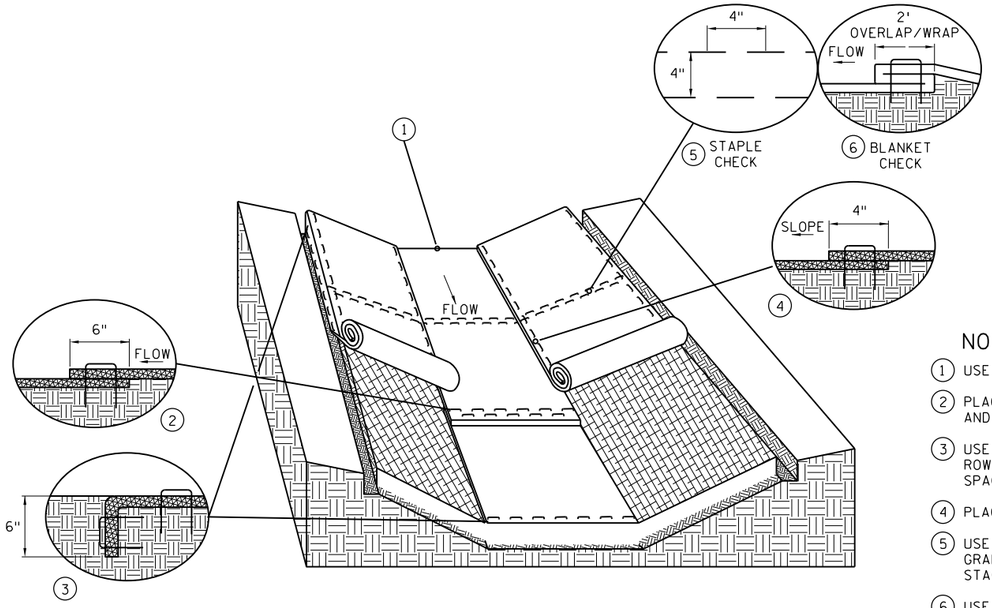


CHECK SLOT ALTERNATIVE
PLACE SINGLE ROW STAPLES AT 12" SPACING

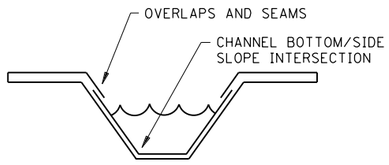
CHECK SLOT DETAILS



BLANKET OVERLAP
PLACE SINGLE ROW STAPLES AT 12" SPACING



DITCH BLANKET STAPLE DETAIL



DITCH BLANKET CRITICAL POINTS (7)

NOTES:

(1) USE CHECK SLOT DETAIL (NO ALTERNATES).

(2) PLACE DOUBLE ROW OF STAPLES STAGGERED 4" APART AND 4" ON CENTER.

(3) USE 6" X 6" TRENCH TO PLACE BLANKET. PLACE SINGLE ROW OF STAPLES ON TOP AND TRENCH SIDES AT 12" SPACING. BACKFILL TRENCH WITH SOIL AND TAMP.

(4) PLACE SINGLE ROW OF STAPLES AT 12" SPACING.

(5) USE STAPLE CHECK FOR CHANNEL SLOPES LESS THAN 2.5% GRADE AT 100' INTERVALS. PLACE DOUBLE ROW OF STAPLES STAGGERED 4" APART AND AT 4" SPACING.

(6) USE BLANKET CHECKS FOR THE FOLLOWING SLOPES:
2.5%-3% 100' INTERVALS
3%-5% 50' INTERVALS
5%-7% 25' INTERVALS

(7) CRITICAL POINTS SHALL BE SECURED WITH PROPER STAPLE PATTERNS.

GENERAL BLANKET INSTALLATION REQUIREMENTS

REPP = ROLLED EROSION PREVENTION PRODUCT.

PREPARE SOIL AS PER SPECIFICATION 2574.

LAY PARALLEL OR PERPENDICULAR TO THE DIRECTION OF WATER FLOW.

OVERLAP ADJACENT STRIP EDGES A MINIMUM OF 4".

OVERLAP BLANKET 6" (MINIMUM) AT EACH END. OVERLAP BOTTOM END OF UPPER BLANKET OVER TOP END OF LOWER BLANKET. STAPLE ALONG OVERLAP EVERY 1.5'.

THE UPPERMOST BLANKET OF ALL SLOPE APPLICATIONS MUST START IN A CHECK SLOT. IF SLOPE LENGTH (L) IS 100' OR GREATER, INSERT BLANKET INTO A CHECK SLOT ⅓ FROM THE BOTTOM OF THE SLOPE.

REVISION:

APPROVED: JANUARY 8, 2020
MARNI KARNOWSKI
CHIEF ENVIRONMENTAL OFFICER

MINNESOTA DEPARTMENT OF TRANSPORTATION

THOMAS STYRBICKI
STATE DESIGN ENGINEER

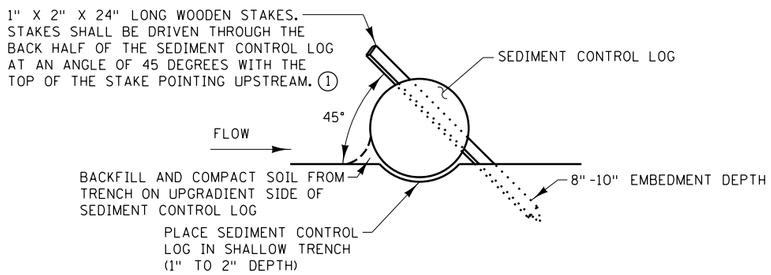
STANDARD PLAN 5-297.404 | 3 OF 3

APPROVED: 1-8-2020
REVISED:

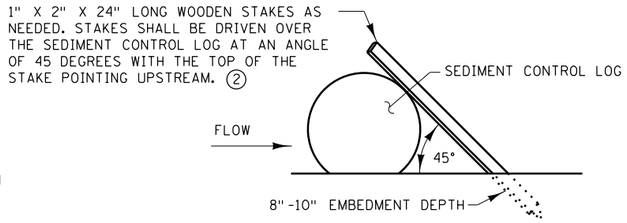
PERMANENT EROSION CONTROL

REPP (BLANKET) STAPLE PATTERN FOR SLOPES

STATE PROJ. NO. SAP 002-612-035 SHEET NO. 19 OF 110 SHEETS

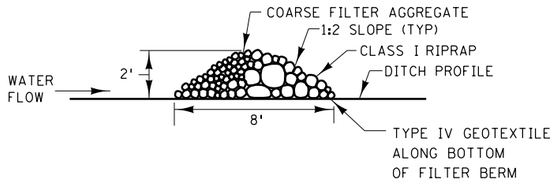


TYPES: STRAW, WOOD FIBER, OR COIR

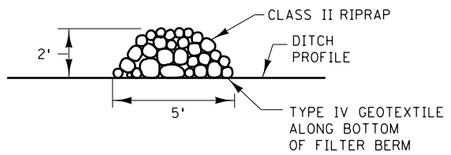


TYPES: WOOD CHIP, COMPOST, OR ROCK

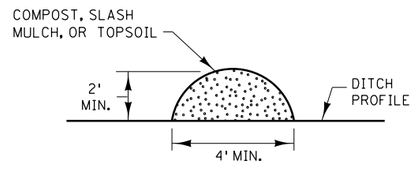
SEDIMENT CONTROL LOGS



TYPE 3 (ROCK WEEPER)

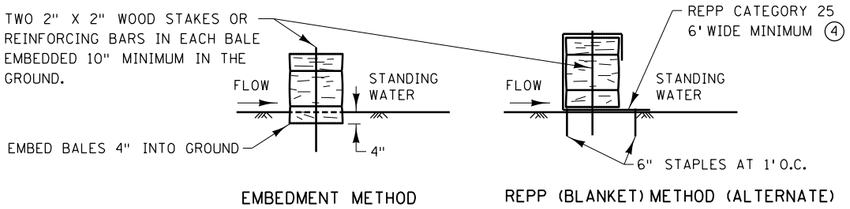


TYPE 5 (ROCK)



TYPE 1 (COMPOST), TYPE 2 (SLASH MULCH), OR TYPE 4 (TOPSOIL)

FILTER BERMS



EMBEDMENT METHOD

REPP (BLANKET) METHOD (ALTERNATE)

BALE BARRIERS (3)

NOTES:

REPP = ROLLED EROSION PREVENTION PRODUCT.

SEE SPECS. 2573, 3149, 3874, 3882, 3885, 3886, AND 3897.

(1) SPACE BETWEEN STAKES SHALL BE A MAXIMUM OF 1' FOR DITCH CHECKS OR 2' FOR OTHER APPLICATIONS.

(2) PLACE STAKES AS NEEDED TO PREVENT MOVEMENT OF SEDIMENT CONTROL LOGS PLACED ON SLOPES OR AS NEEDED DUE TO OTHER FACTORS. STAKES SHALL BE INCIDENTAL.

(3) TO BE USED FOR CRITICAL PERIMETER CONTROL AREAS WHERE STANDING WATER OCCURS (6" MAXIMUM DEPTH). BALES SHALL CONSIST OF TYPE 1 MULCH OF APPROXIMATELY 14" X 18" X 36" LONG. BALES SHALL BE PLACED ON EDGE AND BUTTED TIGHT TO ADJACENT BALES.

(4) INSTEAD OF TRENCHING, PLACE BALE ON THE REPP (BLANKET) AND WRAP BLANKET AROUND THE BALE. PLACE STAKE THROUGH BALE AND BLANKET.

REVISION:

APPROVED: JANUARY 8, 2020
MARNI KARNOWSKI
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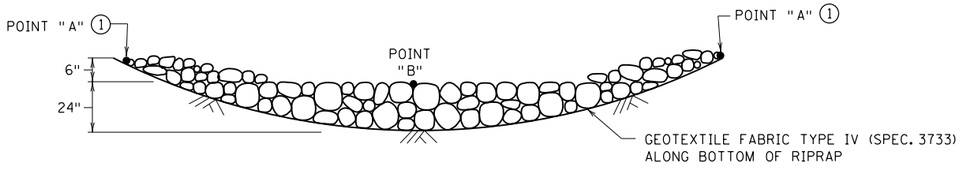
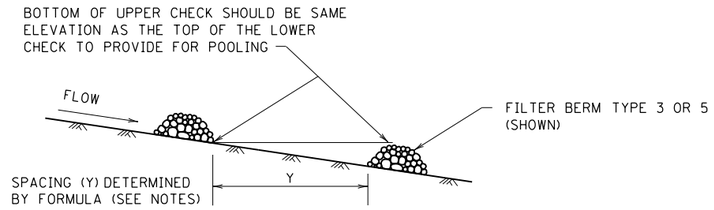
MINNESOTA DEPARTMENT OF TRANSPORTATION

THOMAS STYRBICKI
STATE DESIGN ENGINEER

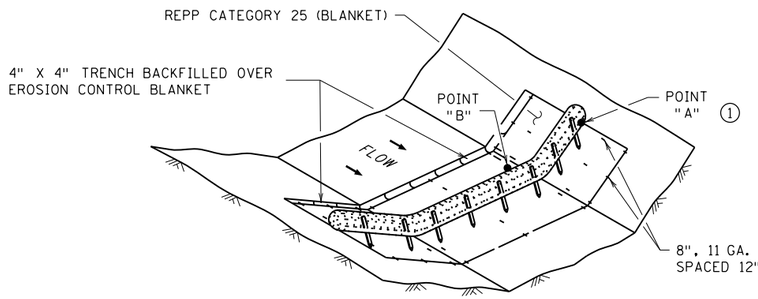
STANDARD PLAN 5-297.405	2 OF 8
APPROVED: 1-8-2020 REVISED:	TEMPORARY SEDIMENT CONTROL FILTER BERMS, SEDIMENT CONTROL LOGS, AND BALE BARRIERS
STATE PROJ. NO. SAP 002-609-022	SHEET NO. 20 OF 110 SHEETS

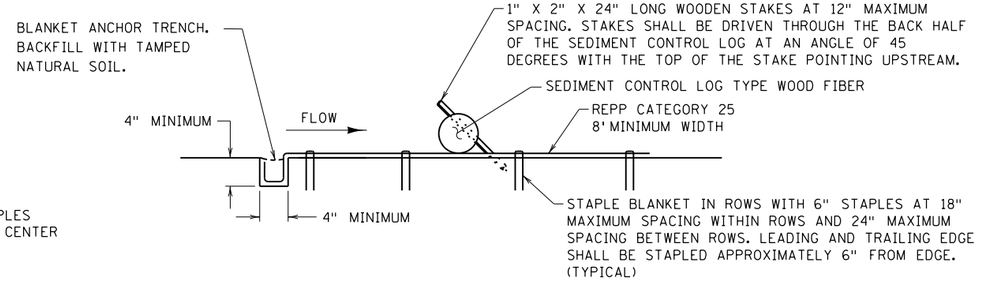


ROCK DITCH CHECKS
FILTER BERMS TYPE 3 (ROCK WEEPER) OR FILTER TYPE 5 (ROCK) ③
FOR USE ON ROUGH-GRADED AREAS
ONLY FOR USE OUTSIDE CLEAR ZONE ②

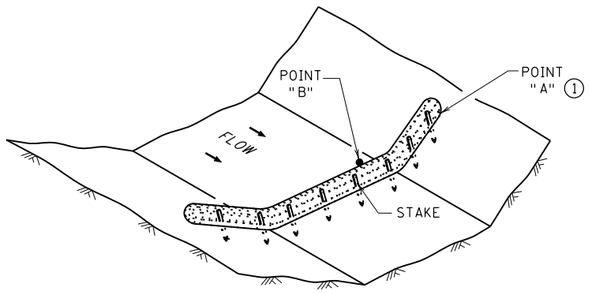


DITCH CHECK SPACING
FOR ALL FILTER BERM TYPES





SEDIMENT CONTROL LOG TYPE REPP (BLANKET) SYSTEM ④



SEDIMENT CONTROL LOG TYPE WOOD FIBER, OR TYPE COMPOST ⑤
FOR USE ON ROUGH GRADED AREAS

NOTES:

REPP = ROLLED EROSION PREVENTION PRODUCT.

SEE SPECS. 2573, 3601, 3733, 3885, 3886 & 3889.

FOR DITCH CHECKS, PLACE SEDIMENT CONTROL LOG PERPENDICULAR TO FLOW AND IN A CRESCENT SHAPE WITH THE ENDS FACING UPSTREAM.

APPROXIMATE SPACING BETWEEN EACH DITCH CHECK SHOULD BE DETERMINED FROM THE FOLLOWING SPACING FORMULA:

$$\text{APPROXIMATE SPACING OF DITCH CHECKS (FT.)} = Y = \frac{\text{DITCH CHECK HEIGHT (FT.)}}{\text{\% CHANNEL SLOPE}} \times 100$$

① POINT "A" MUST BE A MINIMUM OF 6" HIGHER THAN POINT "B" TO ENSURE THAT WATER FLOWS OVER THE DIKE AND NOT AROUND THE ENDS.

② ROCK DITCH CHECKS PLACED WITHIN THE CLEAR ZONE ARE TO BE 18" OR LESS IN HEIGHT. A 1:6 APPROACH AND DEPARTURE SLOPE SHALL BE PROVIDED.

③ DITCH GRADE 3% - 5%, MAX. FLOW VELOCITY 12 FT./SEC.

④ DITCH GRADE 1.5% - 3%, MAX. FLOW VELOCITY 4.5 FT./SEC.

⑤ DITCH GRADE 1.5% - 3%, MAX. FLOW VELOCITY 1.5 FT./SEC.

REVISION:

APPROVED: JANUARY 8, 2020
MARNI KARNOWSKI
CHIEF ENVIRONMENTAL OFFICER

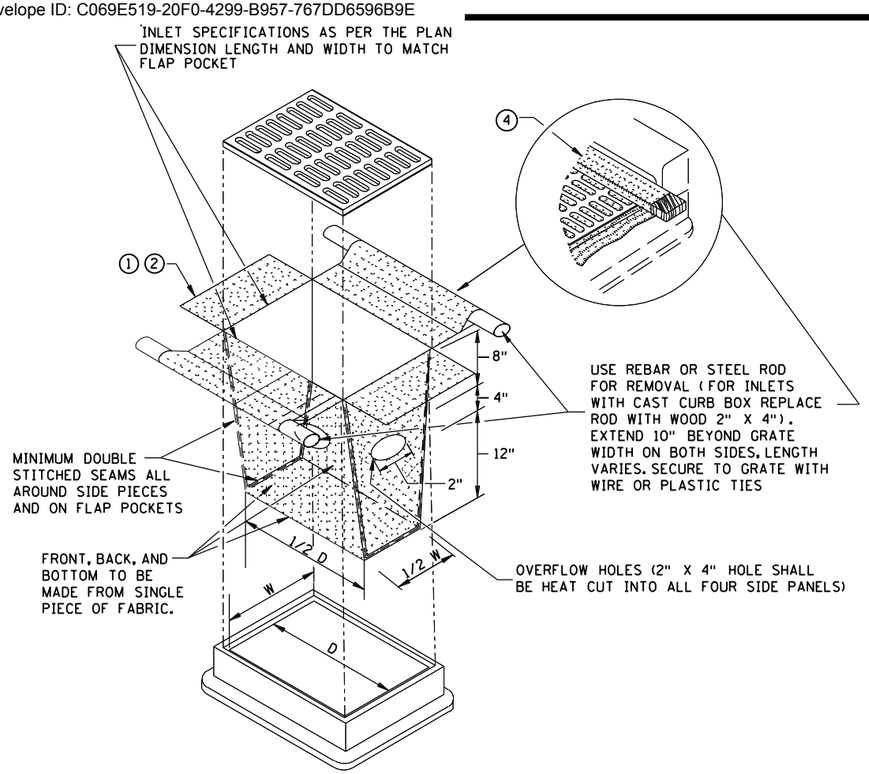
MINNESOTA DEPARTMENT OF TRANSPORTATION

STANDARD PLAN 5-297.405 | 3 OF 8

APPROVED: 1-8-2020
REVISED:
THOMAS STYRBICKI
STATE DESIGN ENGINEER

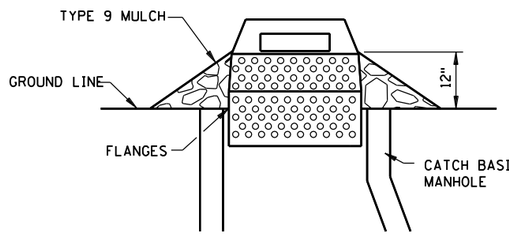
TEMPORARY SEDIMENT CONTROL
DITCH CHECK

STATE PROJ. NO. SAP 002-612-035 | SHEET NO. 21 OF 110 SHEETS



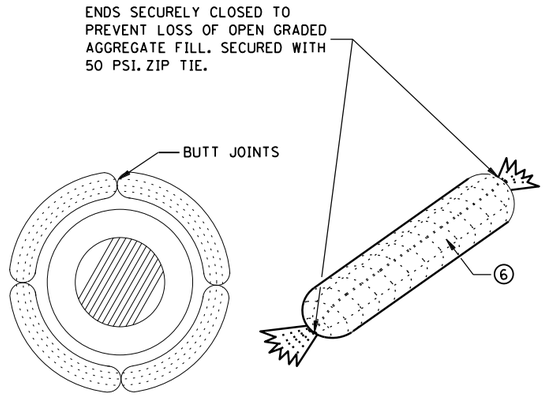
FILTER BAG INSERT ③

(CAN BE INSTALLED IN ANY INLET TYPE
WITH OR WITHOUT A CURB BOX)

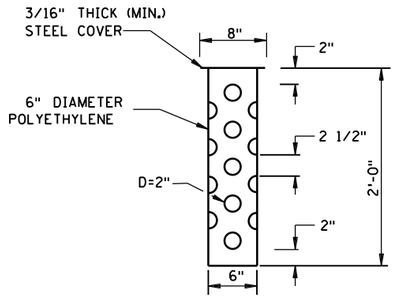


SEDIMENT CONTROL INLET HAT

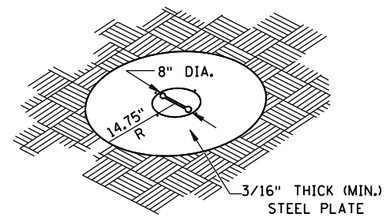
NOTE:
THE SEDIMENT CONTROL BARRIER SHALL BE A METAL OR PLASTIC/POLYETHYLENE RISER SIZED TO FIT INSIDE THE CATCH BASIN/MANHOLE; HAVE PERFORATIONS TO ALLOW FOR WATER INFILTRATION; HAVE AN OVERFLOW OPENING, FLANGES AND A LID/COVER.



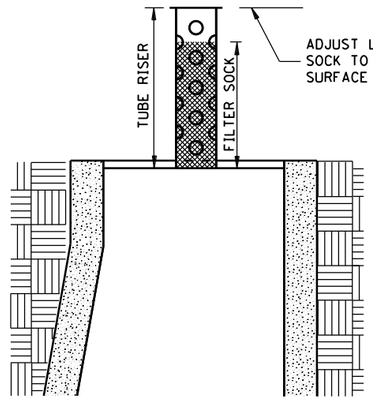
ROCK LOG/COMPOST LOG



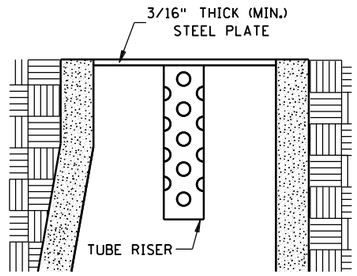
TUBE RISER



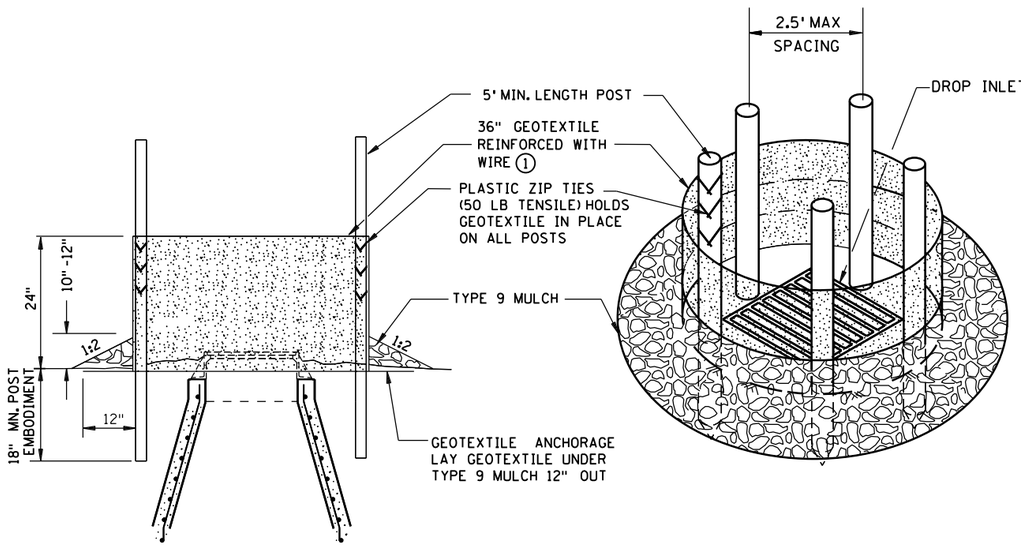
PERSPECTIVE VIEW



SECTION
(UP POSITION)



SECTION
(DOWN POSITION)



SILT FENCE RING AND ROCK FILTER BERM

USE WHERE INLET DRAINS IN AN AREA WITH SLOPES AT 1:3 or LESS

POP-UP HEAD

NOTES:
SEE SPECS. 2573, 3137, & 3886.

DEVICES MUST BE ADJUSTED ACCORDINGLY AS TO NOT CAUSE FLOODING ON ROADWAY THAT WOULD IMPEED TRAFFIC FLOW.

① ALL GEOTEXTILE USED FOR INLET PROTECTION SHALL BE MONOFILAMENT IN BOTH DIRECTIONS, MEETING SPEC. 3886.

② FINISHED SIZE, INCLUDING POCKETS WHERE REQUIRED SHALL EXTEND A MINIMUM OF 10 INCHES AROUND THE PERIMETER TO FACILITATE MAINTENANCE OR REMOVAL.

③ INSTALLATION NOTES:
DO NOT PLACE FILTER BAG INSERT IN INLETS SHALLOWER THAN 30 INCHES, MEASURED FROM THE BOTTOM OF THE INLET TO THE TOP OF THE GRATE. THE PLACED BAG SHALL HAVE A MINIMUM SIDE CLEARANCE OF 3 INCHES BETWEEN THE INLET WALLS AND THE BAG, MEASURED AT THE BOTTOM OF THE OVERFLOW HOLES. WHERE NECESSARY THE CONTRACTOR SHALL CLINCH THE BAG, USING PLASTIC ZIP TIES, TO ACHIEVE THE 3 INCH SIDE CLEARANCE.

④ FLAP POCKETS SHALL BE LARGE ENOUGH TO ACCEPT WOOD 2 INCH X 4 INCH OR USE A ROCK SOCK OR SAND BAGS IN PLACE OF THE FLAP POCKETS.

⑤ SOCK HEIGHT MUST NOT BE SO HIGH AS TO SLOW DOWN WATER FILTRATION TO CAUSE FLOODING OF THE ROADWAY.

⑥ GEOTEXTILE SOCK BETWEEN 4-10 FEET LONG AND 4-6 INCH DIAMETER. SEAM TO BE JOINED BY TWO ROWS OF STITCHING WITH A PLASTIC MESH BACKING OR PROVIDE A HEAT BONDED SEAM (OR APPROVED EQUIVALENT). FILL ROCK LOG WITH OPEN GRADED AGGREGATE CONSISTING OF SOUND DURABLE PARTICLES OF COARSE AGGREGATE CONFORMING TO SPEC. 3137 TABLE 3137-1; CA-3 GRADATION.

REVISION
APPROVED: 2-28-2017
CHIEF ENGINEERING OFFICER

MINNESOTA DEPARTMENT OF TRANSPORTATION

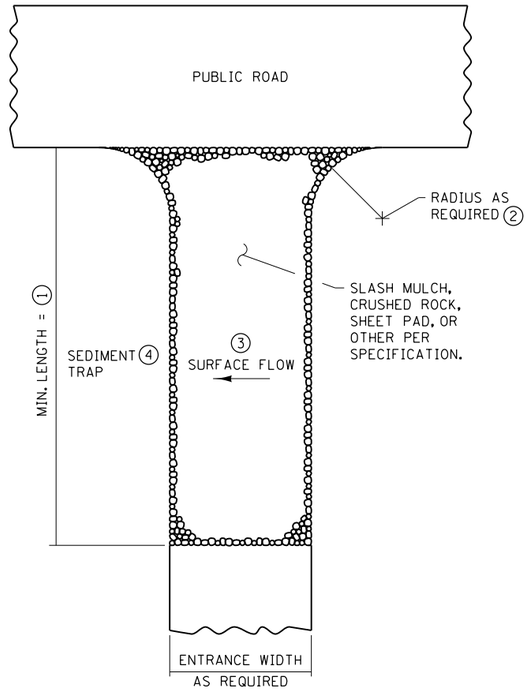
STANDARD PLAN 5-297.405 | 4 OF 8

APPROVED: 2-28-2017
REVISED:

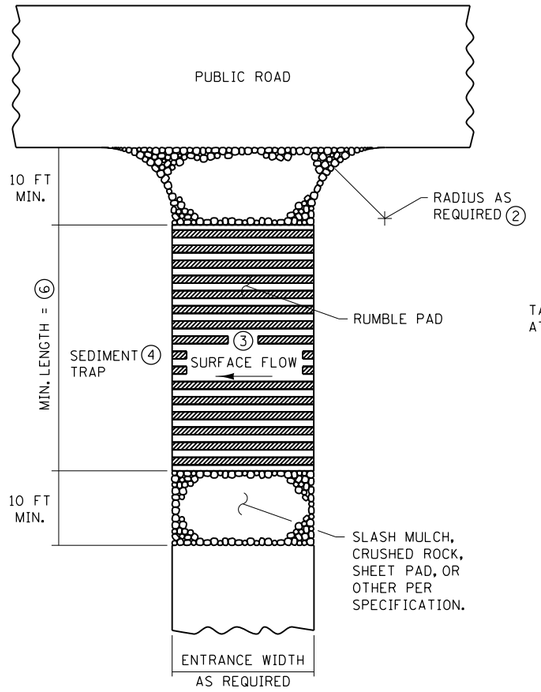
STATE DESIGN ENGINEER

TEMPORARY SEDIMENT CONTROL
STORM DRAIN INLET PROTECTION

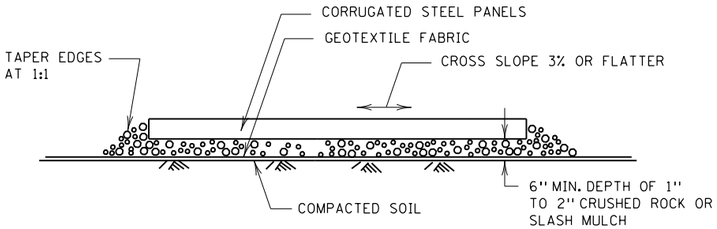
STATE PROJ. NO. SAP 002-612-035 SHEET NO. 22 OF 110 SHEETS



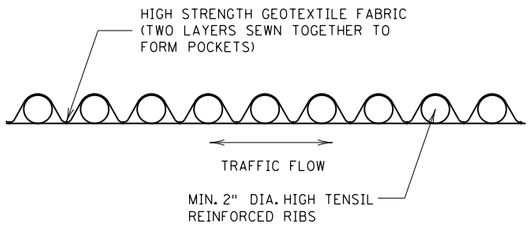
SLASH MULCH, CRUSHED ROCK, OR SHEET PAD CONSTRUCTION EXIT ⑤⑦



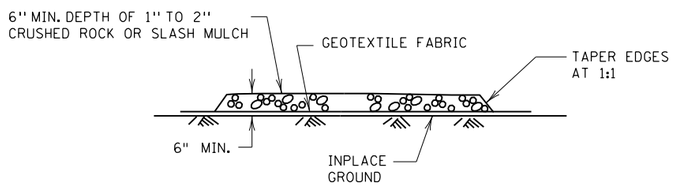
RUMBLE PAD CONSTRUCTION EXIT ⑤⑦



RUMBLE PAD



SHEET PAD



SLASH MULCH OR CRUSHED ROCK

NOTES:

SEE SPECS. 2573 & 3882.

(1) MINIMUM LENGTH SHALL BE THE GREATER OF 50 FEET OR A LENGTH SUFFICIENT TO ALLOW A MINIMUM OF 5 TIRE ROTATIONS ON THE PROVIDED PAD. MINIMUM LENGTH SHALL BE CALCULATED USING THE LARGEST TIRE WHICH WILL BE USED IN TYPICAL OPERATIONS.

(2) PROVIDE RADIUS OR WIDEN PAD SUFFICIENTLY TO PREVENT VEHICLE TIRES FROM TRACKING OFF OF PAD WHEN LEAVING SITE.

(3) IF RUNOFF FROM DISTURBED AREAS FLOWS TOWARD CONSTRUCTION EXITS, PREVENT RUNOFF FROM DRAINING DIRECTLY TO PUBLIC ROAD OVER CONSTRUCTION EXIT BY CROWNING THE EXIT OR SLOPING TO ONE SIDE. IF SURFACE GRADING IS INSUFFICIENT, PROVIDE OTHER MEANS OF INTERCEPTING RUNOFF.

(4) IF RUNOFF FROM CONSTRUCTION EXITS WILL DRAIN OFF OF PROJECT SITE, PROVIDE SEDIMENT TRAP WITH STABILIZED OVERFLOW.

(5) IF A TIRE WASH OFF IS REQUIRED THE CONSTRUCTION EXITS SHALL BE GRADED TO DRAIN THE WASH WATER TO A SEDIMENT TRAP.

(6) MINIMUM LENGTH OF RUMBLE PAD SHALL BE 20 FEET, OR AS REQUIRED TO REMOVE SEDIMENT FROM TIRES. IF SIGNIFICANT SEDIMENT IS TRACKED FROM THE SITE, THE RUMBLE PAD SHALL BE LENGTHENED OR THE DESIGN MODIFIED TO PROVIDE ADDITIONAL VIBRATION. WASH-OFF LENGTH SHALL BE AS REQUIRED TO EFFECTIVELY REMOVE CONSTRUCTION SEDIMENT FROM VEHICLE TIRES.

(7) MAINTENANCE OF CONSTRUCTION EXITS SHALL OCCUR WHEN THE EFFECTIVENESS OF SEDIMENT REMOVAL HAS BEEN REDUCED. MAINTENANCE SHALL CONSIST OF REMOVING SEDIMENT AND CLEANING THE MATERIALS OR PLACING ADDITIONAL MATERIAL (SLASH MULCH OR CRUSHED ROCK) OVER SEDIMENT FILLED MATERIAL TO RESTORE EFFECTIVENESS.

REVISION
APPROVED: 2-28-2017
CHIEF ENGINEER, OTIE

MINNESOTA DEPARTMENT OF TRANSPORTATION

STANDARD PLAN 5-297.405 | 5 OF 8

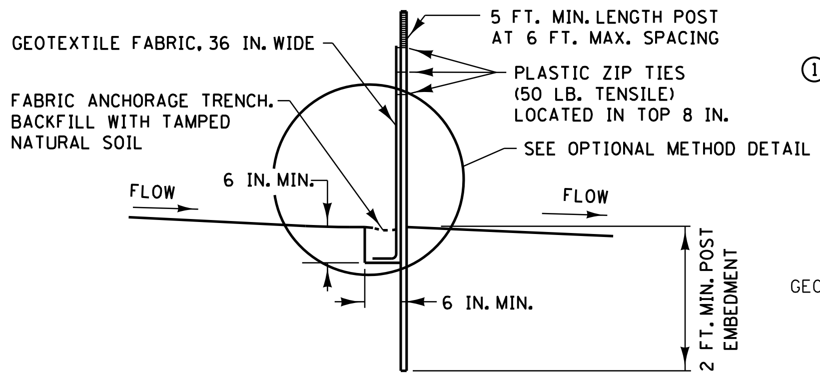
APPROVED: 2-28-2017
REVISED:

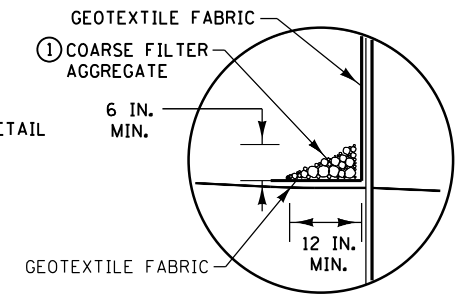
STATE DESIGN ENGINEER

TEMPORARY SEDIMENT CONTROL

STABILIZED CONSTRUCTION EXIT

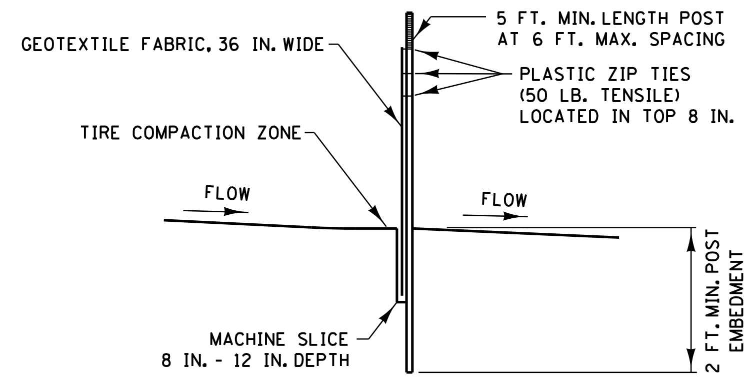
STATE PROJ. NO. SAP 002-612-035 SHEET NO. 23 OF 110 SHEETS



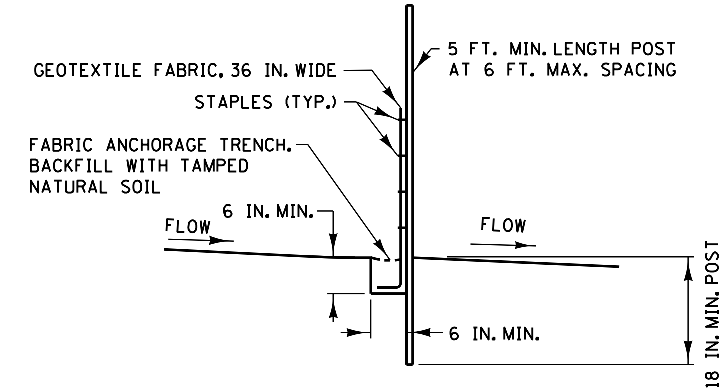


OPTIONAL METHOD

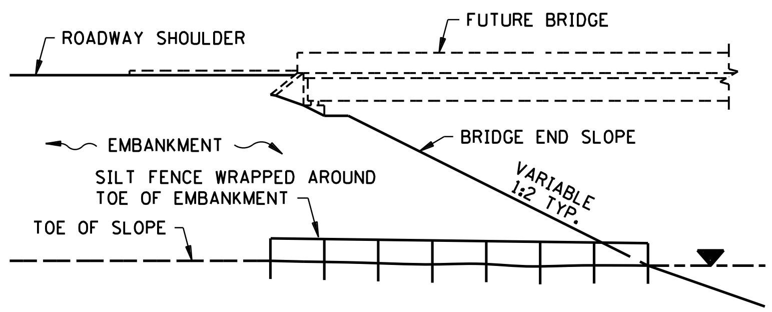
SILT FENCE TYPE HI ②
(HAND INSTALLED)



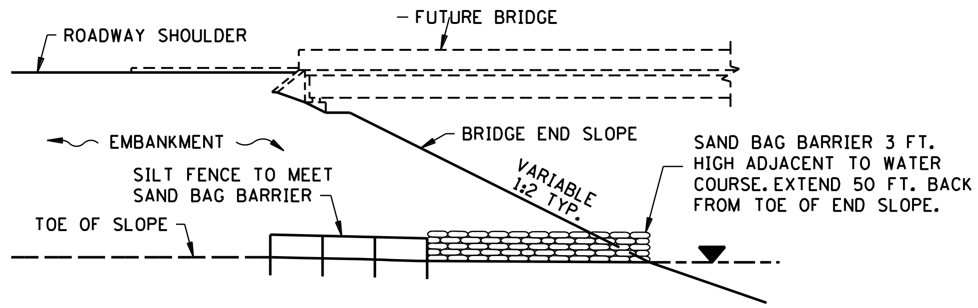
SILT FENCE TYPE MS ②
(MACHINE SLICED)



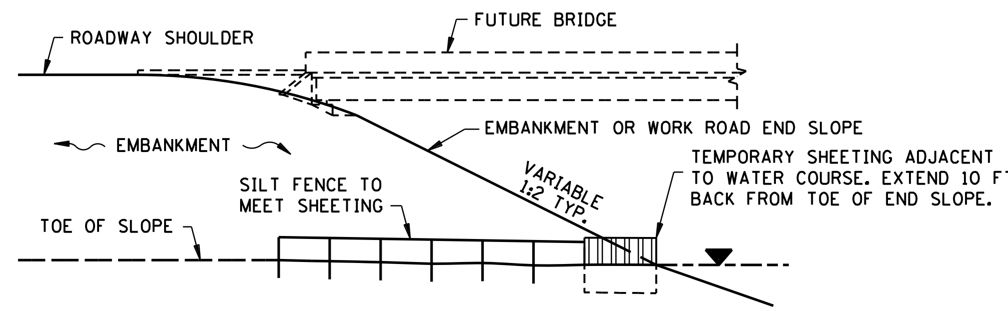
SILT FENCE TYPE PA ③
(PREASSEMBLED)



SILT FENCE ONLY ④

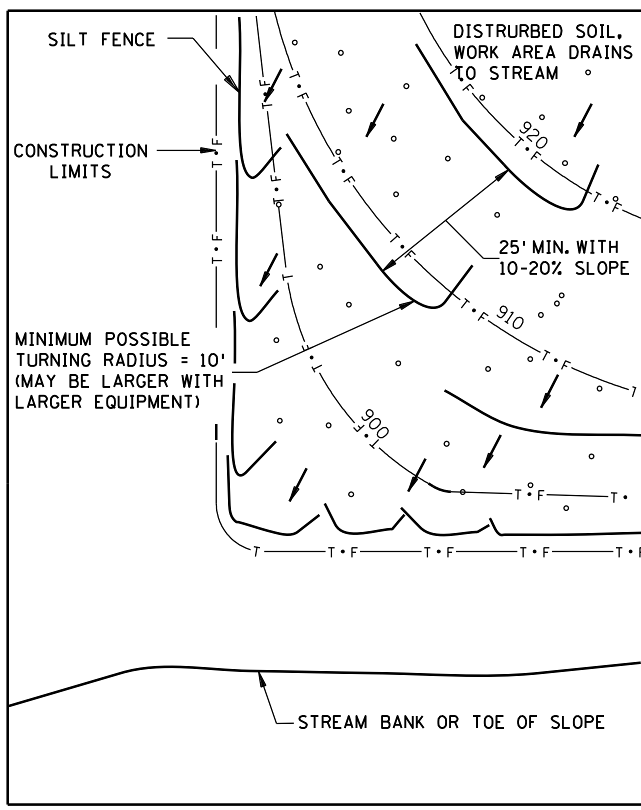


SILT FENCE WITH SAND BAGS ⑤

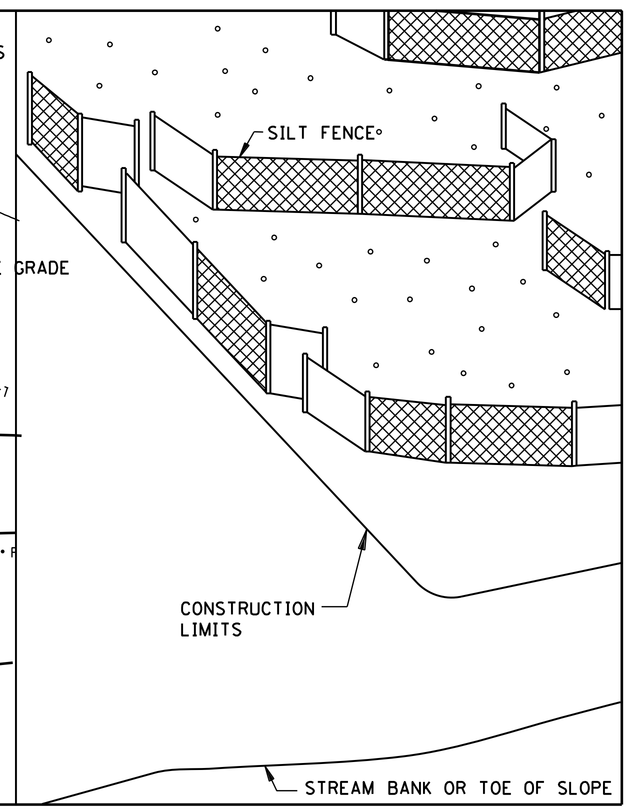


SILT FENCE WITH SHEETING ⑥

INSTALLATION AT BRIDGE EMBANKMENT ADJACENT TO WATER

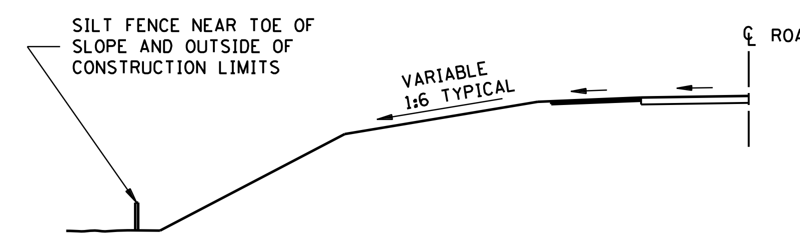


PLAN VIEW



PERSPECTIVE VIEW

J-HOOK INSTALLATION



LOCATION AT TOE OF ROADWAY EMBANKMENT

NOTES:

SEE SPECS. 2573, 3149 & 3886.

① COARSE FILTER AGGREGATE (SPEC. 3149) SHALL BE INCIDENTAL.

② TO PROTECT AREAS FROM SHEET FLOW. MAXIMUM CONTRIBUTING AREA: 1 ACRE.

③ TO PROTECT AREAS FROM SHEET FLOW. MAXIMUM CONTRIBUTING AREA: 0.25 ACRE.

④ WATER COURSE FLOW VELOCITY: STANDING.
CONTRIBUTING SLOPE AREA: 1./2 ACRE.

⑤ WATER COURSE FLOW VELOCITY: 1 TO 7 FT./SEC.
CONTRIBUTING SLOPE AREA: 1. ACRE.

⑥ WATER COURSE FLOW VELOCITY: 8 TO 15 FT./SEC.
CONTRIBUTING SLOPE AREA: 3 ACRES.

REVISIONS

APPROVED: 2-28-2017

[illegible]

MINNESOTA DEPARTMENT OF TRANSPORTATION

STANDARD PLAN 5-297.405 | 6 OF 8

APPROVED: 2-28-2017
REVISED:

[illegible]
STATE DESIGN ENGINEER

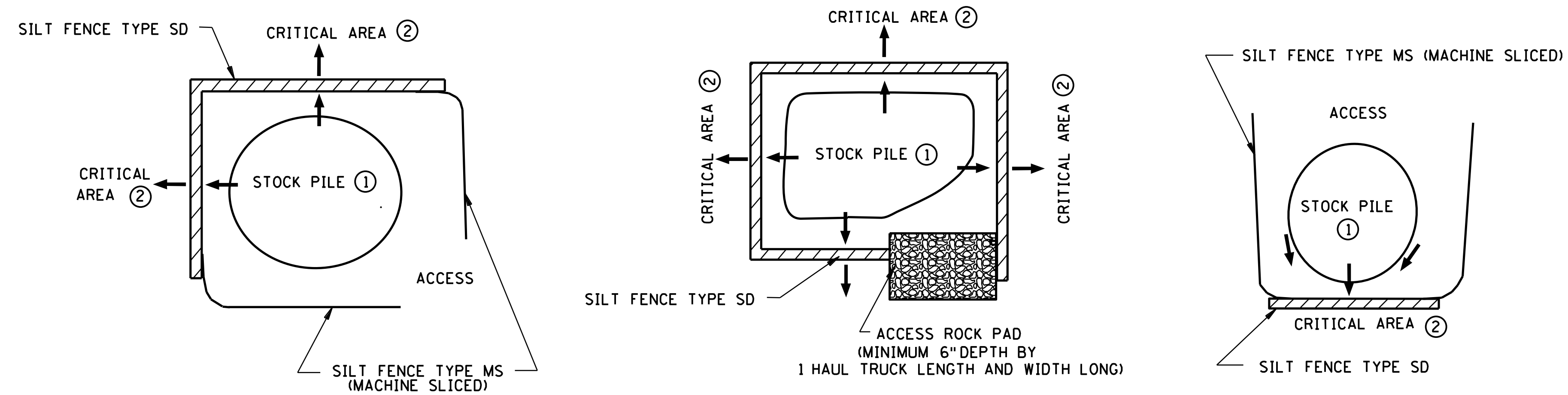
TEMPORARY SEDIMENT CONTROL

SILT FENCE

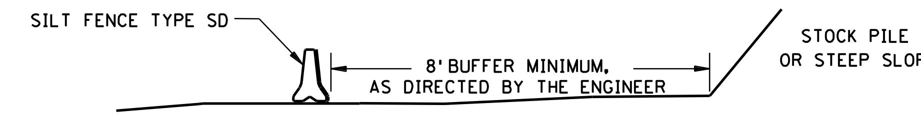
STATE PROJ. NO. SAP 002-612-035 SHEET NO. 24 OF 110 SHEETS

PLOTTED/REVISED: 01/30/2025

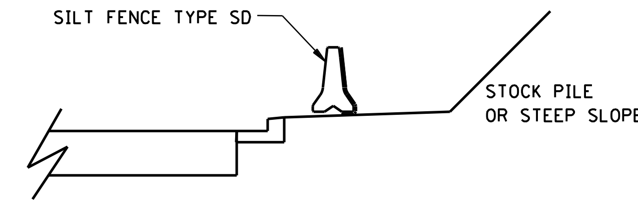
DISTRICT #:
IPLOT NAME: $$@IPLOT$NAME@$$
PATH & FILENAME: P:\002-612-035 17 to 53\Plan\00261203 5_MNDOT SHEETS COMB.dgn



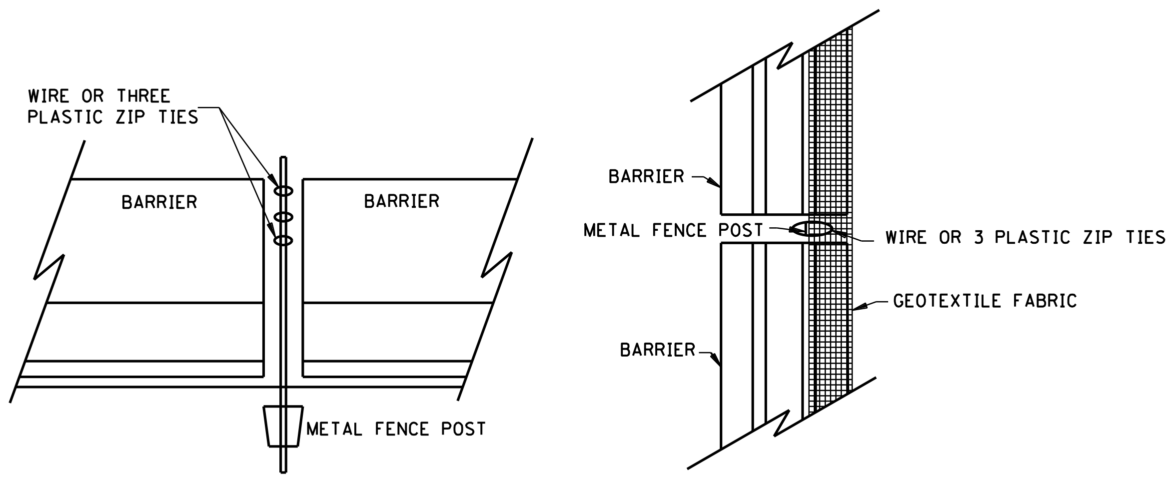
STOCK PILE CONTAINMENT



STOCKPILE SEDIMENT CONTROL



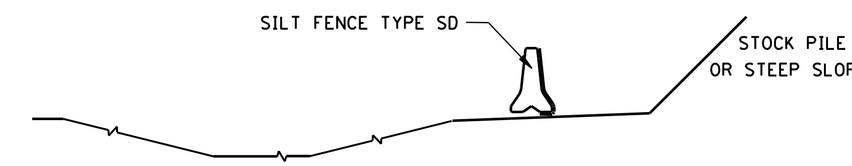
CURB AND GUTTER PROTECTION SYSTEM



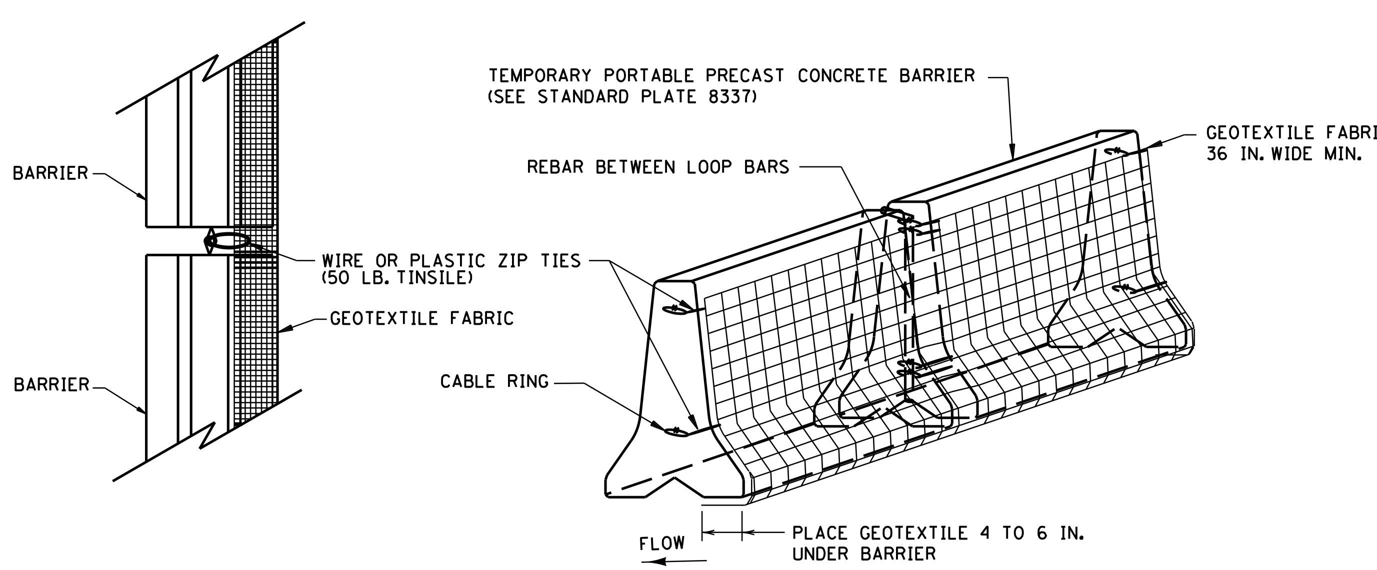
PROFILE VIEW

TOP VIEW

SILT FENCE TYPE SD (SUPER DUTY)
BARRIER WITHOUT LOOP BARS



DITCH PROTECTION SYSTEM



TOP VIEW

PERSPECTIVE VIEW

SILT FENCE TYPE SD (SUPER DUTY)
BARRIER WITH LOOP BARS

NOTES:

SEE SPECS. 2533, 2573 & 3886.

SILT FENCE TYPE SD USED TO PROTECT CRITICAL AREAS FROM SHEET FLOW, AND AREAS WHERE OTHER SILT FENCES CANNOT BE PLACED. MAXIMUM CONTRIBUTING AREA: 1 ACRE.

PLACE SILT FENCE TYPE SD ALONG A CONSTANT ELEVATION.

SILT FENCE TYPE SD CAN UTILIZE EITHER A CONCRETE, OR WATER FILLED, TEMPORARY MEDIAN BARRIER.

① PLACING STOCK PILES NEXT TO AN ENVIRONMENTALLY SENSITIVE AREA IS NOT RECOMMENDED. WHEN THERE ARE NO FEASIBLE ALTERNATIVES, PLACE SILT FENCE SD AS SHOWN OR AS DIRECTED BY THE ENGINEER.

② CRITICAL AREAS INCLUDE WETLANDS, JUDICIAL DITCHES, STREAMS, WATER BODIES, AND OTHER AREAS REQUIRING PROTECTION.

REVISION
APPROVED: 2-28-2017
[illegible]

MINNESOTA DEPARTMENT OF TRANSPORTATION

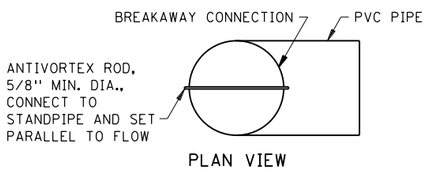
STANDARD PLAN 5-297.405 | 7 OF 8

APPROVED: 2-28-2017
REVISED:
[illegible]
STATE DESIGN ENGINEER

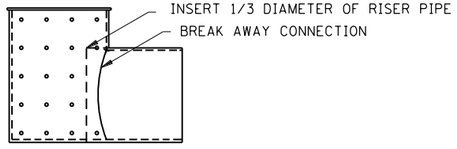
TEMPORARY SEDIMENT CONTROL

SUPER DUTY SILT FENCE

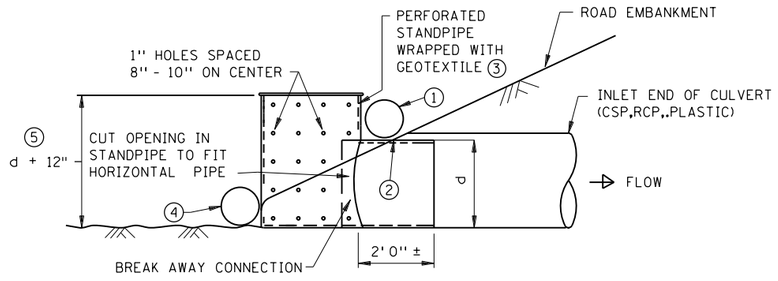
STATE PROJ. NO. SAP 002-612-035 SHEET NO. 25 OF 110 SHEETS



PLAN VIEW



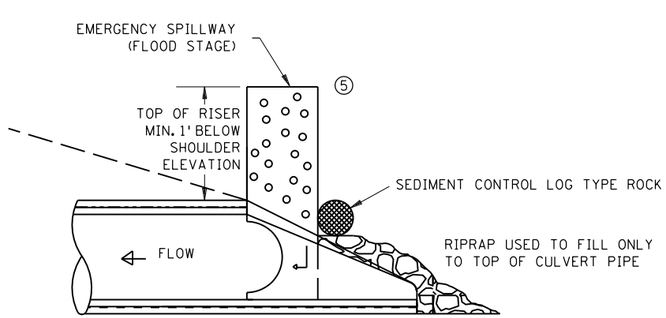
CULVERT STANDPIPE



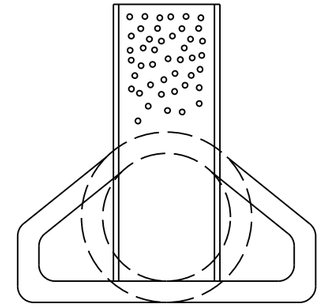
ELEVATION VIEW OF CULVERT INSTALLATION

CULVERT STANDPIPE INSERT (D-RISER)

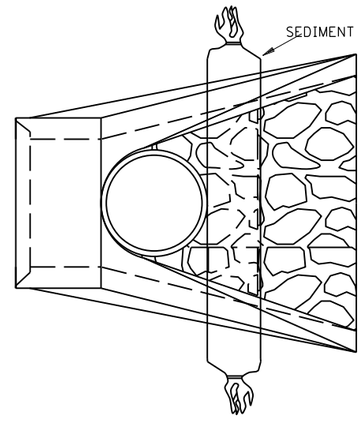
d= CULVERT SIZE: 12" - 36"



LONGITUDINAL SECTION



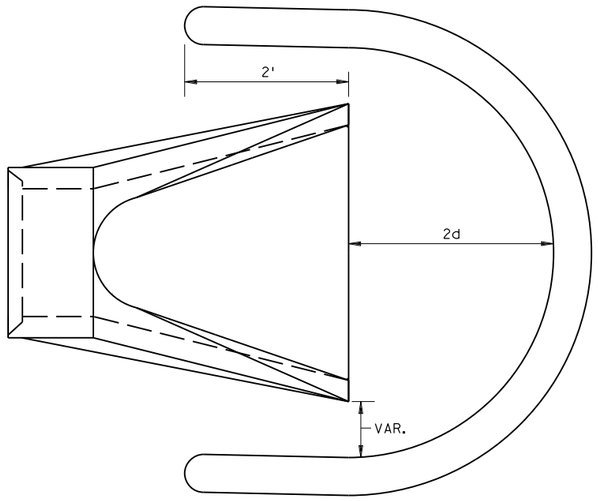
END VIEW



NOTE: SEDIMENT CONTROL LOG TYPE ROCK MAY BE WRAPPED AROUND RISER

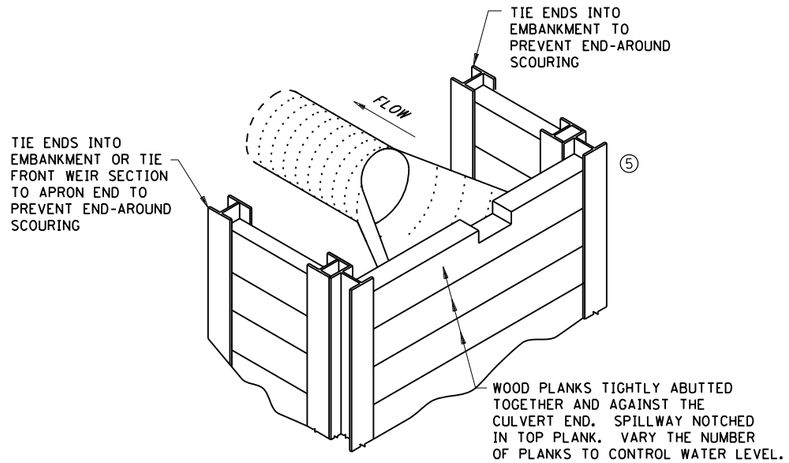
TOP VIEW

CULVERT STANDPIPE INSERT (D-RISER)



SEDIMENT CONTROL LOG WEIR
(COMPOST, WOOD CHIP, OR ROCK)

d = CULVERT SIZE: 12"-36"



WOOD PLANK WEIR

NOTES:

SEE SPECS. 2573, 3891 & 3893.

FOR USE WHEN TEMPORARY PONDING IS NEEDED IN DITCH SECTIONS FOR SEDIMENT CONTROL.

MANUFACTURED ALTERNATIVES LISTED ON MnDOT'S APPROVED PRODUCTS LIST MAY BE SUBSTITUTED AT NO ADDITIONAL COST.

(1) ROCK LOG OR SANDBAG TO HOLD STANDPIPE AND ACT AS A SEAL BETWEEN RISER PIPE AND CULVERT.

(2) PLACE CULVERT APRON AND SLIDE TEMPORARY STANDPIPE INTO CSP OR RCP CULVERT.

(3) ALL GEOTEXTILE USED FOR CULVERT PROTECTION SHALL BE MONOFILAMENT IN BOTH DIRECTIONS, MEETING SPEC. 3886 FOR MACHINE SLICED.

(4) ROCK LOG OR RIP RAP TO HOLD STANDPIPE AND ACT AS A FILTER BETWEEN RISER PIPE AND CULVERT.

(5) HEIGHT OVERFLOW NOT TO CAUSE FLOODING OF ROAD OR ADJACENT PROPERTIES.

REVISION
APPROVED: 2-28-2017
Chief Engineering Officer

MINNESOTA DEPARTMENT OF TRANSPORTATION

STANDARD PLAN 5-297.405 | 8 OF 8

APPROVED: 2-28-2017
REVISED:

STATE DESIGN ENGINEER

TEMPORARY SEDIMENT CONTROL

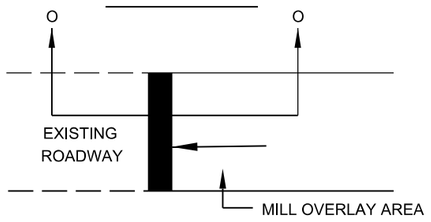
CULVERT END CONTROLS

STATE PROJ. NO. SAP 002-612-035 SHEET NO. 26 OF 110 SHEETS

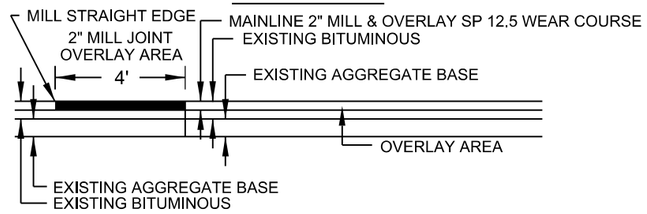
jcfoster

MAINLINE (MILL / OVERLAY) STA 13+56

PLAN VIEW

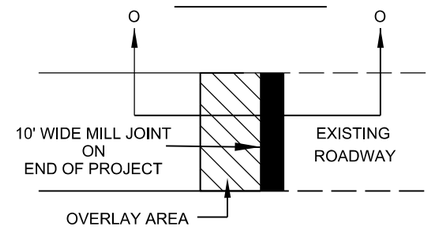


SECTION O - O



MAINLINE JOINT DETAIL (RECLAIM) STA 63+36

PLAN VIEW



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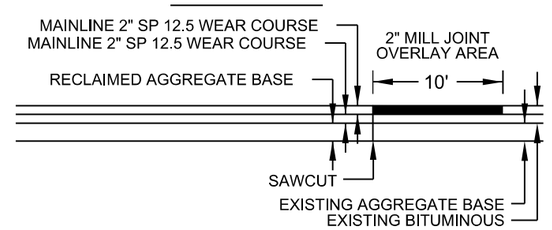
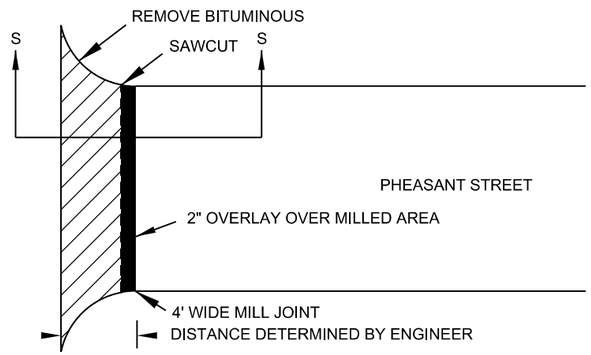
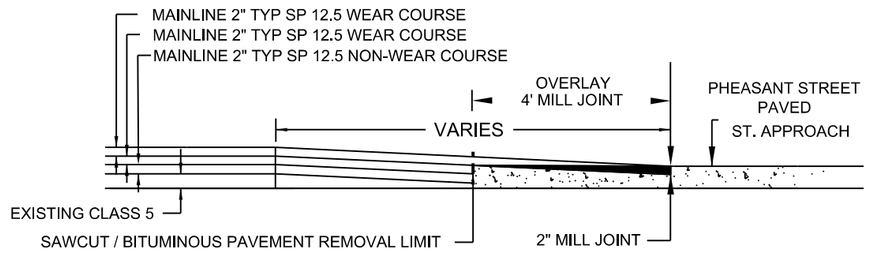


STREET APPROACH DETAIL, PHEASANT STREET

PLAN VIEW

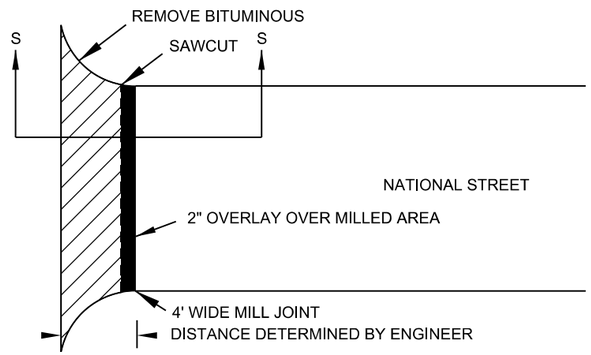


SECTION S - S



STREET APPROACH DETAIL, NATIONAL STREET

PLAN VIEW



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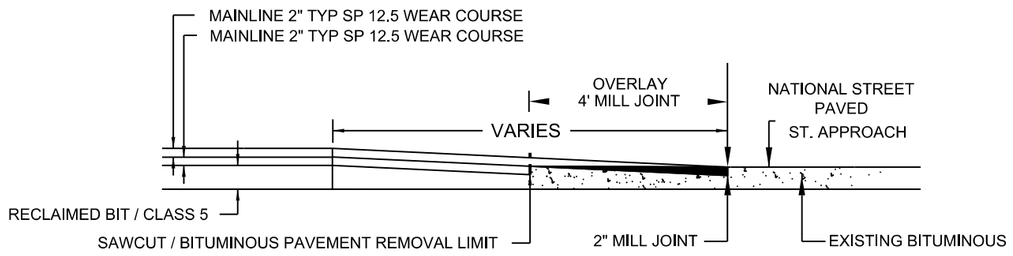

NO	DATE	BY	CKD	APPR	REVISION		
						01/30/2025	7:04:15 AM

NAME: P:\002-612-035 17 to 53\Plan\002612035_DET.dgn

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: NICHOLAS J DOBDA

SIGNATURE:

DATE: 01/30/2025 LICENSE NO. 49046

DRAWN BY JJF DATE 12/01/24

DESIGN BY JJF DATE 12/01/24

CHECKED BY NJD DATE 01/28/25

ANOKA COUNTY

ANOKA COUNTY HIGHWAY DEPT.

SAP 002-612-035

DETAILS

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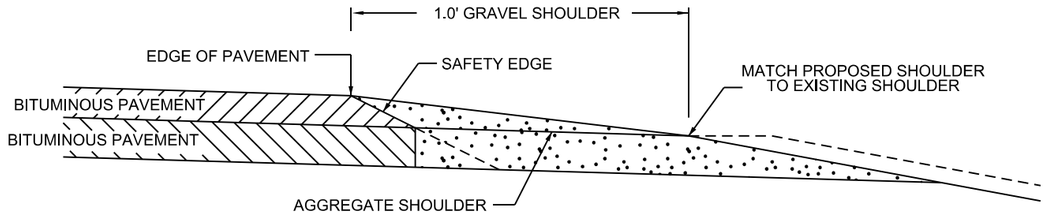
jcfoster

SHOULDER DETAIL

BITUMINOUS SAFETY EDGE
GRAVEL SHOULDER

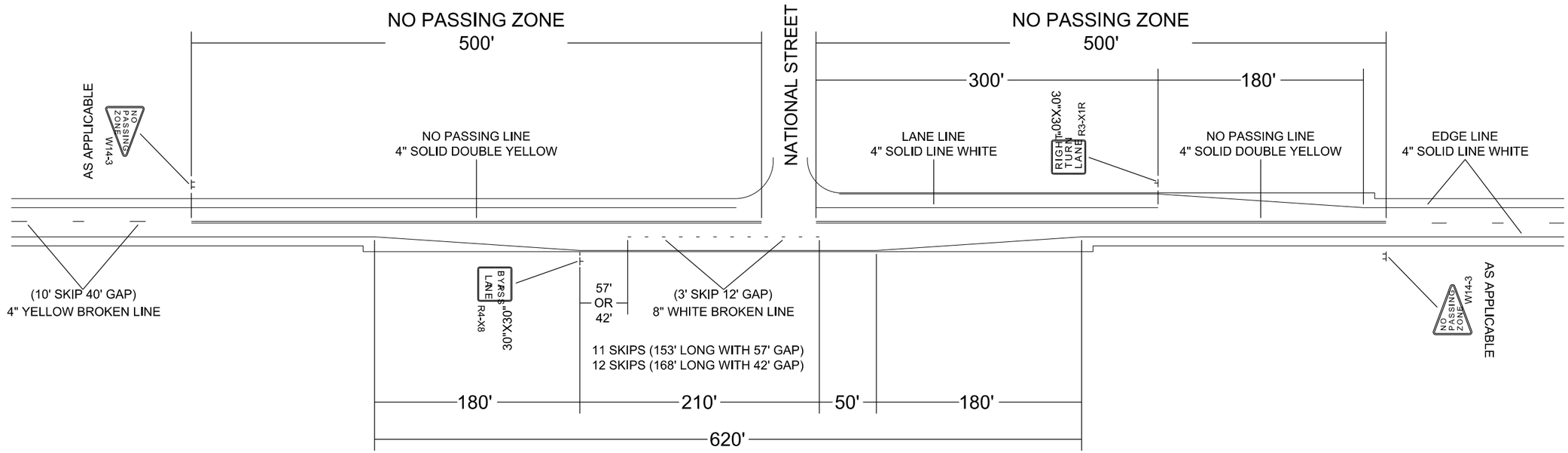


SAFETY EDGE TO BE USED IN ALL NON-CURB AREAS ON SHOULDER.

OPTIONAL DESIGN EXTENDS SAFETY EDGE DEEPER
THAN 6" AND WIDER THAN 10.5". SEE SPECIAL PROVISIONS .

RIGHT TURN AND BYPASS LANE

GENERAL LAYOUT
PLAN VIEW



NO	DATE	BY	CKD	APPR	REVISION		
						01/30/2025	7:04:15 AM

NAME: P:\002-612-035 17 to 53\Plan\002612035_DET.dgn

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ANOKA COUNTY HIGHWAY DEPT.

SAP 002-612-035

DETAILS

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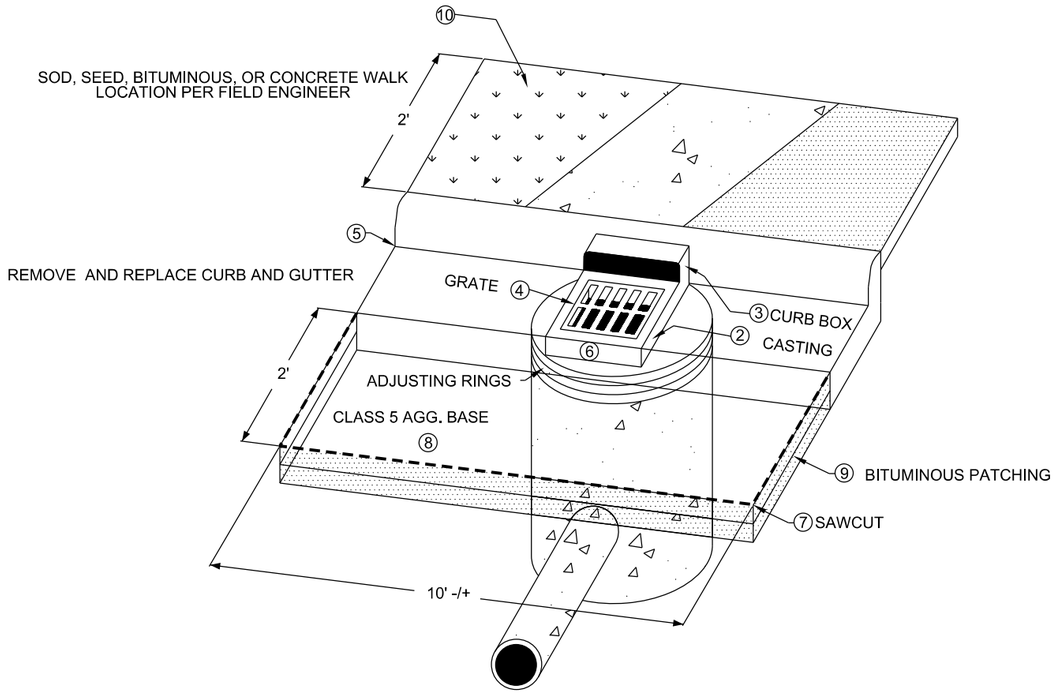
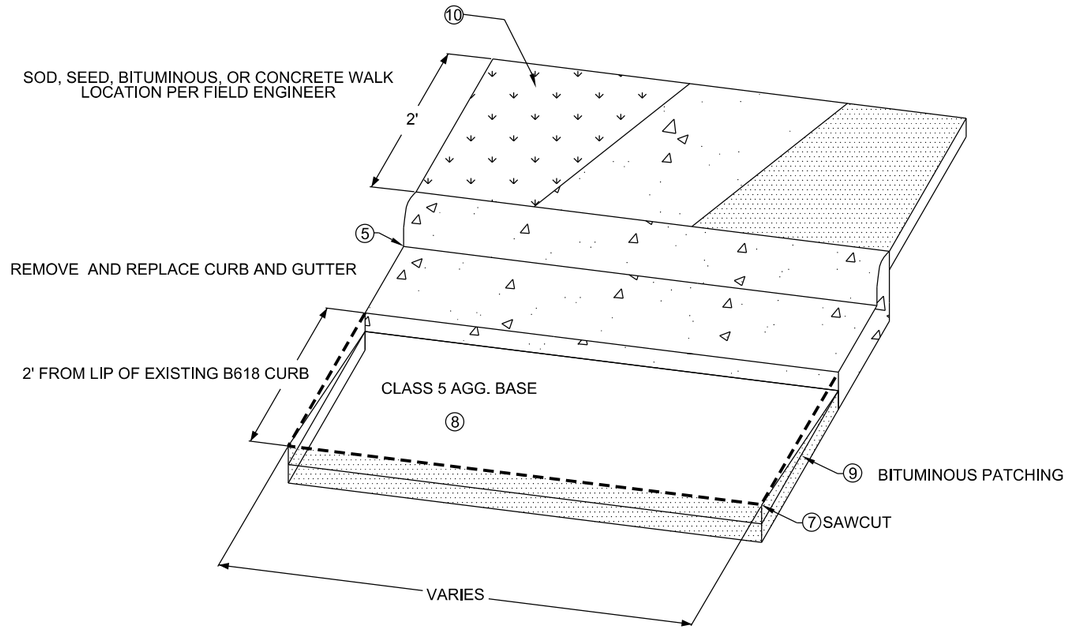
CATCH BASIN DETAIL

SEE STRUCTURE TAB FOR LOCATION
(PAGE 4)



NEW CURB DETAIL

SEE PLAN FOR LOCATION



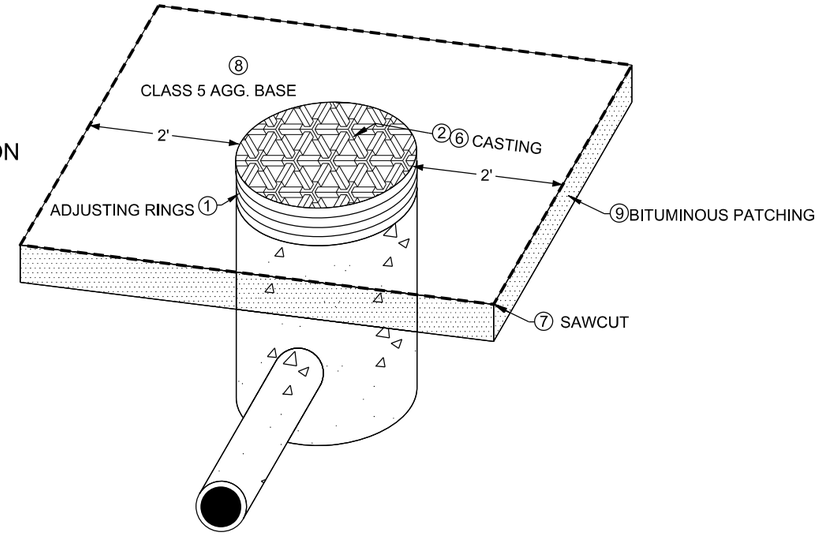
NOTES

FOR TRAFFIC CONTROL AT CATCH BASIN AND MANHOLE REPAIRS REFER TO THE MINNESOTA MANUAL ON TEMPORARY TRAFFIC CONTROL LAYOUTS FIELD MANUAL.

1. CONCRETE ENCASED CONCRETE ADJUSTING RINGS STANDARD PLATE 4026A
2. RING AND FRAME CASTING; REFERENCE CASTING ASSEMBLIES SUMMARY CHART FOR CASTING TYPE
3. CURB BOX MATCHES CASTING REFERENCE CHART FOR CASTING TYPE
4. GRATE CASTING; REFERENCE CASTING ASSEMBLIES SUMMARY CHART FOR CASTING TYPE
5. CONCRETE CURB AND GUTTER DESIGN B STANDARD PLATE 7100H, FORM CURB TO FIT CASTING
6. INSTALLATION OF CATCH BASIN OR MANHOLE CASTINGS; REFERENCE STANDARD PLATE PER TYPE OF CASTING
7. SAWCUT BITUMINOUS PAVEMENT / CONCRETE CURB FULL DEPTH.
8. ADD AND COMPACT AGGREGATE BASE CLASS 5 AROUND REPAIRED STRUCTURE. ITEM INCIDENTAL TO ENTIRE STRUCTURE REPAIR
9. REMOVE VARIABLE DEPTH BITUMINOUS, PATCH WITH 2, 3" LIFTS OF BITUMINOUS, TOP LIFT SHOULD TAPER TO BOTTOM LIFT AT CURB.
10. REPLACE DISTURED AREA BEHIND CATCH BASIN WITH EITHER SOD (RESIDENTAL AREAS), EROSION CONTROL BLANKET, BITUMINOUS ,OR CONCRETE

MANHOLE DETAIL

SEE STRUCTURE TAB FOR LOCATION



NO	DATE	BY	CKD	APPR	REVISION	
						01/30/2025 7:04:15 AM

NAME: P:\002-612-035 17 to 53\Plan\002612035_DET.dgn

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: NICHOLAS J DOBDA

SIGNATURE:

DATE: 01/30/2025 LICENSE NO. 49046

DRAWN BY JJF DATE 12/01/24

DESIGN BY JJF DATE 12/01/24

CHECKED BY NJD DATE 01/28/25

ANOKA COUNTY

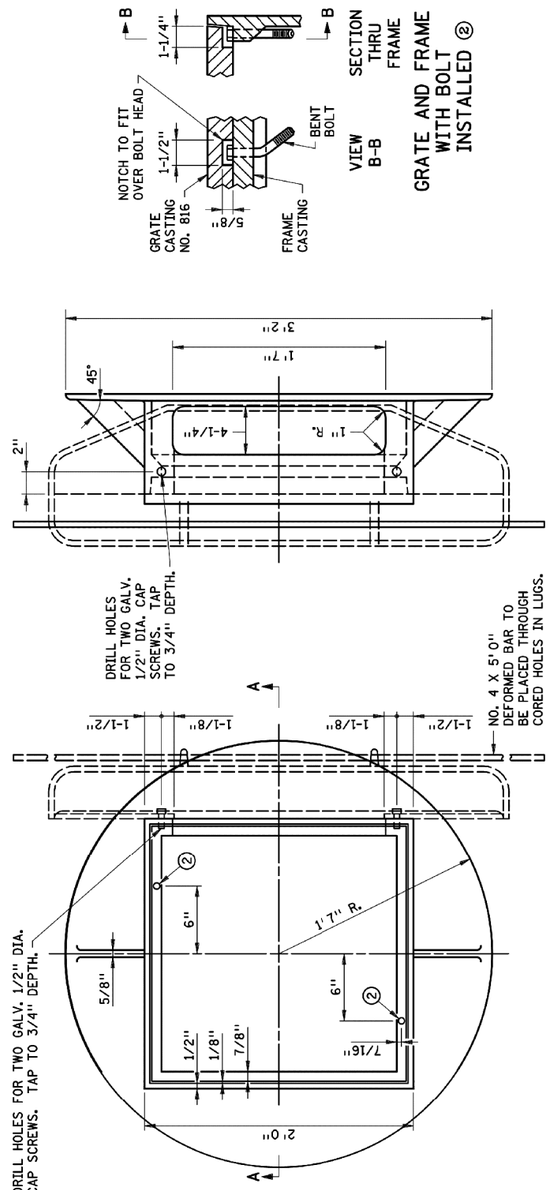
ANOKA COUNTY HIGHWAY DEPT.

SAP 002-612-035

DETAILS

Sheet 29 of 110 Sheets

jcfoster



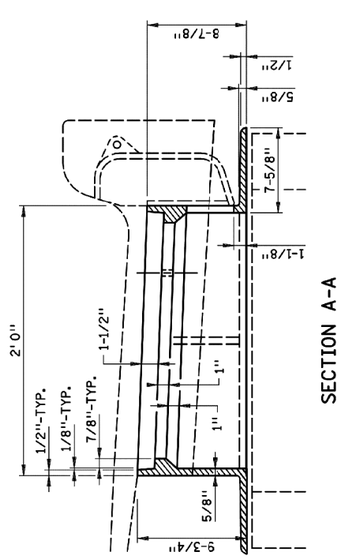
CASTINGS USED FOR ASSEMBLY

GRATE NO. 816 (MNDOT STD PLATE 4154B)

CURB BOX ① NO. 823A (MNDOT STD PLATE 4160) OR

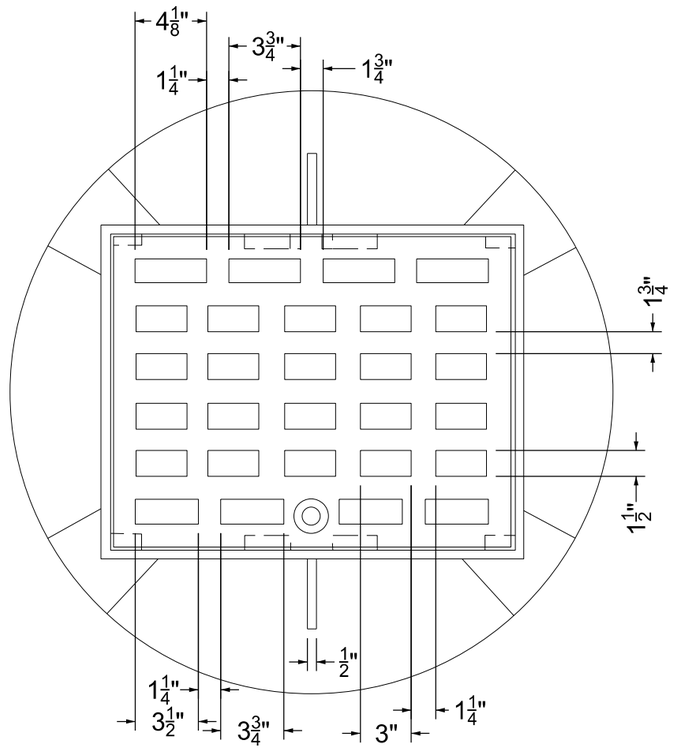
NOTES:

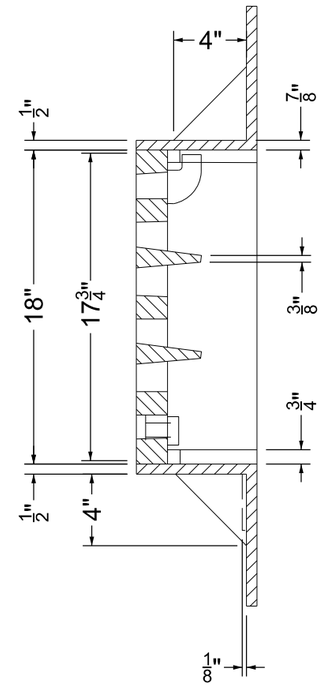
USE 1/4" FILLETS IN ALL CORNERS.
SEE MNDOT STANDARD PLATE 7111 FOR INSTALLATION REQUIREMENTS.
① APPLIES TO DESIGN B OR V CURB AND CURB AND GUTTER.
② AT LOCATIONS INDICATED IN TOP VIEW, PROVIDE 9/16" DIA. HOLES WHEN GRATE NO 816 (MNDOT STD PLATE 4154) IS USED WITH THIS FRAME. FIELD PLACE 1/2" DIA X 4" LONG GALV BOLT IN UP STREAM SIDE AND BENT UNDERSIDE TO PREVENT REMOVAL. THIS WILL PREVENT GRATE NO. 816 (MNDOT STD PLATE 4154) FROM BEING PLACED IN WRONG AND NOT BEING BICYCLE SAFE

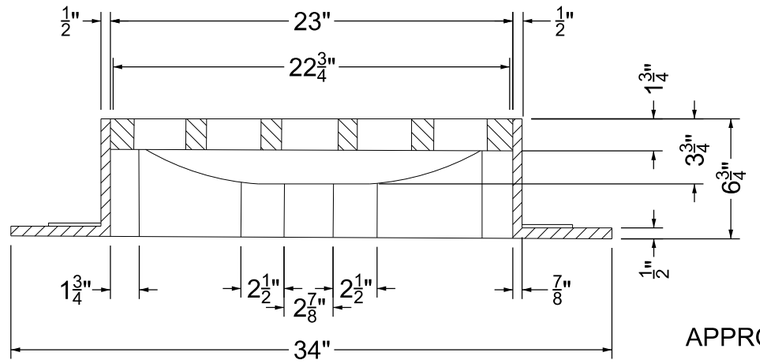


GRATE FRAME CASTING TYPE C & D

FRAME RING AND CASTING TYPE A







APPROX. WEIGHT = 300 LBS.

NO	DATE	BY	CKD	APPR	REVISION		
						01/30/2025	7:04:15 AM

NAME: P:\002-612-035 17 to 53\Plan\002612035_DET.dgn

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ANOKA COUNTY HIGHWAY DEPT.

SAP 002-612-035

DETAILS

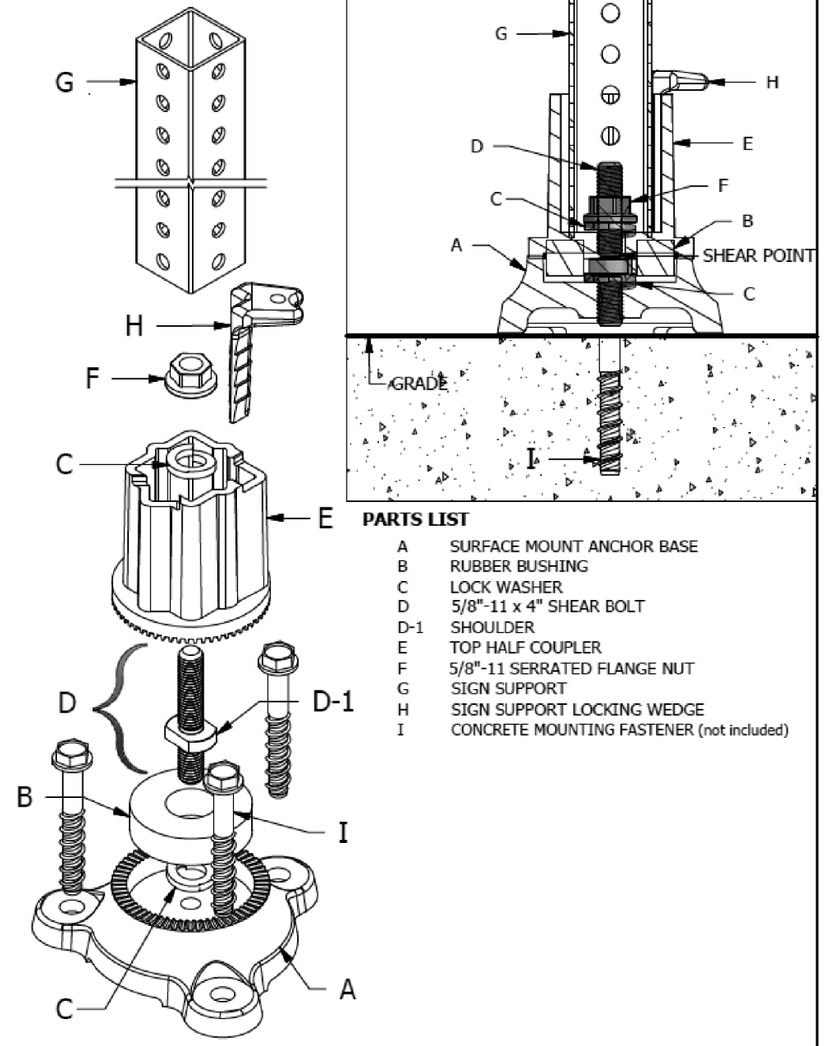
Sheet 30 of 110 Sheets

jcfoster

MEDIAN SIGN INSTALLATION ONLY

DATE:	
8-13-21	

INSTALLED CROSS SECTION VIEW



PARTS LIST

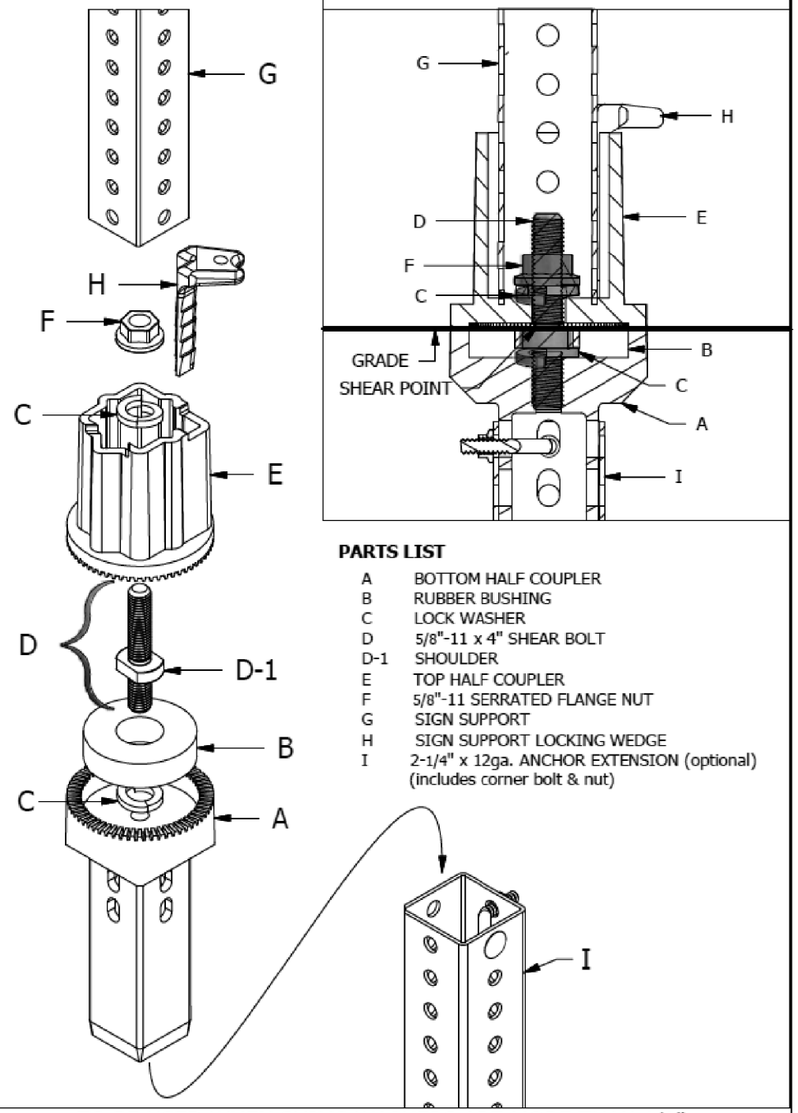
A	SURFACE MOUNT ANCHOR BASE
B	RUBBER BUSHING
C	LOCK WASHER
D	5/8"-11 x 4" SHEAR BOLT
D-1	SHOULDER
E	TOP HALF COUPLER
F	5/8"-11 SERRATED FLANGE NUT
G	SIGN SUPPORT
H	SIGN SUPPORT LOCKING WEDGE
I	CONCRETE MOUNTING FASTENER (not included)

KLEEN BREAK MODEL 425 FOR **SURFACE MOUNT CONCRETE INSTALLATIONS**
SQUARE POST SIGN SUPPORT INSTALLATION INSTRUCTIONS (RECEIVES 1- 3/4"& 2" SQUARE POST)

MEDIAN SIGN INSTALLATION ONLY

DATE:	**KLEEN BREAK MODEL 425** FOR **CONCRETE INSTALLATIONS**
8-13-21	SQUARE POST SIGN SUPPORT INSTALLATION INST. (RECEIVES 1- 3/4"& 2" POST)

INSTALLED CROSS SECTION VIEW



PARTS LIST

A	BOTTOM HALF COUPLER
B	RUBBER BUSHING
C	LOCK WASHER
D	5/8"-11 x 4" SHEAR BOLT
D-1	SHOULDER
E	TOP HALF COUPLER
F	5/8"-11 SERRATED FLANGE NUT
G	SIGN SUPPORT
H	SIGN SUPPORT LOCKING WEDGE
I	2-1/4" x 12ga. ANCHOR EXTENSION (optional) (includes corner bolt & nut)

TO BE USED WHEN SHIMS WASHERS ARE MORE THAN 1/2"

NOTE: SHOULDER SIGNS AND OR SIGNS IN NON-BITUMINOUS OR CONCRETE AREA WILL BE INSTALLED WITH 3 POUND "U" CHANNEL POSTS

NO	DATE	BY	CKD	APPR	REVISION		
						01/30/2025	7:04:17 AM

NAME: P:\002-612-035 17 to 53\Plan\002612035_DET.dgn

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: NICHOLAS J DOBDA
SIGNATURE:
DATE: 01/30/2025 LICENSE NO. 49046

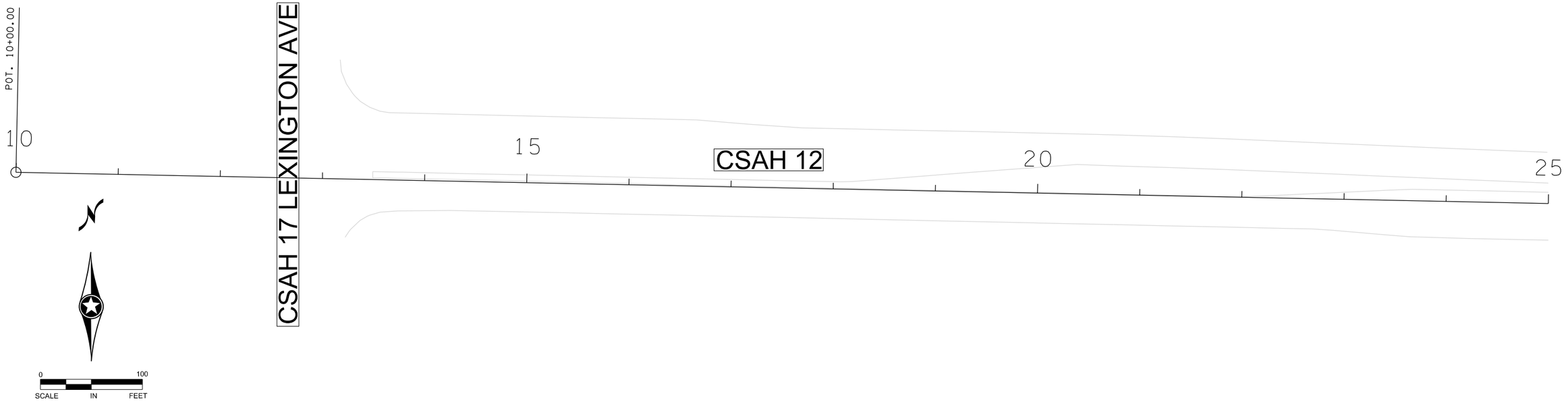
DRAWN BY JJF DATE 12/01/24
DESIGN BY JJF DATE 12/01/24
CHECKED BY NJD DATE 01/28/25

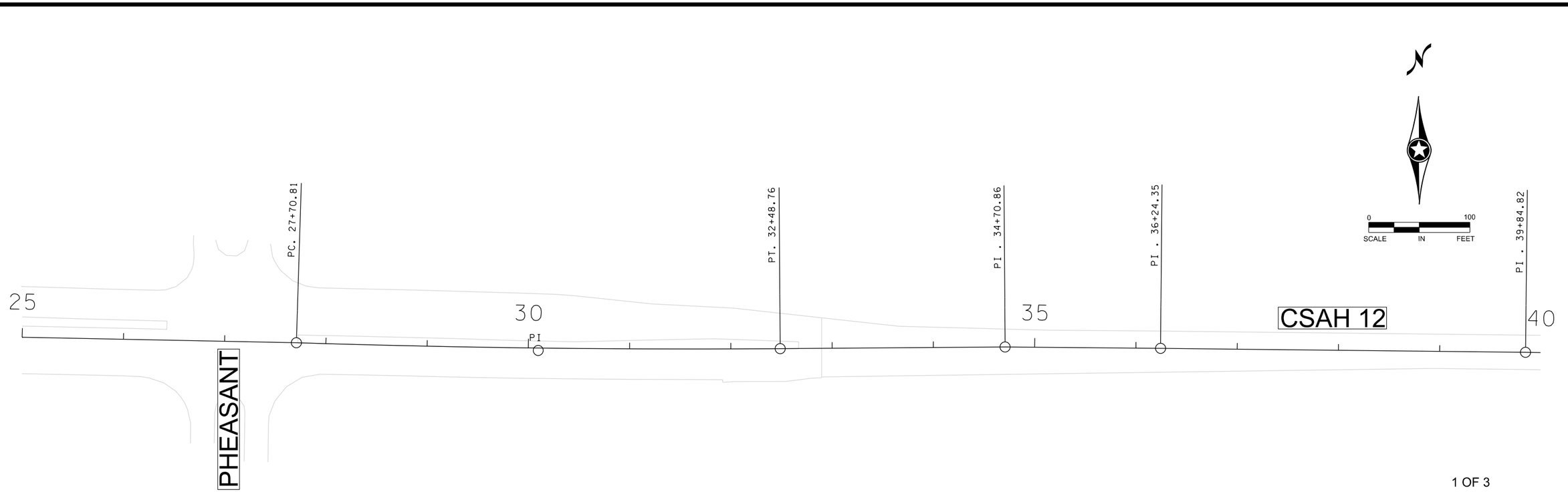
ANOKA COUNTY HIGHWAY DEPT.

SAP 002-612-035

DETAILS

Sheet 31 of 110 Sheets





NO	DATE	BY	CKD	APPR	REVISION

NAME: P:\002-612-035 17 to 53\Plan\002612035_AL1.dgn 01/30/2025 7:04:21 AM

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.

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ANOKA COUNTY

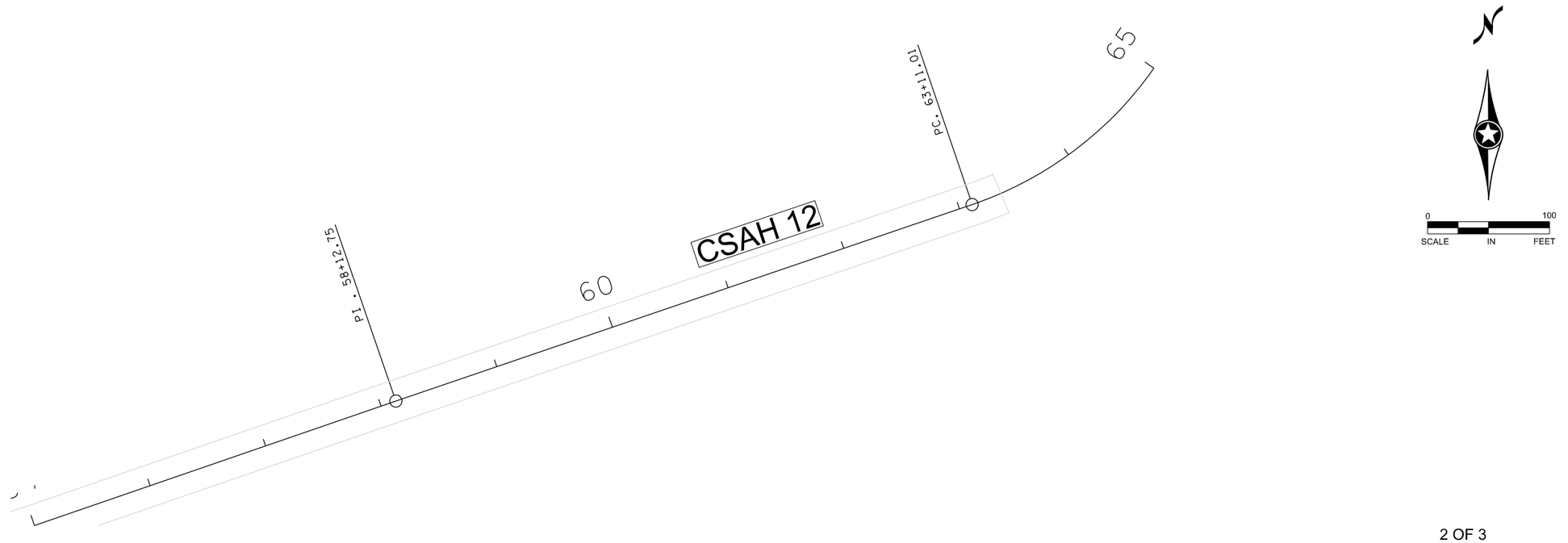
ANOKA COUNTY HIGHWAY DEPT.

SAP 002-612-035

ALIGNMENT

STA 10+00.00 TO 40+00.00

Sheet 32 of 110 Sheets



2 OF 3

NO	DATE	BY	CKD	APPR	REVISION

NAME: P:\002-612-035 17 to 53\Plan\002612035_AL2.dgn 01/30/2025 7:04:28 AM

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.

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SIGNATURE:

DATE: 01/30/2025 LICENSE NO. 49046

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ANOKA COUNTY

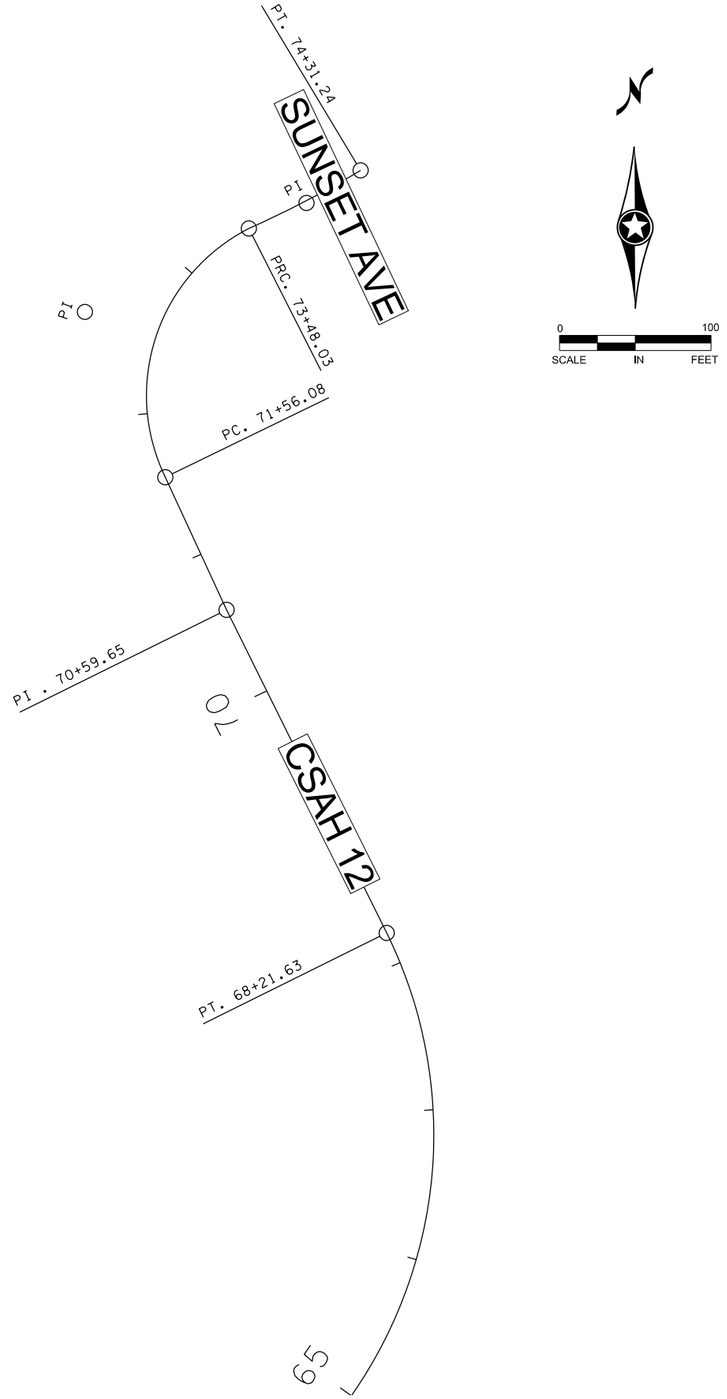
ANOKA COUNTY HIGHWAY DEPT.

SAP 002-612-035

ALIGNMENT

STA 40+00.00 TO 65+00.00

Sheet 33 of 110 Sheets



ALIGNMENT TABULATION

POINT NUMBER	POINT	STATION	CIRCULAR CURVE DATA					COORDINATES		AZIMUTH
			DELTA	DEGREE	RADIUS	TANGENT	LENGTH	E	N	
℄ C.S.A.H. 12 <ALIRD5>										
500	POT	10+00.000						526,448.0554	148,287.2242	
	PC	27+70.809						528,218.4984	148,251.2326	S 88° 11' 28.61" E
ALIRD5 1	PI	30+09.817	2° 13' 38.97" LT	0° 27' 57.76"	12,294.030'	239.008'	477.956'	528,457.3873	148,243.6888	PI
	CC							528,606.5331	160,539.1374	
	PT	32+48.765						528,696.3889	148,245.4357	N 89° 34' 52.42" E
501	POT	34+70.863						528,918.4810	148,247.0590	
502	POT	36+24.354						529,071.9670	148,245.7740	
503	POT	39+84.823						529,432.4140	148,241.8070	
504	POT	45+11.383						529,958.9200	148,234.2310	
	PC	51+17.467						530,564.9712	148,227.9225	S 89° 24' 13.02" E
ALIRD5 2	PI	52+47.140	19° 37' 06.64" LT	7° 38' 21.97"	750.000'	129.672'	256.806'	530,694.6365	148,226.5728	PI
	CC							530,572.7777	148,977.8819	
	PT	53+74.273						530,817.2277	148,268.8373	N 70° 58' 40.34" E
505	POT	58+12.751						531,231.7620	148,411.7520	
	PC	63+11.012						531,703.3589	148,572.5617	N 71° 10' 16.15" E
ALIRD5 3	PI	66+53.216	97° 31' 11.84" LT	19° 05' 54.94"	300.000'	342.205'	510.613'	532,027.2511	148,683.0056	PI
	CC							531,606.5362	148,856.5078	
	PT	68+21.625						531,875.3688	148,989.6581	N 26° 20' 55.69" W
506	POT	70+59.653						531,769.7237	149,202.9572	
	PC	71+56.081						531,729.2476	149,290.4781	N 25° 56' 10.67" W
ALIRD5 4	PI	72+77.487	88° 57' 47.54" RT	46° 20' 48.89"	123.624'	121.407'	191.951'	531,676.1477	149,399.6568	PI
	CC							531,840.4200	149,344.5476	
	PRC	73+48.031						531,784.3478	149,454.7235	N 63° 01' 36.87" E
	PRC	73+48.031						531,784.3478	149,454.7235	N 66° 02' 54.92" E
ALIRD5 5	PI	73+89.686	7° 01' 03.31" LT	8° 26' 02.63"	679.338'	41.655'	83.205'	531,822.4156	149,471.6337	PI
	CC							531,508.5626	150,075.5636	
	PT	74+31.236						531,858.1323	149,493.0682	N 59° 01' 51.62" E

AREA OUTSIDE PROJECT LIMITS

NO	DATE	BY	CKD	APPR	REVISION

NAME: P:\002-612-035 17 to 53\Plan\002612035_AL3.dgn 01/30/2025 7:04:29 AM

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.

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ANOKA COUNTY

ANOKA COUNTY HIGHWAY DEPT.

SAP 002-612-035

ALIGNMENT

STA 65+00.00 TO 74+31.24

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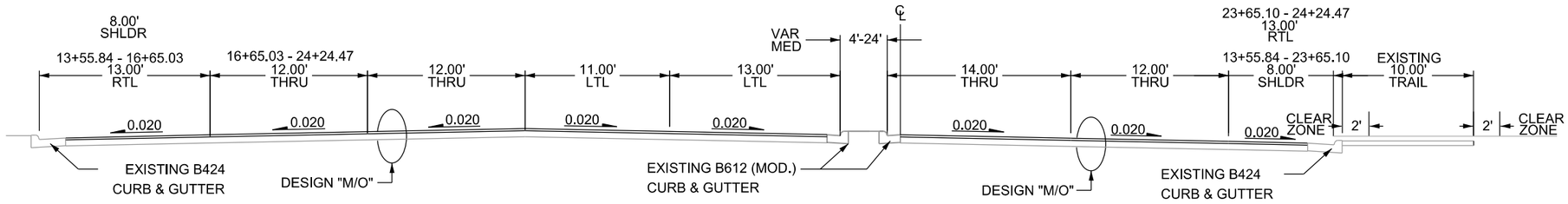
jcfoster

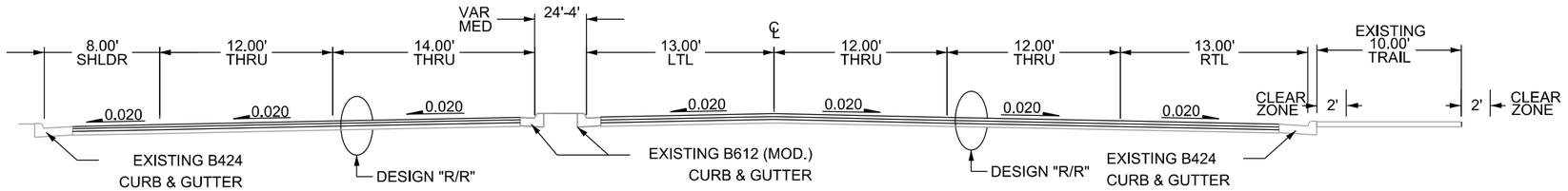
109TH AVE NE (CSAH12)

EXISTING/PROPOSED
13+56.00 TO 24+24.00



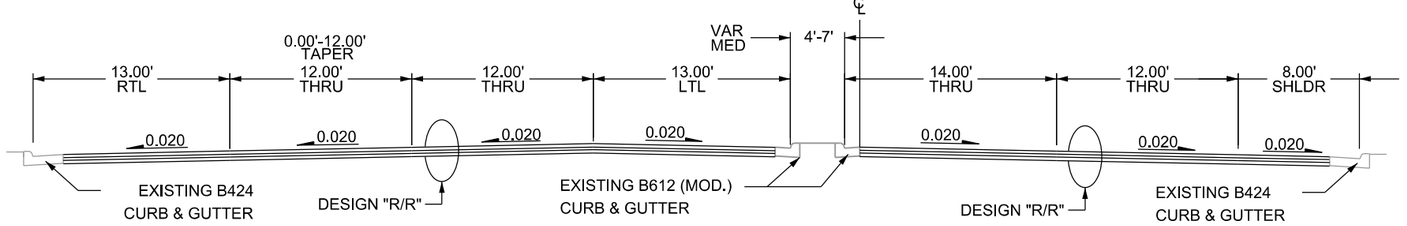
109TH AVE NE (CSAH12)

EXISTING/PROPOSED
24+24.00 - 26+40.00



109TH AVE NE (CSAH12)

EXISTING/PROPOSED
26+40.00 - 32+90.00



NO	DATE	BY	CKD	APPR	REVISION		
1	1/29/25	JF	ND		ADDED 2' CLEAR ZONE TO IN-PLACE TRAIL TYPICALS		
						01/30/2025	7:04:30 AM

NAME: P:\002-612-035 17 to 53\Plan\002612035_TYP.dgn

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ANOKA COUNTY

ANOKA COUNTY
HIGHWAY DEPT.

SAP 002-612-035

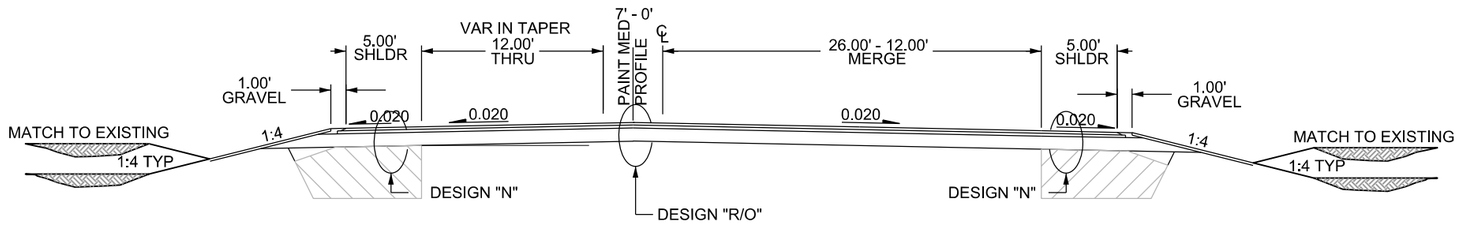
TYPICAL SECTIONS

Sheet 35 of 110 Sheets

jcfoster

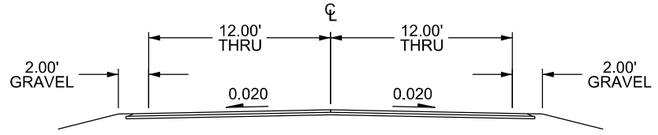
109TH AVE NE (CSAH12)

EXISTING / PROPOSED
32+90.00 - 35+14.00



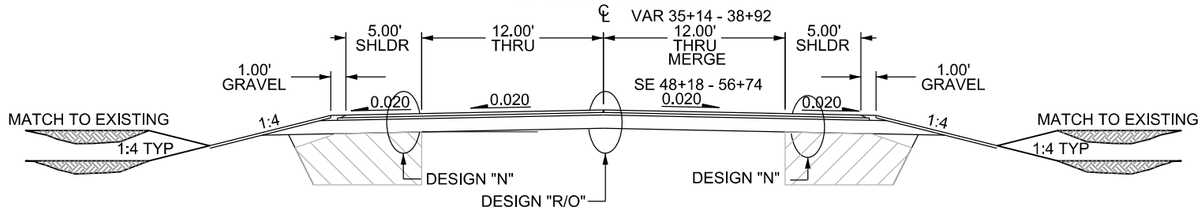
109TH AVE NE (CSAH12)

EXISTING
35+14.00 - 63+36.18



109TH AVE NE (CSAH12)

PROPOSED
35+14.00 - 41+56.00
50+25.00 - 63+36.00



2 OF 3

NO	DATE	BY	CKD	APPR	REVISION		
						01/30/2025	7:04:30 AM

NAME: P:\002-612-035 17 to 53\Plan\002612035_TYP.dgn

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SIGNATURE: [signature]

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ANOKA COUNTY HIGHWAY DEPT.

SAP 002-612-035

TYPICAL SECTIONS

Sheet 36 of 110 Sheets

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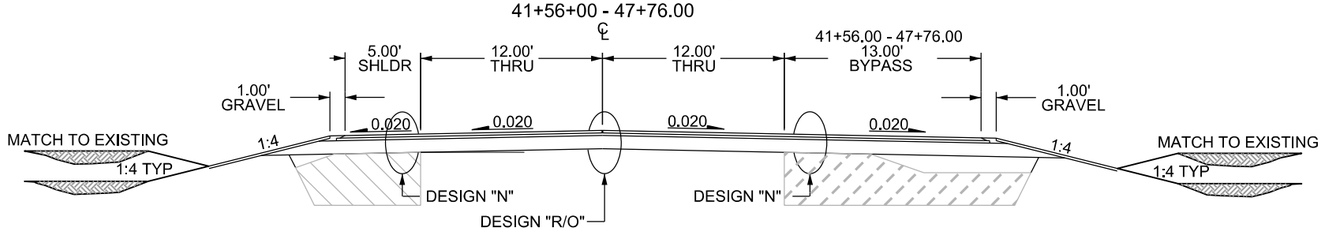
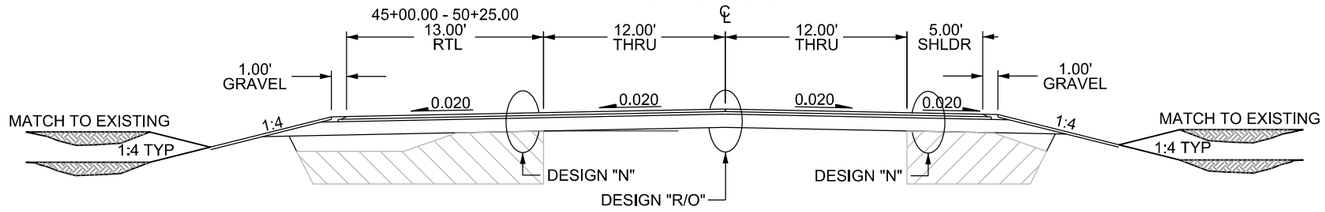
109TH AVE NE (CSAH12)

PROPOSED
LEB BYPASSS AT NATIONAL ST
41+56+00 - 47+76.00

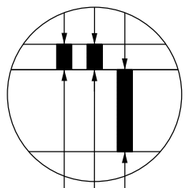


109TH AVE NE (CSAH12)

PROPOSED
LWB RTL AT NATIONAL ST
45+00.00 - 50+25.00

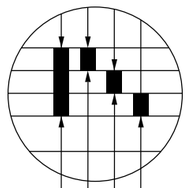


DESIGN M/O
MILL / OVERLAY



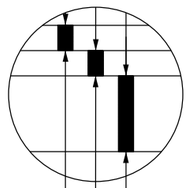
2.0" MILL BITUMINOUS
2.0" BITUMINOUS WEAR(SPWEB340C)
REMAINING BITUMINOUS

DESIGN R/R
REMOVE / REPLACE



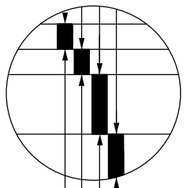
REMOVE EXISTING BITUMINOUS
2.0" BITUMINOUS WEAR(SPWEB340C)
2.0" BITUMINOUS WEAR(SPWEB340C)
2.0" BITUMINOUS NON-WEAR(SPNWB330B)

DESIGN R/O
RECLAIM / OVERLAY



2.0" BITUMINOUS WEAR(SPWEB340C)
2.0" BITUMINOUS WEAR(SPWEB340C)
INPLACE RECLAIMED BITUMINOUS

DESIGN N
NEW SHLDR / RTL / BYPASS



2.0" BITUMINOUS WEAR(SPWEB340C)
2.0" BITUMINOUS WEAR(SPWEB340C)
6.0" CLASS 5 BASE
SELECT GRANULAR EMBANKMENT

NO	DATE	BY	CKD	APPR	REVISION		
						01/30/2025	7:04:30 AM

NAME: P:\002-612-035 17 to 53\Plan\002612035_TYP.dgn

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ANOKA COUNTY
HIGHWAY DEPT.

SAP 002-612-035

TYPICAL SECTIONS

Sheet 37 of 110 Sheets

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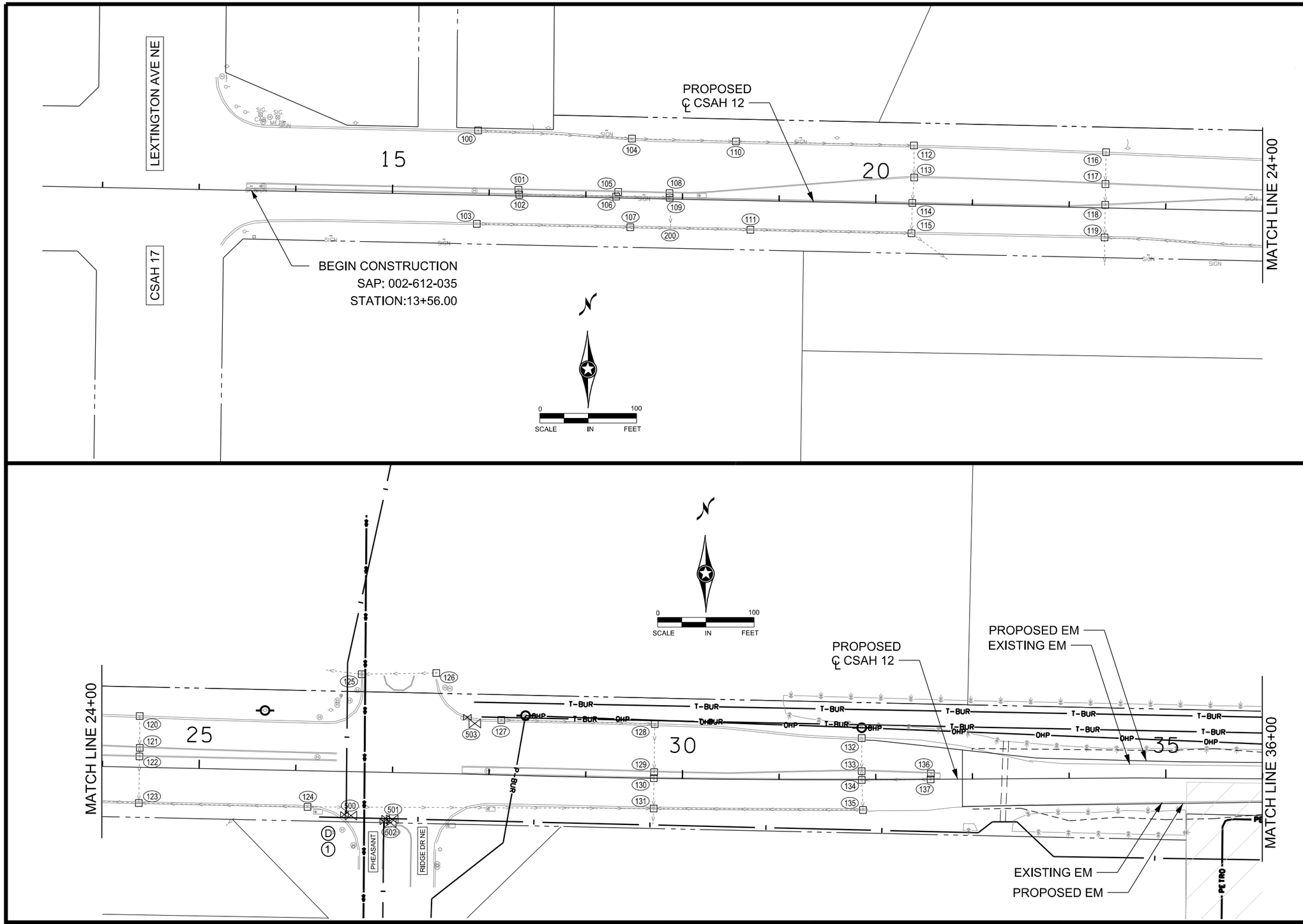


UTILITY LEGEND

- PETRO — MAGELLAN MIDSTREAM-PIPELINE
- MAGELLAN EASEMENT
- G-3"PVC — CENTERPOINT-GAS
- OHP — XCEL ENERGY-OH-POWER
- P-BUR — XCEL ENERGY-BUR-POWER
- T-BUR — LUMEN CENTURYLINK-TELE COMM
- TV — COMCAST-TV COMM
- SANITARY SEWER - BLAINE
- WATERMAIN - BLAINE
- EXISTING STORM
- POWER POLE
- HAND HOLE
- GATE VALVE
- GAS VALVE
- WETLANDS
- ENVIORNMENTAL AREA OF CONCERN "RUBUS"
- CONSTRUCTION LIMIT
- EXISTING R / W

WARNING
HIGH-PRESSURE PIPELINE(S)
Excavation and/or Construction Prohibited
Without compliance with State One-Call, AND
Without Written Permission From
MAGELLAN PIPELINE COMPANY, L.P.

NO	DATE	BY	CKD	APPR	REVISION		
1	1/29/25	JF	ND		LABELED MNDOT R/W, ALL SHEETS		
NO	DATE	BY	CKD	APPR	REVISION	01/30/2025	7:04:32 AM

NAME: P:\002-612-035 17 to 53\Plan\002612035_UT1.dgn

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: NICHOLAS J DOBDA

SIGNATURE:

DATE: 01/30/2025 LICENSE NO. 49046

DRAWN BY JJF DATE 12/01/24

DESIGN BY JJF DATE 12/01/24

CHECKED BY NJD DATE 01/28/25

ANOKA COUNTY

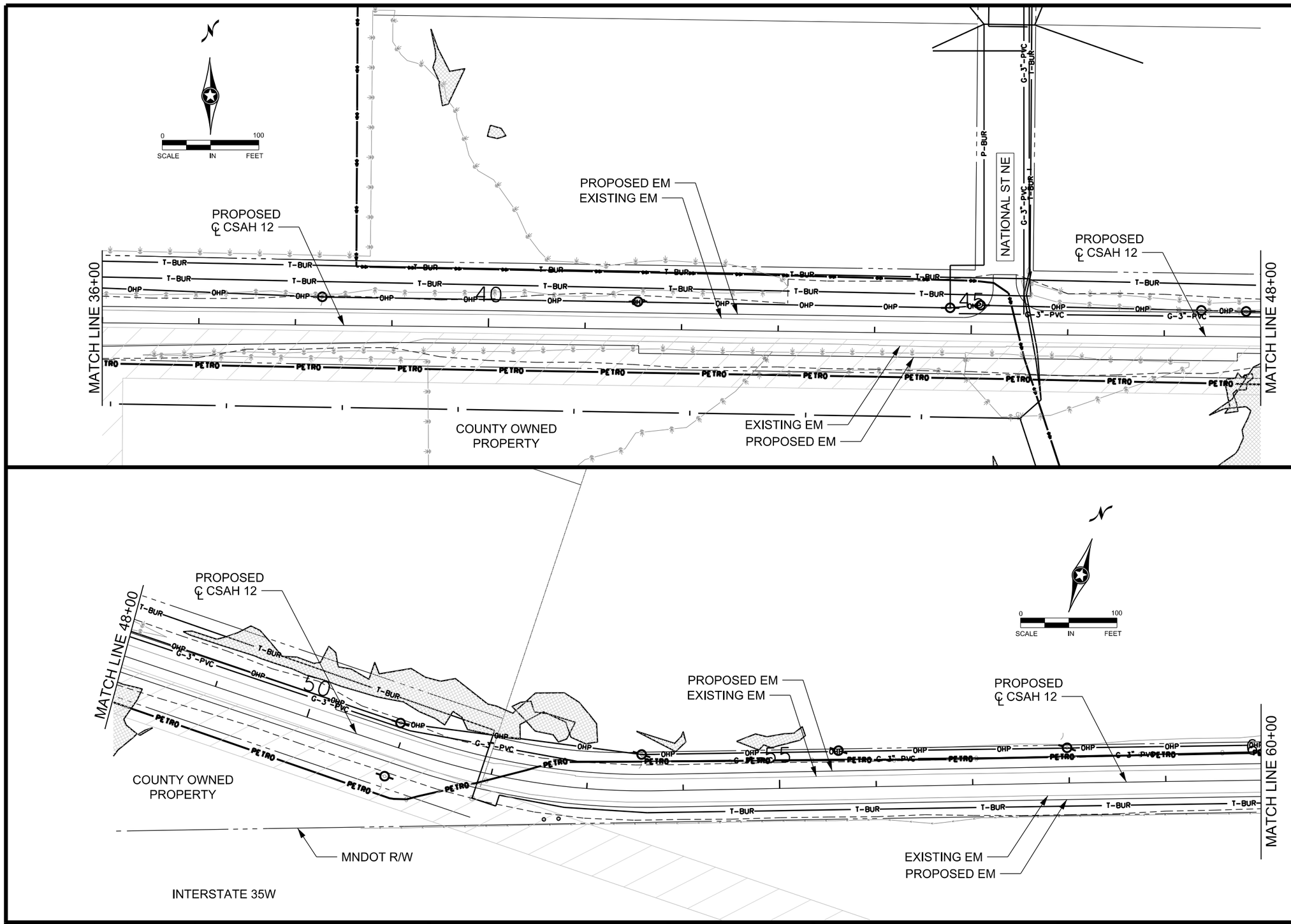
ANOKA COUNTY HIGHWAY DEPT.

SAP 002-612-035

EXISTING UTILITIES

STA 13+56.00 TO 36+00.00

jcfoster



UTILITY LEGEND

- PETRO — MAGELLAN MIDSTREAM-PIPELINE
- MAGELLAN EASEMENT
- G-3"PVC — CENTERPOINT-GAS
- OHP — XCEL ENERGY-OH-POWER
- P-BUR — XCEL ENERGY-BUR-POWER
- T-BUR — LUMEN CENTURYLINK-TELE COMM
- Tv — COMCAST-TV COMM
- SANITARY SEWER - BLAINE
- WATERMAIN - BLAINE
- EXISTING STORM
- POWER POLE
- HAND HOLE
- GATE VALVE
- GAS VALVE
- WETLANDS
- ENVIORNMENTAL AREA OF CONCERN "RUBUS"
- CONSTRUCTION LIMIT
- EXISTING R / W

WARNING
HIGH-PRESSURE PIPELINE(S)
Excavation and/or Construction Prohibited
Without compliance with State One-Call, AND
Without Written Permission From
MAGELLAN PIPELINE COMPANY, L.P.

NO	DATE	BY	CKD	APPR	REVISION		
1	1/29/25	JF	ND		LABELED MNDOT R/W, ALL SHEETS		
NAME: P:\002-612-035 17 to 53\Plan\002612035_UT2.dgn						01/30/2025	7:04:34 AM

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: NICHOLAS J DOBDA
SIGNATURE:
DATE: 01/30/2025 LICENSE NO. 49046

DRAWN BY JJF DATE 12/01/24
DESIGN BY JJF DATE 12/01/24
CHECKED BY NJD DATE 01/28/25

ANOKA COUNTY HIGHWAY DEPT.

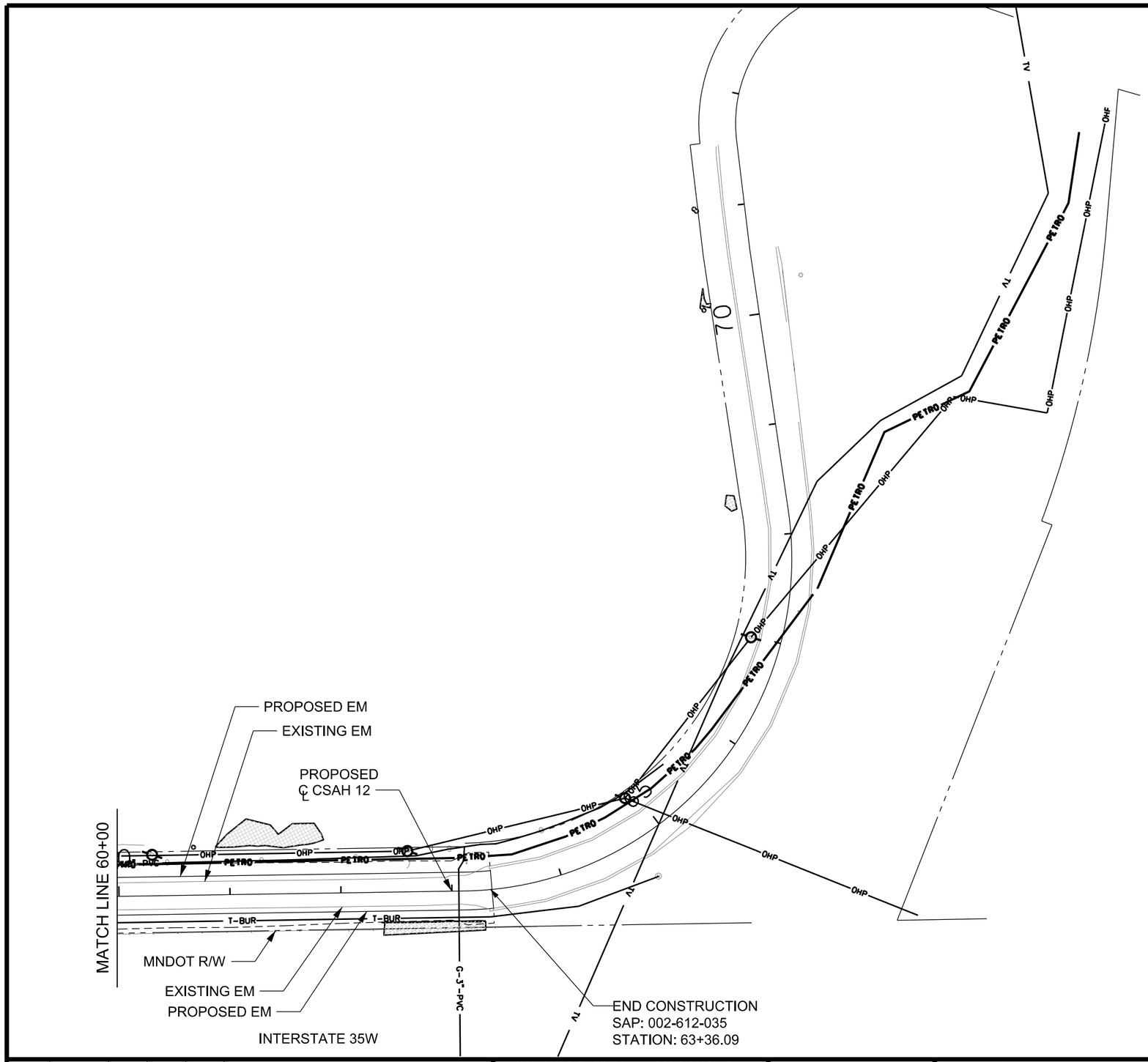
SAP 002-612-035

2 OF 3

EXISTING UTILITIES
STA 36+00.00 TO 60+00.00

Sheet 39 of 110 Sheets

jcfoster



UTILITY LEGEND

- MAGELLAN MIDSTREAM-PIPELINE
- MAGELLAN EASEMENT
- CENTERPOINT-GAS
- XCEL ENERGY-OH-POWER
- XCEL ENERGY-BUR-POWER
- LUMEN CENTURYLINK-TELE COMM
- COMCAST-TV COMM
- SANITARY SEWER - BLAINE
- WATERMAIN - BLAINE
- EXISTING STORM
- POWER POLE
- HAND HOLE
- GATE VALVE
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- WETLANDS
- ENVIORNMENTAL AREA OF CONCERN "RUBUS"
- CONSTRUCTION LIMIT
- EXISTING R / W

WARNING
HIGH-PRESSURE PIPELINE(S)
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MAGELLAN PIPELINE COMPANY, L.P.

3 OF 3

NO	DATE	BY	CKD	APPR	REVISION		
1	1/29/25	JF	ND		LABELED MNDOT R/W, ALL SHEETS		
						01/30/2025	7:04:35 AM

NAME: P:\002-612-035 17 to 53\Plan\002612035_UT3.dgn

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: NICHOLAS J DOBDA

SIGNATURE:

DATE: 01/30/2025 LICENSE NO. 49046

DRAWN BY JJF DATE 12/01/24

DESIGN BY JJF DATE 12/01/24

CHECKED BY NJD DATE 01/28/25

ANOKA COUNTY

ANOKA COUNTY HIGHWAY DEPT.

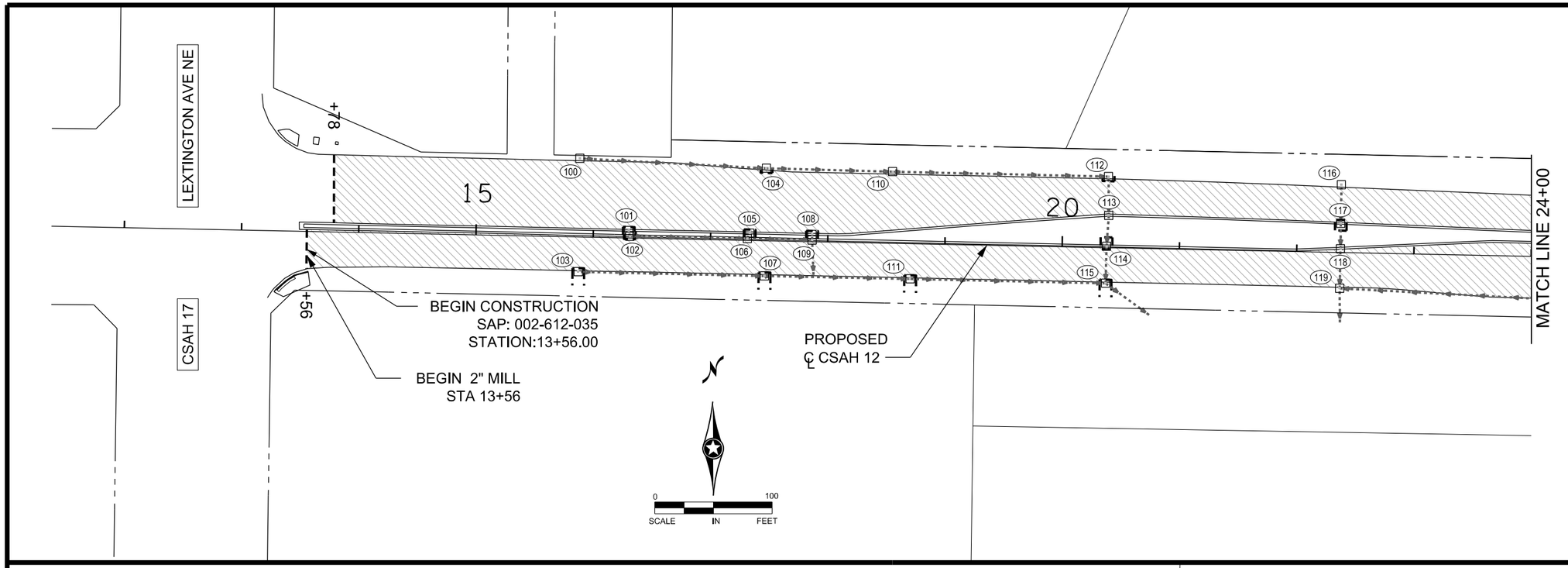
SAP 002-612-035

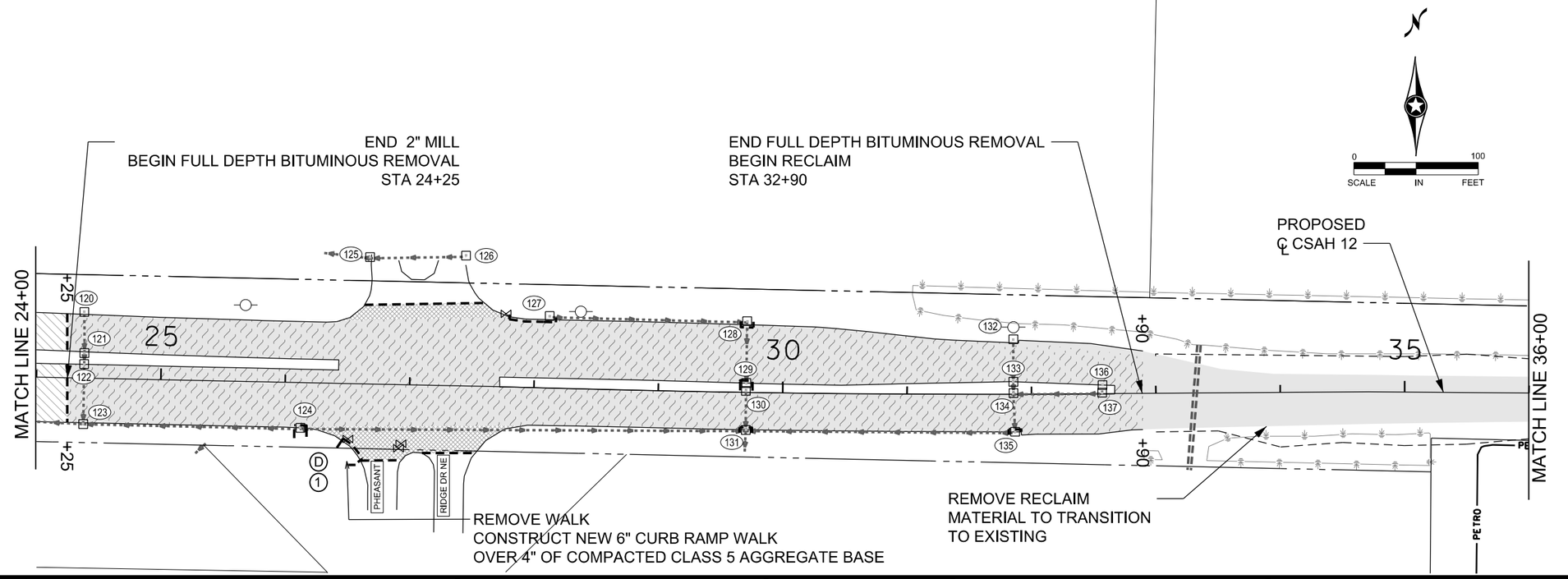
EXISTING UTILITIES

STA 60+00.00 TO 63+36.09

Sheet 40 of 110 Sheets

jcfoster





REMOVALS LEGEND

- 2" MILL AREA
- REMOVE BITUMINOUS FULL DEPTH
- RECLAIM BITUMINOUS FULL DEPTH
- REMOVE & REPLACE PHEASANT ST APPROACH

NOTE: SEE FLOODPLAIN MITIGATION SHEET FOR GRUBBING REMOVALS

- (XXX) □ CATCH BASIN REPAIRS
- ⋈ ADJUST GATE VALVE
- (D) TRUNCATED DOMES
- (1) REMOVE 6" CONCRETE REPLACE CONCRETE CURB RAMP
- SAWCUT
- REMOVE / REPLACE CULVERT
- EXISTING CULVERT
- EXISTING STORM SEWER
- PETRO MAGELLAN PIPELINE
- WETLANDS
- ENVIORNMENTAL AREA OF CONCERN "RUBUS"
- CONSTRUCTION LIMIT
- R / W
- POWER POLE
- (H) HAND HOLE

WARNING
HIGH-PRESSURE PIPELINE(S)
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Without compliance with State One-Call, AND
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1 OF 3

NO	DATE	BY	CKD	APPR	REVISION		
1	1/29/25	JF	ND		LABELED MNDOT R/W, ALL SHEETS		
						01/30/2025	7:04:36 AM

NAME: P:\002-612-035 17 to 53\Plan\002612035_REM1.dgn

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: NICHOLAS J DOBDA

SIGNATURE:

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CHECKED BY NJD DATE 01/28/25

ANOKA COUNTY
HIGHWAY DEPT.

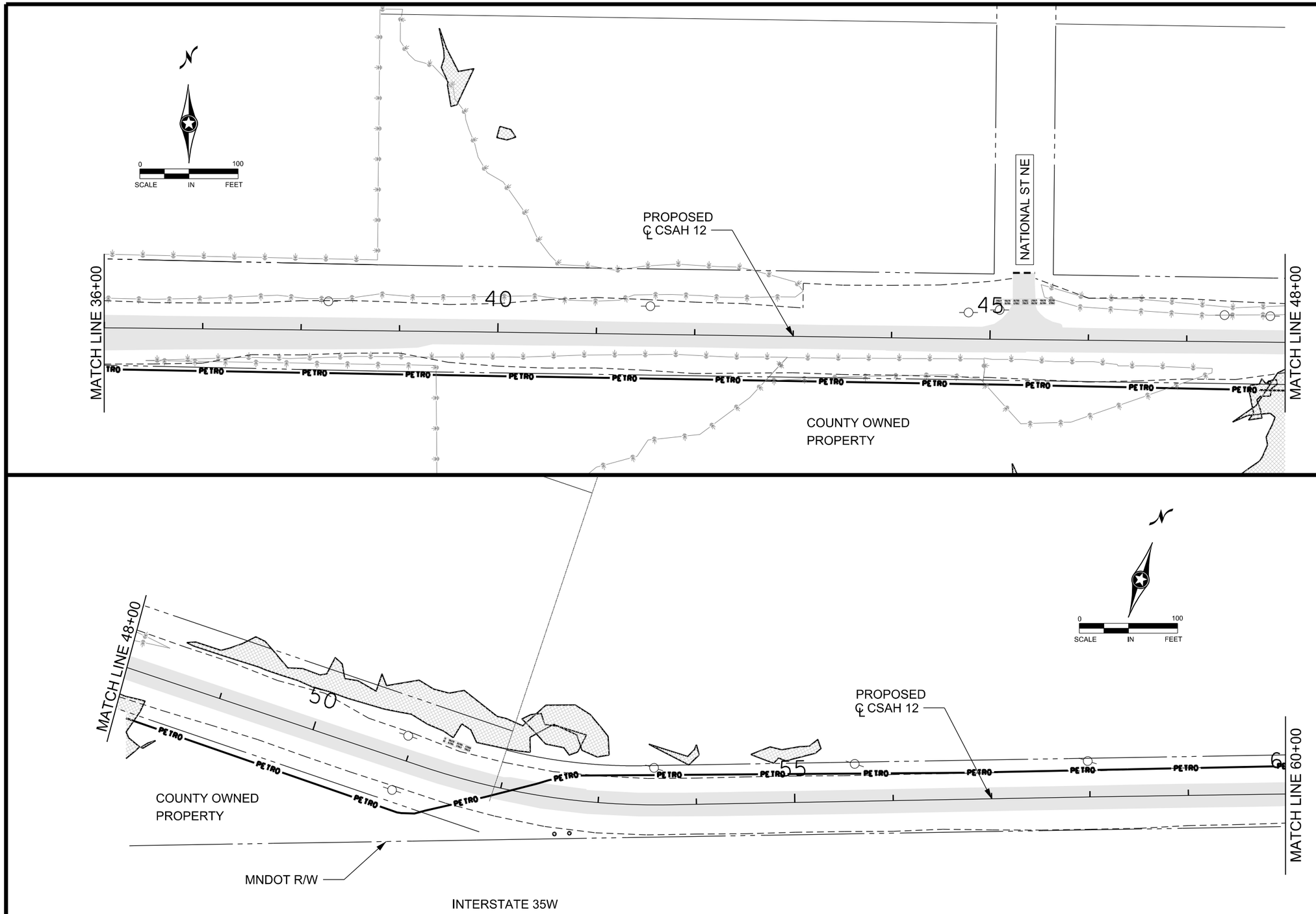
SAP 002-612-035

REMOVAL PLAN

STA 13+56.00 TO 36+00.00

Sheet 41 of 110 Sheets

jcfoster



REMOVALS LEGEND

- 2" MILL AREA
- REMOVE BITUMINOUS FULL DEPTH
- RECLAIM BITUMINOUS FULL DEPTH
- REMOVE & REPLACE PHEASANT ST APPROACH

NOTE: SEE FLOODPLAIN MITIGATION SHEET FOR GRUBBING REMOVALS

- (XXX) □ CATCH BASIN REPAIRS
- ⋈ ADJUST GATE VALVE
- (D) TRUNCATED DOMES
- (1) REMOVE 6" CONCRETE REPLACE CONCRETE CURB RAMP
- SAWCUT
- REMOVE / REPLACE CULVERT
- EXISTING CULVERT
- EXISTING STORM SEWER
- PETRO MAGELLAN PIPELINE
- WETLANDS
- ENVIORNMENTAL AREA OF CONCERN "RUBUS"
- CONSTRUCTION LIMIT
- R / W
- POWER POLE
- (H) HAND HOLE

WARNING
HIGH-PRESSURE PIPELINE(S)
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1	1/29/25	JF	ND		LABELED MNDOT R/W, ALL SHEETS		
NAME: P:\002-612-035 17 to 53\Plan\002612035_REM2.dgn						01/30/2025	7:04:37 AM

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.

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DATE: 01/30/2025 LICENSE NO. 49046

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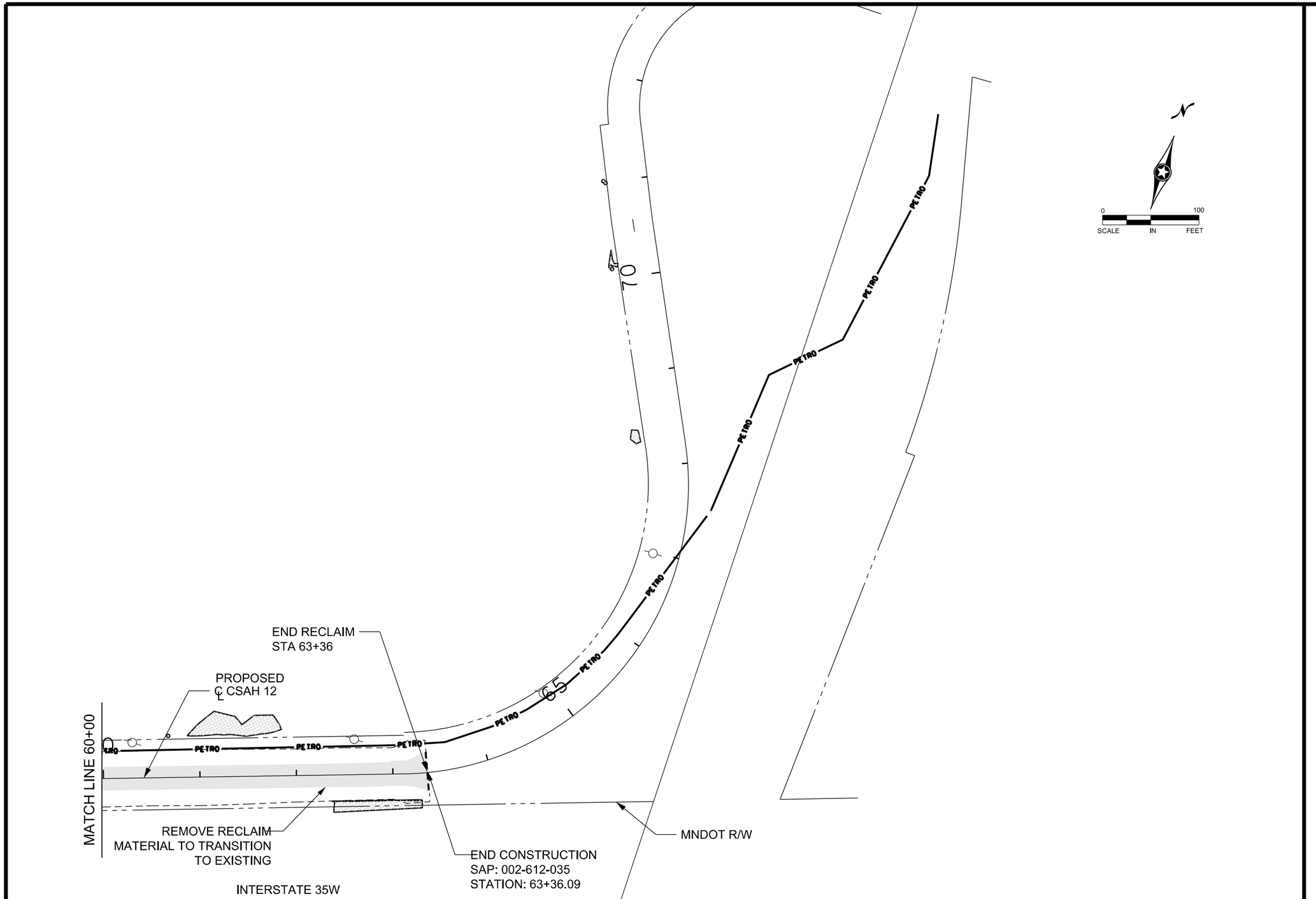
ANOKA COUNTY HIGHWAY DEPT.

SAP 002-612-035

REMOVAL PLAN

STA 36+00.00 TO 60+00.00

jcfoster



REMOVALS LEGEND

- 2" MILL AREA
- REMOVE BITUMINOUS FULL DEPTH
- RECLAIM BITUMINOUS FULL DEPTH
- REMOVE & REPLACE PHEASANT ST APPROACH

NOTE: SEE FLOODPLAIN MITIGATION SHEET FOR GRUBBING REMOVALS

- (XXX) □ CATCH BASIN REPAIRS
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WARNING
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1	1/29/25	JF	ND		LABELED MNDOT R/W, ALL SHEETS		
						01/30/2025	7:04:37 AM

NAME: P:\002-612-035 17 to 53\Plan\002612035_REM3.dgn

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ANOKA COUNTY

ANOKA COUNTY HIGHWAY DEPT.

SAP 002-612-035

REMOVAL PLAN

STA 60+00.00 TO 63+36.09

" FOR REFERENCE "

NUMBER	MH/CB?	CURB BOX?	CASTING TYPE	STRUCTURE TYPE	CASTING HT (IN)	RING HT	PIPES (PIPE SIZE, DIRECTION, INVERT)	GROUT?	RE-RING?	RECON?	OTHER
103	CB	Y	2x2	H	.7	.9	E, 12", 3.76		X		
107	CB	Y	2x2	484020	.7	.6	E, 15"?, 3.41, W, 12", 3.46		X		
200	MH	N	R	48-4020	.7	0	E, 24", 4.10, W, 15?, 4.10, N, 12", 4.16	X			Grout DH
111	CB	Y	2x2	484020	.7	.5	W, 24", 4.4, E, 24", 4.4		X	X	
115	CB	Y	2x2	60	.7	.4	SE, 30", 5.75, W, 24", 5.75, N, 15"?, 5.75	X	X		
119	CB	Y	2x2	484020	.7	.4	S, 15", 4.70, E, 15", 4.70, N, 12", 4.4	X			Grout DH
123	CB	Y	2x2	484020	.7	1.2	W, 15", 4.65, N, 12", 4.65, E, 12", 4.65	X			
124	CB	Y	2x2	484020	.7	.2	W, 12", 5.5, E, 12", 5.5		X		
131	CB	Y	2x2	484020	.7	.6	S, 24", 5.5, N, -, E, 15", 5.4, W, 12", 15"		X		
135	CB	Y	2x2	484020	.7	.8	W, 15", 3.9 N, 15", 3.9		X		clean
132	CB	Y	2x2	H	.7	1.2	S, 12", 3.20	X			Grout DH, clean
128	CB	Y	2x2	484020	.7	.6	W, 12", 4.1, S, 12", 4.3		X		
127	CB	Y	2x2	H	.7	.8	E, 12, 3.6	X	X		
126	CB	Y	18x36	2x3	.7	.6	W, 12", 3.7	X			
125	CB	Y	18x36	484020	.4	.7	E, 12", 4.2, W, 12", 4.2,	X			
120	CB	Y	2x2	H	.7	1.0	S, 12", 3.7	X			
116	CB	Y	2x2	H	.7	.8	S, 12", 3.45	X			
112	CB	Y	2x2	484020	.7	.9	S, 15" 5.9, W, 15", 5.9		X		
110	CB	Y	2x2	484020	.7	1.2	W, 15", 5.6, E, 15", 5.6	X			
104	CB	Y	2x2	484020	.7	0.2	E, 15", 3.6, S, W, 15", 3.6		X		
100	CB	Y	2x2	H	.7	0.3	E, 15", 3.2	X			
102	CB	Y	2x2	484020	.7	.9	E, 12", 4.10 N, 12", 4.1		X		
106	CB	Y	2x2	484020	.7	1.0	W, 12", 4.0, N, 12", 3.3, E, 12", 4.1	X			Grout DH
109	CB	Y	2x2	484020	.7	.7	S, 12", 4.4, W, 12", 4.4, N, 12", 4.4	X			
114	CB	Y	2x2	484020	.7	.4	N, 15", 6.0, S, 15", 6.2		X		
118	CB	Y	2x2	484020	.7	.3	N, 12", 4.1, S, 12", 4.35	X			
122	CB	Y	2x2	484020	.7	1.4	N, 12", 4.9, S, 12", 4.9	X			Grout DH
130	CB	Y	2x2	484020	.7	.7	N, 15", 5.2, S, 15", 5.2	X			
134	CB	Y	2x2	484020	.7	.8	N, 15", 4.0, E 12", 4.10, S, 15", 4.2	X			
137	CB	Y	2x2	484020	.7	.8	N, 12", 3.6, W, 12", 3.6	X			Grout DH clean
136	CB	Y	2x2	H	.7	1.3	N, 12", 2.45	X			clean
133	CB	Y	2x2	4840 20	.7	0.6	S, 15", 4.1, N, 12", 4.10	X			
129	CB	Y	2x2	484020	.7	1.0	S, 15", 5.05, N, 12", 3.05		X		
121	CB	Y	2x2	484020	.7	1.5	N, 12" 5.10, S, 12", 5.10	X			
117	CB	Y	2x2	484020	.7	.7	N, 12", 4.2 S, 12", 4.2		X		
113	CB	Y	2x2	484020	.7	.7	S, 15", 6.3, N, 15", 6.3	X			
105	CB	Y	2x2	H	.7	.5	S, 12", 2.5		X		Grout DH
108	CB	Y	2x2	H	.7	.4	S, 12", 3.7		X		
101	CB	Y	2x2	H	.7	.6	S, 12", 3.45		X		Grout DH

NO	DATE	BY	CKD	APPR	REVISION

NAME: P:\002-612-035 17 to 53\Plan\002612035_SN.dgn 01/30/2025 7:04:38 AM

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: NICHOLAS J DOBDA
SIGNATURE: NJDobda
DATE: 01/30/2025 LICENSE NO. 49046

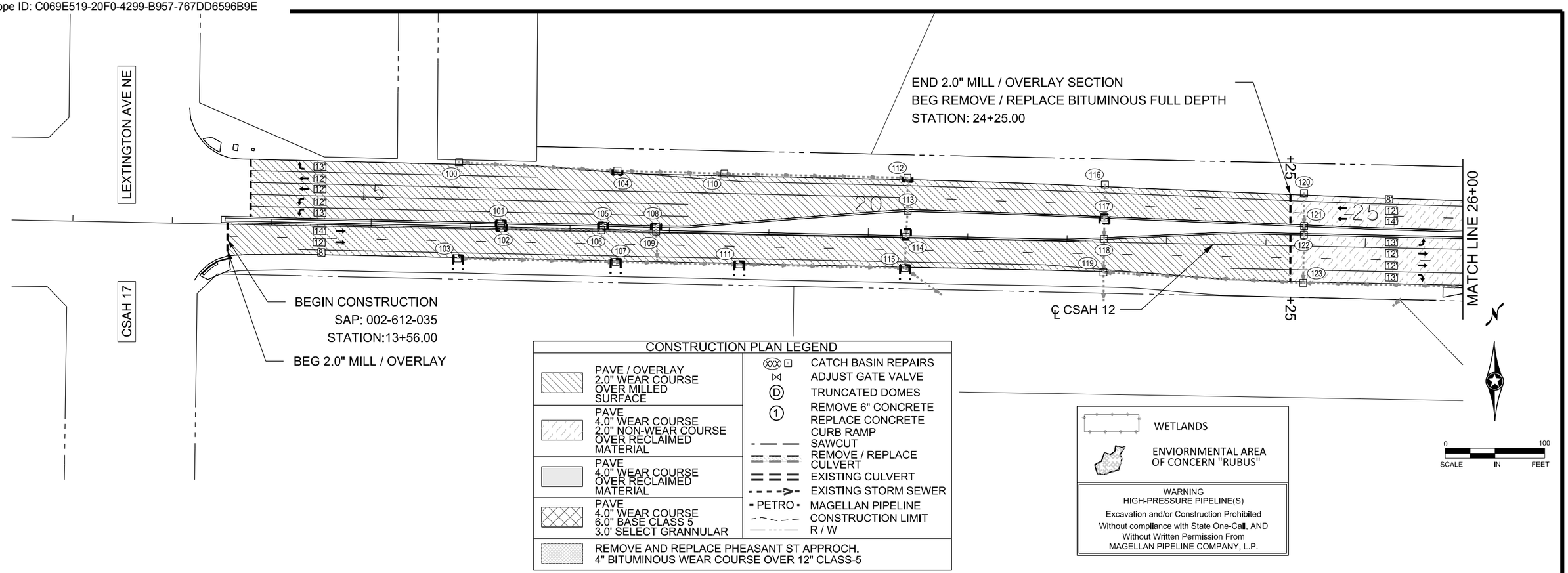
DRAWN BY JJF DATE 12/01/24
DESIGN BY JJF DATE 12/01/24
CHECKED BY NJD DATE 01/28/25

ANOKA COUNTY
HIGHWAY DEPT.

SAP 002-612-035

STORM SEWER
SURVEY NOTES
" FOR REFERENCE "

Sheet 44 of 110 Sheets



CONSTRUCTION PLAN LEGEND

- PAVE / OVERLAY — 2.0" WEAR COURSE OVER MILLED SURFACE
- PAVE — 4.0" WEAR COURSE, 2.0" NON-WEAR COURSE OVER RECLAIMED MATERIAL
- PAVE — 4.0" WEAR COURSE OVER RECLAIMED MATERIAL
- PAVE — 4.0" WEAR COURSE, 6.0" BASE CLASS 5, 3.0' SELECT GRANNULAR
- REMOVE AND REPLACE PHEASANT ST APPROCH. 4" BITUMINOUS WEAR COURSE OVER 12" CLASS-5

- (XXX) □ CATCH BASIN REPAIRS
- ⋈ ADJUST GATE VALVE
- (D) TRUNCATED DOMES
- (1) REMOVE 6" CONCRETE REPLACE CONCRETE CURB RAMP
- SAWCUT
- REMOVE / REPLACE CULVERT
- EXISTING CULVERT
- EXISTING STORM SEWER
- PETRO MAGELLAN PIPELINE
- CONSTRUCTION LIMIT
- R / W

WETLANDS

ENVIORNMENTAL AREA OF CONCERN "RUBUS"

WARNING
HIGH-PRESSURE PIPELINE(S)
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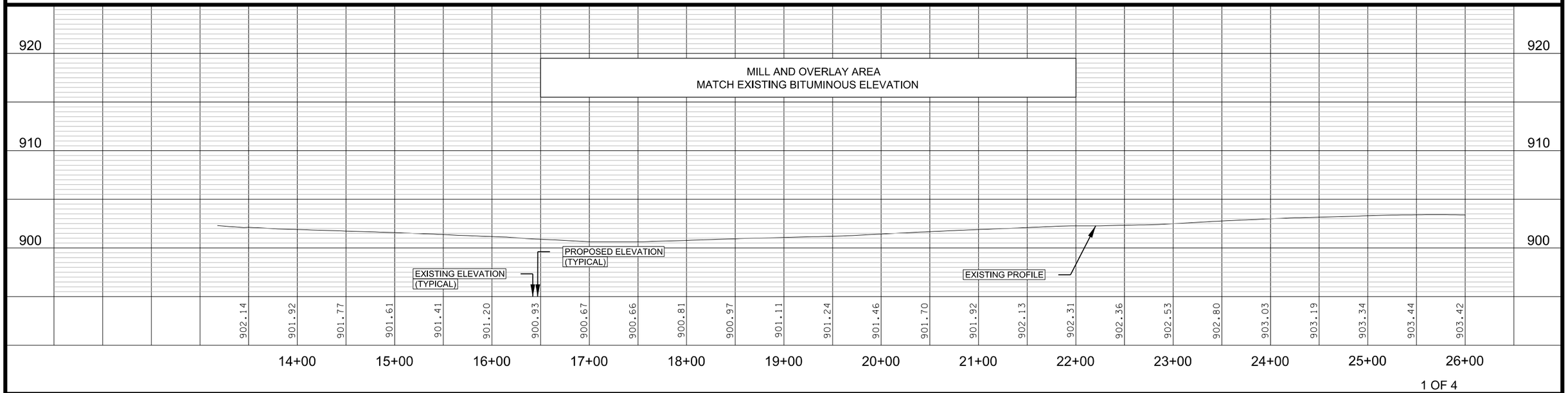
SCALE 0 100 IN FEET



NO	DATE	BY	CKD	APPR	REVISION
1	1/29/25	JF	ND		LABELED MNDOT R/W, ALL SHEETS

NAME: P:\002-612-035 17 to 53\Plan\002612035_PP1.dgn 01/30/2025 7:04:42 AM

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PRINT NAME: NICHOLAS J DOBDA

SIGNATURE: Nicholas J Dobda

DATE: 01/30/2025 LICENSE NO. 49046

DRAWN BY JJF DATE 12/01/24

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CHECKED BY NJD DATE 01/28/25

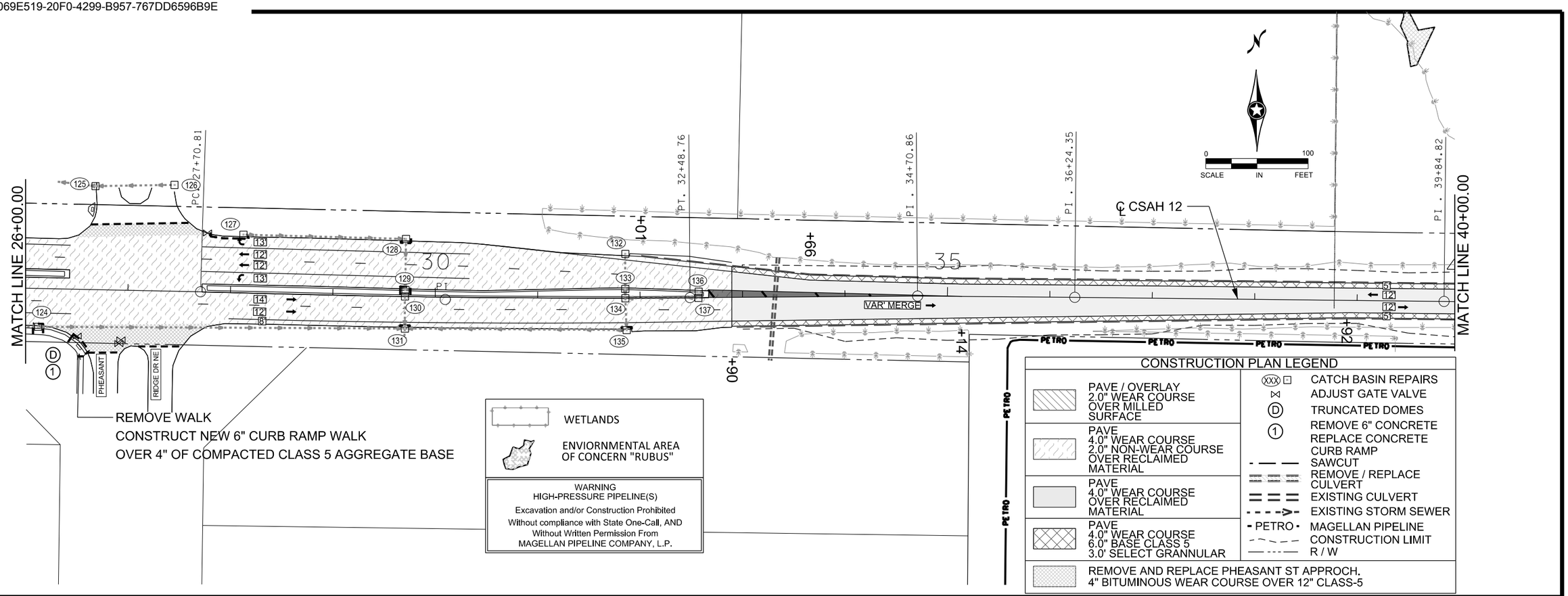
ANOKA COUNTY HIGHWAY DEPT.

SAP 002-612-035

CONSTRUCTION PLAN & PROFILE

STA 13+56.00 TO 26+00.00

Sheet 45 of 110 Sheets



CONSTRUCTION PLAN LEGEND

- PAVE / OVERLAY 2.0" WEAR COURSE OVER MILLED SURFACE
- PAVE 4.0" WEAR COURSE 2.0" NON-WEAR COURSE OVER RECLAIMED MATERIAL
- PAVE 4.0" WEAR COURSE OVER RECLAIMED MATERIAL
- PAVE 4.0" WEAR COURSE 6.0" BASE CLASS 5 3.0" SELECT GRANNULAR
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- CATCH BASIN REPAIRS
- ADJUST GATE VALVE
- TRUNCATED DOMES
- REMOVE 6" CONCRETE REPLACE CONCRETE CURB RAMP
- SAWCUT
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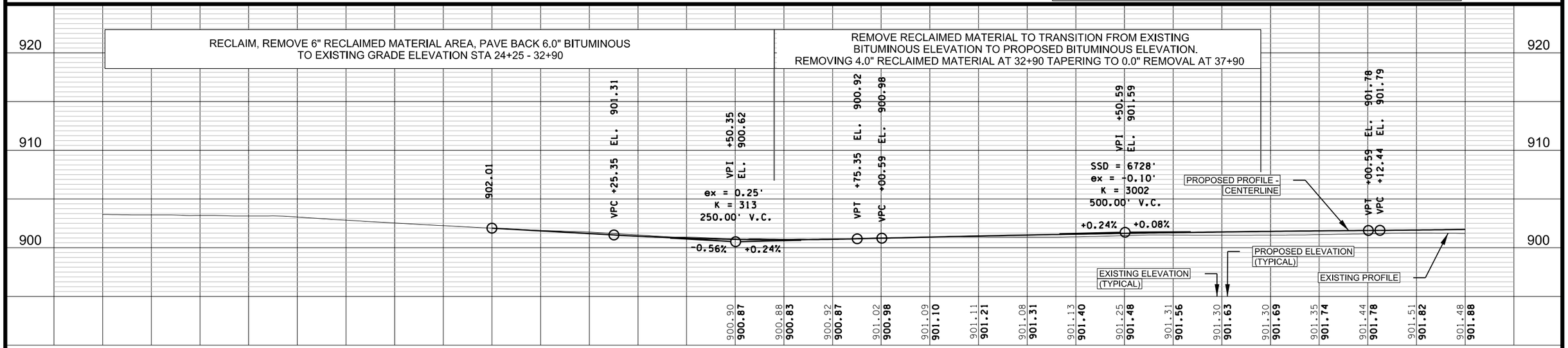
- EXISTING CULVERT
- EXISTING STORM SEWER
- PETRO MAGELLAN PIPELINE
- CONSTRUCTION LIMIT
- R / W

RECLAIM, REMOVE 6" RECLAIMED MATERIAL AREA, PAVE BACK 6.0" BITUMINOUS TO EXISTING GRADE ELEVATION STA 24+25 - 32+90

REMOVE RECLAIMED MATERIAL TO TRANSITION FROM EXISTING BITUMINOUS ELEVATION TO PROPOSED BITUMINOUS ELEVATION. REMOVING 4.0" RECLAIMED MATERIAL AT 32+90 TAPERING TO 0.0" REMOVAL AT 37+90



NO	DATE	BY	CKD	APPR	REVISION
1	1/29/25	JF	ND		LABELED MNDOT R/W, ALL SHEETS

NAME: P:\002-612-035 17 to 53\Plan\002612035_PP2.dgn 01/30/2025 7:04:43 AM

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ANOKA COUNTY

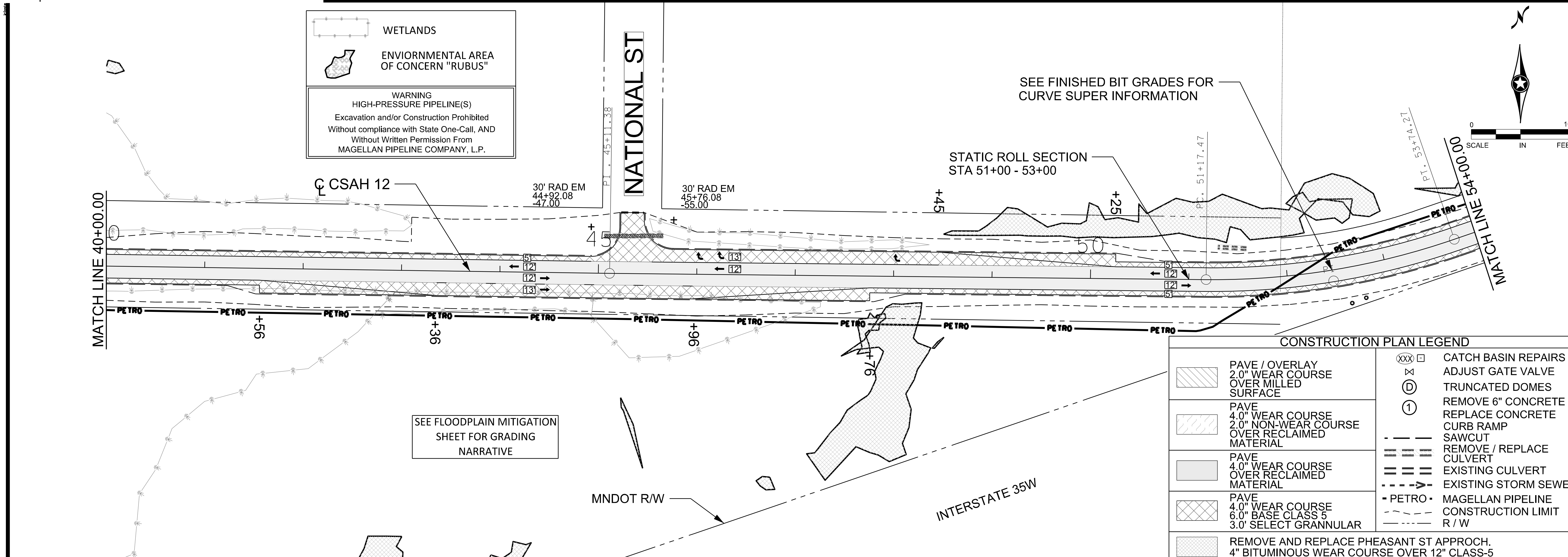
ANOKA COUNTY HIGHWAY DEPT.

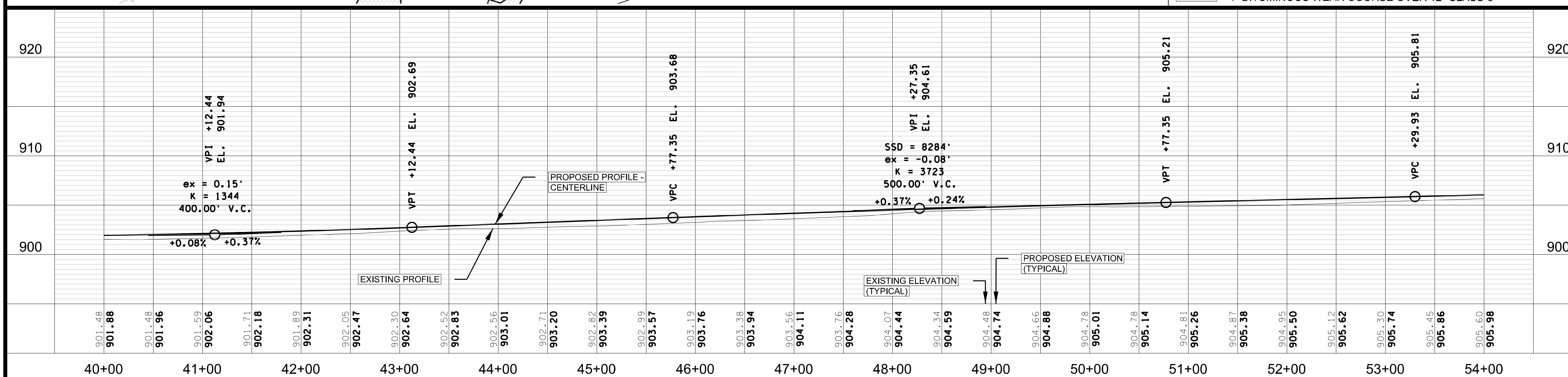
SAP 002-612-035

CONSTRUCTION PLAN & PROFILE

STA 26+00.00 TO 40+00.00

Sheet 46 of 110 Sheets





3 OF 4

NO	DATE	BY	CKD	APPR	REVISION
1	1/29/25	JF	ND		LABELED MNDOT R/W, ALL SHEETS

NAME: P:\002-612-035 17 to 53\Plan\002612035_PP3.dgn 01/30/2025 7:04:44 AM

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PRINT NAME: NICHOLAS J DOBDA

SIGNATURE: [signature]

DATE: 01/30/2025 LICENSE NO. 49046

DRAWN BY JJF DATE 12/01/24

DESIGN BY JJF DATE 12/01/24

CHECKED BY NJD DATE 01/28/25

ANOKA COUNTY

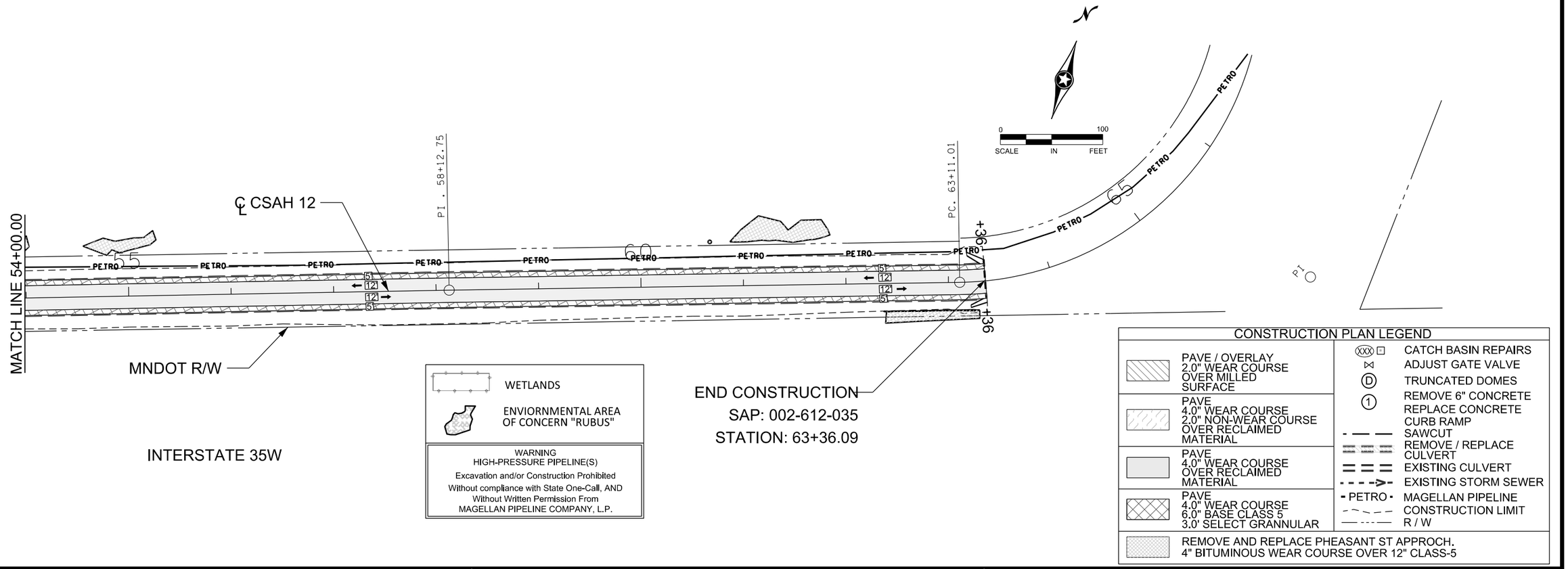
ANOKA COUNTY HIGHWAY DEPT.

SAP 002-612-035

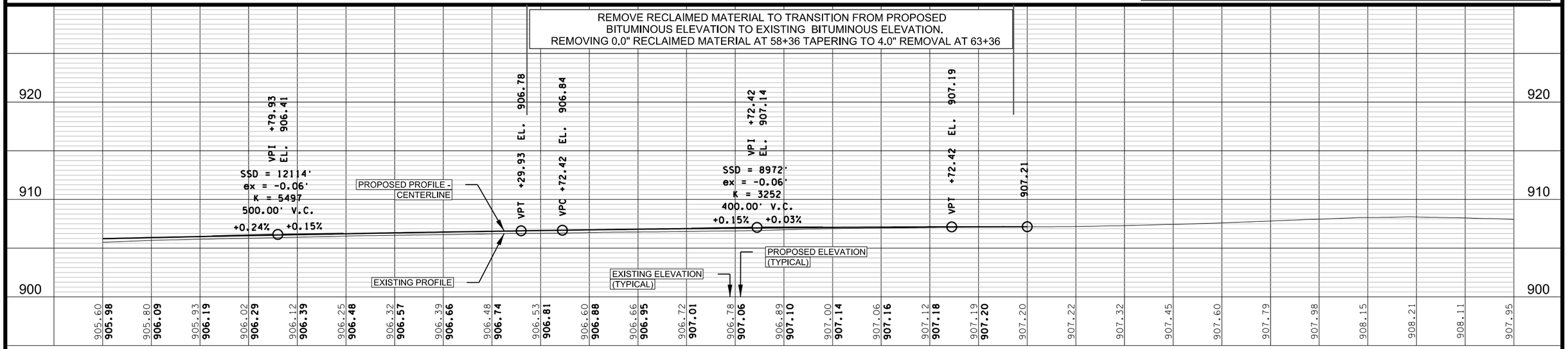
CONSTRUCTION PLAN & PROFILE

STA 40+00.00 TO 54+00.00

Sheet 47 of 110 Sheets



REMOVE RECLAIMED MATERIAL TO TRANSITION FROM PROPOSED BITUMINOUS ELEVATION TO EXISTING BITUMINOUS ELEVATION.
REMOVING 0.0" RECLAIMED MATERIAL AT 58+36 TAPERING TO 4.0" REMOVAL AT 63+36



NO	DATE	BY	CKD	APPR	REVISION
1	1/29/25	JF	ND		LABELED MNDOT R/W, ALL SHEETS

NAME: P:\002-612-035 17 to 53\Plan\002612035_PP4.dgn 01/30/2025 7:04:45 AM

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: NICHOLAS J DOBDA

SIGNATURE:

DATE: 01/30/2025 LICENSE NO. 49046

DRAWN BY JJF DATE 12/01/24

DESIGN BY JJF DATE 12/01/24

CHECKED BY NJD DATE 01/28/25

ANOKA COUNTY

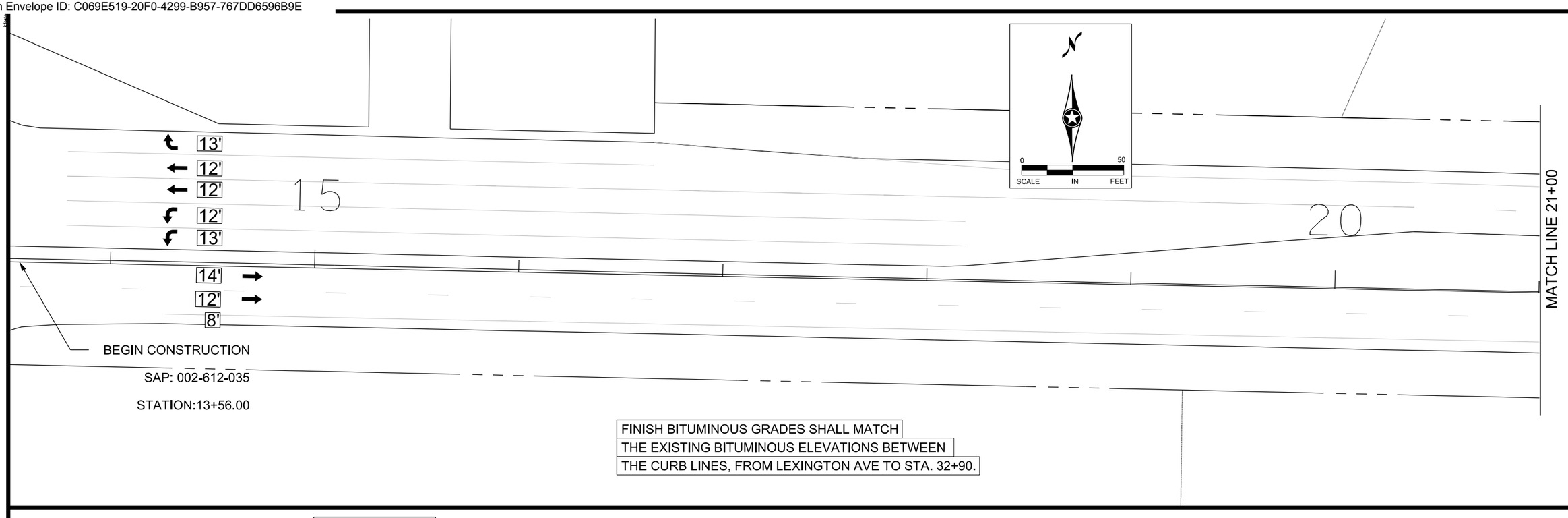
ANOKA COUNTY HIGHWAY DEPT.

SAP 002-612-035

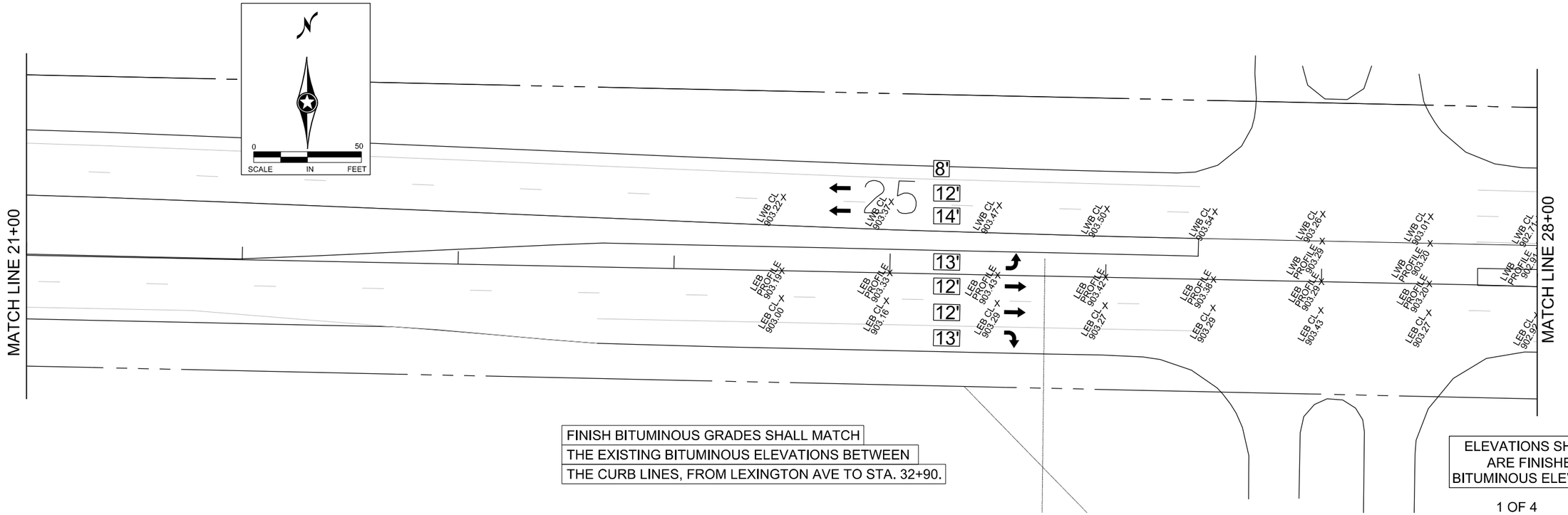
CONSTRUCTION PLAN & PROFILE

STA 54+00.00 TO 63+36.09

Sheet 48 of 110 Sheets



FINISH BITUMINOUS GRADES SHALL MATCH
THE EXISTING BITUMINOUS ELEVATIONS BETWEEN
THE CURB LINES, FROM LEXINGTON AVE TO STA. 32+90.



FINISH BITUMINOUS GRADES SHALL MATCH
THE EXISTING BITUMINOUS ELEVATIONS BETWEEN
THE CURB LINES, FROM LEXINGTON AVE TO STA. 32+90.

ELEVATIONS SHOWN
ARE FINISHED
BITUMINOUS ELEVATIONS

NO	DATE	BY	CKD	APPR	REVISION
1	1/29/25	JF	ND		LABELED MNDOT R/W, ALL SHEETS

NAME: P:\002-612-035 17 to 53\Plan\002612035_SE1_NEW.dgn 01/30/2025 7:04:47 AM

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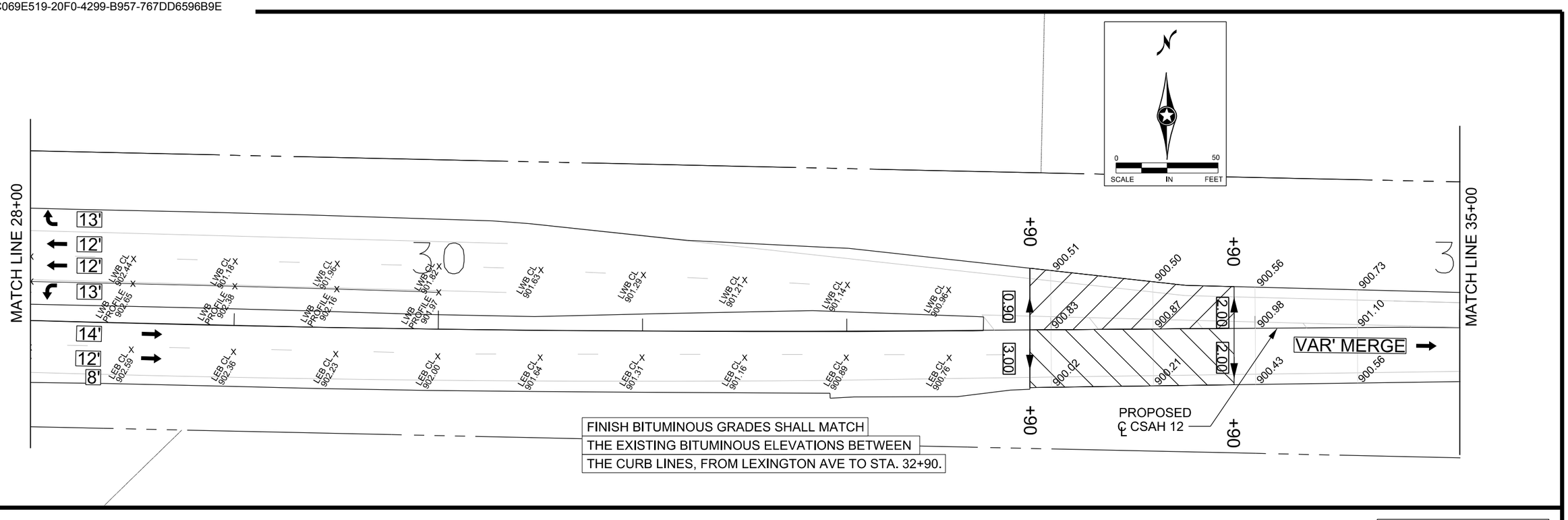
ANOKA COUNTY
HIGHWAY DEPT.

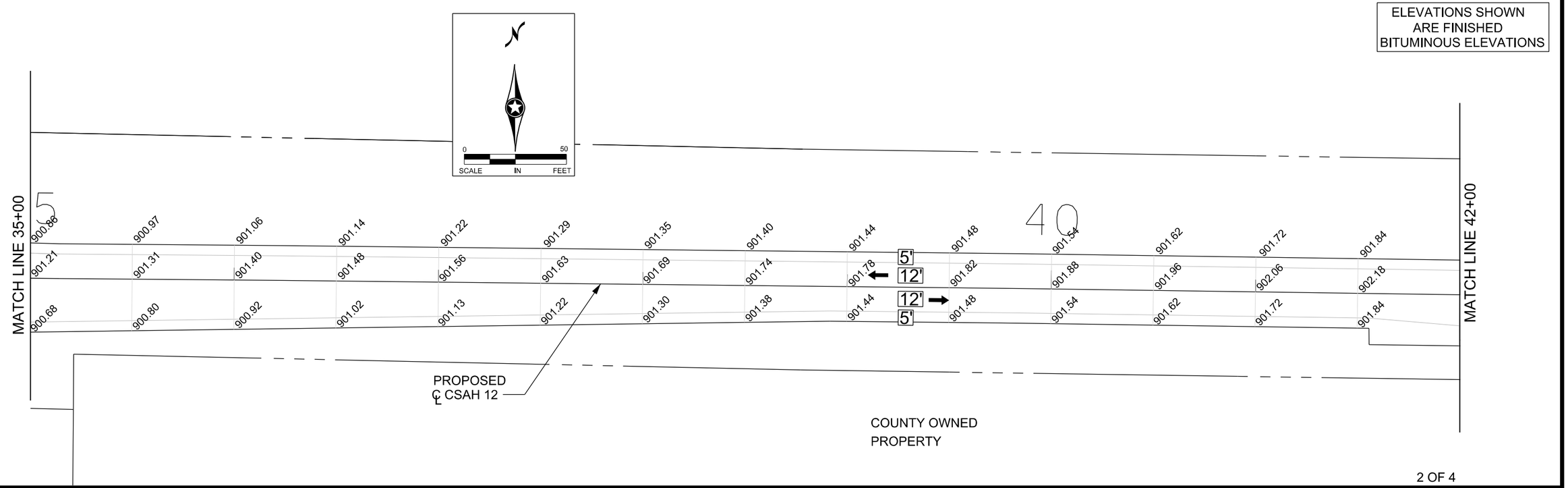
SAP 002-612-035

FINISH BITUMINOUS GRADES
&
ELEVATION TRANSITIONS
STA 13+50 TO 28+00

Sheet 49 of 110 Sheets



ELEVATIONS SHOWN
ARE FINISHED
BITUMINOUS ELEVATIONS



2 OF 4

NO	DATE	BY	CKD	APPR	REVISION
1	1/29/25	JF	ND		LABELED MNDOT R/W, ALL SHEETS

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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.

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ANOKA COUNTY

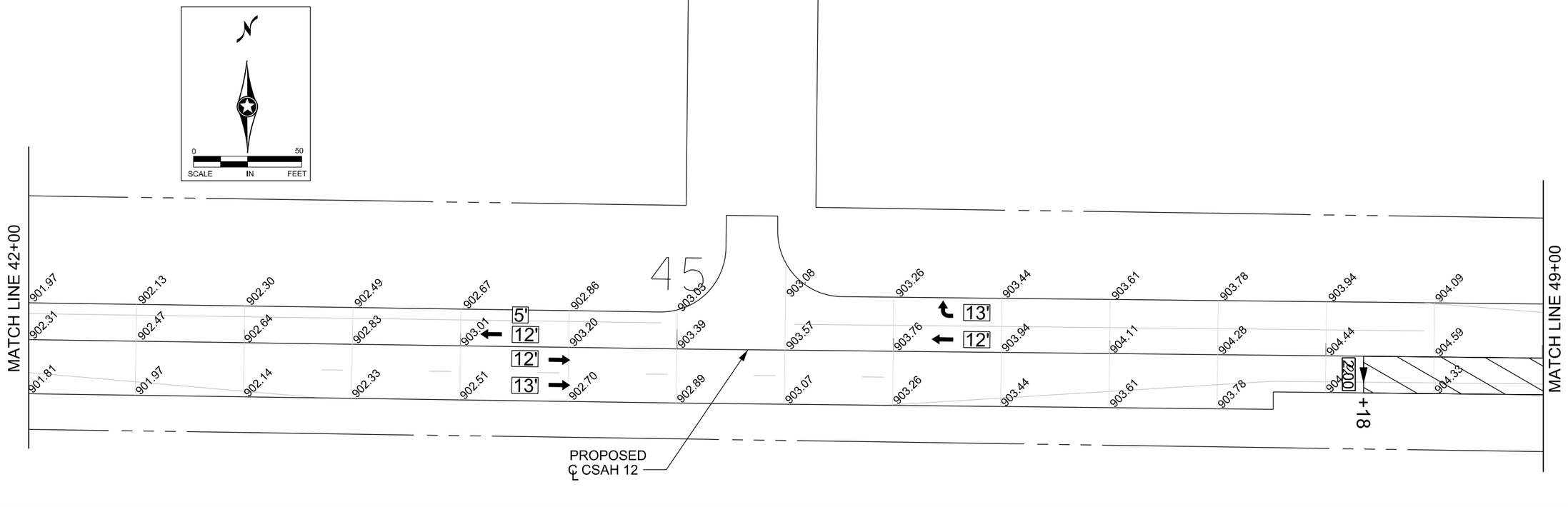
ANOKA COUNTY HIGHWAY DEPT.

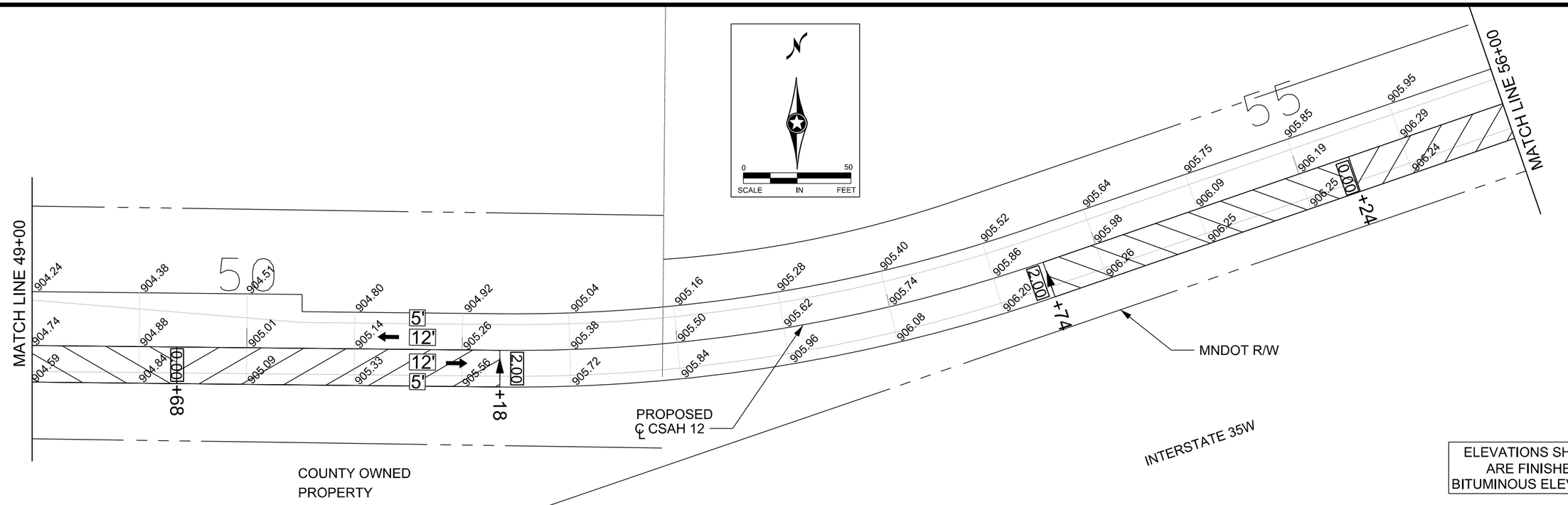
SAP 002-612-035

FINISH BITUMINOUS GRADES & ELEVATION TRANSITIONS

STA 28+00 TO 42+00

Sheet 50 of 110 Sheets





ELEVATIONS SHOWN ARE FINISHED BITUMINOUS ELEVATIONS

NO	DATE	BY	CKD	APPR	REVISION
1	1/29/25	JF	ND		LABELED MNDOT R/W, ALL SHEETS

NAME: P:\002-612-035 17 to 53\Plan\002612035_SE3_NEW.dgn 01/30/2025 7:04:50 AM

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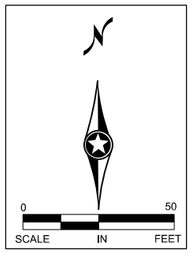
ANOKA COUNTY HIGHWAY DEPT.

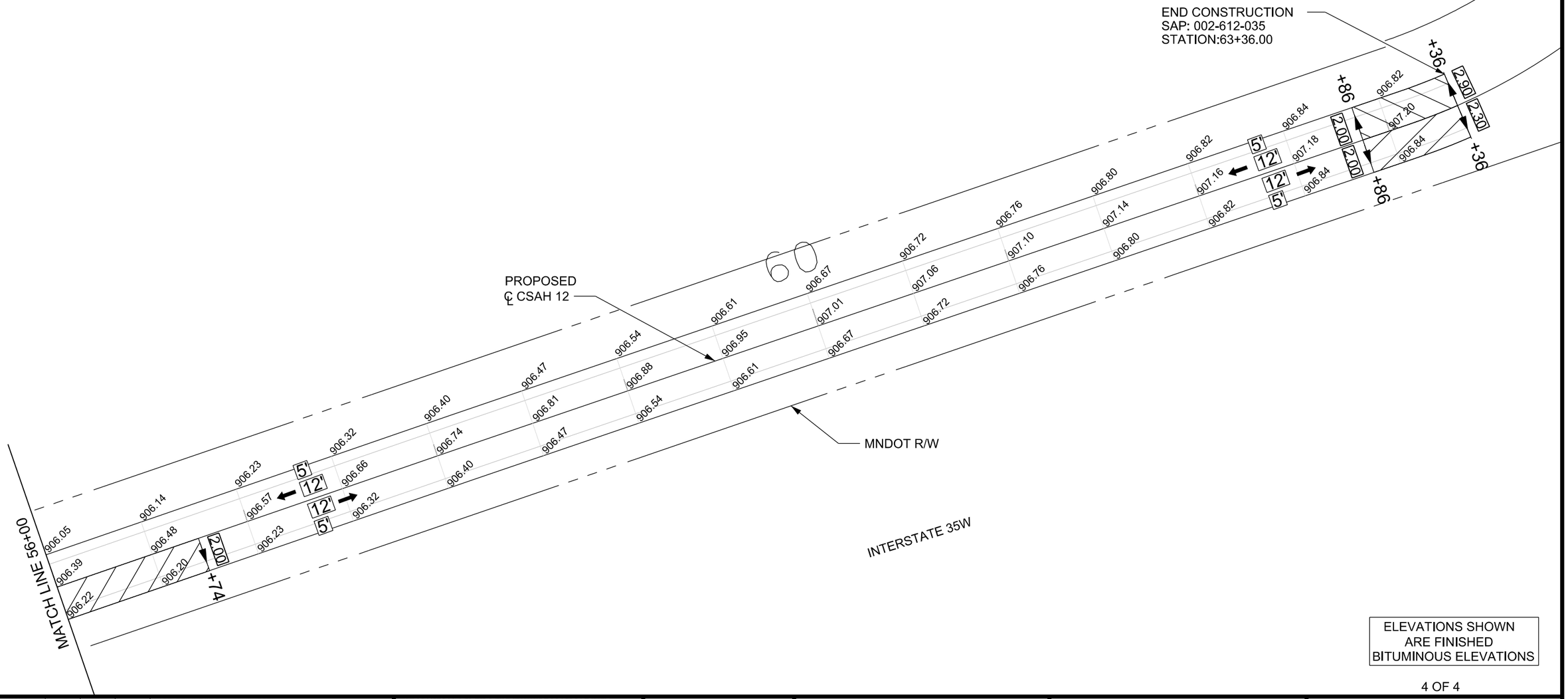
SAP 002-612-035

FINISH BITUMINOUS GRADES & ELEVATION TRANSITIONS

STA 42+00 TO 56+00

Sheet 51 of 110 Sheets





ELEVATIONS SHOWN
ARE FINISHED
BITUMINOUS ELEVATIONS

NO	DATE	BY	CKD	APPR	REVISION
1	1/29/25	JF	ND		LABELED MNDOT R/W, ALL SHEETS

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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.

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ANOKA COUNTY

ANOKA COUNTY
HIGHWAY DEPT.

SAP 002-612-035

FINISH BITUMINOUS GRADES
&
ELEVATION TRANSITIONS
STA 56+00 TO 63+36

Sheet 52 of 110 Sheets

NORTH FLOODPLAIN MITIGATION SITE

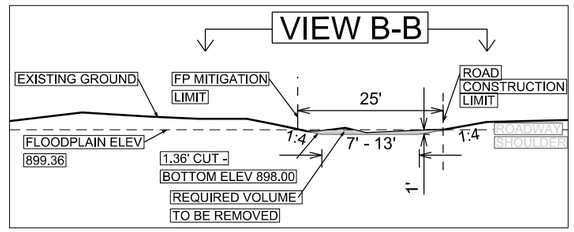
BOTTOM ELEV 898.00
(SEE X-SECTIONS, 91.43 CU YDS)

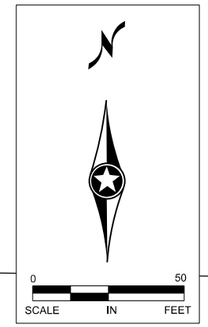
25'

CSAH 12

NATIONAL ST

VIEW B-B





PETRO PETRO PETRO PETRO PETRO PETRO PETRO

CONTRACTOR MUST CONTACT MAGELLAN PIPELINE - FOR WATCHDOG PRIOR TO CROSSING PIPELINE - WITH EQUIPMENT.

PIPELINE MUST BE "BLISTERED OVER" TO - CREATE REQUIRED COVER TO CROSS.

CONTRACTOR TO MINIMISE CROSSING PIPELINE.

529598.8863
148122.1120

529668.8791
148121.1048

40

529613.6689
148106.8977

529653.6648
148106.3222

MATCH EXISTING ELEV

TREE CLEARING LINE

VIEW A-A

VIEW A-A

BOTTOM ELEV 898.00
(1.66' BELOW FLOODPLAIN)

100

MATCH EXISTING ELEV

TREE CLEARING LINE

529612.2302
148006.9081

529652.2260
148006.3325

15

15

529597.0159
147992.1254

529667.0087
147991.1183

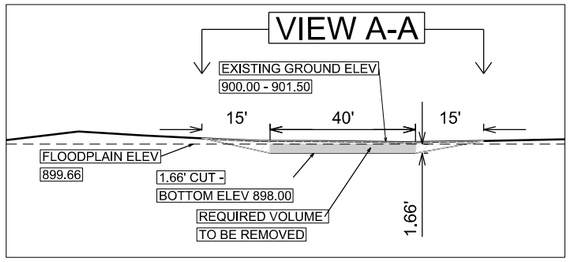
MATCH EXISTING ELEV

TREE CLEARING LINE

SOUTH FLOODPLAIN MITIGATION SITE

(1.66' D X 100' L X 40' W = 6640 CU FT)
245.92 CU YDS

VIEW A-A



COUNTY OWNED PROPERTY

- PETRO - MAGELLAN PIPELINE

WETLANDS

ENVIORNMENTAL AREA OF CONCERN "RUBUS"

CONSTRUCTION LIMIT

R / W

WARNING
HIGH-PRESSURE PIPELINE(S)
Excavation and/or Construction Prohibited
Without compliance with State One-Call, AND
Without Written Permission From
MAGELLAN PIPELINE COMPANY, L.P.

MNDOT R/W

INTERSTATE 35W

1 OF 1

NO	DATE	BY	CKD	APPR	REVISION

NAME: P:\002-612-035 17 to 53\Plan\002612035_FM.dgn 01/30/2025 7:04:53 AM

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.

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ANOKA COUNTY

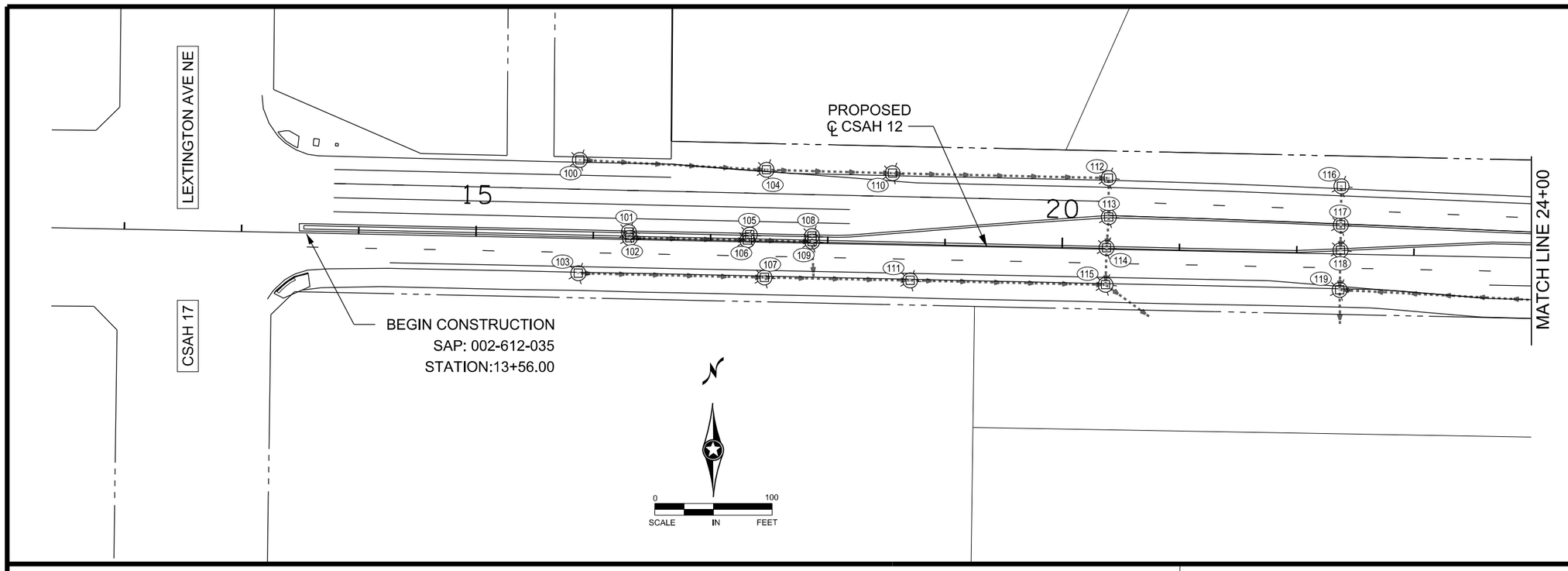
ANOKA COUNTY HIGHWAY DEPT.

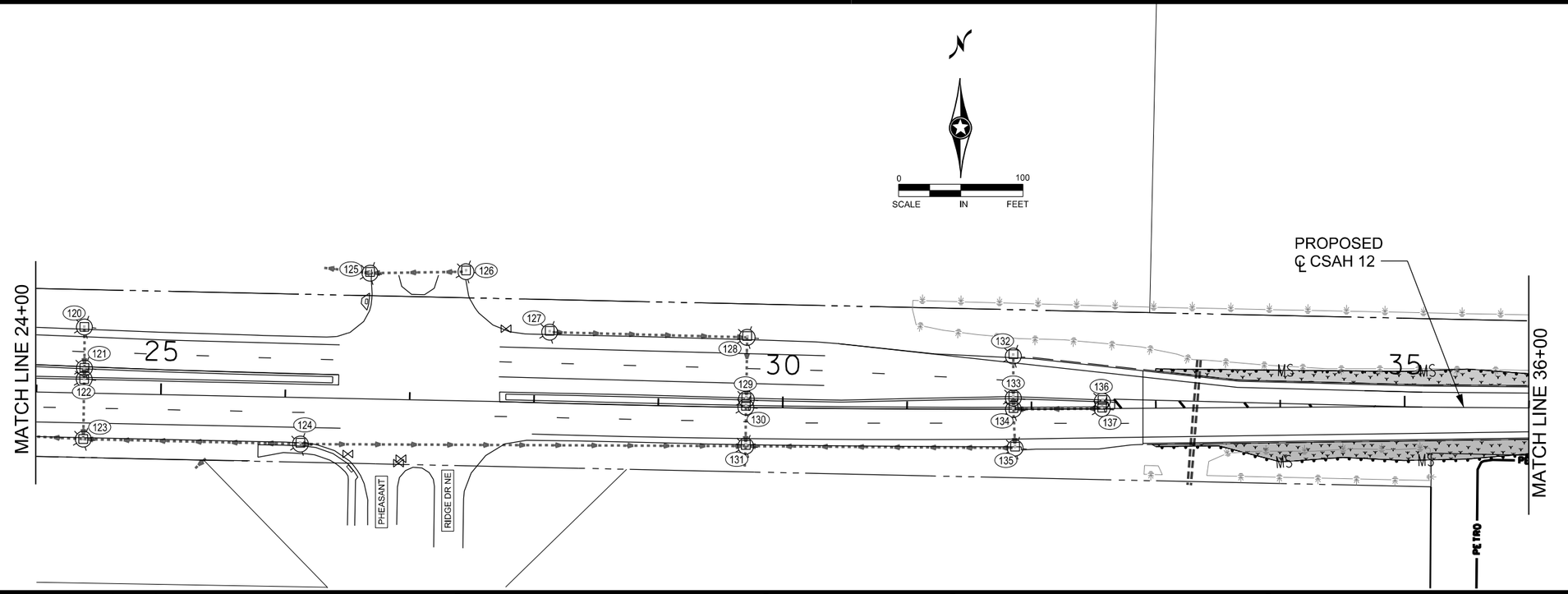
SAP 002-612-035

FLOODPLAIN MITIGATION GRADING

Sheet 53 of 110 Sheets

jcfoster





EROSION LEGEND

- SEED MIXTURE 25-121
  FERTILIZER TYPE 3 (22-5-10)
  ROLLED EROSION PREVENTION CAT 25
  HYDRAULIC REINF-FIBER MATRIX
- SEED MIXTURE 33-261
  FERTILIZER TYPE 3 (22-5-10)
  ROLLED EROSION PREVENTION CAT 25
  HYDRAULIC REINF-FIBER MATRIX
- MS — SILT FENCE TYPE MACHINE SLICED
- STORM DRAIN INLET PROTECTION
- RIPRAP CLASS 2
- CULVERT END - CONTROLS (INLET APRONS)
- CATCH BASIN
- EXISTING CULVERT
- EXISTING STORM SEWER
- PETRO — MAGELLAN PIPELINE
- WETLANDS
- ENVIORNMENTAL AREA OF CONCERN "RUBUS"
- CONSTRUCTION LIMIT
- R / W

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NO	DATE	BY	CKD	APPR	REVISION		
1	1/29/25	JF	ND		LABELED MNDOT R/W, ALL SHEETS		
						01/30/2025	7:04:58 AM

NAME: P:\002-612-035 17 to 53\Plan\002612035_ERO1.dgn

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ANOKA COUNTY

ANOKA COUNTY HIGHWAY DEPT.

SAP 002-612-035

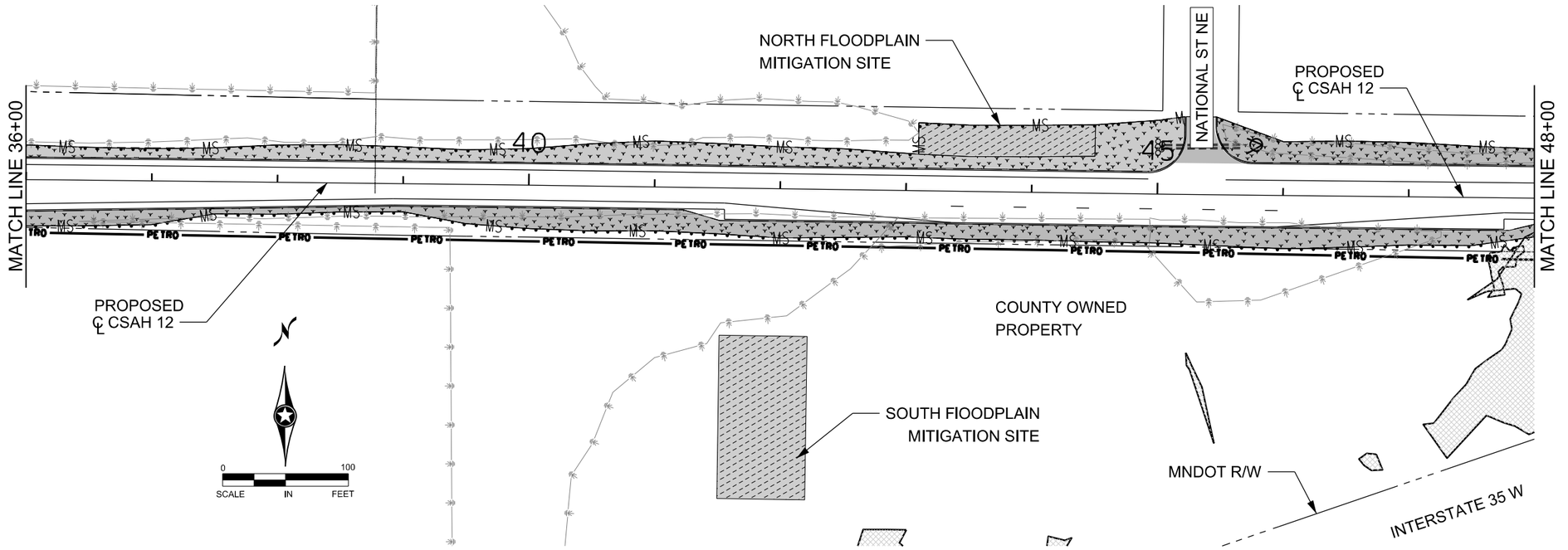
1 OF 3

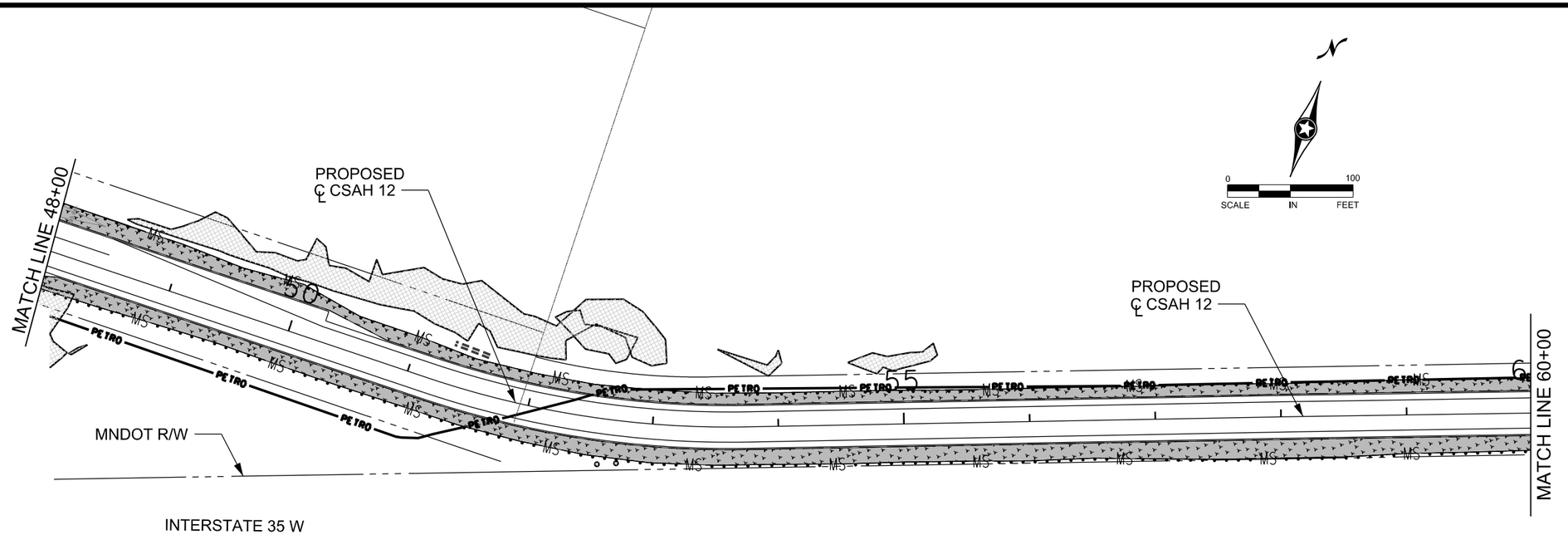
EROSION CONTROL & TURF ESTABLISHMENT

STA 13+56.00 TO 36+00.00

Sheet 54 of 110 Sheets

jcfoster





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- EXISTING CULVERT
- EXISTING STORM SEWER
- PETRO — MAGELLAN PIPELINE
- WETLANDS
- ENVIORNMENTAL AREA OF CONCERN "RUBUS"
- CONSTRUCTION LIMIT
- R / W

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NO	DATE	BY	CKD	APPR	REVISION		
1	1/29/25	JF	ND		LABELED MNDOT R/W, ALL SHEETS		
NO	DATE	BY	CKD	APPR	REVISION	01/30/2025	7:05:00 AM

NAME: P:\002-612-035 17 to 53\Plan\002612035_ERO2.dgn

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ANOKA COUNTY HIGHWAY DEPT.

SAP 002-612-035

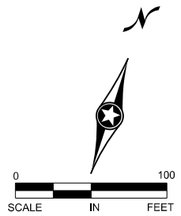
2 OF 3

EROSION CONTROL & TURF ESTABLISHMENT

STA 36+00.00 TO 60+00.00

Sheet 55 of 110 Sheets

jcfoster



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  ROLLED EROSION PREVENTION CAT 25
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- CONSTRUCTION LIMIT
- R / W

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NAME: P:\002-612-035 17 to 53\Plan\002612035_ERO3.dgn						01/30/2025	7:05:03 AM

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ANOKA COUNTY
ANOKA COUNTY HIGHWAY DEPT.

SAP 002-612-035

3 OF 3

EROSION CONTROL
&
TURF ESTABLISHMENT
STA 60+00.00 TO 63+36.09

Sheet 56 of 110 Sheets

STORM WATER POLLUTION PREVENTION PLAN (SWPPP) NARRATIVE

PROJECT DESCRIPTION/LOCATION

SAP 002-612-035 IS LOCATED ON CSAH 12 FROM CSAH 17 TO CR 53 IN THE CITY OF BLAINE IN ANOKA COUNTY. THE PLANNED SCOPE OF THE PROJECT INCLUDES: RECONDITIONING, BITUMINOUS MILLING AND RECLAMATION, BITUMINOUS SURFACING, STORM SEWER REPAIRS, SHOULDER / RTL & BYPASS LANE CONSTRUCTION.

THE SWPPP MUST BE AMENDED TO DOCUMENT ANY CHANGES TO EROSION AND SEDIMENT CONTROLS, METHODS OR PRACTICES. THESE AMENDMENTS MUST BE TIMELY TO KEEP THE SWPPP UPDATED AND NEED TO BE KEPT ON SITE.

RESPONSIBILITIES

PROVIDE A CERTIFIED EROSION CONTROL SUPERVISOR PER MNDOT SPECIFICATION 2573.3.A.1. EROSION CONTROL SUPERVISOR WILL WORK WITH PROJECT ENGINEER TO OVERSEE IMPLEMENTATION OF SWPPP AND INSTALLATION, INSPECTION, AND MAINTENANCE OF THE EROSION PREVENTION AND SEDIMENT CONTROL BMPS BEFORE, DURING AND AFTER CONSTRUCTION UNTIL PERMIT TERMINATION CONDITIONS HAVE BEEN MET.

PROVIDE AT LEAST ONE CERTIFIED INSTALLER PER MNDOT SPECIFICATION 2573.3.A.2. FOR EACH CONTRACTOR OR SUBCONTRACTOR THAT PLACES THE PRODUCTS LISTED IN MNDOT SPECIFICATION SECTION 2573.3.A.2.

- CONTRACTOR RESPONSIBLE TO OBTAIN DEWATERING PERMIT FROM DNR AND COSTS TO SECURE PERMIT.

CHAIN OF RESPONSIBILITY

ANOKA COUNTY AND THE CONTRACTOR ARE CO-PERMITEES FOR THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) CONSTRUCTION PERMIT. THE CONTRACTOR IS RESPONSIBLE TO COMPLY WITH ALL ASPECTS OF THE NPDES CONSTRUCTION PERMIT AT ALL TIMES UNTIL THE NOTICE OF TERMINATION (NOT) HAS BEEN FILED WITH THE MPCA. ANOKA COUNTY CONSTRUCTION PROJECT ENGINEER WILL ENSURE THAT THE CONTRACTOR'S EROSION AND SEDIMENT CONTROL SUPERVISOR FULFILLS THEIR DUTIES.

LAND FEATURE CHANGES

TOTAL DISTURBED AREA	7.999 ACRES
WITHIN THE DISTURBED AREA: TOTAL EXISTING IMPERVIOUS SURFACE AREA	5.384 ACRES
WITHIN THE DISTRUBED AREA: TOTAL PROPOSED IMPERVIOUS SURFACE AREA	6.142 ACRES
TOTAL PROPOSED NET CHANGE IN IMPERVIOUS SURFACE AREA	0.758 ACRES

SWPPP SHEET DESCRIPTIONS	LOCATION
TEMPORARY EROSION CONTROL MEASURES	SHEETS NO. 54 - 56
PERMANENT EROSION CONTROL MEASURES	SHEETS NO. 54 - 56
DIRECTION OF FLOW	SHEETS NO. 54 - 56
FINAL STABILIZATION	SHEETS NO. 54 - 56
SOILS AND CONSTRUCTION NOTES	SHEETS NO. 3
EROSION AND SEDIMENT CONTROL DETAILS	SHEETS NO. 57 - 59
EROSION CONTROL TABULATION	SHEETS NO. 6
TURF ESTABLISHMENT TABULATION	SHEETS NO. 6
SITE MAP	SHEETS NO. 57

SOIL TYPES

SOIL TYPES TYPICALLY FOUND ON THIS PROJECT ARE VERY FINE TO MEDIUM GRAINED SAND.

ENVIRONMENTAL REVIEW

THERE ARE NO STORMWATER MITIGATION MEASURES REQUIRED AS A RESULT OF AN ENVIRONMENTAL, ARCHEOLOGICAL OR AGENCY REVIEW. ALL MITIGATION MEASURES HAVE BEEN ADDRESSED IN THIS PLAN SET OR THE SPECIAL PROVISIONS.

THIS PROJECT IS NOT LOCATED IN A WELL HEAD PROTECTION AREA.

THIS PROJECT IS NOT LOCATED IN A DRINKING WATER SUPPLY MANAGEMENT AREA (DWSMA).

THIS PROJECT IS NOT LOCATED IN A KARST AREA.

THIS PROJECT IS NOT LOCATED IN AN EMERGENCY RESPONSE AREA (ERA) PER DEPARTMENT OF HEALTH.

INSPECTION TIMEFRAMES

INSPECT THE ENTIRE CONSTRUCTION SITE A MINIMUM OF ONCE EVERY SEVEN DAYS DURING ACTIVE CONSTRUCTION AND WITHIN 24 HOURS AFTER A RAINFALL EVENT GREATER THAN 0.5 INCHES IN 24 HOURS. INSPECT ALL TEMPORARY AND PERMANENT WATER QUALITY MANAGEMENT, EROSION PREVENTION AND SEDIMENT CONTROL BMPS, SURFACE WATERS AND CONSTRUCTION SITE EXITS UNTIL ALL CONSTRUCTION IS COMPLETE AND THE SITE HAS UNDERGONE FINAL STABILIZATION. RECORD ALL INSPECTIONS AND MAINTENANCE ACTIVITIES IN WRITING WITHIN 24 HOURS. SUBMIT INSPECTION REPORTS IN A FORMAT THAT IS ACCEPTABLE TO THE PROJECT ENGINEER.

WATER RELATED PERMITS

AGENCY	TYPE OF PERMIT
MINNESOTA POLLUTION CONTROL AGENCY (MPCA)	CONST. STORMWATER PERMIT
RICE CREEK WATERSHED DISTRICT	RCWD
DEPARTMENT OF NATURAL RESOURCES (DNR)	THREATEND AND ENDANGERED

* VERTICAL DATUM NAVD 88 ADJUSTMENT

READ AND REVIEW ALL PERMITS FOR SPECIAL CONDITIONS THAT WILL AFFECT CONSTRUCTION OF THE PROJECT.

IF IT BECOMES NECESSARY TO DISTURB AREAS OUTSIDE OF THE CONSTRUCTION LIMITS, OPERATIONS SHOULD CEASE AND DETERMINATION MADE IF ADDITIONAL PERMITS ARE NEEDED OR EXISTING PERMITS NEED TO BE MODIFIED.

TEMPORARY DEWATERING ACTIVITIES MAY BE REQUIRED FOR ROADWAY CONSTRUCTION AND UTILITY WORK. CONTRACTOR IS RESPONSIBLE FOR OBTAINING THE PERMIT. SUBMIT A SITE MANAGEMENT PLAN TO THE ENGINEER FOR APPROVAL PRIOR TO COMMENCING WORK.

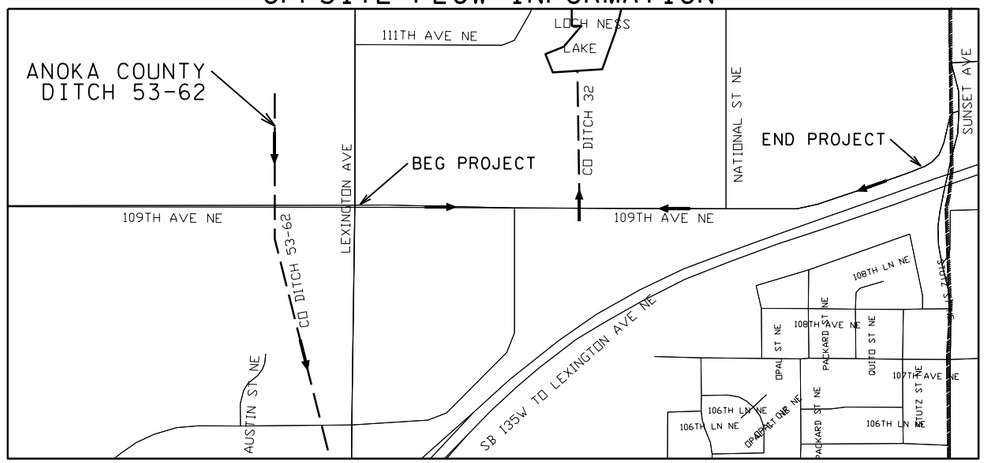
WATERBODY	NO WORK DURING
LAKES	APRIL 1 - JUNE 30
NON-TROUT STREAMS	MARCH 15 - JUNE 15
TROUT STREAMS	SEPTEMBER 1 - APRIL 1

SEE DNR PERMIT FOR MORE INFORMATION

SPECIAL AND IMPAIRED WATERS THAT ARE LOCATED WITHIN ONE MILE (AERIAL RADIUS) OF THE PROJECT LIMITS AND RECEIVE RUNOFF FROM THE PROJECT SITE.

WATERBODY NAME	IMPAIRMENT(S) OR SPECIAL STATUS
UNNAMED DITCH AC 53-62	BENTHIC MACROINVERTEBRATE BIOASSESSMENT AND DISSOLVED OXYGEN.

OFFSITE FLOW INFORMATION



AREAS OF ENVIRONMENTAL SENSITIVITY (AES)

WETLANDS AND EXISTING STORMWATER FACILITIES WITHIN AND NEAR THE PROJECT BOUNDARY ARE SHOWN ON REMOVALS AND CONSTRUCTION PLANS.

PROJECT ORGANIZATION CONTACTS	NAME	PHONE
CONTRACTOR'S EROSION AND SEDIMENT CONTROL SUPERVISOR		
CONTRACTOR'S EROSION AND SEDIMENT CONTROL INSTALLER		
MNDOT METRO WRE (EROSION CONTROL/MS4)	RYAN RUPP	651-775-4081
	SARAH THOMSON	651-775-0921
ANOKA COUNTY CONSTRUCTION SUPERVISOR	CHRIS OSTERHUS	651-233-3168
RICE CREEK WATERSHED DISTRICT	PATRICK HUGHES	763-398-3080
MINNESOTA DEPARTMENT OF NATURAL RESOURCES	PATTY FOWLER	612-708-7732
ARMY CORP OF ENGINEERS		
MPCA DUTY OFFICER 24 HR EMERGENCY NOTIFICATION	651-649-5451 OR 1(800)-422-0798	

NO	DATE	BY	CKD	APPR	REVISION
1	4/8/25	JF	ND		ADDED VERTICAL DATUM NOTE, TOP RT CORNER

NAME: P:\002-612-035 17 to 53\Plan\002612035_SW.dgn 04/08/2025 9:30:27 AM

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: NICHOLAS J DOBDA
SIGNATURE:
DATE: 04/08/2025 LICENSE NO. 49046

DRAWN BY JJF DATE 12/01/24
DESIGN BY JJF DATE 12/01/24
CHECKED BY NJD DATE 01/28/25

ANOKA COUNTY HIGHWAY DEPT.

SAP 002-612-035

STORM WATER POLLUTION PREVENTION PLAN

STORM WATER POLLUTION PREVENTION PLAN (SWPPP) NARRATIVE (CONTINUED)

EROSION AND SEDIMENT CONTROL MEASURES

AREA	TIME FRAME
ESTABLISH SEDIMENT CONTROL DEVICES ON ALL DOWN GRADIENT PERIMETERS AND UPGRADIENT OF ANY BUFFER ZONES	BEFORE ANY UP GRADIENT LAND DISTURBING ACTIVITIES BEGIN
REPAIR, REPLACE OR SUPPLEMENT PERIMETER CONTROL BMPS	WHEN BMP BECOMES NONFUNCTIONAL OR SEDIMENT REACHES 1/2 THE HEIGHT OF THE BMP BY THE END OF THE NEXT BUSINESS DAY AFTER DISCOVERY.
REPLACE, REPAIR OR SUPPLEMENT ALL NONFUNCTIONAL BMPS	BY THE END OF THE NEXT BUSINESS DAY AFTER DISCOVERY.
REPAIR, REPLACE, OR SUPPLEMENT INLET PROTECTION BMPS	WHEN THEY BECOME NONFUNCTIONAL OR SEDIMENT REACHES 1/2 THE HEIGHT AND/OR DEPTH OF THE BMP BY THE END OF THE NEXT BUSINESS DAY AFTER DISCOVERY.
REMOVE TRACKED SEDIMENT FROM PAVED SURFACES BOTH ON AND OFF SITE (LIGHTLY WET PRIOR TO SWEEPING)	WITHIN 24 HOURS OF DISCOVERY
REMOVE ALL DELTAS AND SEDIMENT DEPOSITED IN SURFACE WATERS AND RESTABILIZE	WITHIN 7 DAYS OF DISCOVERY

1. PROVIDE PERIMETER CONTROL AROUND ALL STOCKPILES AND DO NOT PLACE THEM IN NATURAL BUFFER AREAS, SURFACE WATERS OR STORMWATER CONVEYANCES. TOPSOIL BERMS MUST BE STABILIZED IN ORDER TO BE CONSIDERED PERIMETER CONTROL BMPS.
2. PROTECT STORM SEWER INLETS AT ALL TIMES WITH THE APPROPRIATE INLET PROTECTION BMP AND PROVIDE EMERGENCY OVERFLOW CAPABILITIES. SILT FENCE PLACED IN THE INLET GRATE IS NOT AN ACCEPTABLE INLET PROTECTION BMP FOR GRADING OPERATIONS.
3. PLACE AND MAINTAIN CONSTRUCTION EXITS OF SUFFICIENT SIZE TO PREVENT TRACKING OF SEDIMENT ONTO PAVED SURFACES BOTH ON AND OFF THE PROJECT SITE. REGULAR STREET SWEEPING IS NOT AN ACCEPTABLE ALTERNATIVE TO PROPER CONSTRUCTION EXIT INSTALLATION AND MAINTENANCE.
4. PROVIDE SCOUR PROTECTION AT OUTFALL OF DEWATERING ACTIVITIES. PROVIDE STABILIZATION IN TRENCHES CUT FOR DEWATERING OR SITE DRAINING PURPOSES.
5. PREPARE AND SUBMIT A SITE MANAGEMENT PLAN AND CONTACT ALL APPROPRIATE AUTHORITIES PRIOR TO WORKING IN SURFACE WATERS.
6. MAINTAIN ALL BMPS UNTIL WORK HAS BEEN COMPLETED, SITE HAS GONE UNDER FINAL STABILIZATION FOR PERMIT TERMINATION, AND THE NOTICE OF TERMINATION (NOT) HAS BEEN SUBMITTED TO THE MPCA.

STABILIZATION

AREA	TIME FRAME	NOTES
LAST 200 LINEAL FEET OF DRAINAGE DITCH OR SWALE	WITHIN 24 HOURS OF CONNECTION TO SURFACE WATER OR PROPERTY EDGE	2A, 3A
REMAINING PORTIONS OF DRAINAGE DITCH OR SWALE	7 DAYS	3A
PIPE AND CULVERT OUTLETS	24 HOURS	
EXPOSED SOILS AND STOCKPILES	7 DAYS	1A
WHEN CONSTRUCTION HAS TEMP. OR PERM. CEASED	IMMEDIATELY	

1A. TEMPORARY SOIL STOCKPILES WITHOUT SIGNIFICANT CLAY OR SILT AND STOCKPILED AND CONSTRUCTED ROAD BASE ARE EXEMPT FROM THE STABILIZATION REQUIREMENT.

2A. STABILIZE WETTED PERIMETER OF DITCH (I.E. WHERE THE DITCH GETS WET).

3A. APPLICATION OF MULCH, HYDROMULCH (SLOPE>2%), DISK-ANCHORED MULCH (SLOPE>2%), TACKIFIER AND POLYACRYLAMIDE ARE NOT ACCEPTABLE STABILIZATION METHODS IN DITCHES AND SWALES.

MATERIAL STORAGE, WASTE MANAGEMENT, FUELING AND DUST CONTROL

1. PROVIDE A SPILL KIT AT EACH WORK LOCATION ON THE SITE. ENSURE ALL SPILLS ARE CLEANED UP IMMEDIATELY.
2. STORE ALL LIQUID CHEMICALS UNDER COVER WITH SECONDARY CONTAINMENT. CREATE AND FOLLOW A WRITTEN DISPOSAL PLAN FOR ALL WASTE MATERIALS. STORE, COLLECT AND DISPOSE OF ALL SOLID WASTE.
3. FUEL AND MAINTAIN VEHICLES IN A DESIGNATED CONTAINED AREA WHENEVER FEASIBLE. USE DRIP PANS OR ABSORBENT MATERIALS TO PREVENT SPILLS OR LEAKED CHEMICALS FROM DISCHARGING TO SURFACE WATER OR STORMWATER CONVEYANCES.
4. PROVIDE EFFECTIVE CONTAINMENT FOR ALL LIQUID AND SOLID WASTES GENERATED BY WASHOUT OF CONCRETE, STUCCO, PAINT, FORM RELEASE OILS, CURING COMPOUNDS AND OTHER CONSTRUCTION MATERIALS. LIQUID AND SOLID WASHOUT WASTES MUST NOT CONTACT THE GROUND. DESIGN THE CONTAINMENT SO THAT IT DOES NOT RESULT IN RUNOFF FROM THE WASHOUT OPERATIONS OR CONTAINMENT AREA.
5. USE METHODS AND OPERATIONAL PROCEDURES THAT PREVENT DISCHARGE OR PLACEMENT OF BITUMINOUS GRINDINGS, CUTTINGS, MILLINGS, AND OTHER BITUMINOUS WASTES FROM AREAS OF EXISTING OR FUTURE VEGETATED SOILS AND FROM ALL WATER CONVEYANCE SYSTEMS, INCLUDING INLETS, DITCHES AND CURB FLOW LINES.
6. USE METHODS AND OPERATIONAL PROCEDURES THAT PREVENT CONCRETE DUST, STREET SWEEPING DUST, SAWCUT SLURRY, PLANING WASTE, CONCRETE WASH OUT, AND OTHER CONCRETE WASTES FROM LEAVING ANOKA COUNTY RIGHT OF WAY, DEPOSITING IN EXISTING OR FUTURE VEGETATED AREAS, AND FROM ENTERING STORMWATER CONVEYANCE SYSTEMS, INCLUDING INLETS, DITCHES AND CURB FLOW LINES.
7. PORTABLE TOILETS MUST BE POSITIONED SO THAT THEY ARE SECURE AND WILL NOT BE TIPPED OR KNOCKED OVER. SANITARY WASTE MUST BE DISPOSED OF PROPERLY IN ACCORDANCE WITH MINN. R. CHAPTER 7041.

IMPORTANT SWPPP NOTES FOR CONSTRUCTION ACTIVITY

1. PREPARE AND SUBMIT A SITE MANAGEMENT PLAN FOR THE ENGINEER'S ACCEPTANCE FOR CONCRETE MANAGEMENT, CONCRETE SLURRY APPLICATION AREAS, WORK IN AND NEAR AREAS OF ENVIRONMENTAL SENSITIVITY, AREAS IDENTIFIED IN THE PLANS AS "SITE MANAGEMENT PLAN AREA", ANY WORK THAT WILL REQUIRE DEWATERING, AND AS REQUESTED BY THE ENGINEER. SUBMIT ALL SITE MANAGEMENT PLANS TO THE ENGINEER IN WRITING. ALLOW A MINIMUM OF 7 DAYS FOR ANOKA COUNTY TO REVIEW AND ACCEPT SITE MANAGEMENT PLAN SUBMITTALS. WORK WILL NOT BE ALLOWED TO COMMENCE IF A SITE MANAGEMENT PLAN IS REQUIRED UNTIL ACCEPTANCE HAS BEEN GRANTED BY THE ENGINEER. THERE WILL BE NO EXTRA TIME ADDED TO THE CONTRACT DUE TO THE UNTIMELY SUBMITTAL.
2. DO NOT BUILD INFILTRATION AREAS OR PLACE FINAL FILTRATION MEDIA UNTIL THE PROJECT IS NEARLY COMPLETE. PROTECT THESE AREAS FROM COMPACTION AND FROM CONSTRUCTION STORMWATER RUNOFF.
3. ROUTE STORMWATER AROUND UNSTABILIZED AREAS OF THE SITE WHENEVER FEASIBLE.
4. CONSTRUCTION PROJECT SHOULD BE PHASED TO MINIMIZE THE DURATION OF EXPOSED SOILS.
5. MINIMIZE COMPACTION OF SOILS AND PRESERVE TOPSOIL IN AREAS WHERE VEGETATION WILL BE ESTABLISHED.
6. DIRECT DISCHARGES FROM BMPS TO VEGETATED AREAS WHENEVER FEASIBLE. PROVIDE VELOCITY DISSIPATION DEVICES AS NEEDED TO PREVENT EROSION.
7. FLOATING SILT CURTAIN IS ALLOWED AS PERIMETER CONTROL FOR IN WATER WORK ONLY. PLACE THE FLOATING SILT CURTAIN AS CLOSE TO SHORE AS POSSIBLE. PLACE PERIMETER CONTROL BMP ON LAND IMMEDIATELY AFTER THE IN WATER WORK IS COMPLETED.
8. DISCHARGE TURBID OR SEDIMENT LADEN WATER TO TEMPORARY SEDIMENT BASINS WHENEVER FEASIBLE (REQUIRED IF DRAINAGE AREA IS 10 ACRES OR LARGER OR 5 ACRES OR LARGER AND WITHIN 1 MILE OF IMPAIRED WATER). IN THE EVENT THAT IT IS NOT FEASIBLE TO DISCHARGE THE SEDIMENT LADEN WATER TO A TEMPORARY SEDIMENT BASIN, THE WATER MUST BE TREATED SO THAT IT DOES NOT CAUSE A NUISANCE CONDITION IN THE RECEIVING WATERS OR TO DOWNSTREAM LANDOWNERS. MUST DOCUMENT WHY SEDIMENT BASIN IS NOT FEASIBLE.
9. PROVIDE STABILIZATION IN ANY TRENCHES CUT FOR DEWATERING OR SITE DRAINING PURPOSES.
10. PROVIDE A 50 FOOT NATURAL BUFFER OR, IF BUFFER IS INFEASIBLE, PROVIDE A DOUBLE ROW OF SEDIMENT CONTROLS SPACED AT LEAST 5' APART WHEN A SURFACE WATER IS LOCATED WITHIN 50 FEET OF LAND DISTURBANCE AND STORMWATER FLOWS TO THE SURFACE WATER.
11. PROVIDE A 100 FOOT NATURAL BUFFER OR, IF BUFFER IS INFEASIBLE, PROVIDE A DOUBLE ROW OF SEDIMENT CONTROLS SPACED AT LEAST 5' APART WHEN A SPECIAL WATER IS LOCATED WITHIN 100 FEET OF THE LAND DISTURBANCE AND STORMWATER FLOWS TO THE SPECIAL WATER.
12. SUBSOIL ALL DISTURBED GREEN SPACES EXCEPT AS LISTED IN 2574.3A.5.

PIPE AND STRUCTURE NOTES

1. SIZE AND ELEVATION OF CULVERTS, STORM SEWER PIPES, CATCH BASINS, PONDS, INFILTRATION/FILTRATION BASINS, PERMEABLE DITCH BLOCKS AND OVERFLOW DEVICES HAVE BEEN SPECIFICALLY DESIGNED TO CONFORM TO MNDOT DESIGN STANDARDS AND PERMIT REQUIREMENTS. THE DESIGN COMPUTATIONS ARE ON FILE WITH ANOKA COUNTY. CHANGING THESE ITEMS OR THE DIRECTION OF FLOW FROM WHAT IS SHOWN ON THE PLANS MAY CAUSE PROBLEMS OFF THE PROJECT AND COULD MEAN THE PROJECT IS OUT OF COMPLIANCE WITH APPROVED DRAINAGE PERMITS. ANY CHANGES OF THE DRAINAGE SYSTEM MUST BE APPROVED BY ANOKA COUNTY.
2. PERFORM POST INSTALLATION MANDREL TESTING OF ALL PLASTIC PIPE.
3. SUBSURFACE DRAINAGE TILES DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED, REPLACED OR REROUTED, AND CONNECTED TO THE EXISTING TILE OR DRAINAGE SYSTEM TO ENSURE THAT EXISTING UPLAND DRAINAGE IS PERPETUATED. THIS SHALL BE DONE TO THE APPROVAL AND SATISFACTION OF THE ENGINEER.

NPDES PERMIT TERMINATION CONDITIONS

1. CONTRACTOR MUST COMPLETE ALL CONSTRUCTION ACTIVITY AND MUST INSTALL PERMANENT COVER OVER ALL AREAS PRIOR TO SUBMITTING NOT. VEGETATIVE COVER MUST CONSIST OF A UNIFORM PERENNIAL VEGETATION WITH A DENSITY OF 70% OF ITS EXPECTED FINAL GROWTH.
2. CONTRACTOR MUST REMOVE ANY ACCUMULATED SEDIMENT AND STABILIZE THE PERMANENT STORMWATER TREATMENT SYSTEM(S) AND MUST ENSURE THE SYSTEM(S) ARE OPERATING AS DESIGNED.
3. CONTRACTOR MUST REMOVE ALL SEDIMENT FROM CONVEYANCE SYSTEMS PRIOR TO SUBMITTING THE NOT.
4. CONTRACTOR MUST REMOVE ALL TEMPORARY SYNTHETIC EROSION PREVENTION AND SEDIMENT CONTROL BMPS PRIOR TO SUBMITTING THE NOT. CONTRACTOR MAY LEAVE BMPS DESIGNED TO DECOMPOSE ON-SITE IN PLACE.
5. FOR CONSTRUCTION PROJECTS ON AGRICULTURAL LAND, CONTRACTOR MUST RETURN THE DISTURBED LAND TO ITS PRECONSTRUCTION AGRICULTURAL USE PRIOR TO SUBMITTING THE NOT.

NO	DATE	BY	CKD	APPR	REVISION

NAME: P:\002-612-035 17 to 53\Plan\002612035_SW.dgn 01/30/2025 7:05:10 AM

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: NICHOLAS J DOBDA

SIGNATURE:

DATE: 01/30/2025 LICENSE NO. 49046

DRAWN BY JJF DATE 12/01/24

DESIGN BY JJF DATE 12/01/24

CHECKED BY NJD DATE 01/28/25

ANOKA COUNTY HIGHWAY DEPT.

SAP 002-612-035

STORM WATER POLLUTION PREVENTION PLAN

Sheet 58 of 110 Sheets

STORM WATER POLLUTION PREVENTION PLAN (SWPPP)

Training

Individual revising or amending the SWPPP and individuals performing inspections must fill in the following table.

Name of on-site personnel trained	
Dates of training	
Name of instructor(s)	
Entity providing training	
Content of training course or workshop	

Amending the SWPPP

The SWPPP must be amended to record changes or modifications to permanent BMPs or other storm water treatment systems and removals of temporary BMPs. Changes to temporary BMPs may be recorded on this sheet. Include a brief description of the problem, location, nature of alteration, and comments. This record is to be retained for three years after project completion.

Date Reported	Plan Location (sheet)	Project Location (station)	Problem, solution, and notes

3 OF 3

NO	DATE	BY	CKD	APPR	REVISION

NAME: P:\002-612-035 17 to 53\Plan\002612035_SW.dgn 01/30/2025 7:05:08 AM

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: NICHOLAS J DOBDA

SIGNATURE: [signature]

DATE: 01/30/2025 LICENSE NO. 49046

DRAWN BY JJF DATE 12/01/24

DESIGN BY JJF DATE 12/01/24

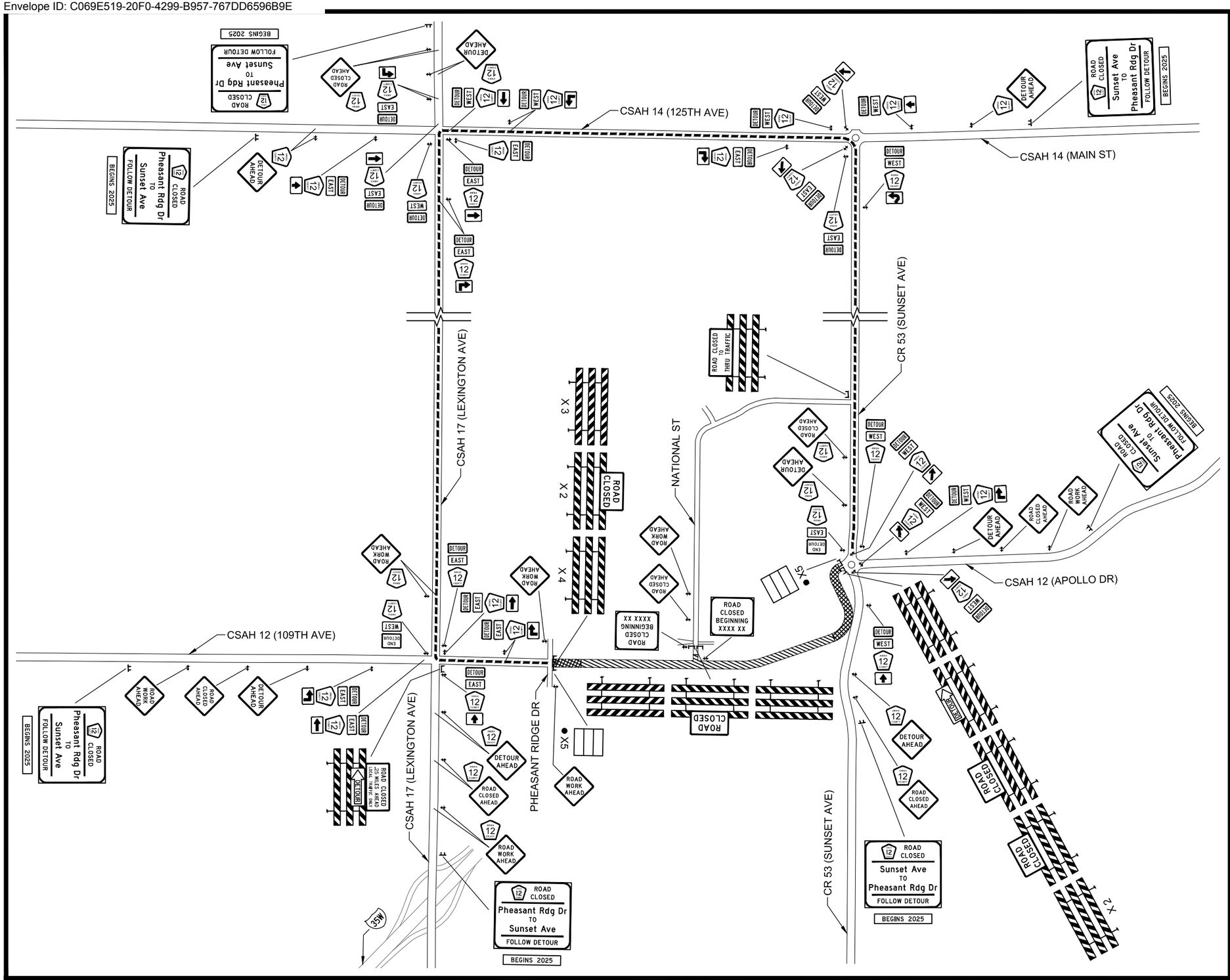
CHECKED BY NJD DATE 01/28/25

ANOKA COUNTY

ANOKA COUNTY HIGHWAY DEPT.

SAP 002-612-035

STORM WATER POLLUTION PREVENTION PLAN



NOT TO SCALE

TRAFFIC CONTROL DEVICES & SYMBOLS LEGEND

SYMBOL	DESCRIPTION
	WORK AREA
	AREA CLOSED TO TRAFFIC
	DETOUR ROUTE
	TRAFFIC CONTROL SIGN (DOUBLE POST)
	TRAFFIC CONTROL SIGN (TEMPORARY)
	TYPE III BARRICADE =
	DRUM-LIKE CHANNELIZER TYPE B =
	PORTABLE CHANGEABLE MESSAGE SIGN (PCMS)

PCMS - MESSAGE SEQUENCE LAYOUT

		R	O	A	D			
		W	O	R	K			
	B	E	G	I	N	S		

	<	D	A	T	E	>	
	E	X	P	E	C	T	
	D	E	L	A	Y	S	

CONSTRUCTION NOTES:

1. NATIONAL STREET CLOSED AT CSAH 12 (109TH AVE).
2. CSAH 12 (109TH AVE) TO BE FULLY CLOSED BETWEEN PHEASANT RIDGE DR AND CR 53 (SUNSET AVE).
3. CSAH 12 (109TH AVE) DETOURED ONTO CSAH 17 (LEXINGTON AVE), CSAH 14 (125TH AVE) AND CR 53 (SUNSET AVE).

TRAFFIC CONTROL NOTES:

1. PCMS AND G20-X1 SIGNS SHALL BE INSTALLED A MINIMUM OF 10 DAYS PRIOR TO ACTUAL COMMENCEMENT OF ROAD CLOSURE AT A LOCATION AS SPECIFIED ON PLAN. PCMS AND G20-X1 SIGNS TO BE REMOVED WHEN ROAD CLOSURE COMMENCES.
2. G20-X2 ADVANCE CLOSURE NOTICE SIGNS SHALL BE INSTALLED 10 DAYS PRIOR TO THE WORK STARTING DATE. ONCE WORK BEGINS, REMOVE BEGINS DATE PLAQUE AS SHOWN IN PLAN.
3. ALL SIGNS SHALL BE MAINTAINED THROUGHOUT CONSTRUCTION.

NO	DATE	BY	CKD	APPR	REVISION

NAME: P:\002-612-035\Base\Traffic\Detour Plan.dwg

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: SEAN R. THIEL

SIGNATURE: Sean R. Thiel

DATE: 1/28/2025 LICENSE NO. 45129

DRAWN BY FL DATE 11/13/24

DESIGN BY FL DATE 11/13/24

CHECKED BY SRT DATE

ANOKA COUNTY HIGHWAY DEPT.

SAP 002-612-035

DETOUR PLAN

Sheet 60 of 110 Sheets

DETOUR PLAN QUANTITIES

K

"M" SERIES

SIGN	MUTCD CODE	COLOR	SIZE INCHES	QUANTITY
DETOUR	M4-8	BLACK ON ORANGE	24 X 12	32
END DETOUR	M4-8a	BLACK ON ORANGE	30 X 24	2
EAST	M3-2a	WHITE ON BLUE	24 X 12	19
WEST	M3-4a	WHITE ON BLUE	24 X 12	15
ANOKA 12 COUNTY	M1-6M	WHITE AND YELLOW ON BLUE	24 X 24	51
	M5-1aL	WHITE ON BLUE	21 X 15	5
	M5-1aR	WHITE ON BLUE	21 X 15	6
	M5-3	WHITE ON BLUE	21 X 15	1
	M6-1aL	WHITE ON BLUE	21 X 15	3
	M6-1aR	WHITE ON BLUE	21 X 15	2
	M6-2L	WHITE ON BLUE	21 X 15	2
	M6-2R	WHITE ON BLUE	21 X 15	3
	M6-3a	WHITE ON BLUE	21 X 15	4

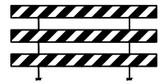
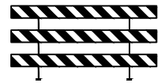
"W" SERIES

SIGN	MUTCD CODE	COLOR	SIZE INCHES	QUANTITY
ROAD WORK AHEAD	W20-1	BLACK ON ORANGE	36 X 36	2
			48 X 48	7
DETOUR AHEAD	W20-2	BLACK ON ORANGE	36 X 36	3
			48 X 48	8
ROAD CLOSED AHEAD	W20-3	BLACK ON ORANGE	36 X 36	2
			48 X 48	7

BARRICADE MOUNTED

SIGN	MUTCD CODE	COLOR	SIZE INCHES	QUANTITY
DETOUR	M4-10L	BLACK ON ORANGE	48 X 18	1
DETOUR	M4-10R	BLACK ON ORANGE	48 X 18	1
ROAD CLOSED	R11-2M	BLACK ON WHITE	48 X 30	5
ROAD CLOSED .25 MILES AHEAD LOCAL TRAFFIC ONLY	R11-3a	BLACK ON WHITE	60 X 30	1
ROAD CLOSED TO THRU TRAFFIC	R11-4	BLACK ON WHITE	60 X 30	1

DEVICES

DEVICE	MUTCD CODE	COLOR	SIZE	QUANTITY
	DRUM			10
	TYPE III LEFT		8 FOOT	12
	TYPE III RIGHT		8 FOOT	8
(2) 	PCMS TYPE C			2 (10 DAYS)

"G" SERIES

SIGN	MUTCD CODE	COLOR	SIZE INCHES	QUANTITY
ROAD CLOSED BEGINNING MTH DAY	G20-X1	BLACK ON ORANGE	54 X 48	2
ANOKA 12 COUNTY ROAD CLOSED Pheasant Rdg Dr TO Sunset Ave FOLLOW DETOUR	G20-X2	BLACK ON ORANGE	96 X 84	4
ANOKA 12 COUNTY ROAD CLOSED Sunset Ave TO Pheasant Rdg Dr FOLLOW DETOUR	G20-X2	BLACK ON ORANGE	96 X 84	3
(1) BEGINS MTH DAY			72 X 12	7

SPECIFIC NOTES:

1. BEGINS DATE PLAQUE SHALL COVER FOLLOW DETOUR BEFORE WORK BEGINS AND BE REMOVED WHEN WHEN WORK BEGINS.
2. PCMS TO BE INSTALLED A MINIMUM OF 10 DAYS PRIOR TO COMMENCEMENT OF ROAD WORK AND REMOVED WHEN ROAD WORK BEGINS.

NOTES:

- ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE LATEST EDITION OF THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, INCLUDING THE LATEST FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS.
- ALL TYPE III BARRICADES SHALL BE REFLECTORIZED ON BOTH SIDES. BARRICADE MARKINGS SHALL BE SLANTED IN ACCORDANCE WITH THE MUTCD.

NO	DATE	BY	CKD	APPR	REVISION

NAME: P:\002-612-035\Base\Traffic\Detour Plan Quantities.dwg

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: SEAN R. THIEL

SIGNATURE: Sean R. Thiel

DATE: 1/28/2025 LICENSE NO. 45129

DRAWN BY FL DATE 11/08/24

DESIGN BY FL DATE 11/08/24

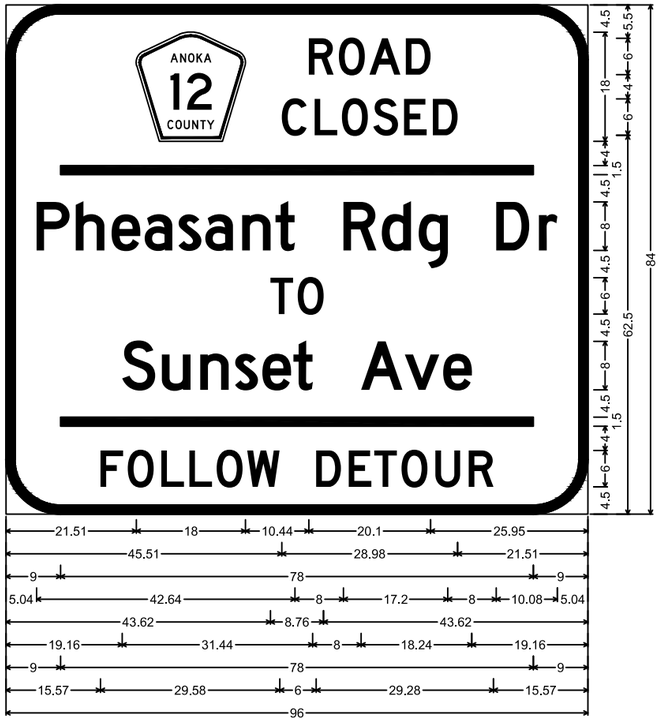
CHECKED BY SRT DATE

ANOKA COUNTY HIGHWAY DEPT.

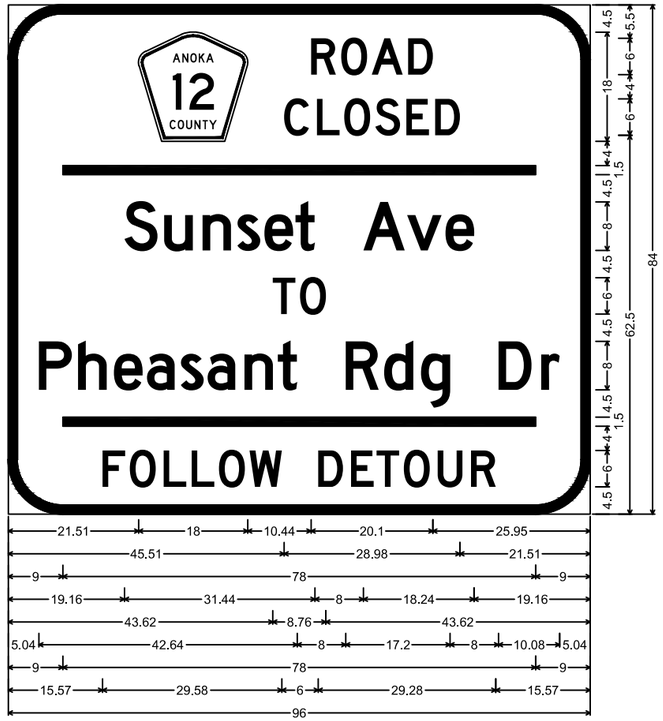
SAP 002-612-035

DETOUR PLAN QUANTITIES

"G" SERIES SIGN DESIGN



9.00" Radius, 1.50" Border, Black on, None;
Pentagonal County 12 M1-6a; "ROAD", D 2K; "CLOSED", D 2K;
"Pheasant Rdg Dr", D 2K; "TO", D 2K; "Sunset Ave", D 2K; "FOLLOW DETOUR", D 2K;



9.00" Radius, 1.50" Border, Black on, None;
Pentagonal County 12 M1-6a; "ROAD", D 2K; "CLOSED", D 2K; "Sunset Ave", D 2K;
"TO", D 2K; "Pheasant Rdg Dr", D 2K; "FOLLOW DETOUR", D 2K;

No border, Black on, Orange;
"BEGINS", D 2K

NO	DATE	BY	CKD	APPR	REVISION

NAME: P:\002-612-035\Base\Traffic\Detour Plan Quantities.dwg

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DRAWN BY FL DATE 11/08/24

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CHECKED BY SRT DATE

ANOKA COUNTY HIGHWAY DEPT.

SAP 002-612-035

DETOUR PLAN QUANTITIES

Sheet 62 of 110 Sheets

PERMANENT PAVEMENT MARKING PLAN
NOTES & GUIDELINES

GENERAL INFORMATION:

1. THE ENGINEER'S INVOLVEMENT IN THE APPLICATION OF THE MATERIAL SHALL BE LIMITED TO FIELD CONSULTATION AND INSPECTION. ANOKA COUNTY HIGHWAY DEPARTMENT WILL PLACE NECESSARY "SPOTTING" AT APPROPRIATE POINTS TO PROVIDE HORIZONTAL CONTROL FOR STRIPING AND TO DETERMINE NECESSARY STARTING AND CUTOFF POINTS. LONGITUDINAL JOINTS, PAVEMENT EDGES AND EXISTING MARKINGS MAY SERVE AS HORIZONTAL CONTROL WHEN SO DIRECTED.
2. EDGE LINES AND LANE LINES ARE TO BE BROKEN ONLY AT INTERSECTIONS WITH PUBLIC ROADS AND AT PRIVATE ENTRANCES IF THEY ARE CONTROLLED BY A YIELD SIGN, STOP SIGN OR TRAFFIC SIGNAL. THE BREAK POINT IS TO BE AT THE START OF THE RADIUS FOR THE INTERSECTION OR AT MARKED STOP LINES OR CROSSWALKS.
3. A TOLERANCE OF 1/4 INCH UNDER OR 1/4 INCH OVER THE SPECIFIED WIDTH WILL BE ALLOWED FOR STRIPING PROVIDED THE VARIATION IS GRADUAL AND DOES NOT DETRACT FROM THE GENERAL APPEARANCE. BROKEN LINE SEGMENTS MAY VARY UP TO ONE-HALF FOOT FROM THE SPECIFIED LENGTHS PROVIDED THE OVER AND UNDER VARIATIONS ARE REASONABLY COMPENSATORY. ALIGNMENT DEVIATIONS FROM THE CONTROL GUIDE SHALL NOT EXCEED 1 INCH. MATERIAL SHALL NOT BE APPLIED OVER LONGITUDINAL JOINTS. ESTABLISHMENT OF APPLICATION TOLERANCES SHALL NOT RELIEVE THE CONTRACTOR OF THEIR RESPONSIBILITY TO COMPLY AS CLOSELY AS PRACTICABLE WITH THE PLANNED DIMENSIONS.
4. PERMANENT PAVEMENT MARKINGS SHALL NOT BE PLACED OVER TEMPORARY TAPE MARKINGS.
5. THE FILLING OF TANKS, POURING OF MATERIALS OR CLEANING OF EQUIPMENT SHALL NOT BE PERFORMED ON UNPROTECTED PAVEMENT SURFACES UNLESS ADEQUATE PROVISIONS ARE MADE TO PREVENT SPILLAGE OF MATERIAL.

PAINT:

1. AT THE TIME OF APPLYING THE MARKING MATERIAL, THE APPLICATION AREA SHALL BE FREE OF CONTAMINATION. THE CONTRACTOR SHALL CLEAN THE ROADWAY SURFACE PRIOR TO THE LINE APPLICATION IN A MATTER AND TO THE EXTENT REQUIRED BY THE ENGINEER.
2. GLASS BEADS SHALL BE APPLIED IMMEDIATELY AFTER APPLICATION OF THE PAINT LINE.
3. EXCEPT WHEN USED AS A TEMPORARY MARKING, PAVEMENT MARKINGS SHALL ONLY BE APPLIED IN SEASONABLE WEATHER WHEN AIR AND PAVEMENT SURFACE TEMPERATURES ARE 50°F OR HIGHER AND SHALL NOT BE APPLIED WHEN THE WIND OR OTHER CONDITIONS CAUSE A FILM OR DUST TO BE DEPOSITED ON THE PAVEMENT SURFACE AFTER CLEANING AND BEFORE THE MARKING MATERIAL CAN BE APPLIED.

MULTI-COMPONENT (MULTI-COMP):

1. THE ROAD SURFACE SHALL BE CLEANED AT THE DIRECTION OF THE ENGINEER JUST PRIOR TO APPLICATION. PAVEMENT CLEANING SHALL CONSIST OF AT LEAST BRUSHING WITH A ROTARY BROOM (NON-METALLIC) OR AS RECOMMENDED BY THE MATERIAL MANUFACTURER AND ACCEPTABLE TO THE ENGINEER. NEW PORTLAND CEMENT CONCRETE SURFACES SHALL BE SANDBLAST CLEANED TO REMOVE ANY SURFACE TREATMENT AND/OR LAITANCE ON LOW SPEED (SPEED LIMIT 35 MPH OR LESS) URBAN PORTLAND CEMENT CONCRETE ROADWAYS. SANDBLAST CLEANING SHALL BE USED FOR ALL MULTI-COMP PAVEMENT MARKINGS.
2. THE MULTI-COMP MARKING APPLICATION SHALL IMMEDIATELY FOLLOW THE PAVEMENT CLEANING. GLASS BEADS SHALL BE APPLIED IMMEDIATELY AFTER APPLICATION OF THE MULTI-COMP LINE TO PROVIDE AN IMMEDIATE NO-TRACK SYSTEM.
3. A MULTI-COMP LINE SHALL BE APPLIED WITH A MINIMUM THICKNESS OF 20 MILS (WET) AND 4" WIDE . GLASS BEADS SHALL BE APPLIED AT A MINIMUM RATE OF 25 LBS POUNDS PER GALLON RATE SUFFICIENT TO ACHIEVE AN ACCEPTABLE NO-TRACK SYSTEM.
4. PAVEMENT MARKINGS SHALL ONLY BE APPLIED IN SEASONABLE WEATHER WHEN AIR AND PAVEMENT SURFACE TEMPERATURES ARE 40° OR HIGHER AND SHALL NOT BE APPLIED WHEN THE WIND OR OTHER CONDITIONS CAUSE A FILM OR DUST TO BE DEPOSITED ON THE PAVEMENT SURFACE AFTER CLEANING AND BEFORE THE MARKING MATERIAL CAN BE APPLIED.

PREFORMED THERMOPLASTIC:

1. THE PREFORMED THERMOPLASTIC MARKINGS SHALL BE APPLIED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS ON CLEAN AND DRY SURFACES. SEE SPECIAL PROVISIONS FOR PREFORMED THERMOPLASTIC MARKING SPECIFICATIONS.

PERMANENT PAVEMENT MARKING TABULATION — L

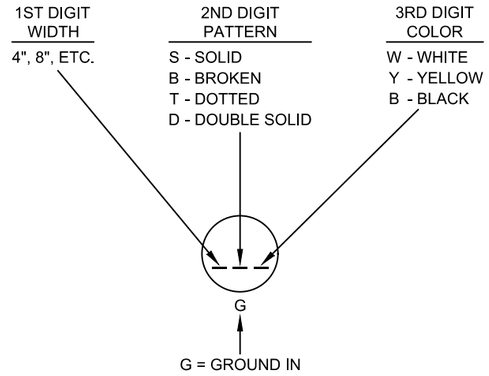
ITEM DESCRIPTION	UNIT	TOTAL QUANTITY		CSAH 12 (109TH AVE)		PHEASANT RIDGE DR	
		WHITE	YELLOW	WHITE	YELLOW	WHITE	YELLOW
4" SOLID LINE MULTI-COMPONENT	LIN FT	14234	4287	14234	4287		
4" DOUBLE SOLID LINE MULTI-COMPONENT	LIN FT		4114		4114		
4" BROKEN LINE MULTI-COMPONENT	LIN FT	700		700			
8" DOTTED LINE MULTI-COMPONENT	LIN FT	36		36			
24" SOLID LINE PREFORM THERMO GROUND IN	LIN FT	86	17	60	17	26	
CROSSWALK PREFORM THERMOPLASTIC GROUND IN	SQ FT	523		325		198	
PAVEMENT MESSAGE PREFORM THERMOPLASTIC	SQ FT	207.36		207.36			

PAVEMENT MARKING SYMBOLS & MATERIALS LEGEND

- BROKEN LINE - 50' CYCLE (10' LINE, 40' GAP)
- DOTTED LINE - 15' CYCLE (3' LINE, 12' GAP) UNLESS SHOWN OTHERWISE IN THE PLAN
- CROSSWALK BLOCK
- PAVEMENT MESSAGE (LEFT ARROW)
- LANE TRANSITION ARROW

STRIPING KEY

- CIRCLE - MULTI-COMP
- TRIANGLE - PAINT
- OCTAGON - PREF THERMO



EXAMPLE: (4SW / G) = 4" SOLID LINE WHITE MULTI-COMP GROUND IN

NO	DATE	BY	CKD	APPR	REVISION

NAME: P:\002-612-035\Base\Traffic\Permanent Pavement Marking Plan Notes & Tabulations.dwg

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: SEAN R. THIEL
SIGNATURE: Sean R. Thiel
DATE: 1/28/2025 LICENSE NO. 45129

DRAWN BY FL DATE 10/24/24
DESIGN BY FL DATE 10/24/24
CHECKED BY SRT DATE

ANOKA COUNTY HIGHWAY DEPT.

SAP 002-612-035

PERMANENT PAVEMENT MARKING PLAN NOTES & TABULATIONS

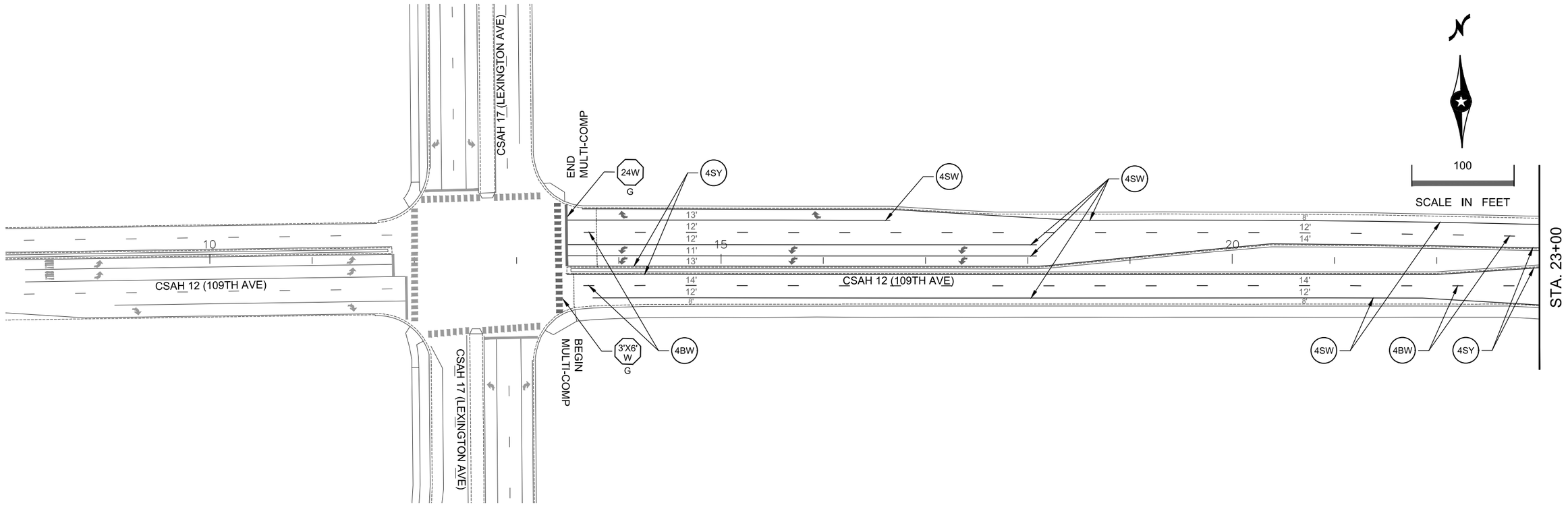
Sheet 63 of 110 Sheets

STRIPING NOTES: (TYP.)

1. LOCATIONS OF ALL PERMANENT STRIPING AND PAVEMENT MARKINGS ARE APPROXIMATE. EXACT LOCATIONS WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.
2. ALL MAINLINE PERMANENT STRIPING AND PAVEMENT MARKINGS SHALL BE PLACED WITHIN 72 HOURS OF MAINLINE PAVING.
3. APPLY ALL PAVEMENT MARKINGS AS RECOMMENDED BY THE MATERIAL MANUFACTURER.
4. PERMANENT PAVEMENT MARKINGS AND STRIPING SHALL NOT BE PLACED OVER TEMPORARY TAPE MARKINGS.
5. MAINLINE MULTI-COMP MARKINGS SHALL MATCH INTO EXISTING PAINT.
6. PAVEMENT MARKINGS OUTSIDE OF WORK AREA AFFECTED BY CONSTRUCTION ACTIVITIES SHALL BE REMARKED WITH ORIGINAL MATERIAL OR AS SPECIFIED ON PLAN.

STRIPING KEY

- CIRCLE - MULTI-COMP
- TRIANGLE - PAINT
- OCTAGON - PREF THERMO



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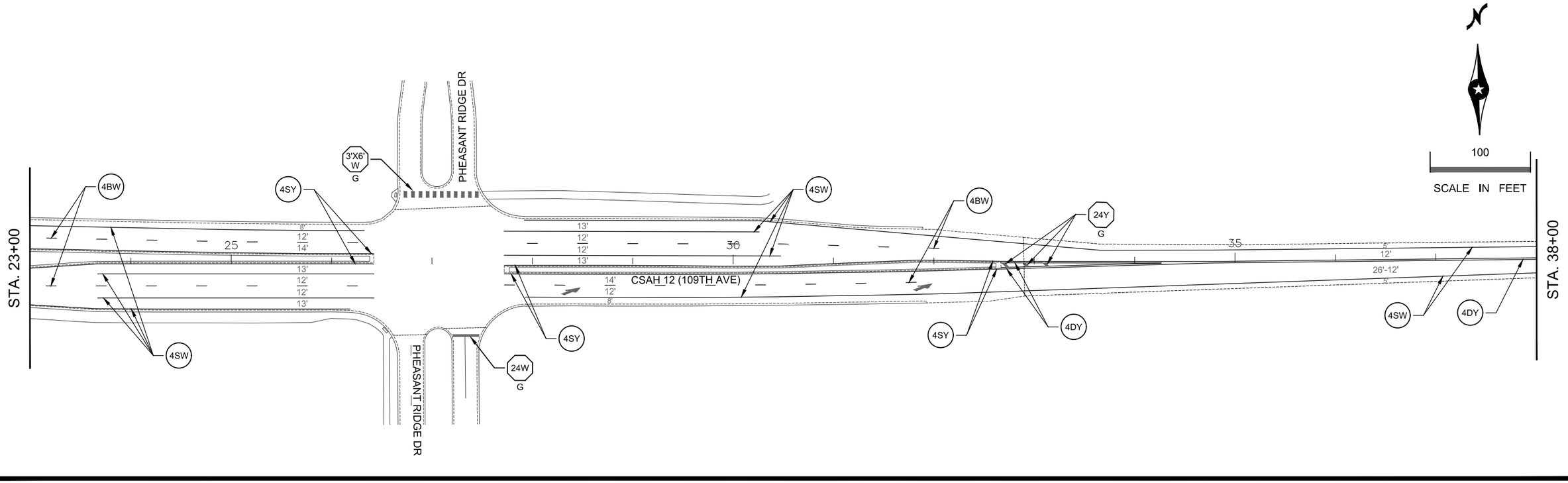
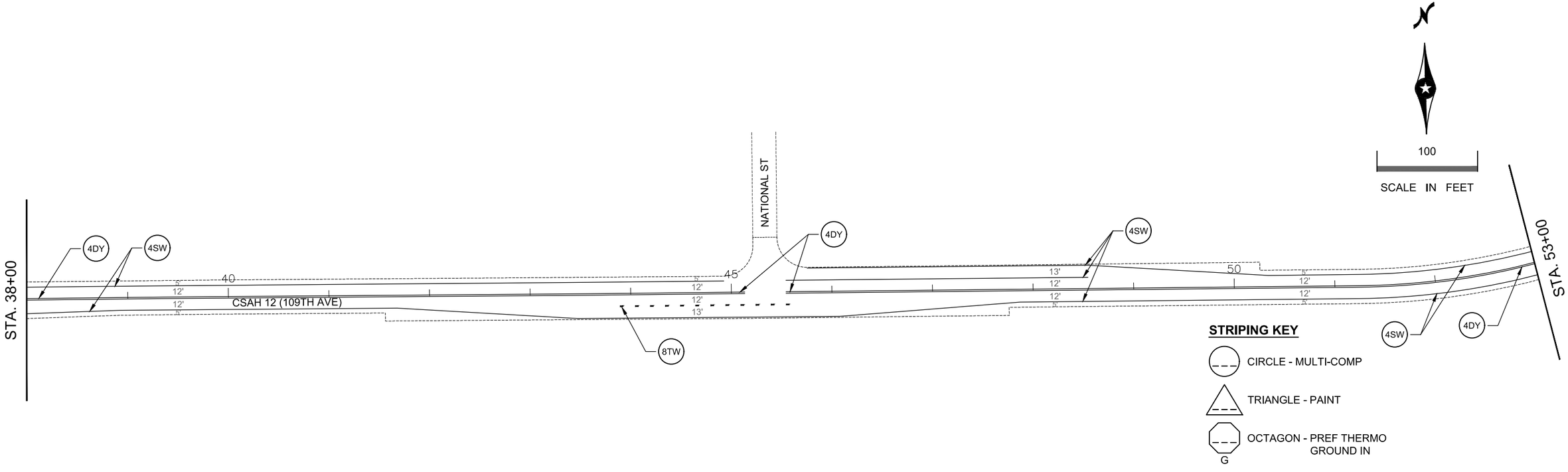
PERMANENT PAVEMENT MARKING PLAN

Sheet 64 of 110 Sheets





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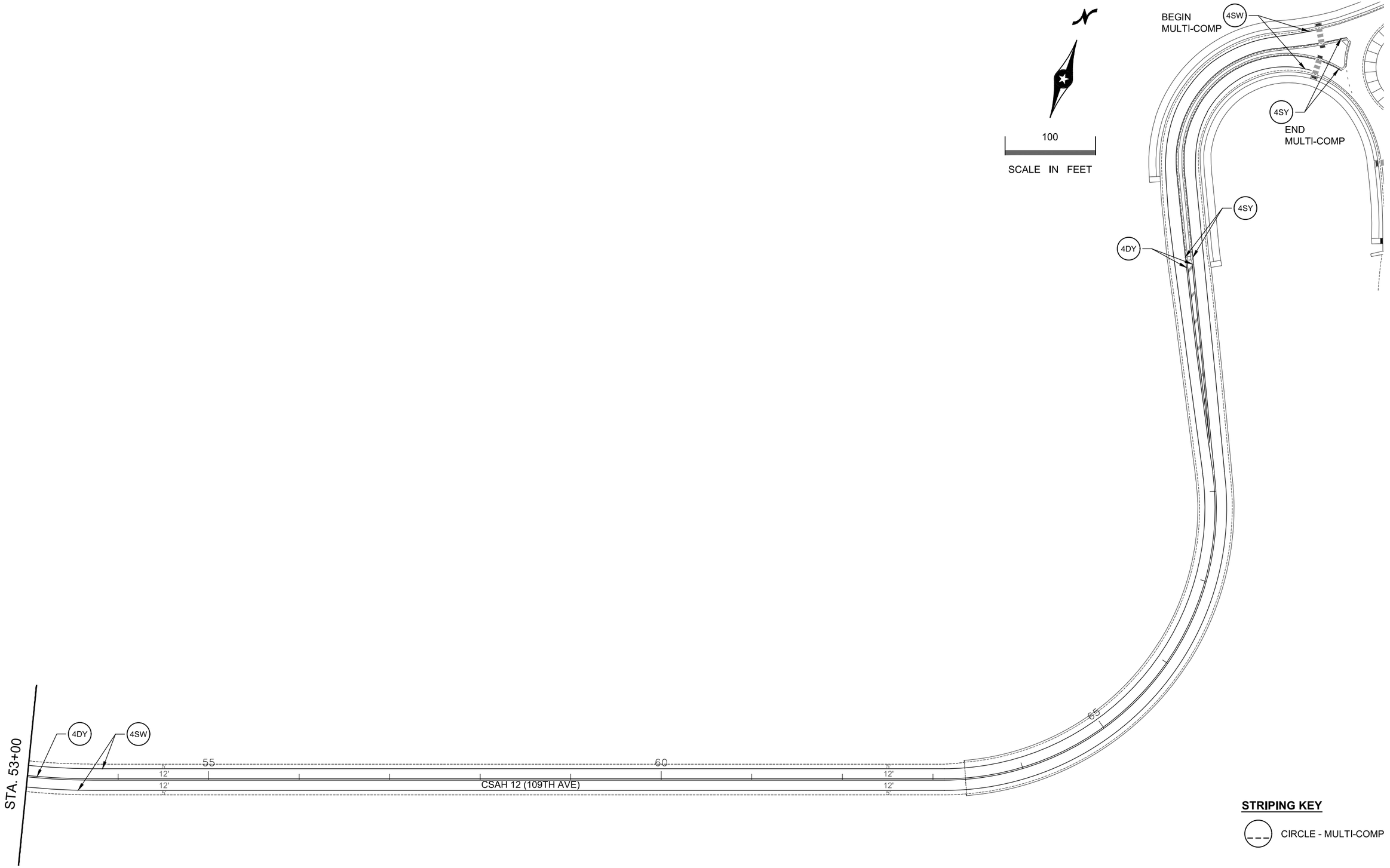
Sheet 65 of 110 Sheets



STRIPING KEY

CIRCLE - MULTI-COMP

NO	DATE	BY	CKD	APPR	REVISION

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ANOKA COUNTY HIGHWAY DEPT.

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PERMANENT PAVEMENT MARKING PLAN

Sheet 66 of 110 Sheets

TRAFFIC CONTROL NOTES: (TYP.)

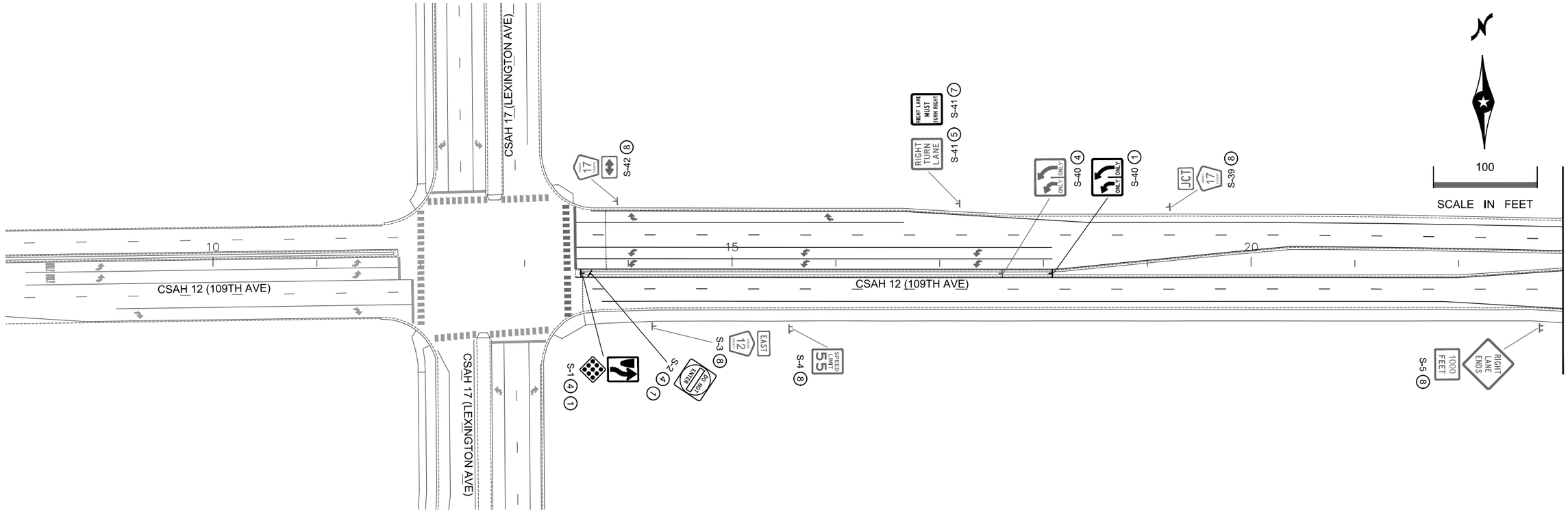
- ALL TRAFFIC CONTROL DEVICES SHALL CONFORM AND BE PLACED IN ACCORDANCE WITH THE MOST RECENT EDITION OF THE "MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MN MUTCD), INCLUDING PART 6, "FIELD MANUAL", DATED SEPTEMBER 2020.
- ALL SIGNS SHALL BE FURNISHED AND INSTALLED UNLESS OTHERWISE NOTED.
- ALL CENTER MEDIAN SIGNS ON CSAH 12 (109TH AVE), BETWEEN STA. 13+50 AND STA. 33+00, SHALL BE REMOVED, FABRICATED AND INSTALLED UTILIZING THE SQUARE TUBE SHEAR BOLT BASE IN ACCORDANCE TO MnDOT SPEC. 3402 AND THE ANOKA COUNTY SIGNING DETAILS.

TRAFFIC CONTROL DEVICES & SYMBOLS LEGEND

SYMBOL	DESCRIPTION
⊢	TRAFFIC CONTROL SIGN (SINGLE POST)
⊢⊣	TRAFFIC CONTROL SIGN (SINGLE POST, BACK TO BACK)
⊢⊢	TRAFFIC CONTROL SIGN (DOUBLE POST)

SIGNING NOTES

1. F. & I.
4. REMOVE
5. REMOVE SIGN PANEL
6. INSTALL
7. F. & I. SIGN PANEL
8. RETAIN INPLACE



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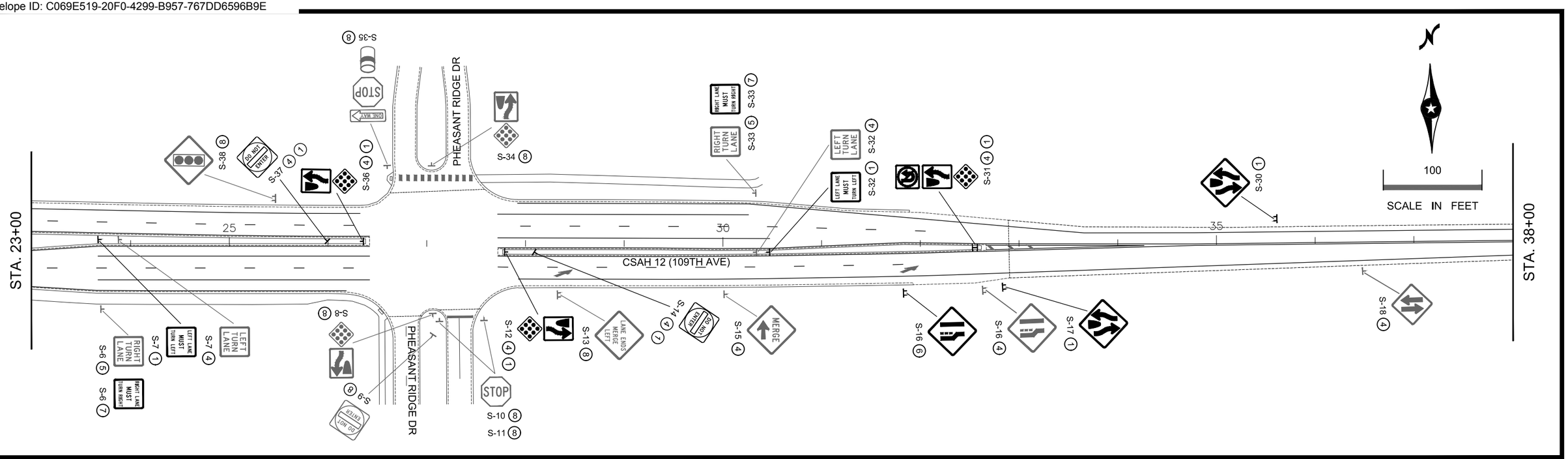
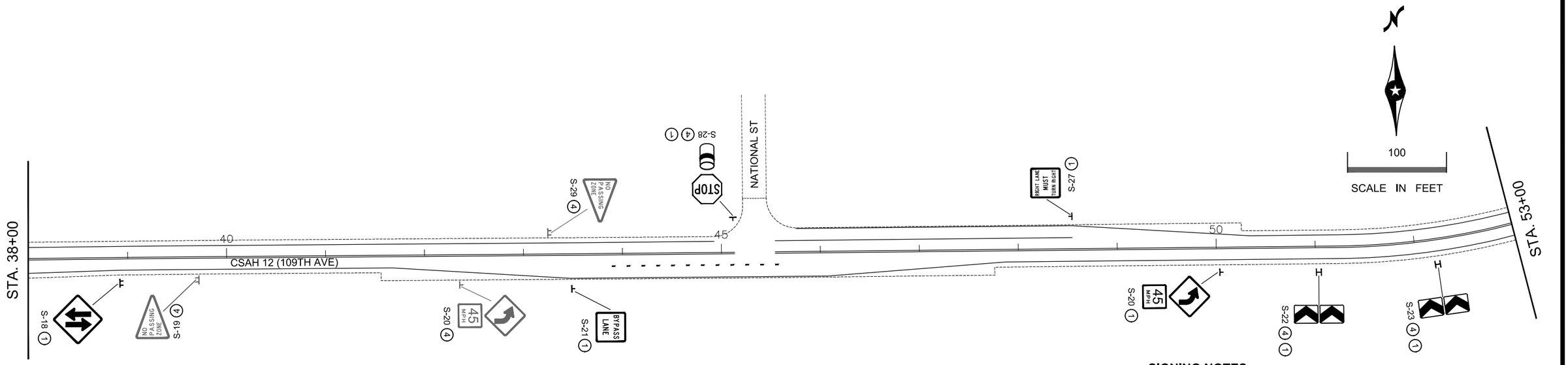
SAP 002-612-035

SIGNING AND TABULATIONS

Sheet 67 of 110 Sheets





SIGNING NOTES

(1) F. & I.
(4) REMOVE
(5) REMOVE SIGN PANEL
(6) INSTALL
(7) F. & I. SIGN PANEL
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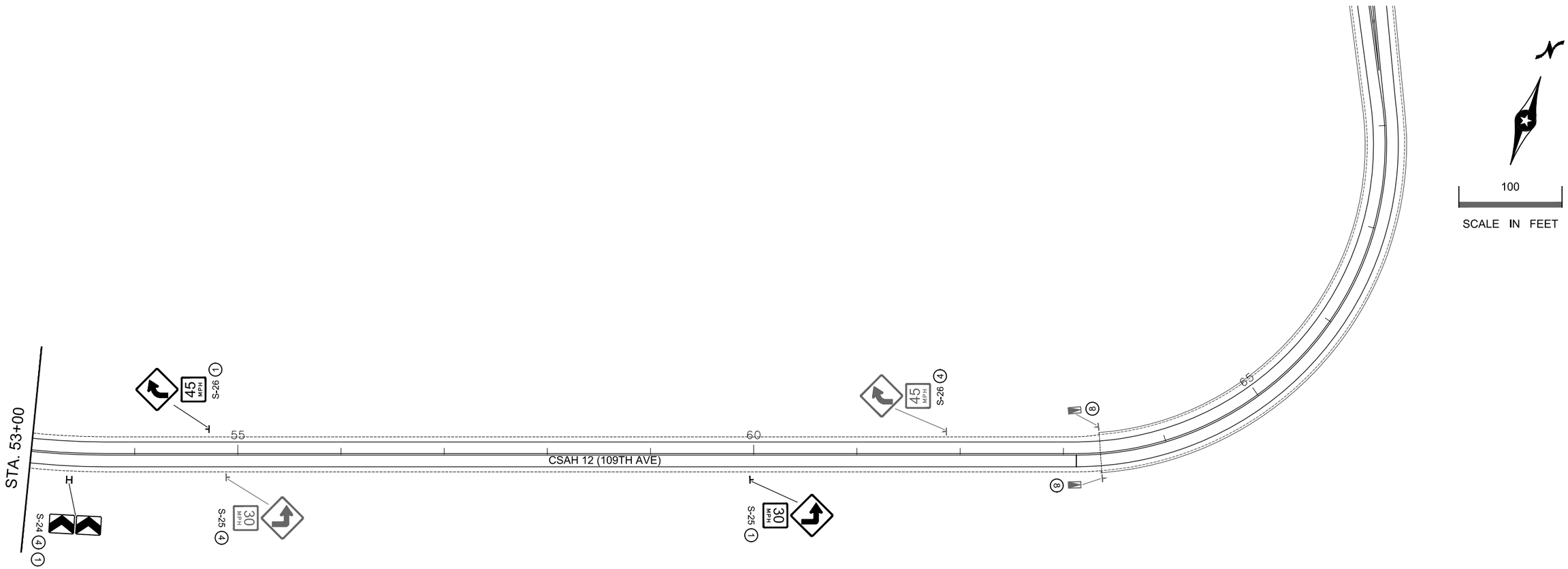

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(1) F. & I.

(4) REMOVE

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SAP 002-612-035

SIGNING AND TABULATIONS

Sheet 69 of 110 Sheets

SIGN AND DELINEATOR / MARKER

M

	SIGN NUMBER	PANEL CODE	LEGEND	SIZE (W x H)	MOUNTING HEIGHT	SUPPORT TYPE (1)	SUPPORT NUMBER OF POSTS	REMOVE SIGN TYPE C	REMOVE SIGN TYPE C PANEL	SIGN	INSTALL SIGN TYPE C	INSTALL SIGN TYPE C PANEL	DELINEATOR / MARKER
				INCHES	FEET			EACH	EACH	SQ FEET	EACH	EACH	EACH
	S-1	R4-7	KEEP RIGHT	24 x 30	7	S-CONC	1	1		5.00	1		
		OM1-1	TYPE 1 OBJECT MARKER	18 x 18	4								1
	S-2	R5-1	DO NOT ENTER	30 x 30	7	S-CONC	1	1		6.25	1		
	S-3	M3-2	EAST	24 x 12		U-SOIL							
		M1-6M	ANOKA COUNTY 12	24 x 24									
	S-4	R2-1	SPEED LIMIT 55	36 x 48		U-SOIL							
	S-5	W9-1R	RIGHT LANE ENDS	36 x 36		U-SOIL							
		W16-2P	1000 FEET	24 x 18									
	S-6	R3-X1R	RIGHT TURN LANE	30 x 30	7	U-SOIL			1				
		R3-7R	RIGHT LANE MUST TURN RIGHT	30 x 30		U-SOIL				6.25		1	
	S-7	R3-X1L	LEFT TURN LANE	30 x 30	7	U-CONC	1	1					
		R3-7L	LEFT LANE MUST TURN LEFT	30 x 30		S-CONC				6.25	1		
	S-8	R4-7	KEEP RIGHT	24 x 30		U-SOIL							
		OM1-1	TYPE 1 OBJECT MARKER	18 x 18									
	S-9	R5-1	DO NOT ENTER	30 x 30		U-SOIL							
	S-10	R1-1	STOP	30 x 30		U-SOIL							
	S-11	R1-1	STOP	30 x 30		U-SOIL							
	S-12	R4-7	KEEP RIGHT	24 x 30	7	S-CONC	1	1		5.00	1		
		OM1-1	TYPE 1 OBJECT MARKER	18 x 18	4								1
	S-13	W9-2L	LANE ENDS MERGE LEFT	36 x 36		U-SOIL							
	S-14	R5-1	DO NOT ENTER	30 x 30	7	S-CONC	1	1		6.25	1		
	S-15	W20-X3L	MERGE	30 x 30		U-SOIL		1					
	S-16	W4-2R	LANE TRANSITION RIGHT	36 x 36	7	U-SOIL	2	1		9.00	1		
	S-17	W6-2	DIVIDED HIGHWAY ENDS	36 x 36	7	U-SOIL	2			9.00	1		
	S-18	W6-3	TWO WAY TRAFFIC	30 x 30	7	U-SOIL	1	1		6.25	1		
	S-19	W14-3	NO PASSING ZONE	x		U-SOIL		1					
	S-20	W1-2L	LEFT CURVE	36 x 36	7	U-SOIL	1	1		9.00	1		
		W13-1P	ADVISORY SPEED 45	24 x 24						4.00			
	S-21	R4-X8	BYPASS LANE	30 x 30	7	U-SOIL	1			6.25	1		
(2)	S-22	W1-8	CHEVRON	18 x 24	5	U-SOIL	1	1		3.00	1		
		W1-8	CHEVRON	18 x 24						3.00			
(2)	S-23	W1-8	CHEVRON	18 x 24	5	U-SOIL	1	1		3.00	1		
		W1-8	CHEVRON	18 x 24						3.00			
(2)	S-24	W1-8	CHEVRON	18 x 24	5	U-SOIL	1	1		3.00	1		
		W1-8	CHEVRON	18 x 24						3.00			
	S-25	W1-1L	LEFT TURN	36 x 36	7	U-SOIL	1	1		9.00	1		
		W13-1P	ADVISORY SPEED 30	24 x 24						4.00			
	S-26	W1-2R	RIGHT CURVE	30 x 30	7	U-SOIL	1	1		6.25	1		
		W13-1P	ADVISORY SPEED 45	24 x 24						4.00			
	S-27	R3-7R	RIGHT LANE MUST TURN RIGHT	30 x 30	7	U-SOIL	1			6.25	1		
	S-28	R1-1	STOP	30 x 30	7	U-SOIL	1	1		6.25	1		
		X4-3	CIRCULAR DELINEATOR	4 x 15									1
	S-29	W14-3	NO PASSING ZONE	x		U-SOIL		1					
	S-30	W6-1	DIVIDED HIGHWAY BEGINS	36 x 36	7	U-SOIL	2			9.00	1		
(2)	S-31	R3-4	NO U-TURN	24 x 24	7	U-CONC	1	1		4.00	1		
		R4-7	KEEP RIGHT	24 x 30						5.00			
		OM1-1	TYPE 1 OBJECT MARKER	18 x 18	4								1
	S-32	R3-X1L	LEFT TURN LANE	30 x 30	7	S-CONC	1	1					
		R3-7L	LEFT LANE MUST TURN LEFT	30 x 30						6.25	1		
	S-33	R3-X1R	RIGHT TURN LANE	30 x 30	7	U-SOIL			1				
		R3-7R	RIGHT LANE MUST TURN RIGHT	30 x 30						6.25		1	
	S-34	R4-7	KEEP RIGHT	24 x 30		U-SOIL							
		OM1-1	TYPE 1 OBJECT MARKER	18 x 18									
	S-35	R6-1R	ONE WAY RIGHT	36 x 12		U-SOIL	1						
		R1-1	STOP	30 x 30									
		X4-3	CIRCULAR DELINEATOR	4 x 15									
	S-36	R4-7	KEEP RIGHT	24 x 30	7	S-CONC	1	1		5.00	1		
		OM1-1	TYPE 1 OBJECT MARKER	18 x 18	4								1
	S-37	R5-1	DO NOT ENTER	30 x 30	7	S-CONC	1	1		6.25	1		
	S-38	W3-3	SIGNAL AHEAD	48 x 48		U-SOIL							
	S-39	M2-1	JCT	21 x 15		U-SOIL							
		M1-6M	ANOKA COUNTY 17	24 x 24									
	S-40	R3-8AB	LANE USE CONTROL DOUBLE LEFT	36 x 30	7	S-CONC	1	1		7.50	1		
	S-41	R3-X1R	RIGHT TURN LANE	30 x 30	7	U-SOIL			1				
		R3-7R	RIGHT LANE MUST TURN RIGHT	30 x 30						6.25		1	
	S-42	M1-6M	ANOKA COUNTY 17	24 x 24		U-SOIL							
		M6-4	DOUBLE ARROW	21 x 15									
						TOTAL		22	3	188	23	3	5

SPECIFIC NOTES:

(1) S-CONC: 2" POST
U-CHANNEL: 3 LBS PER FOOT BLACK POST

(2) BACK TO BACK

NO	DATE	BY	CKD	APPR	REVISION

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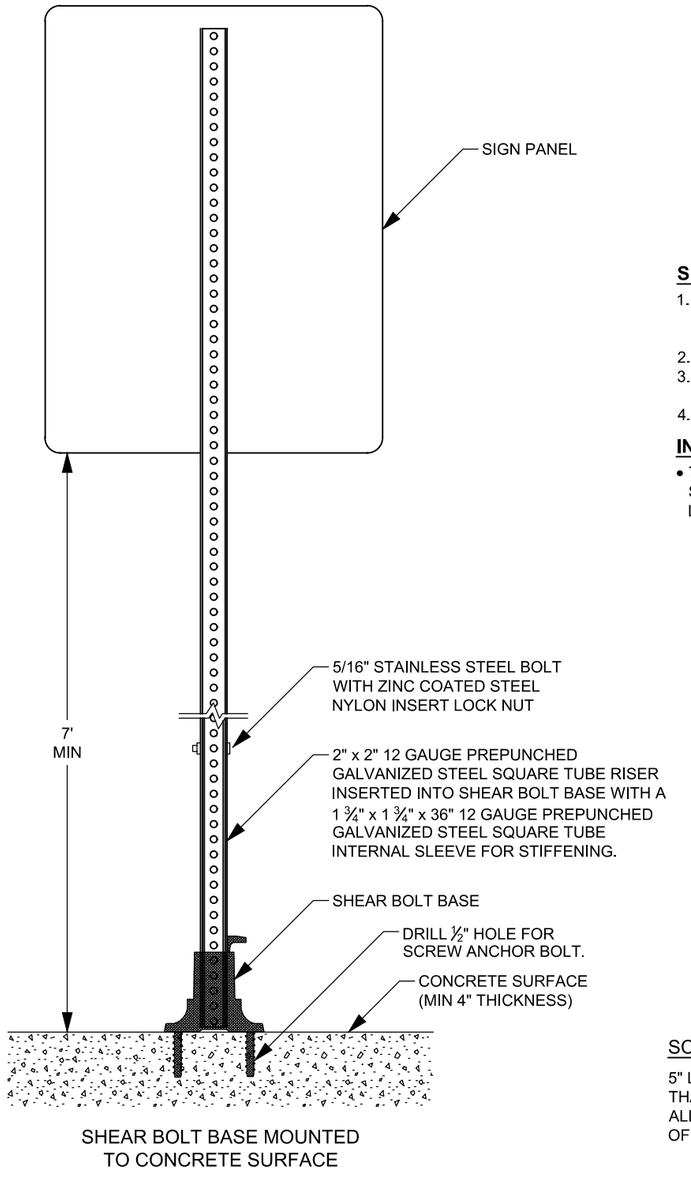
SIGNING AND TABULATIONS

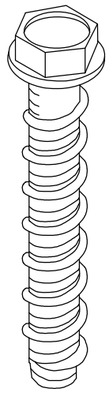
Sheet 70 of 110 Sheets

SIGN INSTALLATION TYPICALS

ISLAND MOUNT
SQUARE TUBE SHEAR BOLT BASE
SIGN INSTALLATION TYPICAL



SHEAR BOLT BASE MOUNTED
TO CONCRETE SURFACE



SCREW ANCHOR BOLT

5" LONG CARBON STEEL
THAT MUST MEET A MINIMUM
ALLOWABLE TENSION LOAD
OF 2270 PSI.

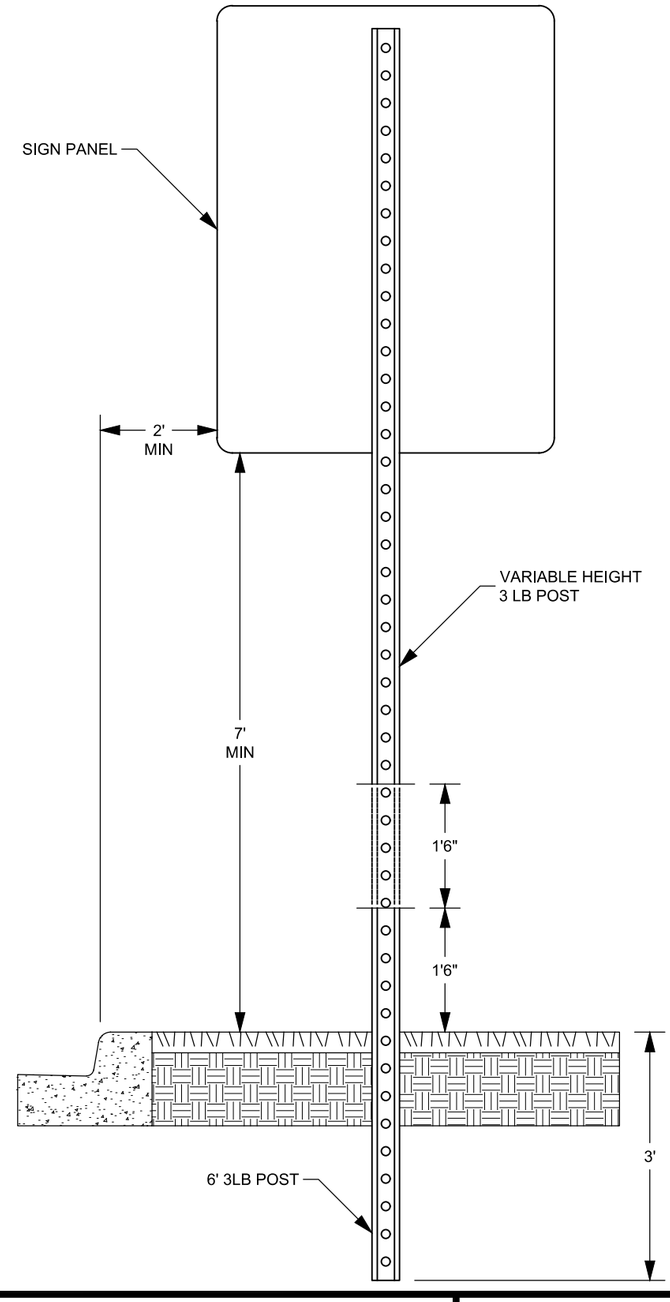
SIGN NOTES:

1. TO MEET CRASHWORTHY REQUIREMENTS THE DISTANCE BETWEEN THE BOTTOM OF THE SIGN PANEL AND THE GROUND SURFACE BELOW ANY PORTION OF THE PRIMARY SIGN PANEL MUST BE A MINIMUM OF 7 FEET. SEE TABULATIONS FOR MOUNTING HEIGHT.
2. INSTALLATION OF SHEAR BOLT BASE MUST BE NO EARLIER THAN 3 DAYS AFTER CONCRETE IS PLACED.
3. FOR SHEAR BOLT BASE USE APPROVED PRODUCT FROM MnDOT APPROVED PRODUCTS LIST. PRODUCT MUST BE MODIFIED AS SHOWN.
4. USE ANTI SEIZE ON THE SHEAR BOLT CONNECTIONS.

INSTALLATION NEAR SHARED-USE PATHWAY (MN MUTCD):

- THE MINIMUM HEIGHT MEASURED VERTICALLY FROM THE SHARED-USE PATHWAY TO THE BOTTOM OF THE SIGN SHALL BE 7 FEET. IF A SECONDARY SIGN IS MOUNTED BELOW THE PRIMARY SIGN AND IS MOUNTED LESS THAN 7 FEET, IT SHALL NOT PROJECT MORE THAN 4 INCHES INTO THE SHARED-USE PATHWAY.

GROUND POST MOUNT
SIGN INSTALLATION TYPICAL



NO	DATE	BY	CKD	APPR	REVISION

NAME: P:\002-612-035\Base\Traffic\Signing & Striping Details.dwg

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: SEAN R. THIEL

SIGNATURE: Sean R. Thiel

DATE: 1/28/2025 LICENSE NO. 45129

DRAWN BY FL DATE 11/07/24

DESIGN BY FL DATE 11/07/24

CHECKED BY SRT DATE

ANOKA COUNTY
HIGHWAY DEPT.

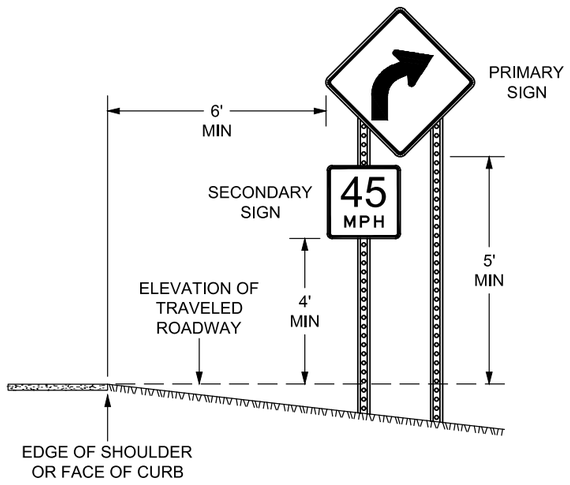
SAP 002-612-035

SIGNING & STRIPING DETAILS

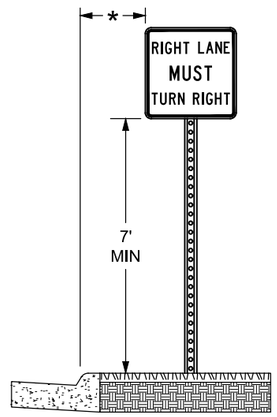
Sheet 71 of 110 Sheets

SIGN PLACEMENT TYPICALS

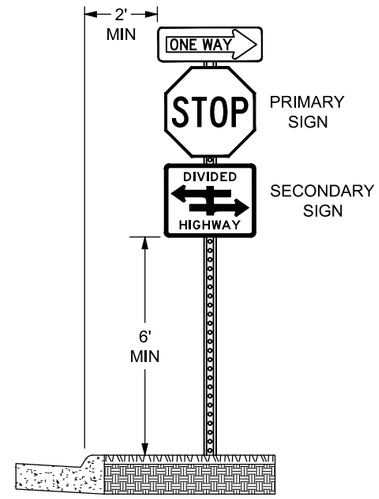
RURAL

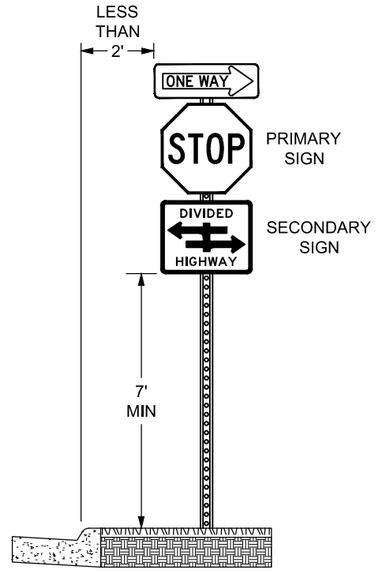


URBAN

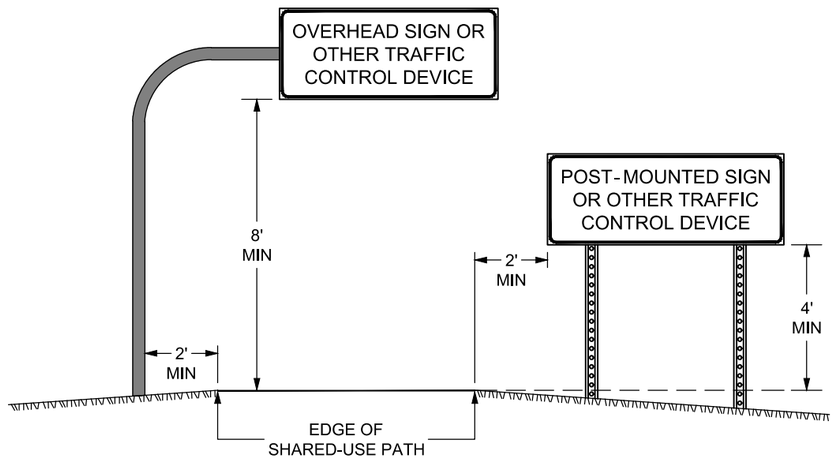


* 2' - NARROW BOULEVARD (≤ 8' WIDE)
6' - WIDE BOULEVARD





SHARED-USE PATH



NOTES:
- ALL DIMENSIONS ARE MINIMUMS.
- MAINTAIN A DISTANCE OF 2' BETWEEN TRAFFIC CONTROL DEVICE AND SHARED-USE PATH.
- 7' SIGN CLEARANCE IF 2' DISTANCE BETWEEN SIGN AND SHARED-USE PATH CANNOT BE MAINTAINED.

NO	DATE	BY	CKD	APPR	REVISION

NAME: P:\002-612-035\Base\Traffic\Signing & Striping Details.dwg

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PRINT NAME: SEAN R. THIEL

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ANOKA COUNTY

ANOKA COUNTY HIGHWAY DEPT.

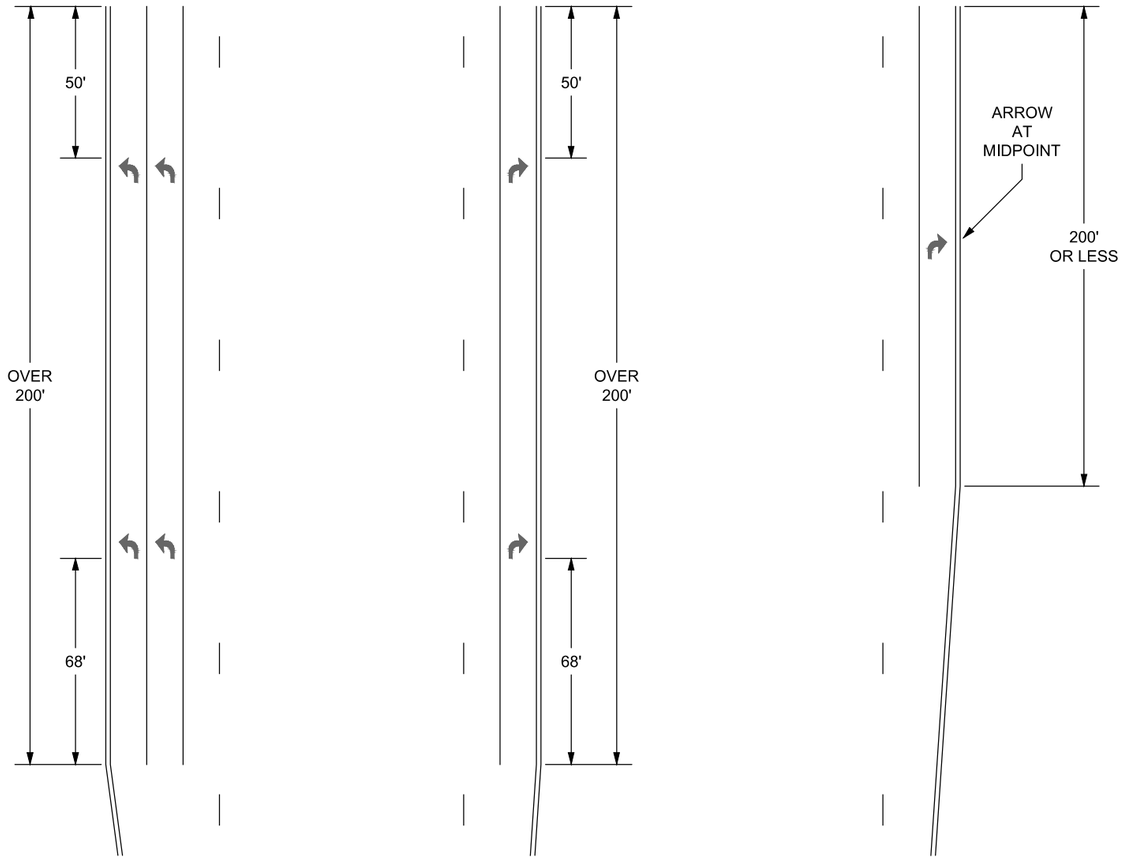
SAP 002-612-035

SIGNING & STRIPING DETAILS

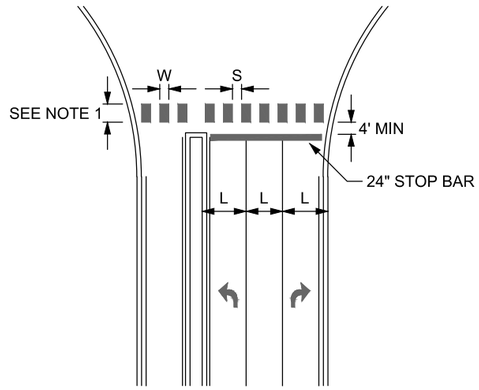
Sheet 72 of 110 Sheets

PAVEMENT MARKING TYPICALS

TURN LANE ARROW PLACEMENT

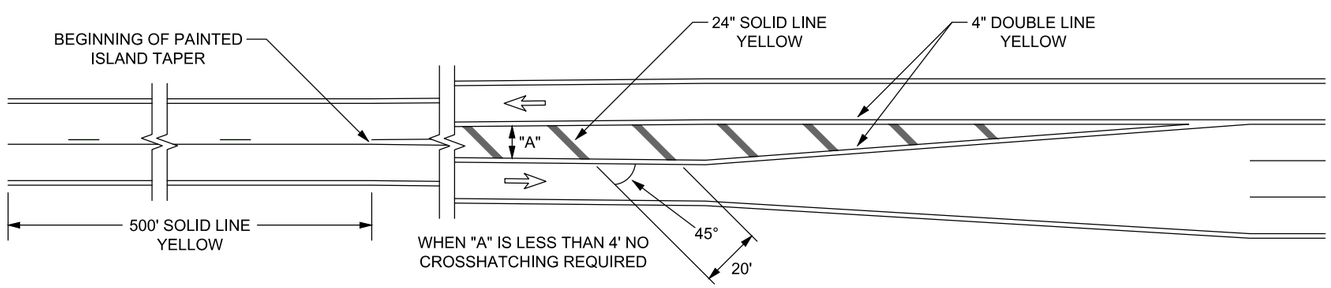


PEDESTRIAN CROSSWALK



(L) WIDTH OF INSIDE LANE	(W) WIDTH OF PAINTED AREAS	(S) WIDTH OF SPACE
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'

LEFT TURN ISLAND MARKINGS



CROSSWALK NOTES:

1. THE BLOCKS SHALL BE A MINIMUM OF 6' AND AT LEAST AS LONG AS THE TRUNCATED DOMES. FOR FANNED TRUNCATED DOMES THE BLOCKS SHALL BE AT LEAST AS LONG AS THE APPROACHING SIDEWALK OR SHARED-USE PATH.
2. BLOCKS TO BE CENTERED ON CENTERLINE AND LANE LINES.
3. A MINIMUM OF 1.5' CLEAR DISTANCE SHALL BE LEFT ADJACENT TO THE CURB FACE. IF BLOCK FALLS INTO THIS DISTANCE IT MUST BE OMITTED.
4. ON TWO LANE TWO WAY STREETS, USE SPACING SHOWN FOR AN 11' INSIDE LANE.
5. FOR DIVIDED ROADWAYS, ADJUSTMENTS IN SPACING OF THE BLOCKS SHOULD BE MADE IN THE MEDIAN SO THAT THE BLOCKS ARE MAINTAINED IN THEIR PROPER LOCATION ACROSS THE TRAVELED PORTION OF THE ROADWAY.
6. AT SKEWED CROSSWALKS, THE BLOCKS ARE TO REMAIN PARALLEL TO THE LANE LINES.
7. THE BLOCKS SHALL BE PLACED SO THAT THEY ARE NOT LOCATED IN THE WHEEL PATH OF THE VEHICLES.
8. LOCATION OF CROSSWALK BLOCKS, STOP BARS, SIGNAL LOOPS AND PEDESTRIAN RAMPS ARE APPROXIMATE. FINAL LOCATIONS TO BE DETERMINED AND FIELD VERIFIED DURING CONSTRUCTION BY THE FIELD ENGINEER.

NO	DATE	BY	CKD	APPR	REVISION

NAME: P:\002-612-035\Base\Traffic\Signing & Striping Details.dwg

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PRINT NAME: SEAN R. THIEL

SIGNATURE: Sean R. Thiel

DATE: 1/28/2025 LICENSE NO. 45129

DRAWN BY FL DATE 11/07/24

DESIGN BY FL DATE 11/07/24

CHECKED BY SRT DATE

ANOKA COUNTY

ANOKA COUNTY HIGHWAY DEPT.

SAP 002-612-035

SIGNING & STRIPING DETAILS

Sheet 73 of 110 Sheets

STATUS:

1 = MAINTAIN 3-SECTION HEAD AT CURRENT LOCATION (AT 29') & REVISE SIGNAL HEAD NUMBER/LABELING (FROM 2-3 TO 2-2, AND FROM 6-3 TO 6-2).

2 = MAINTAIN 3-SECTION HEAD AT CURRENT LOCATION, (AT 17'), SWAP RLA-YLA-GLA LENSES WITH RYG LENSES IN RELOCATED SIGNAL HEAD AT 6', AND REVISE SIGNAL HEAD NUMBER/LABELING (FROM 5-1 TO 2-3, AND FROM 1-1 TO 6-3).

3 = SALVAGE INPLACE 3-SECTION HEAD FROM MOUNT AT 41' (OLD 2-2, 6-2) (CAP MOUNT), INSTALL ON NEW STRAP-ON MID-MAST ARM MOUNT AT 6', SWAP RYG LENSES WITH RLA-YLA-GLA LENSES IN INPLACE SIGNAL HEAD AT 17', AND REVISE SIGNAL HEAD NUMBER/LABELING (FROM 2-2 TO 5-1, AND FROM 6-2 TO 1-1).

4 = REVISE FROM TYPE 10A BRACKETING TO TYPE 10B BRACKETING (TO INCORPORATE NEW ONE SECTION PEDESTRIAN INDICATION INSTALLATION).

(&&)

○⇦ = INPLACE LED (REUSE INPLACE).
FYA = FLASHING YELLOW ARROW

LED SIGNAL HEADS

SIGNAL HEAD #	ALL 12" INDICATIONS R	Y	FYA	G	STATUS
1-1	⇦	⇦		⇦	3
1-2	⇦	⇦		⇦	INPLACE
2-1	○	○		○	INPLACE
2-2	○	○		○	1
2-3	○	○		○	2
3-1	⇦	⇦		⇦	INPLACE
3-2 (&&)	⇦	⇦		⇦	4
4-1 (&&)	○	○		○	4
4-2, 4-3	○	○		○	INPLACE
5-1	⇦	⇦		⇦	3
5-2	⇦	⇦		⇦	INPLACE
6-1	○	○		○	INPLACE
6-2	○	○		○	1
6-3	○	○		○	2
7-1, 7-2	⇦	⇦		⇦	INPLACE
8-1, 8-2, 8-3	○	○		○	INPLACE

LOOP DETECTORS FUNCTIONS:

1) CALL AND EXTEND
3) EXTEND ONLY
7) DELAYED CALL- IMMEDIATE EXTEND
8) CARRY OVER (STRETCH)

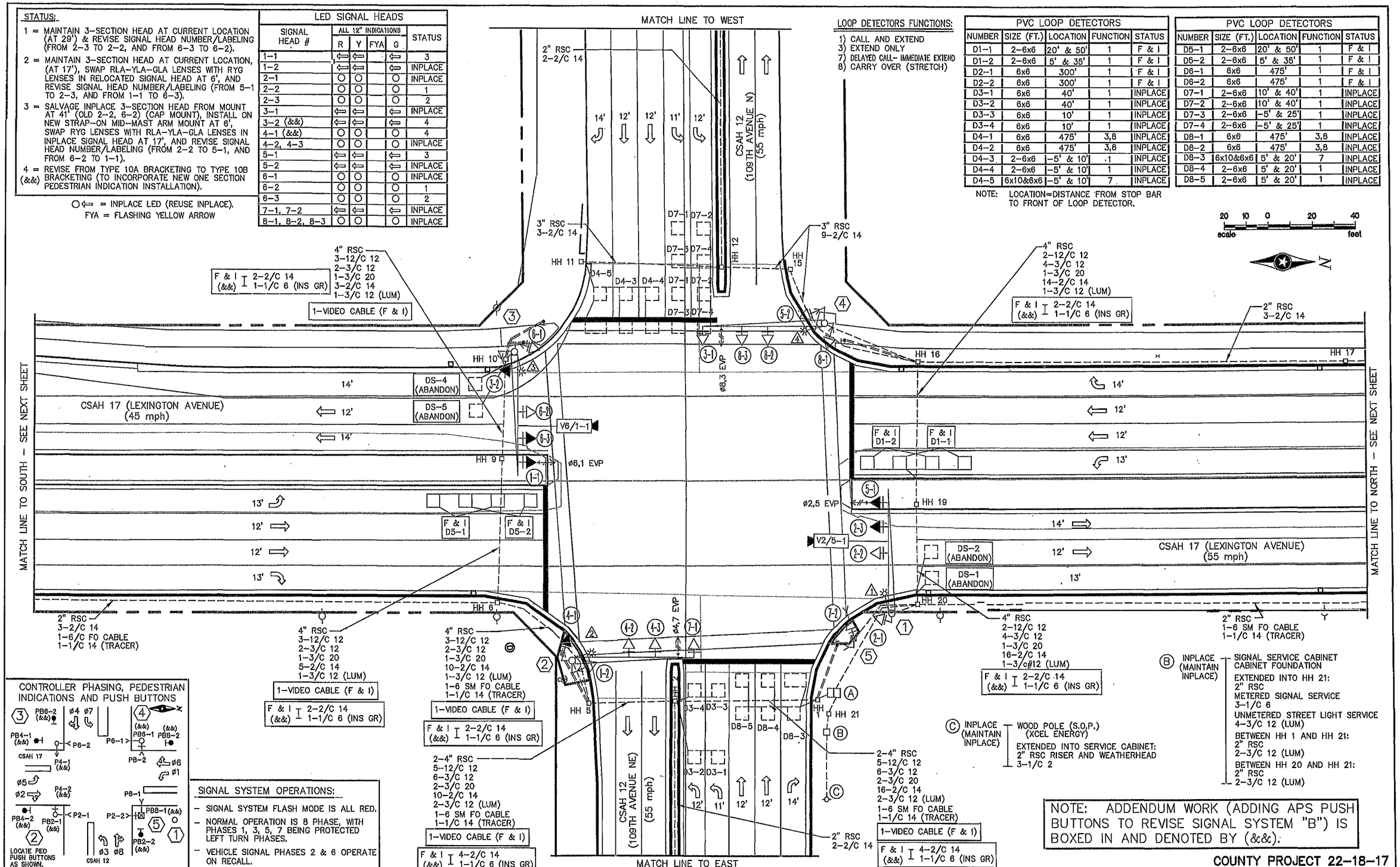
PVC LOOP DETECTORS

NUMBER	SIZE (FT.)	LOCATION	FUNCTION	STATUS
D1-1	2-6x6	20' & 50'	1	F & I
D1-2	2-6x6	5' & 35'	1	F & I
D2-1	6x6	300'	1	F & I
D2-2	6x6	300'	1	F & I
D3-1	6x6	40'	1	INPLACE
D3-2	6x6	40'	1	INPLACE
D3-3	6x6	10'	1	INPLACE
D3-4	6x6	10'	1	INPLACE
D4-1	6x6	475'	3,8	INPLACE
D4-2	6x6	475'	3,8	INPLACE
D4-3	2-6x6	-5' & 10'	1	INPLACE
D4-4	2-6x6	-5' & 10'	1	INPLACE
D4-5	6x10&6x6	-5' & 10'	7	INPLACE

NOTE: LOCATION=DISTANCE FROM STOP BAR TO FRONT OF LOOP DETECTOR.

PVC LOOP DETECTORS

NUMBER	SIZE (FT.)	LOCATION	FUNCTION	STATUS
D5-1	2-6x6	20' & 50'	1	F & I
D5-2	2-6x6	5' & 35'	1	F & I
D6-1	6x6	475'	1	F & I
D6-2	6x6	475'	1	F & I
D7-1	2-6x6	10' & 40'	1	INPLACE
D7-2	2-6x6	10' & 40'	1	INPLACE
D7-3	2-6x6	-5' & 25'	1	INPLACE
D7-4	2-6x6	-5' & 25'	1	INPLACE
D8-1	6x6	475'	3,8	INPLACE
D8-2	6x6	475'	3,8	INPLACE
D8-3	6x10&6x6	5' & 20'	7	INPLACE
D8-4	2-6x6	5' & 20'	1	INPLACE
D8-5	2-6x6	5' & 20'	1	INPLACE



CONTROLLER PHASING, PEDESTRIAN INDICATIONS AND PUSH BUTTONS

SIGNAL SYSTEM OPERATIONS:

- SIGNAL SYSTEM FLASH MODE IS ALL RED.
- NORMAL OPERATION IS 8 PHASE, WITH PHASES 1, 3, 5, 7 BEING PROTECTED LEFT TURN PHASES.
- VEHICLE SIGNAL PHASES 2 & 6 OPERATE ON RECALL.

(B) INPLACE (MAINTAIN INPLACE)
- SIGNAL SERVICE CABINET
- CABINET FOUNDATION
- EXTENDED INTO HH 21: 2" RSC
- METERED SIGNAL SERVICE 3-1/C 6
- UNMETERED STREET LIGHT SERVICE 4-3/C 12 (LUM)
- BETWEEN HH 1 AND HH 21: 2" RSC 2-3/C 12 (LUM)
- BETWEEN HH 20 AND HH 21: 2" RSC 2-3/C 12 (LUM)

(C) INPLACE (MAINTAIN INPLACE)
- WOOD POLE (S,O,P.) (XCEL ENERGY)
- EXTENDED INTO SERVICE CABINET: 2" RSC RISER AND WEATHERHEAD 3-1/C 2

NOTE: ADDENDUM WORK (ADDING APS PUSH BUTTONS TO REVISE SIGNAL SYSTEM "B") IS BOXED IN AND DENOTED BY (&&).

COUNTY PROJECT 22-18-17

DRAWN BY: JMG
DESIGNER: JMG
CHECKED BY: JMG
DESIGN TEAM

NO.	BY	DATE	REVISIONS

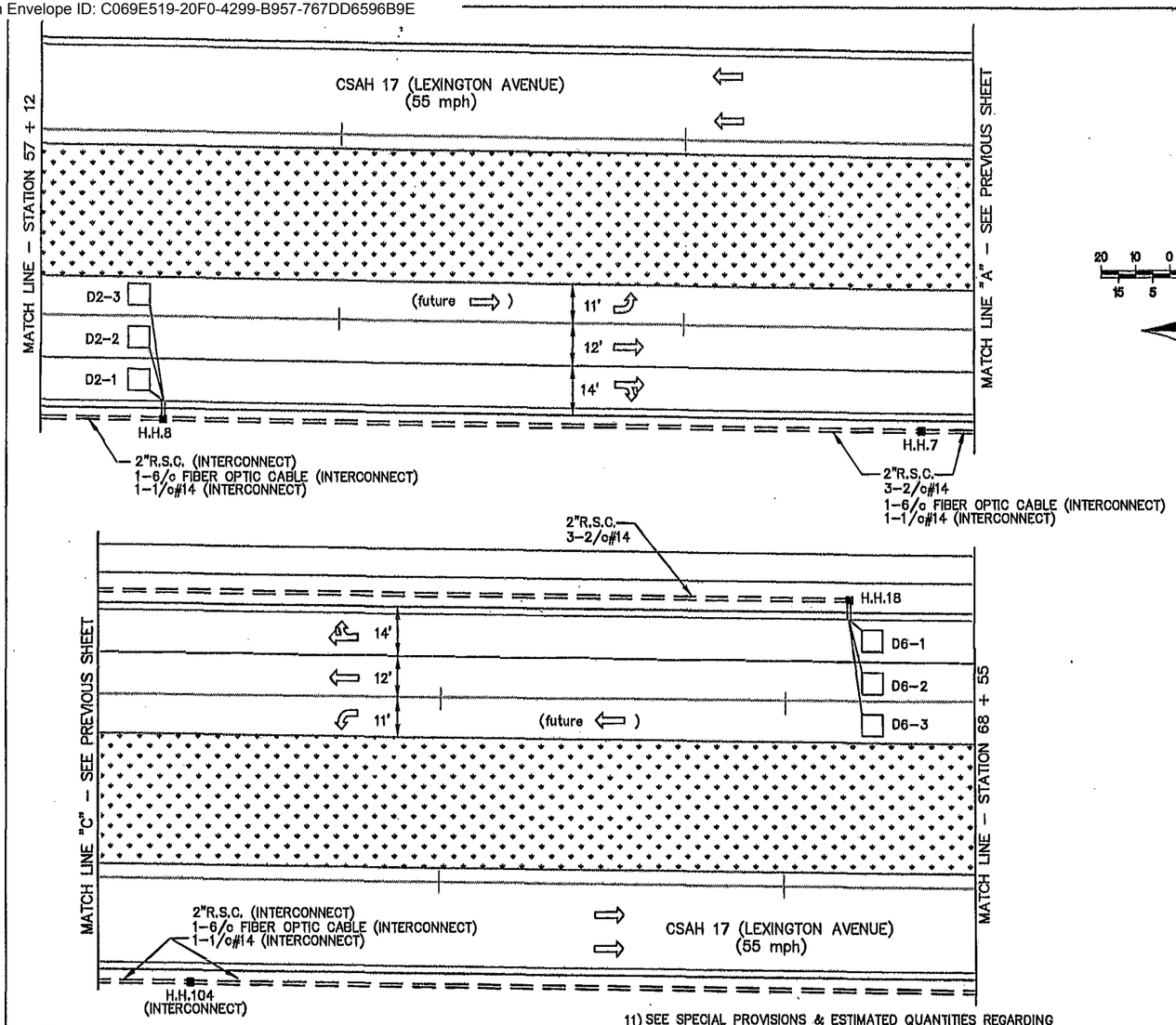
I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
Date: May 9, 2022
Name: John M Gray, PE
Lic. No. 22457

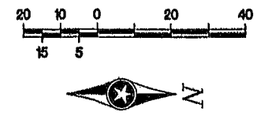
SEH
PHONE: (651) 490-2000
3535 VADNAIS CENTER DR.
ST. PAUL, MN 55110

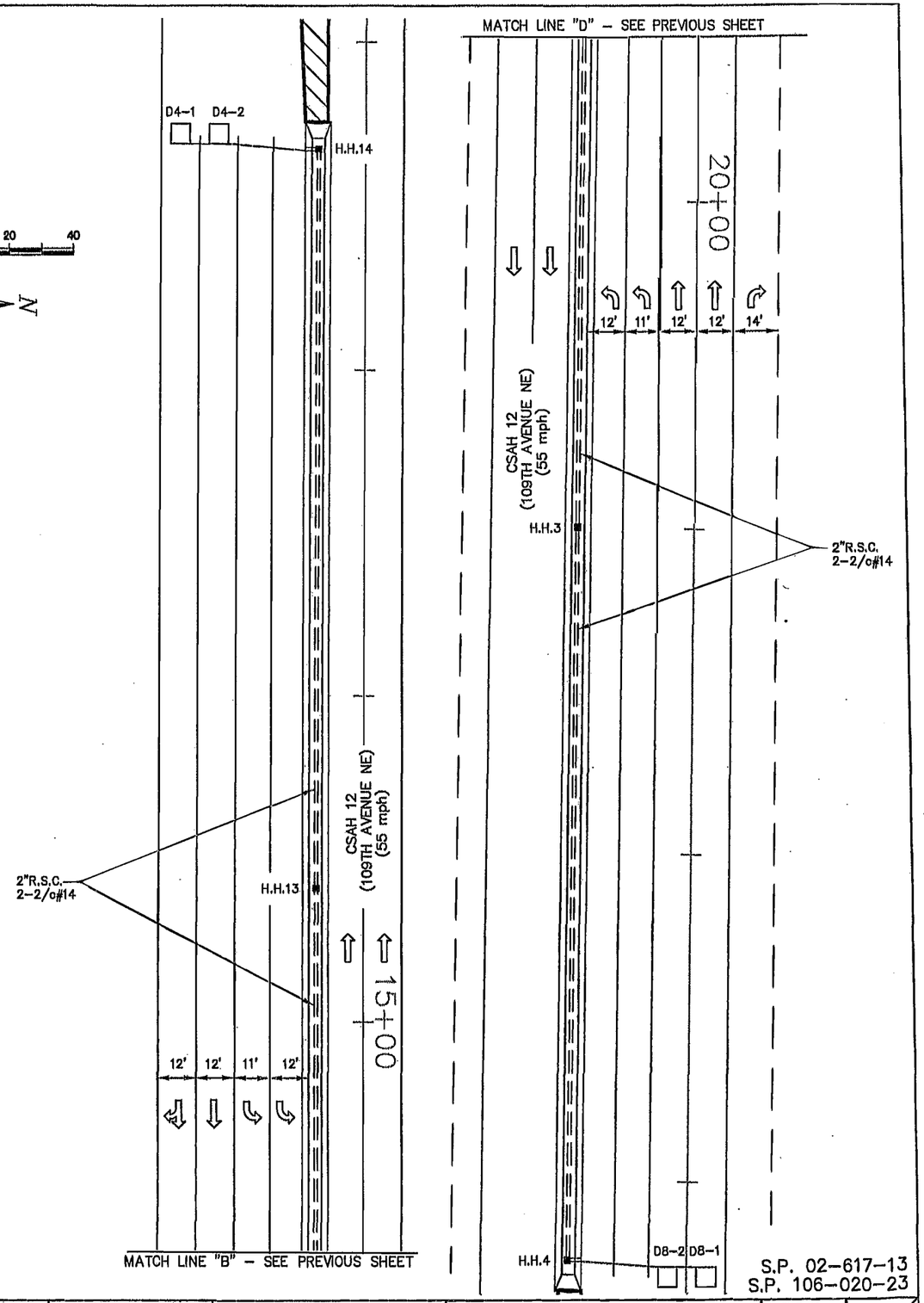
ANOKA COUNTY
CITY OF BLAINE

REVISE SIGNAL SYSTEM "B"
INTERSECTION LAYOUT
CSAH 17 (LEXINGTON AVENUE NE)
AT CSAH 12 (109TH AVENUE NE)

FILE NO. ANOKC 122928
SIGNAL SHEET 6 OF 35
74/110







NOTES:

1) LOCATION OF POLES, CONTROLLER CABINET, SERVICE CABINET, LOOP DETECTORS AND HANDHOLES SHALL BE DETERMINED IN THE FIELD BY THE ENGINEER.
2) SEE SPECIAL PROVISIONS FOR COUNTY FURNISHED MATERIALS.
3) LOOP DETECTOR WIRES SHALL BE CROSS-LINKED POLYETHYLENE (XLP) IN 3/4" N.M.C. SEE SPECIAL PROVISIONS.
4) NEW HANDHOLES SHALL BE PVC HANDHOLES WITH METAL FRAMES AND COVERS.
5) EACH SIGNAL FACE SHALL HAVE BACKGROUND SHIELD.
6) EACH PEDESTRIAN INDICATION SHALL BE ONE SECTION HAND/WALKING PERSON INDICATION.
7) ALL VEHICLE SIGNAL INDICATIONS, AND ALL PEDESTRIAN SIGNAL INDICATIONS SHALL BE LED.
8) SEE SPECIAL PROVISIONS AND DETAILS REGARDING SIGNS TO BE FURNISHED & INSTALLED BY CONTRACTOR (INCIDENTAL TO ITEM NO. 2565.511 FOR THIS SIGNAL SYSTEM).
9) CONTRACTOR SHALL PROVIDE EXTENDED BRACKETS FOR EACH POLE MOUNTED VEHICLE AND PEDESTRIAN SIGNAL FACE.
10) A 3/4" HALF COUPLING, 3/4" PIPE NIPPLE AND CONDUIT OUTLET BODY SHALL BE FURNISHED AND INSTALLED 6 FEET FROM THE END OF EACH MAST ARM (FOR EVP).
11) SEE SPECIAL PROVISIONS & ESTIMATED QUANTITIES REGARDING INPLACE SIGNAL SYSTEM TO BE REMOVED AND SALVAGED BY CONTRACTOR (SEPARATE FROM ITEM NO. 2565.511).
12) CONTRACTOR SHALL MAINTAIN OPERATION OF INPLACE SIGNAL SYSTEM AT ALL TIMES, UNTIL APPROVED BY ENGINEER FOR SIGNAL SYSTEM TO BE TURNED OFF.
13) CONTRACTOR SHALL COORDINATE ALL TRAFFIC SIGNAL INSTALLATION WORK WITH ROAD CONSTRUCTION TO BE COMPLETED BY OTHERS AS PART OF ENTIRE PROJECT.
14) (INTERCONNECT) DENOTES ITEMS TO BE FURNISHED & INSTALLED BY CONTRACTOR UNDER ITEM NO. 2565.601 (TRAFFIC CONTROL INTERCONNECTION). SEE ESTIMATED QUANTITIES & SPECIAL PROVISIONS.
15) CONTRACTOR SHALL COIL AND STORE AN ADDITIONAL 10' OF 1-2/c#14 CABLE IN HANDHOLES 10 AND 20 (FOR FUTURE LOOP DETECTOR INSTALLATIONS BY OTHERS).
16) CONTRACTOR SHALL COIL AND STORE AN ADDITIONAL 10' OF 2-2/c#14 CABLE IN HANDHOLE 19 (FOR FUTURE LOOP DETECTOR INSTALLATIONS BY OTHERS).
17) CONTRACTOR SHALL COIL AND STORE AN ADDITIONAL 10' OF 2-2/c#14 CABLE IN HANDHOLE 9 (FOR FUTURE LOOP DETECTOR INSTALLATIONS BY OTHERS).
18) CONTRACTOR SHALL COIL AND STORE AN ADDITIONAL 75' OF 2-2/c#14 CABLE IN HANDHOLE 6 (FOR FUTURE EXTENSION OF CABLES FOR LOOP DETECTORS D5-1 AND D5-2 FROM HANDHOLE 6 TO HANDHOLE 9 BY OTHERS).

W:\AE\ANOKC\D0305\T\TSSE1.DWG

DRAWN BY: JMG
DESIGNER: JMG
CHECKED BY: JMG
DESIGN TEAM

No.	BY	DATE	REVISIONS
1	JMG	06/23	REVISED TO ACCOMMODATE NEW EAST GEOMETRICS

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.

Date: June 30, 2004 Name: John M. Gray, P.E. Lic. No. 22457

SEH®
PHONE: (651) 490-2000
3535 VADNAIS CENTER DR.
ST. PAUL, MN 55110

ANOKA COUNTY, MINNESOTA
CITY OF BLAINE

TRAFFIC SIGNAL SYSTEM "A"
INTERSECTION LAYOUT
CSAH 17 (LEXINGTON AVENUE) AT CSAH 12 (109TH AVENUE NE)

FILE NO. AANOKC0305.00
SIGNAL SHEET 9A OF 28

S.P. 02-617-13
S.P. 106-020-23

20 10 0 20 40
scale feet

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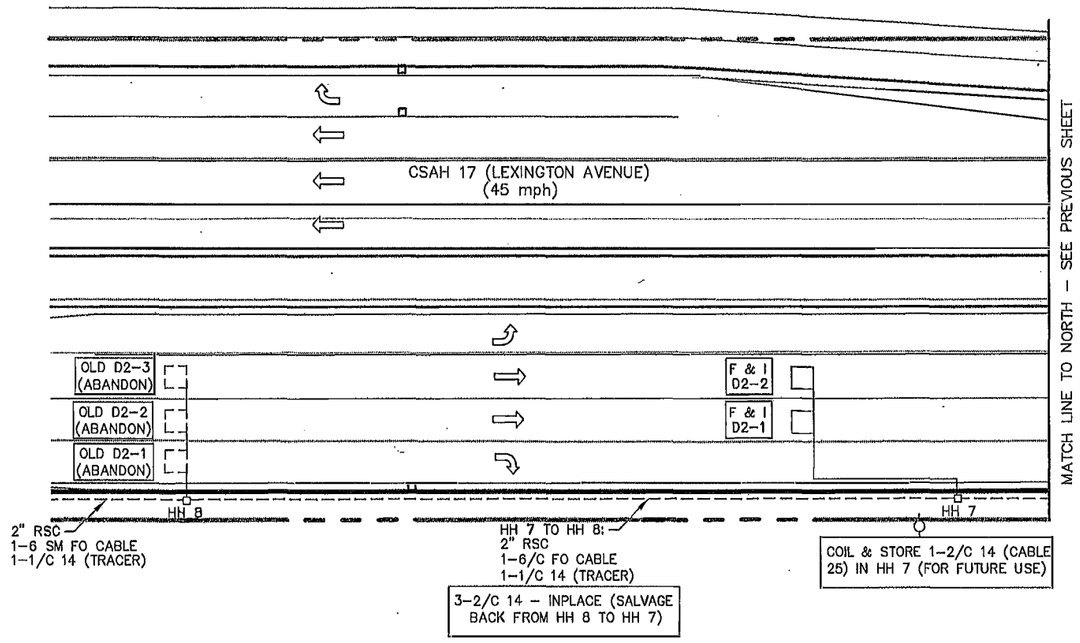
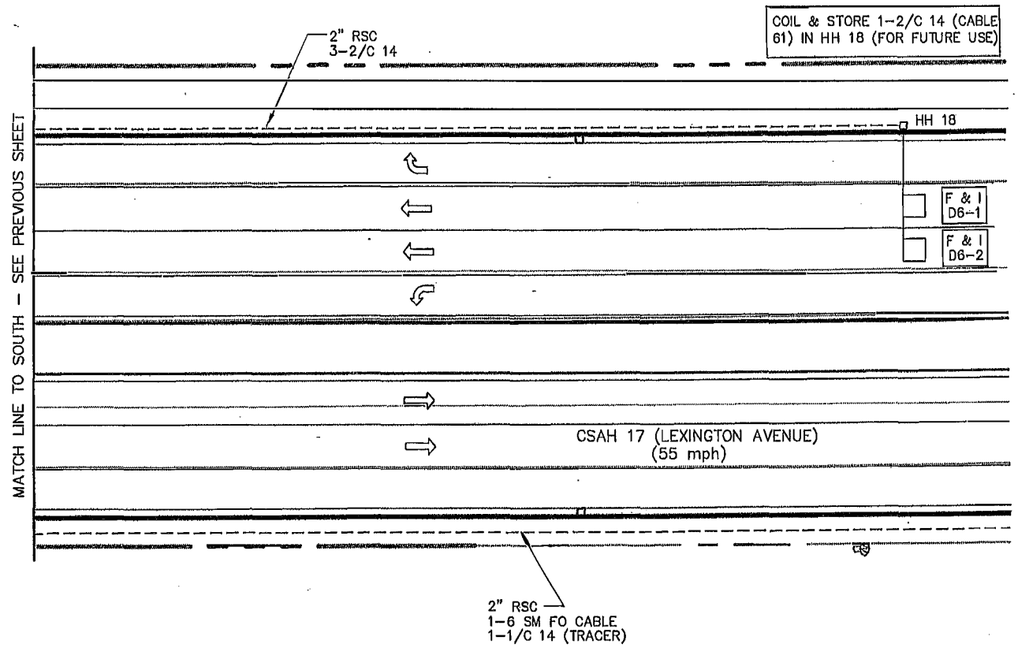




COUNTY PROJECT 22-18-17

DRAWN BY: JMG DESIGNER: JMG CHECKED BY: JMG DESIGN TEAM	NO.	BY	DATE	REVISIONS	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. Date: March 28, 2022 Name: John M Gray, PE Lic. No. 22457	SEH PHONE: (651) 490-2000 3535 VADNAIS CENTER DR. ST. PAUL, MN 55110	ANOKA COUNTY CITY OF BLAINE	REVISE SIGNAL SYSTEM "B" MATCH LINES CSAH 17 (LEXINGTON AVENUE NE) AT CSAH 12 (109TH AVENUE NE)	FILE NO. ANOKC 122928 SIGNAL SHEET 7 OF 35 76/110

REVISE SIGNAL SYSTEM B NOTES:

1) ALL ITEMS OF THIS SIGNAL SYSTEM ARE INPLACE AND SHALL BE REUSED AND MAINTAINED INPLACE, UNLESS BOXED IN AND NOTED OTHERWISE ON PLANS.
2) ALL HANDHOLES (PVC WITH METAL FRAMES AND COVERS) ARE INPLACE AND SHALL BE REUSED AND MAINTAINED INPLACE, EXCEPT AS FOLLOWS:
   - ADJUST HANDHOLES 6, 7, 8, 9, 10, 11, 15, 16, 17, 18, 19, AND 20 TO FINISHED SURROUNDING GRADE AFTER ALL WORK IS COMPLETED (INCIDENTAL).
3) LOCATION OF NEW LOOP DETECTORS SHALL BE DETERMINED IN THE FIELD BY THE ENGINEER.
4) ALL CABLES AND CONDUCTORS, CONDUIT, HANDHOLES, AND LOOP DETECTORS ARE INPLACE AND SHALL BE REUSED AND MAINTAINED INPLACE, EXCEPT WHERE BOXED IN AND DENOTED OTHERWISE.
5) LOOP DETECTOR WIRES SHALL BE CROSS-LINKED POLYETHYLENE (XLP) 12 AWG IN 3/4" NMC. NEW LOOP DETECTORS D1-1, D1-2, D2-1, D2-2, D5-1, D5-2, D6-1, AND D6-2 SHALL BE FURNISHED, INSTALLED & MADE OPERATIONAL BY CONTRACTOR TO THE SATISFACTION OF ENGINEER. SEE DETAILS & SPECIAL PROVISIONS.
6) CONTRACTOR SHALL REMOVE AND DISPOSE OF ALL EXISTING LOOP DETECTOR SPLICE KITS (FOR LOOP DETECTORS D1-1, D1-2, D2-1, D2-2, D5-1, D5-2, D6-1, D6-2) AND SHALL FURNISH AND INSTALL NEW LOOP DETECTOR SPLICE KITS IN THE ADJACENT HANDHOLE FOR THESE LOOP DETECTORS AS CALLED FOR IN THE SPECIAL PROVISIONS.
7) A SEPARATE PAY ITEM HAS BEEN ADDED (2565 - RIGID PVC LOOP DETECTOR 6' x 6') FOR POTENTIAL REPLACEMENT OF LOOP DETECTORS, SHOULD THESE LOOP DETECTORS BE REQUIRED TO BE REPLACED BY THE CONTRACTOR EITHER DUE TO MILL/OVERLAY WORK OR CURB RAMP/CURB AND GUTTER WORK THAT CAUSES THE EXISTING LOOP DETECTOR TO BE DAMAGED. THE CONTRACTOR SHALL MAKE EVERY EFFORT TO PROTECT AND MAINTAIN THE EXISTING LOOP DETECTORS (INCLUDING LEAD-IN CONDUITS FROM HANDHOLE TO IN-PAVEMENT LOOP DETECTOR CONDUIT) AND SHALL NOTIFY THE ENGINEER IF THEY ANTICIPATE THAT A LOOP DETECTOR WILL BE DAMAGED DUE TO THEIR WORK. COUNTY WILL PROVIDE INITIAL LOCATION OF THESE LOOP DETECTORS FOR CONTRACTOR TO BE ABLE TO PLAN FOR WORKING AROUND THESE LOOP DETECTORS, SEE SPECIAL PROVISIONS.
8) CONTRACTOR SHALL MAINTAIN A SIGNAL SYSTEM IN OPERATION AT THIS INTERSECTION AT ALL TIMES, UNLESS OTHERWISE APPROVED BY THE ENGINEER FOR THE SIGNAL SYSTEM TO BE PLACED INTO ALL-RED FLASH DURING NON-PEAK TRAFFIC PERIODS (FOR WORK THAT REQUIRES THE SIGNAL SYSTEM TO BE OUT OF OPERATION OR TO ACCOMMODATE ROAD WORK AT THE INTERSECTION).
9) ANY DAMAGE TO INPLACE TRAFFIC SIGNAL FACILITIES (CONDUIT, CABLES, HANDHOLES, SIGNAL POLES, ETC.), DUE TO TRAFFIC SIGNAL OR ROAD WORK, SHALL BE REPAIRED BY CONTRACTOR TO SATISFACTION OF THE ENGINEER, AT NO EXPENSE TO THE COUNTY.
10) F & I = NEW, FURNISH AND INSTALL.
    S & I = INPLACE, SALVAGE AND INSTALL.
11) SEE SPECIAL PROVISIONS REGARDING VIDEO DETECTION SYSTEM TO BE FURNISHED BY THE COUNTY, INSTALLED & MADE OPERATIONAL BY THE CONTRACTOR DURING CONSTRUCTION, AND SALVAGED BY THE CONTRACTOR AFTER PERMANENT Ø1, 2, 6 LOOP DETECTORS ARE MADE OPERATIONAL (INCIDENTAL TO REVISE SIGNAL SYSTEM B PAY ITEM).
12) VIDEO DETECTOR CABLES TO BE FURNISHED & INSTALLED BY THE CONTRACTOR FOR USE DURING CONSTRUCTION SHALL BE FULLY COMPATIBLE WITH VIDEO CAMERA AND CABINET EQUIPMENT.
13) MOVEMENT/REAIMING OF VIDEO CAMERAS AND ALL LABOR AND MATERIALS NEEDED TO REVISE THIS SIGNAL SYSTEM DURING CONSTRUCTION ARE INCIDENTAL.
14) (&&) CONTRACTOR SHALL FURNISH AND INSTALL TWO (2) NEW ONE-SECTION COUNTDOWN TIMER "HAND/WALKING PERSON" PEDESTRIAN SIGNALS (HOUSINGS, VISORS, LENSES, BRACKETING), ONE EACH ON POLES 2 AND 3 (TO ADD PEDESTRIAN CROSSING TO SOUTH SIDE OF SIGNAL SYSTEM) (INCLUDED AS PART OF THE REVISE SIGNAL SYSTEM B PAY ITEM - ADDENDUM).

NOTE: ADDENDUM WORK (ADDING APS PUSH BUTTONS TO REVISE SIGNAL SYSTEM "B") IS BOXED IN AND DENOTED BY (&&).

① INPLACE (MAINTAIN INPLACE)
- PA100 POLE FOUNDATION
- TYPE PA100-A-55-D40-9 (DAVIT AT 350 DEG)
- LUMINAIRE-250 W HPS
- END MOUNT CAPPED (FOR FUTURE USE)
- 2-ONE WAY SIGNALS-OVERHEAD (17' & 29' FROM END OF MAST ARM) (2-3, 2-2)
- TYPE 10A-POLE MOUNTED 180 DEG
- TYPE D SIGN PANEL-OVERHEAD
- 2-R6-1 SIGN PANELS-POLE MOUNTED 0/180 DEG
- EXTENDED INTO HH 20:
- 3" RSC
- 2-12/C 12
- 1-3/C 12
- 1-3/C 20
- 1-3/C 12 (LUM)

INPLACE (S & I)
- ONE WAY SIGNAL (HOUSING, VISORS, BACKGROUND SHIELD) - OVERHEAD AT 41' (RELOCATE TO 6')
- RLA-YLA-GLA LED LENSES - RELOCATE FROM SIGNAL HEAD AT 17' TO SIGNAL HEAD AT 6' (FOR 5-1)
- RYG LED LENSES - RELOCATE FROM SIGNAL HEAD AT 41' TO SIGNAL HEAD AT 17' (FOR 2-3)
- ONE WAY EVP DETECTOR & LIGHT AT 6' (Ø2,5)

INSTALL (FURNISHED BY COUNTY)
- VIDEO CAMERA-MAST ARM MOUNTED (FACING NB TRAFFIC) (V2/5-1)

F & I
- STRAP-ON MID MAST ARM MOUNT AT 6' (FOR 5-1)
- CAP MID-MAST ARM MOUNT AT 41'
- 3/4" RSC EXTENSION AT 6' (FOR EVP EXTENSION OVER HEAD 5-1)
- 5-FOOT EXTENSION, MOUNTING HARDWARE, AND KBR HUB AT 24' FOR VIDEO CAMERA (FOR MOUNTING ON MAST ARM)
- 1-VIDEO CABLE

④ INPLACE (MAINTAIN INPLACE)
- PA100 POLE FOUNDATION
- TYPE PA100-A-55-D40-9 (DAVIT AT 350 DEG)
- LUMINAIRE-250 W HPS
- 3-ONE WAY SIGNALS-OVERHEAD (0', 17' AND 29' FROM END OF MAST ARM)
- 2-TYPE 10B-POLE MOUNTED 90/180 DEG
- TYPE D SIGN PANEL-OVERHEAD
- ONE WAY EVP DETECTOR AND LIGHT (Ø8,3)
- 2-R6-1 SIGN PANELS-POLE MOUNTED 0/180 DEG
- EXTENDED INTO HH 16:
- 3" RSC
- 2-12/C 12
- 4-3/C 12
- 1-3/C 20
- 1-3/C 12 (LUM)

INPLACE (SALVAGE)
- 2-PEDESTRIAN PUSH BUTTONS AT 0/270 DEG
- 2-R10-3e METAL SIGNS AT 0/270 DEG

(&&) F & I
- 1-APS PB, SIGN (LT ARROW) AND APS MAST ARM POLE ADAPTOR (PB6-1)
- PLUG HOLES ON MAST ARM POLE WHERE PUSH BUTTONS USED TO BE (AT 0/270 DEG)
- 1-2/C 14

⑤ INPLACE (MAINTAIN INPLACE)
- PEDESTAL FOUNDATION
- 14' PEDESTAL POLE (INCLUDES BASE)
- WIND COLLAR FOR PEDESTAL POLE
- TYPE 5D
- EXTENDED INTO HH 20:
- 3" RSC
- 1-12/C 12
- 1-3/C 12

INPLACE (SALVAGE)
- 2-PEDESTRIAN PUSH BUTTONS (WEST/SOUTH SIDES)
- 2-R10-3e METAL SIGNS AT WEST/SOUTH SIDES

(&&) F & I
- 1-APS PB, SIGN (LT ARROW) AND APS PEDESTAL POLE SPACERS (PB8-1)
- PLUG HOLES ON PEDESTAL POLE WHERE PUSH BUTTONS USED TO BE (WEST/SOUTH SIDES))
- 1-2/C 14

② INPLACE (MAINTAIN INPLACE)
- PA100 POLE FOUNDATION
- TYPE PA100-A-55-D40-9 (DAVIT AT 350 DEG)
- LUMINAIRE-250 W HPS
- 3-ONE WAY SIGNALS-OVERHEAD (0', 18' AND 30' FROM END OF MAST ARM)
- TYPE 10B-POLE MOUNTED 90 DEG
- TYPE D SIGN PANEL-OVERHEAD
- ONE WAY EVP DETECTOR AND LIGHT (Ø4,7)
- 2-R6-1 SIGN PANELS-POLE MOUNTED 0/180 DEG
- EXTENDED INTO HH 5:
- 3" RSC
- 2-12/C 12
- 4-3/C 12
- 1-3/C 20
- 1-3/C 12 (LUM)

INPLACE (SALVAGE)
- 1-PEDESTRIAN PUSH BUTTON AT 270 DEG
- 1-R10-3e METAL SIGN AT 270 DEG

INPLACE (REVISE)
- REVISE TYPE 10A BRACKETING AT 180 DEG TO BECOME TYPE 10B (INPLACE 4-1, NEW P4-2)

INPLACE (REMOVE)
- R9-3 SIGN PANEL-FACING POLE 3

(&&) F & I
- 1-SET CD PED SIGNAL (HOUSING, VISOR, LED CDT LENS) AT 180 DEG (NEW P4-2)
- REVISE TYPE 10A TO TYPE 10B AT 180 DEG
- 1-APS PB, SIGN (LT ARROW) AND APS MAST ARM POLE ADAPTOR (PB2-1)
- PLUG HOLES ON MAST ARM POLE WHERE PUSH BUTTON USED TO BE (AT 270 DEG)
- 1-2/C 14

(&&) F & I
- APS PUSH BUTTON STATION (SEE DETAILS)
- 1-APS PB & SIGN (RT ARROW) (PB2-2)
- EXTEND INTO HH 1:
- 1" CONDUIT
- 1-2/C 14
- 1-1/C 6 (INS GR)

(&&) F & I
- APS PUSH BUTTON STATION (SEE DETAILS)
- 1-APS PB & SIGN (RT ARROW) (PB4-2)
- EXTEND INTO HH 5:
- 1" CONDUIT
- 1-2/C 14
- 1-1/C 6 (INS GR)

(&&) F & I
- APS PUSH BUTTON STATION (SEE DETAILS)
- 1-APS PB & SIGN (LT ARROW) (PB4-1)
- EXTEND INTO HH 10:
- 1" CONDUIT
- 1-2/C 14
- 1-1/C 6 (INS GR)

(&&) F & I
- APS PUSH BUTTON STATION (SEE DETAILS)
- 1-APS PB & SIGN (RT ARROW) (PB6-2)
- EXTEND INTO HH 10:
- 1" CONDUIT
- 1-2/C 14
- 1-1/C 6 (INS GR)

(&&) F & I
- APS PUSH BUTTON STATION (SEE DETAILS)
- 1-APS PB & SIGN (RT ARROW) (PB8-2)
- EXTEND INTO HH 16:
- 1" CONDUIT
- 1-2/C 14
- 1-1/C 6 (INS GR)

③ INPLACE (MAINTAIN INPLACE)
- PA100 POLE FOUNDATION
- TYPE PA100-A-55-D40-9 (DAVIT AT 350 DEG)
- LUMINAIRE-250 W HPS
- END MOUNT CAPPED (FOR FUTURE USE)
- 2-ONE WAY SIGNALS-OVERHEAD (17' & 29' FROM END OF MAST ARM) (6-3, 6-2)
- TYPE 10B-POLE MOUNTED 180 DEG
- TYPE D SIGN PANEL-OVERHEAD
- 2-R6-1 SIGN PANELS-POLE MOUNTED 0/180 DEG
- EXTENDED INTO HH 10:
- 3" RSC
- 3-12/C 12
- 2-3/C 12
- 1-3/C 20
- 1-3/C 12 (LUM)

INPLACE (S & I)
- ONE WAY SIGNAL (HOUSING, VISORS, BACKGROUND SHIELD) - OVERHEAD AT 41' (RELOCATE TO 6')
- RLA-YLA-GLA LED LENSES - RELOCATE FROM SIGNAL HEAD AT 17' TO SIGNAL HEAD AT 6' (FOR 1-1)
- RYG LED LENSES - RELOCATE FROM SIGNAL HEAD AT 41' TO SIGNAL HEAD AT 17' (FOR 6-3)
- ONE WAY EVP DETECTOR & LIGHT AT 6' (Ø6,1)

INSTALL (FURNISHED BY COUNTY)
- VIDEO CAMERA-MAST ARM MOUNTED (FACING SB TRAFFIC) (V6/1-1)

F & I
- STRAP-ON MID MAST ARM MOUNT AT 6' (FOR 1-1)
- CAP MID-MAST ARM MOUNT AT 41'
- 3/4" RSC EXTENSION AT 6' (FOR EVP EXTENSION OVER HEAD 1-1)
- 5-FOOT EXTENSION, MOUNTING HARDWARE, AND KBR HUB AT 24' FOR VIDEO CAMERA (FOR MOUNTING ON MAST ARM)
- 1-VIDEO CABLE

INPLACE (SALVAGE)
- 1-PEDESTRIAN PUSH BUTTON AT 180 DEG
- 1-R10-3e METAL SIGN AT 180 DEG

INPLACE (REVISE)
- REVISE TYPE 10A BRACKETING AT 90 DEG TO BECOME TYPE 10B (INPLACE 3-2, NEW P4-1)

INPLACE (REMOVE)
- R9-3 SIGN PANEL-FACING POLE 2

(&&) F & I
- 1-SET CD PED SIGNAL (HOUSING, VISOR, LED CDT LENS) AT 90 DEG (NEW P4-1)
- REVISE TYPE 10A TO TYPE 10B AT 90 DEG
- PLUG HOLES ON MAST ARM POLE WHERE PUSH BUTTON USED TO BE (AT 180 DEG)

INSTALL
- VIDEO PROCESSOR AND INTERNAL VIDEO EQUIPMENT (FURNISHED BY COUNTY)

Ⓐ INPLACE (MAINTAIN INPLACE)
- CONTROLLER AND CABINET
- CABINET FOUNDATION
- EXTENDED INTO HH 21:
- METERED SIGNAL SERVICE
- 2" RSC
- 3-1/C 6
- EXTENDED INTO HH 1:
- 2-4" RSC
- 5-12/C 12
- 6-3/C 12
- 2-3/C 20
- 19-2/C 14
- 1-6 SM FO CABLE
- 1-1/C 14 (TRACER)

1-VIDEO CABLE (F & I)

F & I (&&) 5-2/C 14 + 1-1/C 6 (INS GR)

- EXTENDED INTO HH 20:
- 2-4" RSC
- 5-12/C 12
- 6-3/C 12
- 2-3/C 20
- 19-2/C 14
- 1-6 SM FO CABLE
- 1-1/C 14 (TRACER)

1-VIDEO CABLE (F & I)

F & I (&&) 3-2/C 14 + 1-1/C 6 (INS GR)

- 2-3" RSC STUBBED OUT FROM CABINET TO SOUTH (BOTH ENDS THREADED & CAPPED)

COUNTY PROJECT 22-18-17

DRAWN BY: JMG
DESIGNER: JMG
CHECKED BY: JMG
DESIGN TEAM

NO.	BY	DATE	REVISIONS

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.
Date: May 9, 2022
Name: John M Gray, PE
Lic. No. 22457

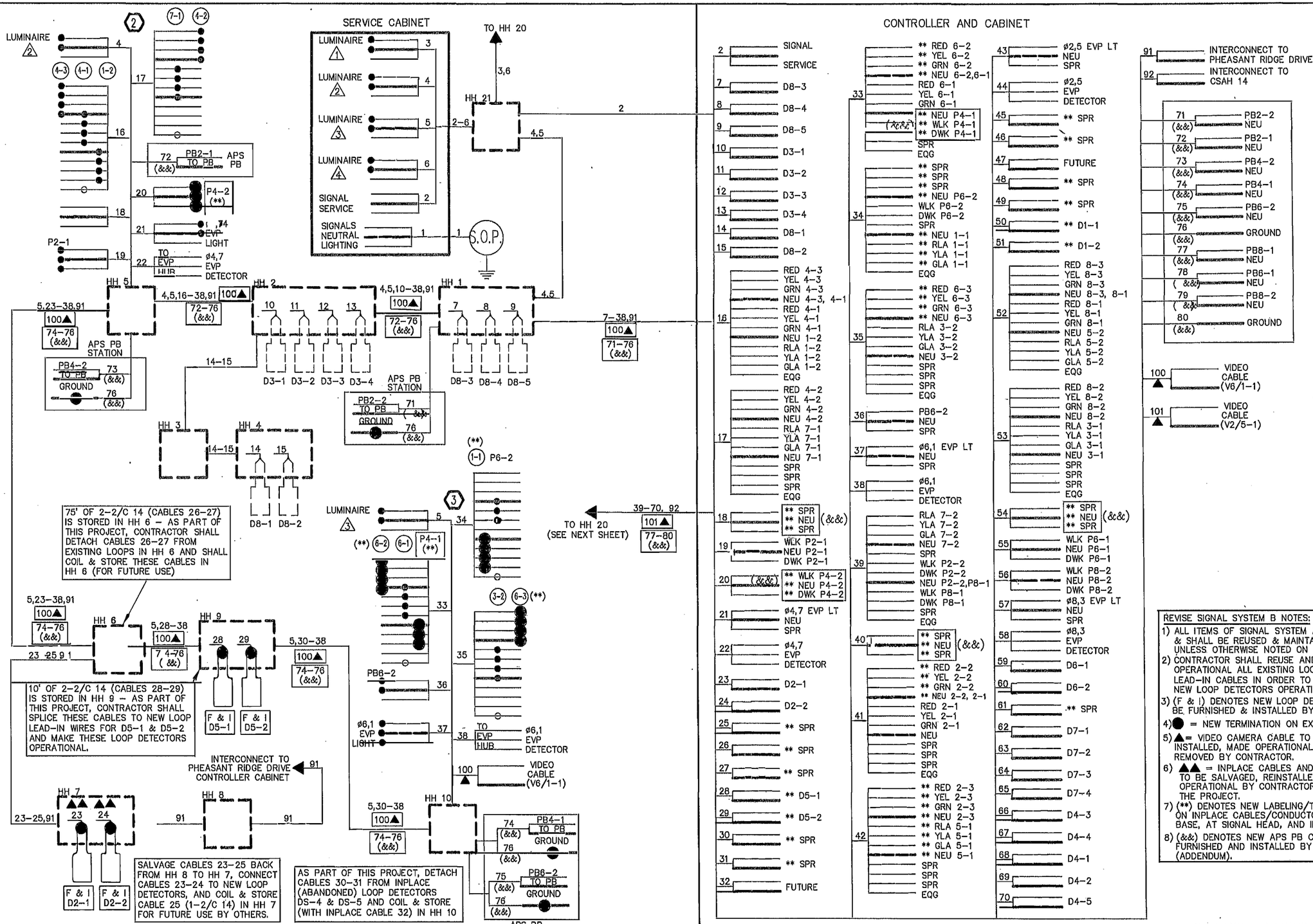
SEH
PHONE: (651) 490-2000
3535 VADNAIS CENTER DR.
ST. PAUL, MN 55110

ANOKA COUNTY
CITY OF BLAINE

REVISE SIGNAL SYSTEM "B"
NOTES
CSAH 17 (LEXINGTON AVENUE NE)
AT CSAH 12 (109TH AVENUE NE)

FILE NO. ANOKC 122928
SIGNAL SHEET 8 OF 35

NOTE: ADDENDUM WORK (ADDING APS PUSH BUTTONS TO REVISE SIGNAL SYSTEM "B") IS BOXED IN AND DENOTED BY (&&).



REVISE SIGNAL SYSTEM B NOTES:

1) ALL ITEMS OF SIGNAL SYSTEM ARE INPLACE & SHALL BE REUSED & MAINTAINED INPLACE UNLESS OTHERWISE NOTED ON PLANS.
2) CONTRACTOR SHALL REUSE AND MAKE OPERATIONAL ALL EXISTING LOOP DETECTOR LEAD-IN CABLES IN ORDER TO MAKE ALL NEW LOOP DETECTORS OPERATIONAL.
3) (F & I) DENOTES NEW LOOP DETECTORS TO BE FURNISHED & INSTALLED BY CONTRACTOR.
4) ● = NEW TERMINATION ON EXISTING CABLE.
5) ▲ = VIDEO CAMERA CABLE TO BE FURNISHED INSTALLED, MADE OPERATIONAL, AND REMOVED BY CONTRACTOR.
6) ▲▲ = INPLACE CABLES AND CONDUCTORS TO BE SALVAGED, REINSTALLED, AND MADE OPERATIONAL BY CONTRACTOR AS PART OF THE PROJECT.
7) (**) DENOTES NEW LABELING/TERMINATION ON INPLACE CABLES/CONDUCTORS IN POLE BASE, AT SIGNAL HEAD, AND IN CABINET.
8) (&&) DENOTES NEW APS PB CABLES TO BE FURNISHED AND INSTALLED BY CONTRACTOR (ADDENDUM).

COUNTY PROJECT 22-18-17

DRAWN BY: JMG
DESIGNER: JMG
CHECKED BY: JMG
DESIGN TEAM

NO.	BY	DATE	REVISIONS

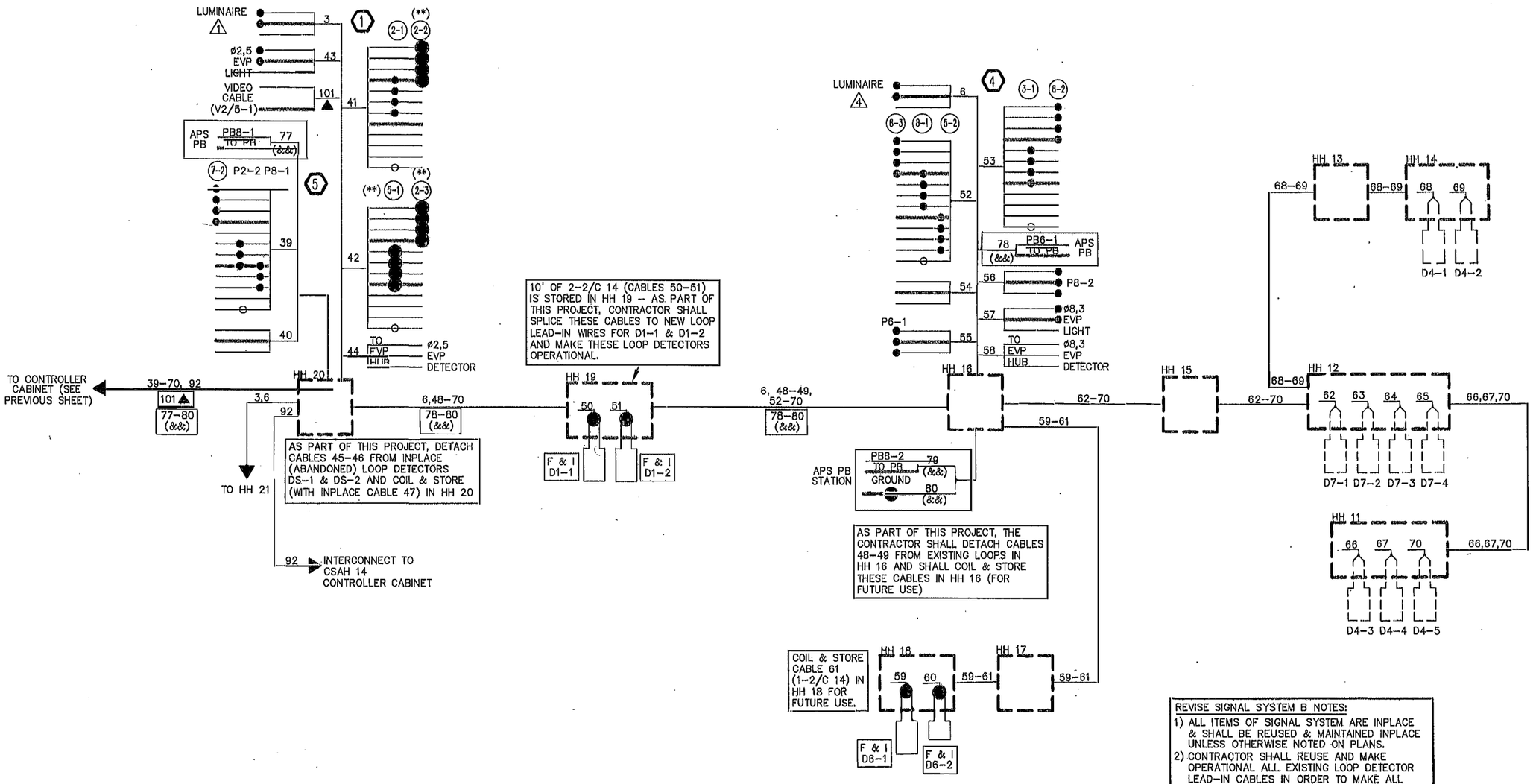
I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
Date: May 9, 2022
Name: John M Gray, PE
Lic. No. 22457

SEH
PHONE: (651) 490-2000
3535 VADNAIS CENTER DR.
ST. PAUL, MN 55110

ANOKA COUNTY
CITY OF BLAINE

REVISE SIGNAL SYSTEM "B"
FIELD WIRING DIAGRAM
CSAH 17 (LEXINGTON AVENUE NE)
AT CSAH 12 (109TH AVENUE NE)

FILE NO. ANOKC 122928
SIGNAL SHEET 9 OF 35
78/110



NOTE: ADDENDUM WORK (ADDING APS PUSH BUTTONS TO REVISE SIGNAL SYSTEM "B") IS BOXED IN AND DENOTED BY (&&).

REVISE SIGNAL SYSTEM B NOTES:

1) ALL ITEMS OF SIGNAL SYSTEM ARE INPLACE & SHALL BE REUSED & MAINTAINED INPLACE UNLESS OTHERWISE NOTED ON PLANS.
2) CONTRACTOR SHALL REUSE AND MAKE OPERATIONAL ALL EXISTING LOOP DETECTOR LEAD-IN CABLES IN ORDER TO MAKE ALL NEW LOOP DETECTORS OPERATIONAL.
3) (F & I) DENOTES NEW LOOP DETECTORS TO BE FURNISHED & INSTALLED BY CONTRACTOR.
4) ● = NEW TERMINATION ON EXISTING CABLE.
5) ▲= VIDEO CAMERA CABLE TO BE FURNISHED INSTALLED, MADE OPERATIONAL, AND REMOVED BY CONTRACTOR.
6) ▲▲ = INPLACE CABLES AND CONDUCTORS TO BE SALVAGED, REINSTALLED, AND MADE OPERATIONAL BY CONTRACTOR AS PART OF THE PROJECT.
7) (**) DENOTES NEW LABELING/TERMINATION ON INPLACE CABLES/CONDUCTORS IN POLE BASE, AT SIGNAL HEAD, AND IN CABINET.
8) (&&) DENOTES NEW APS PB CABLES TO BE FURNISHED AND INSTALLED BY CONTRACTOR (ADDENDUM).

COUNTY PROJECT 22-18-17

DRAWN BY: JMG
DESIGNER: JMG
CHECKED BY: JMG
DESIGN TEAM

NO.	BY	DATE	REVISIONS

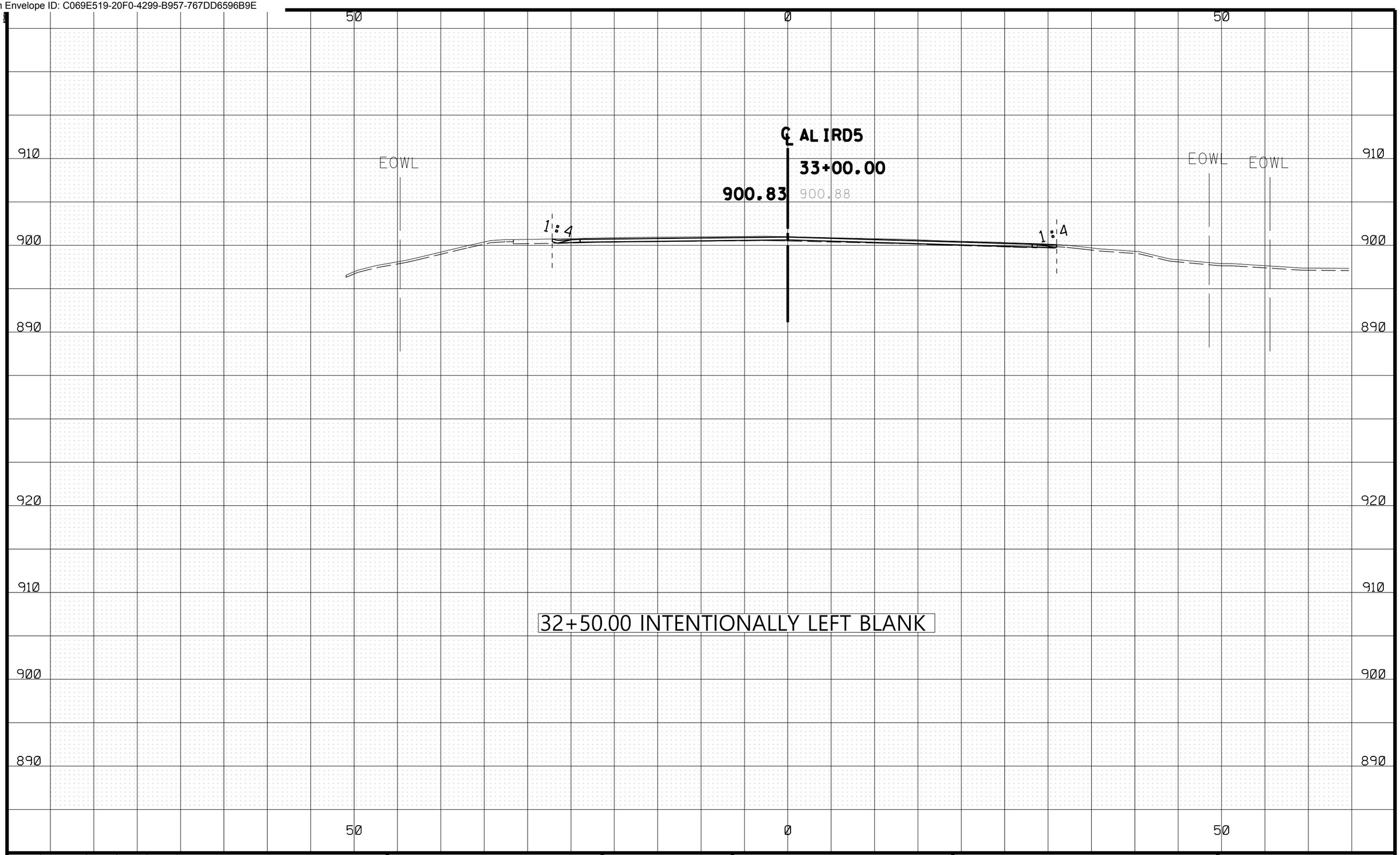
I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
Date: May 9, 2022
Name: John M Gray, PE
Lic. No. 22467

SEH
PHONE: (651) 490-2000
3535 VADNAIS CENTER DR.
ST. PAUL, MN 55110

ANOKA COUNTY
CITY OF BLAINE

REVISE SIGNAL SYSTEM 'B'
FIELD WIRING DIAGRAM
CSAH 17 (LEXINGTON AVENUE NE)
AT CSAH 12 (109TH AVENUE NE)

FILE NO. ANOKC 122928
SIGNAL SHEET 10 OF 35
79/110



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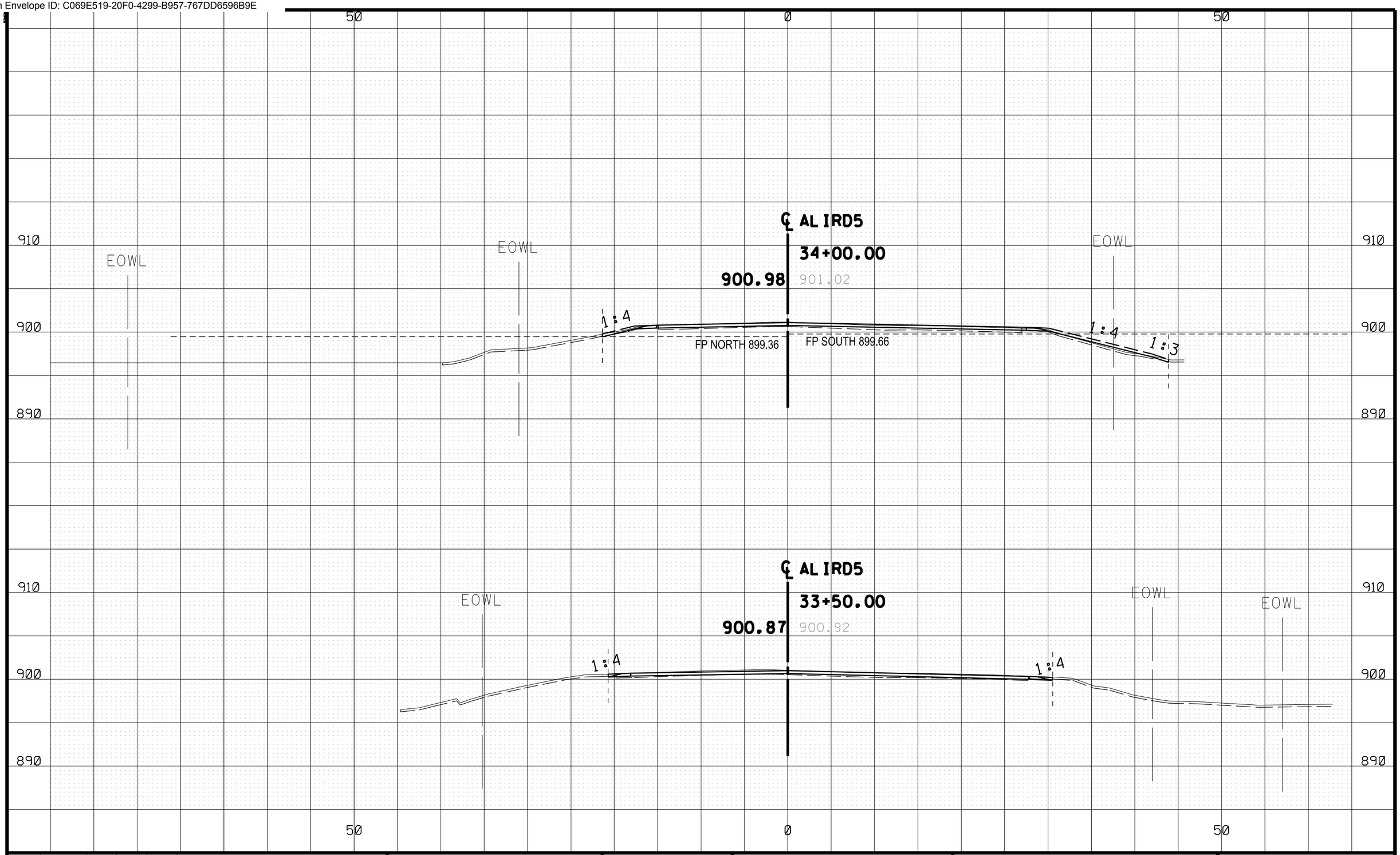
DRAWN BY JJF DATE 12/01/24
DESIGN BY JJF DATE 12/01/24
CHECKED BY NJD DATE 01/28/25

ANOKA COUNTY HIGHWAY DEPT.

SAP 002-612-035

CROSS SECTIONS
STA 32+50.00 TO 33+00.00



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ANOKA COUNTY

ANOKA COUNTY HIGHWAY DEPT.

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CROSS SECTIONS

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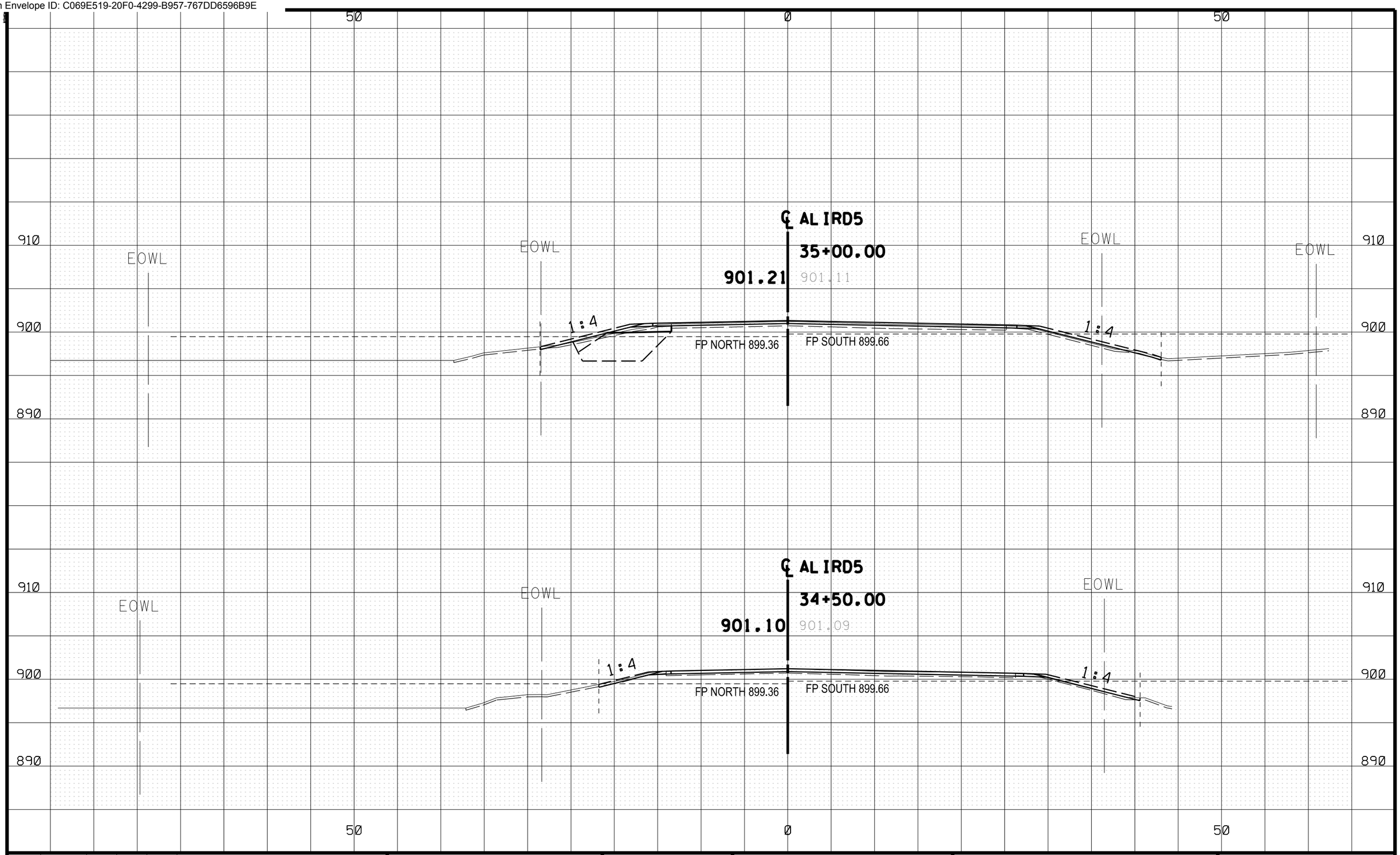
Sheet 81 of 110 Sheets



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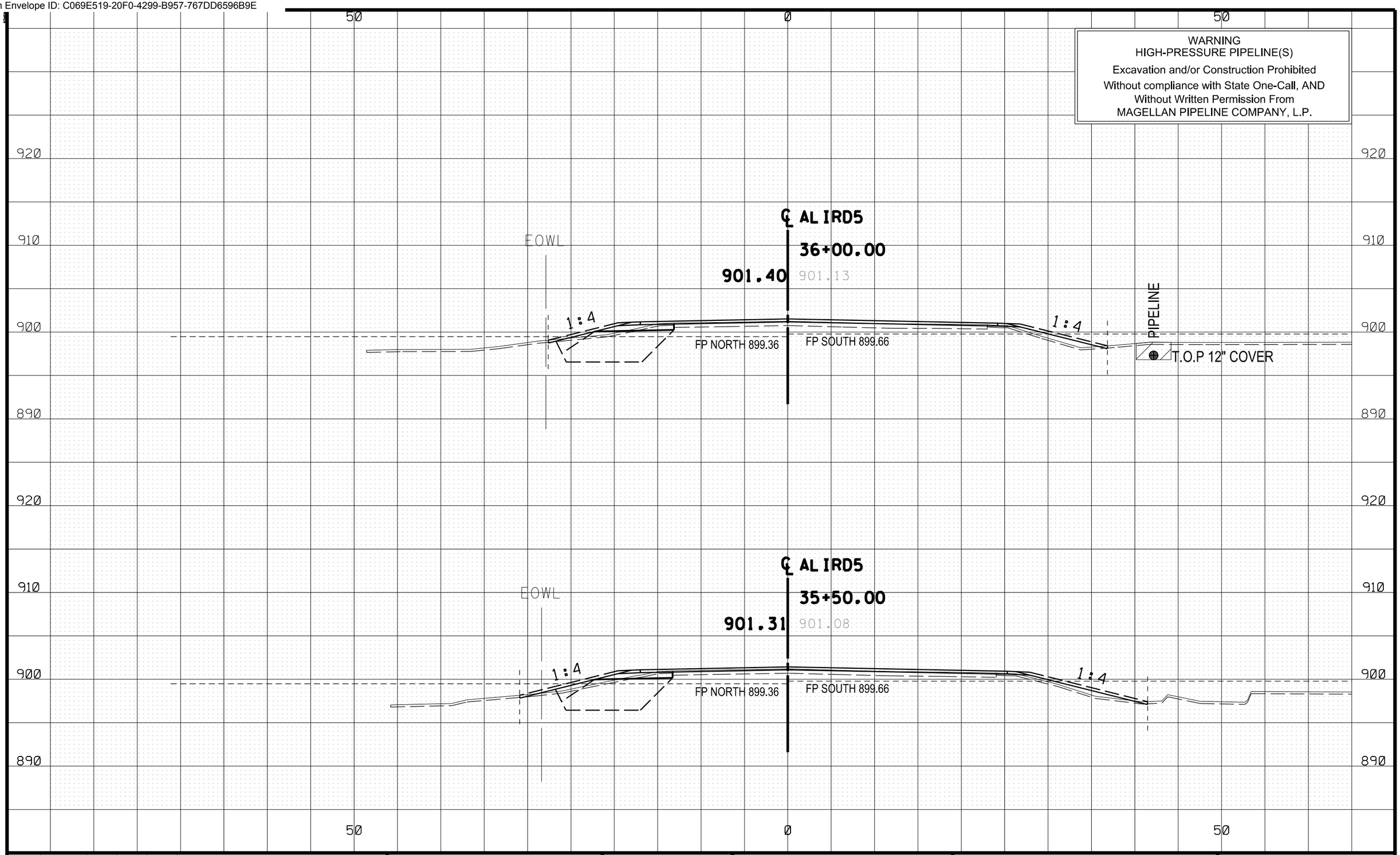
CROSS SECTIONS

STA 34+50.00 TO 35+00.00

WARNING
HIGH-PRESSURE PIPELINE(S)
Excavation and/or Construction Prohibited
Without compliance with State One-Call, AND
Without Written Permission From
MAGELLAN PIPELINE COMPANY, L.P.



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DESIGN BY JJF DATE 12/01/24
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ANOKA COUNTY
HIGHWAY DEPT.

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CROSS SECTIONS
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Sheet 83 of 110 Sheets

WARNING
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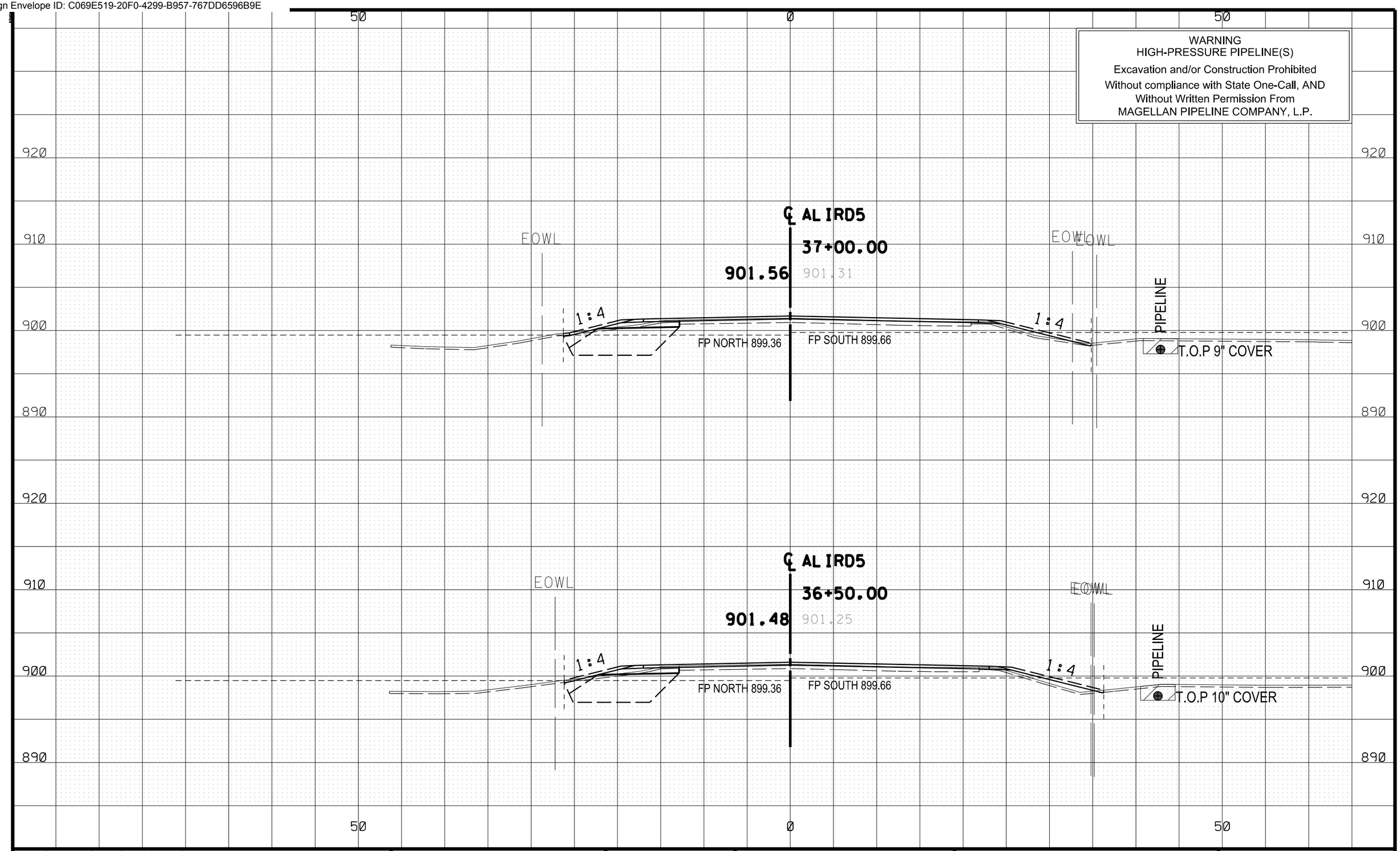
Without Written Permission From
MAGELLAN PIPELINE COMPANY, L.P.



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ANOKA COUNTY
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Sheet 84 of 110 Sheets

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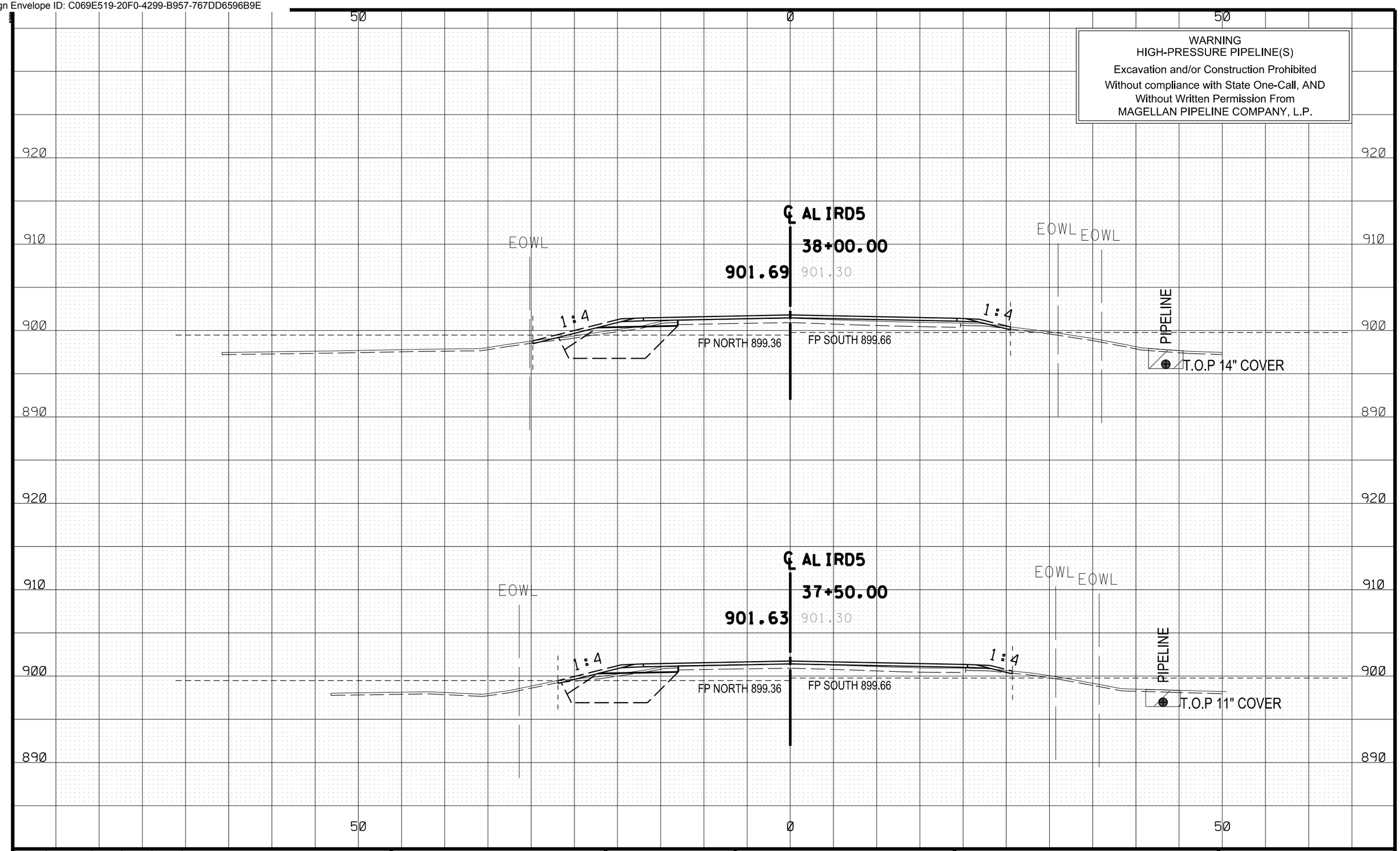

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ANOKA COUNTY
HIGHWAY DEPT.

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CROSS SECTIONS
STA 37+50.00 TO 38+00.00

Sheet 85 of 110 Sheets

WARNING
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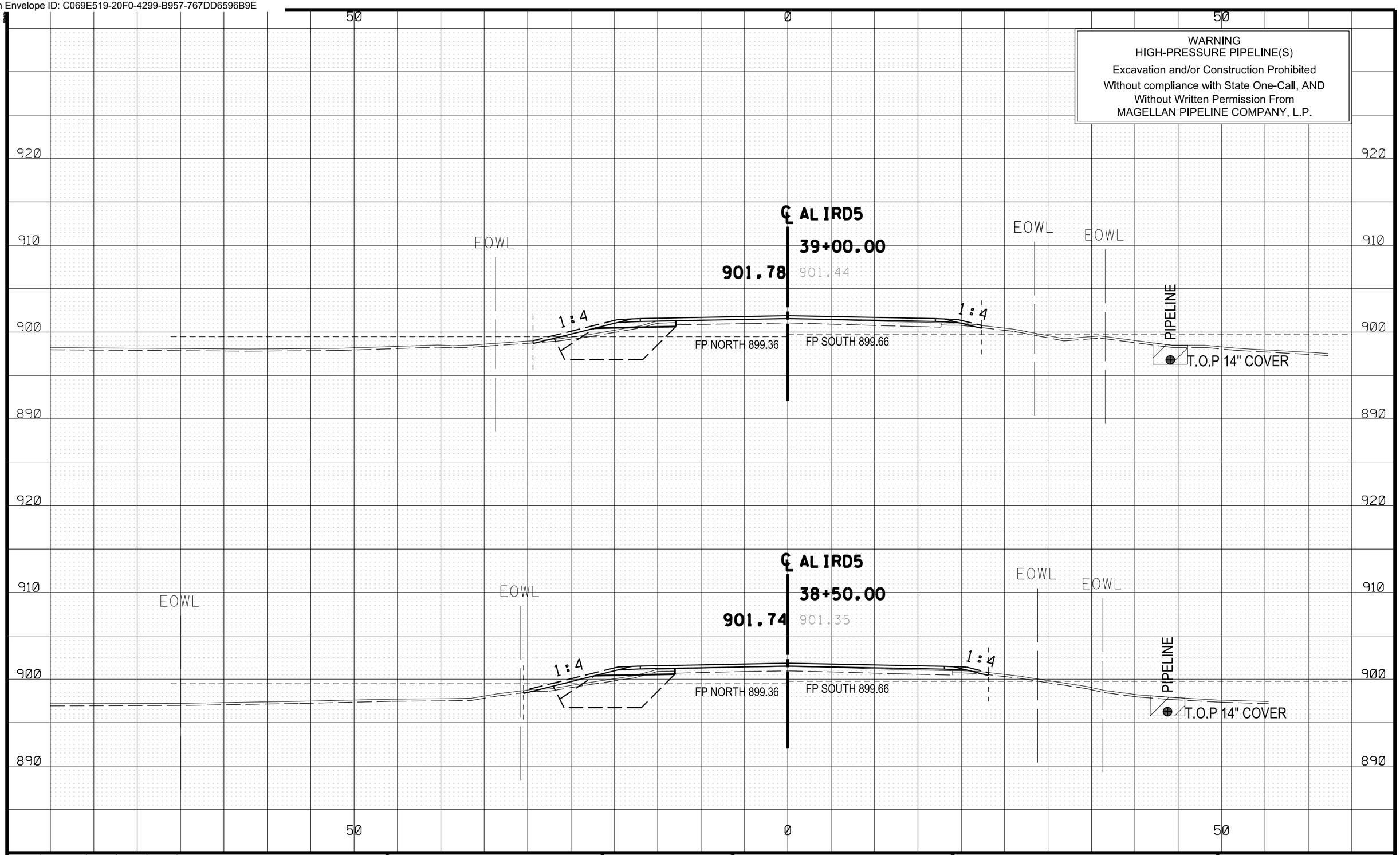

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CHECKED BY NJD DATE 01/28/25

ANOKA COUNTY
HIGHWAY DEPT.

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CROSS SECTIONS
STA 38+50.00 TO 39+00.00

WARNING
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Excavation and/or Construction Prohibited
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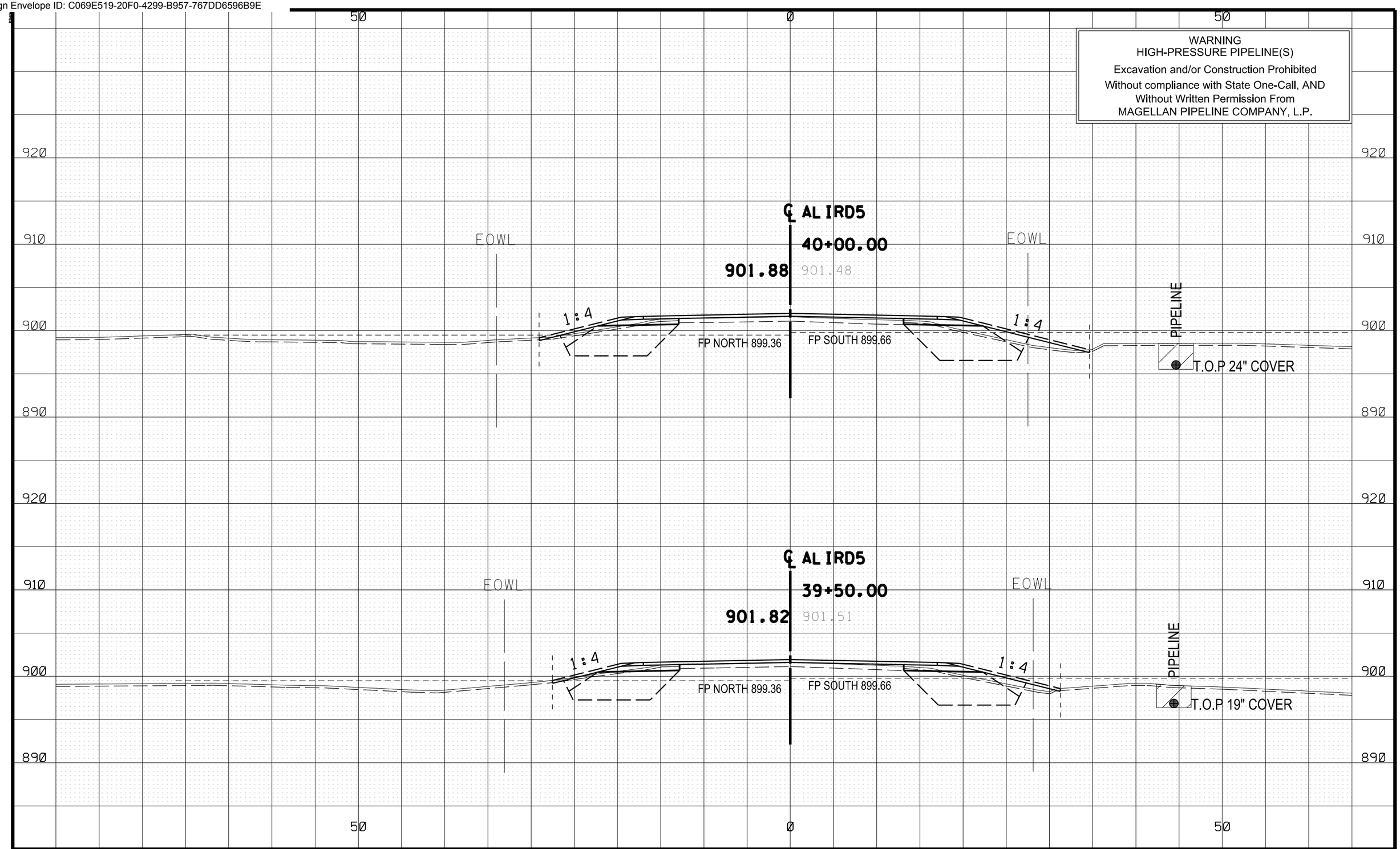
MAGELLAN PIPELINE COMPANY, L.P.



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DESIGN BY JJF DATE 12/01/24
CHECKED BY NJD DATE 01/28/25

ANOKA COUNTY
HIGHWAY DEPT.

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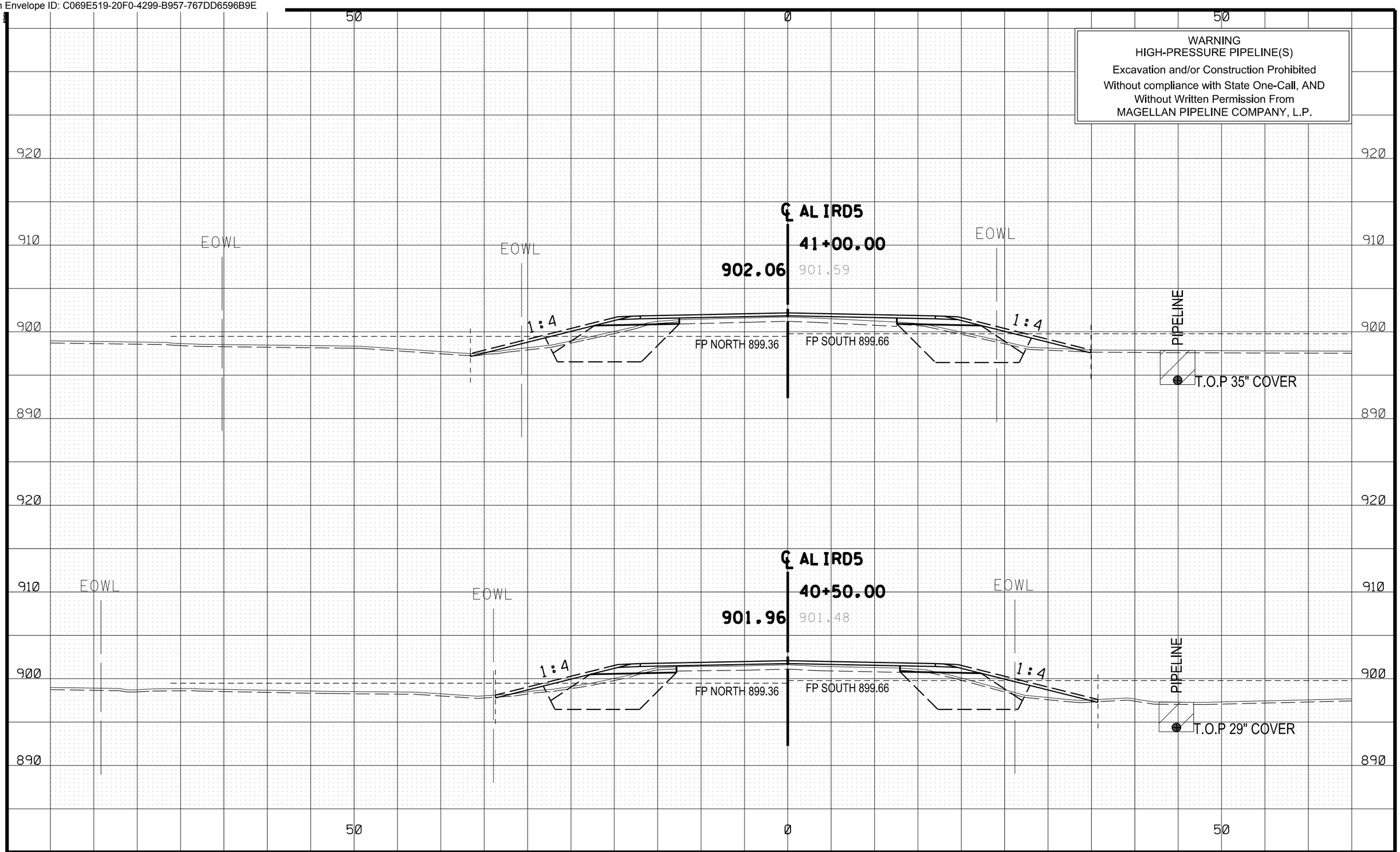
CROSS SECTIONS
STA 39+50.00 TO 40+00.00
Sheet 87 of 110 Sheets

WARNING
HIGH-PRESSURE PIPELINE(S)
Excavation and/or Construction Prohibited
Without compliance with State One-Call, AND
Without Written Permission From
MAGELLAN PIPELINE COMPANY, L.P.



NO	DATE	BY	CKD	APPR	REVISION

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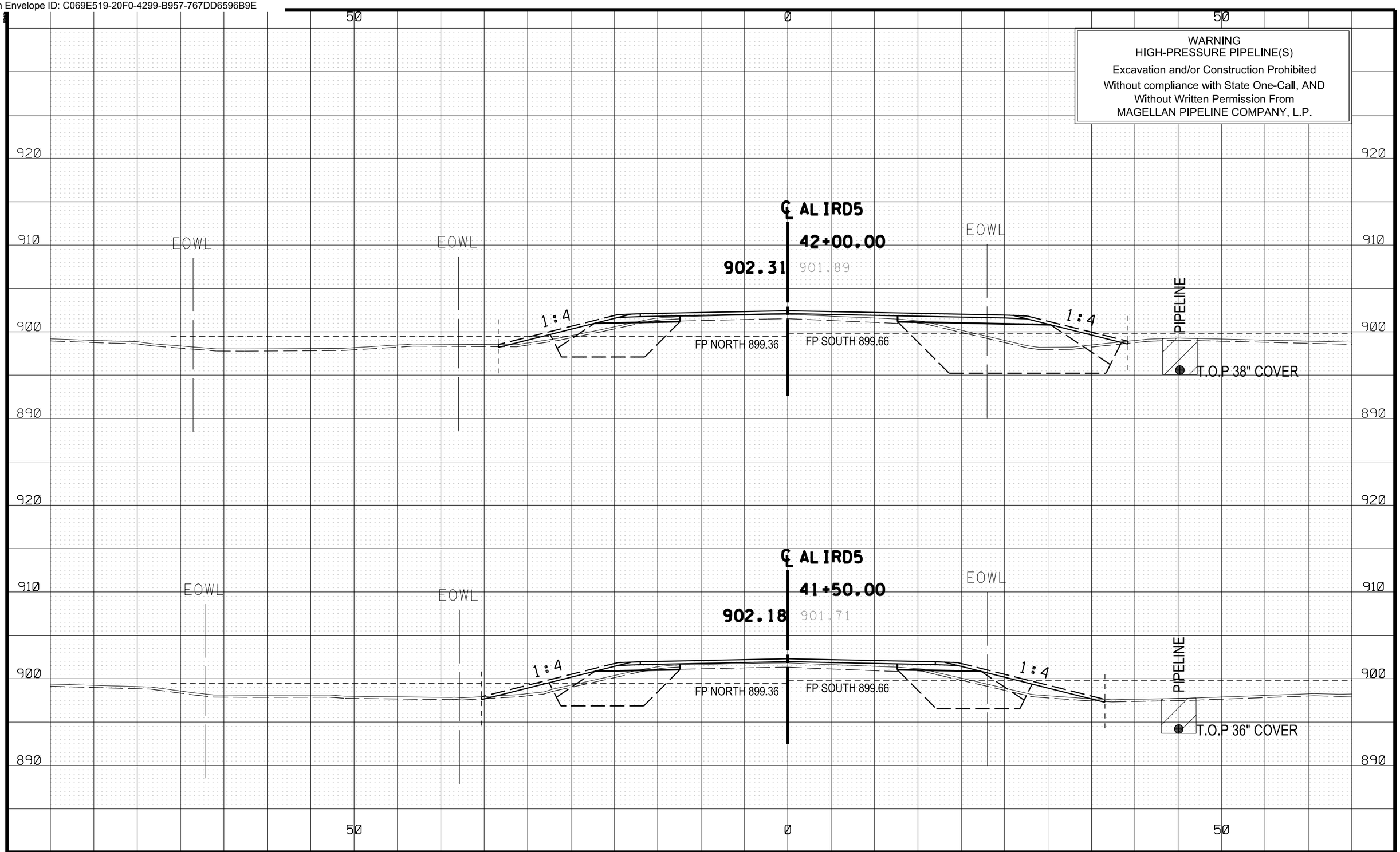
DESIGN BY JJF DATE 12/01/24
CHECKED BY NJD DATE 01/28/25

ANOKA COUNTY HIGHWAY DEPT.

SAP 002-612-035

CROSS SECTIONS
STA 40+50.00 TO 41+00.00

WARNING
HIGH-PRESSURE PIPELINE(S)
Excavation and/or Construction Prohibited
Without compliance with State One-Call, AND
Without Written Permission From
MAGELLAN PIPELINE COMPANY, L.P.



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ANOKA COUNTY
HIGHWAY DEPT.

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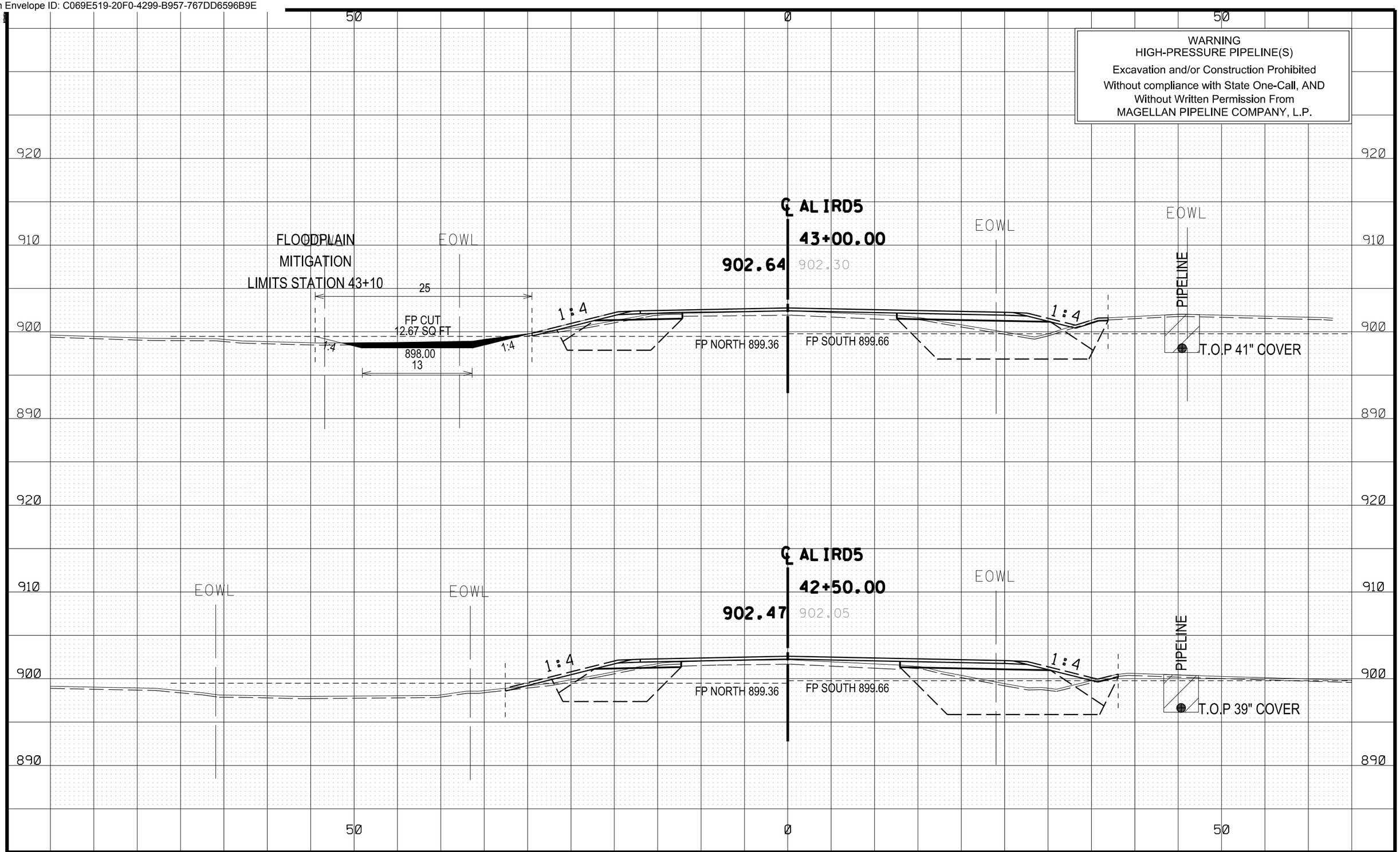
CROSS SECTIONS
STA 41+50.00 TO 42+00.00

Sheet 89 of 110 Sheets

WARNING
HIGH-PRESSURE PIPELINE(S)
Excavation and/or Construction Prohibited
Without compliance with State One-Call, AND
Without Written Permission From
MAGELLAN PIPELINE COMPANY, L.P.



NO	DATE	BY	CKD	APPR	REVISION

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DRAWN BY JJF DATE 12/01/24
DESIGN BY JJF DATE 12/01/24
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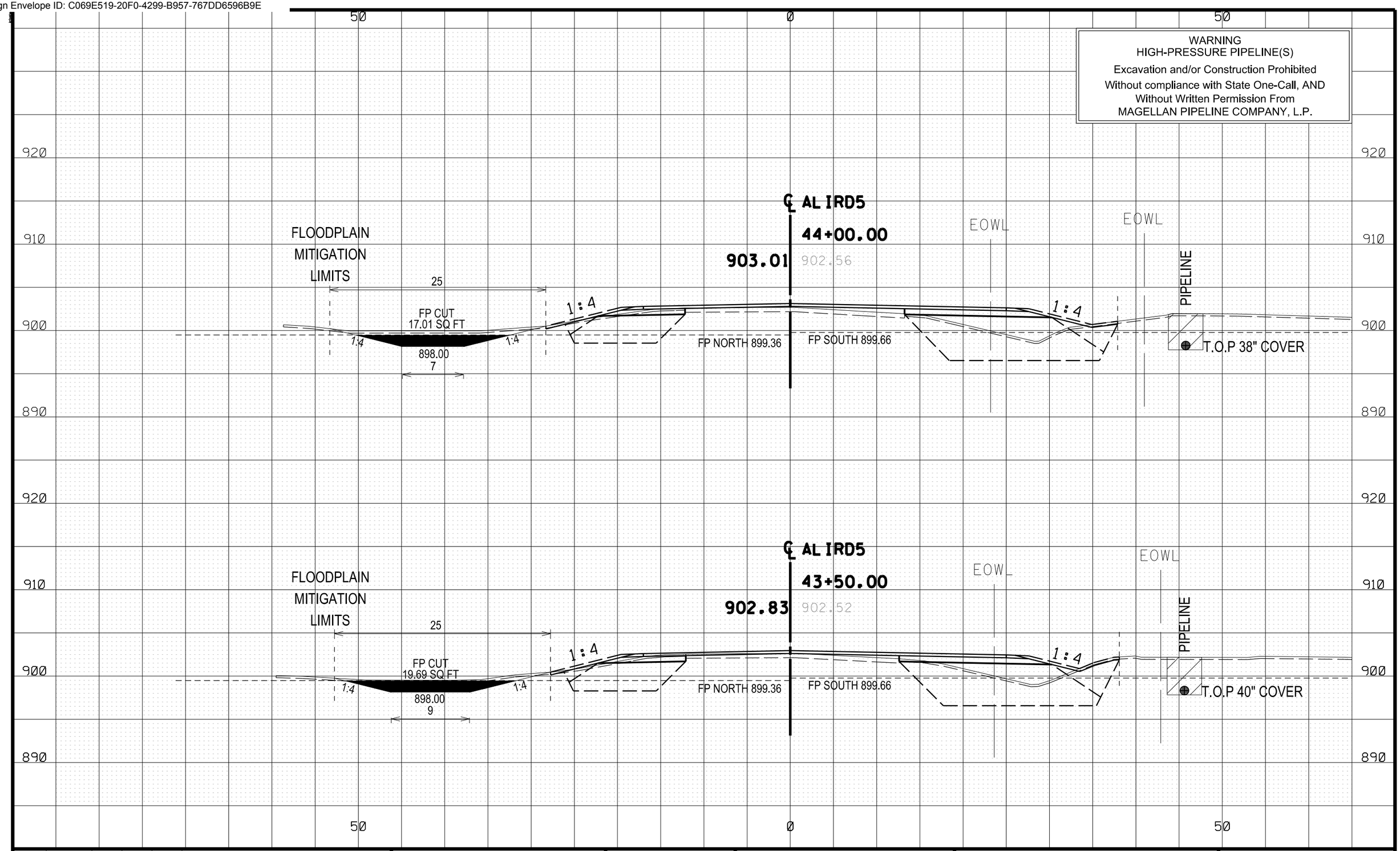
ANOKA COUNTY
HIGHWAY DEPT.

SAP 002-612-035

CROSS SECTIONS
STA 42+50.00 TO 43+00.00

WARNING
HIGH-PRESSURE PIPELINE(S)
Excavation and/or Construction Prohibited
Without compliance with State One-Call, AND
Without Written Permission From
MAGELLAN PIPELINE COMPANY, L.P.



NO	DATE	BY	CKD	APPR	REVISION

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ANOKA COUNTY
HIGHWAY DEPT.

SAP 002-612-035

CROSS SECTIONS
STA 43+50.00 TO 44+00.00

WARNING
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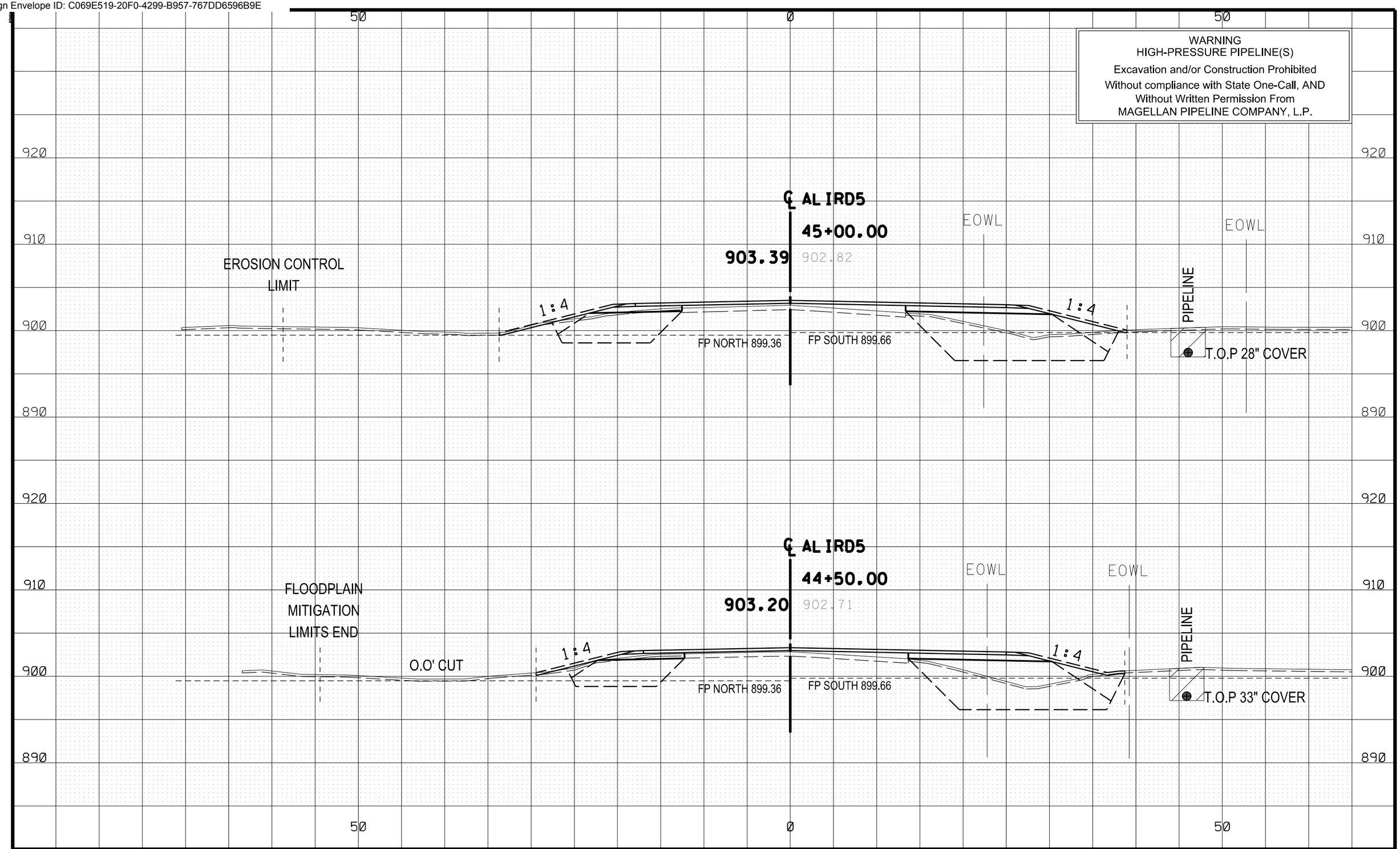
Without Written Permission From
MAGELLAN PIPELINE COMPANY, L.P.



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ANOKA COUNTY
HIGHWAY DEPT.

SAP 002-612-035

CROSS SECTIONS
STA 44+50.00 TO 45+00.00

Sheet 92 of 110 Sheets

WARNING
HIGH-PRESSURE PIPELINE(S)
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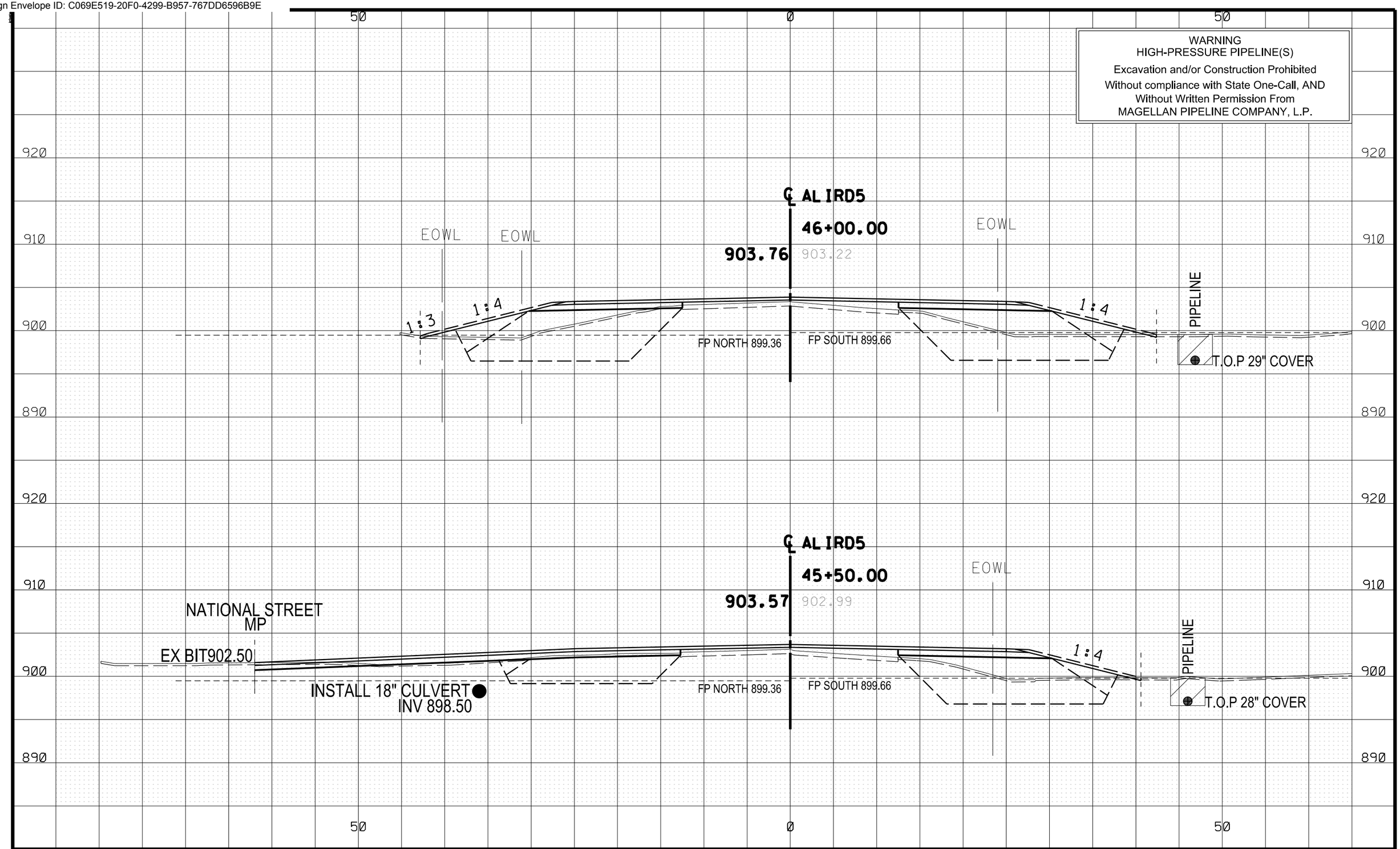
Without Written Permission From
MAGELLAN PIPELINE COMPANY, L.P.



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ANOKA COUNTY
HIGHWAY DEPT.

SAP 002-612-035

CROSS SECTIONS
STA 45+50.00 TO 46+00.00

WARNING
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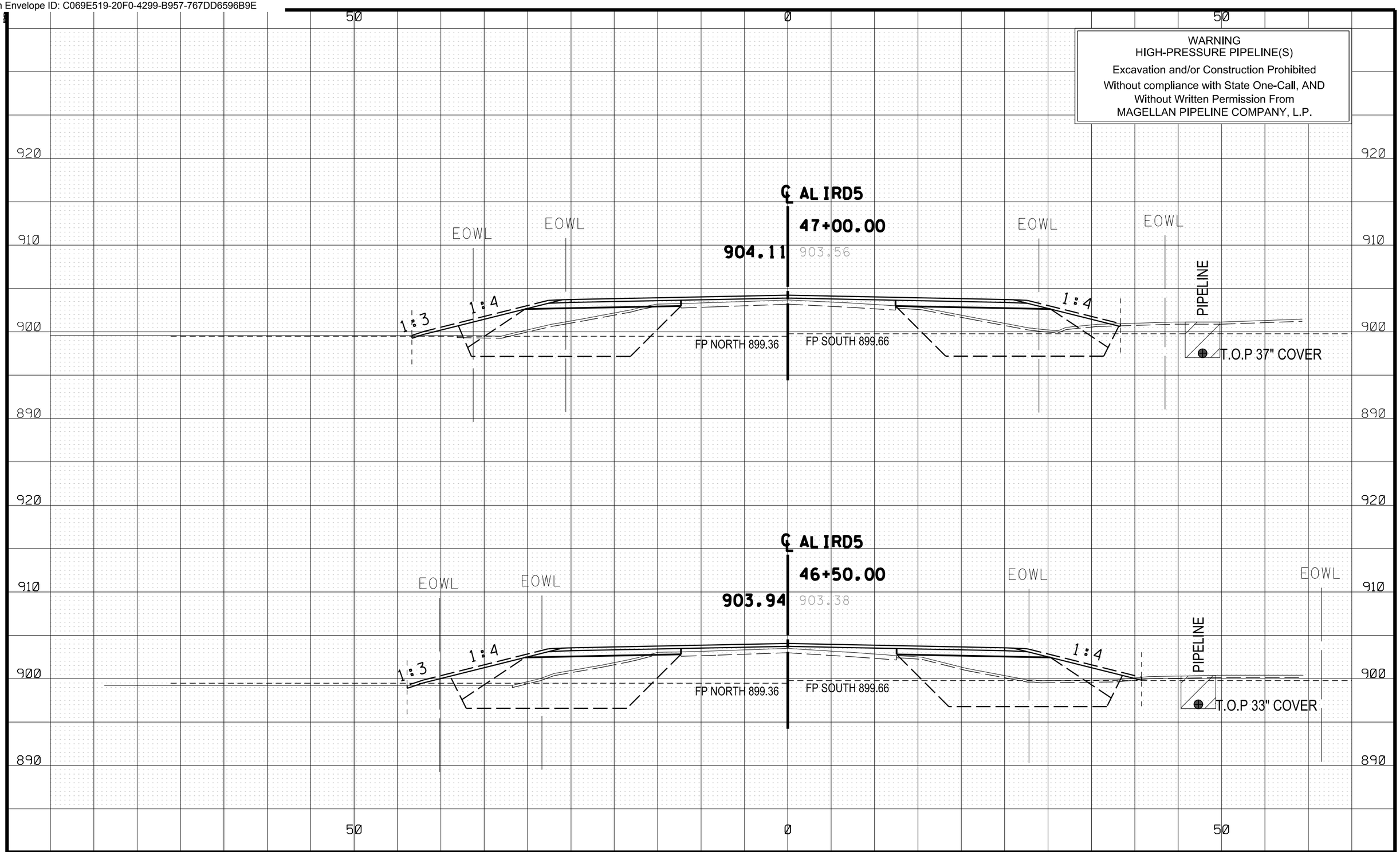

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ANOKA COUNTY
HIGHWAY DEPT.

SAP 002-612-035

CROSS SECTIONS
STA 46+50.00 TO 47+00.00

WARNING
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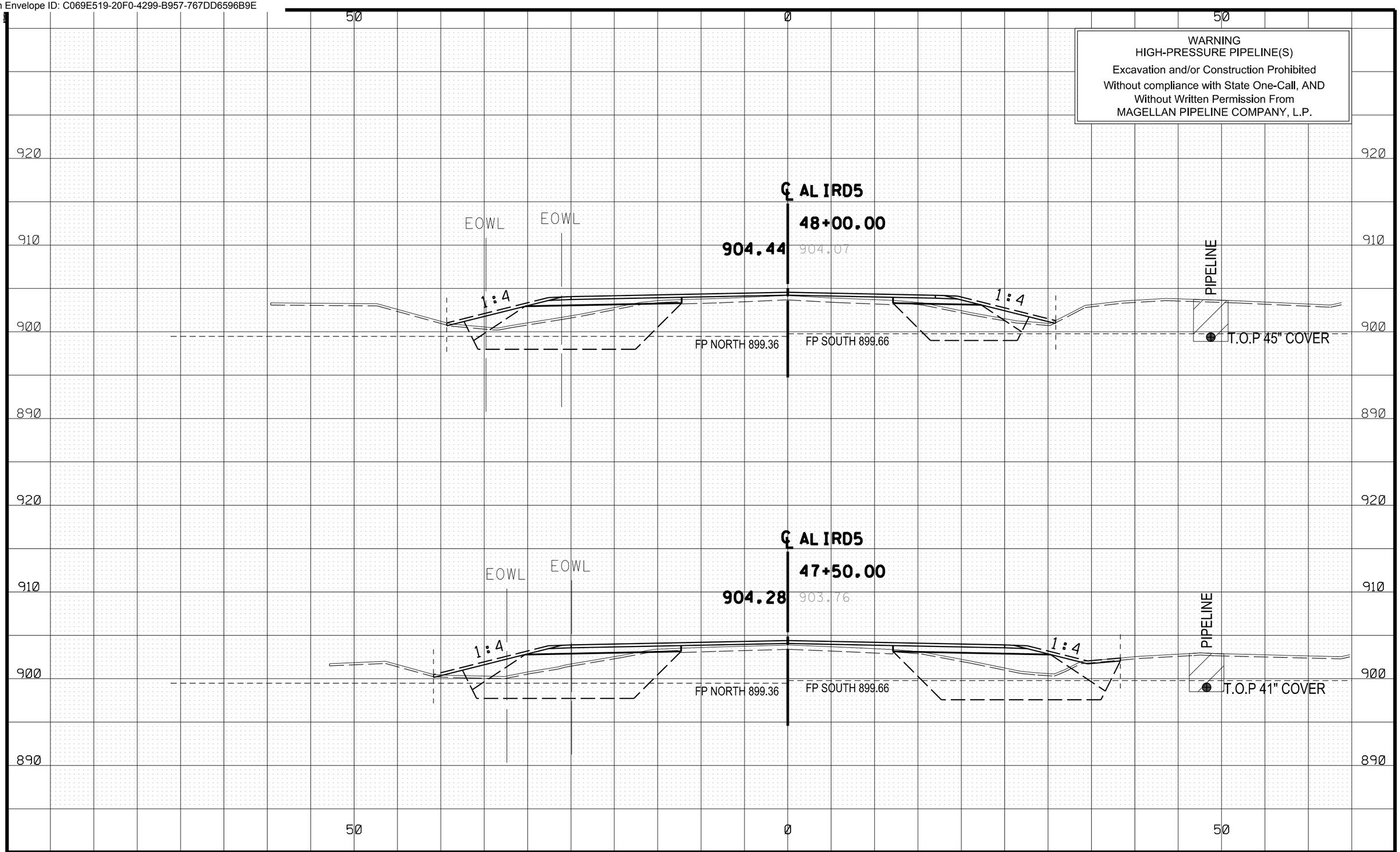

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ANOKA COUNTY
HIGHWAY DEPT.

SAP 002-612-035

CROSS SECTIONS
STA 47+50.00 TO 48+00.00

Sheet 95 of 110 Sheets

WARNING
HIGH-PRESSURE PIPELINE(S)
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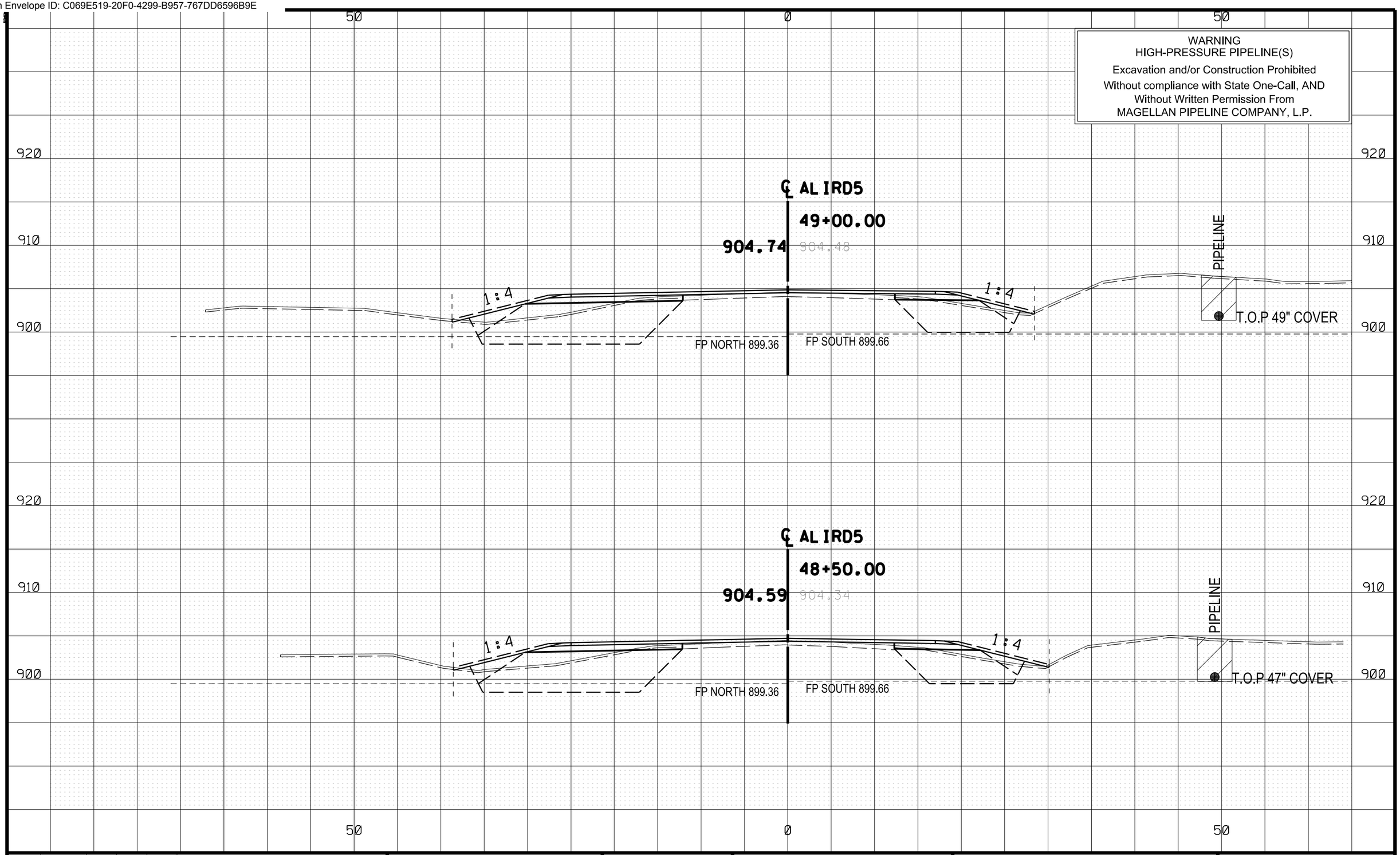

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ANOKA COUNTY
HIGHWAY DEPT.

SAP 002-612-035

CROSS SECTIONS
STA 48+50.00 TO 49+00.00

WARNING
HIGH-PRESSURE PIPELINE(S)
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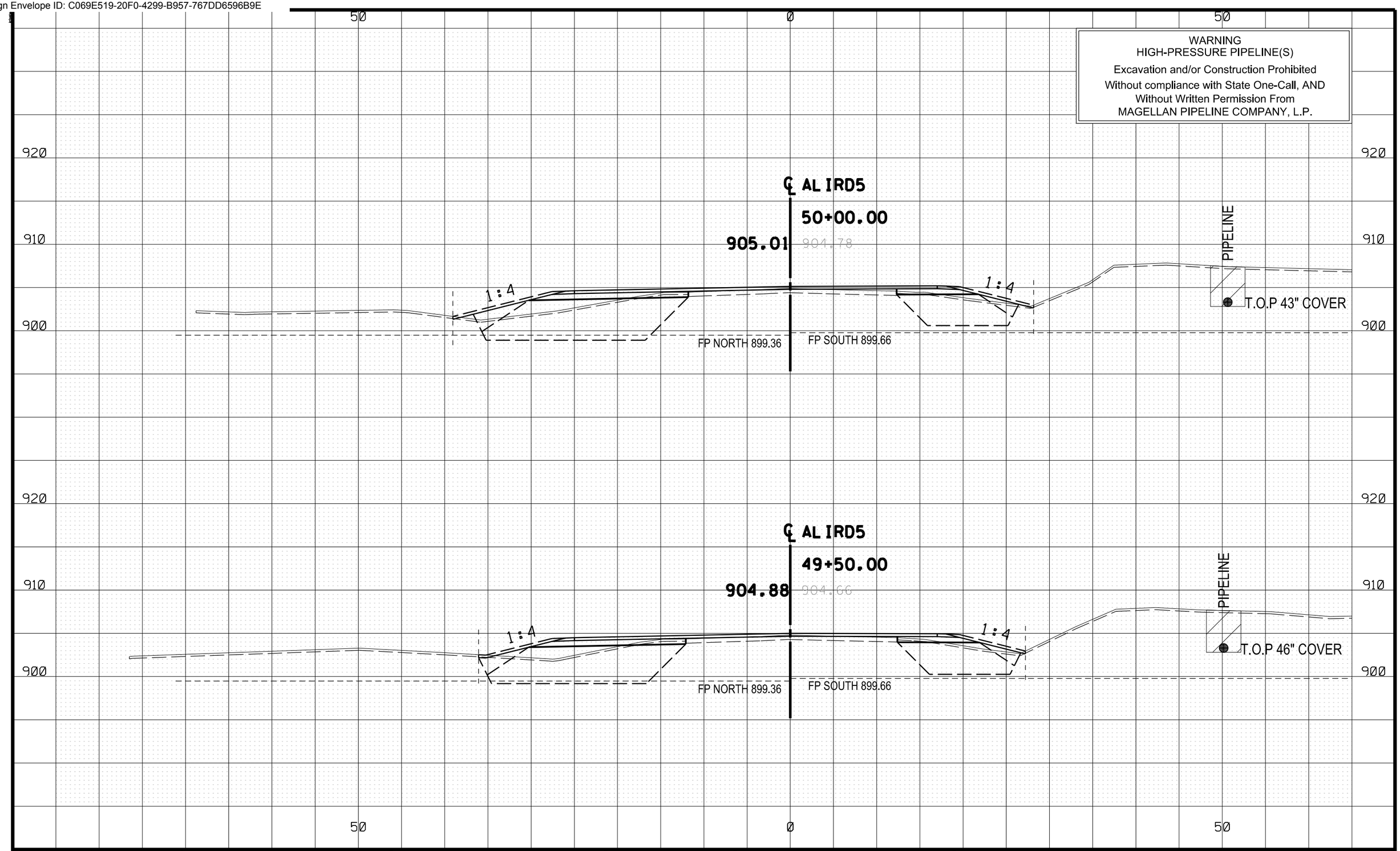

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ANOKA COUNTY
HIGHWAY DEPT.

SAP 002-612-035

CROSS SECTIONS
STA 49+50.00 TO 50+00.00

Sheet 97 of 110 Sheets

WARNING
HIGH-PRESSURE PIPELINE(S)
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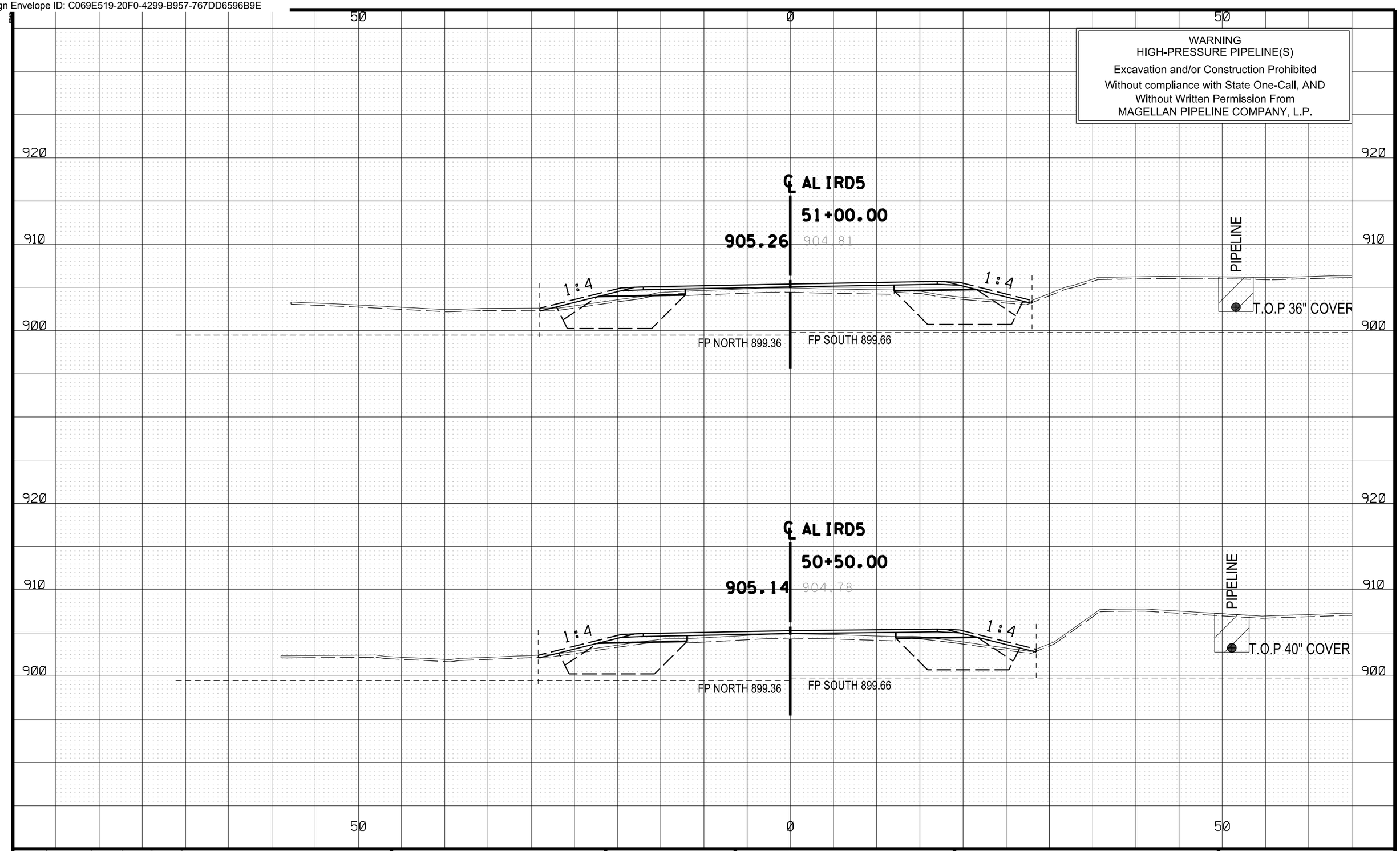

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ANOKA COUNTY
HIGHWAY DEPT.

SAP 002-612-035

CROSS SECTIONS
STA 50+50.00 TO 51+00.00
Sheet 98 of 110 Sheets

WARNING
HIGH-PRESSURE PIPELINE(S)
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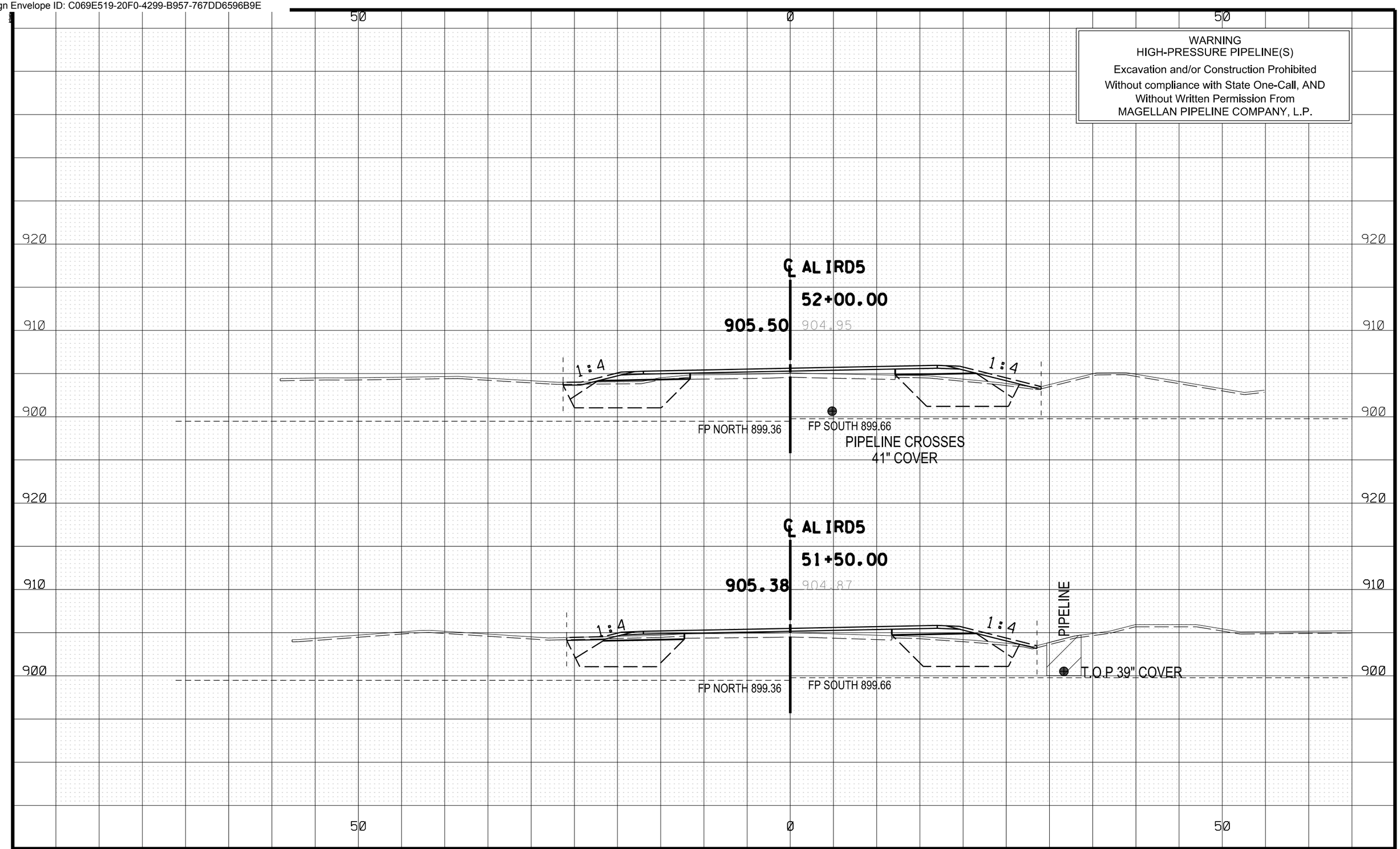
MAGELLAN PIPELINE COMPANY, L.P.



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ANOKA COUNTY
HIGHWAY DEPT.

SAP 002-612-035

CROSS SECTIONS
STA 51+50.00 TO 52+00.00

Sheet 99 of 110 Sheets

WARNING
HIGH-PRESSURE PIPELINE(S)
Excavation and/or Construction Prohibited
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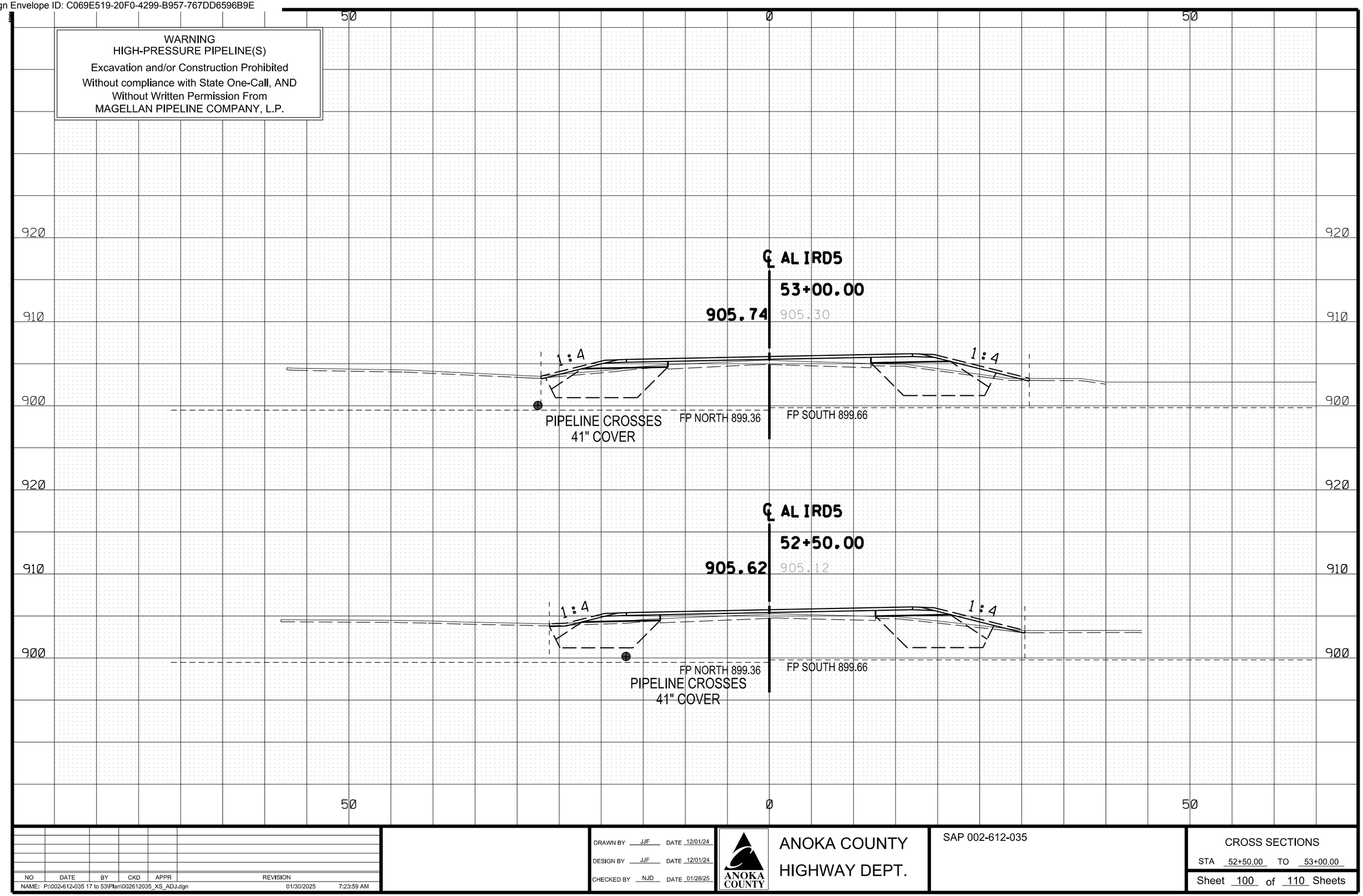
MAGELLAN PIPELINE COMPANY, L.P.



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ANOKA COUNTY
HIGHWAY DEPT.

SAP 002-612-035

CROSS SECTIONS
STA 52+50.00 TO 53+00.00

Sheet 100 of 110 Sheets

WARNING
HIGH-PRESSURE PIPELINE(S)
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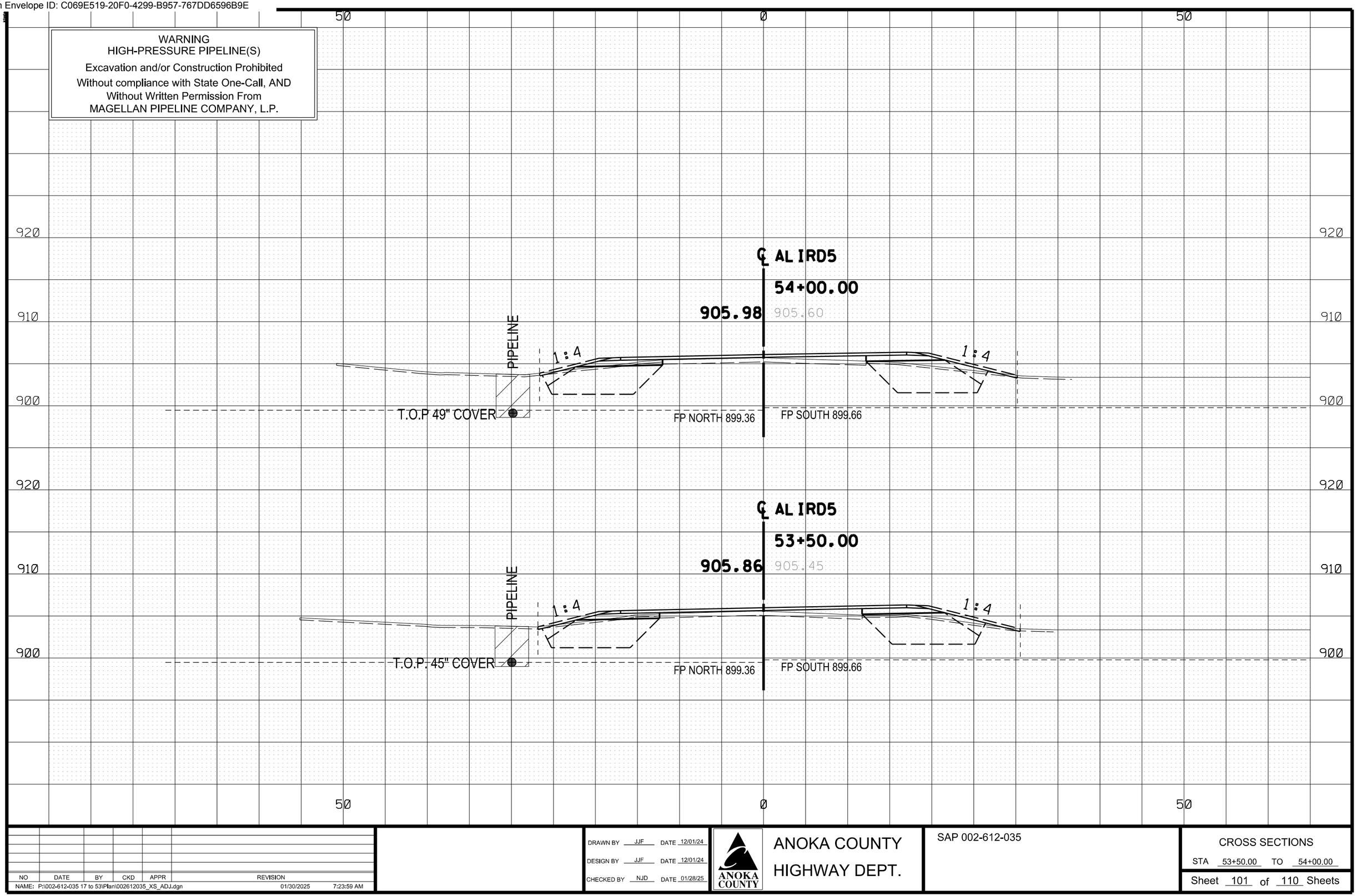

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ANOKA COUNTY
HIGHWAY DEPT.

SAP 002-612-035

CROSS SECTIONS
STA 53+50.00 TO 54+00.00
Sheet 101 of 110 Sheets

WARNING
HIGH-PRESSURE PIPELINE(S)
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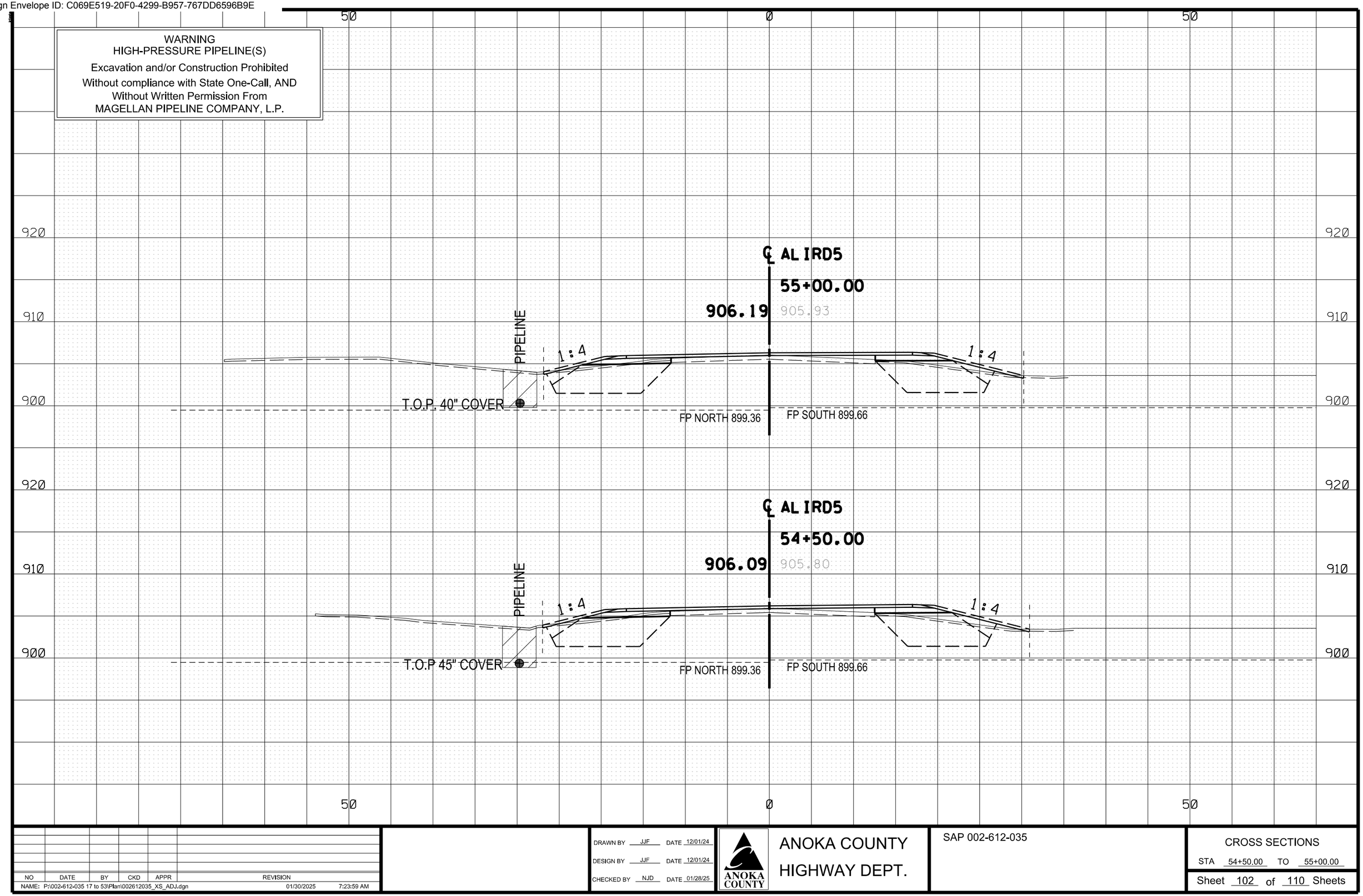

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ANOKA COUNTY
HIGHWAY DEPT.

SAP 002-612-035

CROSS SECTIONS
STA 54+50.00 TO 55+00.00

Sheet 102 of 110 Sheets

WARNING
HIGH-PRESSURE PIPELINE(S)
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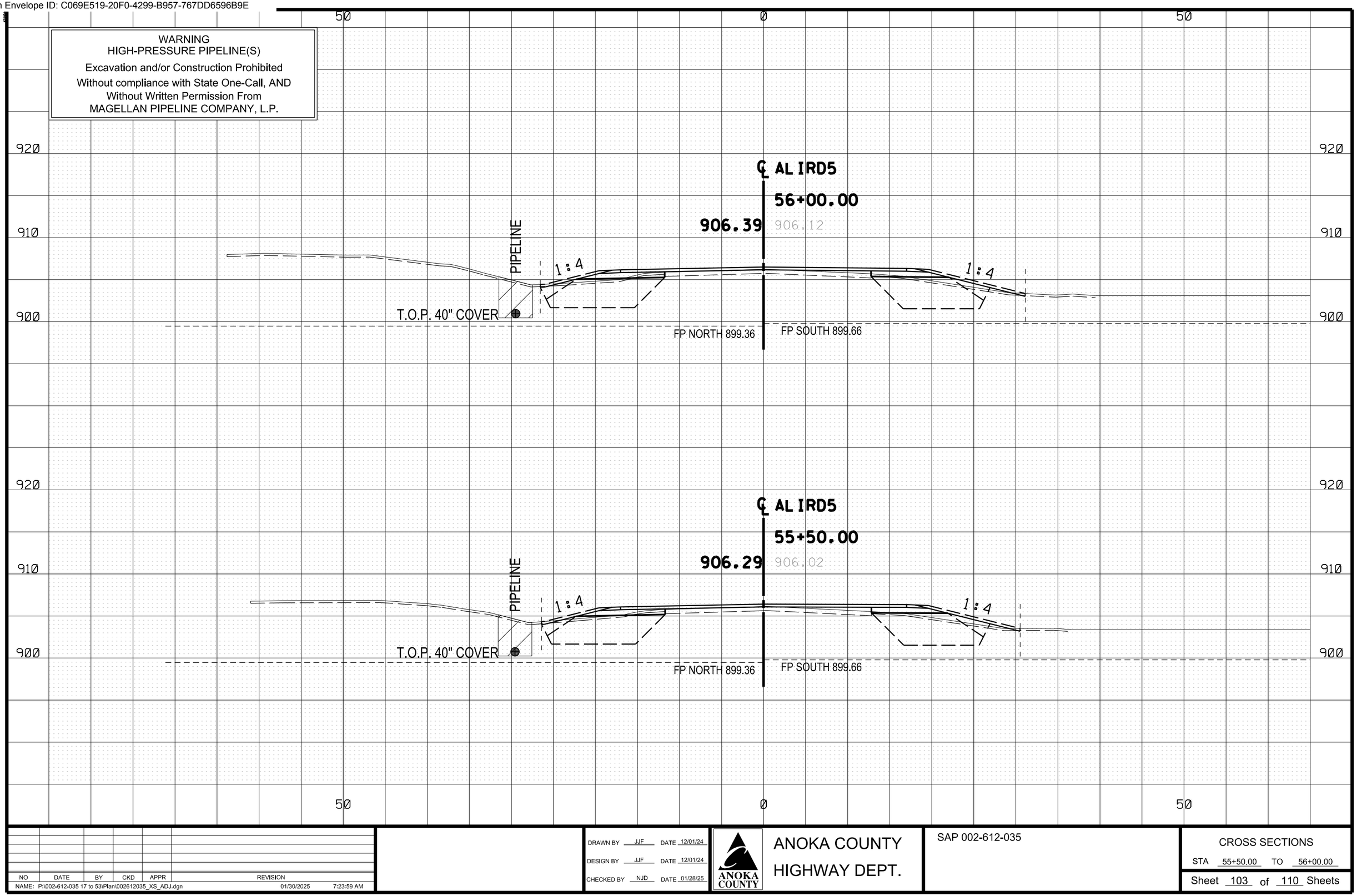

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ANOKA COUNTY
HIGHWAY DEPT.

SAP 002-612-035

CROSS SECTIONS
STA 55+50.00 TO 56+00.00

Sheet 103 of 110 Sheets

WARNING
HIGH-PRESSURE PIPELINE(S)
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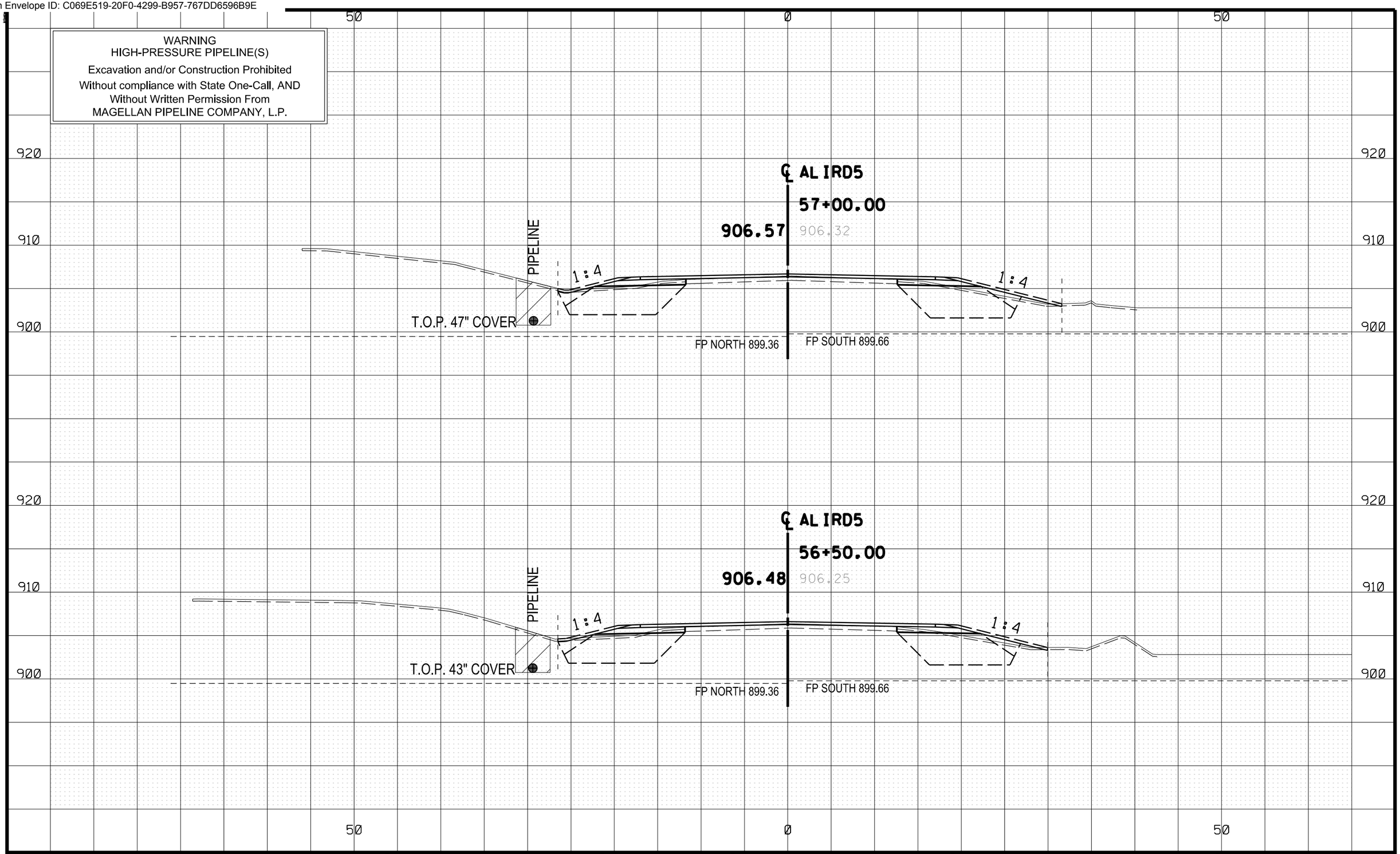

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ANOKA COUNTY
HIGHWAY DEPT.

SAP 002-612-035

CROSS SECTIONS
STA 56+50.00 TO 57+00.00

Sheet 104 of 110 Sheets

WARNING
HIGH-PRESSURE PIPELINE(S)
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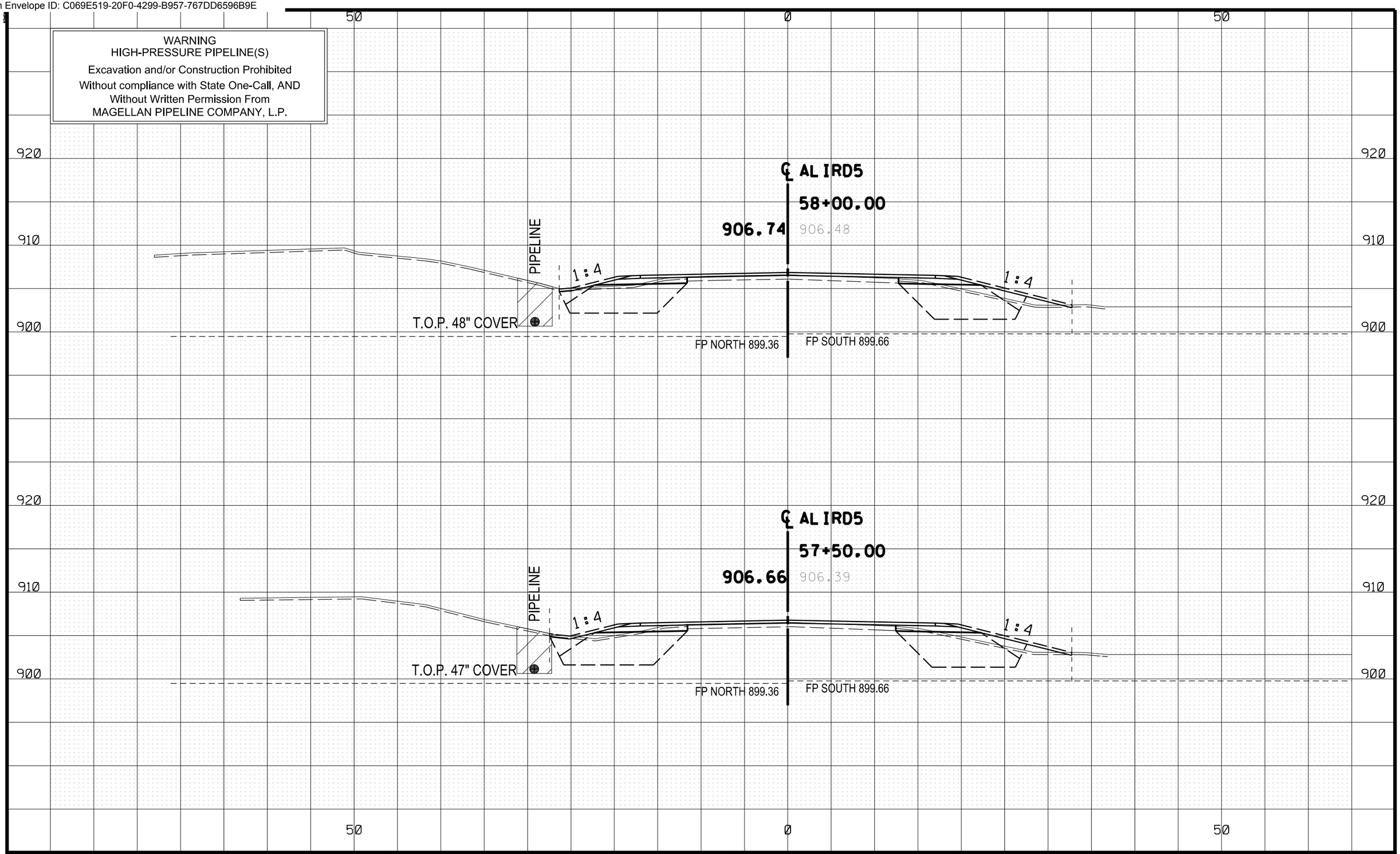
Without Written Permission From
MAGELLAN PIPELINE COMPANY, L.P.



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ANOKA COUNTY HIGHWAY DEPT.

SAP 002-612-035

CROSS SECTIONS
STA 57+50.00 TO 58+00.00

Sheet 105 of 110 Sheets

WARNING
HIGH-PRESSURE PIPELINE(S)
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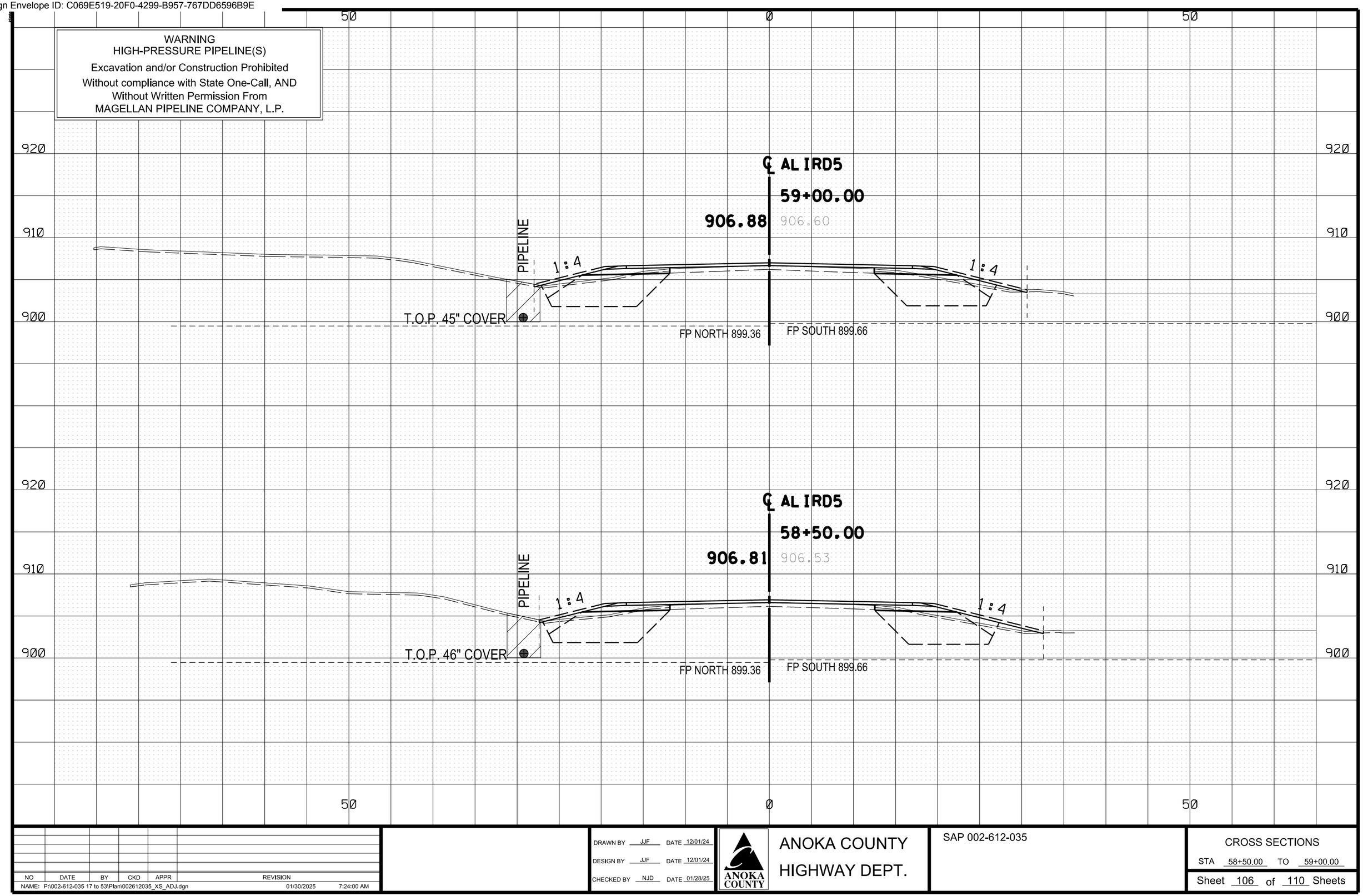
MAGELLAN PIPELINE COMPANY, L.P.



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ANOKA COUNTY
HIGHWAY DEPT.

SAP 002-612-035

CROSS SECTIONS
STA 58+50.00 TO 59+00.00
Sheet 106 of 110 Sheets

WARNING
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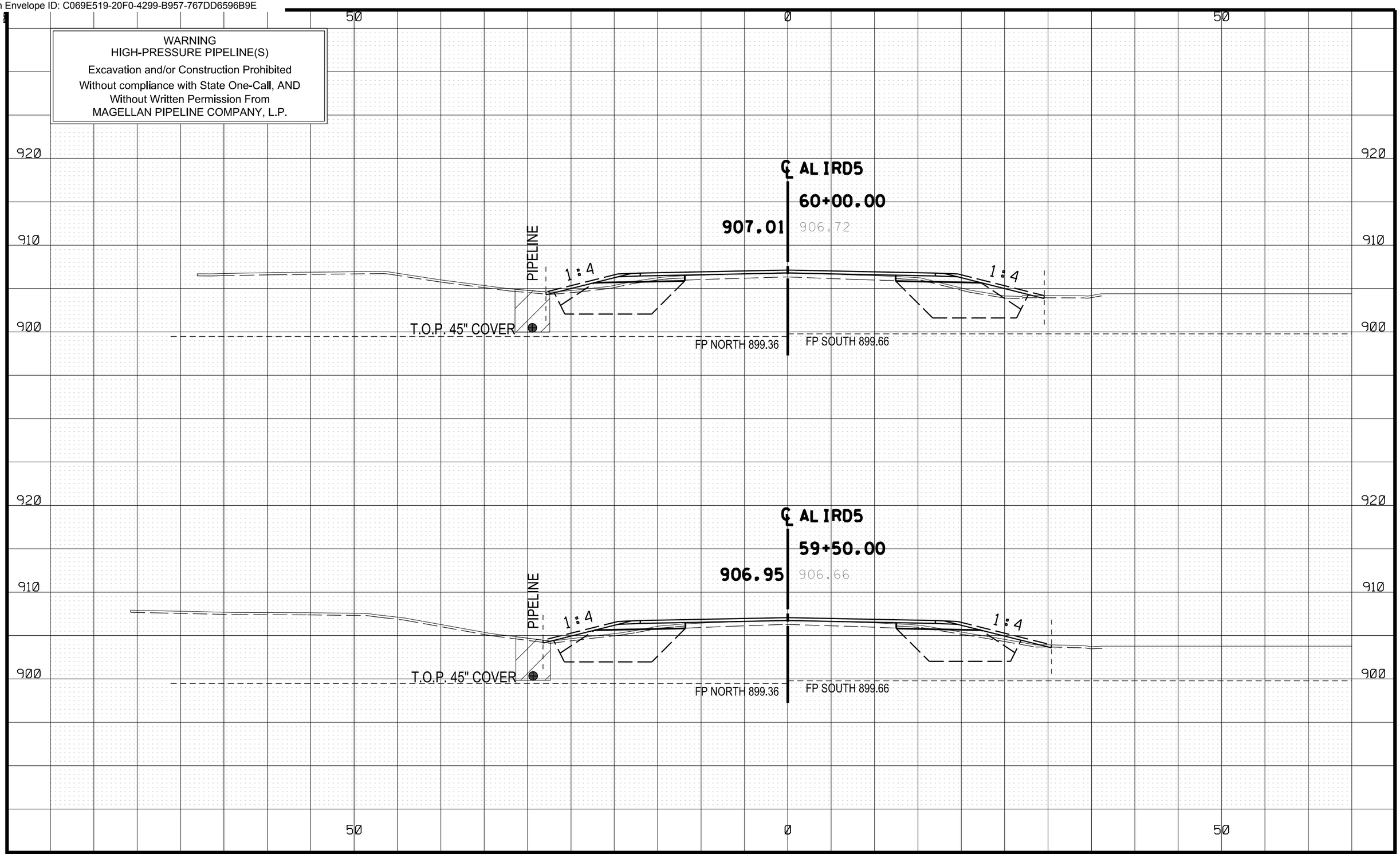

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ANOKA COUNTY
HIGHWAY DEPT.

SAP 002-612-035

CROSS SECTIONS
STA 59+50.00 TO 60+00.00

WARNING
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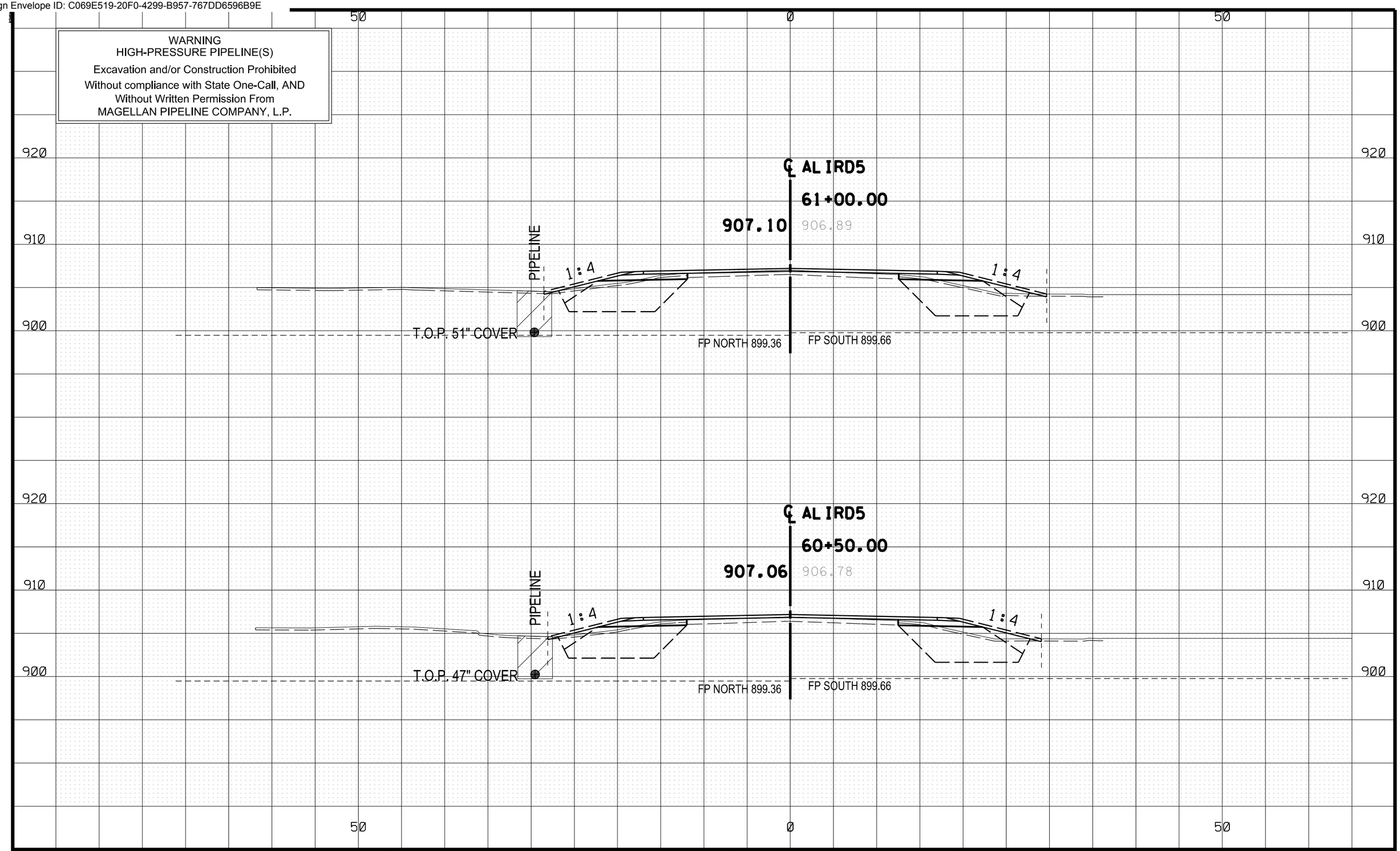

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ANOKA COUNTY
HIGHWAY DEPT.

SAP 002-612-035

CROSS SECTIONS
STA 60+50.00 TO 61+00.00

Sheet 108 of 110 Sheets

WARNING
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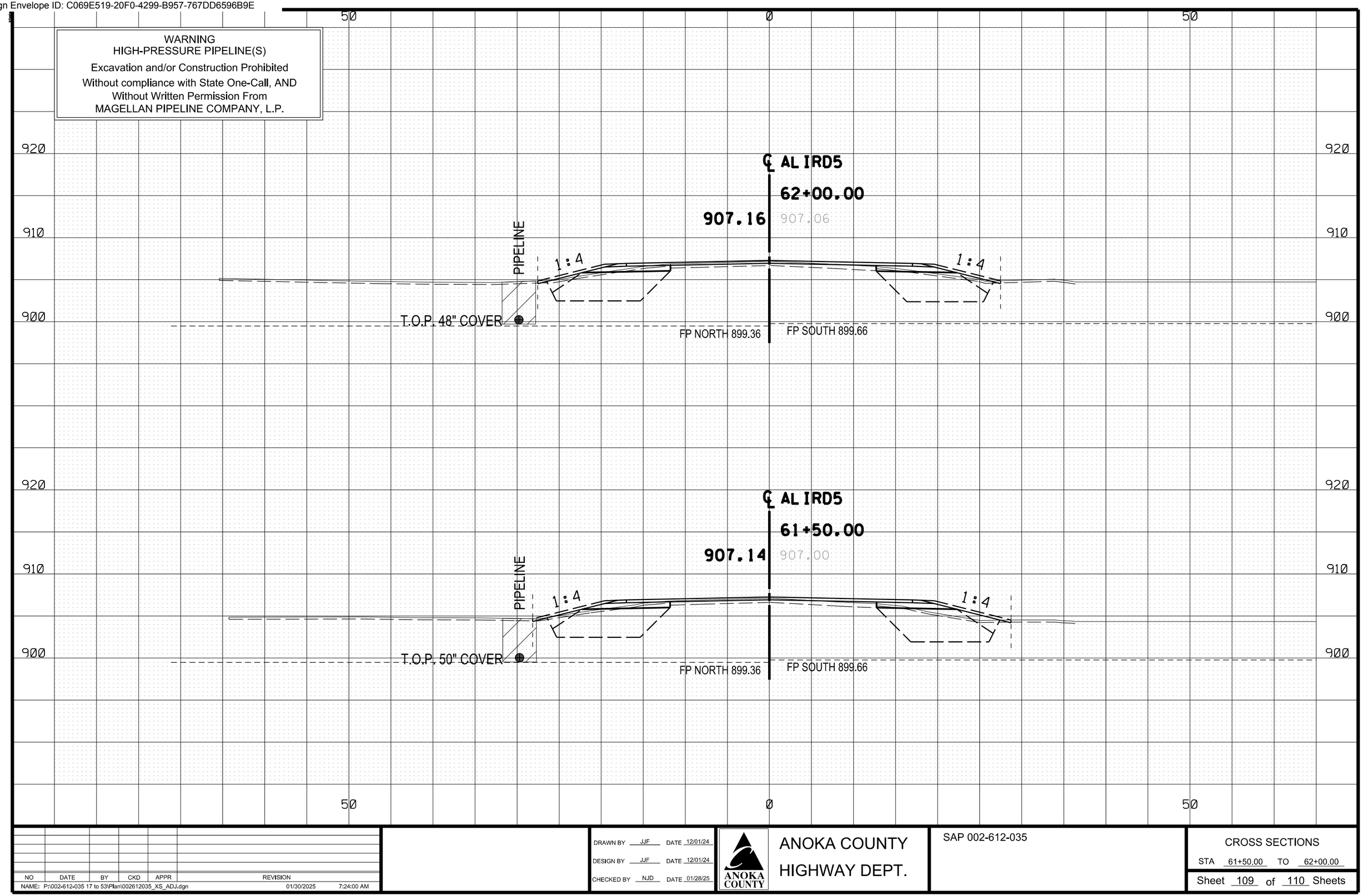

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ANOKA COUNTY
HIGHWAY DEPT.

SAP 002-612-035

CROSS SECTIONS
STA 61+50.00 TO 62+00.00

Sheet 109 of 110 Sheets

WARNING
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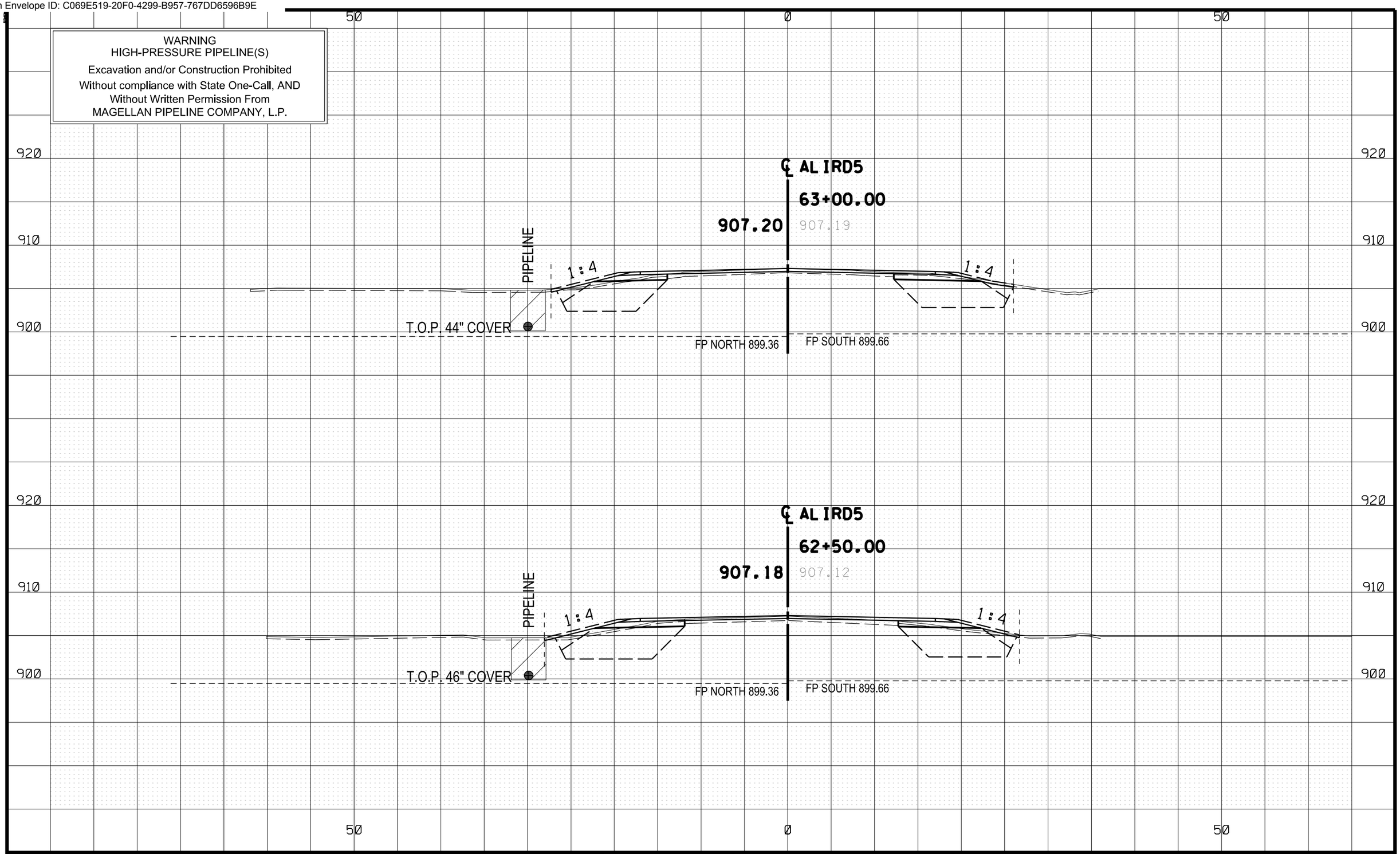

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SAP 002-612-035

CROSS SECTIONS
STA 62+50.00 TO 63+00.00
Sheet 110 of 110 Sheets

Anoka County
TRANSPORTATION DIVISION
Respectful, Innovative, Fiscally Responsible

Highway
Transit
Surveyor
GIS
Fleet

Joe MacPherson, P.E.
Chief Officer, Transportation, County Engineer

Jerry Auge, P.E.
Department Director, Assistant County Engineer

EXCAVATOR AND OPERATOR NOTICE

This notice is for all excavators and operators applying for permits involving excavations - your obligations to comply with Minnesota State Statues 216D are attached to this notice.

This notice is a requirement of State Statute 216D.02; Notice to Excavators and Operators.

216D.03 NOTIFICATION CENTER.

Subdivision 1. **Participation.** An operator shall participate in and share in the costs of one statewide notification center operated by a vendor selected under subdivision 2.

Subd. 2. **Establishment of notification center; rules.** (a) The notification center services must be provided by a nonprofit corporation approved in writing by the commissioner. The nonprofit corporation must be governed by a board of directors of up to 20 members, one of whom is the director of the Office of Pipeline Safety. The other board members must represent and be elected by operators, excavators, and other persons eligible to participate in the center. In deciding to approve a nonprofit corporation, the commissioner shall consider whether it meets the requirements of this paragraph and whether it demonstrates that it has the ability to contract for and implement the notification center service.

(b) The commissioner shall adopt rules:

(1) establishing a notification process and competitive bidding procedure for selecting a vendor to provide the notification service;

(2) governing the operating procedures and technology needed for a statewide notification center; and

(3) setting forth the method for assessing the cost of the service among operators.

(c) The commissioner shall select a vendor to provide the notification center service. The commissioner may advertise for bids as provided in section 16C.06, subdivisions 1 and 2, and base the selection of a vendor on best value as provided in section 16C.06, subdivision 6. The commissioner shall select and contract with the vendor to provide the notification center service, but all costs of the center must be paid by the operators. The commissioner may at any time appoint a task force to advise on the renewal of the contract or any other matter involving the center's operations.

(d) An operator may submit a bid and be selected to contract to provide the notification center service under paragraph (a) or (c). The commissioner shall annually review the services provided by the nonprofit corporation approved under paragraph (a) or the vendor selected under paragraph (c).

Subd. 3. **Cooperation with local government.** In establishing operating procedures and technology for the statewide notification center, the board of directors or the commissioner must work in cooperation with the League of Minnesota Cities, the Association of Minnesota Counties, and the Township Officers' Association. The purpose of this cooperation is to maximize the participation of local governmental units that issue permits for activities involving excavation to assure that excavators receive notice of and comply with the requirements of sections 216D.01 to 216D.07.

Subd. 4. **Notice to local government.** The notification center shall provide local governmental units with a master list, by county, of the operators in the county who are participants in the notification center, and the telephone number and mailing address of the notification center.

History: *1987 c 353 s 9; 1997 c 187 art 1 s 15; 1998 c 386 art 2 s 69*

216D.04 EXCAVATION; LAND SURVEY.

Subdivision 1. **Notice required; contents.** (a) Except in an emergency, an excavator shall and a land surveyor may contact the notification center and provide notice at least 48 hours, excluding Saturdays, Sundays, and holidays and not more than 14 calendar days before beginning any excavation or boundary survey. An excavation or boundary survey begins, for purposes of this requirement, the first time excavation or a boundary survey occurs in an area that was not previously identified by the excavator or land surveyor in the notice.

(b) The notice may be oral or written, and must contain the following information:

(1) the name of the individual providing the notice;

(2) the precise location of the proposed area of excavation or survey;

(3) the name, address, and telephone number of the individual or individual's company;

(4) the field telephone number, if one is available;

(5) the type and extent of the activity;

(6) whether or not the discharge of explosives is anticipated;

(7) the date and time when the excavation or survey is to commence; and

(8) the estimated duration of the activity.

Subd. 1a. **Plans for excavation.** (a) Any person, prior to soliciting bids or entering into a contract for excavation, shall provide a proposed notice to the notification center to obtain from the affected operators of underground facilities the type, size, and general location of underground facilities. Affected operators shall provide the information within 15 working days. An operator who provides information to a person who is not a unit of government may indicate any portions of the information which are proprietary and may require the person to provide appropriate confidentiality protection. The information obtained from affected operators must be submitted on the final drawing used for the bid or contract and must depict the utility quality level of that information. This information must be updated not more than 90 days before completion of the final drawing used for the bid or contract.

(b) This subdivision does not apply to bids and contracts for:

(1) routine maintenance of underground facilities or installation, maintenance, or repair of service lines;

(2) excavation for operators of underground facilities performed on a unit of work or similar basis; or

(3) excavation for home construction and projects by home owners.

(c) A person required by this section to show existing underground facilities on its drawings shall conduct one or more preliminary design meetings during the design phase to communicate the project design and coordinate utility relocation. Affected facility operators shall attend these meetings or make other arrangements to provide information.

(d) A person required by this section to show existing underground facilities on its drawings shall conduct one or more preconstruction meetings to communicate the project design and coordinate utility relocation. Affected facility operators and contractors shall attend these meetings or make other arrangements to provide information.

(e) This subdivision does not affect the obligation to provide a notice of excavation as required under subdivision 1.

Subd. 2. **Duties of notification center; regarding notice.** The notification center shall assign an inquiry identification number to each notice and retain a record of all notices received for at least six years. The center shall immediately transmit the information contained in a notice to every operator that has an underground facility in the area of the proposed excavation or boundary survey.

Subd. 3. **Locating underground facility; operator.** (a) Prior to the excavation start time on the notice, an operator shall locate and mark or otherwise provide the approximate horizontal location of the underground facilities of the operator and provide readily available information regarding the operator's abandoned and out-of-service underground facilities as shown on maps, drawings, diagrams, or other records used in the operator's normal course of business, without cost to the excavator. The excavator shall determine the precise location of the underground facility, without damage, before excavating within two feet of the marked location of the underground facility.

(b) Within 96 hours or the time specified in the notice, whichever is later, after receiving a notice for boundary survey from the notification center, excluding Saturdays, Sundays, and holidays, unless otherwise agreed to between the land surveyor and operator, an operator shall locate and mark or otherwise provide the approximate horizontal location of the underground facilities of the operator, without cost to the land surveyor.

(c) For the purpose of this section, the approximate horizontal location of the underground facilities is a strip of land two feet on either side of the underground facilities.

(d) Markers used to designate the approximate location of underground facilities must follow the current color code standard used by the American Public Works Association.

(e) If the operator cannot complete marking of the excavation or boundary survey area before the excavation or boundary survey start time stated in the notice, the operator shall promptly contact the excavator or land surveyor.

(f) After December 31, 1998, operators shall maintain maps, drawings, diagrams, or other records of any underground facility abandoned or out-of-service after December 31, 1998.

(g) An operator or other person providing information pursuant to this subdivision is not responsible to any person, for any costs, claims, or damages for information provided in good faith regarding abandoned, out-of-service, or private or customer-owned underground facilities.

Subd. 4. **Locating underground facility; excavator or land surveyor.** (a) The excavator or land surveyor shall determine the precise location of the underground facility, without damage, before excavating within two feet on either side of the marked location of the underground facility.

(b) If the excavator or land surveyor cancels the excavation or boundary survey, the excavator or land surveyor shall cancel the notice through the notification center.

(c) The notice is valid for 14 calendar days from the start time stated on the notice. If the activity will continue after the expiration time, then the person responsible for the activity shall serve an additional notice at least 48 hours, excluding Saturdays, Sundays, and holidays, before the expiration time of the original notice, unless the excavator makes arrangements with the operators affected to periodically verify or refresh the marks, in which case the notice is valid for six months from the start time stated on the notice.

(d) The excavator is responsible for reasonably protecting and preserving the marks until no longer required for proper and safe excavation near the underground facility. If the excavator has reason to believe the marks are obliterated, obscured, missing, or incorrect, the excavator shall notify the facility operator or notification center in order to have an operator verify or refresh the marks.

History: *1987 c 353 s 10; 1992 c 493 s 5; 1993 c 341 art 1 s 21; 1997 c 196 s 1; 1998 c 348 s 1-3; 2004 c 163 s 2-6*

216D.05 PRECAUTIONS TO AVOID DAMAGE.

An excavator shall:

(1) plan the excavation to avoid damage to and minimize interference with underground facilities in and near the construction area;

(2) use white markings for proposed excavations except where it can be shown that it is not practical;

(3) maintain a clearance between an underground facility and the cutting edge or point of any mechanized equipment, considering the known limit of control of the cutting edge or point to avoid damage to the facility;

(4) provide support for underground facilities in and near the construction area, including during backfill operations, to protect the facilities; and

(5) conduct the excavation in a careful and prudent manner.

History: *1987 c 353 s 11; 1998 c 348 s 4; 2004 c 163 s 7*

216D.06 DAMAGE TO FACILITY.

Subdivision 1. **Notice; repair.** (a) If any damage occurs to an underground facility or its protective covering, the excavator shall notify the operator promptly. When the operator receives a damage notice, the operator shall promptly dispatch personnel to the damage area to investigate. If the damage results in the escape of any flammable, toxic, or corrosive gas or liquid or endangers life, health, or property, the excavator responsible shall immediately notify the operator and the 911 public safety answering point, as defined in section 403.02, subdivision 19, and take immediate action to protect the public and property. The excavator shall also attempt to minimize the hazard until arrival of the operator's personnel or until emergency responders have arrived and completed their assessment. The 911 public safety answering point shall maintain a response plan for notifications generated by this section.

(b) An excavator shall delay backfilling in the immediate area of the damaged underground facilities until the damage has been investigated by the operator, unless the operator authorizes otherwise. The repair of damage must be performed by the operator or by qualified personnel authorized by the operator.

(c) An excavator who knowingly damages an underground facility, and who does not notify the operator as soon as reasonably possible or who backfills in violation of paragraph (b), is guilty of a misdemeanor.

Subd. 2. **Cost reimbursement.** (a) If an excavator damages an underground facility, the excavator shall reimburse the operator for the cost of necessary repairs, and for a pipeline the cost of the product that was being carried in the pipeline and was lost as a direct result of the damage.

(b) Reimbursement is not required if the damage to the underground facility was caused by the sole negligence of the operator or the operator failed to comply with section 216D.04, subdivision 3.

Subd. 3. **Prima facie evidence of negligence.** It is prima facie evidence of the excavator's negligence in a civil court action if damage to the underground facilities of an operator resulted from excavation, and the excavator failed to give an excavation notice under section 216D.04 or provide support as required by section 216D.05.

History: *1987 c 353 s 12; 1999 c 43 s 1*

216D.07 EFFECT ON LOCAL ORDINANCES.

(a) Sections 216D.01 to 216D.07 do not affect or impair local ordinances, charters, or other provisions of law requiring permits to be obtained before excavating.

(b) A person with a permit for excavation from the state or a public agency is subject to sections 216D.01 to 216D.07. The state or public agency that issued a permit for excavation is not liable for the actions of an excavator who fails to comply with sections 216D.01 to 216D.07.

History: *1987 c 353 s 13*

CHAPTER 7560
OFFICE OF PIPELINE SAFETY
EXCAVATION NOTICE SYSTEM

7560.0100 DEFINITIONS.

Subpart 1. **Scope.** The terms used in this chapter have the meanings given them. Terms not defined in this part have the meanings given them in Minnesota Statutes, section 216D.01.

Subp. 1a. **Abandoned facility.** "Abandoned facility" means an underground facility that is no longer in service and is physically disconnected from a portion of the operating facility that is in use or still carries service. An abandoned facility has been deemed abandoned by the operator.

Subp. 2. **Director.** "Director" means the director of the Office of Pipeline Safety of the Minnesota Department of Public Safety.

Subp. 3. **Good cause to believe.** "Good cause to believe" means grounds put forth in good faith that are not arbitrary, irrational, unreasonable, or irrelevant and that are based on at least one of the following sources:

A. information from a person;

B. facts supplied by the notification center defined in Minnesota Statutes, section 216D.01, subdivision 8;

C. facts of which the director or an agent of the director has personal knowledge; and

D. information provided by excavators or operators.

Subp. 4. **Locate.** "Locate" means an operator's markings of an underground facility.

Subp. 5. [Renumbered as subp 8]

Subp. 5a. [Renumbered as subp 9]

Subp. 6. [Renumbered as subp 11]

Subp. 7. **Meet.** When used as a noun in this chapter, "meet" refers to a meeting at the site of proposed excavation requested at the time of notice by the excavator with all affected underground facility operators to further clarify the precise geographic location of excavation, schedule locating, propose future contacts, and share other information concerning the excavation and facilities.

Subp. 8. **Office.** "Office" means the Office of Pipeline Safety of the Minnesota Department of Public Safety.

Subp. 9. **Out-of-service facility.** "Out-of-service facility" means an underground facility that is no longer maintained and is not intended for future use, but has not been deemed abandoned. An out-of-service facility may still be connected to a portion of the operating facility that is in use or still carries service.

Subp. 10. **Public right-of-way.** "Public right-of-way" means the area on, below, or above a public roadway, highway, street, cartway, bicycle lane, and sidewalk in which a government unit has an interest, including other rights-of-way dedicated for travel purposes and utility easements of government units.

Subp. 11. **Remuneration.** "Remuneration" means direct or indirect compensation or consideration paid to the person or the person's agent, employer, employee, subcontractor, or contractor. A person who excavates as part of the person's duties as an employee, employer, agent, subcontractor, or contractor is considered to be acting for remuneration.

Subp. 12. **Service lateral.** "Service lateral" means an underground facility that is used to transmit, distribute, or furnish gas, electricity, communications, or water from a common source to an end-use customer. A service lateral is also an underground facility that is used in the removal of wastewater from a customer's premises.

Statutory Authority: *MS s 14.06; 216D.08; 299F.56; 299F.60; 299F.641; 299J.04*

History: *16 SR 135; 24 SR 448; 29 SR 1503*

Published Electronically: *July 20, 2005*

7560.0125 ABANDONED AND OUT-OF-SERVICE FACILITIES.

Subpart 1. **Duty of operators to provide readily available information.** Operators shall provide readily available information, as shown on maps, drawings, diagrams, or other records used in the normal course of business, on the approximate location of abandoned and out-of-service facilities to an excavator by the excavation date and time noted on the excavation or location notice unless otherwise agreed between the excavator and the operator. An operator fulfills an obligation to provide information on these facilities by doing one or more of the following:

A. locating and marking the approximate location of the facility according to the current color code standard used by the American Public Works Association, as required in Minnesota Statutes, section 216D.04, subdivision 3, with an abandoned or out-of-service facility identified by an uppercase A surrounded by a circle;

B. providing informational flags at the area of proposed excavation;

C. communicating information verbally; or

D. providing copies of maps, diagrams, or records.

Subp. 2. **Duty to notify operator.** An excavator shall notify the operator:

A. before moving, removing, or otherwise altering a facility that is thought to be abandoned or out of service; or

B. if damage to the facility occurs, pursuant to Minnesota Statutes, section 216D.01, subdivision 2.

Subp. 3. **Verification of abandoned or out-of-service facility.** Upon receipt of notification by an excavator pursuant to subpart 2, an operator shall verify that an underground facility is abandoned or out of service, by either reference to installation records, testing, or other comparable standard of verification, before an excavator is allowed to move, remove, or otherwise alter an underground facility.

Subp. 4. **Liability.** An operator providing information pursuant to Minnesota Statutes, section 216D.04, subdivision 3, is not responsible to any person for any costs, claims, or damages for information provided in good faith regarding abandoned and out-of-service underground facilities.

Statutory Authority: *MS s 14.06; 216D.08; 299J.04; 299F.60*

History: *24 SR 448*

Published Electronically: *July 20, 2005*

7560.0150 PUBLIC RIGHT-OF-WAY MAPPING AND INSTALLATION.

Subpart 1. **Duty of operator to map.** After December 31, 2005, an operator shall maintain a map, a diagram, a drawing, or geospatial information regarding the location of its underground facility within a public right-of-way installed after that date.

Subp. 2. **Duty to install locating wire.** After December 31, 2005, an operator shall install a locating wire or have an equally effective means of marking the location of each nonconductive underground facility within a public right-of-way installed after that date. This requirement does not apply when making minor repairs to an existing nonconductive facility. As applied to this chapter, "minor repairs" means repairs to or partial replacement of portions of existing service laterals located within a public right-of-way for purposes of routine maintenance and upkeep.

Statutory Authority: *MS s 299J.04*

History: *29 SR 1503*

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7560.0200 [Repealed, 24 SR 448]

Published Electronically: *July 20, 2005*

7560.0225 EXCAVATOR RESPONSIBILITIES REGARDING A LOCATE.

Subpart 1. [Repealed, 29 SR 1503]

Subp. 2. **Responsibility to protect and preserve.** The excavator is responsible for reasonably protecting and preserving a locate until no longer required for proper and safe excavation near the underground facility. If the excavator has reason to believe a locate is obliterated, obscured, missing, or incorrect, the excavator shall notify the facility operator or notification center in order to have an operator verify, refresh, or re-mark the locate.

Subp. 3. **Use of locate.** A locate is valid for 14 days from the excavation commencement time stated on the excavation or location notice, unless the excavator has made previous arrangements with the operators affected to periodically verify, refresh, or re-mark the locate.

Statutory Authority: *MS s 14.06; 216D.08; 299J.04; 299F.60*

History: *24 SR 448; 29 SR 1503*

Published Electronically: *July 20, 2005*

7560.0250 LOCATE STANDARDS.

Subpart 1. **Facility locate.** Unless otherwise agreed to between the excavator and operator, an operator shall locate an underground facility using stakes, flags, paint, or other suitable materials in varying combinations dependent upon the surface. The locate must be in sufficient detail to clearly identify the approximate route of the underground facility. The locate must also include:

A. name, abbreviation, or logo of the operator when more than one operator listed on the notice uses the same color markings;

B. width of the underground facility if it is greater than eight inches; and

C. number of underground facilities if greater than one.

Subp. 2. **Operator duties in no conflict situation.** After December 31, 2005, an operator who receives notice and determines that an underground facility is not in conflict with the proposed excavation shall complete one or more of the following:

A. mark the area "NO" followed by the operator's name, abbreviation, or logo in the color code of the underground facility not in conflict;

B. place a clear plastic flag at the area that:

(1) states "N/C" or "NO CONFLICT" in lettering matching the color code of the underground facility that is not in conflict; and

(2) includes the operator's name, abbreviation, or logo, the date, a contact telephone number, and the ticket number; or

C. contact the notification center through procedures required by the notification center and indicate that there are no underground facilities in conflict with the proposed excavation and that no markings or flags were left at the proposed excavation site.

Subp. 3. **Placement of flags or markings.** If using N/C (no conflict) flags or markings pursuant to subpart 2, an operator shall place the flags or markings in a location that can be readily observed by an excavator. When an area of proposed excavation is delineated by the use of white markings, an operator shall place the N/C flags or markings within, or as near as practicable to, the delineated area.

Subp. 4. **Duties of notification center.** After December 31, 2005, the notification center shall make the information received under subpart 2 available to the excavator before the start date and time on the notice. The notification center may fulfill this requirement by making the information accessible through one or more Internet addresses, by transmitting the information to a continuously working facsimile machine maintained by the excavator, or by other methodology developed by the notification center. The notification center shall make available the information received by operators pursuant to this section through

an electronic means. The notification center is not required by this subpart to contact an excavator verbally via telephone.

Statutory Authority: *MS s 299J.04*

History: *29 SR 1503*

Published Electronically: *July 20, 2005*

7560.0300 OPERATOR PARTICIPATES AND SHARES COSTS.

An operator shall participate in and share the costs of the one call excavation notice system by:

A. submitting the information required by the notification center to allow the center to notify the operator of excavation activity;

B. updating the information provided to the notification center on a timely basis;

C. installing and paying for equipment reasonably requested by the notification center to facilitate receipt of notice of excavation from the center;

D. paying the costs charged by the notification center on a timely basis; and

E. receiving and responding to excavation notices, including emergency notices, as required by Minnesota Statutes, chapter 216D.

Statutory Authority: *MS s 14.06; 216D.08; 299F.56; 299F.641*

History: *16 SR 135*

Published Electronically: *July 20, 2005*

7560.0325 EMERGENCY EXCAVATION NOTICES.

Subpart 1. **Duty of excavator to provide notice.** An excavator shall provide notice to the notification center before commencing an emergency excavation, unless subpart 2 applies. All emergency notices, regardless whether made prior to excavation, must be verbal or in a manner accepted by the notification center. In addition to the information required by the notification center, the notice must also contain:

A. a description of the situation requiring the emergency excavation;

B. the precise location of the proposed area of the emergency excavation;

C. at least one continuously staffed telephone number where the excavator can be contacted by the operator throughout the emergency; and

D. the excavation start date and time if the need for excavation is not immediate.

Subp. 2. **Excavating before notice.** If an emergency is such that providing notice or waiting for an operator would result in an undue risk to life, health, or significant loss of property, the excavator may excavate without providing prior notice or waiting for an operator to mark an underground facility. In this situation, the excavator shall provide notice as soon as practicable and take all reasonable precautions to avoid or minimize damage. Excavation prior to notice under this subpart does not relieve an excavator from any responsibility for damage to an underground facility pursuant to Minnesota Statutes, section 216D.06.

Subp. 3. **Emergency notice requesting immediate response.** Upon receiving an emergency excavation notice requesting an immediate response, an operator shall:

A. attempt to contact the excavator within one hour at the telephone number provided in subpart 1, item C, to provide any information concerning facilities at or near the area of excavation including an anticipated response time; and

B. locate and mark the underground facility within three hours of notice unless:

(1) otherwise agreed between the parties;

(2) the operator notifies the excavator that not locating does not present an immediate danger to life or health, or a significant loss of property; or

(3) there is an event or situation that cannot be reasonably anticipated or controlled by the operator.

Subp. 4. **Emergency notice requesting scheduled response.** Upon receiving an emergency excavation notice that does not require an immediate response, and before the scheduled excavation start date and time, an operator shall:

A. locate and mark the underground facility, unless otherwise agreed between the parties; or

B. notify the excavator at the telephone number provided in subpart 1, item C, that there is not an underground facility within the area of proposed excavation.

For purposes of this subpart, a requested start time of three hours or less from the time notice is provided to the center is considered an emergency notice requesting immediate response under subpart 3.

Statutory Authority: *MS s 299J.04*

History: *29 SR 1503*

Published Electronically: *July 20, 2005*

7560.0350 EXCAVATION NOTICE REQUESTING MEET.

Subpart 1. **Excavator duties.** When requesting a meet through the notification center, an excavator must provide at least one contact name and telephone number to assist in facilitating the meet. An excavator shall contact the notification center to cancel or reschedule the meet and the notification center shall relay this information to the affected operators. When a meet is requested, an excavator's notice must include the entire geographic area of the proposed excavation and the specific location of the meet. This part does not relieve an excavator from the duty to provide a precise geographic location of the proposed area of excavation, or to use white markings except where it can be shown that to do so is not practical.

Subp. 2. **Operator duties.** When a meet is requested, an affected operator shall make a reasonable effort to attend the meet at the proposed date and time, or contact the excavator before the meet and reschedule for a mutually agreed date and time.

Subp. 3. **Excavation start date and time.** When a meet is requested, the meet date and time must be at least 48 hours after notice is provided, excluding Saturdays, Sundays, and holidays, and the excavation start date and time must be at least 24 hours after the proposed meet date and time specified on the notice, excluding Saturdays, Sundays, and holidays. This subpart does not apply if these matters are provided for in a written agreement with all affected operators.

Subp. 4. **Meet request documentation.** An excavator shall maintain written documentation of each meet with an underground facility operator or representative. This documentation must be kept for the duration of the excavation conducted under the notice. The documentation must include:

A. the date and time of each meet;

B. the names, company affiliations, and contact information of the attendees of each meet;

C. a diagram, sketch, or description of the precise excavation locations, dates, and times; and

D. the agreed schedule of any future meets or communications.

Statutory Authority: *MS s 299J.04*

History: *29 SR 1503*

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7560.0375 LOCATING A SERVICE LATERAL.

Subpart 1. **Operator duties.** Unless otherwise agreed, an underground facility operator shall locate a service lateral before the start date and time on the notice and in accordance with items A through C:

A. An operator of a natural gas, propane, or electric facility shall locate a service lateral up to the meter or the connection to a customer's underground facility, whichever is closer to the end-use customer. If the meter or connection to the customer's underground facility is within a public right-of-way, at a minimum the operator shall locate that portion of the service lateral within the public right-of-way up to the point where the service lateral first leaves the public right-of-way.

B. An operator of a communication facility shall locate a service lateral up to the entry of the first building. If the service lateral does not enter a building, the operator shall locate up to the utilization equipment, fence, or wall that surrounds the equipment.

C. After December 31, 2005, an operator of a sewage or water facility, at a minimum, shall locate that portion of the service lateral within a public right-of-way installed after that date up to the point where the service lateral first leaves the public right-of-way. The operator shall either locate or provide information as shown on maps, drawings, diagrams, or other records, on the location of a sewer or water service lateral installed before January 1, 2006. If no information is available on a sewer or water service lateral installed before January 1, 2006, then notifying the excavator that no information exists fulfills the requirements of this section.

Subp. 2. **Exception.** An operator is not required to locate a service lateral of a customer who currently participates in the statewide notification system, provided the customer and operator mutually agree that the customer will assume locate responsibilities. The agreement must be in writing.

Statutory Authority: *MS s 299J.04*

History: *29 SR 1503*

Published Electronically: *July 20, 2005*

7560.0400 CITATIONS.

Subpart 1. **Notice of violation.** The office shall issue a notice of probable violation when the office has good cause to believe a violation of Minnesota Statutes, sections 216D.01 to 216D.09 or this chapter has occurred.

Subp. 2. **Contents of notice of violation.** A notice of violation must include:

A. a statement of the statute or rule allegedly violated by the person and a description of the evidence on which the allegation is based;

B. notice of response options available to the person cited;

C. notice that the person has 30 days in which to respond;

D. notice that failure to respond within 30 days precludes administrative review under this chapter; and

E. if a civil penalty is proposed, the amount of the proposed civil penalty and the maximum civil penalty applicable under law.

Subp. 3. **Receipt of notice.** The notice of violation is deemed received three days after mailing to the person's last known address.

Statutory Authority: *MS s 14.06; 216D.08; 299F.56; 299F.60; 299F.641; 299J.04*

History: *16 SR 135; 24 SR 448*

Published Electronically: *July 20, 2005*

7560.0500 RESPONSE OPTIONS.

The person shall respond to the notice of violation in the following way:

A. When the notice contains a proposed compliance order, the person shall:

(1) agree to the proposed compliance order;

(2) request the execution of a consent order;

(3) object to the proposed compliance order and submit written explanations, information, or other materials in answer to the allegations in the notice; or

(4) request the office to initiate a hearing under Minnesota Statutes, sections 14.50 to 14.69.

B. When the notice contains a proposed civil penalty, the person shall:

(1) pay the penalty and close the case;

(2) submit an offer in compromise of the proposed civil penalty;

(3) submit a written explanation, information, or other material in answer to the allegations or in mitigation of the proposed civil penalty; or

(4) request the office to initiate a hearing under Minnesota Statutes, sections 14.50 to 14.69.

C. Failure to respond in writing within 30 days precludes administrative review under this chapter. A final order will be issued and penalties will be forwarded for collection.

Statutory Authority: *MS s 14.06; 216D.08; 299F.56; 299F.60; 299F.641; 299J.04*

History: *16 SR 135; 24 SR 448*

Published Electronically: *July 20, 2005*

7560.0600 DIRECTOR REVIEW.

If the person objects to the proposed civil penalty or compliance order and submits written explanations, information, or other materials in response to a notice of violation, within the time specified in part 7560.0500, the director shall review the submissions and determine whether to negotiate further, to change or withdraw the notice of violation, or to initiate a hearing under Minnesota Statutes, sections 14.50 to 14.69.

Statutory Authority: *MS s 14.06; 216D.08; 299F.56; 299F.60; 299F.641; 299J.04*

History: *16 SR 135; 24 SR 448*

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7560.0700 CONSENT ORDER.

An executed consent order must contain:

A. an admission by the person of the jurisdictional facts;

B. a waiver of further procedural steps and the right to seek judicial or administrative review or otherwise challenge or contest the validity of the consent order; and

C. an agreement that the notice of violation may be used to construe the terms of the consent order.

Statutory Authority: *MS s 14.06; 216D.08; 299F.56; 299F.641*

History: *16 SR 135*

Published Electronically: *July 20, 2005*

7560.0800 CIVIL PENALTIES.

Subpart 1. **Proceedings against excavators.** When the office has good cause to believe that an excavator is engaging or has engaged in conduct that violates Minnesota Statutes, section 216D.04, subdivision 1, 2, or 3; 216D.05, clause (1), (2), (3), or (4); or 216D.06, subdivision 1, or a rule adopted under Minnesota Statutes, section 216D.08, subdivision 4, the office, if appropriate, shall negotiate a civil penalty under Minnesota Statutes, section 216D.08, subdivision 2. A penalty imposed under Minnesota Statutes, section 216D.08, is subject to the contested case and judicial review provisions of Minnesota Statutes, chapter 14. An operator who engages or has engaged in excavation that violates Minnesota Statutes, chapter 216D, is subject to the proceedings specified in subpart 2 and is subject to the penalties specified in subpart 4, item B or C.

Subp. 2. **Proceedings against underground facility operators.** The office may negotiate a civil penalty under item A or B.

A. When the office has good cause to believe that an underground facility operator, other than an operator set forth in item B, is engaging or has engaged in conduct that violates Minnesota Statutes, sections 216D.01 to 216D.07, or a rule adopted under Minnesota Statutes, section 216D.08, subdivision 4, the office, if appropriate, shall negotiate a civil penalty under Minnesota Statutes, section 216D.08, subdivision 2. A penalty imposed under Minnesota Statutes, section 216D.08, is subject to the contested case and judicial review provisions of Minnesota Statutes, chapter 14.

B. When the office has good cause to believe that an operator who engages in the transportation of gas or hazardous liquids or who owns or operates a gas or hazardous liquid pipeline facility is engaging or has engaged in conduct that violates Minnesota Statutes, sections 299F.56 to 299F.641, or a rule adopted under Minnesota Statutes, section 299F.60, subdivision 5, the office, if appropriate, shall negotiate a civil penalty under Minnesota Statutes, section 299F.60, subdivision 2. A penalty imposed under Minnesota Statutes, section 299F.60, is subject to the contested case and judicial review provisions of Minnesota Statutes, chapter 14.

Subp. 3. **Assessment considerations.** In assessing a civil penalty under this part, the office shall consider the following factors:

A. the nature, circumstances, and gravity of the violation;

B. the degree of the person's culpability;

C. the person's history of previous offenses;

D. the person's ability to pay;

E. good faith on the part of the person in attempting to remedy the cause of the violation;

F. the effect of the penalty on the person's ability to continue in business; and

G. past reports of damage to an underground facility by a person.

Subp. 4. **Maximum penalties.** For the purposes of this part, penalties imposed under this part must not exceed the limits in items A to C.

A. Penalties imposed against excavators must not exceed $1,000 for each violation per day of violation.

B. Penalties imposed against underground facility operators, other than an operator set forth in item C, must not exceed $1,000 for each violation per day of violation.

C. Penalties imposed against an operator who engages in the transportation of gas or hazardous liquids or who owns or operates a gas or hazardous liquid pipeline facility must not exceed $10,000 for each violation for each day that the violation persists, except that the maximum civil penalty must not exceed $500,000 for a related series of violations.

Subp. 5. **Payment procedure.** The person shall pay a civil penalty that has been proposed, assessed, or compromised by submitting to the office a check or money order in the correct amount, payable to the commissioner of public safety.

Statutory Authority: *MS s 14.06; 216D.08; 299F.56; 299F.60; 299F.641; 299J.04*

History: *16 SR 135; 24 SR 448*

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AutoNav: Enabled
EnvelopeId Stamping: Enabled
Time Zone: (UTC-06:00) Central Time (US & Canada)

Envelope Originator:
Highway Permits
Anoka County Government Center
2100 3rd Avenue
Anoka, MN 55303
highwaypermits@anokacountymn.gov
IP Address: 24.220.63.244

Record Tracking

Status: Original
5/27/2025 4:00:36 PM
Holder: Highway Permits
highwaypermits@anokacountymn.gov
Location: DocuSign

Security Appliance Status: Connected
Pool: StateLocal

Storage Appliance Status: Connected
Pool: Anoka County
Location: Docusign

Signer Events	Signature	Timestamp
craig meyer craig@dreselcontracting.com Security Level: DocuSign.email ID: 1 5/27/2025 4:00:38 PM	DocuSigned by: craig meyer 57F0146483CA482...	Sent: 5/27/2025 4:00:37 PM Viewed: 5/27/2025 4:00:48 PM Signed: 5/27/2025 4:18:14 PM
	Signature Adoption: Pre-selected Style Using IP Address: 24.220.63.244	
Electronic Record and Signature Disclosure: Accepted: 6/26/2024 7:25:39 AM ID: 98c2b60d-47ff-4bc6-9057-f08307c30c36		
Susan Burgmeier Susan.Burgmeier@anokacountymn.gov Associate Traffic Technician Anoka County Signing Group: Highway Permits Security Level: Email, Account Authentication (Optional)	DocuSigned by: Susan Burgmeier C5E91FE15CD44EE...	Sent: 5/27/2025 4:18:23 PM Viewed: 5/28/2025 7:35:38 AM Signed: 5/28/2025 8:58:13 AM
	Signature Adoption: Pre-selected Style Using IP Address: 156.98.106.245	
Electronic Record and Signature Disclosure: Accepted: 5/13/2025 9:49:10 AM ID: 66e21fba-4219-43be-84f5-6d6b8ad710ae		

In Person Signer Events	Signature	Timestamp

Editor Delivery Events	Status	Timestamp

Agent Delivery Events	Status	Timestamp

Intermediary Delivery Events	Status	Timestamp

Certified Delivery Events	Status	Timestamp

Carbon Copy Events	Status	Timestamp
craig meyer craig@dreselcontracting.com Security Level: Email, Account Authentication (Optional)	COPIED	Sent: 5/28/2025 8:58:22 AM
Electronic Record and Signature Disclosure:		

Carbon Copy Events	Status	Timestamp
Not Offered via Docusign		

Witness Events	Signature	Timestamp

Notary Events	Signature	Timestamp

Envelope Summary Events	Status	Timestamps
Envelope Sent	Hashed/Encrypted	5/27/2025 4:00:37 PM
Envelope Updated	Security Checked	5/27/2025 4:18:14 PM
Envelope Updated	Security Checked	5/28/2025 8:58:13 AM
Certified Delivered	Security Checked	5/28/2025 7:35:38 AM
Signing Complete	Security Checked	5/28/2025 8:58:13 AM
Completed	Security Checked	5/28/2025 8:58:22 AM

Payment Events	Status	Timestamps

Electronic Record and Signature Disclosure

ELECTRONIC RECORD AND SIGNATURE DISCLOSURE

The following information constitutes Anoka County's (we, us or Company) written notices or disclosures relating to your use of DocuSign in relation to Anoka County's license. Described below are the terms and conditions for providing notices and disclosures electronically through the DocuSign system. Please read the information below carefully and thoroughly, and if you agree to this Electronic Record and Signature Disclosure (ERSD), please confirm your agreement by selecting the check-box next to 'I agree to use electronic records and signatures' before clicking 'CONTINUE' within the DocuSign system.

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Upon your acceptance to receive electronic notifications, all required notices, disclosures, authorizations, acknowledgements, and other documents that are required to be provided or made available to you during the course of our relationship with you will be provided electronically through the DocuSign system. All of the required documents will be provided to you at the address that you have given us.

How to contact Anoka County:

You may change your preferred method of contact whether electronically, or paper copies, or change your email address. You may also request paper copies of certain information from us, or withdraw your prior consent to receive documents. Please use the contact information below for your request and in the body of your correspondence, identify your desired action. If you are

changing an email address, please include your prior email address as well as your new address. If you no longer wish to receive future documents in electronic format, please include that request in the body of your email.

Email: helpdesk@co.anoka.mn.us
Phone: (763)-324-4110
Address: Anoka County Government Center
Attn: Information Technology, #300
2100 3rd Avenue
Anoka, MN 55303

Required hardware and software

The minimum system requirements for using the DocuSign system may change over time. The current system requirements are found here: https://support.docusign.com/guides/signer-guide-signing-system-requirements.

ACKNOWLEDGEMENT

To confirm your access to the electronic notices and disclosures, which will be similar to other electronic notices and disclosures that we may provide to you, please acknowledge that you have read this ERSD by selecting the check-box next to 'I agree to use electronic records and signatures' before clicking 'CONTINUE' within the DocuSign system.

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- Until or unless you notify Anoka County as described above, you consent to receive exclusively through electronic means all notices, disclosures, authorizations, acknowledgements, and other documents that are required to be provided or made available to you by Anoka County during the course of your relationship with Anoka County.