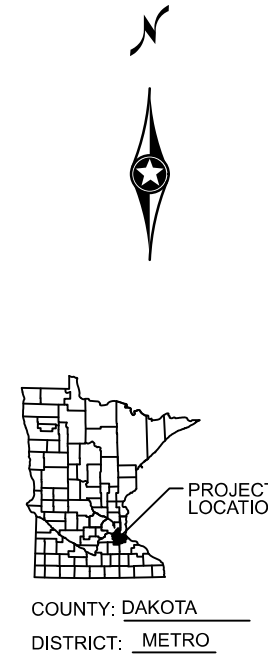
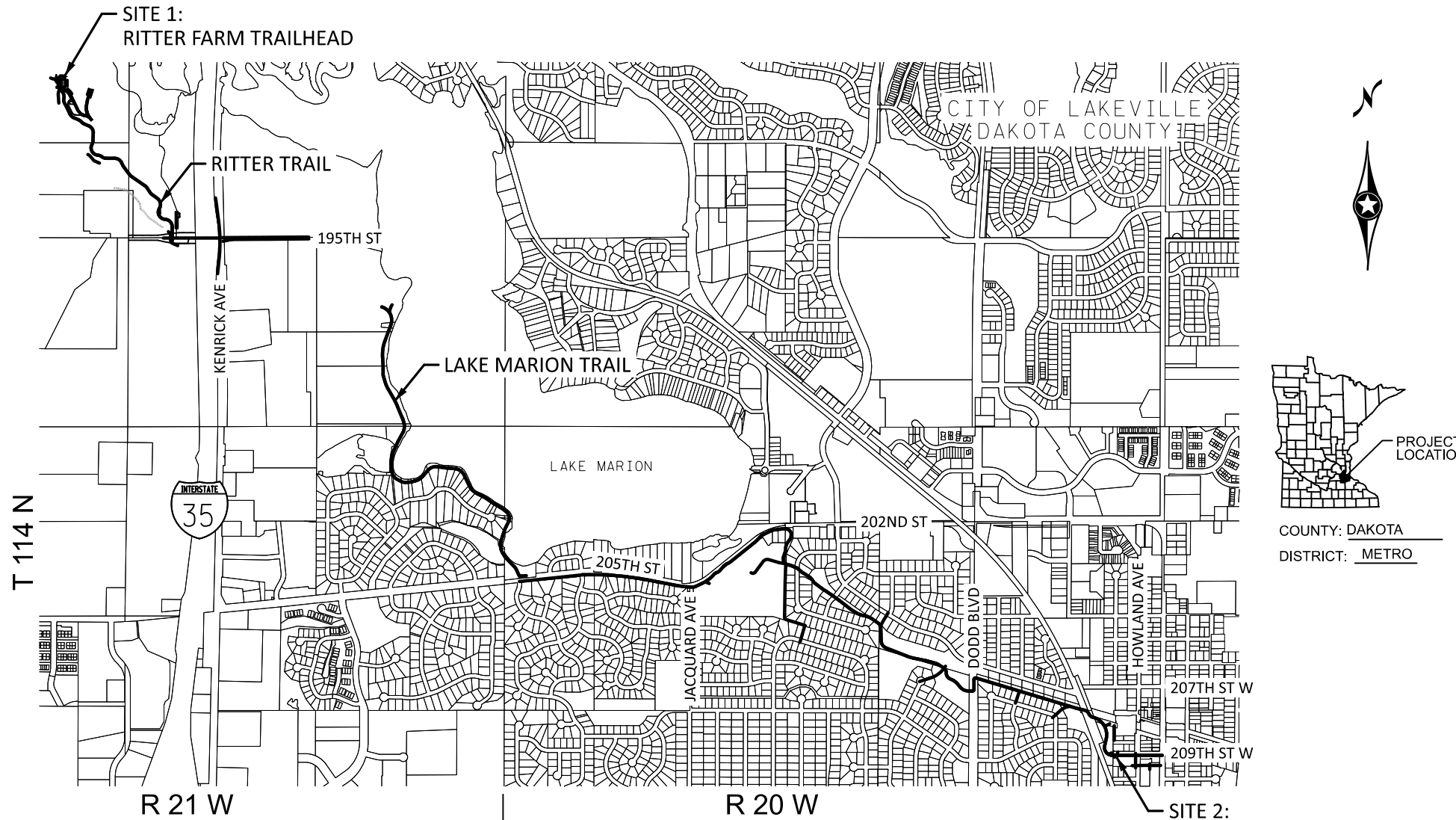


# DAKOTA COUNTY & CITY OF LAKEVILLE LAKE MARION GREENWAY

CONSTRUCTION PLAN FOR BITUMINOUS SURFACING, ADA IMPROVEMENTS, SIDEWALK

LOCATED ON RITTER TRAIL FROM RITTER FARM TO 209TH ST



**GOVERNING SPECIFICATIONS**  
 THE 2025 EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR CONSTRUCTION" SHALL GOVERN.  
 CITY OF LAKEVILLE FEBRUARY 2024 SPECIFICATIONS.  
 ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE LATEST EDITION OF THE MINNESOTA MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, INCLUDING THE LATEST EDITION OF THE FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS.  
 CITY ENGINEERS ASSOCIATION OF MINNESOTA CONSTRUCTION STANDARD SPECIFICATIONS 2025 FINAL VERSION


**INDEX**

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2-3	GENERAL LAYOUT
4	ESTIMATED QUANTITIES
5	QUANTITY TABULATIONS
6	CONSTRUCTION NOTES & STANDARD PLATES
7-8	TYPICAL SECTIONS
9-35	STANDARD PLANS
36-37	INPLACE TOPOGRAPHY & UTILITIES PLAN
38-39	REMOVAL PLAN
40-41	CONSTRUCTION PLAN
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46-48	SWPPP
49-51	TURF ESTABLISHMENT & EROSION CONTROL PLAN
52-54	SIGNING & PAVEMENT MARKING PLAN
55-56	LIGHTING PLAN
L1.1 - L1.4	TRAILHEAD SITE PLAN
L2.1 - L2.3	TRAILHEAD GRADING PLAN
L3.1 - L3.4	TRAILHEAD LANDSCAPE PLAN
L4.1 - L4.7	TRAILHEAD DETAILS

THIS PLAN CONTAINS 74 SHEETS

ALL APPLICABLE FEDERAL, STATE, AND LOCAL LAWS AND ORDINANCES WILL BE COMPLIED WITHIN THE CONSTRUCTION OF THIS PROJECT.



SIGNATURE:  PRINTED NAME: DJ SOSA, PE

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

DATE: 3/27/2026 LICENSE NUMBER: 10405

**BIKE PATH DESIGN DESIGNATION:**

DESIGN SPEED (MPH) 18  
 BASED ON 4.5 FT HEIGHT OF EYE  
 0.0 FT HEIGHT OF OBJECT

**SCALES:**

PLAN	100'
PROFILE	50' HORIZ.
	5' VERT.
INDEX MAP	1000'
GENERAL LAYOUT	400'

**RITTER FARM TRAILHEAD**

GROSS LENGTH	00.00 FEET	0.000 MILES
BRIDGES-LENGTH	FEET	MILES
EXCEPTIONS-LENGTH	FEET	MILES
NET LENGTH	00.00 FEET	0.000 MILES

NOTE: LENGTH BASED ON XXX ALIGNMENT

**DOWNTOWN LAKEVILLE GATEWAY**

GROSS LENGTH	00.00 FEET	0.000 MILES
BRIDGES-LENGTH	FEET	MILES
EXCEPTIONS-LENGTH	FEET	MILES
NET LENGTH	00.00 FEET	0.000 MILES

NOTE: LENGTH BASED ON XXX ALIGNMENT

PLAN REVISIONS		
DATE	SHEET NO.	APPROVER

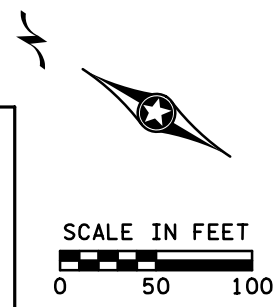
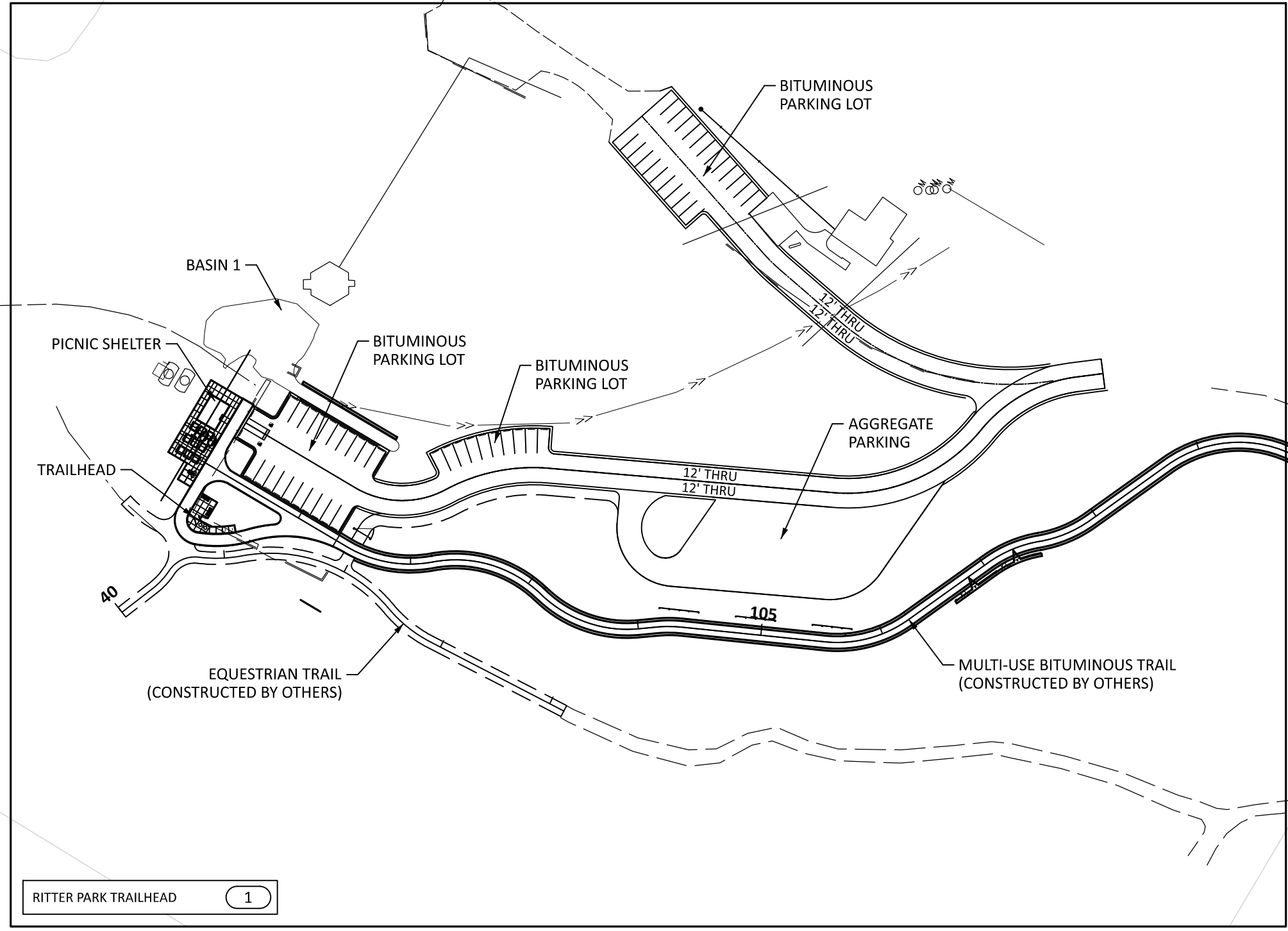
THE SUBSURFACE UTILITY INFORMATION IN THIS PLAN IS UTILITY QUALITY LEVEL D. THIS UTILITY QUALITY LEVEL WAS DETERMINED ACCORDING TO THE GUIDELINES OF CI/ASCE 38-22, ENTITLED "STANDARD GUIDELINES FOR INVESTIGATING AND DOCUMENTING EXISTING UTILITIES."

FOR PLANS AND UTILITIES SYMBOLS SEE INPLACE TOPOGRAPHY & UTILITY PLAN

CHARGE IDENTIFIER

Date Printed: 3/27/2026 WSB Filename: Projects\Minnesota\Roadway\03\_Discipline\Roadway\03\_Sheets\027938-000-100tsh-001\_TRAILHEAD

DATE: 27-MAR-2026  
 FILENAME: Projects\Minnesota\027938-000\05\_Discipline\Roadway\03\_Sheets\027938-000-105gel-plan-001\_TRAILHEAD



LEGEND		
SECTION	INDEX	
INPLACE TOPOGRAPHY & UTILITY PLAN	RITTER PARK TRAILHEAD	36
REMOVAL PLANS		38
CONSTRUCTION PLAN		40
SIGNING/STRIPING		52

RITTER PARK TRAILHEAD 1

LEGEND	
	INPLACE ROADWAYS
	PROPOSED TRAILS
	AREAS OF ENVIRONMENTAL SENSITIVITY

DRAWN BY: JMP  
 DESIGNED BY: TDO  
 CHECKED BY: TDO

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

SIGNATURE: *Taylor D. Olson*  
 PRINTED NAME: TAYLOR OLSON, PE  
 DATE: 3/27/2026 LIC. NO. 57274

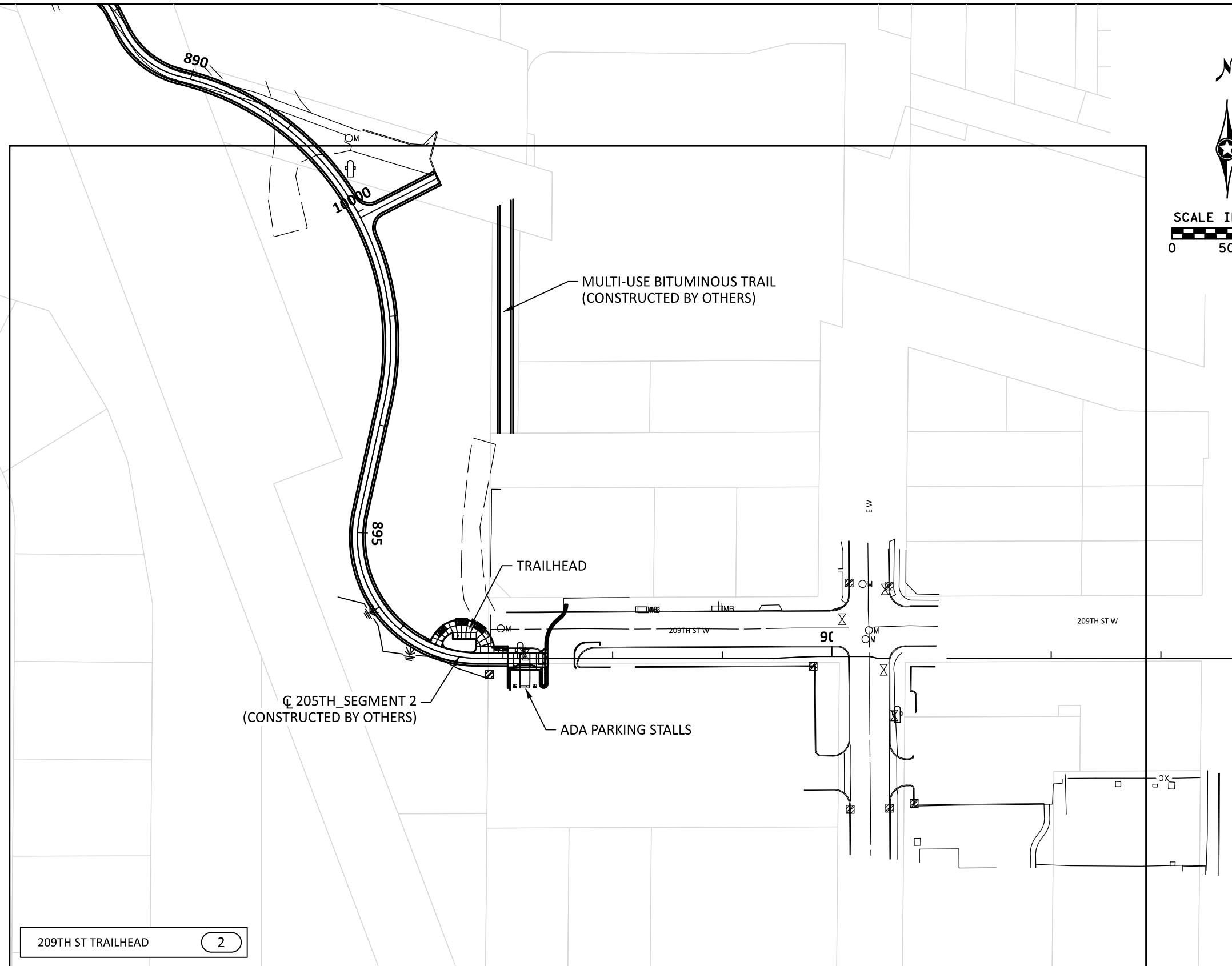


DAKOTA COUNTY PARKS AND CITY OF LAKEVILLE  
 LAKE MARION GREENWAY PROJECT  
 CITY OF LAKEVILLE, MINNESOTA

GENERAL LAYOUT  
 RITTER FARM TRAILHEAD

Sheet No. 2 of 74 Sheets

DATE: 27-MAR-2026  
 FILENAME: Projects\Minnesota\027938-000\05\_Discipline\Roadway\03\_Sheets\027938-000-105gel-plan-001\_TRAILHEAD



209TH ST TRAILHEAD 2

LEGEND		
SECTION	INDEX	
	INPLACE TOPOGRAPHY & UTILITY PLAN	DOWNTOWN TRAILHEAD
REMOVAL PLANS	39	
CONSTRUCTION PLAN	41	

LEGEND	
	INPLACE ROADWAYS
	PROPOSED TRAILS
	AREAS OF ENVIRONMENTAL SENSITIVITY

DRAWN BY: JMP  
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DAKOTA COUNTY PARKS AND CITY OF LAKEVILLE  
 LAKE MARION GREENWAY PROJECT  
 CITY OF LAKEVILLE, MINNESOTA

**GENERAL LAYOUT**  
 DOWNTOWN LAKEVILLE GATEWAY

Sheet No. 3 of 74 Sheets


NOTES:  
(P) PLAN QUANTITY

STATEMENT OF ESTIMATED QUANTITIES						
TAB	SHEET NO.	ITEM NO.	DESCRIPTION	NOTES	UNIT	PROJECT TOTAL
<b>RITTER FARM TRAILHEAD</b>						
A	38	2104.502	REMOVE PORTA POTTY ENCLOSURE		EACH	2
A	38	2104.502	REMOVE LIGHT POLE		EACH	1
A	38	2104.502	REMOVE GATE		EACH	2
A	38	2104.502	REMOVE KIOSK STRUCTURE		EACH	1
	5	2104.503	REMOVE FENCE		LIN FT	344
	5	2104.504	REMOVE BITUMINOUS WALK		SQ FT	548
		2106.507	SELECT GRANULAR EMBANKMENT (CV)	(P)	CU YD	2811
B	5	2211.507	AGGREGATE SURFACING (CV) CLASS 2		CU YD	300
B	5	2211.507	AGGREGATE BASE (CV) CLASS 5		CU YD	1249
B	5	2360.504	TYPE SP 9.5 WEAR CRS MIX(2;B) 3.0" THICK		SQ YD	390
B	5	2360.509	TYPE SP 9.5 WEARING COURSE MIX (3;C)		TON	413
B	5	2360.509	TYPE SP 12.5 NON WEAR COURSE MIX (3;C)		TON	388
	L1.2	2502.602	SEPTIC TANK		EACH	2
	L1.2	2503.603	4" SOLID PVC SDR 35		LIN FT	110
	L1.2	2503.603	4" HDPE PIPE SEWER - DIRECTIONAL DRILLED		LIN FT	710
	L1.2	2503.603	48" SANITARY SEWER MANHOLE		EACH	1
	L1.3	2504.602	BENCH		EACH	3
	L1.3	2504.602	PICNIC TABLE		EACH	9
	L1.3	2504.602	TRASH RECEPTACLES		EACH	4
	L1.3	2504.602	SWING GATE		EACH	1
	L1.3	2504.602	BIKE LOOPS		EACH	4
	L1.3	2504.602	BIKE FIX-IT STATION		EACH	1
	L1.3	2504.602	WHEEL STOP		EACH	31
	L1.3	2504.602	KIOSK		EACH	1
	L1.2	2521.518	6-INCH CONCRETE PAVEMENT		SQ FT	2,270
	L1.2	2531.503	D412 CURB & GUTTER		LIN FT	348
	L1.2	2531.618	TRUNCATED DOMES		SQ FT	16
	L1.2	2540.601	SHELTER STRUCTURE		LUMP SUM	1
	L2.1,L2.2	2511.507	RANDOM RIPRAP CLASS III		CU YD	83
	L1.2	2540.618	NATURAL STONE RETAINING WALL		SQ FT	405
	L1.2	2557.503	FENCING		LIN FT	97.5
	L3.4	2571.502	DECIDUOUS TREE 1.5" CAL B&B		EACH	2
	L3.4	2571.502	DECIDUOUS TREE 2.0" CAL B&B		EACH	4
	L3.4	2571.502	DECIDUOUS TREE 2.5" CAL B&B		EACH	2
	L3.4	2571.502	DECIDUOUS SHRUB 5-GAL CONT		EACH	21
	L3.4	2571.502	DECIDUOUS SHRUB 15-GAL CONT		EACH	4
	L3.4	2571.502	PERENNIAL 1 GAL CONT		EACH	5
	L3.4	2571.502	CONIFEROUS TREE 6' HT B&B		EACH	2
	L3.4	2571.502	ORNAMENTAL GRASS NO 1 CONT		EACH	29
	L3.2	2571.603	METAL LANDSCAPE EDGER		LIN FT	40
	L3.2	2571.604	WEED BARRIER PAPER		SQ YD	48
	L3.2	2571.607	MULCH MATERIAL TYPE 6		CU YD	8
		2573.501	EROSION CONTROL SUPERVISOR		LUMP SUM	1
D	5	2575.605	SEEDING SPECIAL		ACRE	0.7
D	5	2575.608	SEED WET DITCH		POUND	2.5

STATEMENT OF ESTIMATED QUANTITIES						
TAB	SHEET NO.	ITEM NO.	DESCRIPTION	NOTES	UNIT	PROJECT TOTAL
<b>DOWNTOWN LAKEVILLE GATEWAY</b>						
A	5	2104.503	SAWING BITUMINOUS PAVEMENT (FULL DEPTH)		LIN FT	122
A	5	2104.503	REMOVE CURB & GUTTER		LIN FT	115
A	5	2104.504	REMOVE BITUMINOUS PAVEMENT		SQ YD	201
B	5	2211.507	AGGREGATE BASE (CV) CLASS 5		CU YD	13
B	5	2360.504	TYPE SP 9.5 WEAR CRS MIX(2;B) 3.0" THICK		SQ YD	76
H	45	2503.503	15" RC PIPE SEWER DES 3006 CL V		LIN FT	57
H	45	2503.602	CONNECT TO EXISTING STORM SEWER		EACH	2
	L1.4	2504.602	CONNECT TO EXISTING WATERMAIN		EACH	1
	L1.4	2504.602	GATE VALVE & BOX		EACH	1
	L1.4	2504.602	BLOWOUT		EACH	1
	L1.4	2504.602	BENCH		EACH	3
	L1.4	2504.602	BIKE LOOPS		EACH	4
	L1.4	2504.602	BIKE FIX-IT STATION		EACH	1
	L1.4	2504.602	KIOSK		EACH	1
	L1.4	2504.602	TRASH RECEPTACLES		EACH	2
	L1.4	2504.603	1.5" TYPE K WATERMAIN		LIN FT	27
		2506.502	CASTING ASSEMBLY		EACH	3
		2506.502	INSTALL CASTING		EACH	3
H	45	2506.503	CONST DRAINAGE STRUCTURE DES SPEC 1		LIN FT	3.7
H	45	2506.503	CONST DRAINAGE STRUCTURE DES 48-4020		LIN FT	4
H	45	2506.503	CONST DRAINAGE STRUCTURE DES 60-4020		LIN FT	9.8
	L1.4	2521.518	6-INCH CONCRETE PAVEMENT		SQ FT	1,492
	L1.4	2531.503	B618 CURB & GUTTER		LIN FT	148
	L1.4	2531.618	TRUNCATED DOMES		SQ FT	32
	L1.4	2540.601	DRINKING FOUNTAIN		LUMP SUM	1
	L3.4	2571.502	DECIDUOUS TREE 1.5" CAL B&B		EACH	3
	L3.4	2571.502	DECIDUOUS TREE 2.0" CAL B&B		EACH	3
	L3.4	2571.502	DECIDUOUS SHRUB 5-GAL CONT		EACH	24
	L3.4	2571.502	PERENNIAL 1 GAL CONT		EACH	39
	L3.4	2571.502	ORNAMENTAL GRASS NO 1 CONT		EACH	61
	L3.3	2571.603	METAL LANDSCAPE EDGER		LIN FT	150
	L3.3	2571.604	WEED BARRIER PAPER		SQ YD	157
	L3.3	2571.607	MULCH MATERIAL TYPE 6		CU YD	18
D	5	2573.502	STORM DRAIN INLET PROTECTION		EACH	3
D	5	2574.508	FERTILIZER TYPE 3		POUND	392
D	5	2575.505	SEEDING		ACRE	1.12
D	5	2575.523	RAPID STABILIZATION METHOD 3		M GALLON	6.72
D	5	2575.508	HYDRAULIC BONDED FIBER MATRIX		POUND	3358
D	5	2575.608	SEED WET DITCH		POUND	1.5
D	5	2575.608	SEED SOUTHERN BOULEVARD		POUND	179

STATEMENT OF ESTIMATED QUANTITIES						
TAB	SHEET NO.	ITEM NO.	DESCRIPTION	NOTES	UNIT	PROJECT TOTAL
<b>ALTERNATE AREA</b>						
		2360.509	TYPE SP 9.5 WEARING COURSE MIX (3;C)		TON	170
		2360.509	TYPE SP 12.5 NON WEAR COURSE MIX (3;C)		TON	212

DATE: 27-MAR-2026  
FILENAME: Projects\Minnesota\027938-000\05\_Discipline\Roadway\03\_Sheets\027938-000-130est-plan-001\_TRAILHEAD

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DESIGNED BY: TDO		PRINTED NAME: TAYLOR OLSON, PE
CHECKED BY: TDO		DATE: 3/27/2026 LIC. NO. 57274



**DAKOTA COUNTY PARKS AND CITY OF LAKEVILLE**  
LAKE MARION GREENWAY PROJECT  
CITY OF LAKEVILLE, MINNESOTA

**ESTIMATED QUANTITIES**

DATE: 27-MAR-2026  
 FILENAME: Projects\Minnesota\027938-000\05\_Discipline\Roadway\03\_Sheets\027938-000-130tab-plan-001\_TRAILHEAD

REMOVALS					A
LOCATION	REMOVE				SAWING BITUMINOUS PAVEMENT (FULL DEPTH)
	CURB & GUTTER	FENCE	BITUMINOUS PAVEMENT	BITUMINOUS WALK	
	LIN FT	LIN FT	SQ YD	SQ FT	LIN FT
RITTER PARK TRAILHEAD		344		548	
209TH ST TRAILHEAD	115		201		122
<b>PROJECT TOTAL</b>	<b>115</b>	<b>344</b>	<b>201</b>	<b>548</b>	<b>122</b>

TURF ESTABLISHMENT & EROSION CONTROL								D
LOCATION	STORM DRAIN INLET PROTECTION	SEEDING SPECIAL	SEEDING	RAPID STABILIZATION METHOD 3	FERILIZER TYPE 3	HYDRAULIC BONDED FIBER MATRIX	SEED WET DITCH	SEED SOUTHERN BOULEVARD
	EACH	ACRE	ACRE	MGAL	POUND	POUND	POUND	POUND
RITTER PARK TRAILHEAD		0.7					2.5	
209TH ST TRAILHEAD	3		1.12	6.72	392	3358	1.5	179
<b>PROJECT TOTAL</b>	<b>3</b>	<b>0.7</b>	<b>1.12</b>	<b>6.72</b>	<b>392</b>	<b>3358</b>	<b>4</b>	<b>179</b>

NOTES:  
 (1). MNL RUSTY PATCHED BUMBLE BEE MIX

BITUMINOUS & AGGREGATE TABULATION					B
LOCATION	AGGREGATE BASE (CV) CLASS 5	AGGREGATE SURFACING (CV) CLASS 2	TYPE SP 9.5 WEAR CRS MIX(2;B) 3.0" THICK	TYPE SP 9.5 WEARING COURSE MIX (3;C)	TYPE SP 12.5 WEARING COURSE MIX (3;C)
	CU YD	CU YD	SQ YD	TON	TON
RITTER FARM TRAILHEAD	1236	300	390	309	388
RITTER TRAIL PAVING				104	
DONWTOWN LAKEVILLE GATEWAY	13		76		
<b>PROJECT TOTAL</b>	<b>1249</b>	<b>300</b>	<b>466</b>	<b>413</b>	<b>388</b>

NOTES:  
 (2) INCLUDES AGGREGATE UNDER BITUMINOUS PAVEMENT, TRAIL, CURB & GUTTER, AND CONCRETE WALK.

BASIS OF QUANTITIES:  
 - BITUMINOUS DENSITY: 113 LB/SY/IN  
 - TACK COAT BETWEEN BITUMINOUS LIFTS: 0.05 GAL/SY

DRAWN BY: JMP  
 DESIGNED BY: TDO  
 CHECKED BY: TDO

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SIGNATURE: *Taylor D Olson*  
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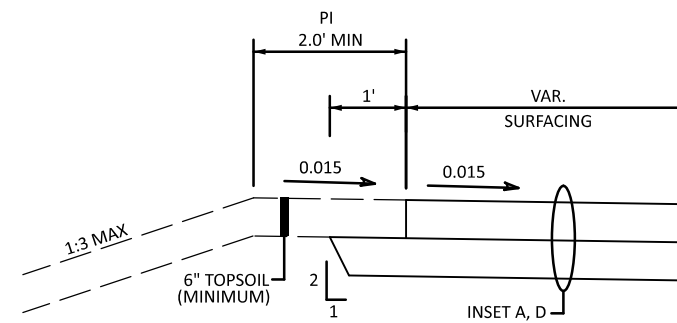
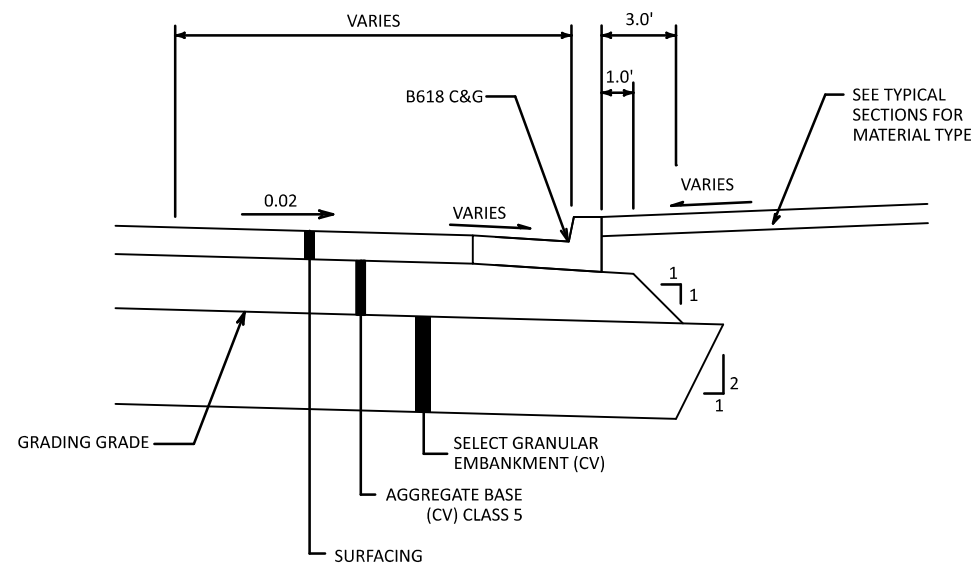
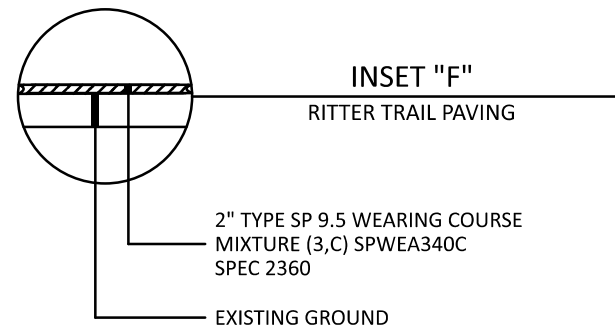
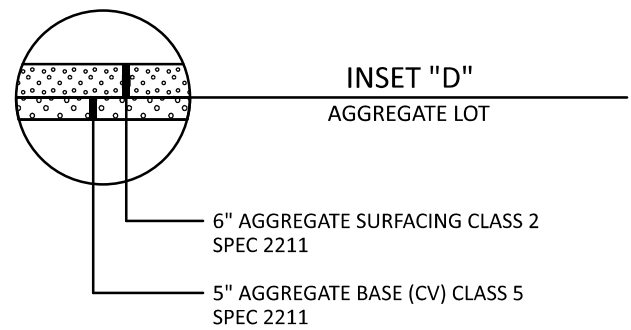
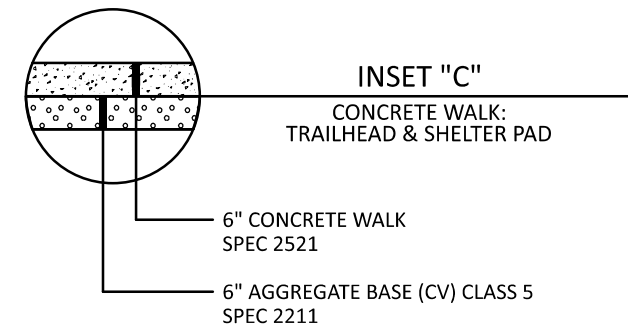
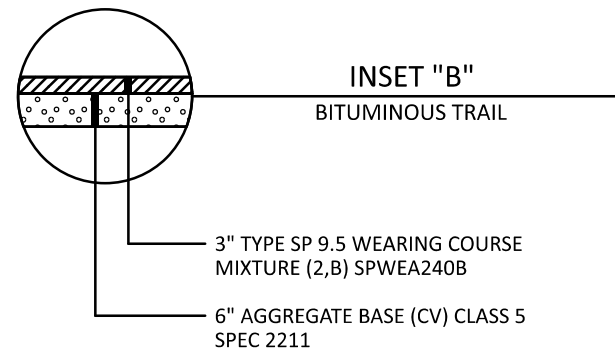
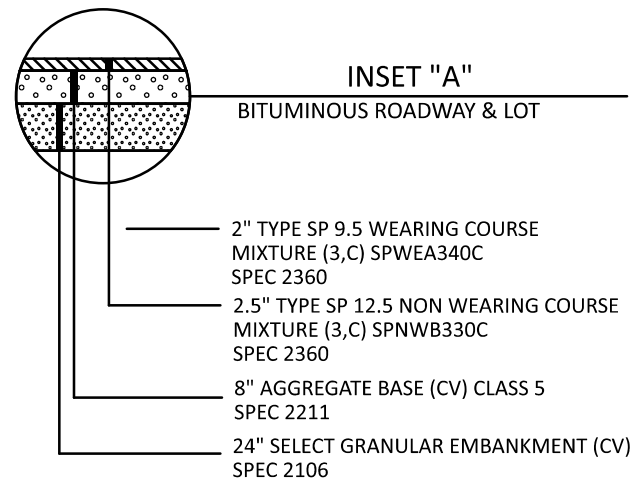


DAKOTA COUNTY PARKS AND CITY OF LAKEVILLE  
 LAKE MARION GREENWAY PROJECT  
 CITY OF LAKEVILLE, MINNESOTA

TABULATIONS



DATE: 27-MAR-2026  
 FILENAME: Projects\Minnesota\027938-000\05\_Discipline\Roadway\03\_Sheets\027938-000-145typ-plan-001\_TRAILHEAD



**GENERAL NOTES:**

- THE GRADING GRADE CROSS SLOPE WILL BE THE SAME AS THE PAVEMENT CROSS SLOPE UNLESS OTHERWISE NOTED.
- THE PROFILE GRADE IS THE FINISHED GRADE AT CENTERLINE.
- ALL EDGE DIMENSIONS ARE TO THE EDGE OF PAVEMENT.
- ALL CROSS SLOPES ARE IN FT/FT.

DRAWN BY: JMP  
 DESIGNED BY: TDO  
 CHECKED BY: TDO

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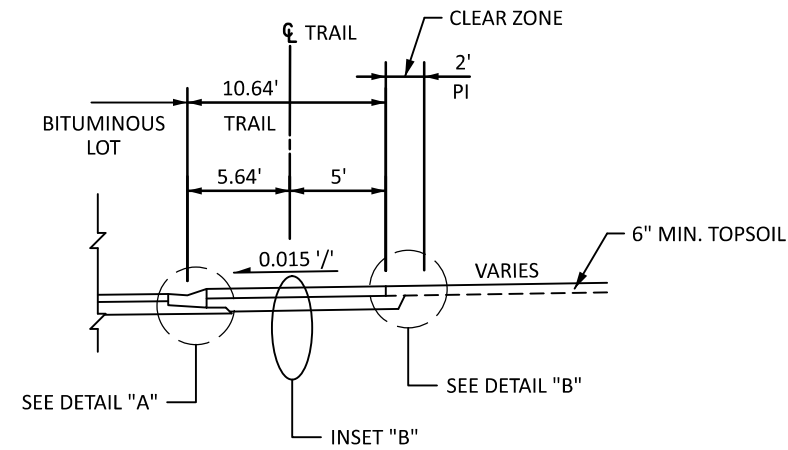
DAKOTA COUNTY PARKS AND CITY OF LAKEVILLE  
 LAKE MARION GREENWAY PROJECT  
 CITY OF LAKEVILLE, MINNESOTA

**TYPICAL SECTIONS**  
 PAVEMENT INSETS & DETAILS

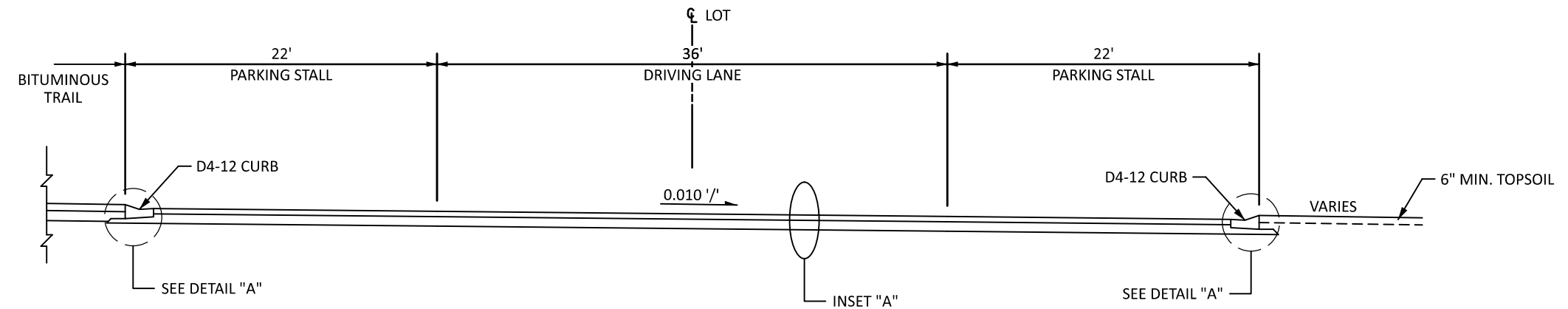
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**BITUMINOUS TRAIL**

STA 100+11.74 TO STA 101+35.74 (RITTER TRAIL)



**BITUMINOUS LOT**



**GENERAL NOTES:**

- THE GRADING GRADE CROSS SLOPE WILL BE THE SAME AS THE PAVEMENT CROSS SLOPE UNLESS OTHERWISE NOTED.
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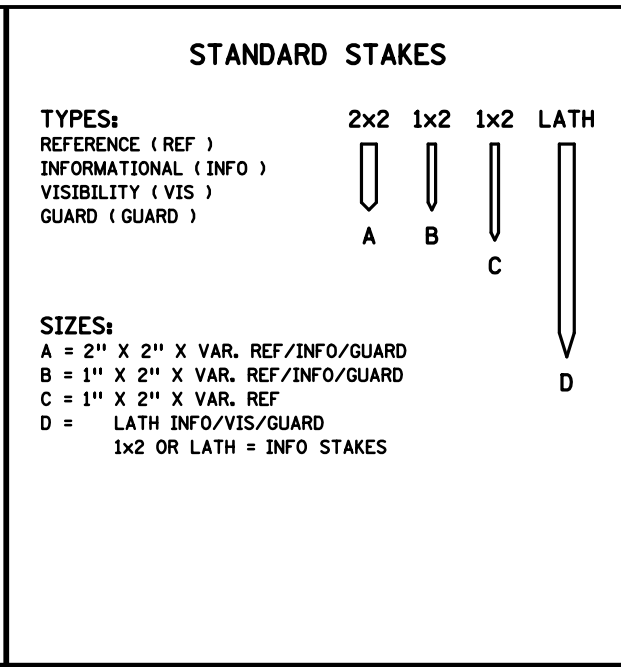
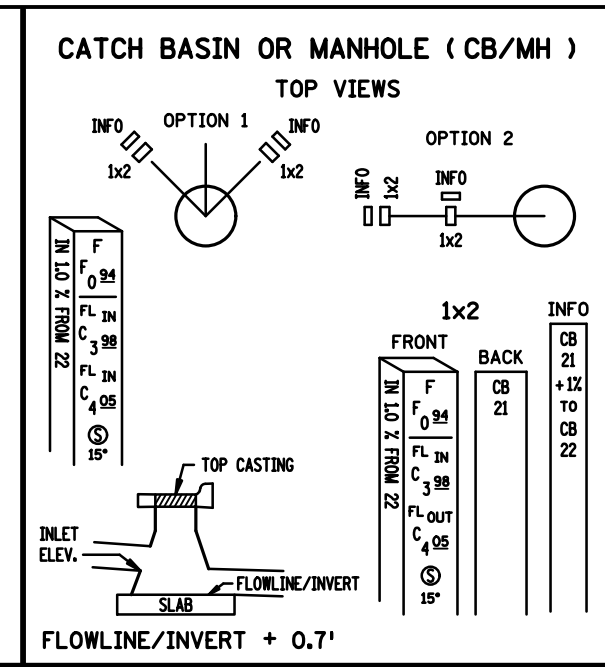
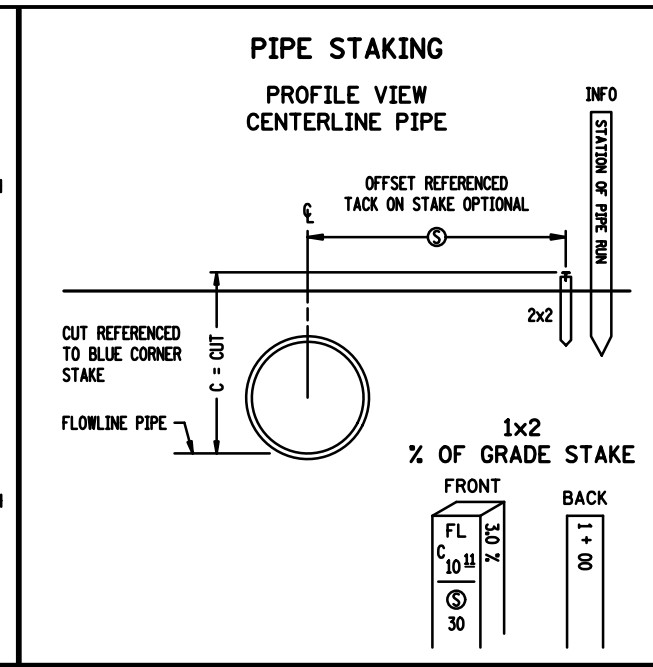
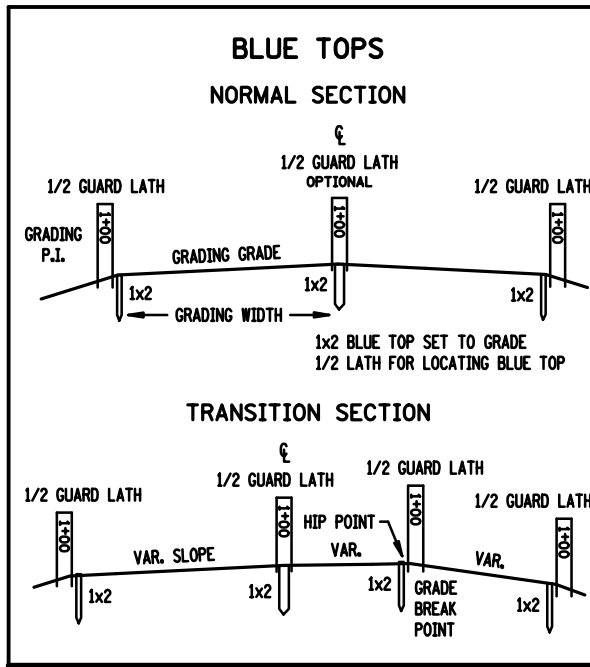


DAKOTA COUNTY PARKS AND CITY OF LAKEVILLE  
 LAKE MARION GREENWAY PROJECT  
 CITY OF LAKEVILLE, MINNESOTA

TYPICAL SECTIONS

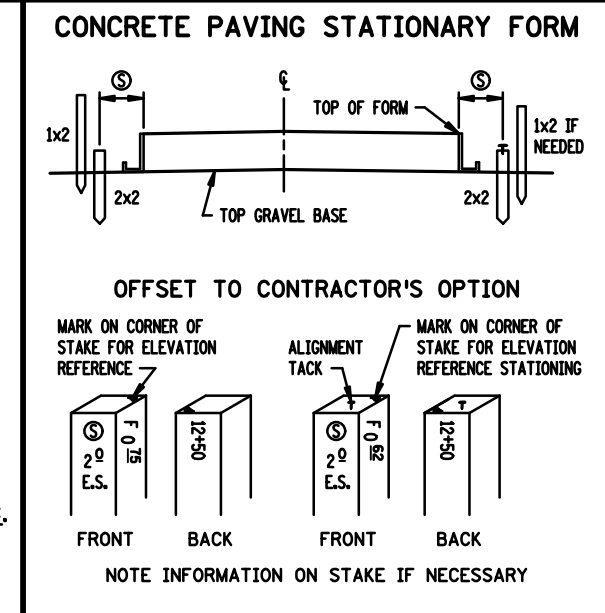
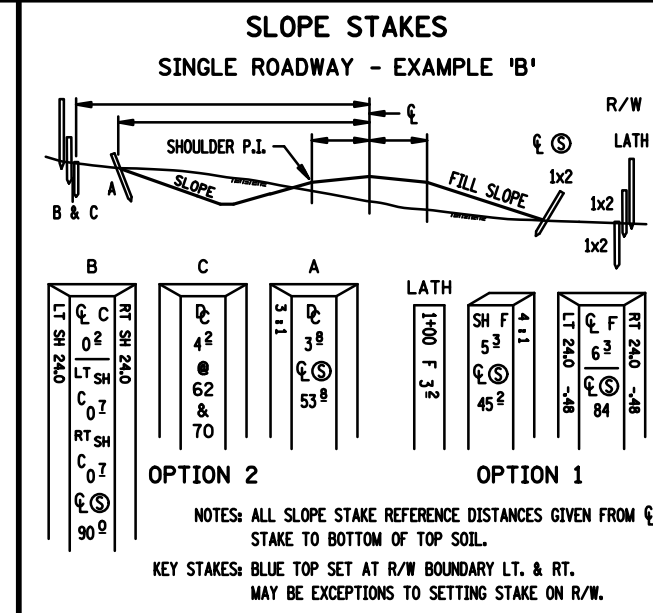
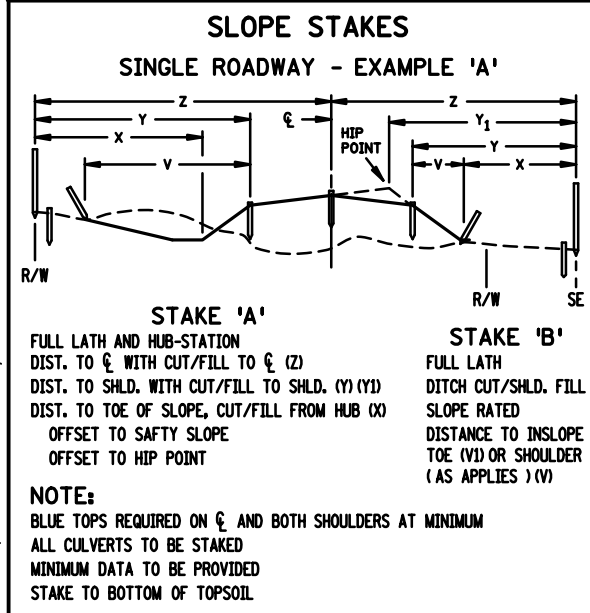
Sheet No. 8 of 74 Sheets

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 FILENAME: Projects\Minnesota\027938-000\05\_Discipline\Roadway\03\_Sheets\027938-000-155spr-100-detl-001TRAILHEAD



### ABBREVIATIONS

BBL = BARREL ( PIPE )	HP = HIP POINT
B.C. = BACK CURB	LT = LEFT
C & G = CURB & GUTTER	MH = MANHOLE
C = CUT	NB = NORTHBOUND
CAP = CORR. ALUM. PIPE	⊙ = OFFSET
CB = CATCH BASIN	PAR = PARCEL
CL & GR = CLEAR & GRUB	% = PERCENT GRADE
CMP = CORR. METAL PIPE	P.E. = PERM. EASEMENT
COR = CORNER	RAD = RADIUS POINT
CR = CROWN	RCP = REINF. CONC. PIPE
CSP = CORR. STEEL PIPE	RP = REFERENCE POINT
⊕ = DITCH CUT	RSC = REINF. SECT. CONC.
D.E. = DRAINAGE EASEMENT	RT = RIGHT
DI = DROP INLET	R/W = RIGHT OF WAY
EB = EASTBOUND	SB = SOUTHBOUND
E.M. = EDGE BITUMINOUS MAT	SCP = SECT. CONC. PIPE
E.S. = EDGE CONCRETE SLAB	SH = SHOULDER
F = FILL	TC = TOP CASTING
FF = FRONT FACE	OR TOP CURB
FL = FLOW LINE	T.E. = TEMP. EASEMENT
FL IN = FLOWLINE INLET	3 : 1 = SLOPE ( EXAMPLE )
FL OUT = FLOWLINE OUTLET	WB = WESTBOUND
GR = GRADE	WP = WORKING POINTS
GW = GRADING WIDTH	



### RECOMMENDED STAKING INTERVALS

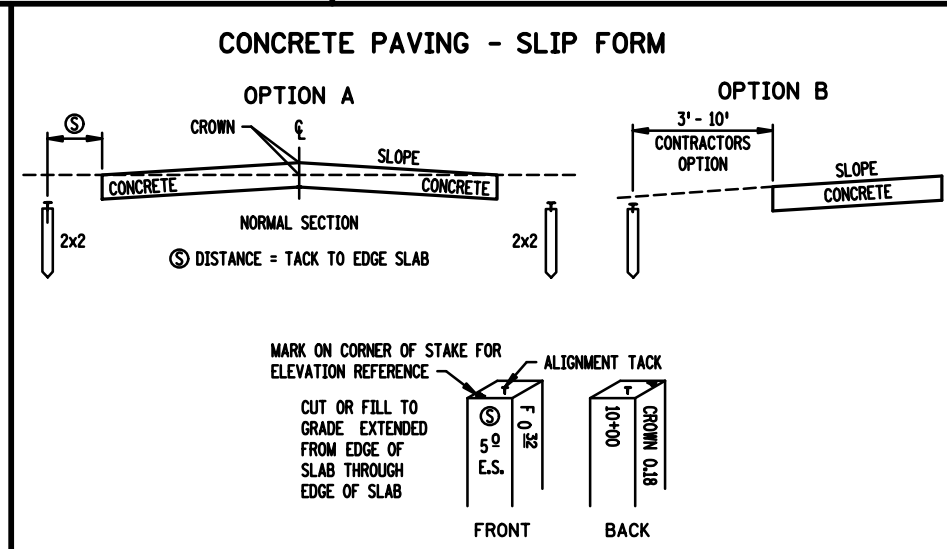
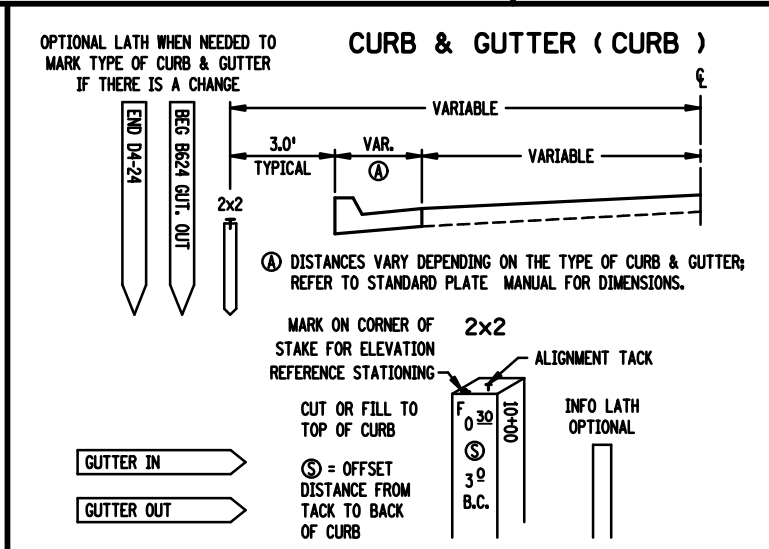
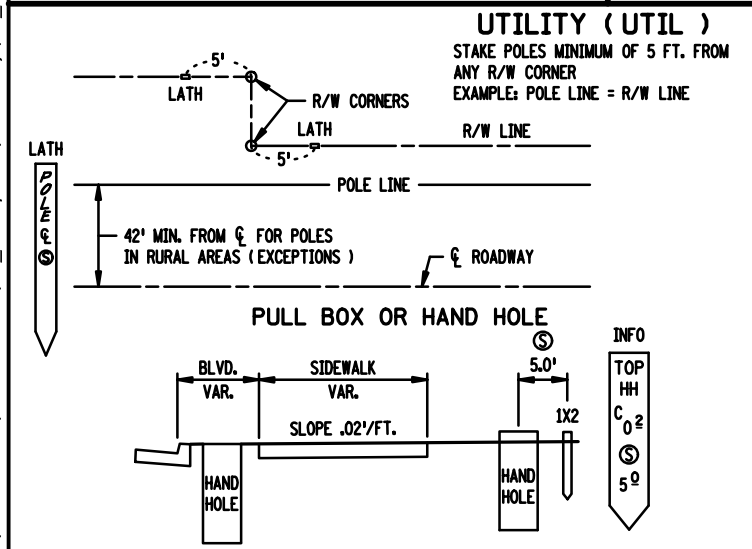
FIGURE A

	SLOPE STAKES	SUB GRADE B.T.	CLASS MATERIAL B.T.	CONC PAVT	CL & GR LIMITS	MUCK EXC.	R/W	TEMP. EASE.
TANGENT	100	100	100	50	50	100	ALL CORNERS	ALL CORNERS
HORIZ. CURVE								
0 - 3'	100	100	100	50	50	100	ALL CORNERS	ALL CORNERS
OVER 3' -	100	50	50	25	25	100	ALL CORNERS	ALL CORNERS
VERT. CURVE								
M' 100' CHORD 0 - 25	100	100	100	50	50			
M' OVER .25	100	50	50	25	25			
TRAN.		50	50					

### STAKING TOLERANCES ( FEET )

	HORIZONTAL	VERTICAL
CONSTRUCTION LIMITS	± 1.5	
CLEARING & GRUBBING	2.0	
SLOPE STAKES	2.0	± 0.2
KEY STAKES	0.2	0.03
DRAINAGE STAKES	0.05	0.05
CURB & GUTTER	0.07	0.03
PAVING	0.05	0.03
ALIGNMENT	0.07	
UTILITY	0.10	0.05
STRUCTURAL	0.02	0.02
GUARD RAIL	0.5	
BUILDINGS	0.04	
O.H. SIGNS	0.05	0.05
MUCK EXCAVATION LIMITS	2.0	
R/W B-POINTS	0.10	
NOISE WALLS	1.0	0.5

THE TOLERANCES ARE RELATIVE TO PROJECT DATUM



### DISCLAIMER

THESE STAKING INFORMATION SHEETS ARE FOR INFORMATION PURPOSES ONLY. STAKING PROCEDURES VARY AND MAY BE SUBJECT TO CHANGE DURING CONSTRUCTION BY CIRCUMSTANCES AND/OR AGREEMENTS BETWEEN SURVEY CREW AND CONTRACTOR.

LEAD EXPERT OFFICE  
 BRYAN DODDS  
 DIRECTOR  
 OFFICE OF LAND MANAGEMENT

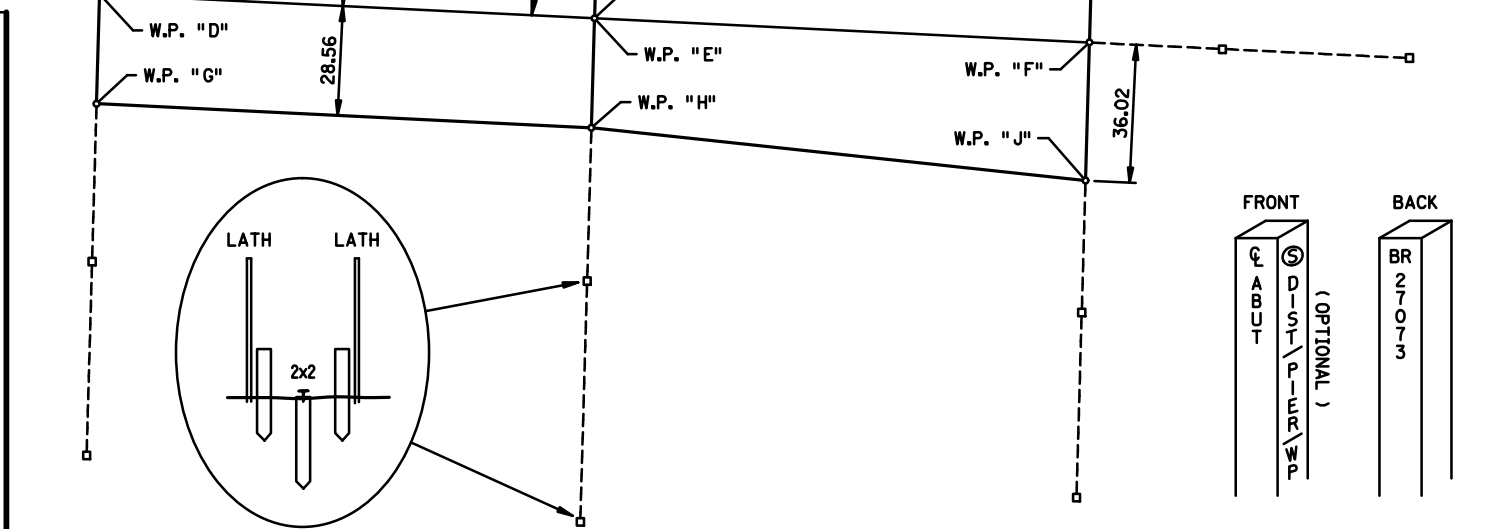
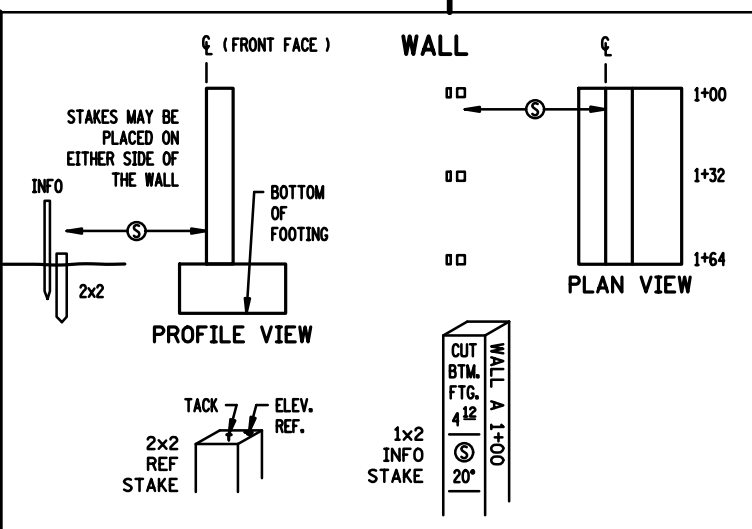
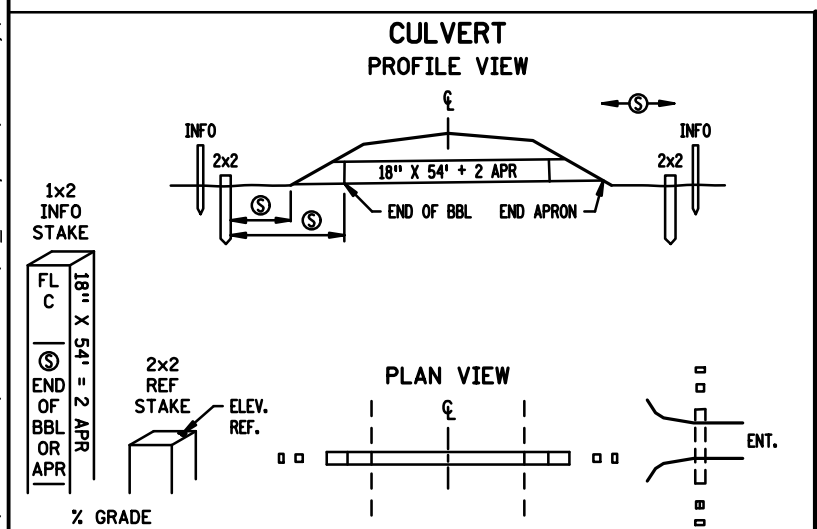
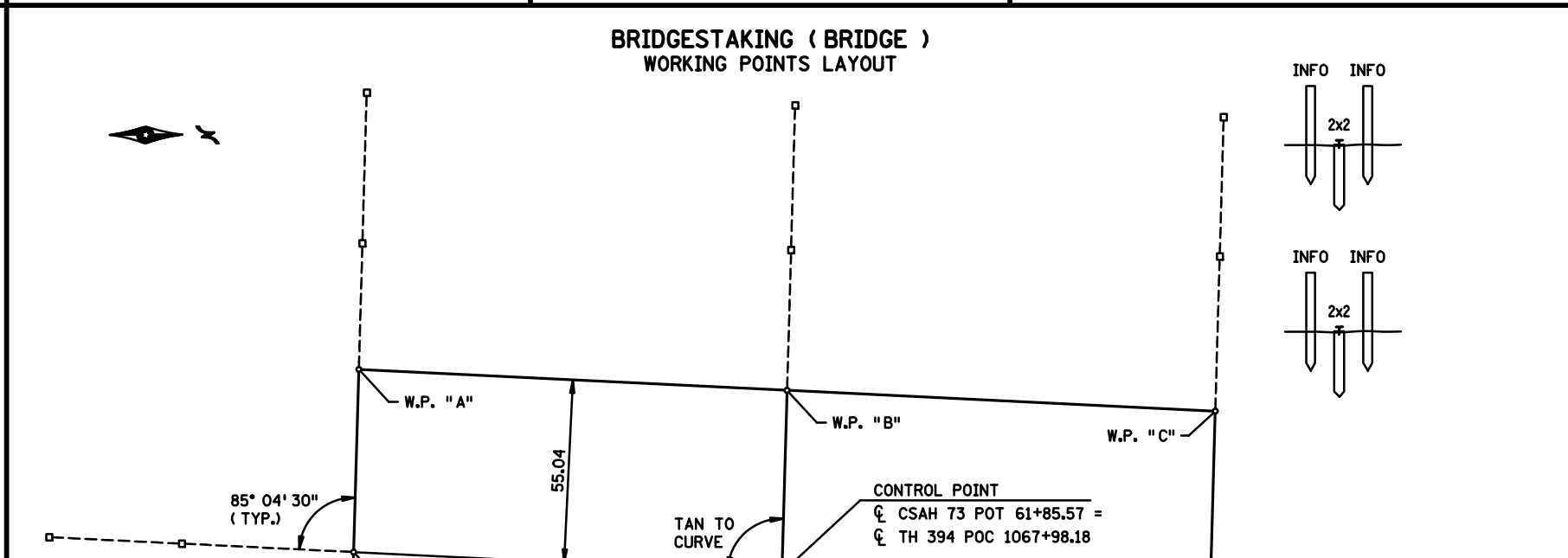
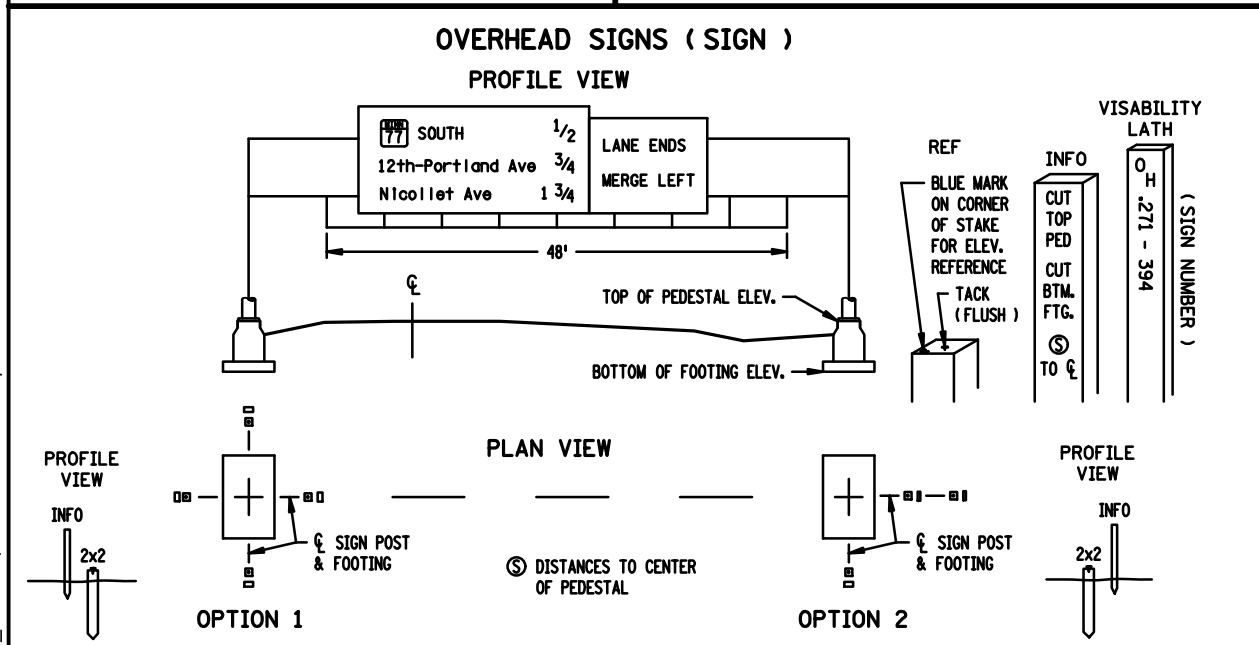
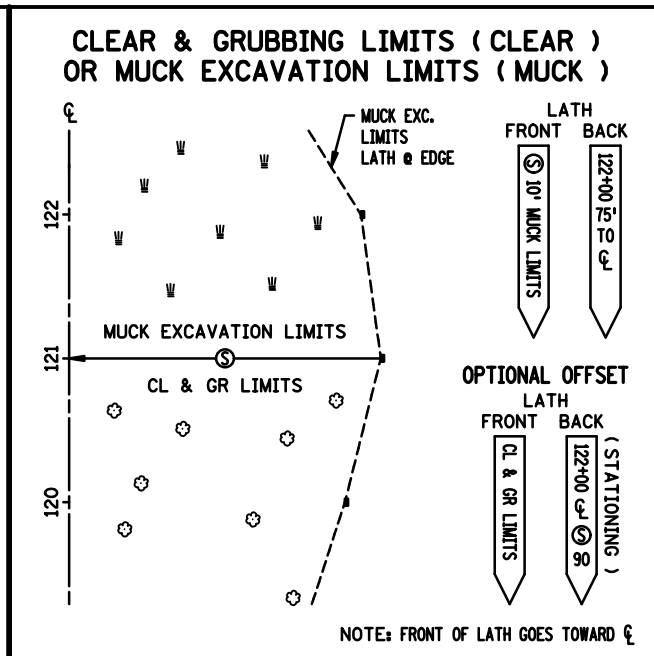
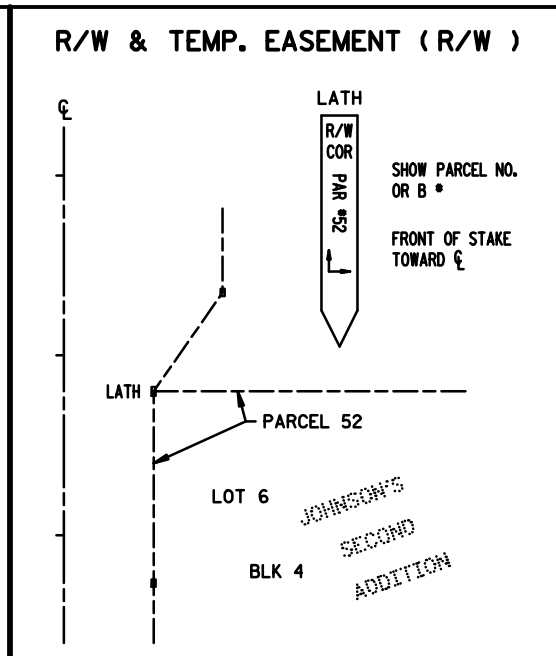
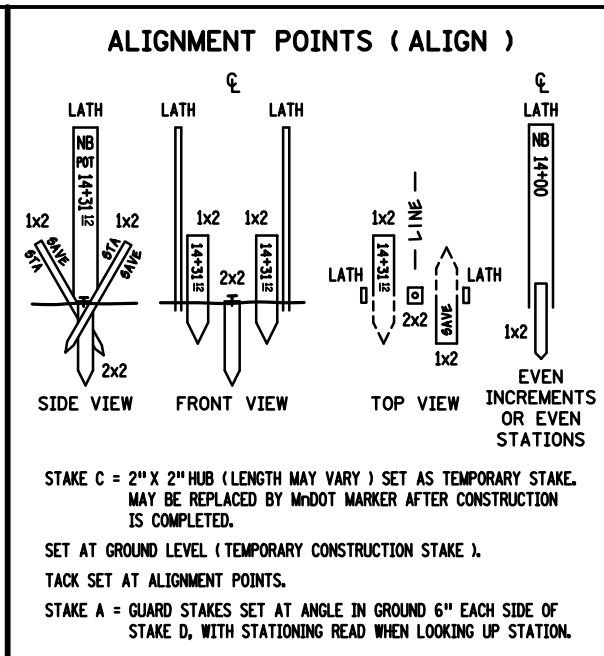
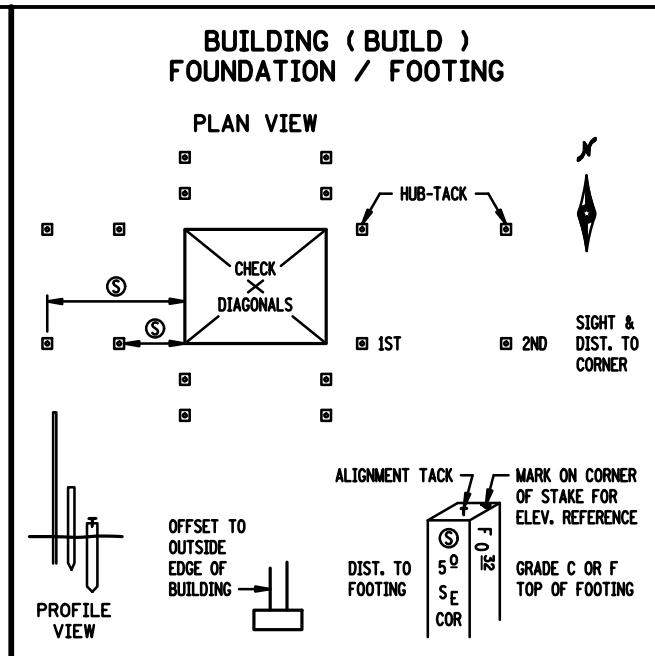
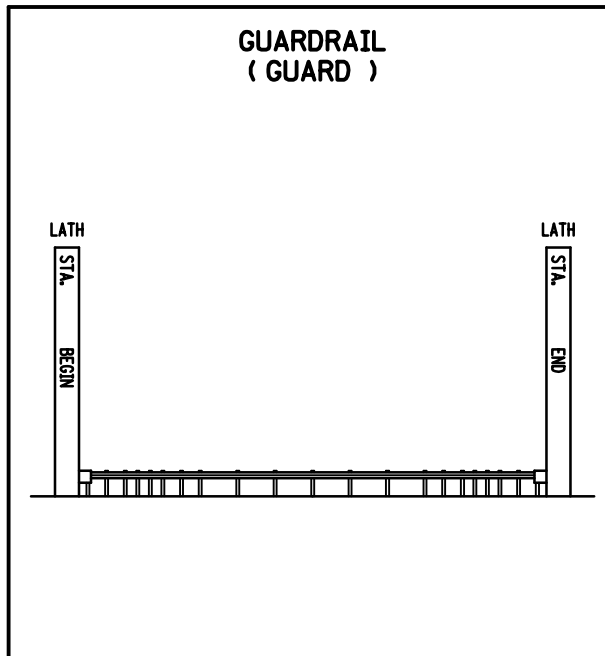
SIGNATURE: *Taylor Olson*  
 PRINTED NAME: TAYLOR OLSON, PE  
 DATE: 3/27/2026 LIC. NO. 57274

DAKOTA COUNTY PARKS AND CITY OF LAKEVILLE  
 LAKE MARION GREENWAY PROJECT  
 CITY OF LAKEVILLE, MINNESOTA

STAKING INFORMATION SHEET  
 APPROVED: 08-06-2014  
 REVISED:

STANDARD PLAN 5-297.115  
 1 OF 2  
 Sheet No. 9 of 74 Sheets

DATE: 27-MAR-2026  
 FILENAME: Projects\Minnesota\Roadway\03\_Sheets\027938-000-155sprn-100-detl-001TRAILHEAD



**LEAD EXPERT OFFICE**  
 BRYAN DODDS  
 DIRECTOR  
 OFFICE OF LAND MANAGEMENT

**STAKING INFORMATION SHEET**

APPROVED: 08-06-2014  
 REVISED:  
 Christopher Roy  
 STATE DESIGN ENGINEER

STANDARD PLAN 5-297.115  
 2 OF 2

DRAWN BY: JMP  
 DESIGNED BY: TDO  
 CHECKED BY: TDO

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

SIGNATURE: Taylor Olson  
 PRINTED NAME: TAYLOR OLSON, PE  
 DATE: 3/27/2026 LIC. NO. 57274

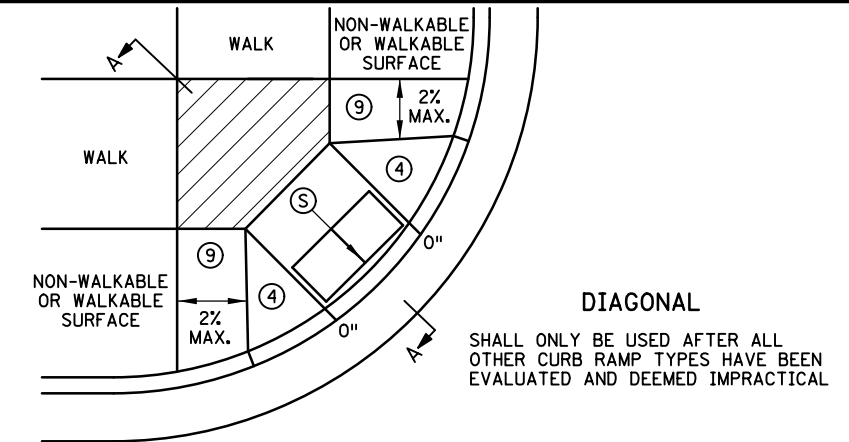
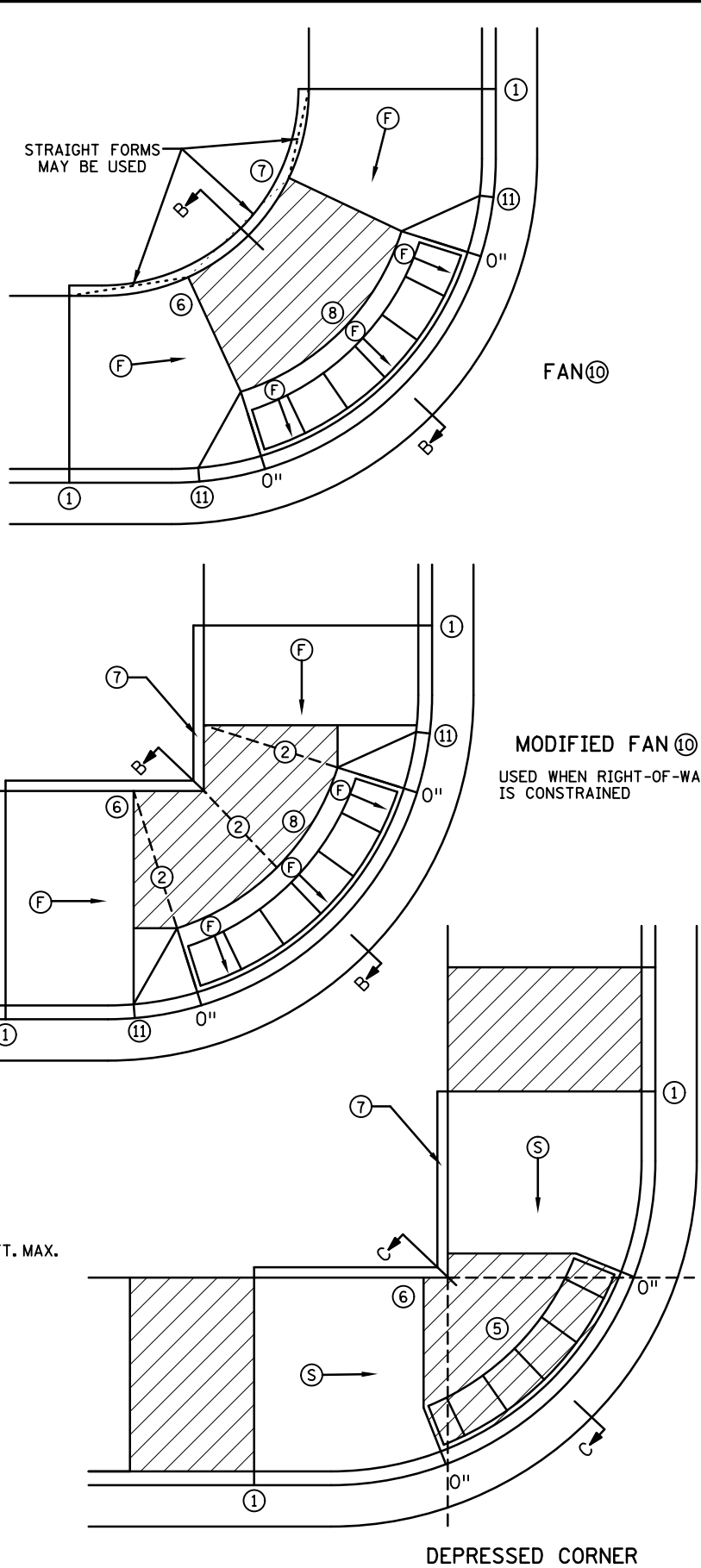
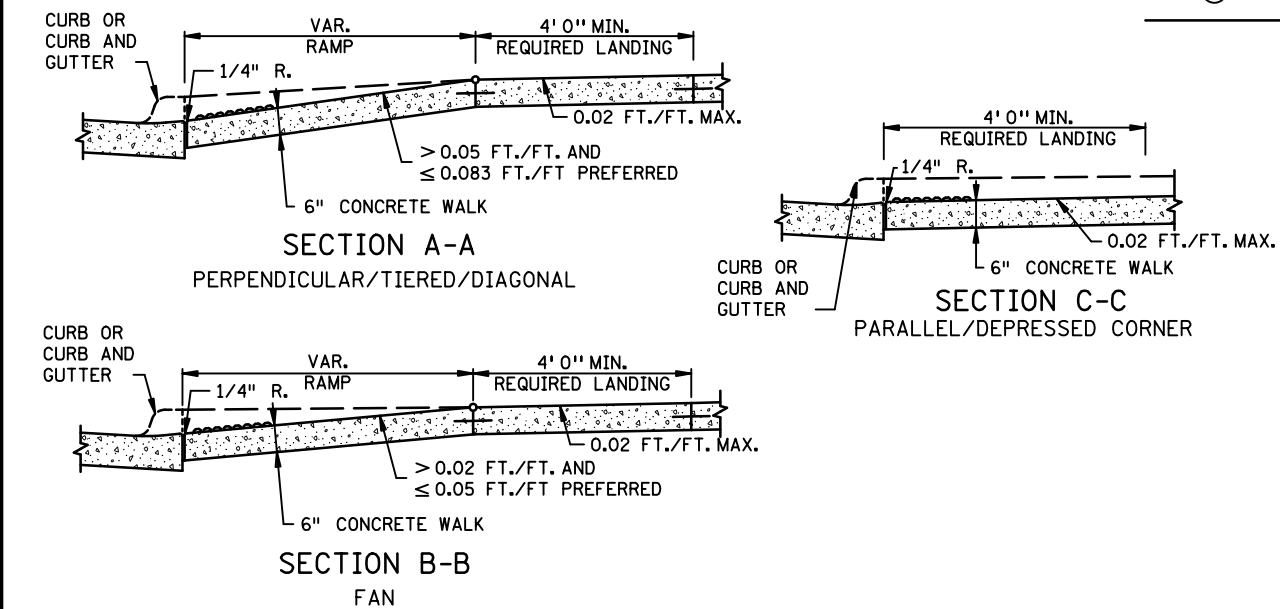
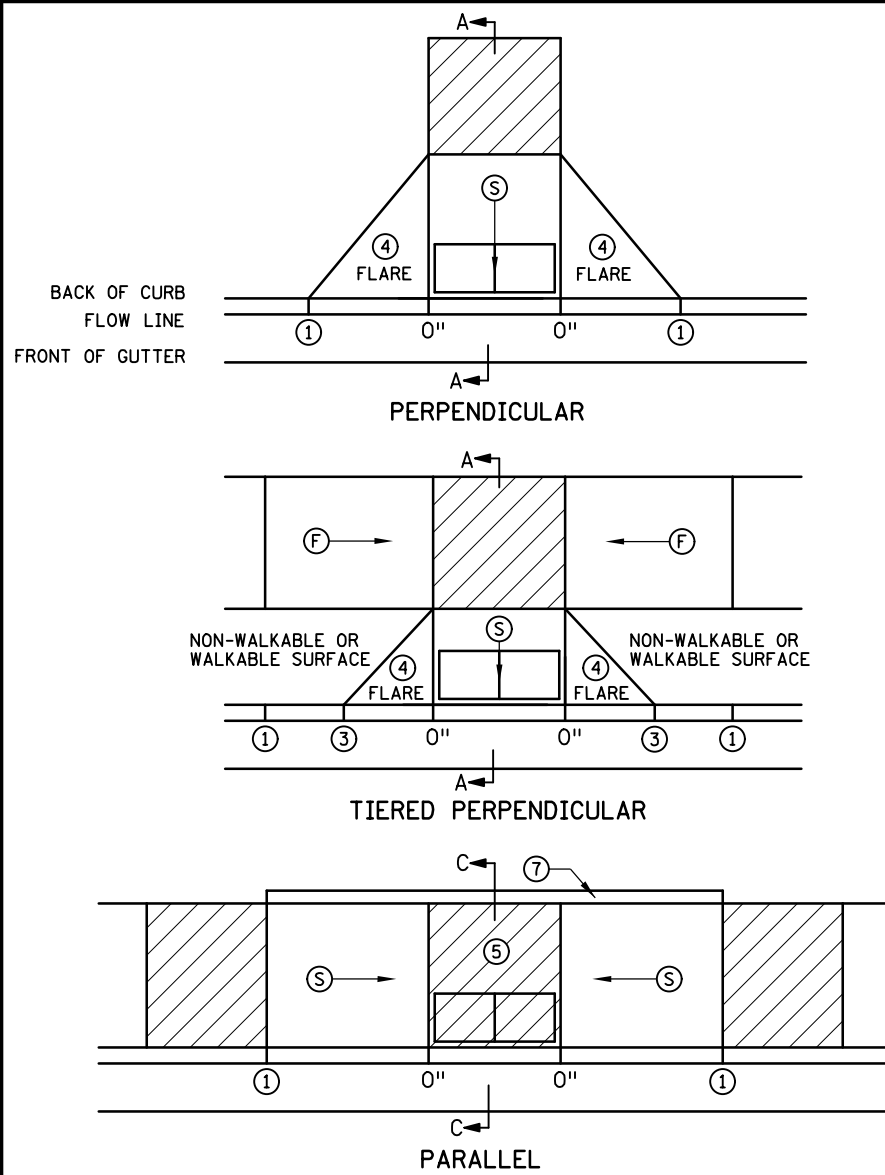


DAKOTA COUNTY PARKS AND CITY OF LAKEVILLE  
 LAKE MARION GREENWAY PROJECT  
 CITY OF LAKEVILLE, MINNESOTA

STANDARD PLANS

Sheet No. 10 of 74 Sheets

DATE: 27-MAR-2026  
 FILENAME: Projects\Minnesota\027938-000\05\_Discipline\Roadway\03\_Sheets\027938-000-155spr-200-def-001TRAILHEAD



**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.

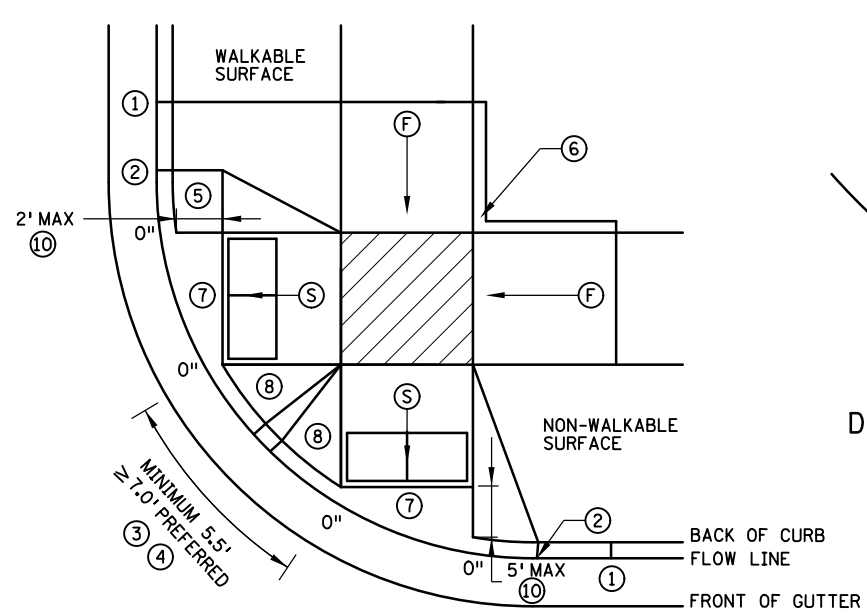
**LEGEND**

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

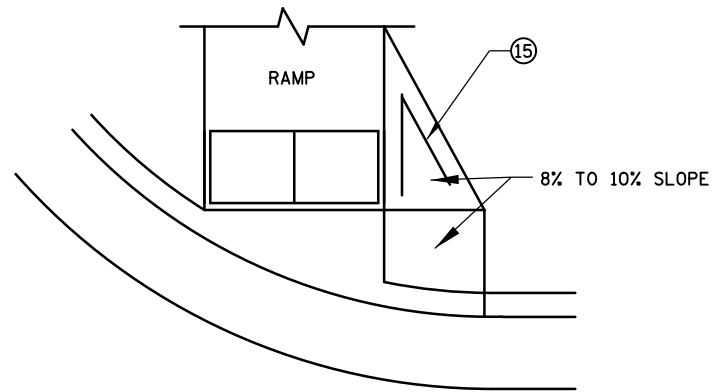
- (S) INDICATES PEDESTRIAN RAMP - SLOPE SHALL BE BETWEEN 5.0% MINIMUM AND 8.3% MAXIMUM IN THE DIRECTION SHOWN AND THE CROSS SLOPE SHALL NOT EXCEED 2.0%.
- (F) INDICATES PEDESTRIAN RAMP - SLOPE SHALL BE GREATER THAN 2.0% AND LESS THAN 5.0% IN THE DIRECTION SHOWN AND CROSS SLOPE SHALL NOT EXCEED 2.0%.
- 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 PAR.
- X" CURB HEIGHT

<b>LEAD EXPERT OFFICE</b>	JEFFREY PERKINS OPERATIONS DIVISION	<b>PEDESTRIAN CURB RAMP DETAILS</b>	APPROVED: 11-04-2021 REVISED:	 THOMAS STYRBICKI STATE DESIGN ENGINEER	<b>STANDARD PLAN</b> 5-297.250	1 OF 6
DRAWN BY: JMP DESIGNED BY: TDO CHECKED BY: TDO	I HEREBY CERTIFY THAT THIS SHEET WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.	SIGNATURE: PRINTED NAME: TAYLOR OLSON, PE DATE: 3/27/2026 LIC. NO. 57274			<b>DAKOTA COUNTY PARKS AND CITY OF LAKEVILLE</b> LAKE MARION GREENWAY PROJECT CITY OF LAKEVILLE, MINNESOTA	<b>STANDARD PLANS</b> Sheet No. 11 of 74 Sheets

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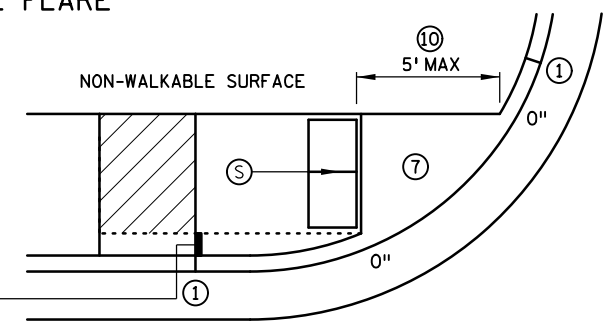


COMBINED DIRECTIONAL

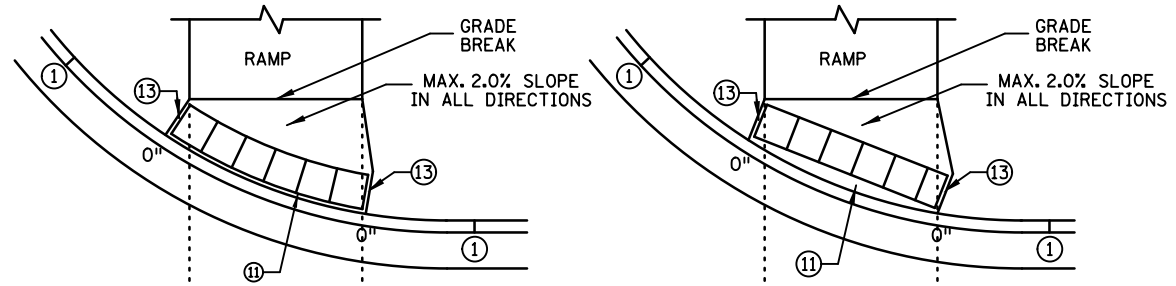


DIRECTIONAL RAMP WALKABLE FLARE

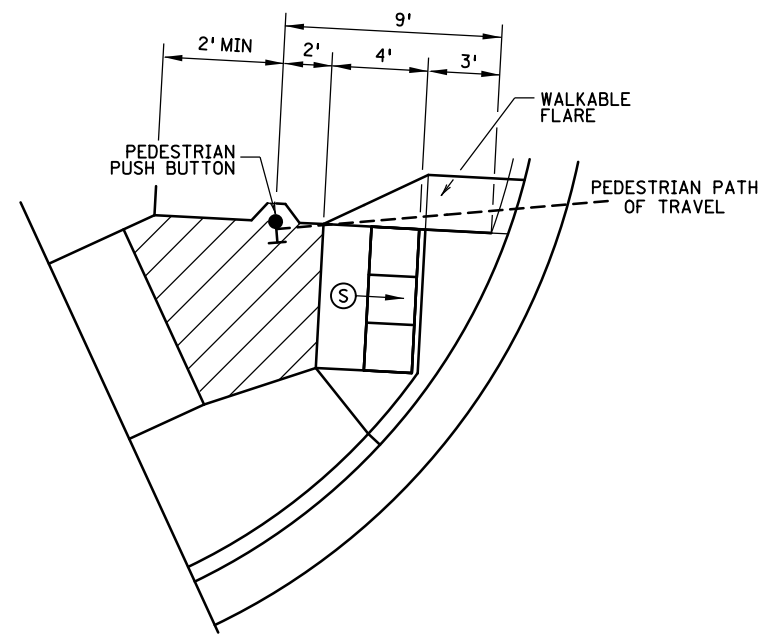
IF NON-CONCRETE BLVD. IS CONSTRUCTED AND IS LESS THAN 2' IN WIDTH AT TOP OF CURB TRANSITION, PAVE CONCRETE RAMP WIDTH TO ADJACENT BACK OF CURB.



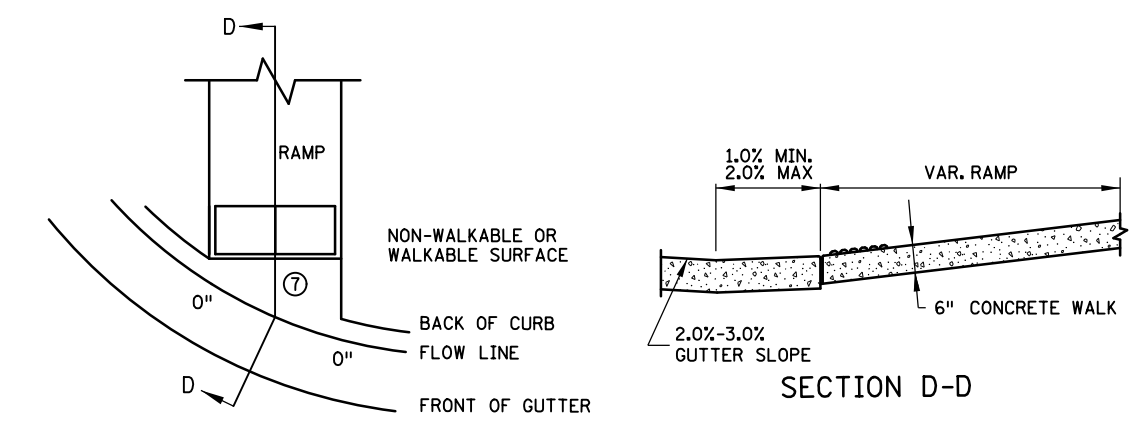
STANDARD ONE-WAY DIRECTIONAL ⑨



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)



CURB FOR DIRECTIONAL RAMPS ⑭

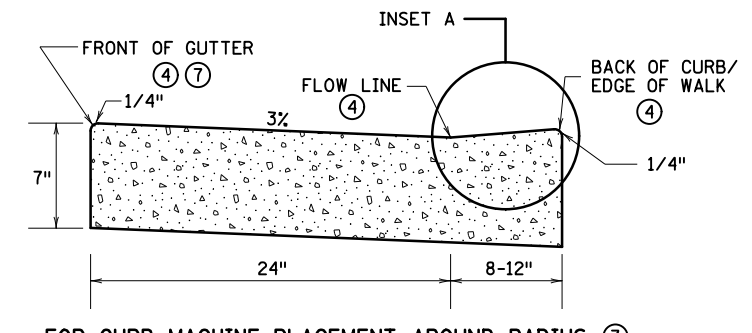
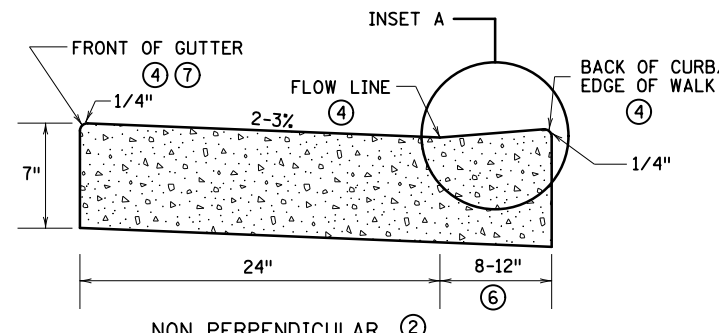
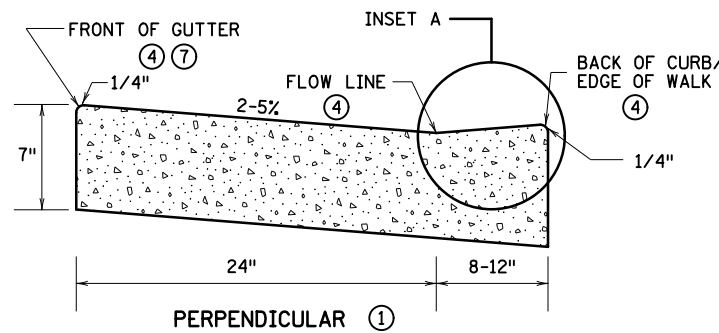
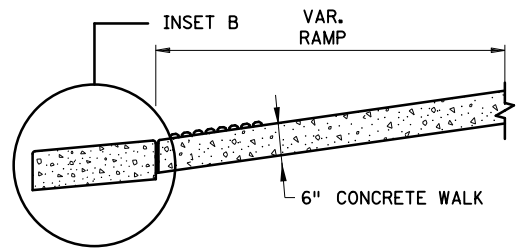
NOTES:

- 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.
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- 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 DOME 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).

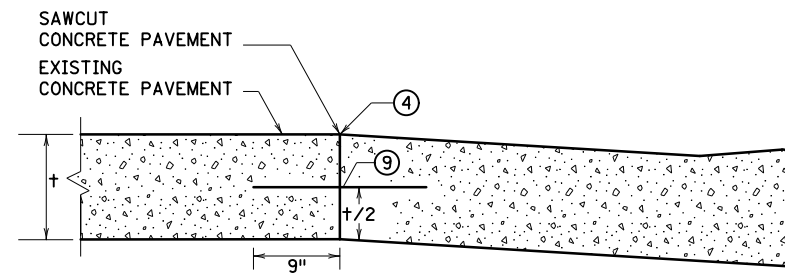
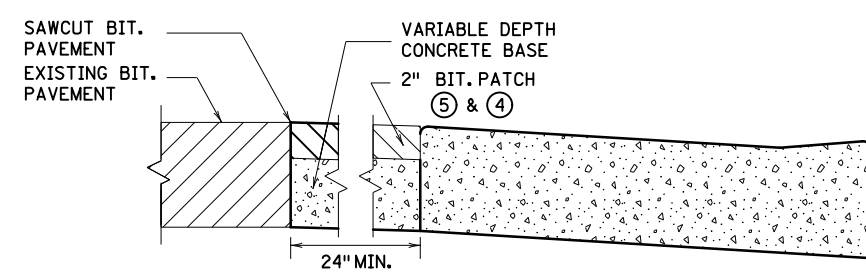
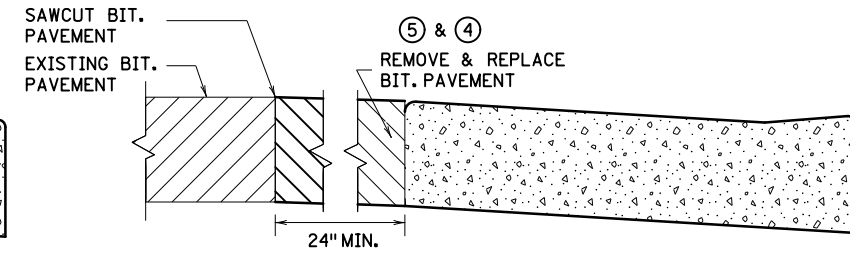
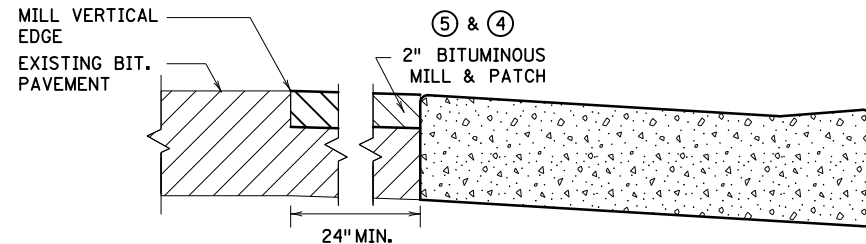
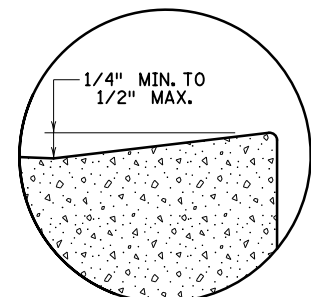
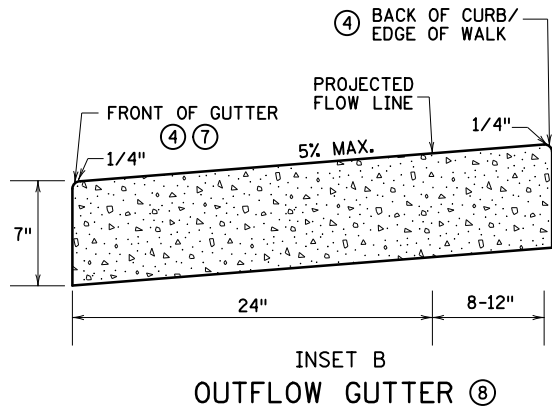
LEGEND	
THESE LONGITUDINAL SLOPE RANGES SHALL BE THE STARTING POINT. IF SITE CONDITIONS WARRANT, LONGITUDINAL SLOPES UP TO 8.3% OR FLATTER ARE ALLOWED.	
Ⓢ	INDICATES PEDESTRIAN RAMP - SLOPE SHALL BE BETWEEN 5.0% MINIMUM AND 8.3% MAXIMUM IN THE DIRECTION SHOWN AND THE CROSS SLOPE SHALL NOT EXCEED 2.0%.
Ⓣ	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%.
[Hatched Box]	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 PAR.
X"	CURB HEIGHT

LEAD EXPERT OFFICE	JEFFREY PERKINS OPERATIONS DIVISION	PEDESTRIAN CURB RAMP DETAILS	APPROVED: 11-04-2021 REVISED:	 THOMAS STYRBICKI STATE DESIGN ENGINEER	STANDARD PLAN 5-297.250	2 OF 6
DRAWN BY: JMP	I HEREBY CERTIFY THAT THIS SHEET WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.	 DAKOTA COUNTY PARKS AND CITY OF LAKEVILLE LAKE MARION GREENWAY PROJECT CITY OF LAKEVILLE, MINNESOTA	STANDARD PLANS			
DESIGNED BY: TDO	SIGNATURE: TAYLOR OLSON, PE DATE: 3/27/2026 LIC. NO. 57274	Sheet No. 12 of 74 Sheets				

DATE: 27-MAR-2026  
 FILENAME: Projects\Minnesota\05\_Discipline\Roadway\03\_Sheets\027938-000-155spr-200-def-001TRAILHEAD



PEDESTRIAN ACCESS ROUTE CURB & GUTTER DETAIL

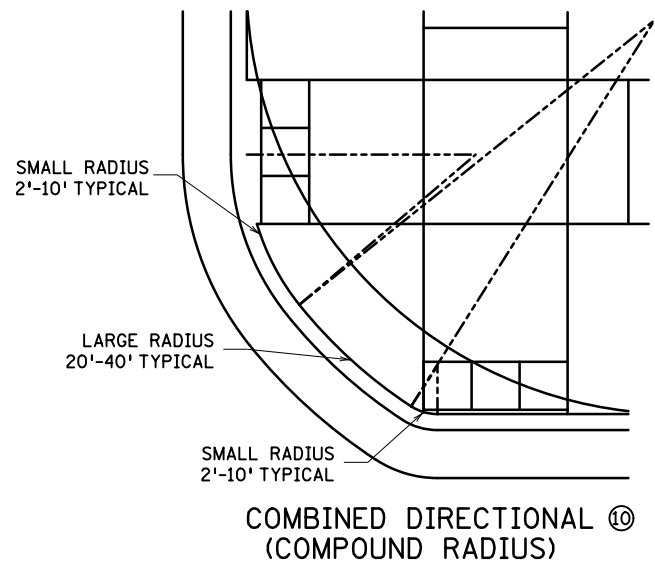
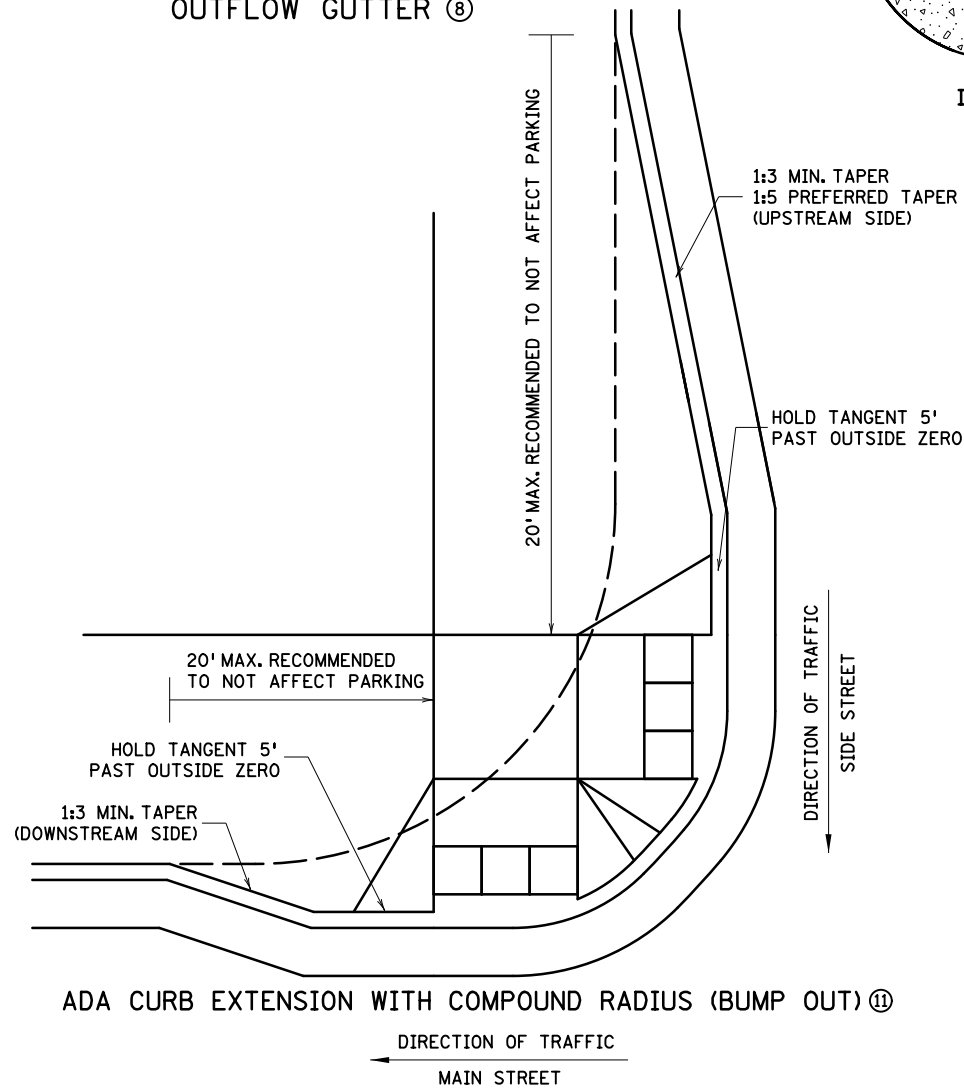


ONLY ALLOWED PER ENGINEER'S APPROVAL

PAVEMENT TREATMENT OPTIONS IN FRONT OF CURB & GUTTER  
 FOR USE ON CURB RAMP RETROFITS

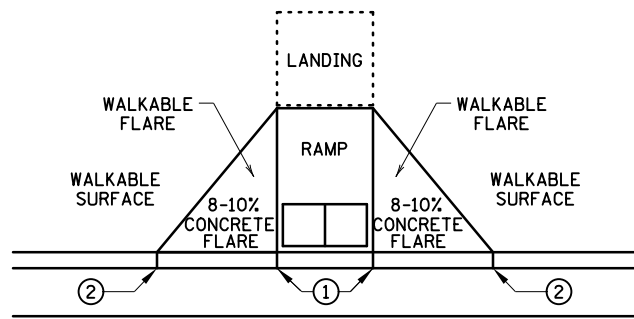
NOTES:

- 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.

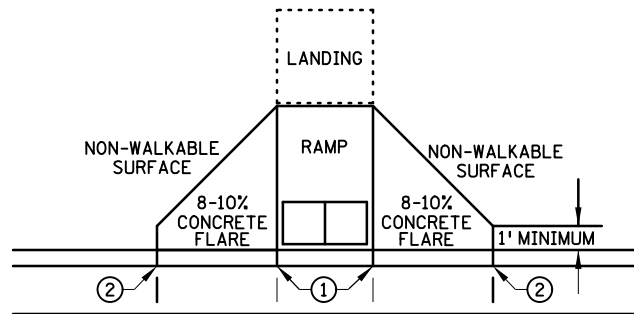


LEAD EXPERT OFFICE	JEFFREY PERKINS OPERATIONS DIVISION	PEDESTRIAN CURB RAMP DETAILS		APPROVED: 11-04-2021 REVISED:	THOMAS STYRBICKI STATE DESIGN ENGINEER	STANDARD PLAN 5-297.250	3 OF 6
DRAWN BY: JMP	DESIGNED BY: TDO	CHECKED BY: TDO	DAKOTA COUNTY PARKS AND CITY OF LAKEVILLE LAKE MARION GREENWAY PROJECT CITY OF LAKEVILLE, MINNESOTA		STANDARD PLANS		Sheet No. 13 of 74 Sheets
I HEREBY CERTIFY THAT THIS SHEET WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.			SIGNATURE: <i>Taylor D. Olson</i> PRINTED NAME: TAYLOR OLSON, PE DATE: 3/27/2026 LIC. NO. 57274				

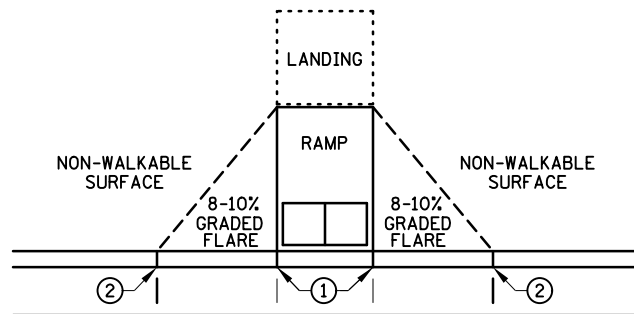
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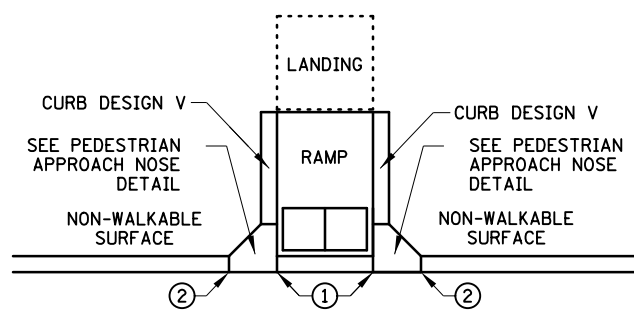
PAVED FLARES  
ADJACENT TO WALKABLE SURFACE



PAVED FLARES  
ADJACENT TO NON-WALKABLE SURFACE

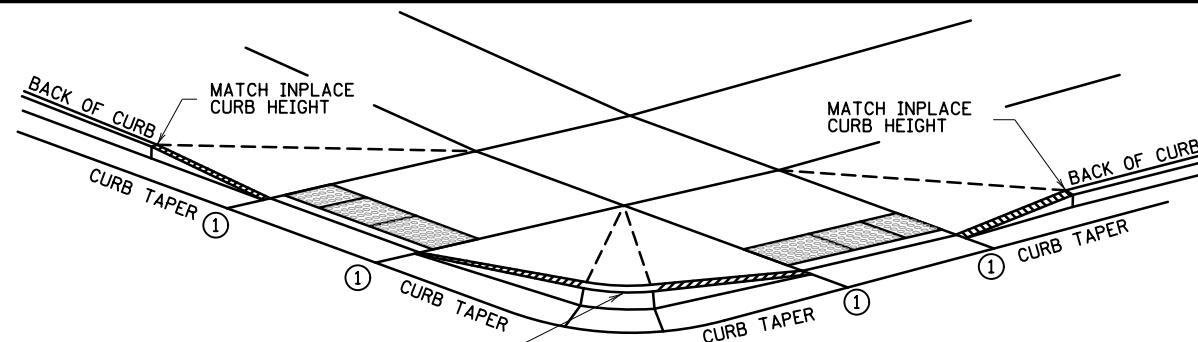


GRADED FLARES



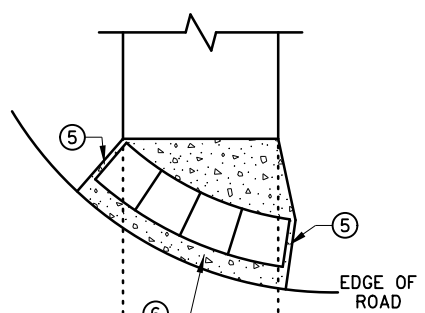
RETURNED CURB ④

TYPICAL SIDE TREATMENT OPTIONS ③ ⑩

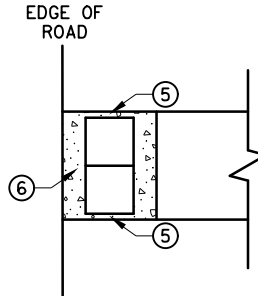


3" MINIMUM CURB HEIGHT, 4" PREFERRED  
(MEASURED AT FRONT FACE OF CURB)  
FOR A MIN. 6" LENGTH (MEASURED ALONG FLOW LINE)

DETECTABLE EDGE WITH CURB AND GUTTER ⑦

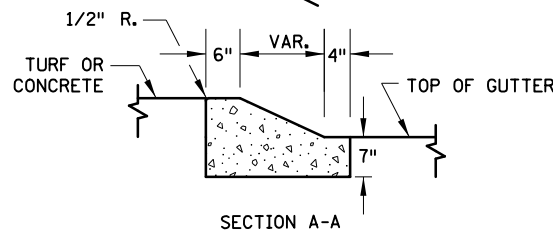
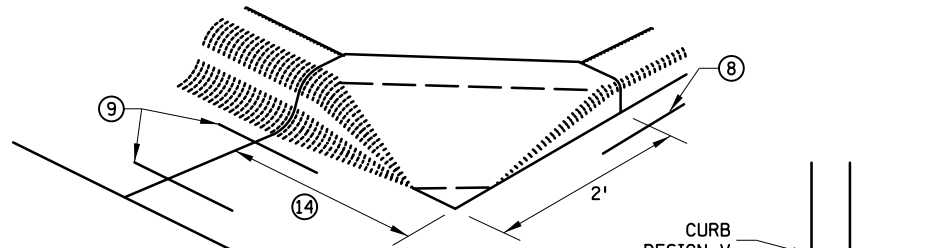


RADIAL DETECTABLE WARNING

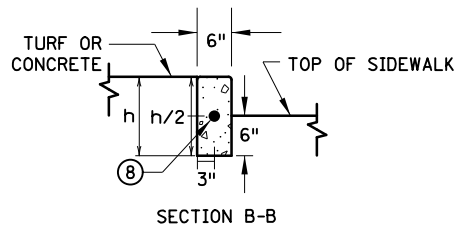


RECTANGULAR DETECTABLE WARNING

DETECTABLE EDGE WITHOUT CURB AND GUTTER

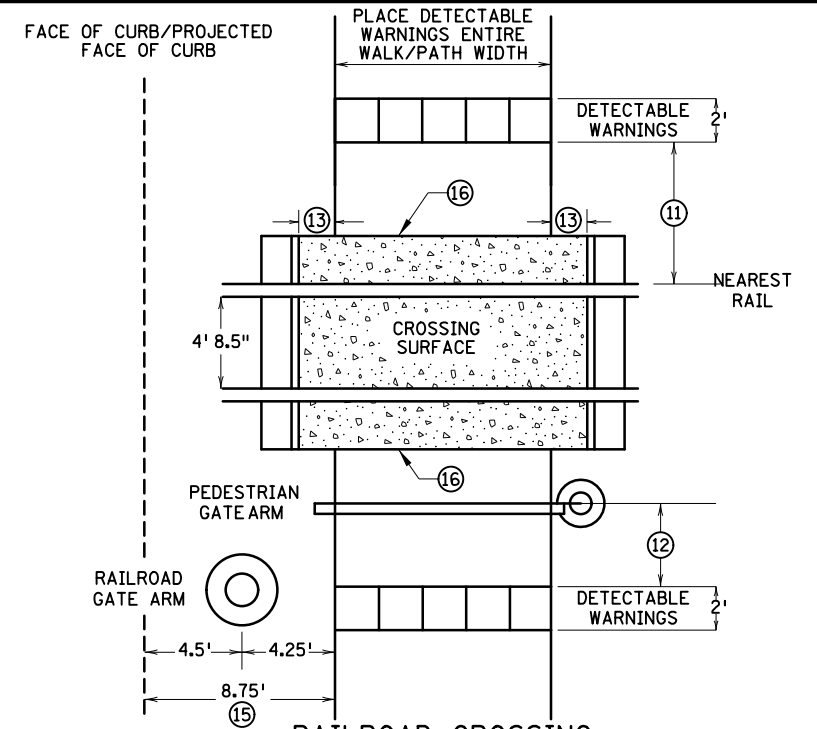


SECTION A-A



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 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.

LEAD EXPERT OFFICE  
 JEFFREY PERKINS  
 OPERATIONS DIVISION

PEDESTRIAN CURB RAMP DETAILS

APPROVED: 11-04-2021  
 REVISED:

THOMAS STYRBICKI  
 STATE DESIGN ENGINEER

STANDARD PLAN  
 5-297.250  
 4 OF 6

DRAWN BY: JMP  
 DESIGNED BY: TDO  
 CHECKED BY: TDO

I HEREBY CERTIFY THAT THIS SHEET WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.  
 SIGNATURE: Taylor D. Olson  
 PRINTED NAME: TAYLOR OLSON, PE  
 DATE: 3/27/2026 LIC. NO. 57274

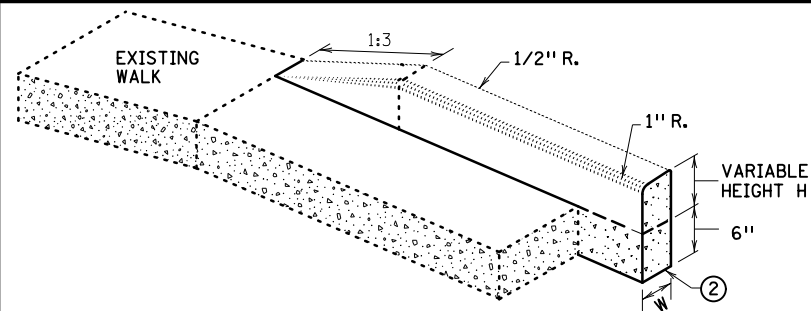


DAKOTA COUNTY PARKS AND CITY OF LAKEVILLE  
 LAKE MARION GREENWAY PROJECT  
 CITY OF LAKEVILLE, MINNESOTA

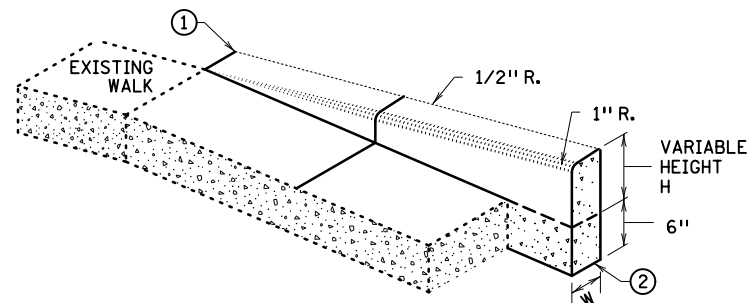
STANDARD PLANS

Sheet No. 14 of 74 Sheets

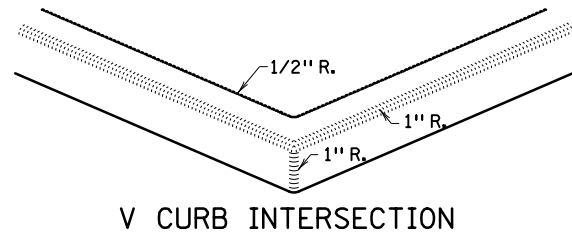
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**V CURB ADJACENT TO LANDSCAPE**  
 CURB WITHIN SIDEWALK LIMITS

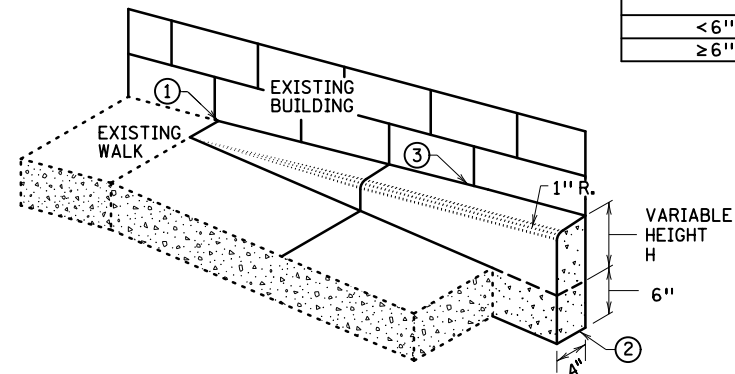


**V CURB ADJACENT TO LANDSCAPE**  
 CURB OUTSIDE SIDEWALK LIMITS

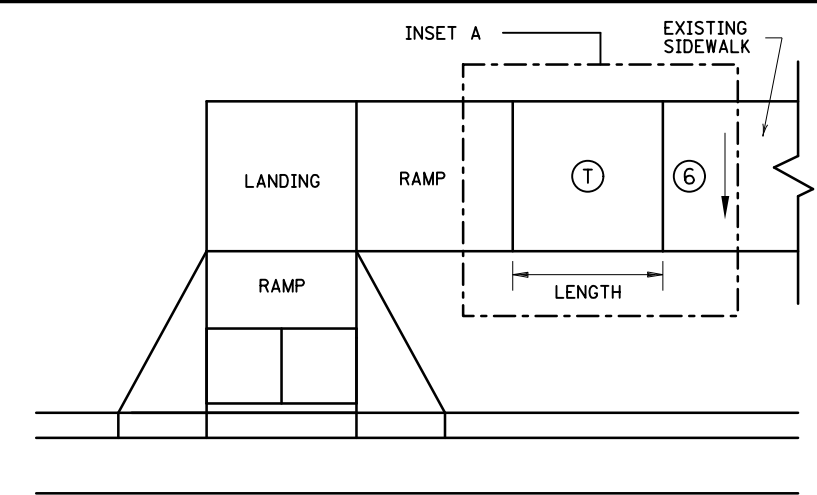


**V CURB INTERSECTION**

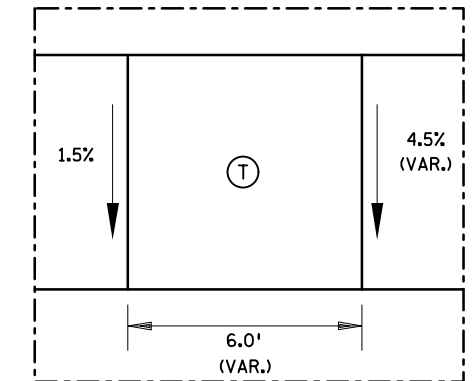
CONCRETE CURB DESIGN V	
CURB HEIGHT H	CURB WIDTH W
<6"	4"
≥6"	6"



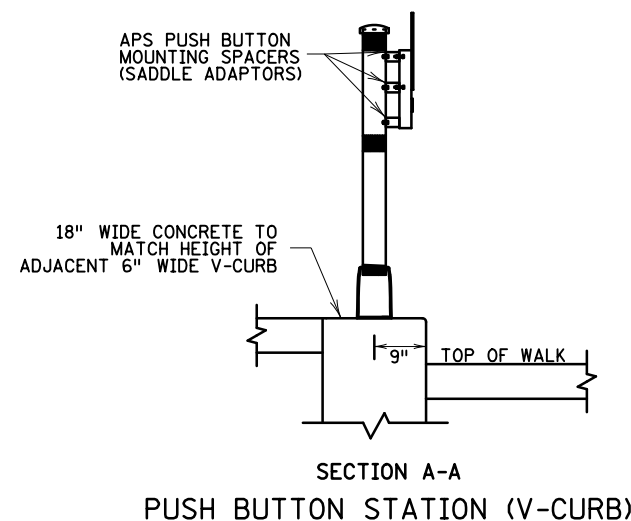
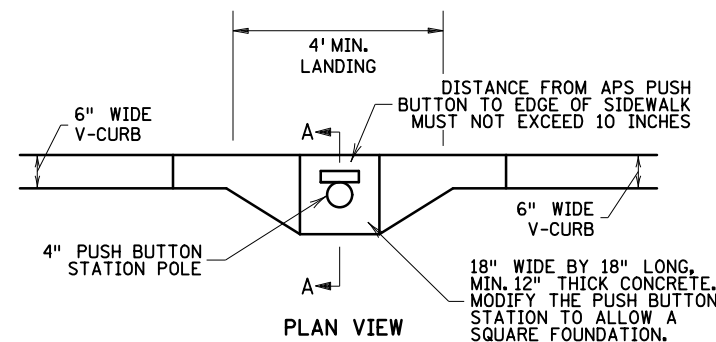
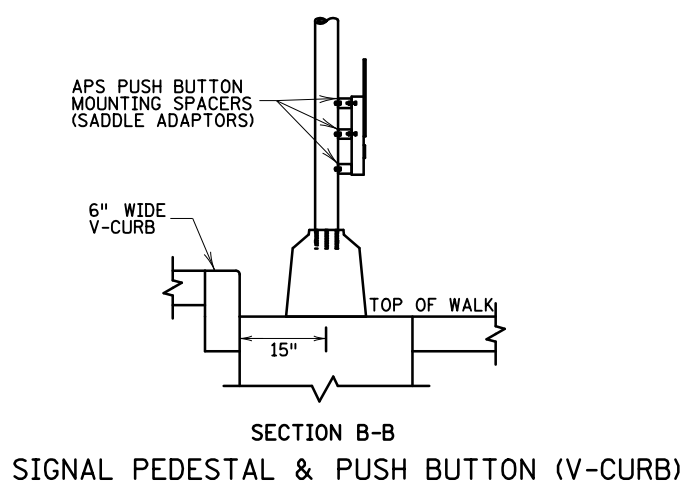
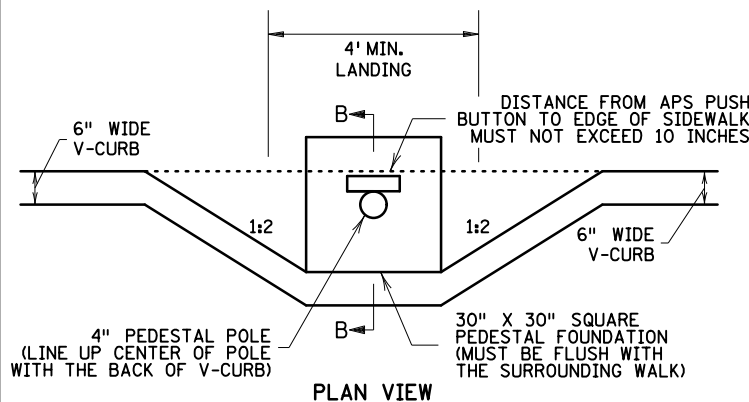
**V CURB ADJACENT TO BUILDING OR BARRIER**



**TRANSITION PANEL ④ ⑤**



**INSET A**



**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 1/2" 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.

**LEAD EXPERT OFFICE**  
 JEFFREY PERKINS  
 OPERATIONS DIVISION

**PEDESTRIAN CURB RAMP DETAILS**

APPROVED: 11-04-2021  
 REVISED:

*Thomas Styrbicki*  
 THOMAS STYRBICKI  
 STATE DESIGN ENGINEER

**STANDARD PLAN**  
 5-297.250

5 OF 6

DRAWN BY: JMP  
 DESIGNED BY: TDO  
 CHECKED BY: TDO

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 PRINTED NAME: TAYLOR OLSON, PE  
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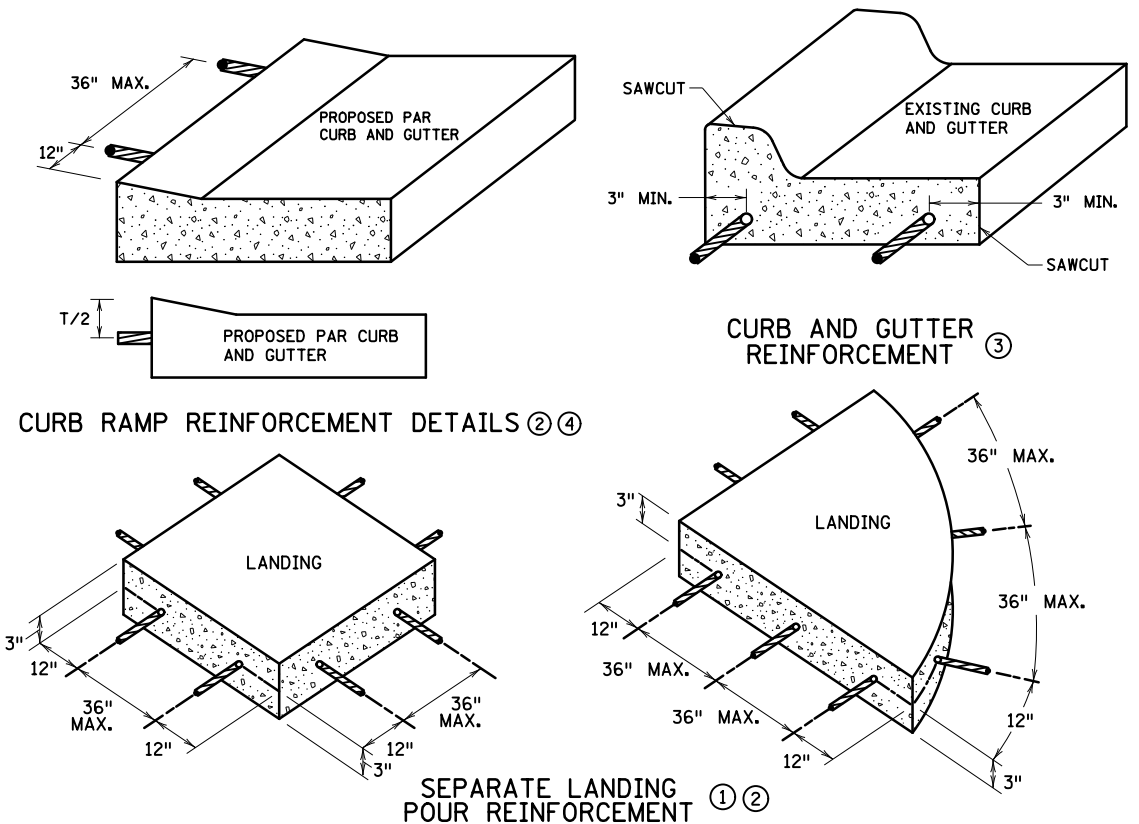
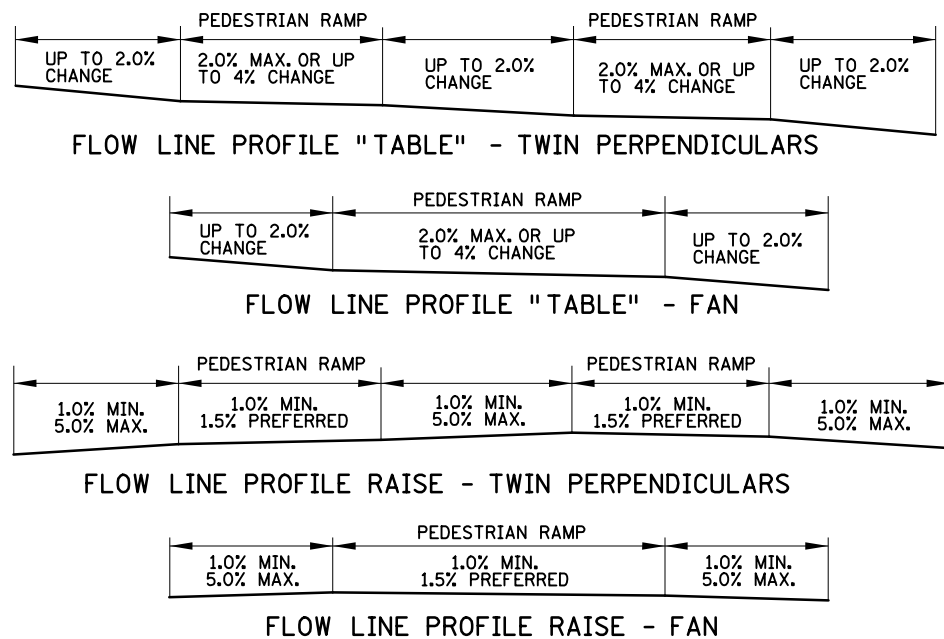
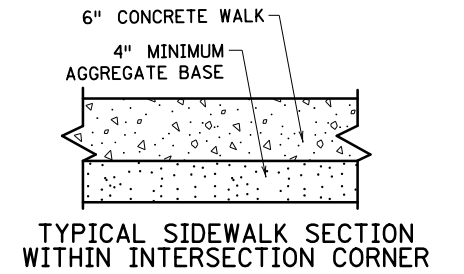
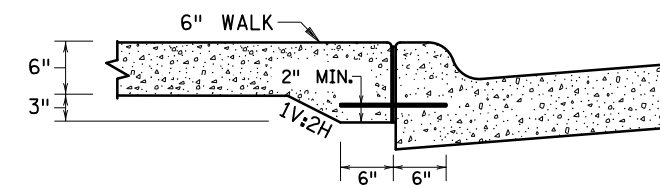
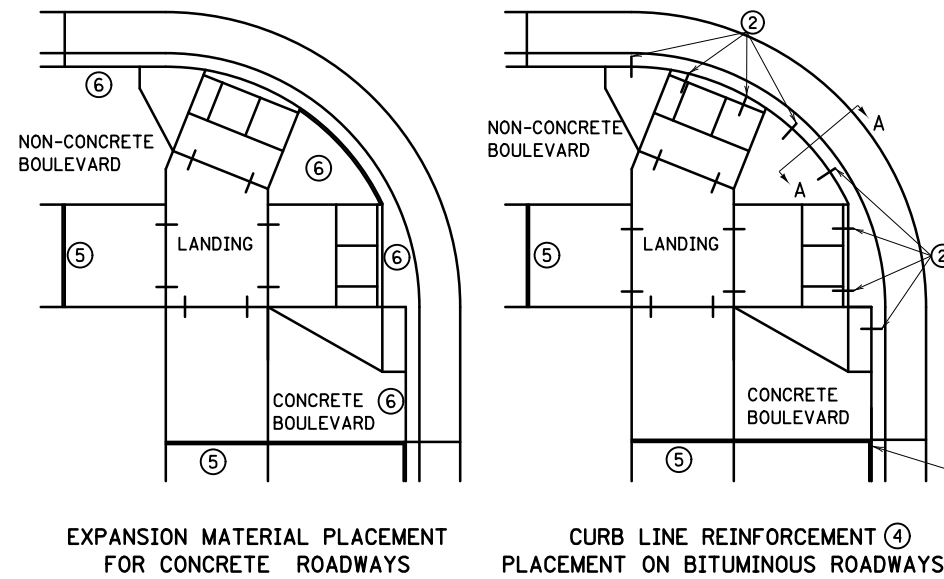
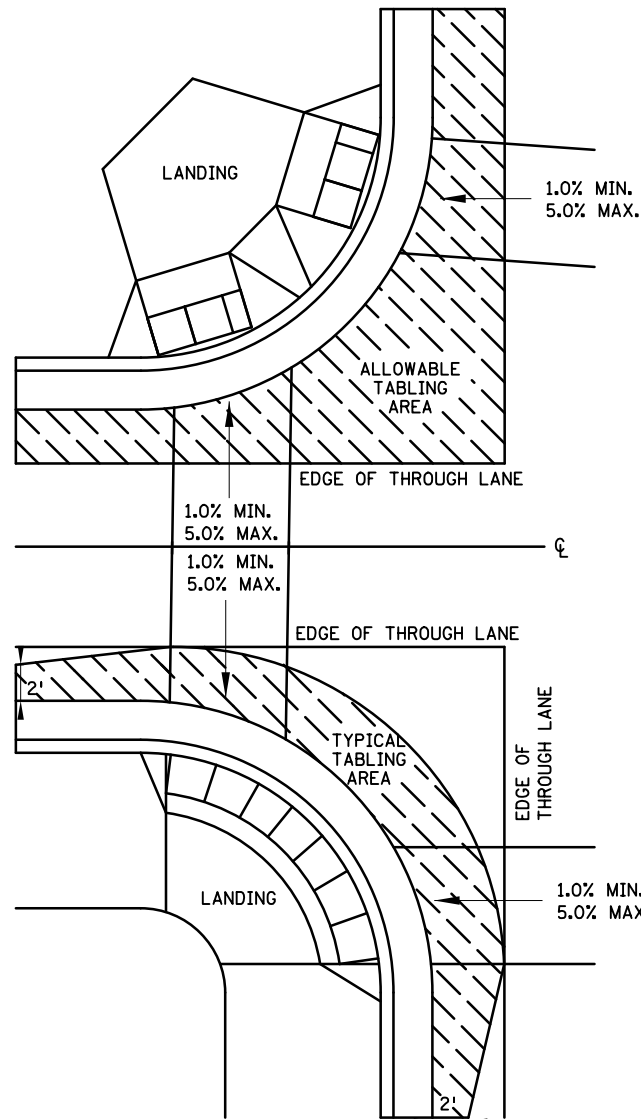


**DAKOTA COUNTY PARKS AND CITY OF LAKEVILLE**  
 LAKE MARION GREENWAY PROJECT  
 CITY OF LAKEVILLE, MINNESOTA

**STANDARD PLANS**

Sheet No. 15 of 74 Sheets

DATE: 27-MAR-2026  
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**CURB LINE AND ROAD CROSSING ADJUSTMENTS**

**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.

LEAD EXPERT OFFICE  
 JEFFREY PERKINS  
 OPERATIONS DIVISION

**PEDESTRIAN CURB RAMP DETAILS**

APPROVED: 11-04-2021  
 REVISED:

*Tom Styrbicki*  
 THOMAS STYRBICKI  
 STATE DESIGN ENGINEER

STANDARD PLAN  
 5-297.250  
 6 OF 6

DRAWN BY: JMP  
 DESIGNED BY: TDO  
 CHECKED BY: TDO

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

SIGNATURE: *Taylor D. Olson*  
 PRINTED NAME: TAYLOR OLSON, PE  
 DATE: 3/27/2026 LIC. NO. 57274

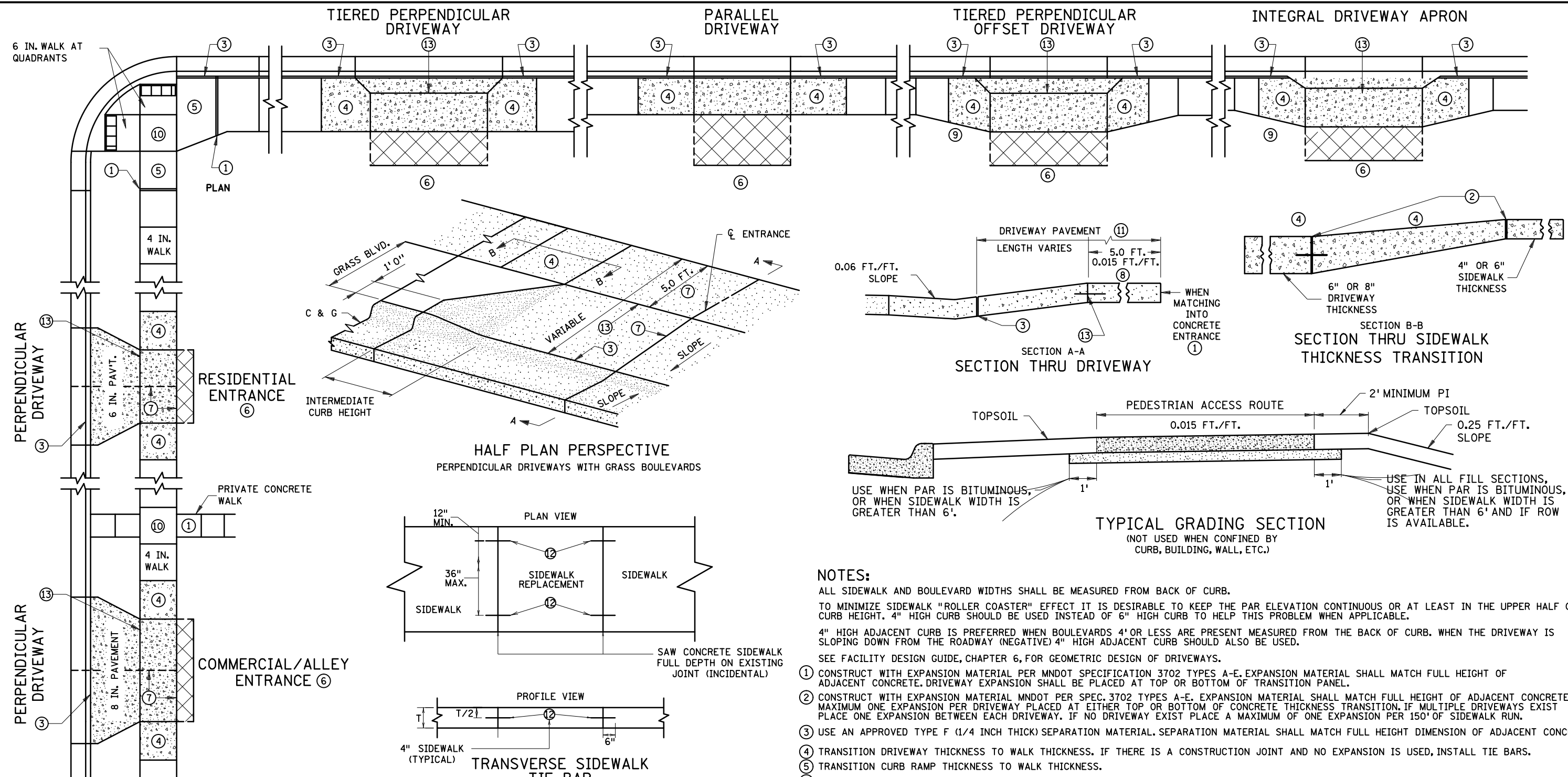


DAKOTA COUNTY PARKS AND CITY OF LAKEVILLE  
 LAKE MARION GREENWAY PROJECT  
 CITY OF LAKEVILLE, MINNESOTA

**STANDARD PLANS**

Sheet No. 16 of 74 Sheets

DATE: 27-MAR-2026  
 FILENAME: Projects\Minnesota\05\_Discipline\Roadway\03\_Sheets\027938-000-155spr-200-det-001\TRAILHEAD



**SIDEWALK LONGITUDINAL JOINT TIE BAR TABLE**

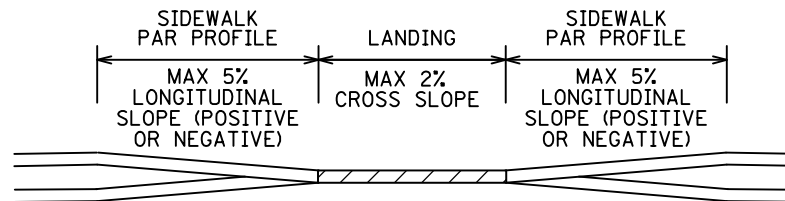
SIDEWALK WIDTH, W	SIDEWALK THICKNESS, T	TIE BAR SIZE	LENGTH	SPACING
> 7'	4"	No. 4	12"	24"
> 10'	6"	No. 4	12"	36"

FOR 4" CONCRETE ONLY: CAST IN PLACE BARS MUST BE SUPPORTED WITH P-STAKES OR REINFORCEMENT BASKETS FOR FULL WIDTH CONCRETE PLACEMENTS.  
 FOR 6" CONCRETE ONLY: DRILL AND GROUT OR CAST IN PLACE THROUGH HOLES IN THE FORMS REQUIRED FOR STAGED ADJACENT CONCRETE PLACEMENTS.

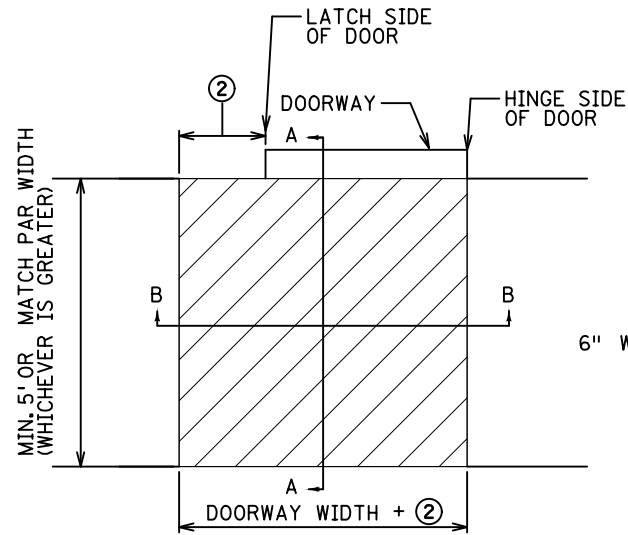
- NOTES:**
- ALL SIDEWALK AND BOULEVARD WIDTHS SHALL BE MEASURED FROM BACK OF CURB.
  - TO MINIMIZE SIDEWALK "ROLLER COASTER" EFFECT IT IS DESIRABLE TO KEEP THE PAR ELEVATION CONTINUOUS OR AT LEAST IN THE UPPER HALF OF CURB HEIGHT. 4" HIGH CURB SHOULD BE USED INSTEAD OF 6" HIGH CURB TO HELP THIS PROBLEM WHEN APPLICABLE.
  - 4" HIGH ADJACENT CURB IS PREFERRED WHEN BOULEVARDS 4' OR LESS ARE PRESENT MEASURED FROM THE BACK OF CURB. WHEN THE DRIVEWAY IS SLOPING DOWN FROM THE ROADWAY (NEGATIVE) 4" HIGH ADJACENT CURB SHOULD ALSO BE USED.
  - SEE FACILITY DESIGN GUIDE, CHAPTER 6, FOR GEOMETRIC DESIGN OF DRIVEWAYS.
  - ① CONSTRUCT WITH EXPANSION MATERIAL PER MNDOT SPECIFICATION 3702 TYPES A-E. EXPANSION MATERIAL SHALL MATCH FULL HEIGHT OF ADJACENT CONCRETE. DRIVEWAY EXPANSION SHALL BE PLACED AT TOP OR BOTTOM OF TRANSITION PANEL.
  - ② CONSTRUCT WITH EXPANSION MATERIAL MNDOT PER SPEC. 3702 TYPES A-E. EXPANSION MATERIAL SHALL MATCH FULL HEIGHT OF ADJACENT CONCRETE. MAXIMUM ONE EXPANSION PER DRIVEWAY PLACED AT EITHER TOP OR BOTTOM OF CONCRETE THICKNESS TRANSITION. IF MULTIPLE DRIVEWAYS EXIST PLACE ONE EXPANSION BETWEEN EACH DRIVEWAY. IF NO DRIVEWAY EXIST PLACE A MAXIMUM OF ONE EXPANSION PER 150' OF SIDEWALK RUN.
  - ③ USE AN APPROVED TYPE F (1/4 INCH THICK) SEPARATION MATERIAL. SEPARATION MATERIAL SHALL MATCH FULL HEIGHT DIMENSION OF ADJACENT CONCRETE.
  - ④ TRANSITION DRIVEWAY THICKNESS TO WALK THICKNESS. IF THERE IS A CONSTRUCTION JOINT AND NO EXPANSION IS USED, INSTALL TIE BARS.
  - ⑤ TRANSITION CURB RAMP THICKNESS TO WALK THICKNESS.
  - ⑥ MATCH INPLACE DRIVEWAY WIDTH, MATERIAL TYPE AND THICKNESS.
  - ⑦ FORM CONTRACTION JOINT AS NEEDED TO PRODUCE APPROXIMATELY SQUARE PANELS. CONCRETE PANEL SIZE SHOULD NOT EXCEED 1 1/2 : 1 LENGTH X WIDTH. 81 SF FOR 6" CONCRETE DRIVEWAY WITH 9'X9' MAXIMUM PANEL SIZE. 144 SF FOR 8" CONCRETE DRIVEWAY WITH 12'X12' MAXIMUM PANEL SIZE. MATCH DRIVEWAY APRON AND SIDEWALK JOINTS.
  - ⑧ THE PEDESTRIAN ACCESS ROUTE CROSS-SLOPE, SHALL NOT EXCEED 0.02 FT./FT. AS CONSTRUCTED.
  - ⑨ 1:10 MIN. SIDEWALK OFFSET TAPER REQUIRED FOR SIDEWALK REPLACEMENT PROJECTS. 1:3 MIN. AND 1:5 MIN. PREFERRED SIDEWALK OFFSET TAPER FOR DRIVEWAY REPLACEMENT.
  - ⑩ LANDING REQUIRED, SEE NEXT SHEET FOR MORE INFORMATION.
  - ⑪ CONCRETE DRIVEWAY APRON AND CONCRETE DRIVEWAY SIDEWALK SECTIONS SHALL BE CONSTRUCTED SEPARATELY IN AN INDEPENDENT CONCRETE POUR. ENGINEER'S APPROVAL REQUIRED FOR MONOLITHIC PLACEMENTS.
  - ⑫ DRILL AND GROUT NO. 4 X 12" LONG TIE BARS (EPOXY COATED). 36" MAXIMUM SPACING BETWEEN BARS COVER PLACED 1" MINIMUM FROM ADJACENT CONSTRUCTION JOINTS. 1" MINIMUM FROM ADJACENT CONCRETE JOINTS. BARS TO BE ADJUSTED TO MATCH SIDEWALK GRADES. TO BE PAID BY EACH.
  - ⑬ DRILL AND GROUT OR CAST IN-PLACE THROUGH HOLES IN THE FORMS NO. 4 X 12" LONG TIE BARS (EPOXY COATED). 36" MAXIMUM SPACING BETWEEN BARS WITH 2" MINIMUM CONCRETE COVER PLACED 1" MINIMUM FROM ADJACENT CONSTRUCTION JOINTS. 1" MINIMUM FROM ADJACENT CONCRETE JOINTS.

<b>LEAD EXPERT OFFICE</b>	JEFFREY PERKINS OPERATIONS DIVISION	<b>DRIVEWAY AND SIDEWALK DETAILS</b>	APPROVED: 11-04-2021 REVISED: 12-23-2021	 THOMAS STYRBICKI STATE DESIGN ENGINEER	STANDARD PLAN 5-297.254	3 OF 4
DRAWN BY: JMP	DESIGNED BY: TDO	CHECKED BY: TDO	I HEREBY CERTIFY THAT THIS SHEET WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA. SIGNATURE: PRINTED NAME: TAYLOR OLSON, PE DATE: 3/27/2026 LIC. NO. 57274			
				DAKOTA COUNTY PARKS AND CITY OF LAKEVILLE LAKE MARION GREENWAY PROJECT CITY OF LAKEVILLE, MINNESOTA		<b>STANDARD PLANS</b>
Sheet No. 17 of 74 Sheets						

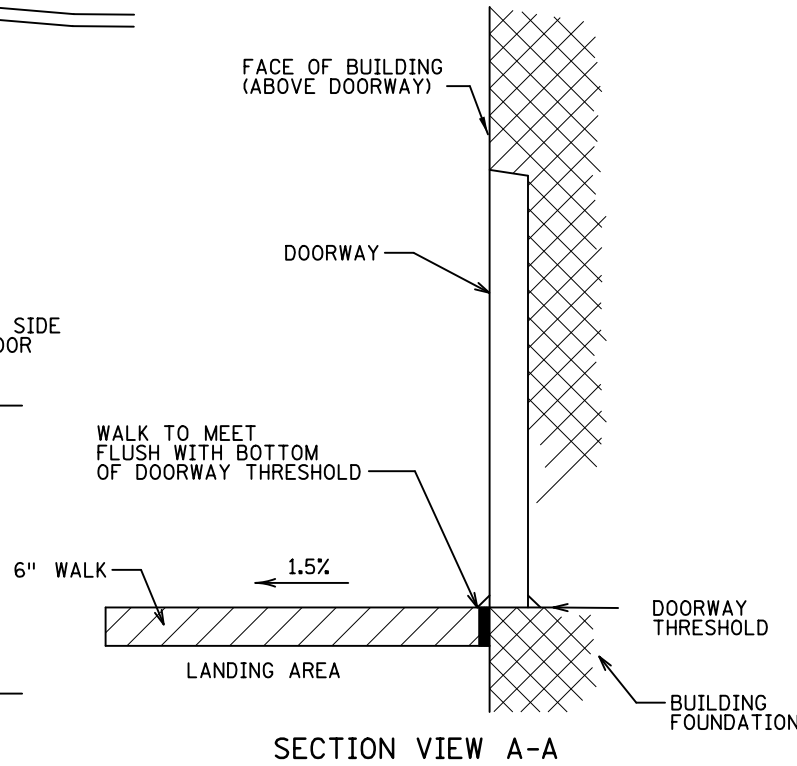
DATE: 27-MAR-2026 FILENAME: Projects\Minnesota\05\_Discipline\Roadway\03\_Sheets\027938-000-155spr-200-def-001TRAILHEAD



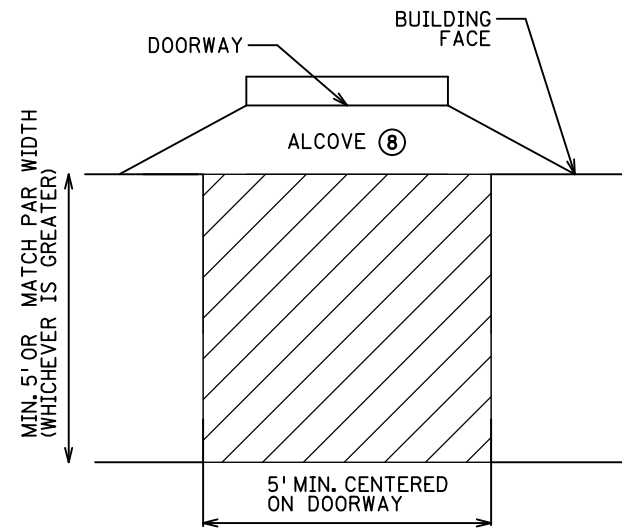
SECTION VIEW B-B



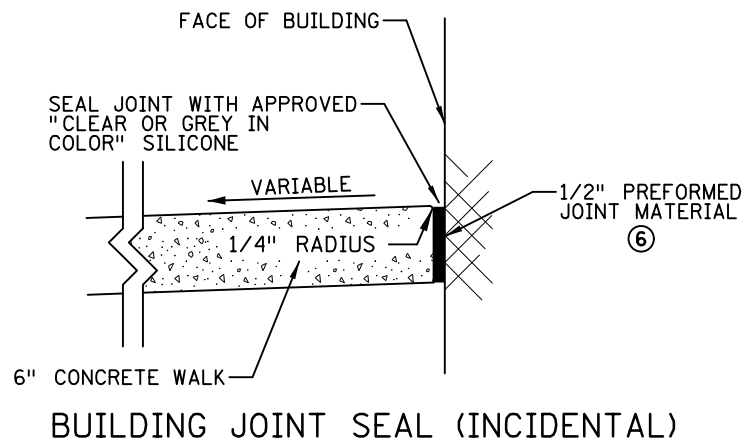
PLAN VIEW DOORWAY



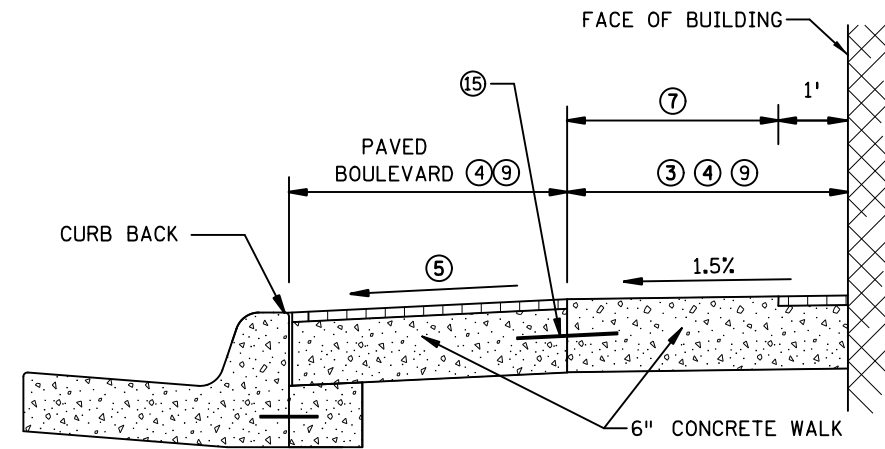
SECTION VIEW A-A



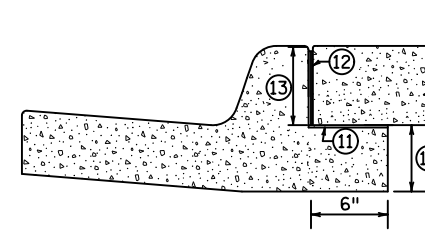
PLAN VIEW DOORWAY WITH ALCOVE  
SIDEWALK LANDING REQUIREMENTS ①



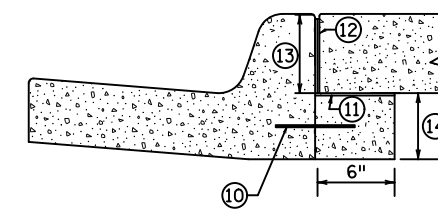
BUILDING JOINT SEAL (INCIDENTAL)



DOWNTOWN SIDEWALK TYPICAL SECTION



SLIP FORM SILL



FIXED FORM SILL

SILL CURB SHOULD BE USED AT ALL LOCATIONS WHEN CONCRETE WALK IS AT BACK OF CURB, INCLUDING PAVED BOULEVARD.  
SILL CURB SHALL NOT BE USED IN CURB RAMP AND DRIVEWAY AREAS, INCLUDING CONCRETE FLARES.  
SILL CURB WITH 4" WALK CAN USE FIXED OR SLIP FORM OPTIONS.

NOTES:

- 6" WALK IS REQUIRED:
- 1) IN ALL SIDEWALK LOCATIONS WHERE VARIABLE SLOPED CONCRETE BOULEVARDS ARE PAVED, SUCH AS COMMERCIAL (STORE FRONT, DOWNTOWN) AREAS.
  - 2) ANYTIME DRILL AND REINFORCEMENT IS USED TO TIE LONGITUDINAL JOINTS TOGETHER.
  - 3) TO ELIMINATE LONGITUDINAL JOINT WHEN INCREASING PANEL SIZE OVER 36SF.
  - 4) AT LOCATIONS WHERE MAINTENANCE EQUIPMENT WILL SUBJECT CONCRETE TO HEAVY LOADS.
- ALL SIDEWALK AND BOULEVARD WIDTHS SHALL BE MEASURED FROM BACK OF CURB.  
FIELD ADJUST SIDEWALK PROFILES TO MEET ALL DOORWAY THRESHOLDS.  
SIDEWALK MUST MAINTAIN POSITIVE DRAINAGE AWAY FROM THE BUILDING TO THE ROADWAY.  
SEE SPECIAL PROVISIONS FOR SILICONE SPECIFICATIONS.
- ① LANDING CRITERIA IS REQUIRED FOR ALL DOORS, STEPS, AND PRIVATE WALKS. FEASIBILITY DECREASES WITH NARROWER BOULEVARDS AND STEEPER SIDEWALK PROFILES.
  - ② 18" MIN. WHEN DOOR SWINGS OUTWARD FROM BUILDING. 12" MIN. WHEN DOOR SWINGS INWARD FROM BUILDING.
  - ③ 6' MIN. PAR REQUIRED WHEN ADJACENT TO BUILDINGS.
  - ④ 2/3 PAR TO 1/3 BOULEVARD SHOULD BE USED WHEN FEASIBLE. HOLD UNIFORM BOULEVARD WIDTH. 4' PREFERRED MINIMUM BOULEVARD.
  - ⑤ 1%-5% FOR THE MAJORITY OF THE BLOCK, WITH EXCEPTIONS UP TO 8% IN CONSTRAINED AREAS.
  - ⑥ CONSTRUCT USING APPROVED EXPANSION MATERIAL PER MNDOT TYPE A-E EXPANSION. LEAVE A MINIMUM 1/2" TOP GAP AND SEAL WITH MNDOT APPROVED SILICONE PER MNDOT SPEC 3722.
  - ⑦ TO MINIMIZE VIBRATION AND ROLLING RESISTANCE, AREA SHALL BE FREE OF PAVERS, STAMPED CONCRETE, AND/OR EXCESSIVE JOINTING.
  - ⑧ 2% MAX. PER BUILDING CODE. IF GREATER THAN 2%, FLATTEN AS FEASIBLE.
  - ⑨ FORM CONTRACTION JOINTS AS NEEDED TO PRODUCE APPROXIMATELY SQUARE PANEL SIZE. CONCRETE PANEL SIZE SHOULD NOT EXCEED 1/2 : 1 LENGTH X WIDTH.
  - ⑩ DRILL AND GROUT NO. 4 X 8" LONG TIE BARS (EPOXY COATED). 36" MAXIMUM SPACING BETWEEN BARS WITH 2" MINIMUM CONCRETE COVER PLACED 1' MINIMUM FROM ADJACENT CONSTRUCTION JOINTS. TIE BARS SHALL BE EMBEDDED 4" WITH 2" MINIMUM CONCRETE COVER AND ARE INCIDENTAL TO SILL PLACEMENT.
  - ⑪ FURNISH AND INSTALL THE FULL WIDTH OF THE TOP OF SILL A MINIMUM 2ML THICK POLYTHENE SHEETING.
  - ⑫ USE AN APPROVED TYPE F (1/4 INCH THICK) SEPARATION MATERIAL. SEPARATION MATERIAL SHALL MATCH FULL HEIGHT DIMENSION OF ADJACENT CONCRETE.
  - ⑬ DIMENSION TO BE SAME AS SIDEWALK THICKNESS, 4" MIN.
  - ⑭ 6" WALK: 5" MIN. FOR B424; 7" MIN. FOR B624  
4" WALK: 7" MIN. FOR B424; 9" MIN. FOR B624
  - ⑮ DRILL AND GROUT NO. 4 X 12" LONG TIE BARS (EPOXY COATED). 36" MAXIMUM SPACING BETWEEN BARS WITH 2" MINIMUM CONCRETE COVER PLACED 1' MINIMUM FROM ADJACENT CONCRETE JOINTS.

LEAD EXPERT OFFICE: JEFFREY PERKINS OPERATIONS DIVISION

DRIVEWAY AND SIDEWALK DETAILS

APPROVED: 11-04-2021  
REVISED:

THOMAS STYRBICKI  
STATE DESIGN ENGINEER

STANDARD PLAN  
5-297.254

4 OF 4

DRAWN BY: JMP  
DESIGNED BY: TDO  
CHECKED BY: TDO

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

SIGNATURE: Taylor D. Olson  
PRINTED NAME: TAYLOR OLSON, PE  
DATE: 3/27/2026 LIC. NO. 57274

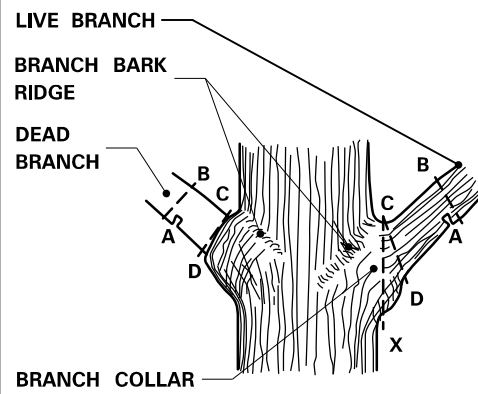


DAKOTA COUNTY PARKS AND CITY OF LAKEVILLE  
LAKE MARION GREENWAY PROJECT  
CITY OF LAKEVILLE, MINNESOTA

STANDARD PLANS

Sheet No. 18 of 74 Sheets

DATE: 27-MAR-2026  
 FILENAME: Projects\Minnesota\027938-000\05\_Discipline\Roadway\03\_Sheets\027938-000-155spr-300-detl-001TRAILHEAD

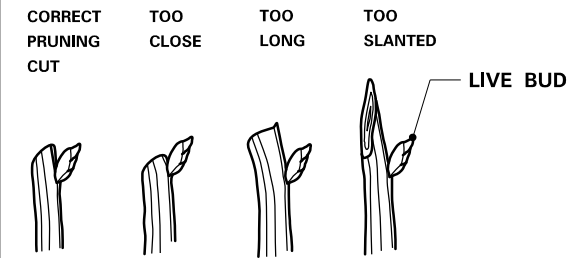


- STEPS TO PRUNING WITH PRUNING SAW:**
1. CUT PART WAY THROUGH THE BRANCH AT POINT A.
  2. CUT COMPLETELY THROUGH BRANCH FROM POINT B TO A.
  3. AT BRANCH COLLAR CUT FROM POINT C TO D.

INCORRECT CUT FROM POINT C TO X (TOO CLOSE) WILL RESULT IN DISCONTINUOUS CALLUS FORMATION AFTER ONE SEASON OF GROWTH.

CORRECT CUT FROM POINT C TO D (LEAVING BRANCH COLLAR BUT NOT THE STUB FROM POINT B TO A) WILL RESULT IN CONTINUOUS DOUGHNUT SHAPED CALLUS FORMATION AFTER ONE SEASON OF GROWTH.

**BRANCHES PRUNED AT TRUNK**  
 (SHIGO METHOD)

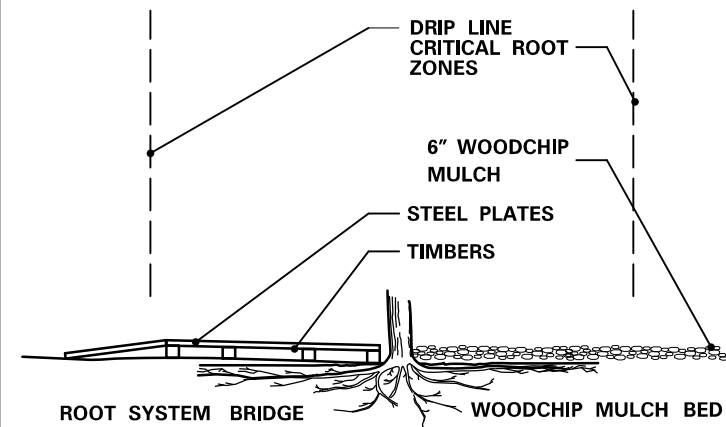


- PRUNING NOTES:**
1. PRUNE USING CLEAN AND SHARP SCISSOR-TYPE PRUNER OR PRUNING SAW.
  2. THE BEST TIME TO PRUNE IS LATE DORMANT SEASON OR EARLY SPRING.
  3. AVOID PRUNING OAKS IN APRIL, MAY, JUNE OR JULY.
  4. IF PRUNING IS NECESSARY OR IF WOUNDS OCCUR TO OAK TREES IN APRIL, MAY, JUNE OR JULY, IMMEDIATELY PAINT CUT SURFACE OR WOUND WITH LATEX PAINT OR SHELLAC.

**BRANCHES PRUNED TO LIVE BUD**

**PRUNING**

(MnDOT 2571.3E.1 and 2571.3K.2.a(9))



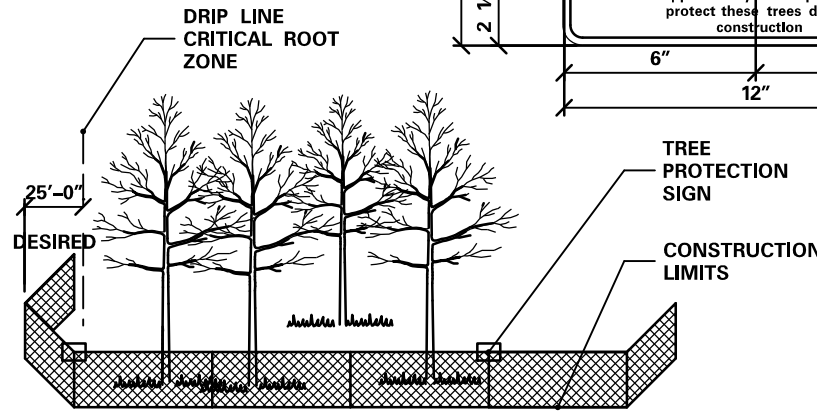
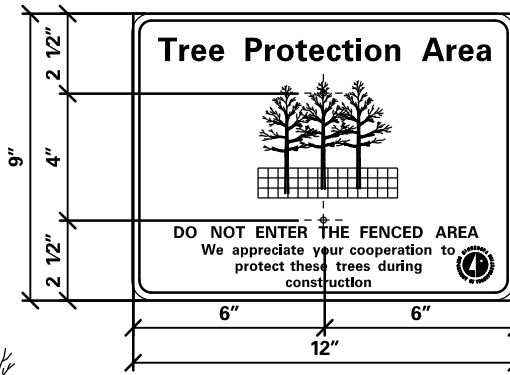
IF CONSTRUCTION VEHICLES MUST PASS OVER ROOT ZONES, THE CONTRACTOR MUST EITHER:

1. CONSTRUCT ROOT SYSTEM BRIDGES WITH STEEL PLATE SUPPORTED ON WOOD TIMBERS PLACED RADIALLY TO THE TREE TRUNK.
- OR
2. PLACE A 6 INCH LAYER OF WOODCHIP MULCH OVER A TYPE III GEOTEXTILE (MnDOT 3733).

**OTHER VEGETATION PROTECTION MEASURES**

(MnDOT 2572.3A.12)

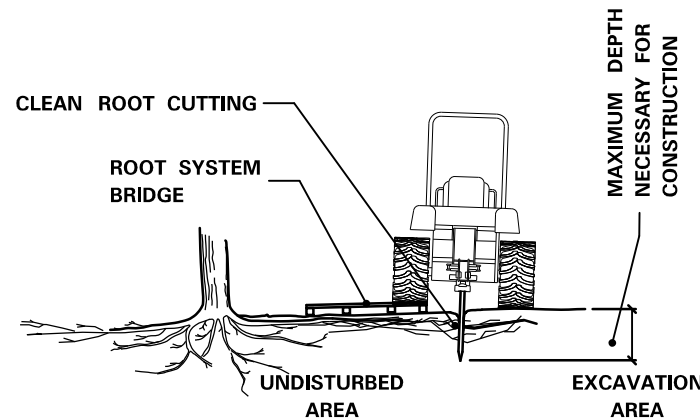
1. FABRICATE 12" X 9" X 3/8" SIGN WITH 0.75" RADIUS CORNERS.
2. SIGN SHALL BE WHITE WITH BLACK LETTERING.
3. ATTACH SIGN TO POST USING 1" LENGTH WOOD SCREWS.



1. FURNISH AND INSTALL TEMPORARY FENCE AT THE TREE'S DRIPLINE OR CONSTRUCTION LIMITS AS SPECIFIED, PRIOR TO ANY CONSTRUCTION.
2. WHEN POSSIBLE PLACE FENCE 25 FEET BEYOND THE DRIPLINE.
3. PLACE TREE PROTECTION SIGNS ALONG FENCE AT 50' INTERVALS.

**TEMPORARY FENCE**

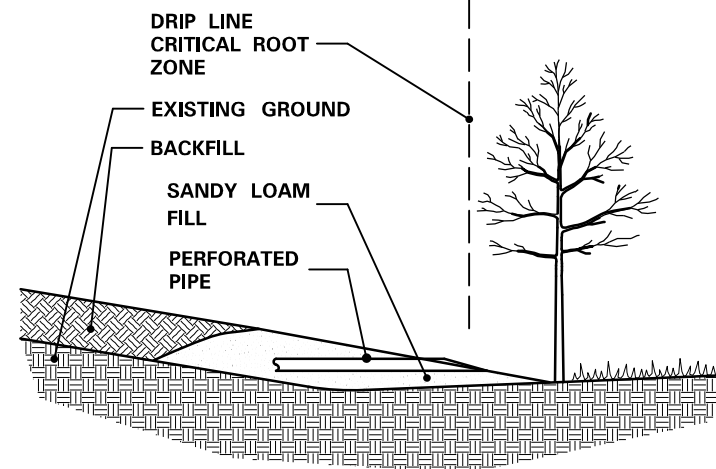
(MnDOT 2572.3A.1)



1. WHEN DESIGNATED IN THE PLAN OR DIRECTED BY THE ENGINEER, PRIOR TO EXCAVATION, ALL TREE ROOTS WILL BE CLEANLY CUT BY A VIBRATORY PLOW OR OTHER APPROVED ROOT CUTTER.
2. THE TREE ROOTS WILL BE CUT CLEANLY TO THE MINIMUM DEPTH NECESSARY FOR CONSTRUCTION.
3. IMMEDIATELY, AND CLEANLY CUT DAMAGED AND EXPOSED ROOTS.
4. ROOT ENDS EXPOSED BY EXCAVATION ACTIVITIES SHALL BE IMMEDIATELY COVERED WITH A 6" LAYER OF ADJACENT SOIL.
5. EXPOSED CUT OAK ROOTS SHALL BE IMMEDIATELY (WITHIN 5 MINUTES) TREATED WITH A WOUND DRESSING MATERIAL CONSISTING OF LATEX PAINT OR SHELLAC.

**CLEAN ROOT CUTTING**

(MnDOT 2572.3A.2)



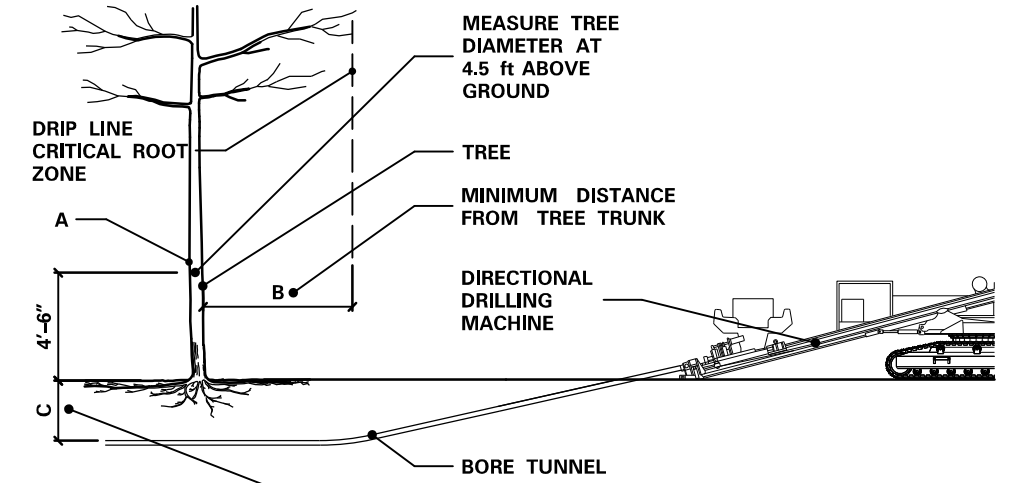
1. ANY FILL REQUIRED WITHIN THE DRIPLINE OF TREES, IS UNCOMPACTED ROOTING TOPSOIL BORROW.
2. EXCESSIVE FILL MAY REQUIRE PLACING PERFORATED PIPE WITH AT LEAST ONE DAYLIGHTED END OPENING AS AN AERATION SYSTEM.

**ROOTING TOPSOIL BORROW**

(MnDOT 2572.3A.4)

**UTILITY CONSTRUCTION**

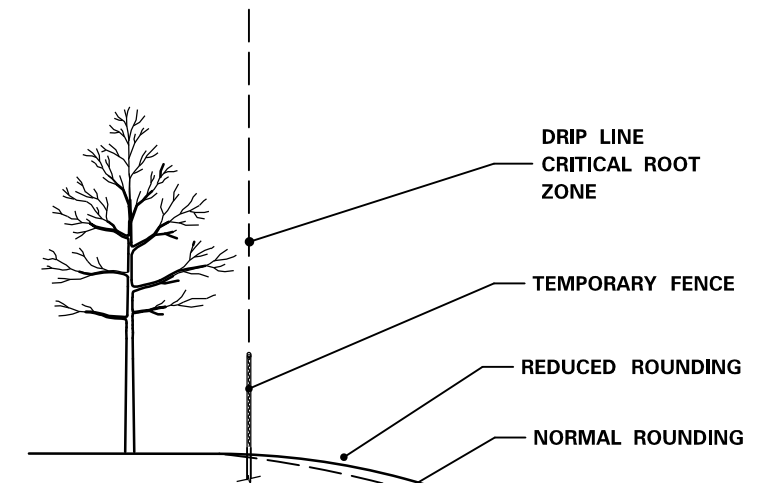
(MnDOT 2572.3A.5)



NOTE:

1. (A) IS THE DIAMETER OF TREES MEASURED 4'-6" FEET ABOVE THE GROUND AND IS TERMED THE "DIAMETER AT BREAST HEIGHT," (DBH).
2. USING A TREE DIAMETER TAPE, WRAP THE TAPE AROUND THE GIRTH OF THE TREE, AT THE DBH, BEING CAREFUL NOT TO TWIST THE TAPE.

TREE PROTECTION ZONE		
A	B	C
<2"	2'	2'
2-4"	4'	2.5'
>4-9"	6'	2.5'
>9-14"	10'	3'
>14-19"	12'	3.25'
>19"	15'	4'



SIGNIFICANT TREES NEAR THE PROPOSED CONSTRUCTION LIMITS WILL BE IDENTIFIED IN THE PLAN OR BY THE ENGINEER AND WILL BE PRESERVED BY THE CONTRACTOR.

1. PLACE THE TEMPORARY FENCE.
2. REDUCE SLOPE ROUNDING WHERE ROOT ZONES ARE DISTURBED BY NORMAL SLOPE ROUNDING.
3. VARY BACKSLOPE STEEPNESS TO AVOID TREE LOSS OR UNNECESSARY ROOT DAMAGE.

**SLOPE ROUNDING**

LEAD EXPERT OFFICE: LYNN CLARKOWSKI, CHIEF ENVIRONMENTAL OFFICER, OFFICE OF ENVIRONMENTAL STEWARDSHIP

DRAWN BY: JMP  
 DESIGNED BY: TDO  
 CHECKED BY: TDO

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

SIGNATURE: Taylor O. Olson  
 PRINTED NAME: TAYLOR OLSON, PE  
 DATE: 3/27/2026 LIC. NO. 57274



DAKOTA COUNTY PARKS AND CITY OF LAKEVILLE  
 LAKE MARION GREENWAY PROJECT  
 CITY OF LAKEVILLE, MINNESOTA

STANDARD PLANS

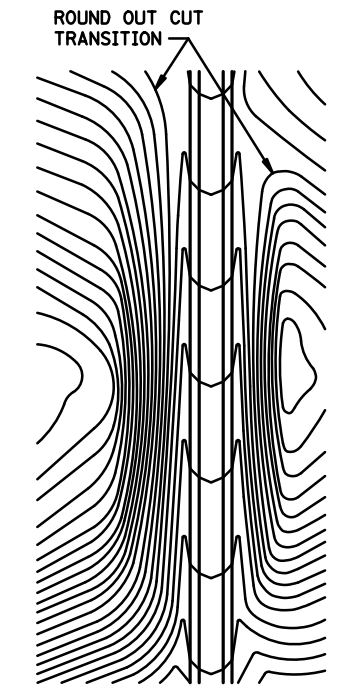
APPROVED: 12-11-2015  
 REVISED:

THOMAS STYRBICKI  
 STATE DESIGN ENGINEER

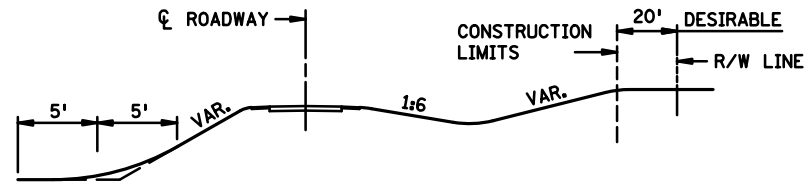
STANDARD PLAN  
 5-297.302

1 OF 1

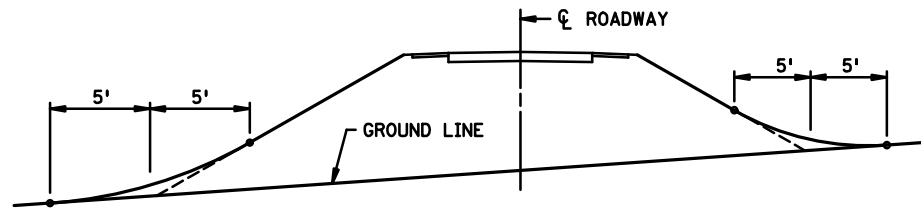
DATE: 27-MAR-2026 FILENAME: Projects\Minnesota\027938-000\05\_Discipline\Roadway\03\_Sheets\027938-000-155spr-400-def-001TRAILHEAD



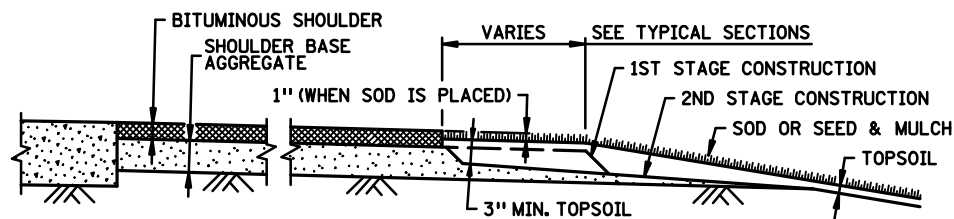
CONTOURING ROAD CUTS



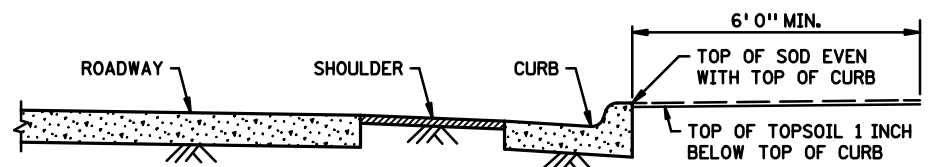
ROUNDING SHOULDERS AND BACKSLOPES



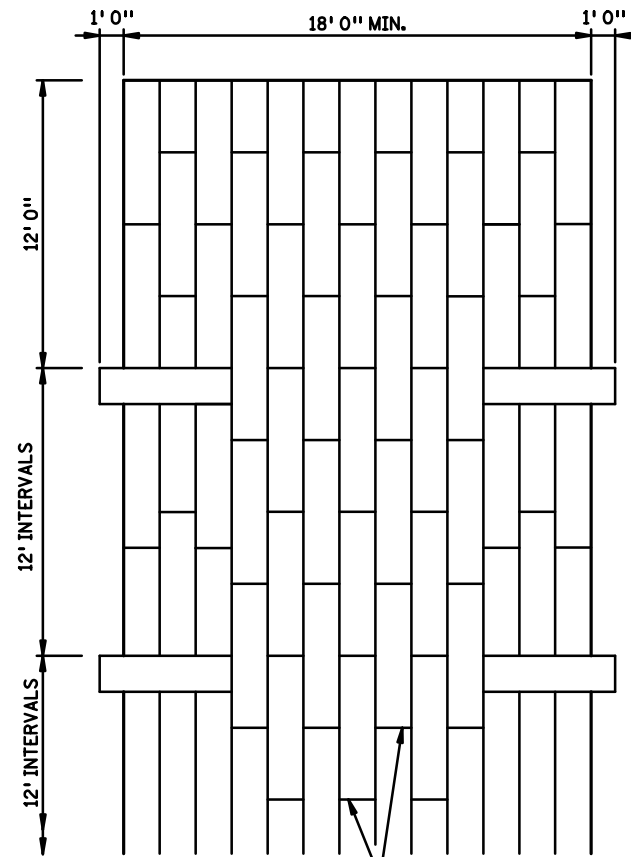
SHAPING FOR DRAINAGE ALONG THE TOE OF FILL SLOPES



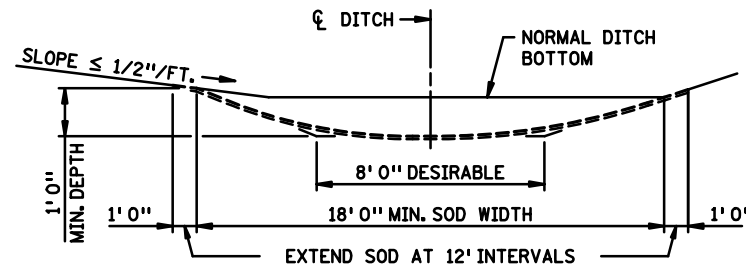
SHAPING AND TOPSOILING INSLOPES



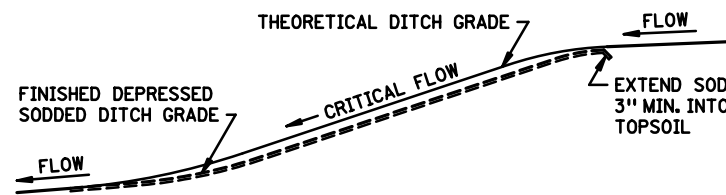
SHAPING ADJACENT TO CURBS WHEN SOD IS PLACED



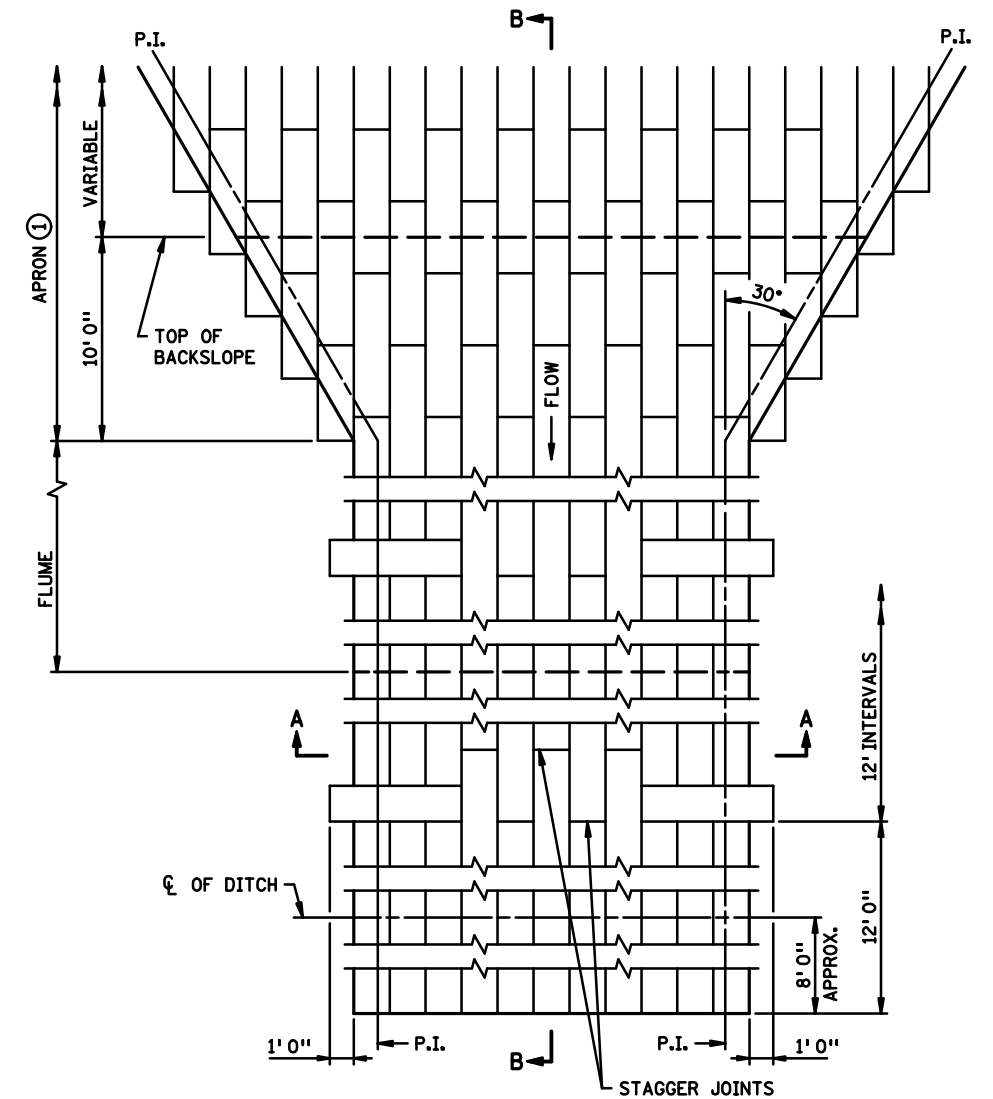
PLAN VIEW



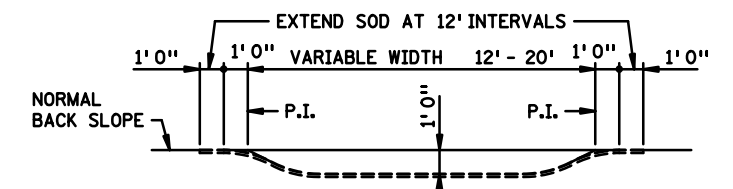
SODDED DITCH CROSS SECTION  
WHERE FRONT OR BACK SLOPE IS FLAT (LESS THAN 1/2"/FT.), FIRST NOTCH DITCH AND THEN PROVIDE ROUNDING.



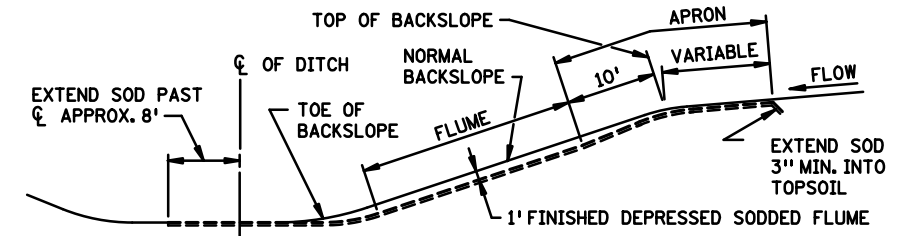
DITCH PROFILE  
SODDED DITCH DETAILS



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.

LEAD EXPERT OFFICE  
LYNN CLARKOWSKI  
CHIEF ENVIRONMENTAL OFFICER  
OFFICE OF ENVIRONMENTAL STEWARDSHIP

PERMANENT EROSION CONTROL  
ALONG ROADWAYS, DITCHES AND FLUMES

APPROVED: 02-28-2017  
REVISED:

THOMAS STYRBICKI  
STATE DESIGN ENGINEER

STANDARD PLAN  
5-297.404

1 OF 3

DRAWN BY: JMP  
DESIGNED BY: TDO  
CHECKED BY: TDO

SIGNATURE: *Taylor D. Olson*  
PRINTED NAME: TAYLOR OLSON, PE  
DATE: 3/27/2026 LIC. NO. 57274

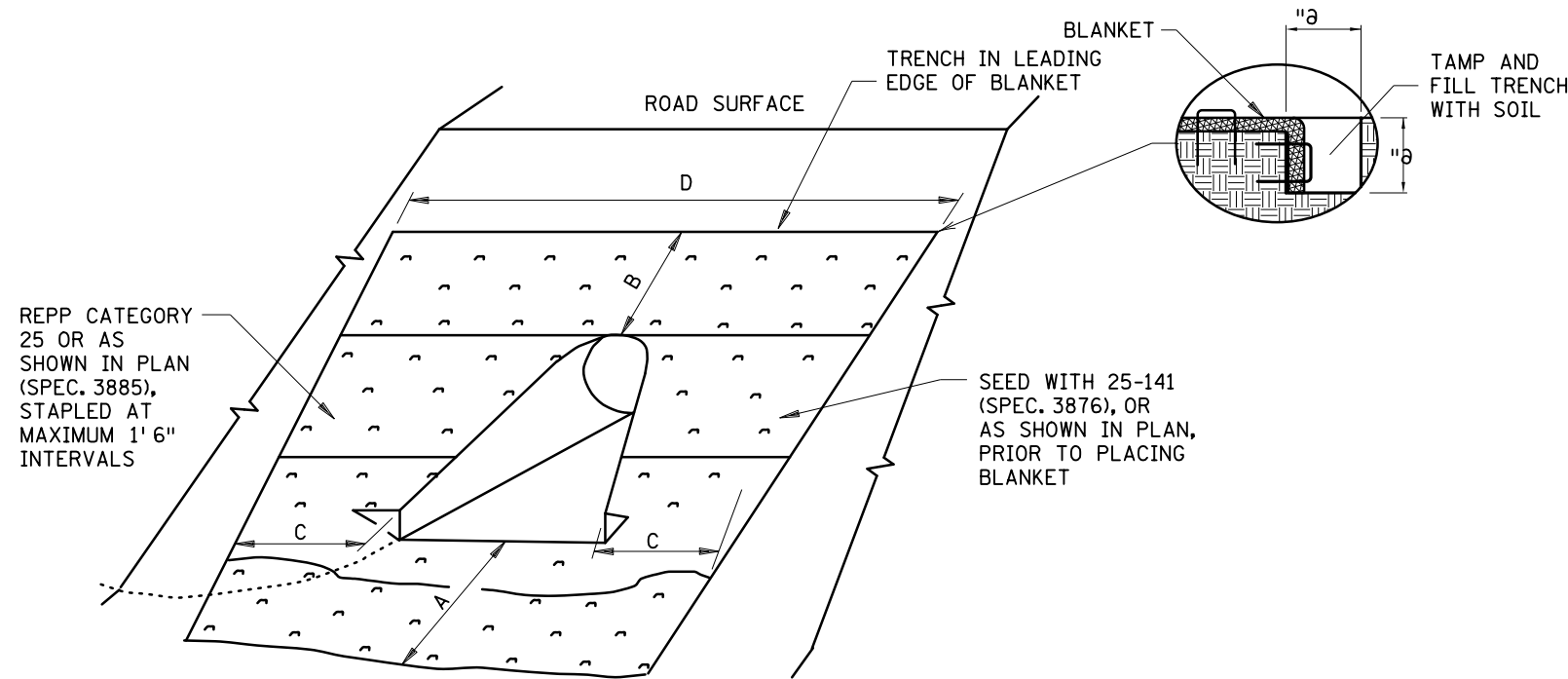


DAKOTA COUNTY PARKS AND CITY OF LAKEVILLE  
LAKE MARION GREENWAY PROJECT  
CITY OF LAKEVILLE, MINNESOTA

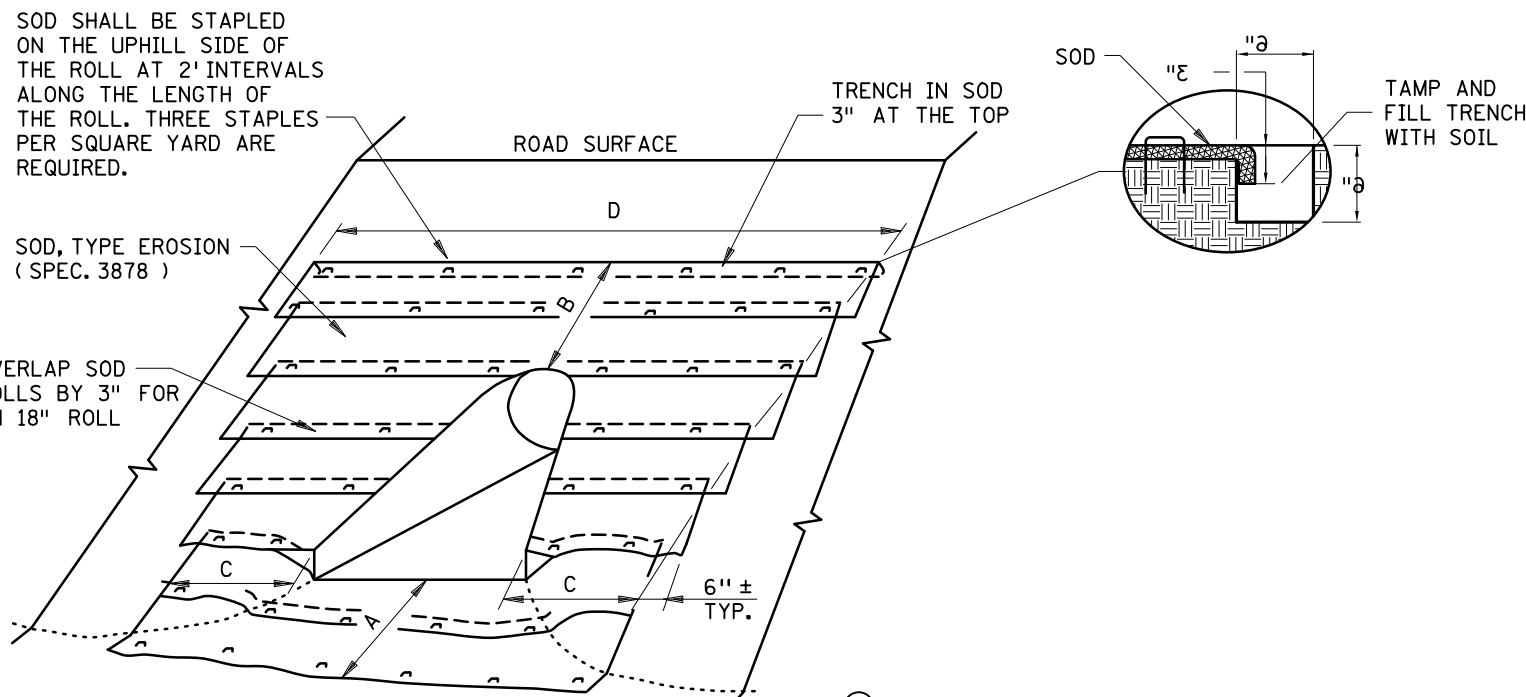
STANDARD PLANS

Sheet No. 20 of 74 Sheets

DATE: 27-MAR-2026  
 FILENAME: Projects\Minnesota\05\_Discipline\Roadway\03\_Sheets\027938-000-155spr-400-def-001\TRAILHEAD



ROLLED EROSION PREVENTION PRODUCT (BLANKET) & SEED DETAIL



SODDING DETAIL

- 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.

CULVERT DIAMETER ②	CULVERT INLET APRON ①						"A"	"B"	"C"	"D"
	SOD OR REPP (SQ. YDS.)									
	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 (PLATE 3148)	CIRCULAR AND ARCH PIPE METAL SAFETY APRON (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 DIAMETER ②	CULVERT OUTLET APRON ①						"A"	"B"	"C"	"D"
	SOD OR REPP (SQ. YDS.)									
	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 (PLATE 3148)	CIRCULAR AND ARCH PIPE METAL SAFETY APRON (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.

LEAD EXPERT OFFICE  
 MARNI KARNOWSKI  
 CHIEF ENVIRONMENTAL OFFICER  
 OFFICE OF ENVIRONMENTAL STEWARDSHIP

DRAWN BY: JMP  
 DESIGNED BY: TDO  
 CHECKED BY: TDO

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

SIGNATURE: *Taylor D. Olson*  
 PRINTED NAME: TAYLOR OLSON, PE  
 DATE: 3/27/2026 LIC. NO. 57274



DAKOTA COUNTY PARKS AND CITY OF LAKEVILLE  
 LAKE MARION GREENWAY PROJECT  
 CITY OF LAKEVILLE, MINNESOTA

PERMANENT EROSION CONTROL  
 TURF ESTABLISHMENT DETAIL AT CULVERT ENDS

APPROVED: 01-08-2020  
 REVISED:

*Tom Styrbicki*  
 THOMAS STYRBICKI  
 STATE DESIGN ENGINEER

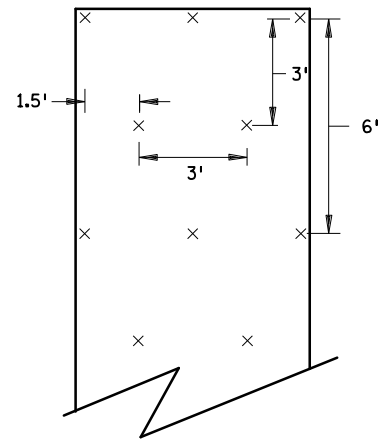
STANDARD PLAN  
 5-297.404

2 OF 3

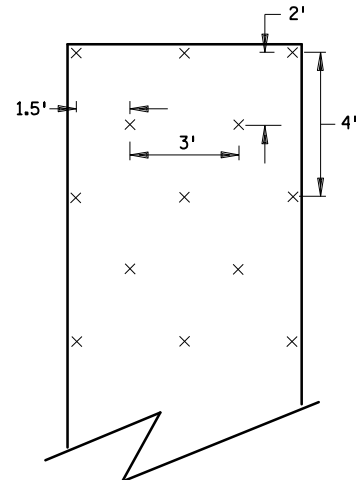
STANDARD PLANS

Sheet No. 21 of 74 Sheets

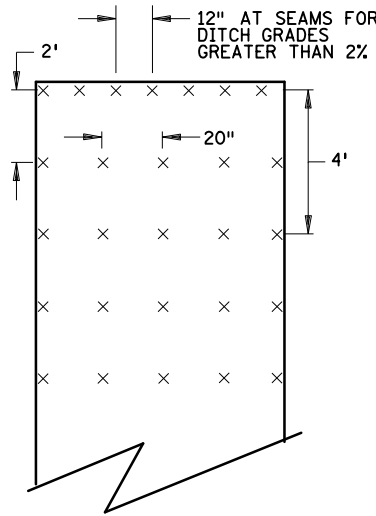
DATE: 27-MAR-2026 FILENAME: Projects\Minnesota\027938-000\05\_Discipline\Roadway\03\_Sheets\027938-000-155spr-400-det-001TRAILHEAD



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

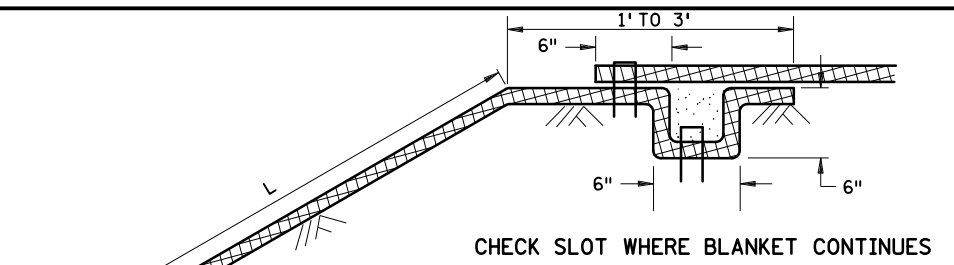


SLOPES 1:2 TO 1:1  
170 STAPLES PER 100 SQ YD

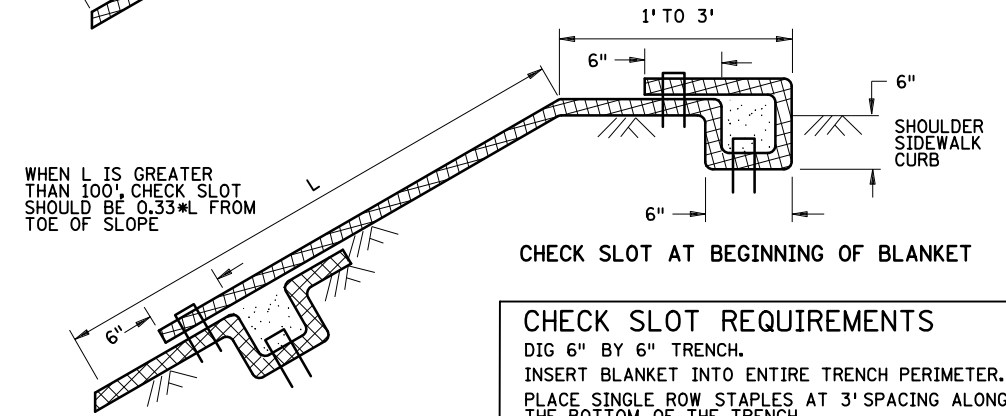


CHANNEL AND DITCH APPLICATIONS  
350 STAPLES PER 100 SQ YD

BLANKET STAPLE PATTERN

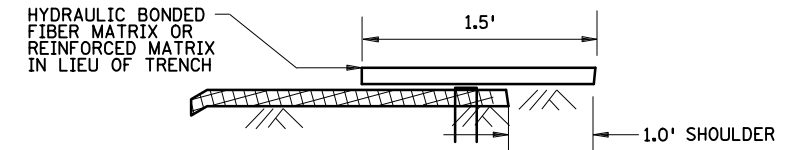


CHECK SLOT WHERE BLANKET CONTINUES



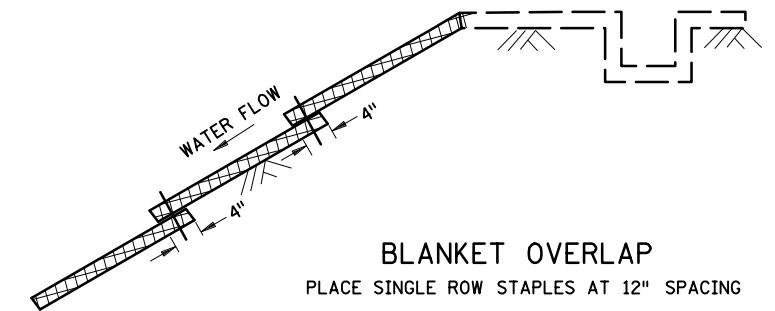
CHECK SLOT AT BEGINNING OF BLANKET

**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.



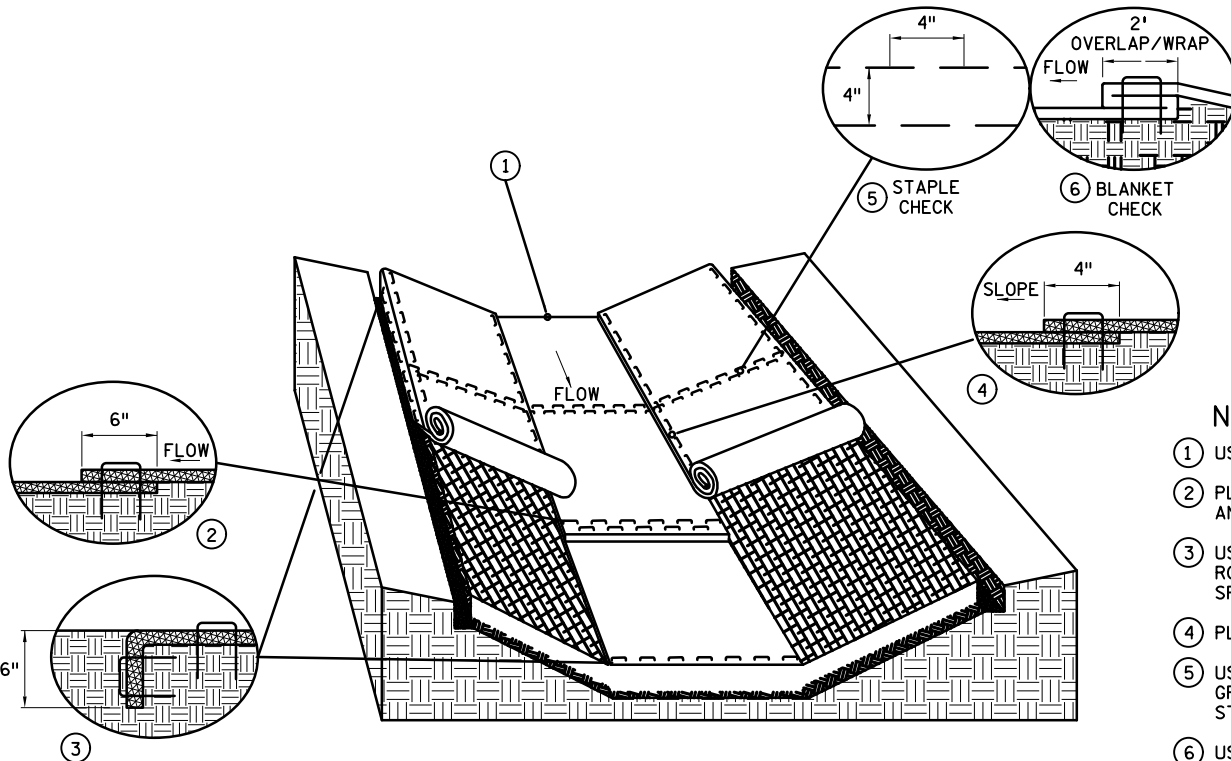
CHECK SLOT ALTERNATIVE  
PLACE SINGLE ROW STAPLES AT 12" SPACING

CHECK SLOT DETAILS

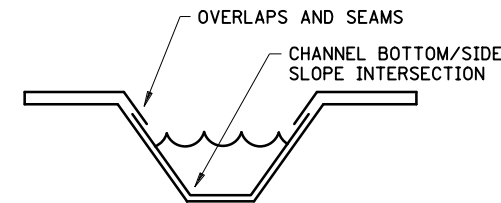


BLANKET OVERLAP  
PLACE SINGLE ROW STAPLES AT 12" SPACING

**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 1/3 FROM THE BOTTOM OF THE SLOPE.



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.

LEAD EXPERT OFFICE  
MARNI KARNOWSKI  
CHIEF ENVIRONMENTAL OFFICER  
OFFICE OF ENVIRONMENTAL STEWARDSHIP

DRAWN BY: JMP  
DESIGNED BY: TDO  
CHECKED BY: TDO

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

SIGNATURE: *Taylor D. Olson*  
PRINTED NAME: TAYLOR OLSON, PE  
DATE: 3/27/2026 LIC. NO. 57274



DAKOTA COUNTY PARKS AND CITY OF LAKEVILLE  
LAKE MARION GREENWAY PROJECT  
CITY OF LAKEVILLE, MINNESOTA

PERMANENT EROSION CONTROL  
REPP (BLANKET) STAPLE PATTERN FOR SLOPES

APPROVED: 01-08-2020  
REVISED:

*Thomas Styrbicki*  
THOMAS STYRBICKI  
STATE DESIGN ENGINEER

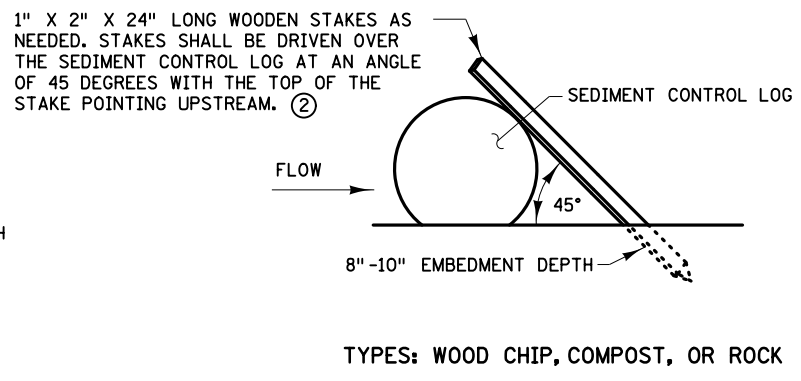
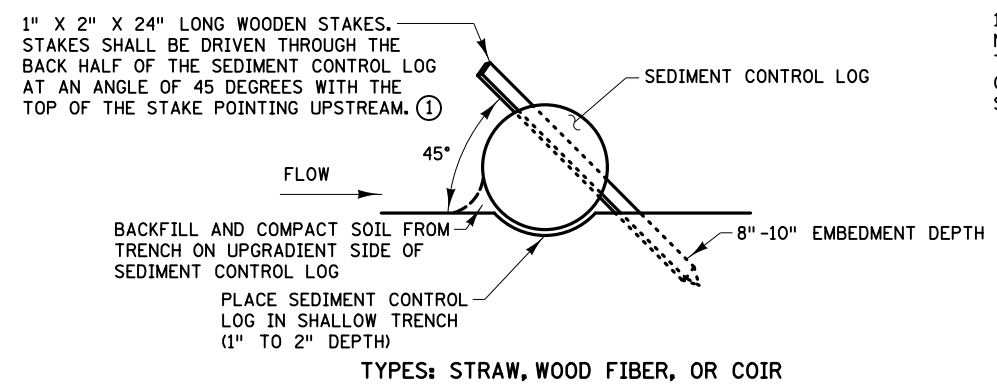
STANDARD PLAN  
5-297.404

3 OF 3

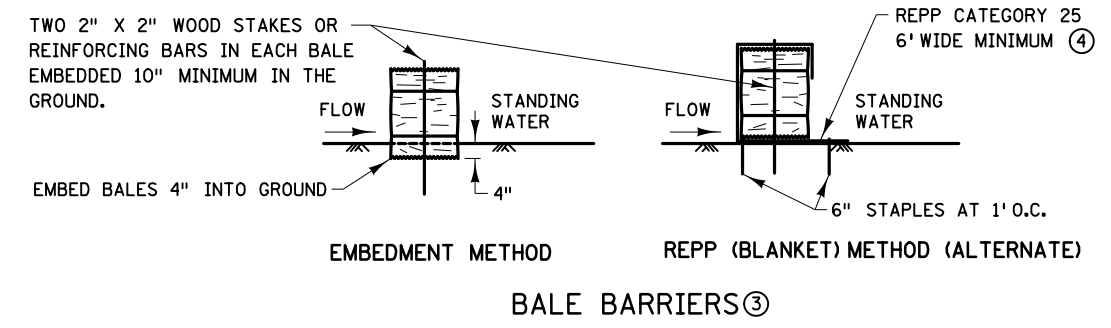
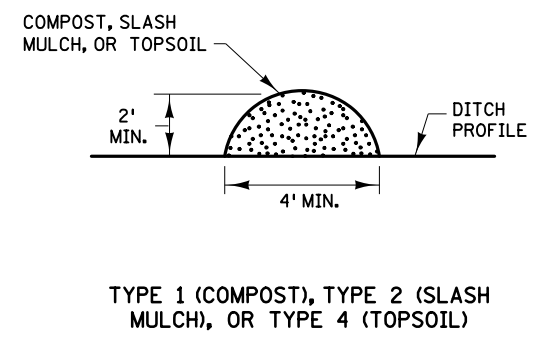
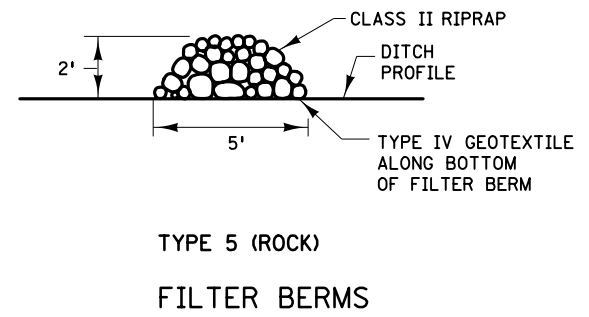
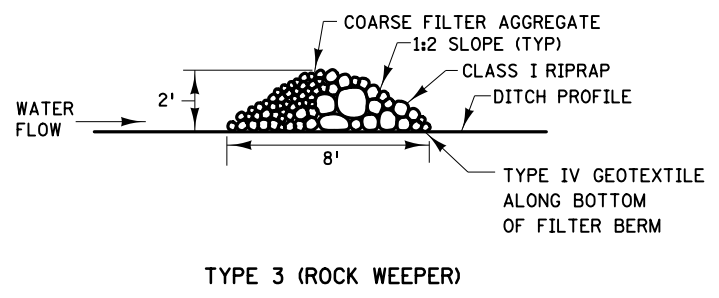
STANDARD PLANS

Sheet No. 22 of 74 Sheets

DATE: 27-MAR-2026  
 FILENAME: Projects\Minnesota\027938-000\05\_Discipline\Roadway\03\_Sheets\027938-000-155spr-400-det-001TRAILHEAD



SEDIMENT CONTROL LOGS



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.

LEAD EXPERT OFFICE  
 MARNI KARNOWSKI  
 CHIEF ENVIRONMENTAL OFFICER  
 OFFICE OF ENVIRONMENTAL STEWARDSHIP

TEMPORARY SEDIMENT CONTROL  
 FILTER BERMS, SEDIMENT CONTROL LOGS, AND BALE BARRIERS

APPROVED: 01-08-2020  
 REVISED:

THOMAS STYRBICKI  
 STATE DESIGN ENGINEER

STANDARD PLAN 5-297.405  
 2 OF 8

DRAWN BY: JMP  
 DESIGNED BY: TDO  
 CHECKED BY: TDO

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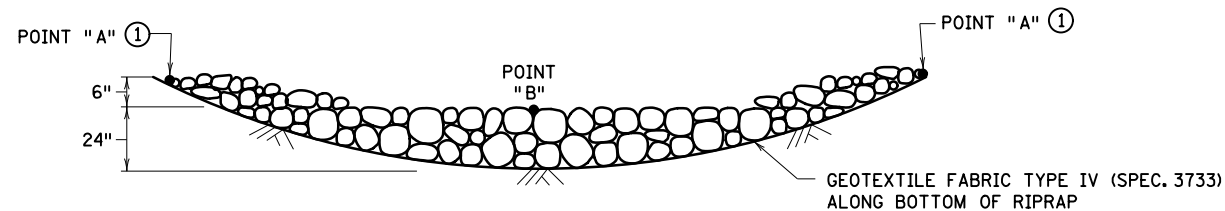
SIGNATURE: *Taylor D. Olson*  
 PRINTED NAME: TAYLOR OLSON, PE  
 DATE: 3/27/2026 LIC. NO. 57274



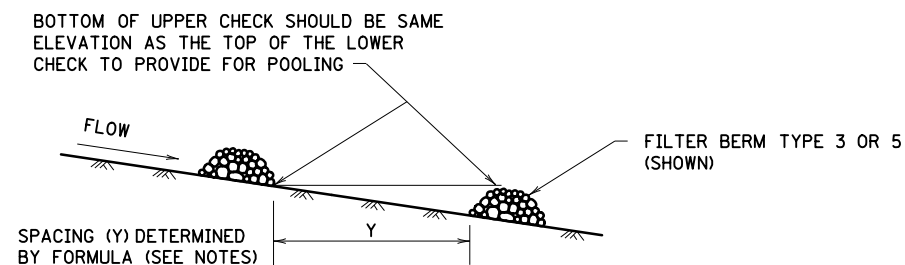
DAKOTA COUNTY PARKS AND CITY OF LAKEVILLE  
 LAKE MARION GREENWAY PROJECT  
 CITY OF LAKEVILLE, MINNESOTA

STANDARD PLANS

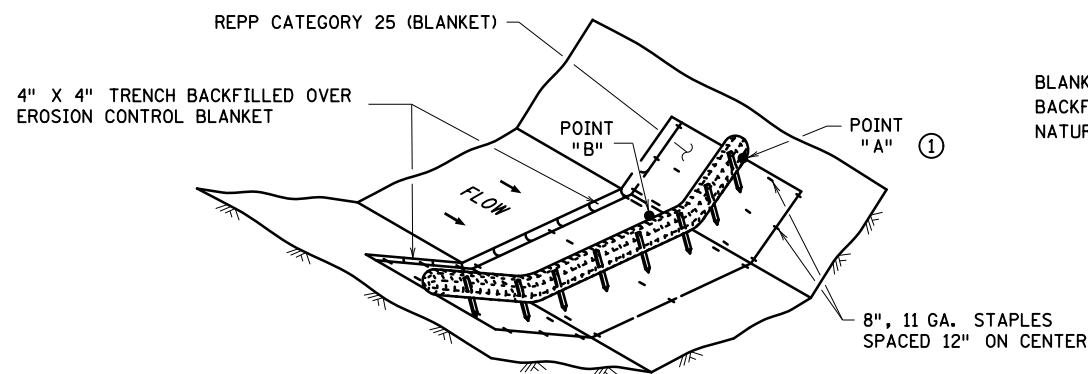
Sheet No. 23 of 74 Sheets



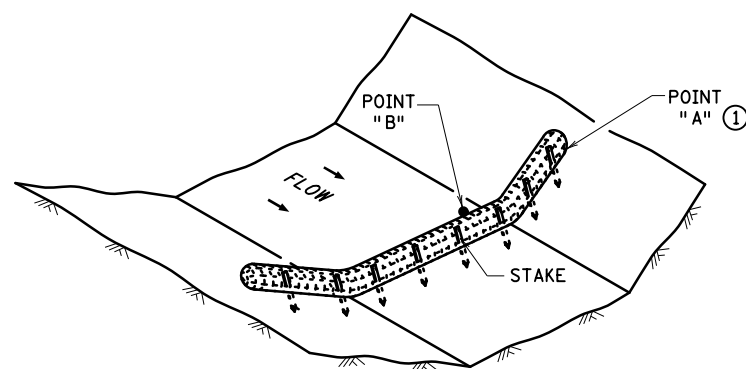
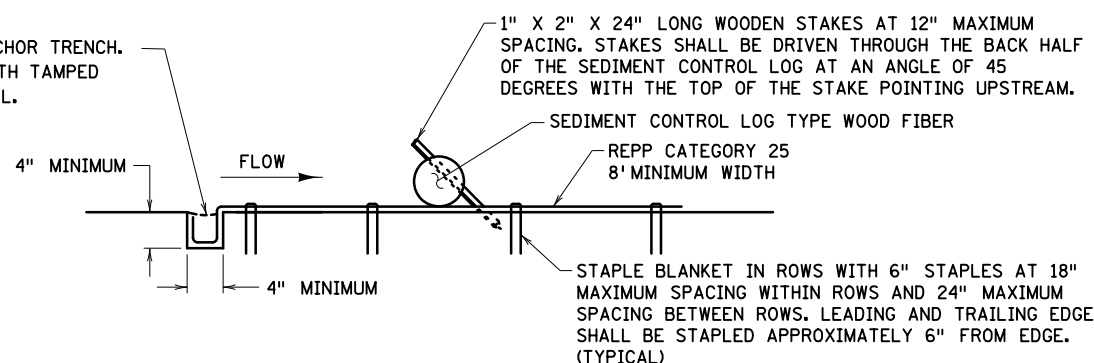
**ROCK DITCH CHECKS**  
**FILTER BERMS TYPE 3 (ROCK WEEPER) OR FILTER TYPE 5 (ROCK) ③**  
**FOR USE ON ROUGH-GRADED AREAS**  
**ONLY FOR USE OUTSIDE CLEAR ZONE ②**



**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:**

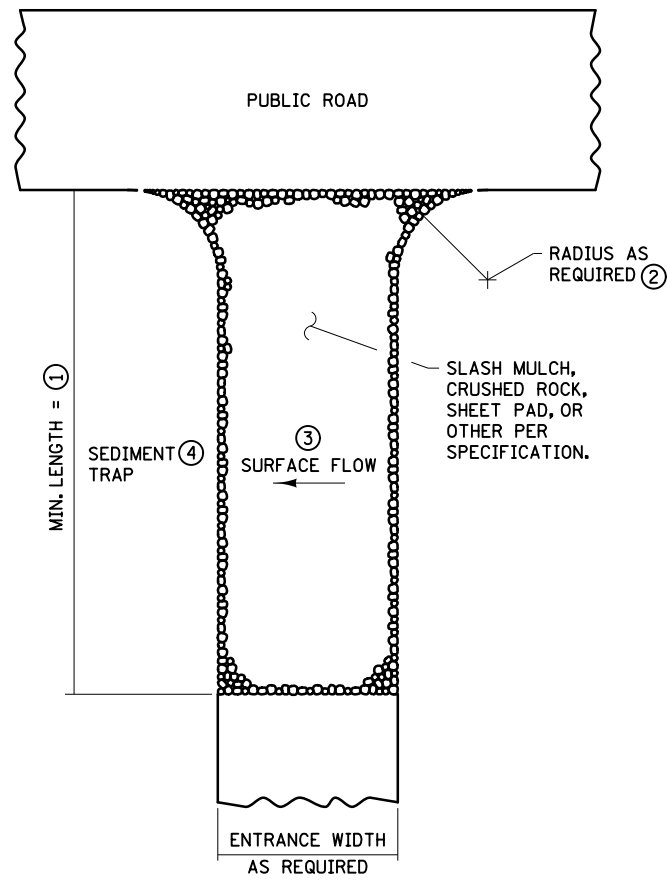
- REPP = ROLLED EROSION PREVENTION PRODUCT.
- SEE SPECS. 2573, 3601, 3733, 3885, 3886 & 3889.
- FOR DITCH CHECKS, PLACE SEDIMENT CONTROL LOG PERPENDICULAR TO FLOW AND IN A CRESCENT SHAPE WITH THE ENDS FACING UPSTREAM.
- APPROXIMATE SPACING BETWEEN EACH DITCH CHECK SHOULD BE DETERMINED FROM THE FOLLOWING 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.

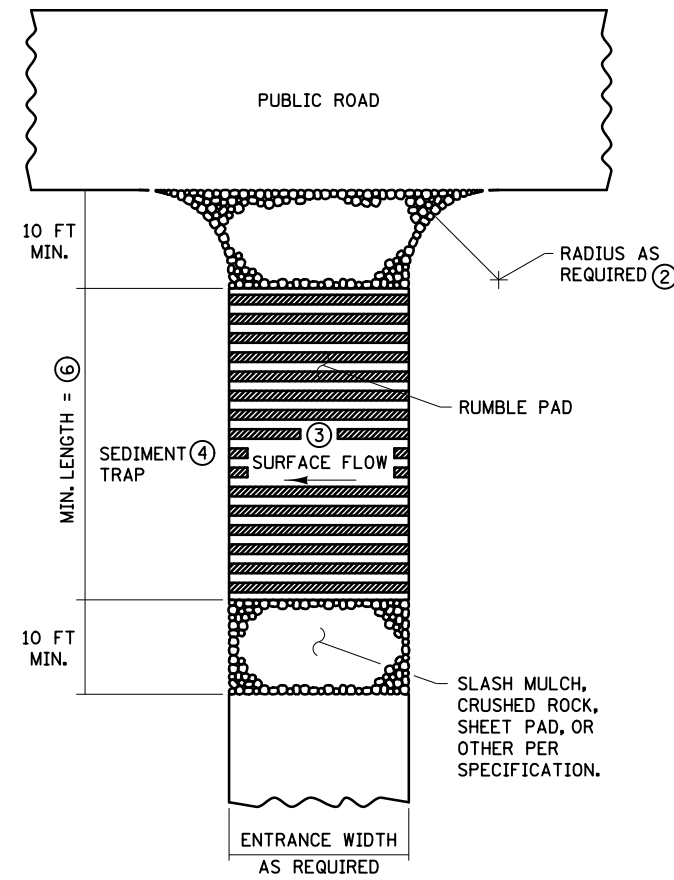
DATE: 27-MAR-2026 FILENAME: Projects\Minnesota\Roadway\03\_Sheets\027938-000-155spr-400-def-001TRAILHEAD

LEAD EXPERT OFFICE	MARNI KARNOWSKI CHIEF ENVIRONMENTAL OFFICER OFFICE OF ENVIRONMENTAL STEWARDSHIP	TEMPORARY SEDIMENT CONTROL DITCH CHECK		APPROVED: 01-08-2020	STANDARD PLAN 5-297.405	3 OF 8
	DESIGNED BY: JMP			REVISOR: THOMAS STYRBICKI STATE DESIGN ENGINEER		
DESIGNED BY: TDO	I HEREBY CERTIFY THAT THIS SHEET WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.	DAKOTA COUNTY PARKS AND CITY OF LAKEVILLE		STANDARD PLANS		Sheet No. 24 of 74 Sheets
CHECKED BY: TDO		LAKE MARION GREENWAY PROJECT CITY OF LAKEVILLE, MINNESOTA				
SIGNATURE: <i>Taylor D. Olson</i>		wsb				
PRINTED NAME: TAYLOR OLSON, PE		LIC. NO. 57274				
DATE: 3/27/2026						

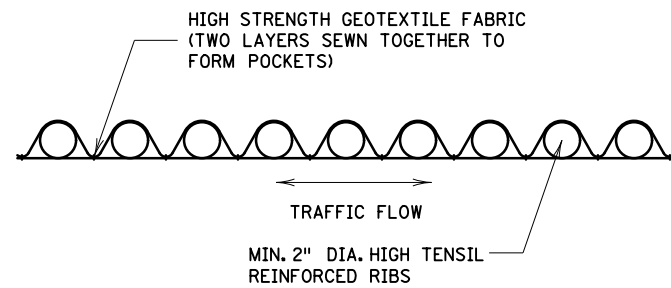
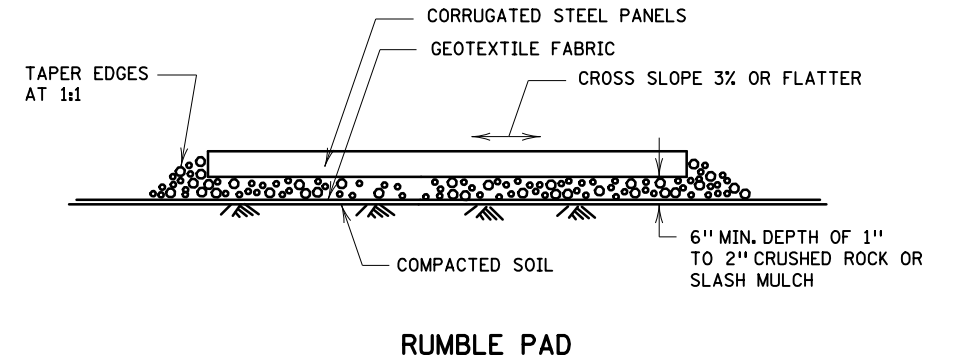
DATE: 27-MAR-2026  
 FILENAME: Projects\Minnesota\027938-000\05\_Discipline\Roadway\03\_Sheets\027938-000-155spr-400-def-001TRAILHEAD



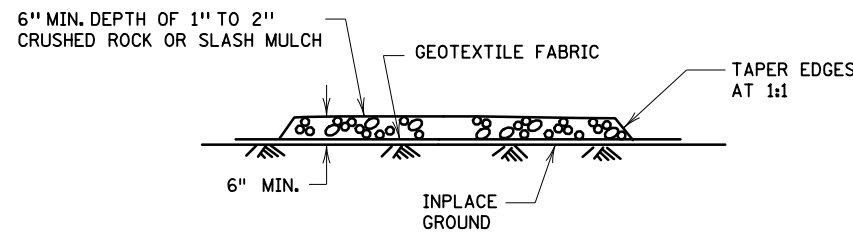
**SLASH MULCH, CRUSHED ROCK, OR SHEET PAD CONSTRUCTION EXIT ⑤⑦**



**RUMBLE PAD CONSTRUCTION EXIT ⑤⑦**



**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.

**LEAD EXPERT OFFICE**  
 LYNN CLARKOWSKI  
 CHIEF ENVIRONMENTAL OFFICER  
 OFFICE OF ENVIRONMENTAL STEWARDSHIP

**TEMPORARY SEDIMENT CONTROL**  
 STABILIZED CONSTRUCTION EXIT

APPROVED: 02-28-2017  
 REVISED:

*Tom Styrbicki*  
 THOMAS STYRBICKI  
 STATE DESIGN ENGINEER

STANDARD PLAN  
 5-297.405  
 5 OF 8

DRAWN BY: JMP  
 DESIGNED BY: TDO  
 CHECKED BY: TDO  
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SIGNATURE: *Taylor Olson*  
 PRINTED NAME: TAYLOR OLSON, PE  
 DATE: 3/27/2026 LIC. NO. 57274

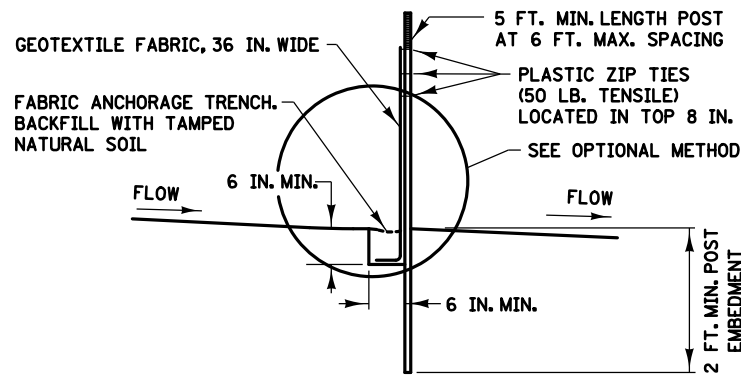


DAKOTA COUNTY PARKS AND CITY OF LAKEVILLE  
 LAKE MARION GREENWAY PROJECT  
 CITY OF LAKEVILLE, MINNESOTA

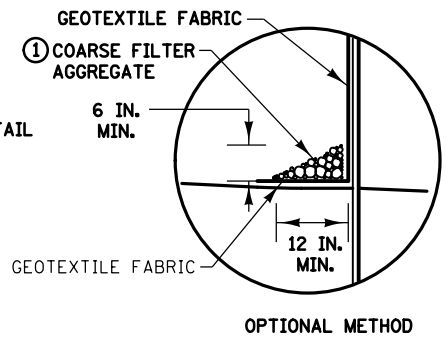
STANDARD PLANS

Sheet No. 25 of 74 Sheets

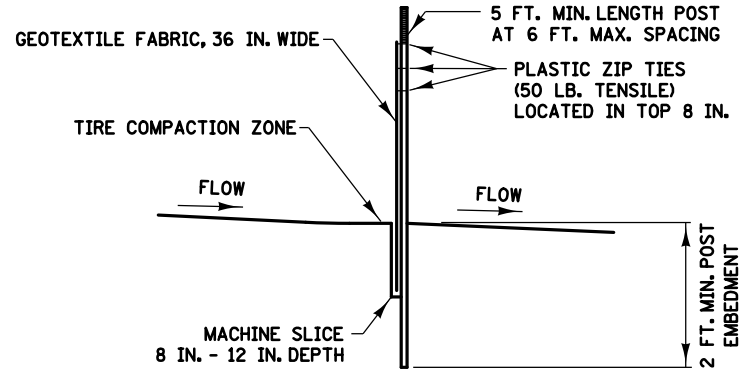
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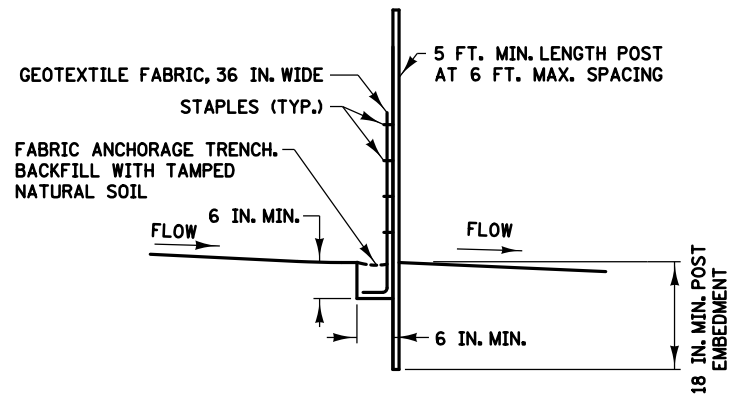
**SILT FENCE TYPE HI ②  
 (HAND INSTALLED)**



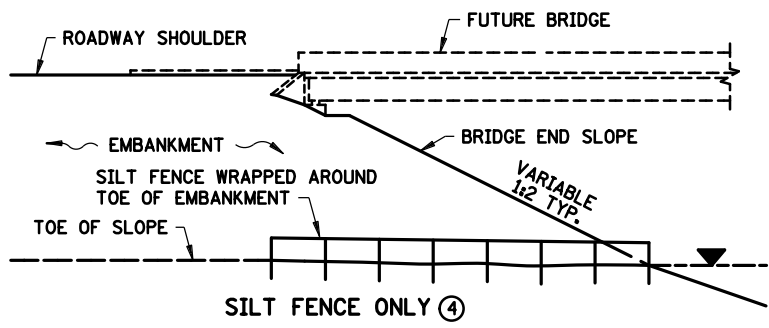
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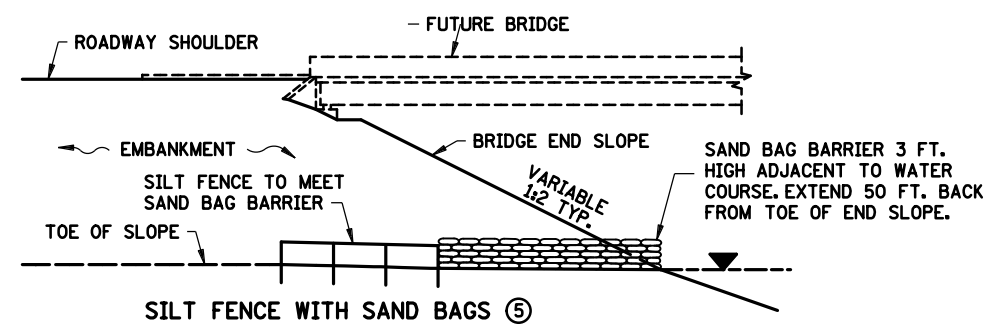
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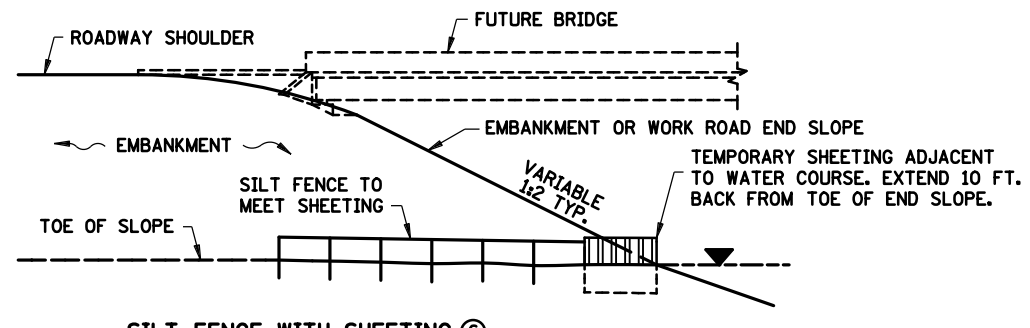
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 (PREASSEMBLED)**



**SILT FENCE ONLY ④**

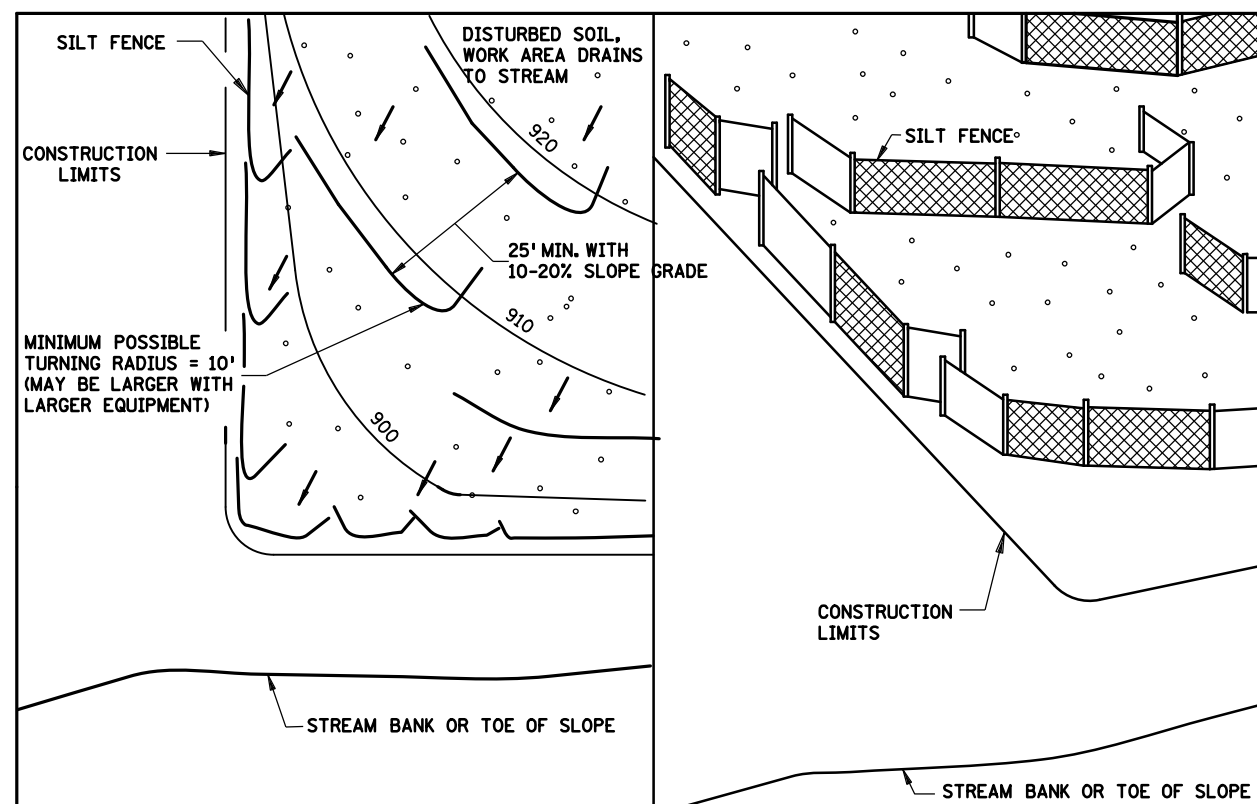


**SILT FENCE WITH SAND BAGS ⑤**

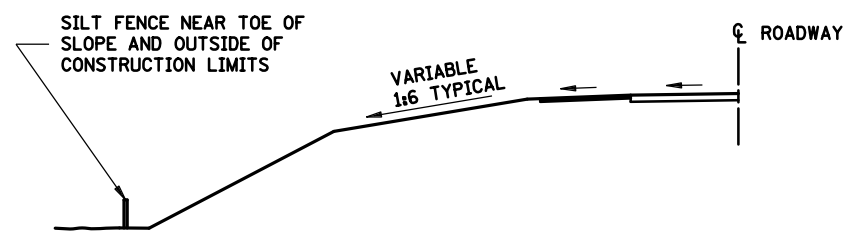


**SILT FENCE WITH SHEETING ⑥**

**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.

**LEAD EXPERT OFFICE**  
 LYNN CLARKOWSKI  
 CHIEF ENVIRONMENTAL OFFICER  
 OFFICE OF ENVIRONMENTAL STEWARDSHIP

**TEMPORARY SEDIMENT CONTROL  
 SILT FENCE**

APPROVED: 02-28-2017  
 REVISED:

*Tom Styrbicki*  
 THOMAS STYRBICKI  
 STATE DESIGN ENGINEER

**STANDARD PLAN  
 5-297.405** 6 OF 8

DRAWN BY: JMP  
 DESIGNED BY: TDO  
 CHECKED BY: TDO

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

SIGNATURE: *Taylor D. Olson*  
 PRINTED NAME: TAYLOR OLSON, PE  
 DATE: 3/27/2026 LIC. NO. 57274

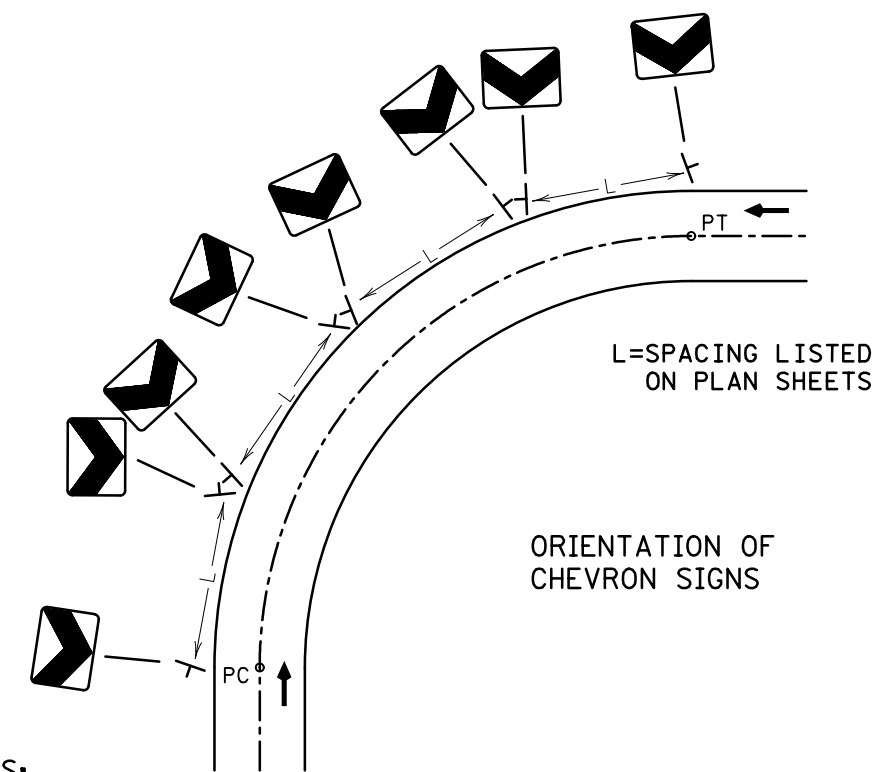
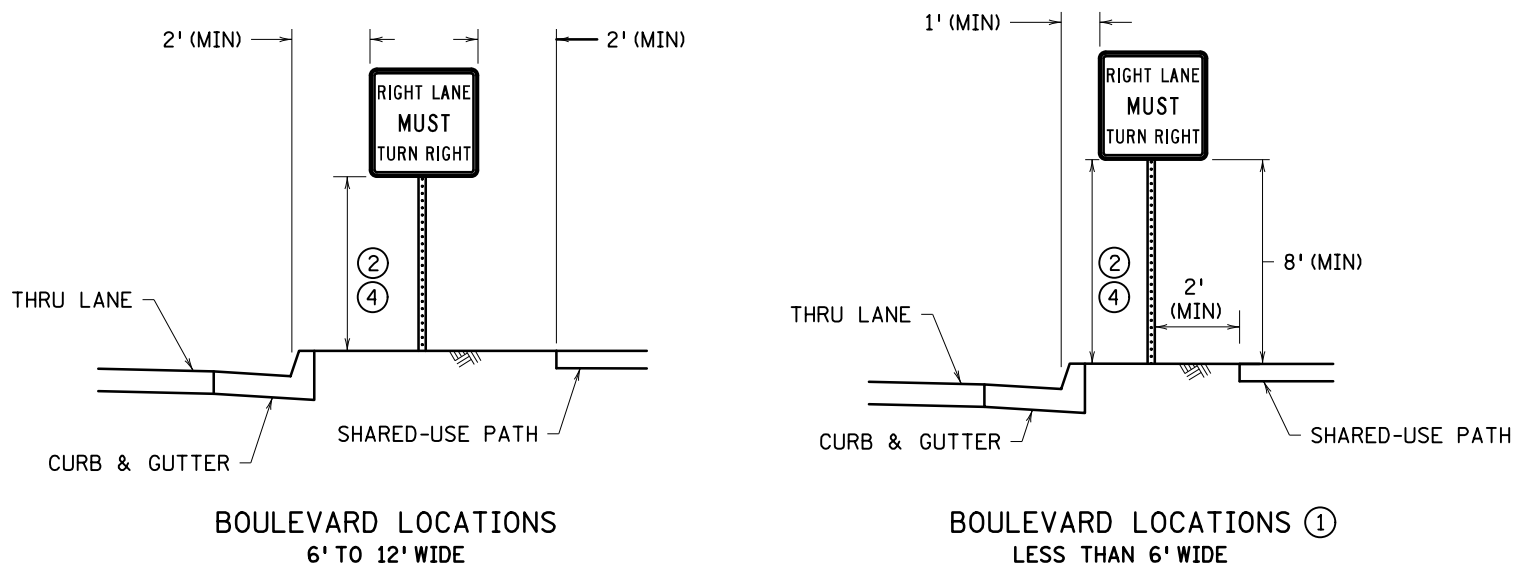
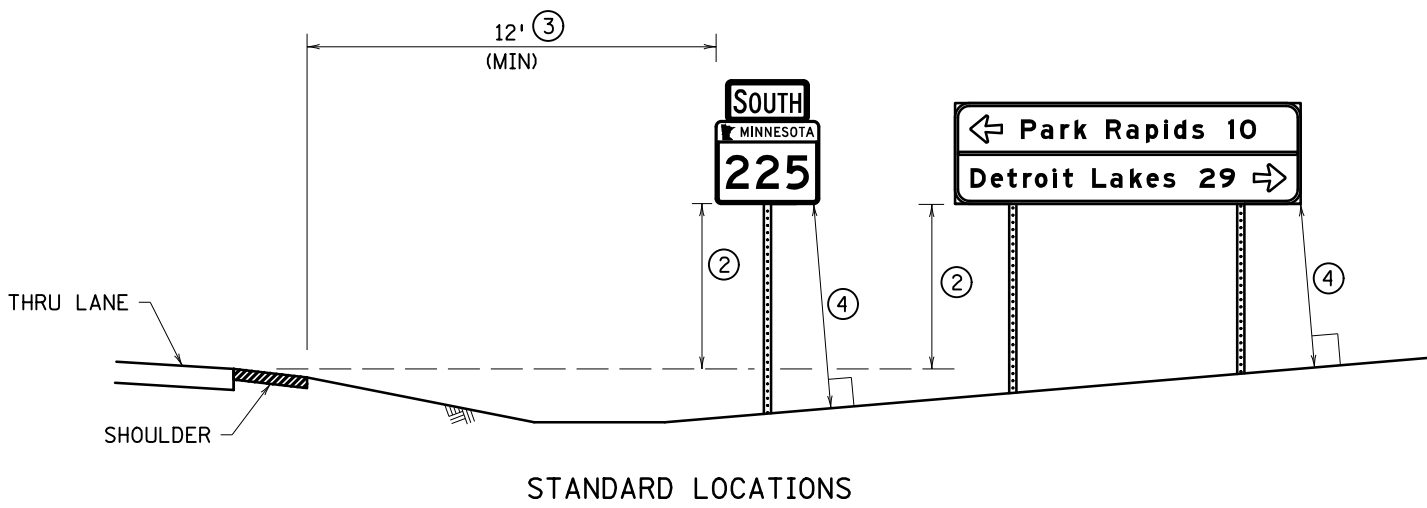
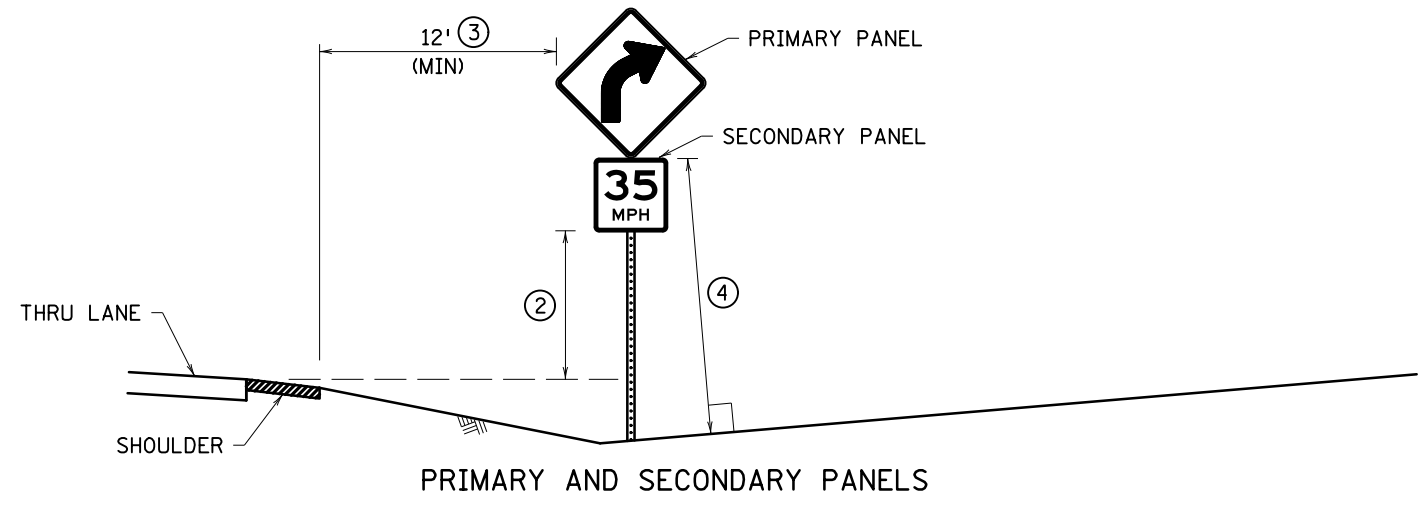


**DAKOTA COUNTY PARKS AND CITY OF LAKEVILLE**  
 LAKE MARION GREENWAY PROJECT  
 CITY OF LAKEVILLE, MINNESOTA

**STANDARD PLANS**

Sheet No. 26 of 74 Sheets

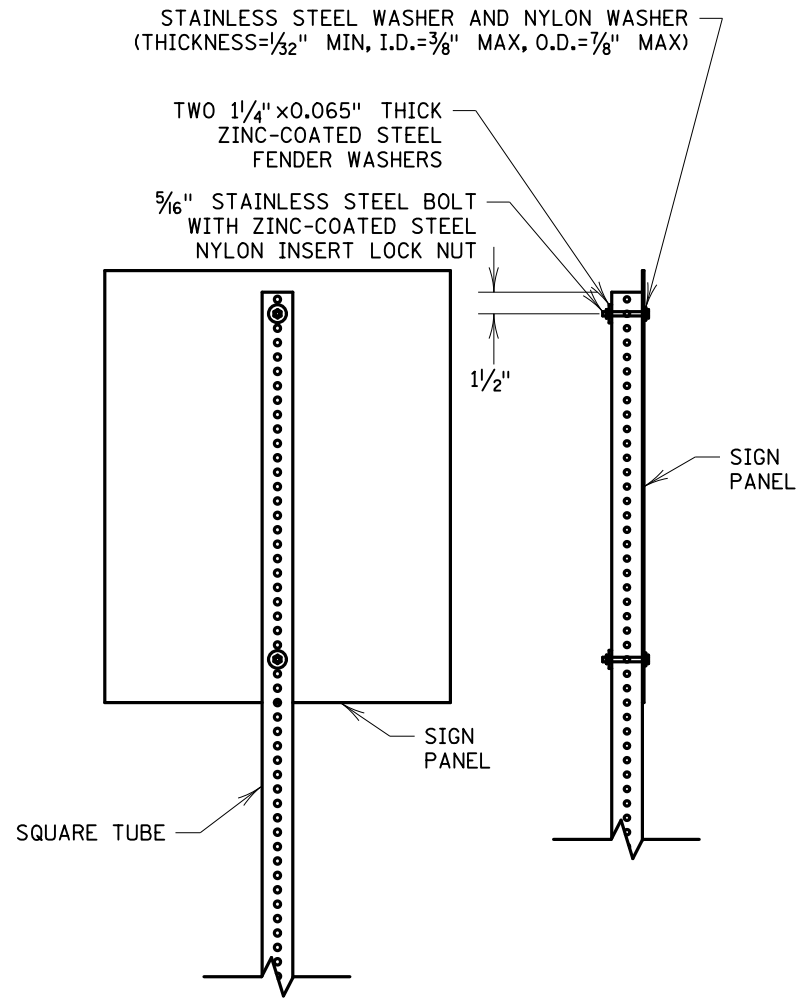
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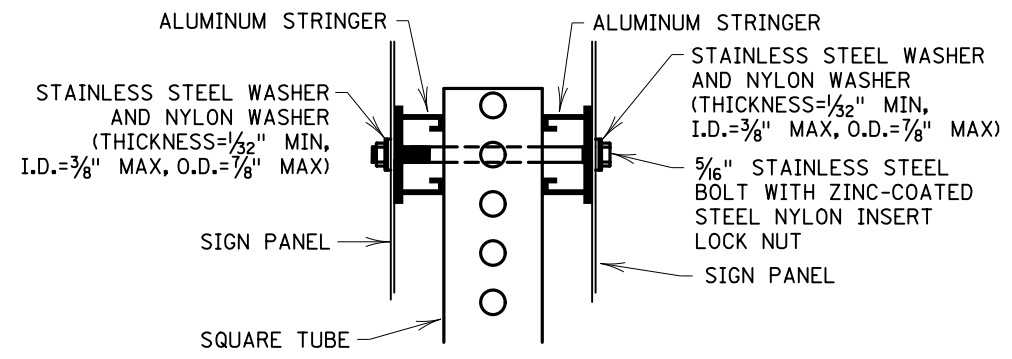
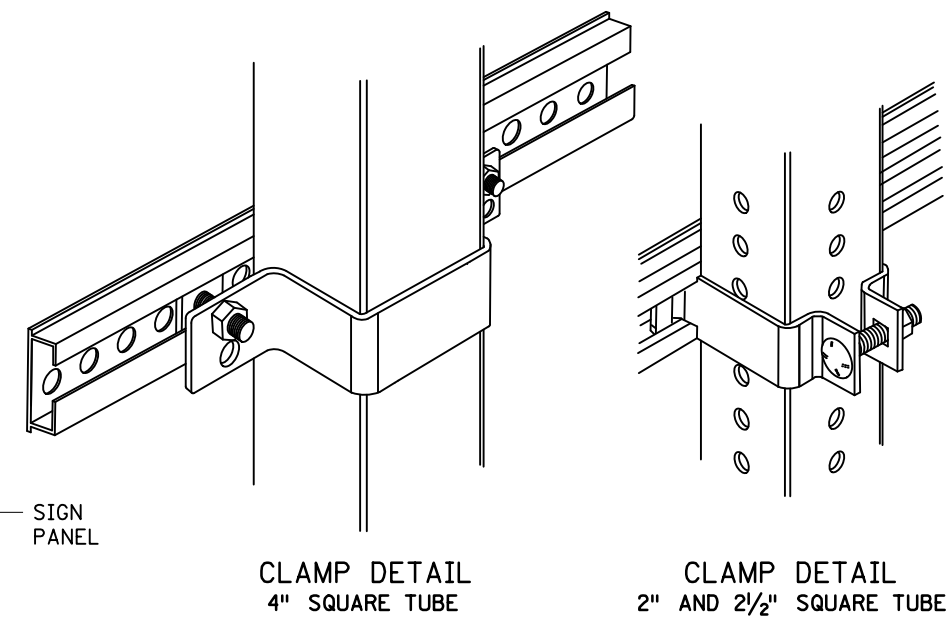
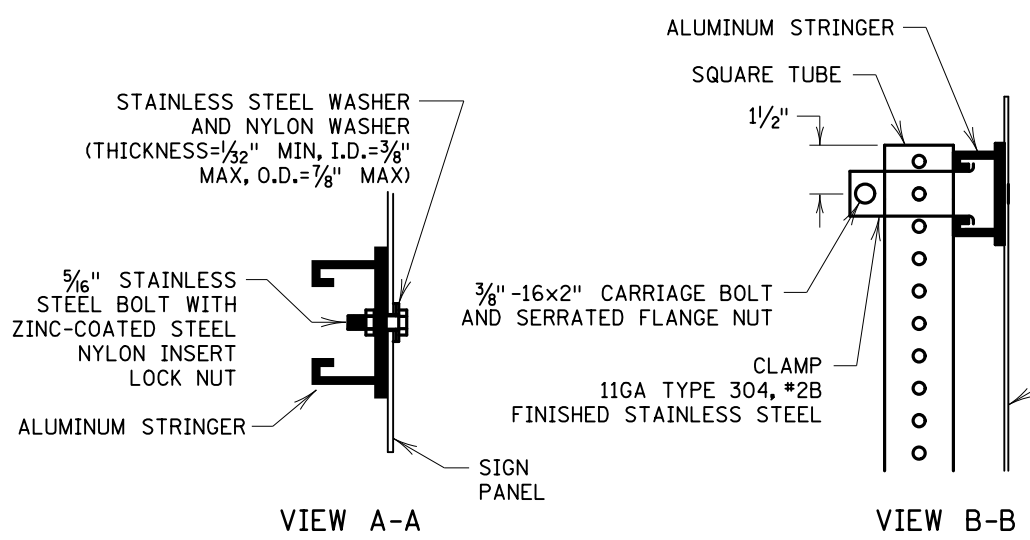
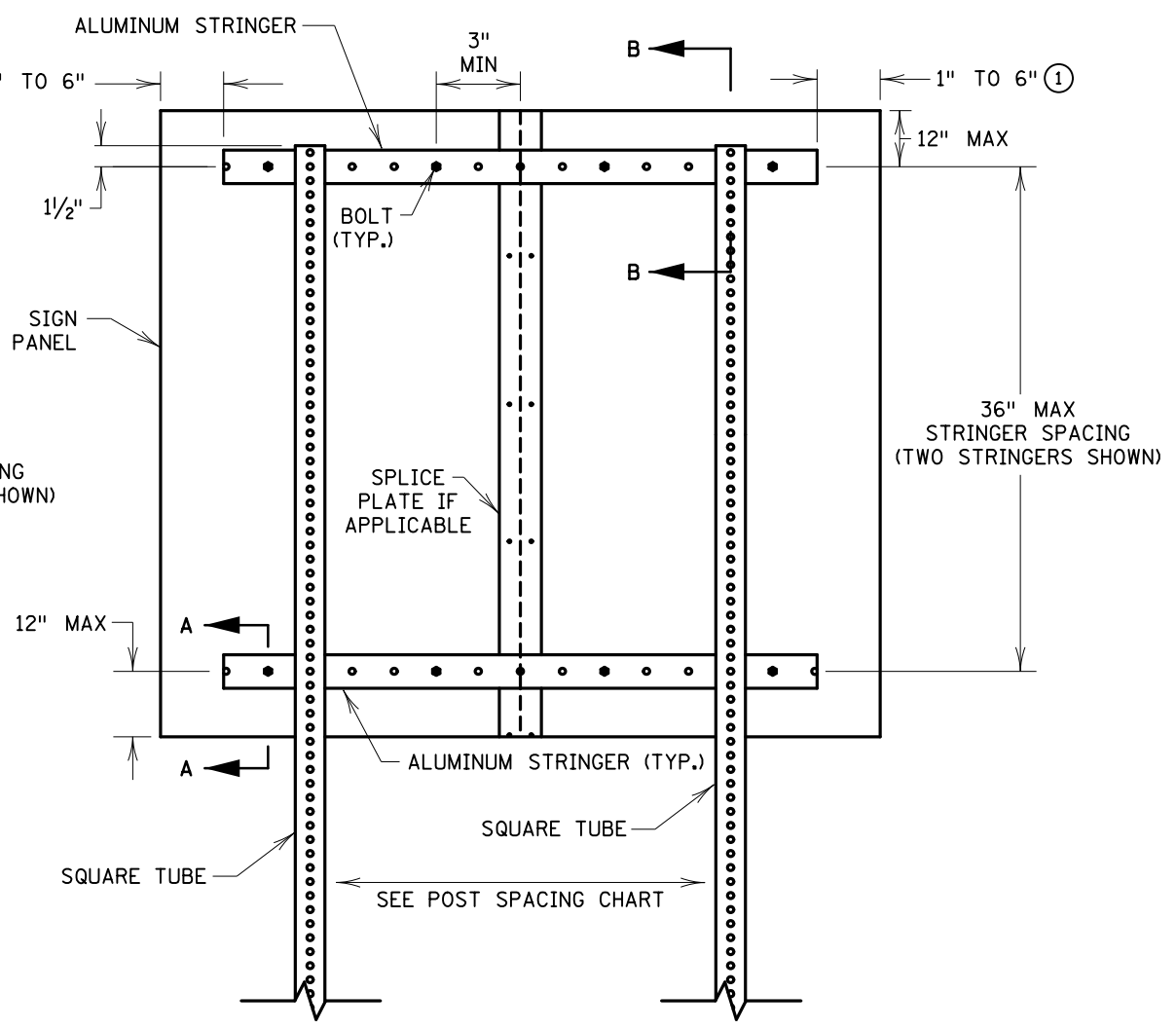
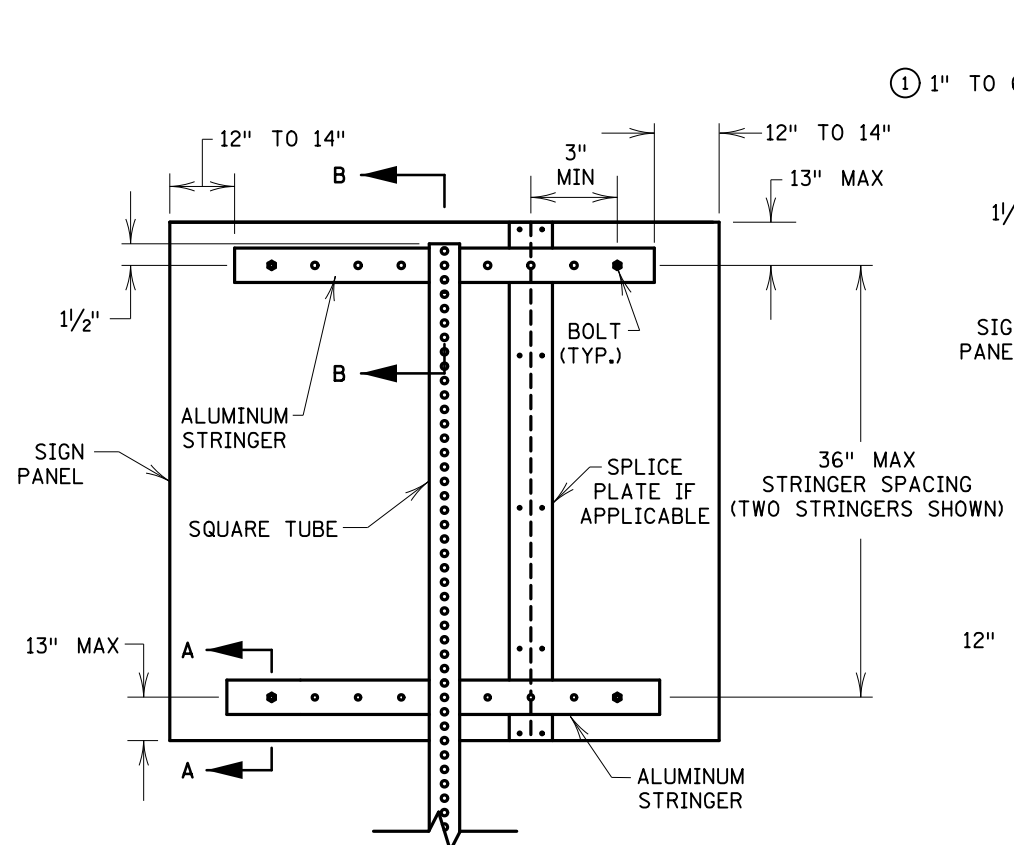
- NOTES:**
- PLACE SIGNS AND ORIENT THEM APPROXIMATELY AS SHOWN IN THE PLAN, AT RIGHT ANGLES TO THE DIRECTION OF, AND FACING THE TRAFFIC THEY ARE INTENDED TO SERVE, UNLESS OTHERWISE SPECIFIED. TO AVOID SPECULAR GLARE, TURN SIGNS APPROXIMATELY THREE DEGREES AWAY FROM APPROACHING TRAFFIC.
  - IF A SIGN NEEDS TO BE REPOSITIONED FROM THE PROPOSED PLAN LOCATION IN ORDER TO AVOID CONFLICTS WITH UTILITIES OR OBSTACLES, CONTACT THE PROJECT ENGINEER.
  - MOUNT SIGN FACES PLUMB.
  - LATERAL CLEARANCES GIVEN APPLY TO RIGHT AND/OR LEFT SIDE INSTALLATION.
  - ERECT OR CONSTRUCT SIGN SUPPORT SO THAT NO PORTION OF THE SIGN PANEL IS WITHIN 15' OF THE RAIL OF A RAILROAD TRACK.
  - PLACE SIGNS SUCH THAT OBSTACLES DO NOT BLOCK THEM FROM BEING VIEWED BY THE APPROACHING TRAFFIC.
  - PLACE SIGNS A MINIMUM OF 10' FROM THE NEAREST OBSTACLE. OBSTACLES MAY INCLUDE, BUT ARE NOT LIMITED TO, LIGHT POLES, TREES, SIGNS, AND BUILDINGS. SIGNS MAY BE PLACED CLOSER TO SIGNS IN TIGHT AREAS, BUT NO MORE THAN TWO POSTS IN A 7' DIAMETER CIRCLE.
  - AVOID PLACING SIGNS IN DITCH BOTTOMS.
- ① ONLY USE WHEN BOULEVARD IS TOO NARROW TO OBTAIN ADEQUATE CURBED LOCATION SIGN OFFSETS.
  - ② ALL SIGN MOUNTING HEIGHTS ARE MEASURED VERTICALLY FROM THE BOTTOM OF THE LOWEST SIGN PANEL TO THE TOP OF THE CURB, OR IN ABSENCE OF CURB, TO THE NEAR EDGE OF THE THRU-LANE PAVEMENT. SEE SIGN TABULATIONS.
  - ③ MINIMUM OFFSET MAY BE REDUCED TO AT LEAST 6' FROM SHOULDER AND AT LEAST 12' FROM THRU LANE IF SITE CONDITIONS PROHIBIT A 12' OFFSET FROM SHOULDER.
  - ④ CRASHWORTHY HEIGHT IS AT LEAST 7' FOR BREAKAWAY STRUCTURES AND AT LEAST 4' FOR BENDABLE STRUCTURES. SEE SPECIFIC SQUARE TUBE BASE STRUCTURE PLAN FOR CRASH RESPONSE TYPE. THE CRASHWORTHY HEIGHT IS MEASURED TO THE BOTTOM OF THE PRIMARY SIGN PANEL EXCLUDING ANY SECONDARY SIGN PANELS, MARKERS, DELINEATORS, AND REFERENCE LOCATION SIGN PANELS. ANY SECONDARY SIGN PANELS MOUNTED TO MORE THAN ONE POST ARE CONSIDERED PRIMARY SIGN PANELS FOR CRASHWORTHY PURPOSES.

<b>LEAD EXPERT OFFICE</b>	BRIAN SORENSON STATE TRAFFIC ENGINEER OFFICE OF TRAFFIC ENGINEERING		<b>STANDARD SIGN PLACEMENT</b>	APPROVED: 08-09-2023 REVISED:	 THOMAS STYRBICKI STATE DESIGN ENGINEER	<b>STANDARD PLAN</b> 5-297.701	1 OF 1
DRAWN BY: JMP	I HEREBY CERTIFY THAT THIS SHEET WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.	SIGNATURE:	<b>STANDARD PLANS</b>	<b>DAKOTA COUNTY PARKS AND CITY OF LAKEVILLE</b> LAKE MARION GREENWAY PROJECT CITY OF LAKEVILLE, MINNESOTA			
DESIGNED BY: TDO		PRINTED NAME: TAYLOR OLSON, PE					
CHECKED BY: TDO		DATE: 3/27/2026 LIC. NO. 57274					

DATE: 27-MAR-2026  
 FILENAME: Projects\Minnesota\027938-000\05\_Discipline\Roadway\03\_Sheets\027938-000-155spr-700-detl-001TRAILHEAD



FOR SIGN PANELS UP TO 30" WIDE



BACK-TO-BACK SIGN MOUNTING  
 WITH STRINGERS

NOTES:  
 BOLT SIGN PANELS TO STRINGERS OR RISER POSTS AT NO GREATER THAN 24" SPACING OR ACCORDING TO THE MNDOT STANDARD SIGNS AND MARKINGS MANUAL FOR MOUNTING HOLES (PUNCH CODES) INFORMATION.

CENTER STRINGERS ON SIGN PANEL.

① IF POST SPACING REQUIRES PLACEMENT OF A POST WITHIN THIS AREA, EXTEND STRINGERS AS NEEDED TO ACCOMMODATE THE STRINGER TO POST CLAMP.

LEAD EXPERT OFFICE  
 BRIAN SORENSON  
 STATE TRAFFIC ENGINEER  
 OFFICE OF TRAFFIC ENGINEERING

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SIGNATURE: *Taylor O. Olson*  
 PRINTED NAME: TAYLOR OLSON, PE  
 DATE: 3/27/2026 LIC. NO. 57274



DAKOTA COUNTY PARKS AND CITY OF LAKEVILLE  
 LAKE MARION GREENWAY PROJECT  
 CITY OF LAKEVILLE, MINNESOTA

SQUARE-TUBE SIGN MOUNTING DETAILS

APPROVED: 08-09-2023  
 REVISED:

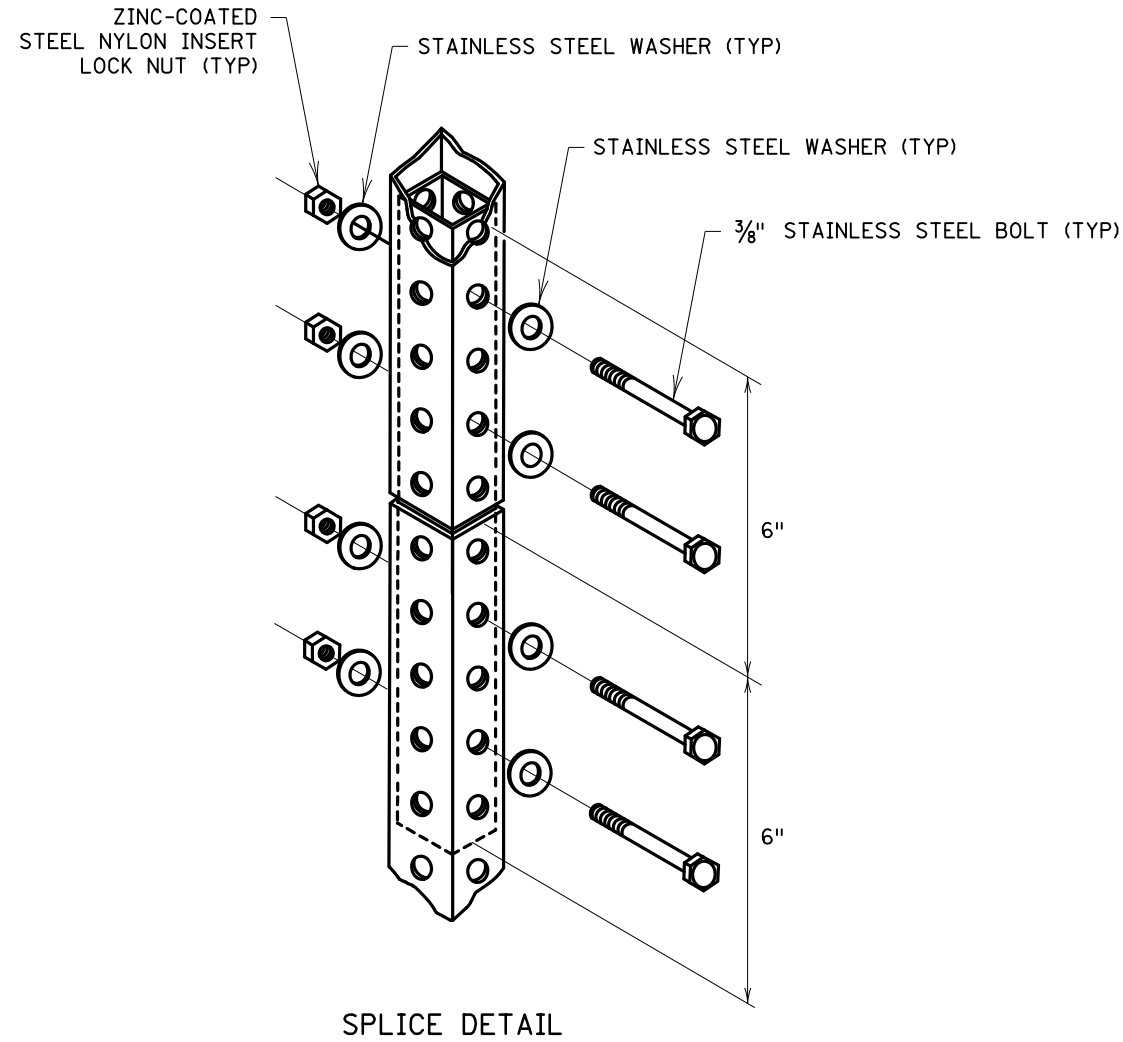
*Tom Styrbicki*  
 THOMAS STYRBICKI  
 STATE DESIGN ENGINEER

STANDARD PLAN  
 5-297.718

1 OF 3

STANDARD PLANS

DATE: 27-MAR-2026  
 FILENAME: Projects\Minnesota\027938-000\05\_Discipline\Roadway\03\_Sheets\027938-000-155spr-700-detl-001TRAILHEAD



PANEL WIDTH (IN)	SQUARE TUBE POST SPACING						
	2 POSTS (IN)	3 POSTS (IN)	4 POSTS (IN)	5 POSTS (IN)	6 POSTS (IN)	7 POSTS (IN)	8 POSTS (IN)
42	15						
48	21						
54	30						
60	36						
66	36						
72	42						
78	42						
84	48						
90	48	42					
96	48	42					
102	54	42					
108	54	42					
114	60	42					
120	60	48					
126	66	48					
132	66	48	42				
138	72	48	42				
144	72	48	42				
150	78	54	42				
156	78	54	42				
162	84	54	42				
168	84	60	48				
174	90	60	48	42			
180	90	60	48	42			
186	96	66	48	42			
192	96	66	48	42			
198	102	66	54	42			
204	102	72	54	42			
210	108	72	54	42			
216	108	72	54	48	42		
222	114	78	60	48	42		
228	114	78	60	48	42		
234	120	78	60	48	42		
240	120	84	60	48	42		
246		84	66	54	42		
252		84	66	54	42		
258		90	66	54	42	42	
264		90	66	54	48	42	
270		90	72	54	48	42	
276		96	72	60	48	42	
282		96	72	60	48	42	
288		96	72	60	48	42	
294		102	78	60	54	42	
300		102	78	60	54	42	42
306		102	78	66	54	42	42
312		108	78	66	54	48	42
318		108	84	66	54	48	42
324		108	84	66	54	48	42
330		114	84	66	60	48	42
336		114	84	72	60	48	42

DISTANCES ARE CENTER-TO-CENTER OF POSTS

**NOTES:**

NO MORE THAN ONE SPLICE PER POST.

WHEN USED, THE SPLICE MUST BE PLACED AT LEAST 8' ABOVE GROUND. THE PREFERRED PLACEMENT LOCATION IS BEHIND THE SIGN PANEL.

INTERIOR POST STUD SHALL BE ONE SIZE SMALLER FOR TIGHT FIT. IF RISER POST IS 2 1/2", INTERIOR POST IS 2 3/16". IF RISER POST IS 2", INTERIOR POST IS 1 3/4".

**LEAD EXPERT OFFICE**  
 BRIAN SORENSON  
 STATE TRAFFIC ENGINEER  
 OFFICE OF TRAFFIC ENGINEERING

DRAWN BY: JMP  
 DESIGNED BY: TDO  
 CHECKED BY: TDO

SIGNATURE: *Taylor O. Olson*  
 PRINTED NAME: TAYLOR OLSON, PE  
 DATE: 3/27/2026 LIC. NO. 57274



DAKOTA COUNTY PARKS AND CITY OF LAKEVILLE  
 LAKE MARION GREENWAY PROJECT  
 CITY OF LAKEVILLE, MINNESOTA

SQUARE-TUBE SIGN MOUNTING DETAILS

APPROVED: 08-09-2023  
 REVISED:

*Tom Styrbicki*  
 THOMAS STYRBICKI  
 STATE DESIGN ENGINEER

STANDARD PLAN  
 5-297.718

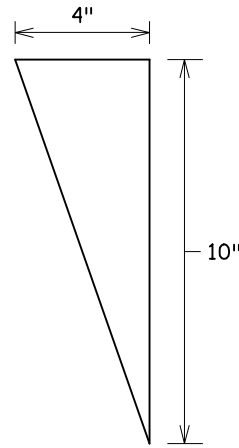
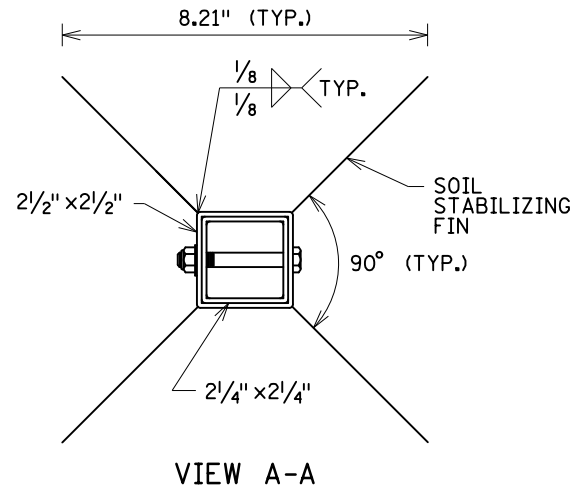
2 OF 3

STANDARD PLANS

Sheet No. 29 of 74 Sheets



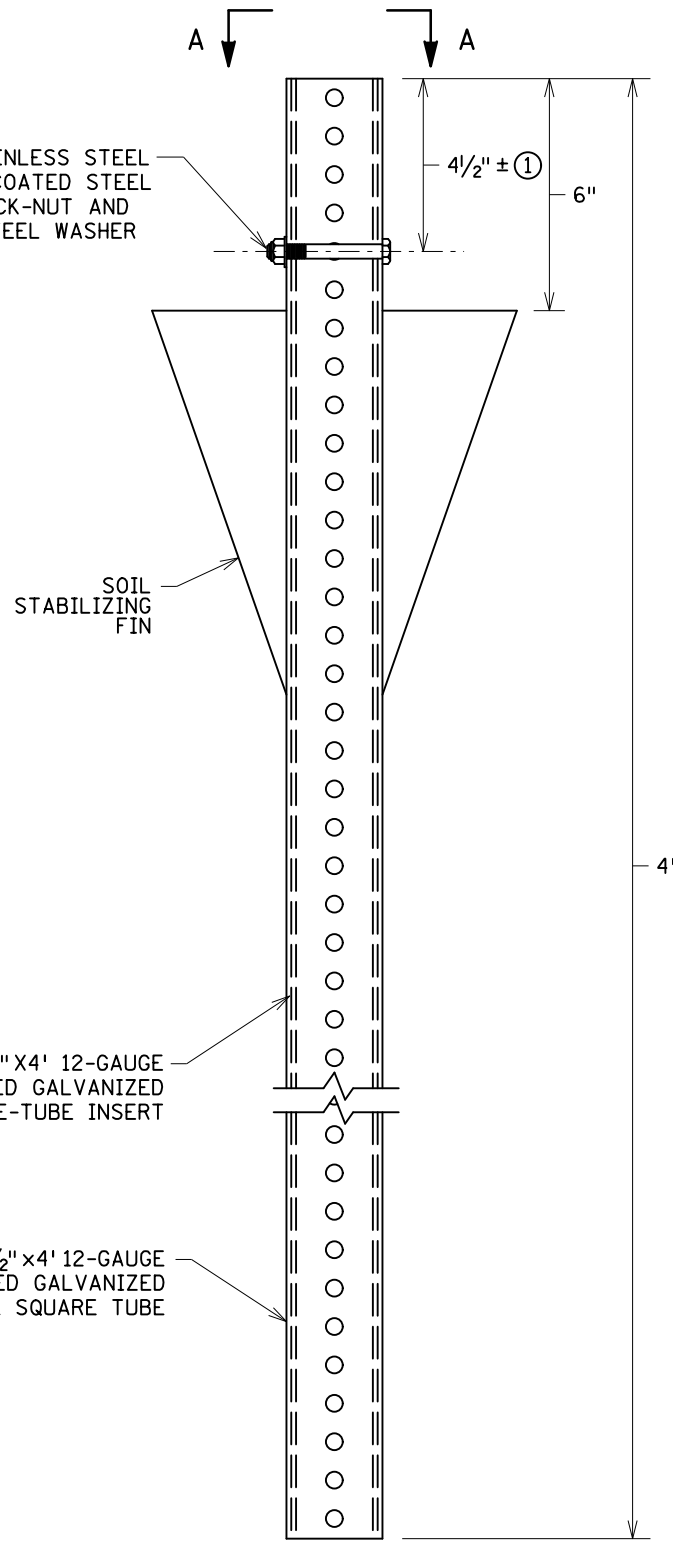
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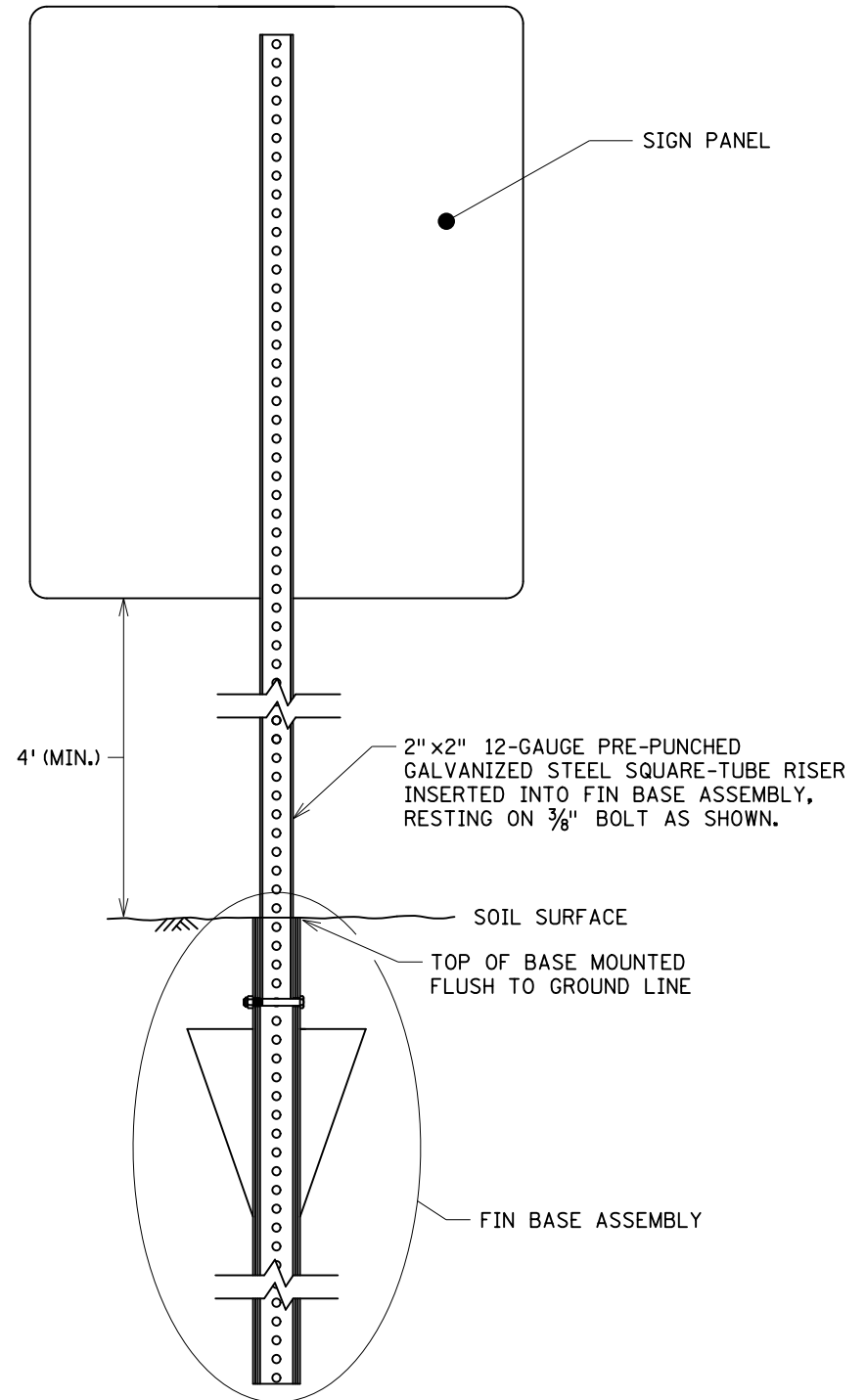
**SOIL STABILIZING FIN**  
FOUR REQUIRED

12-GAUGE PRE-GALVANIZED ASTM A569 STEEL.  
 WELD THE 10" EDGE OF EACH FIN TO EACH  
 CORNER OF THE 2 1/2" SQUARE TUBE. SEE VIEW  
 A-A FOR WELDING DETAILS. WELDS MUST BE  
 ZINC-COATED.

3/8" x 3" LONG STAINLESS STEEL  
 BOLT WITH ZINC-COATED STEEL  
 NYLON INSERT LOCK-NUT AND  
 3/8" STAINLESS STEEL WASHER



**FIN BASE ASSEMBLY**



**FIN BASE IN SOIL**

**NOTES:**

THE CRASH RESPONSE TYPE FOR THIS STRUCTURE IS BENDABLE.

TO MEET CRASHWORTHY REQUIREMENTS, THE DISTANCE BETWEEN THE BOTTOM OF THE SIGN PANEL AND THE GROUND SURFACE BELOW ANY PORTION OF THE SIGN PANEL MUST BE A MINIMUM OF 4'. SEE TABULATIONS FOR MOUNTING HEIGHT.

SEE STANDARD PLAN 5-297.718 FOR ADDITIONAL MOUNTING DETAILS.

SQUARE-TUBE SIGN POSTS IN ACCORDANCE WITH SPEC. 3402.

① INSERT BOLT IN 5TH HOLE DOWN.

**LEAD EXPERT OFFICE**  
 BRIAN SORENSON  
 STATE TRAFFIC ENGINEER  
 OFFICE OF TRAFFIC ENGINEERING

DRAWN BY: JMP  
 DESIGNED BY: TDO  
 CHECKED BY: TDO

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SIGNATURE: *Taylor O. Olson*  
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 DATE: 3/27/2026 LIC. NO. 57274



DAKOTA COUNTY PARKS AND CITY OF LAKEVILLE  
 LAKE MARION GREENWAY PROJECT  
 CITY OF LAKEVILLE, MINNESOTA

**FIN BASE**  
 FOR 2" SQUARE-TUBE RISER POST IN SOIL

APPROVED: 08-09-2023  
 REVISED:

*Tom Styrbicki*  
 THOMAS STYRBICKI  
 STATE DESIGN ENGINEER

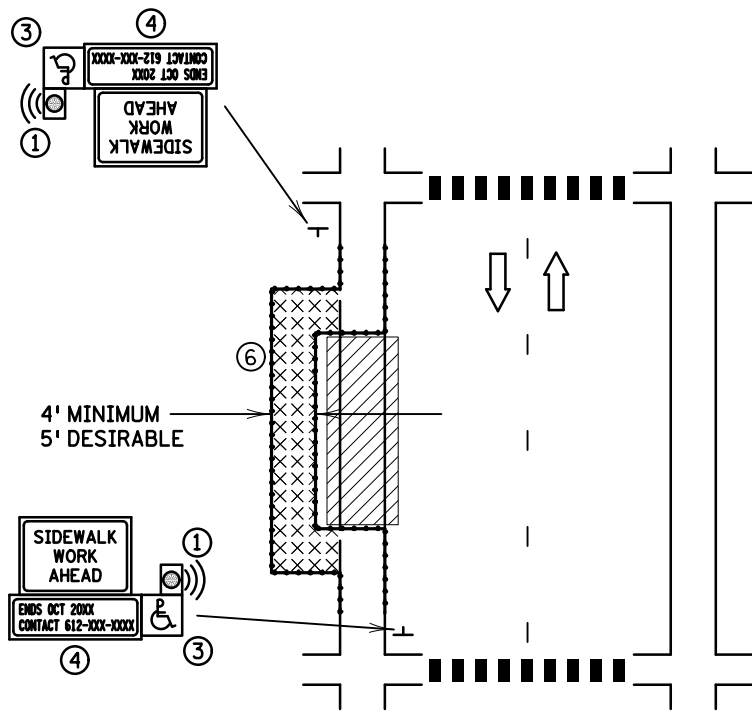
STANDARD PLAN  
 5-297.722

1 OF 1

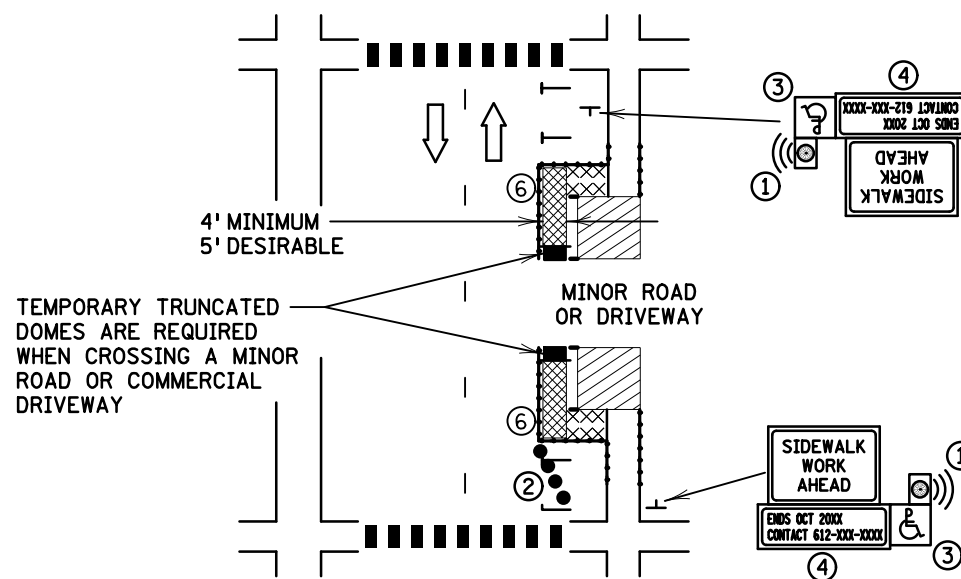
**STANDARD PLANS**

Sheet No. 31 of 74 Sheets

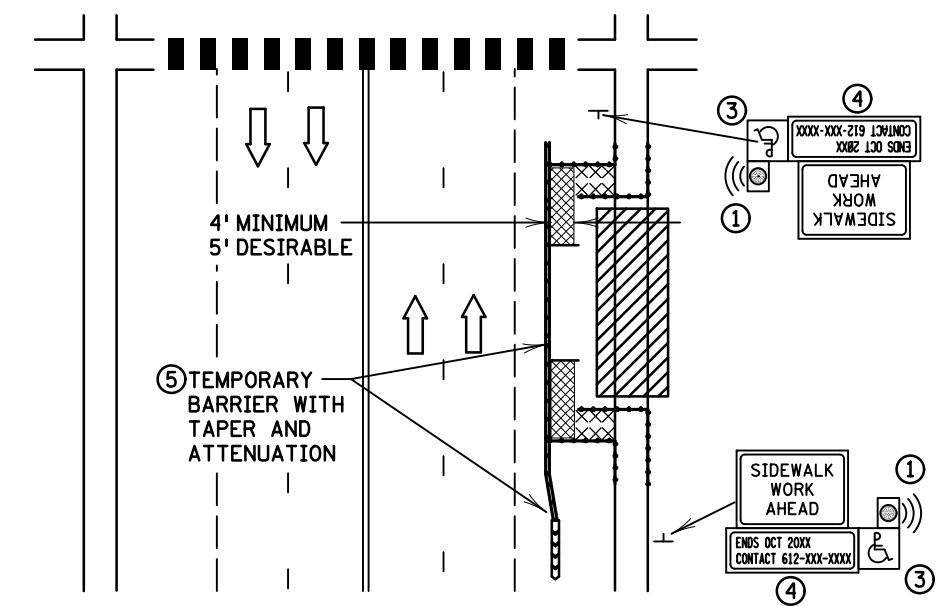
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**BYPASS TYPE A**  
 BYPASS ON ADJACENT AVAILABLE  
 RIGHT OF WAY



**BYPASS TYPE B**  
 SIDEWALK BYPASS USING PARKING OR  
 SHOULDER ON LOW-SPEED ROADWAY



**BYPASS TYPE C**  
 SIDEWALK BYPASS USING SHOULDER  
 OR PARKING LANE ON A MULTI-LANE  
 OR HIGH-SPEED ROADWAY

**NOTES:**

WHEN CLOSING OR RELOCATING CROSSWALKS OR SIDEWALKS, PROVIDE DETECTABLE TEMPORARY FACILITIES AND INCLUDE ACCESSIBILITY FEATURES CONSISTENT WITH EXISTING PEDESTRIAN FACILITIES. THE ALTERNATE PEDESTRIAN ROUTE (APR) MUST REMAIN OPEN AT ALL TIMES.

TEMPORARY TRAFFIC CONTROL DEVICES FOR PEDESTRIANS ARE SHOWN. OTHER DEVICES MAY BE NECESSARY TO CONTROL VEHICULAR TRAFFIC. STAGE WORK AS NECESSARY TO PROVIDE AN APR AT ALL TIMES FOR ROADWAYS WITH NO AVAILABLE DETOURS. PROVIDE A SMOOTH, CONTINUOUS, HARD SURFACE THROUGH THE LENGTH OF THE APR.

PROVIDE A FIRM, STABLE, FREE-DRAINING, NON-SLIP, TEMPORARY WALKWAY SURFACE REGARDLESS OF WEATHER CONDITIONS. SUPPORT THE TEMPORARY WALKWAY SURFACE WITH A SOLID BASE TO COVER SHORT SEGMENTS OF ROUGH, SOFT, OR UNEVEN GROUND. THE TEMPORARY WALKWAY SURFACE WILL ALLOW NORMAL USAGE OF WHEELCHAIRS, WALKERS, STROLLERS, AND OTHER MOBILITY DEVICES. CONCRETE, BITUMINOUS, STEEL, RUBBER, WOOD (3/4" OR THICKER), AND PLASTIC ARE ACCEPTABLE SURFACE MATERIALS FOR THE TEMPORARY WALKWAY SURFACE. GRAVEL, MILLINGS, AND OTHER UNEVEN SURFACES ARE NOT ACCEPTABLE SURFACE MATERIALS. IF NEEDED, PROVIDE SOIL STABILIZATION TO PREVENT EROSION AROUND TEMPORARY SURFACES. IF NEEDED, PROVIDE SOIL STABILIZATION TO PREVENT EROSION AROUND TEMPORARY SURFACES.

IF A 60" PEDESTRIAN WALKWAY WIDTH ISN'T PROVIDED FOR THE ROUTE, THEN A 60" BY 60" PASSING SPACE IS REQUIRED EVERY 200'. THE MINIMUM WIDTH OF THE WALKWAY IS 48".

COVER OR DEACTIVATE ANY PEDESTRIAN TRAFFIC SIGNALS CONTROLLING CLOSED CROSSWALKS.

POST-MOUNTED SIGNS LOCATED ADJACENT TO A SIDEWALK SHALL HAVE A 7' MINIMUM CLEARANCE FROM THE BOTTOM OF THE LOWEST SIGN TO THE SIDEWALK SURFACE. SHARED-USE PATH SHALL HAVE 8' MINIMUM CLEARANCE FROM THE BOTTOM OF THE LOWEST SIGN TO THE SHARED USE PATH SURFACE.

APR SHOULD BE KEPT FREE OF TRASH, SEDIMENT, AND DEBRIS.

ANY PORTABLE SIGN OR BARRICADE PLACED OR STORED IN A PEDESTRIAN WALKWAY THAT COULD POSE A HAZARD TO A VISUALLY-IMPAIRED PEDESTRIAN SHALL HAVE A DETECTABLE EDGE TO GUIDE THE PEDESTRIAN AROUND THE HAZARD. FOR ADDITIONAL GUIDANCE, SEE THE "DETECTABLE EDGE FOR SIGN ON PORTABLE STAND" DETAIL ON STANDARD PLAN 5-297.813.

MINIMIZE DISRUPTION TO PEDESTRIANS TO THE MAXIMUM EXTENT FEASIBLE BY PROVIDING AN APR IN THE FOLLOWING ORDER OF PREFERENCE:

1. PROVIDE THE APR ON THE SAME SIDE OF THE ROADWAY AS THE DISRUPTED ROUTE UTILIZING BYPASSES.
2. WHERE NOT FEASIBLE TO PROVIDE A SAME-SIDE APR, PROVIDE AN APR DETOUR ON THE OTHER SIDE OF THE ROADWAY.
3. WHERE NOT FEASIBLE TO PROVIDE AN APR ON EITHER SIDE OF THE ROADWAY, PROVIDE AN APR DETOUR WITH TRAILBLAZING SIGNS.
  - ① CONSIDER PROVIDING AN APPROVED AUDIBLE MESSAGE DEVICE OR TACTILE MESSAGE FOR PEDESTRIANS WITH VISUAL DISABILITIES.
  - ② RECOMMENDED TAPER WHEN THE CLOSED AREA WAS PREVIOUSLY USED AS AN INTERMITTENT TRAFFIC LANE OR BYPASS LANE IS 25' LONG USING FIVE EQUALLY-SPACED CHANNELIZING DEVICES.
  - ③ FOR FULLY-ACCESSIBLE WALKWAYS THROUGH WORKZONES, CONSIDER DISPLAYING THE INTERNATIONAL SYMBOL OF ACCESSIBILITY.
  - ④ INCLUDE INFORMATION SUCH AS THE DURATION OF THE WALKWAY RESTRICTIONS (BEGINNING AND/OR END DATES) AND A PROJECT CONTACT NUMBER FOR 24/7 QUESTIONS OR REPORTING HAZARDS ON SIGNS FOR TEMPORARY PEDESTRIAN DETOURS.
  - ⑤ SEE THE MOST CURRENT EDITION OF THE MNDOT TEMPORARY BARRIER GUIDANCE MANUAL FOR GUIDANCE ON PLACEMENT AND USAGE OF TEMPORARY BARRIER.

⑥ PROVIDE SOIL STABILIZATION AROUND TEMPORARY SURFACES TO PREVENT EROSION, IF NEEDED.

**LEGEND**

- ⊥ SIGN
- [Hatched Box] WORK AREA
- [Dashed Line] PEDESTRIAN CHANNELIZATION DEVICE
- [Solid Line] TEMPORARY BARRIER
- [Arrow] DIRECTION OF TRAFFIC
- [Dot] CHANNELIZER
- [Speaker Icon] AUDIBLE MESSAGE DEVICE (AMD)
- [Cross-hatched Box] TEMPORARY CURB RAMP WITH DETECTABLE EDGES
- [X-hatched Box] TEMPORARY WALKWAY SURFACE

**LEAD EXPERT OFFICE**  
 BRIAN SORENSON  
 STATE TRAFFIC ENGINEER  
 OFFICE OF TRAFFIC ENGINEERING

**ALTERNATE PEDESTRIAN ROUTE (APR) LAYOUTS**

APPROVED: 03-18-2021  
 REVISED:

*Tom Styrbicki*  
 THOMAS STYRBICKI  
 STATE DESIGN ENGINEER

**STANDARD PLAN**  
 5-297.811  
 1 OF 2

DRAWN BY: JMP  
 DESIGNED BY: TDO  
 CHECKED BY: TDO

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

SIGNATURE: *Taylor D. Olson*  
 PRINTED NAME: TAYLOR OLSON, PE  
 DATE: 3/27/2026 LIC. NO. 57274

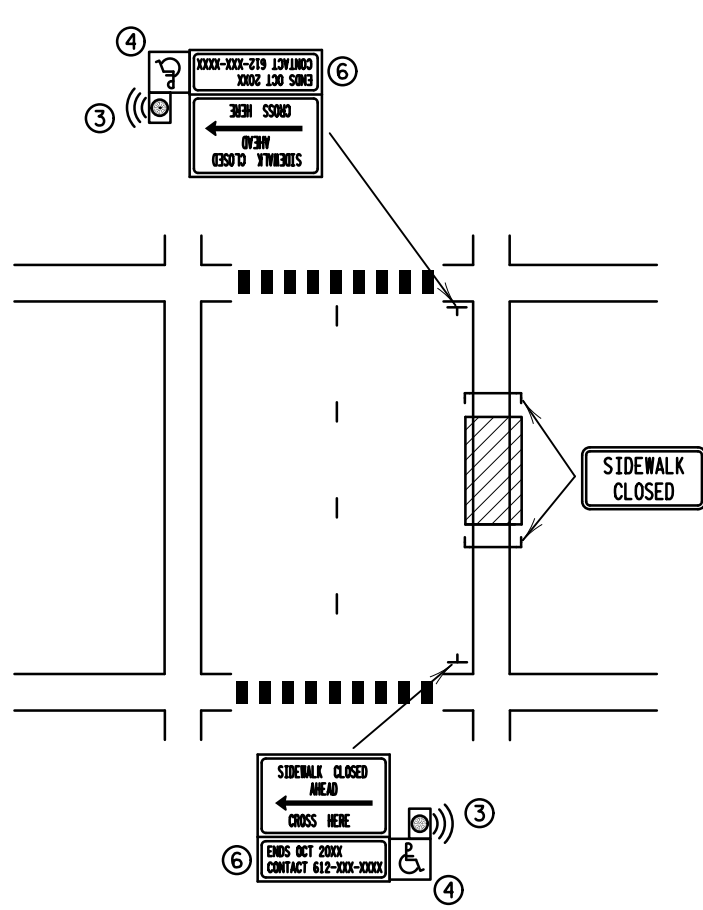


**DAKOTA COUNTY PARKS AND CITY OF LAKEVILLE**  
 LAKE MARION GREENWAY PROJECT  
 CITY OF LAKEVILLE, MINNESOTA

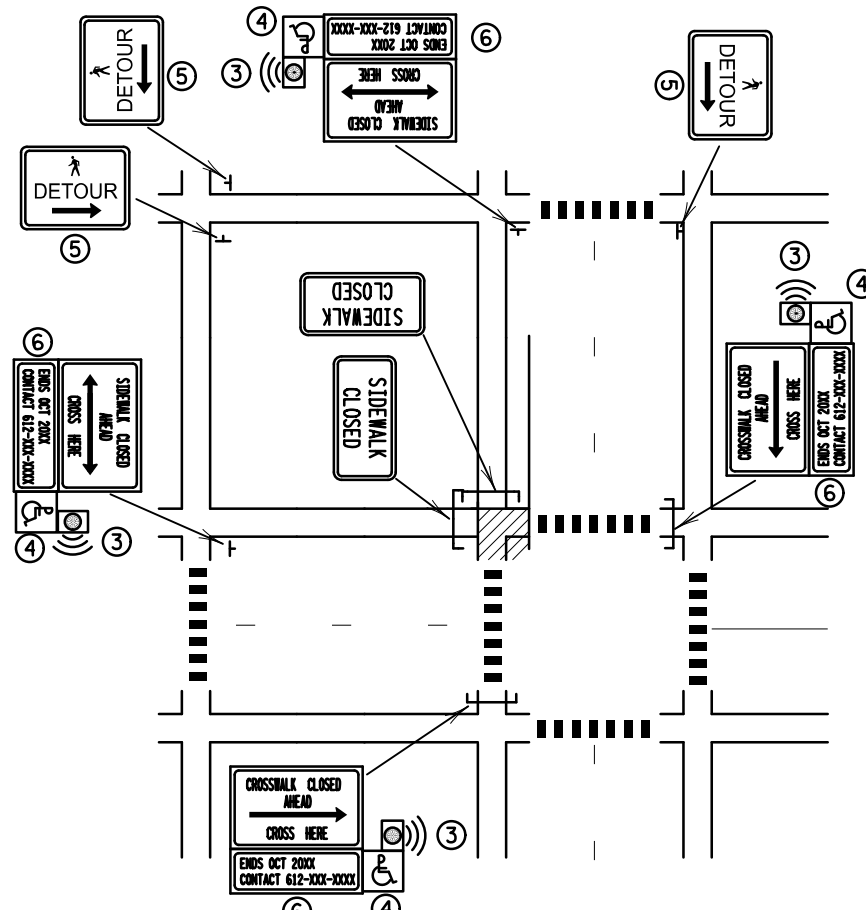
**STANDARD PLANS**

Sheet No. 32 of 74 Sheets

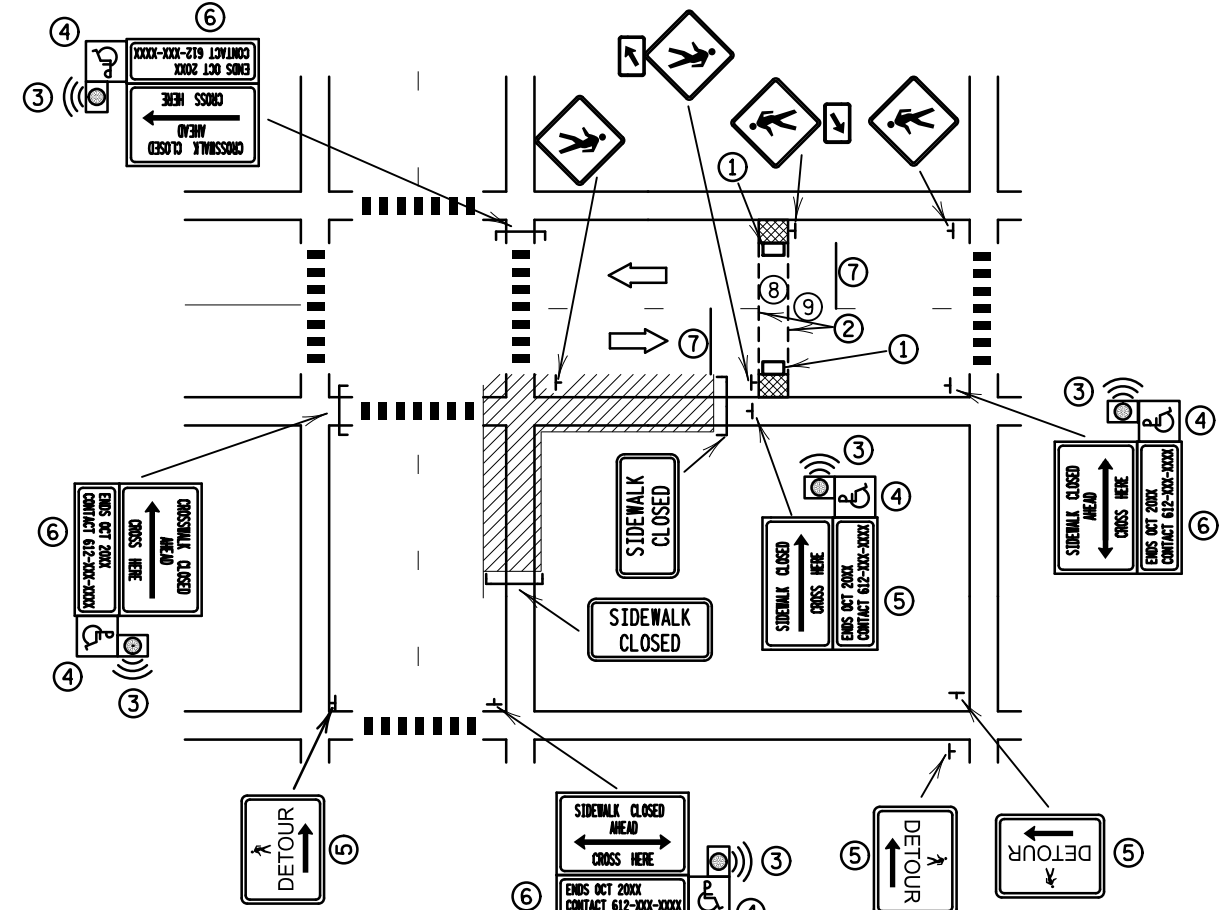
DATE: 27-MAR-2026 FILENAME: Projects\Minnesota\027938-000\05\_Discipline\Roadway\03\_Sheets\027938-000-155spr-800-det1-001TRAILHEAD



OTHER SIDE OF ROADWAY DETOUR FOR MID-BLOCK CLOSURE



ONE QUADRANT CLOSED



OTHER SIDE OF STREET DETOUR OR DETOUR WITH TRAILBLAZING SIGNS FOR CORNER SIDEWALK CLOSURE WITH OPTIONAL TEMPORARY CROSSWALK

**NOTES:**

WHEN CLOSING OR RELOCATING CROSSWALKS OR SIDEWALKS, PROVIDE DETECTABLE TEMPORARY FACILITIES AND INCLUDE ACCESSIBILITY FEATURES CONSISTENT WITH EXISTING PEDESTRIAN FACILITIES. THE MINIMUM TEMPORARY WALKWAY WIDTH SHOULD BE THE WIDTH OF THE EXISTING FACILITY. IF THE EXISTING FACILITY HAS A WIDTH GREATER THAN 60", THE WIDTH OF THE TEMPORARY FACILITY MAY BE 60". IF THE WIDTH OF THE DETOUR IS LESS THAN 60", A 60"-WIDE PASSING SPACE IS REQUIRED EVERY 200'.

TEMPORARY TRAFFIC CONTROL DEVICES FOR PEDESTRIANS ARE SHOWN. OTHER TRAILBLAZING SIGNS OR DEVICES MAY BE NEEDED FOR ADEQUATE ROUTING. STAGE WORK AS NECESSARY TO PROVIDE AN ALTERNATE PEDESTRIAN ROUTE (APR) AT ALL TIMES.

PROVIDE A SMOOTH, CONTINUOUS, HARD SURFACE THROUGH THE LENGTH OF THE APR. PROVIDE A FIRM, STABLE, FREE-DRAINING, NON-SLIP, TEMPORARY WALKWAY SURFACE REGARDLESS OF WEATHER CONDITIONS. SUPPORT THE TEMPORARY WALKWAY SURFACE WITH A SOLID BASE TO COVER SHORT SEGMENTS OF ROUGH, SOFT, OR UNEVEN GROUND. THE TEMPORARY WALKWAY SURFACE WILL ALLOW NORMAL USAGE OF WHEELCHAIRS, WALKERS, STROLLERS, AND OTHER MOBILITY DEVICES. CONCRETE, BITUMINOUS, STEEL, RUBBER, WOOD (3/4" OR THICKER), AND PLASTIC ARE ACCEPTABLE SURFACE MATERIALS FOR THE TEMPORARY WALKWAY SURFACE. GRAVEL, MILLINGS, OR OTHER UNEVEN SURFACES ARE NOT ACCEPTABLE SURFACE MATERIALS. IF NEEDED, PROVIDE SOIL STABILIZATION TO PREVENT EROSION AROUND TEMPORARY SURFACES.

COVER OR DEACTIVATE ANY PEDESTRIAN TRAFFIC SIGNALS CONTROLLING CLOSED CROSSWALKS.

APR SHOULD BE KEPT FREE OF TRASH, SEDIMENT, AND DEBRIS.

POST-MOUNTED SIGNS ADJACENT TO SIDEWALKS SHALL HAVE 7' MINIMUM CLEARANCE FROM THE BOTTOM OF THE LOWEST SIGN TO THE SIDEWALK SURFACE. SHARED-USE PATHS SHALL HAVE 8' MINIMUM CLEARANCE FROM THE BOTTOM OF THE LOWEST SIGN TO THE SHARED-USE PATH SURFACE.

ANY PORTABLE SIGN OR BARRICADE PLACED OR STORED IN A PEDESTRIAN WALKWAY THAT COULD BE A HAZARD TO A VISUALLY-IMPAIRED PEDESTRIAN SHALL HAVE A DETECTABLE EDGE TO GUIDE THE PEDESTRIAN AROUND THE HAZARD. FOR ADDITIONAL GUIDANCE SEE THE "TEMPORARY PEDESTRIAN ACCESS ROUTE (TPAR) DEVICES" STANDARD PLAN, "DETECTABLE EDGE FOR SIGN ON PORTABLE STAND" DETAIL.

MINIMIZE DISRUPTION TO PEDESTRIANS TO THE MAXIMUM EXTENT FEASIBLE BY PROVIDING AN APR IN THE FOLLOWING ORDER OF PREFERENCE:

1. PROVIDE THE APR ON THE SAME SIDE OF THE ROADWAY AS THE DISRUPTED ROUTE UTILIZING BYPASSES.
2. WHERE IT IS NOT FEASIBLE TO PROVIDE A SAME-SIDE APR, PROVIDE AN APR DETOUR ON THE OTHER SIDE OF THE ROADWAY.
3. WHERE IT IS NOT FEASIBLE TO PROVIDE AN APR ON EITHER SIDE OF THE ROADWAY, PROVIDE AN APR DETOUR WITH TRAILBLAZING SIGNS.

- ① TEMPORARY CURB RAMP WITH DETECTABLE WARNINGS.
- ② TEMPORARY PAVEMENT MARKINGS FOR CROSSWALKS MAY USE CROSSWALK BLOCKS, TWO TRANSVERSE LINES OR TWO STRIPS OF 18" PREFORMED MARKING MATERIAL TO FORM 36" WIDE CROSSWALK BLOCKS.
- ③ PROVIDE AN APPROVED AUDIBLE MESSAGE DEVICE OR TACTILE MESSAGE FOR PEDESTRIANS WITH VISUAL DISABILITIES.

- ④ FOR FULLY ACCESSIBLE WALKWAYS THROUGH WORKZONES, CONSIDER DISPLAYING THE INTERNATIONAL SYMBOL OF ACCESSIBILITY.
- ⑤ USE PEDESTRIAN DETOUR TRAILBLAZING SIGNS IF THE PEDESTRIAN DETOUR IS NOT LOCATED ACROSS THE ROADWAY FROM THE SIDEWALK CLOSURE.
- ⑥ TYPICAL SIGN MESSAGE FOR AN ALTERNATE PEDESTRIAN ROUTE SHOULD INCLUDE INFORMATION SUCH AS THE DURATION OF THE WALKWAY RESTRICTIONS (BEGINNING AND/OR END DATES) AND A PROJECT CONTACT NUMBER FOR 24/7 QUESTIONS OR REPORTING HAZARDS. TYPICAL INFORMATION INCLUDED IN AN AUDIBLE MESSAGE CAN BE FOUND IN "TPAR - AUDIBLE MESSAGE CONTENT GUIDELINES" AVAILABLE ON THE MNDOT TRAFFIC ENGINEERING WEBSITE ON THE PEDESTRIAN ACCOMMODATIONS THROUGH WORK ZONES WEB PAGE. ADDITIONALLY, A SUMMARY OF THE MESSAGE CONTENT GUIDELINES CAN BE FOUND WITHIN THE PEDESTRIAN ACCOMMODATIONS THROUGH WORK ZONES DESIGN GUIDANCE DOCUMENT.
- ⑦ LOCATE STOP BAR 20' TO 50' BEFORE THE CROSSWALK. RESTRICT PARKING BETWEEN THE STOP BAR AND THE CROSSWALK. ON TWO-WAY ROADWAYS, RESTRICT PARKING BOTH BEFORE AND AFTER THE CROSSWALK FOR BOTH DIRECTIONS.
- ⑧ CONSIDER LIGHTING AT MID-BLOCK CROSSINGS IN ORDER TO ILLUMINATE PEDESTRIANS, IF NOT ALREADY LIT.
- ⑨ CONSIDER THE ADDITION OF R1-6a SIGNS AS MOTORISTS ARE NOT EXPECTING MID-BLOCK CROSSING.

**LEGEND**

- SIGN
- ▨ WORK AREA
- > DIRECTION OF TRAFFIC
- ⊞ AUDIBLE MESSAGE DEVICE (AMD)
- ▩ TEMPORARY CURB RAMP WITH DETECTABLE EDGES
- ▩ SIDEWALK BARRICADE



R1-6a

LEAD EXPERT OFFICE: BRIAN SORENSON, STATE TRAFFIC ENGINEER, OFFICE OF TRAFFIC ENGINEERING

ALTERNATE PEDESTRIAN ROUTE (APR) LAYOUTS

APPROVED: 03-18-2021  
REVISED:

THOMAS STYRBICKI  
STATE DESIGN ENGINEER

STANDARD PLAN  
5-297.811

2 OF 2

DRAWN BY: JMP  
DESIGNED BY: TDO  
CHECKED BY: TDO

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

SIGNATURE: Taylor D Olson  
PRINTED NAME: TAYLOR OLSON, PE  
DATE: 3/27/2026 LIC. NO.: 57274



DAKOTA COUNTY PARKS AND CITY OF LAKEVILLE  
LAKE MARION GREENWAY PROJECT  
CITY OF LAKEVILLE, MINNESOTA

STANDARD PLANS

Sheet No. 33 of 74 Sheets

**NOTES;**

TPAR SHOULD BE KEPT FREE OF TRASH, SEDIMENT, AND DEBRIS.

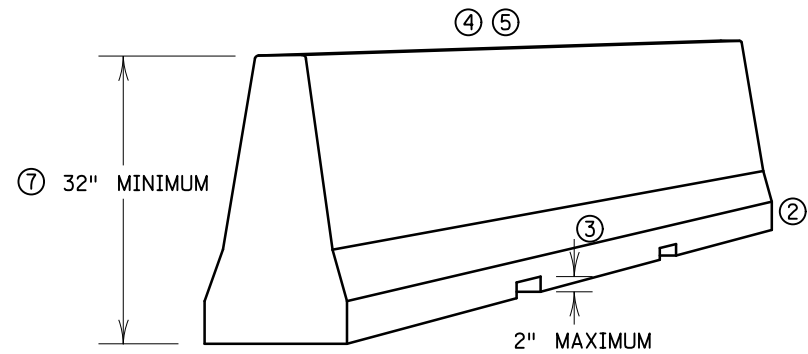
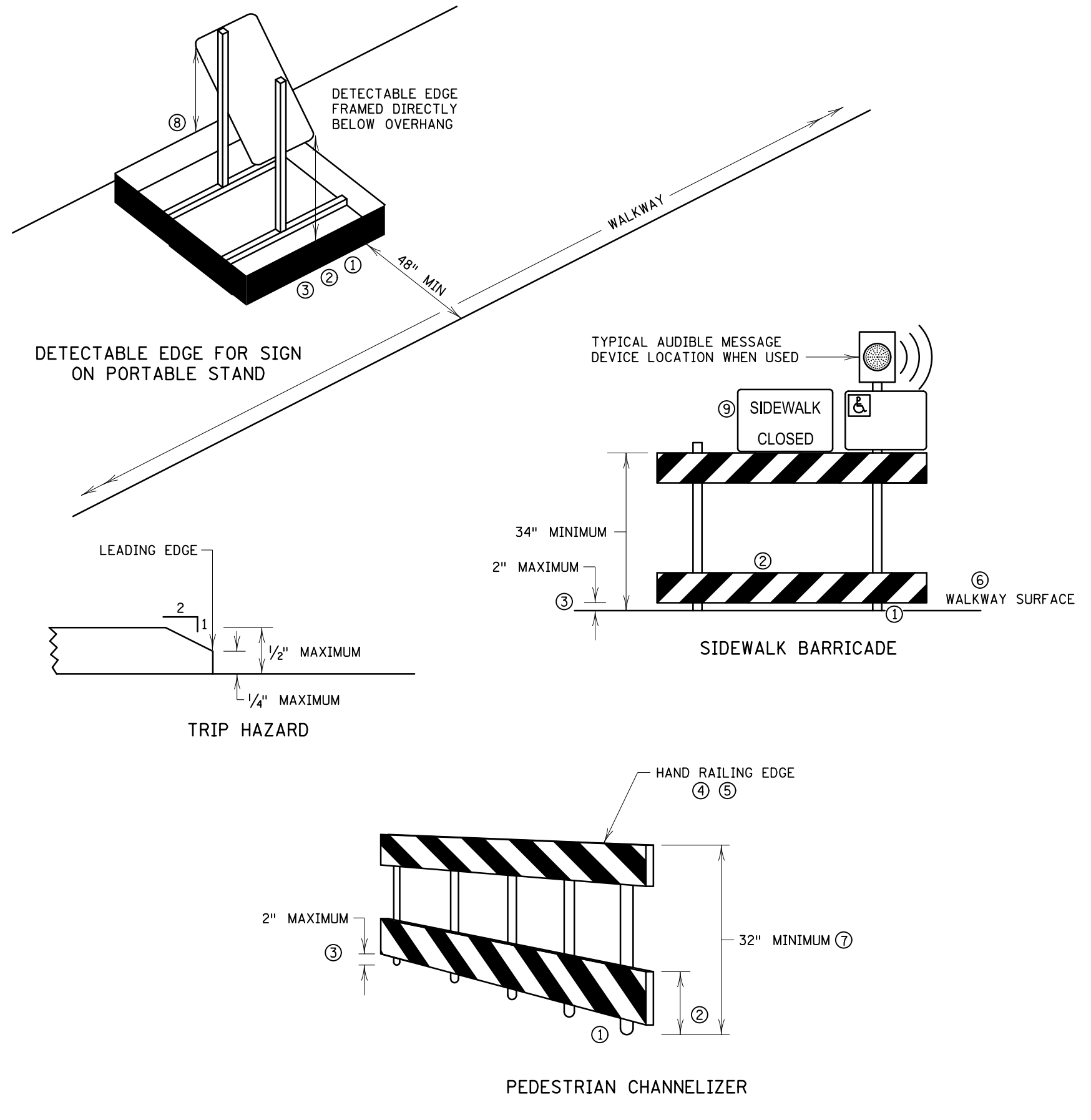
RAILINGS OR OTHER OBJECTS MAY PROTRUDE A MAXIMUM OF 4" INTO THE WALKWAY CLEAR SPACE WHEN LOCATED A MINIMUM OF 27" ABOVE THE WALKWAY SURFACE.

USE CRASHWORTHY TEMPORARY BARRIERS WHEN USED AS A PEDESTRIAN CHANNELIZERS.

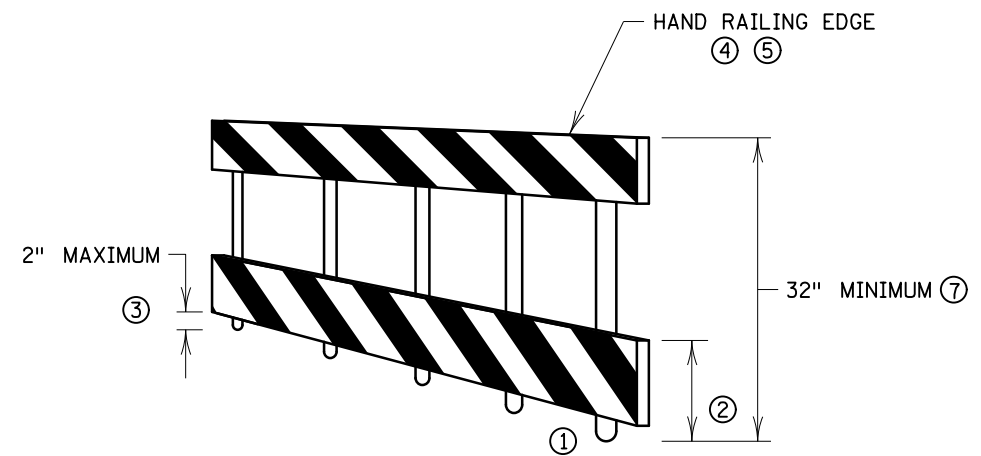
PLACE SIDEWALK BARRICADES ACROSS THE ENTIRE WIDTH OF THE WALKWAYSURFACE, WHEN USED.

USE INTERLOCKING DEVICES TO CHANNELIZE PEDESTRIAN FLOW TO PREVENT GAPS THAT COULD ALLOW PEDESTRIANS TO STRAY FROM THE CHANNELIZED PATH.

- ① PROVIDE DETECTABLE EDGE TO ANY TRIPPING HAZARD IN THE WALKWAY. LOCATE BALLAST BEHIND THE DETECTABLE EDGE OR INTEGRAL TO THE DEVICE. ANY SUPPORT ON THE FRONT OF THE DEVICE SHOULD NOT EXTEND INTO THE 48" MINIMUM WALKWAY CLEAR SPACE. ANY SUPPORT THAT EXTENDS INTO THE WALKWAY SHALL NOT EXCEED 1/2" HEIGHT ABOVE THE WALKWAY SURFACE; IF GREATER THAN 1/4", BEVEL AS SHOWN IN THE TRIP HAZARD DETAIL.
- ② PROVIDE CONTINUOUS DETECTABLE EDGES EXTENDING AT LEAST 6" ABOVE THE WALKWAY SURFACE. MARK DETECTABLE EDGES WITH A COLOR THAT CONTRASTS WITH THE WALKWAY SURFACE. PLACE THE DETECTABLE EDGE AROUND ANY PORTABLE SIGN STAND IN THE WALKWAY AREA WHERE THE SIGN POSES A HAZARD TO A VISUALLY-IMPAIRED PEDESTRIAN.
- ③ DEVICES AND DETECTABLE EDGES SHALL NOT BLOCK WATER DRAINAGE FROM THE WALKWAY. A GAP HEIGHT OR OPENING FROM THE WALKWAY SURFACE UP TO A MAXIMUM OF 2" IS ALLOWED FOR DRAINAGE PURPOSES.
- ④ USE HAND AND GUIDE RAILS WHEN REQUIRED. INSTALL TOP RAIL OR TOP SURFACE IN A VERTICAL PLANE PERPENDICULAR TO THE WALKWAY, ABOVE THE DETECTABLE EDGE. PROVIDE CONTINUOUS RAIL AT A HEIGHT OF 34" TO 38" ABOVE THE WALKWAY SURFACE. USE RAIL SUPPORTS THAT MINIMIZE CONTACT WITH PEDESTRIAN'S HANDS AND FINGERS. SEE "PUBLIC RIGHTS OF WAY ACCESSIBILITY GUIDELINES (PROWAG) 2005" FOR ADDITIONAL GUIDANCE ON USE OF HAND AND GUIDE RAILS.
- ⑤ USE DEVICES FREE OF SHARP OR ROUGH EDGES, AND USE ROUNDED FASTENERS (BOLTS) TO PREVENT HARM TO A PEDESTRIAN'S HANDS, ARMS, AND CLOTHING.
- ⑥ REGARDLESS OF WEATHER CONDITIONS PROVIDE FIRM, STABLE, FREE-DRAINING, AND NON-SLIP TEMPORARY WALKWAY SURFACES. TEMPORARY WALKWAY SURFACES SHALL ALLOW NORMAL USAGE OF WHEELCHAIRS, WALKERS, STROLLERS, OR OTHER MOBILITY DEVICES. CONCRETE, BITUMINOUS, STEEL, RUBBER, WOOD (3/4" OR THICKER), AND PLASTIC ARE ACCEPTABLE SURFACE MATERIALS FOR A TEMPORARY WALKWAY SURFACE. GRAVEL, MILLINGS, AND OTHER UNEVEN SURFACES ARE NOT ACCEPTABLE SURFACE MATERIALS.
- ⑦ PROVIDE 32" HIGH OR GREATER LONGITUDINAL CHANNELIZING DEVICES FOR PEDESTRIANS.
- ⑧ AN EDGE OF THE FRAMING MAY BE REMOVED IF IT IS NOT NEEDED FOR PEDESTRIAN GUIDANCE. STABILITY OF THE DETECTABLE EDGE SHOULD BE MAINTAINED.
- ⑨ TYPICAL. SEE SIGNING PLAN FOR DETAILS.



PEDESTRIAN CHANNELIZER DEVICE USING A PORTABLE CONCRETE BARRIER



PEDESTRIAN CHANNELIZER

DATE: 27-MAR-2026 FILENAME: Projects\Minnesota\027938-000\05\_Discipline\Roadway\03\_Sheets\027938-000-155spr-800-def-001TRAILHEAD

LEAD EXPERT OFFICE	BRIAN SORENSON STATE TRAFFIC ENGINEER OFFICE OF TRAFFIC ENGINEERING	TEMPORARY PEDESTRIAN ACCESS ROUTE (TPAR) DEVICES CHANNELIZERS, SIDEWALK BARRICADES, AND PORTABLE STANDS	APPROVED: 03-18-2021	 THOMAS STYRBICKI STATE DESIGN ENGINEER	STANDARD PLAN 5-297.813	1 OF 2
	DESIGNED BY: TDO		REVISD:			
DRAWN BY: JMP	I HEREBY CERTIFY THAT THIS SHEET WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.	SIGNATURE: PRINTED NAME: TAYLOR OLSON, PE DATE: 3/27/2026 LIC. NO. 57274	STANDARD PLANS		Sheet No. 34 of 74 Sheets	
CHECKED BY: TDO			DAKOTA COUNTY PARKS AND CITY OF LAKEVILLE LAKE MARION GREENWAY PROJECT CITY OF LAKEVILLE, MINNESOTA			

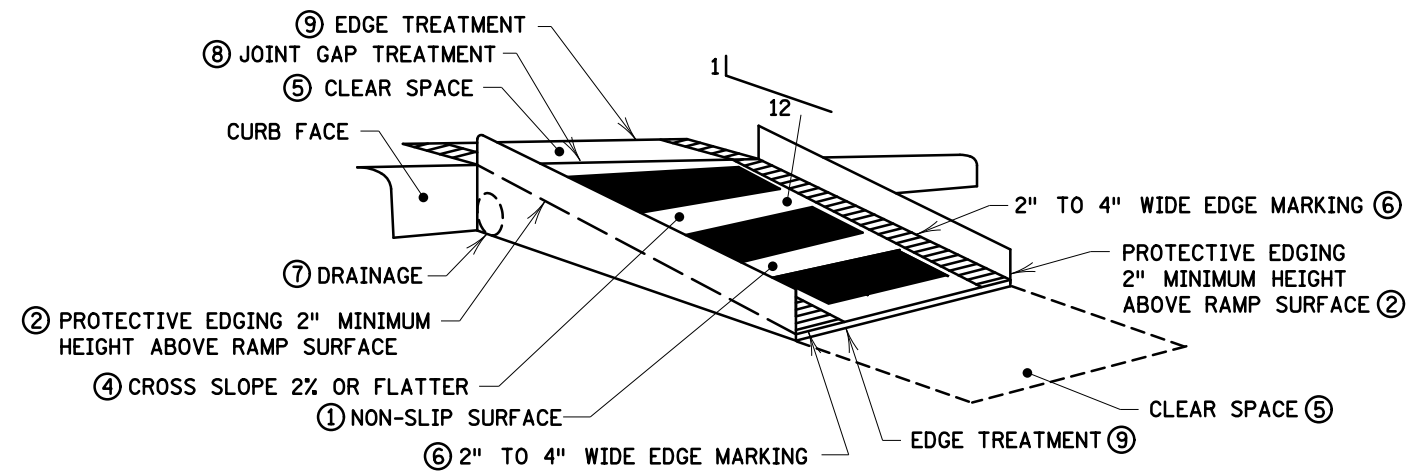
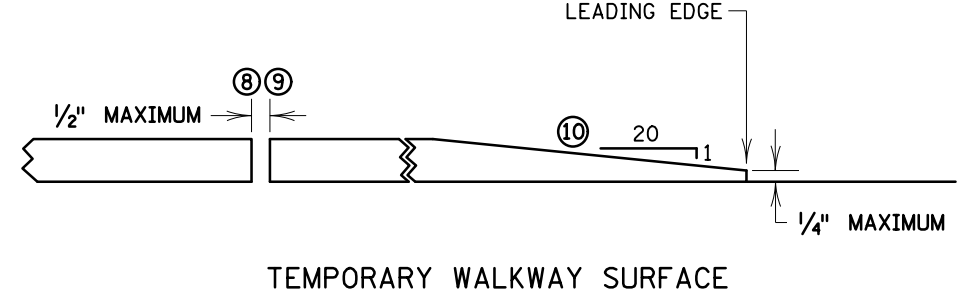
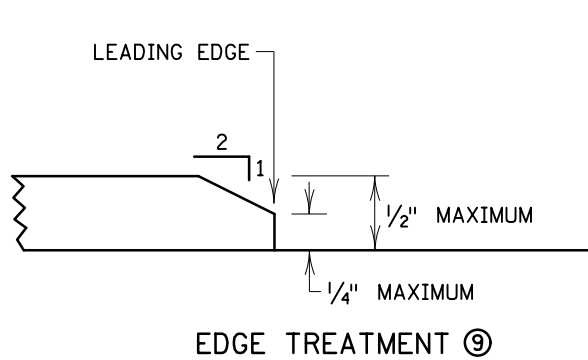
DATE: 27-MAR-2026 FILENAME: Projects\Minnesota\027938-000\05\_Discipline\Roadway\03\_Sheets\027938-000-155spr-800-det-001TRAILHEAD

**NOTES:**

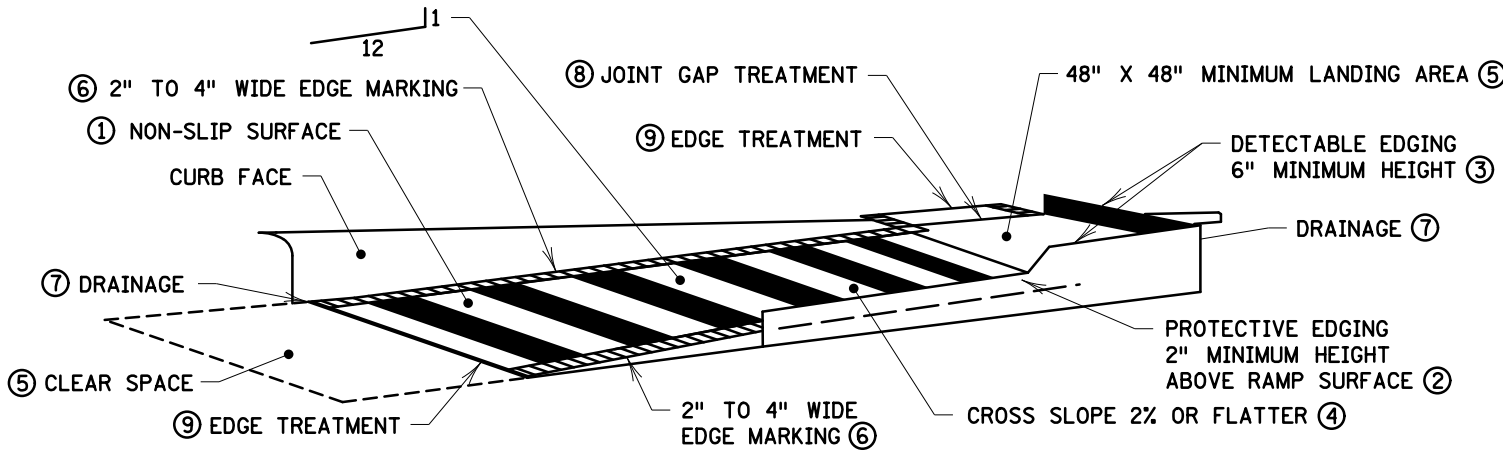
CONSTRUCT SLOPES AS INDICATED OR FLATTER, BUT NOT STEEPER.

TPAR SHOULD BE KEPT FREE OF TRASH, SEDIMENT, AND DEBRIS.

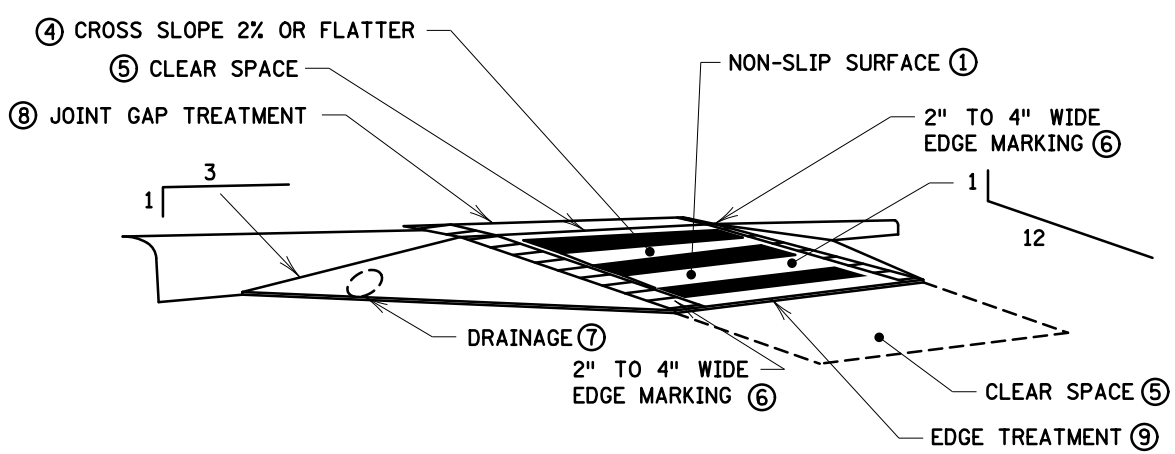
- ① CONSTRUCT CURB RAMPS AT LEAST 48" WIDE WITH A FIRM, STABLE, AND SLIP-RESISTANT SURFACE.
- ② PLACE PROTECTIVE EDGING WITH A 2" MINIMUM HEIGHT WHEN A CURB RAMP OR LANDING PLATFORM HAS A VERTICAL DROP OF 6" OR GREATER OR HAS A SIDE APRON SLOPE STEEPER THAN 1V:3H. CONSIDER PROTECTIVE EDGING WHEN CURB RAMPS OR LANDING PLATFORMS HAVE A VERTICAL DROP OF 3" OR MORE.
- ③ PLACE DETECTABLE EDGING WITH 6" MINIMUM HEIGHT AND CONTRASTING COLOR ON ALL CURB RAMP LANDINGS WHERE THE WALKWAY CHANGES DIRECTION.
- ④ CONSTRUCT CURB RAMPS AND LANDINGS WITH A 2% OR FLATTER CROSS SLOPE.
- ⑤ PROVIDE A CLEAR SPACE OF AT LEAST 48" X 48" ABOVE AND BELOW THE CURB RAMP.
- ⑥ MARK THE CURB RAMP WALKWAY EDGE WITH A 2" TO 4" WIDE MARKING OF CONTRASTING COLOR. THE MARKING IS OPTIONAL WHERE COLOR-CONTRASTING EDGING IS USED.
- ⑦ DO NOT IMPEDE WATER FLOW IN THE GUTTER SYSTEM.
- ⑧ NO LATERAL JOINTS OR GAPS BETWEEN SURFACES SHALL EXCEED 1/2" WIDTH.
- ⑨ CHANGES BETWEEN SURFACE HEIGHTS SHALL NOT EXCEED 1/2". USE VERTICAL LATERAL EDGES UP TO 1/4" HIGH, AND BEVELED AT 1V:2H FOR LATERAL EDGES BETWEEN 1/4" AND 1/2" HEIGHT.
- ⑩ BEVEL THE EDGE OF TEMPORARY WALKWAY SURFACES 1/2" OR THINNER AT 1V:2H. FOR THICKER WALKWAY SURFACE BEVEL EDGE 1V:20H OR FLATTER.



TEMPORARY CURB RAMP PERPENDICULAR TO CURB SHOWN WITH PROTECTIVE EDGE



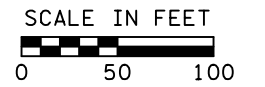
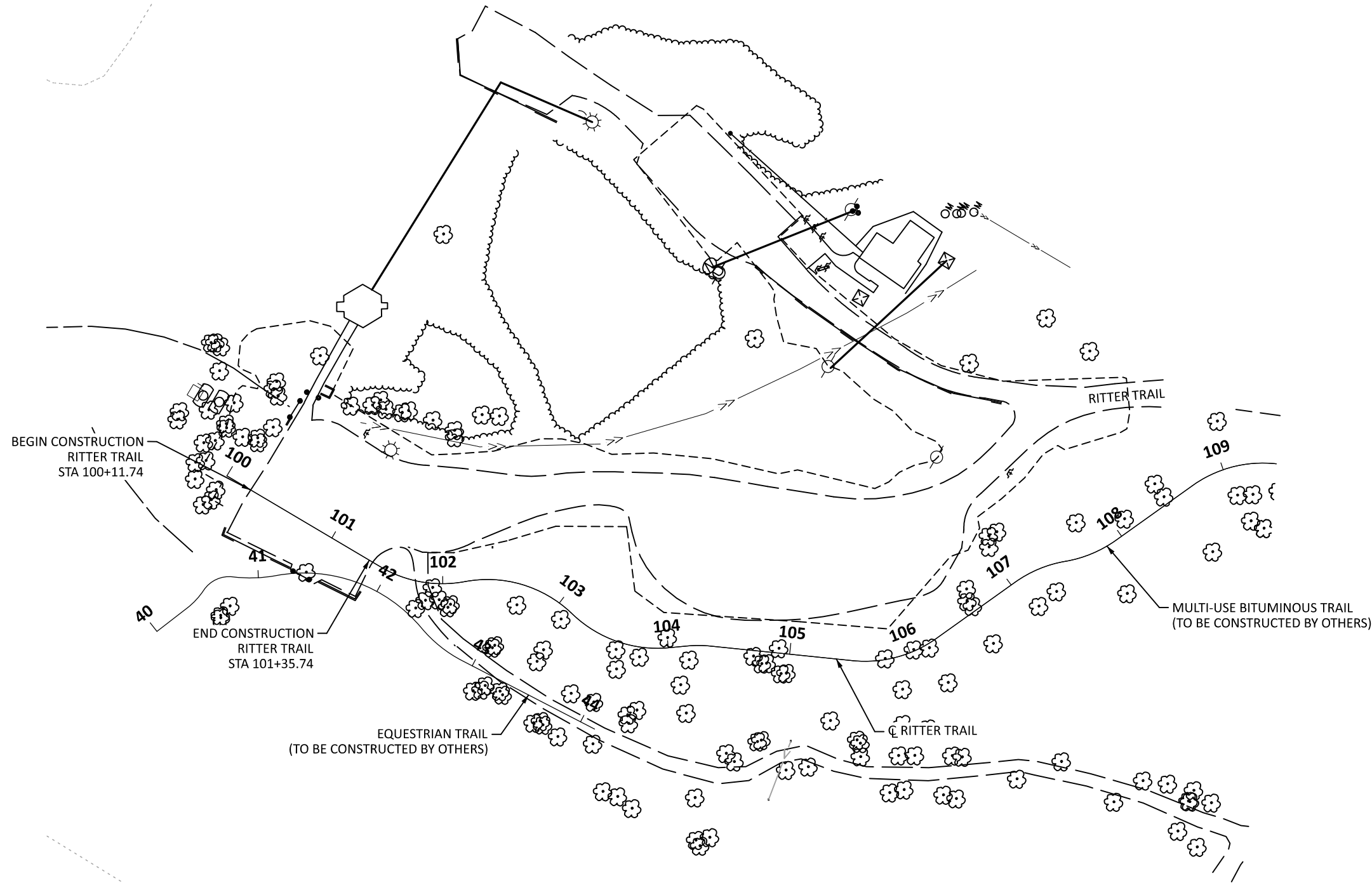
TEMPORARY CURB RAMP PARALLEL TO CURB



TEMPORARY CURB RAMP PERPENDICULAR TO CURB SHOWN WITH SIDE APRON

LEAD EXPERT OFFICE	BRIAN SORENSON STATE TRAFFIC ENGINEER OFFICE OF TRAFFIC ENGINEERING	SIGNATURE: <i>Taylor D. Olson</i> PRINTED NAME: TAYLOR OLSON, PE DATE: 3/27/2026 LIC. NO. 57274	DAKOTA COUNTY PARKS AND CITY OF LAKEVILLE LAKE MARION GREENWAY PROJECT CITY OF LAKEVILLE, MINNESOTA	TEMPORARY PEDESTRIAN ACCESS ROUTE (TPAR) DEVICES TEMPORARY CURB RAMPS AND WALKWAY SURFACES	APPROVED: 03-18-2021 REVISED:	THOMAS STYRBICKI STATE DESIGN ENGINEER	STANDARD PLAN 5-297.813	2 OF 2
	DRAWN BY: JMP DESIGNED BY: TDO CHECKED BY: TDO			1 I HEREBY CERTIFY THAT THIS SHEET WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.	STANDARD PLANS	Sheet No. 35 of 74 Sheets		

DATE: 27-MAR-2026  
 FILENAME: Projects\Minnesota\027938-000\05\_Discipline\Roadway\03\_Sheets\027938-000-135ute-plan-001



**LEGEND**

	BURIED COMMUNICATION
	BURIED FIBER OPTIC
	OVERHEAD FIBER OPTIC
	BURIED GAS LINE
	BURIED POWER LINE
	OVERHEAD POWER LINE
	STORM SEWER
	SANITARY LINE
	WATER LINE
	EXISTING RIGHT OF WAY
	PARCEL BOUNDARY
	CONSTRUCTION LIMITS
	UTILITY PEDESTAL
	MANHOLE
	POWER/UTILITY POLE
	LIGHT POLE
	UTILITY POLE ANCHOR
	VEGETATION
	HYDRANT
	CATCH BASIN
	STORM/WATERMAIN STRUCTURE
	FENCE

**UTILITY NOTES**

	UTILITY CONFLICT AREA (OWNER - IMPACT)
--	--

OWNERSHIP:  
 (1) CHARTER/SPECTRUM, (2) METRO FIBERNET,  
 (3) MCI, (4) FRONTIER, (5) AT&T, (6) LUMEN/CENTURY LINK,  
 (7) XCEL ENERGY, (8) DAKOTA ELECTRIC,  
 (9) MINNESOTA ENERGY RESOURCES, (10) CENTER POINT  
 (11) ARVIG, (12) CITY OF LAKEVILLE

IMPACT NOTES ON PLAN SHEETS  
 (A) LEAVE AS IS, (B) ADJUST, (C) RELOCATE,  
 (D) REMOVE

**GENERAL NOTES**

- UTILITIES ARE SHOWN AT APPROXIMATE LOCATIONS. THE CONTRACTOR SHALL DETERMINE THE ACTUAL LOCATION OF ALL BURIED UTILITIES IN THE FIELD.
- ALL UTILITY WORK SHOWN SHALL BE DONE BY OTHERS UNLESS SHOWN IN THE PLAN AS WORK TO BE PERFORMED BY CONTRACTOR.

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 38-22,  
 ENTITLED "STANDARD GUIDELINES FOR INVESTIGATING AND DOCUMENTING EXISTING UTILITIES."

DRAWN BY: JMP  
 DESIGNED BY: TDO  
 CHECKED BY: TDO

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

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 PRINTED NAME: TAYLOR OLSON, PE  
 DATE: 3/27/2026 LIC. NO. 57274

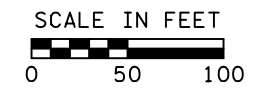
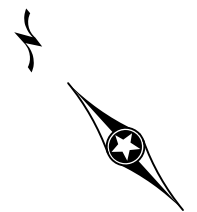
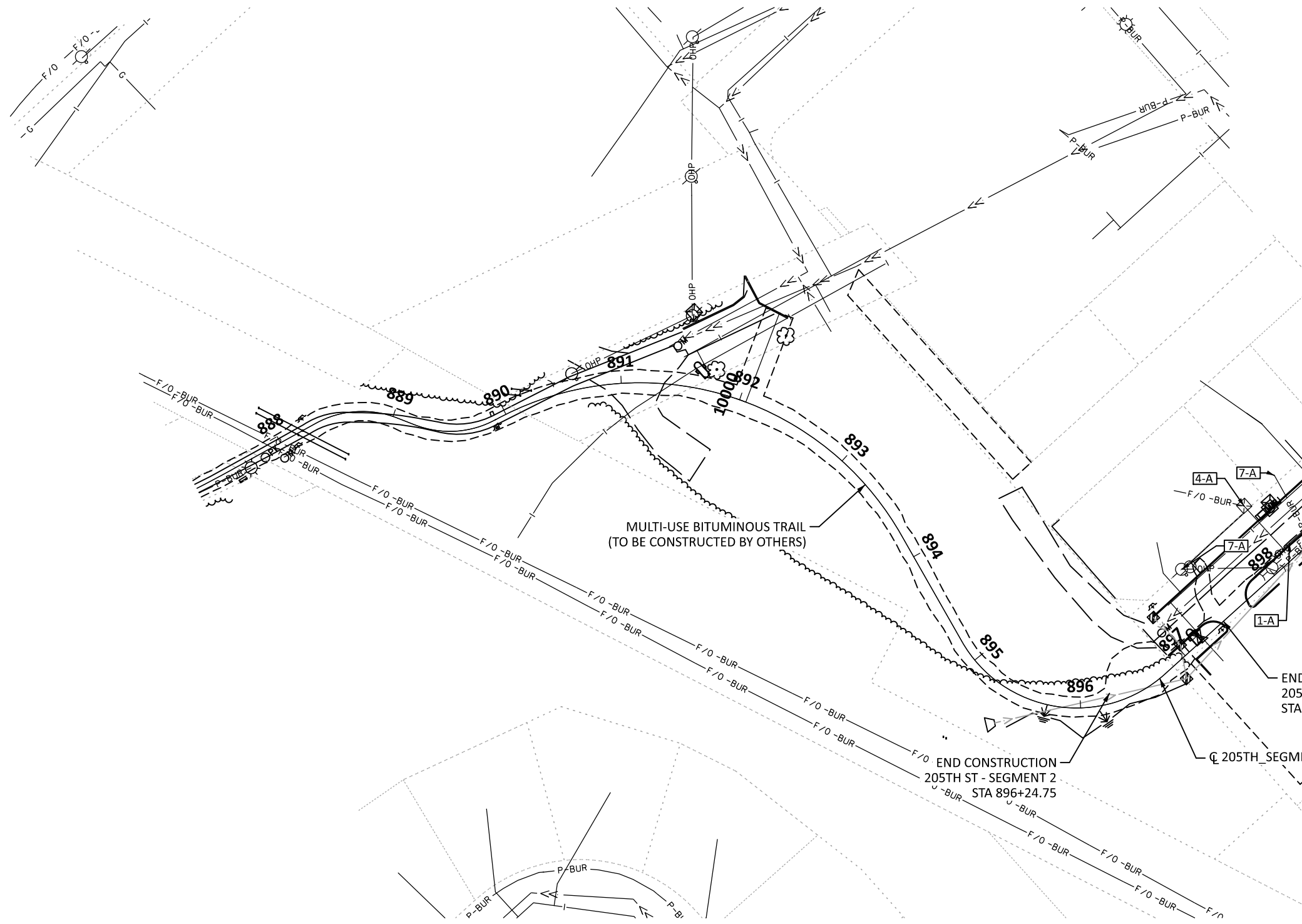


DAKOTA COUNTY PARKS AND CITY OF LAKEVILLE  
 LAKE MARION GREENWAY PROJECT  
 CITY OF LAKEVILLE, MINNESOTA

INPLACE TOPOGRAPHY & UTILITIES PLAN  
 RITTER FARM TRAILHEAD

Sheet No. 36 of 74 Sheets

DATE: 27-MAR-2026  
 FILENAME: Projects\Minnesota\027938-000\05\_Discipline\Roadway\03\_Sheets\027938-000-135ute-plan-001



**LEGEND**

	BURIED COMMUNICATION
	BURIED FIBER OPTIC
	OVERHEAD FIBER OPTIC
	BURIED GAS LINE
	BURIED POWER LINE
	OVERHEAD POWER LINE
	STORM SEWER
	SANITARY LINE
	WATER LINE
	EXISTING RIGHT OF WAY
	PARCEL BOUNDARY
	CONSTRUCTION LIMITS
	UTILITY PEDESTAL
	MANHOLE
	POWER/UTILITY POLE
	LIGHT POLE
	UTILITY POLE ANCHOR
	VEGETATION
	HYDRANT
	CATCH BASIN
	STORM/WATERMAIN STRUCTURE
	FENCE

**UTILITY NOTES**

1-A UTILITY CONFLICT AREA (OWNER - IMPACT)

OWNERSHIP:  
 (1) CHARTER/SPECTRUM, (2) METRO FIBERNET,  
 (3) MCI, (4) FRONTIER, (5) AT&T, (6) LUMEN/CENTURY LINK,  
 (7) XCEL ENERGY, (8) DAKOTA ELECTRIC,  
 (9) MINNESOTA ENERGY RESOURCES, (10) CENTER POINT  
 (11) ARVIG, (12) CITY OF LAKEVILLE

IMPACT NOTES ON PLAN SHEETS  
 (A) LEAVE AS IS, (B) ADJUST, (C) RELOCATE,  
 (D) REMOVE

**GENERAL NOTES**

1. UTILITIES ARE SHOWN AT APPROXIMATE LOCATIONS. THE CONTRACTOR SHALL DETERMINE THE ACTUAL LOCATION OF ALL BURIED UTILITIES IN THE FIELD.
2. ALL UTILITY WORK SHOWN SHALL BE DONE BY OTHERS UNLESS SHOWN IN THE PLAN AS WORK TO BE PERFORMED BY CONTRACTOR.

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 38-22,  
 ENTITLED "STANDARD GUIDELINES FOR INVESTIGATING AND DOCUMENTING EXISTING UTILITIES."

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 DESIGNED BY: TDO  
 CHECKED BY: TDO

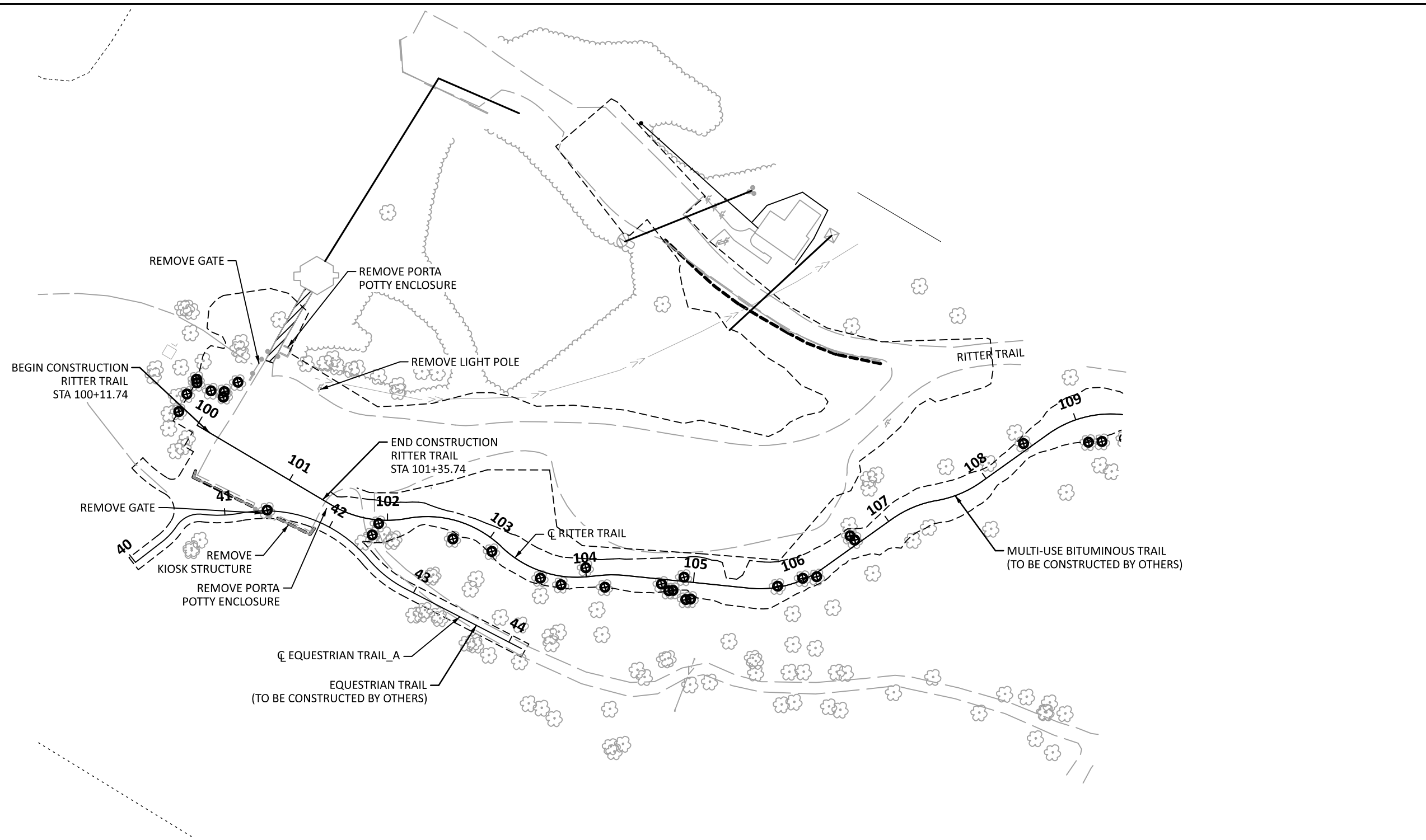
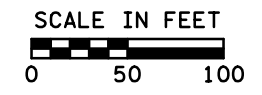
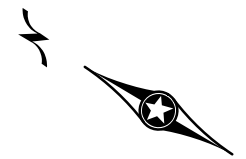
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SIGNATURE: *Taylor D Olson*  
 PRINTED NAME: TAYLOR OLSON, PE  
 DATE: 3/27/2026 LIC. NO. 57274



DAKOTA COUNTY PARKS AND CITY OF LAKEVILLE  
 LAKE MARION GREENWAY PROJECT  
 CITY OF LAKEVILLE, MINNESOTA

**INPLACE TOPOGRAPHY & UTILITIES PLAN**  
 DOWNTOWN LAKEVILLE GATEWAY



**LEGEND**

- ① SAWING BITUMINOUS PAVEMENT (FULL DEPTH)
- INPLACE PAVEMENT
- - - CONSTRUCTION LIMITS
- - - EXISTING ROW
- ==== REMOVE CURB AND GUTTER
- - - REMOVE POST AND RAIL FENCING
- ==== REMOVE INPLACE PIPE
- - - SAWCUT
- > INPLACE PIPE
- 6xxx EXISTING DRN STRUCTURE ID
- ☑ REMOVE DRAINAGE STRUCTURE
- ☼ TREE TO REMAIN
- ☼ CLEARING AND GRUBBING (TO BE COMPLETED BY OTHERS)
- ▨ CLEARING AND GRUBBING (ACRE)
- ▧ REMOVE BITUMINOUS PAVEMENT
- ▩ REMOVE CONCRETE WALK
- REMOVE BITUMINOUS WALK
- MILL AND OVERLAY

**GENERAL NOTES**

1. EXACT LIMITS OF CLEARING AND GRUBBING WILL BE ESTABLISHED IN THE FIELD. NO CLEARING OR GRUBBING SHALL OCCUR WITHOUT THE ENGINEER'S APPROVAL.
2. SAWCUTTING FOR CONCRETE CURB AND GUTTER, CONCRETE WALK, AND BITUMINOUS WALK SHALL BE INCIDENTAL.
3. CONTRACTOR TO REMOVE EXISTING AGGREGATE SURFACING IN ALL AREAS NOT INDICATED FOR NOW PAVEMENT OR AGGREGATE SURFACING.

DATE: 27-MAR-2026  
FILENAME: Projects\Minnesota\027938-000\05\_Discipline\Roadway\03\_Sheets\027938-000-180rem-plan-001

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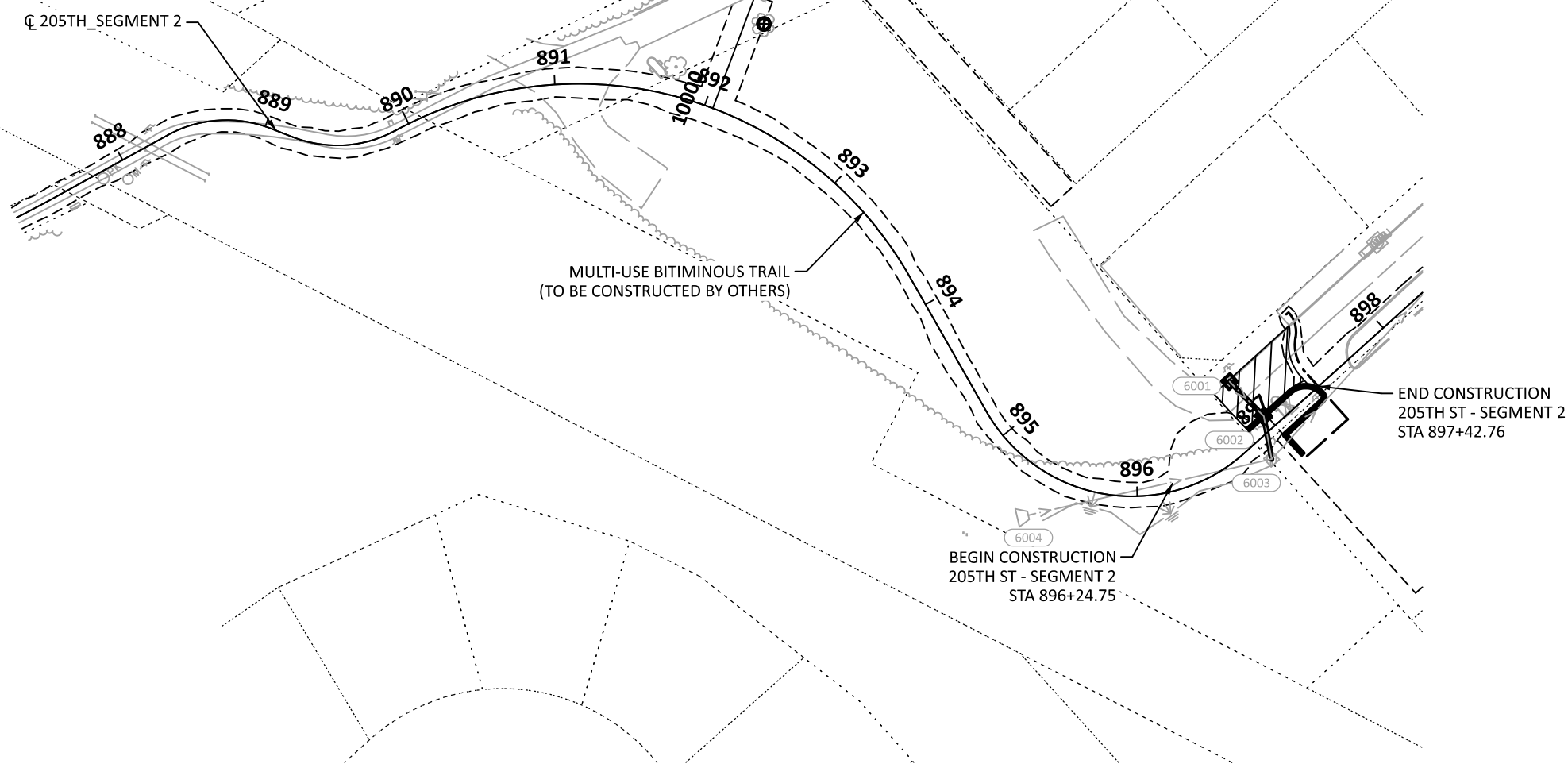
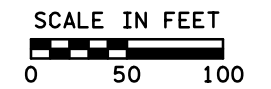


DAKOTA COUNTY PARKS AND CITY OF LAKEVILLE  
LAKE MARION GREENWAY PROJECT  
CITY OF LAKEVILLE, MINNESOTA

**REMOVAL PLAN**  
RITTER FARM TRAILHEAD

Sheet No. 38 of 74 Sheets

DATE: 27-MAR-2026  
 FILENAME: Projects\Minnesota\027938-000\05\_Discipline\Roadway\03\_Sheets\027938-000-180rem-plan-001



**LEGEND**

- ① SAWING BITUMINOUS PAVEMENT (FULL DEPTH)
- INPLACE PAVEMENT
- - - CONSTRUCTION LIMITS
- EXISTING ROW
- ==== REMOVE CURB AND GUTTER
- - - - REMOVE POST AND RAIL FENCING
- ==== REMOVE INPLACE PIPE
- SAWCUT
- > INPLACE PIPE
- 6xxx EXISTING DRN STRUCTURE ID
- ☑ REMOVE DRAINAGE STRUCTURE
- ☼ TREE TO REMAIN
- ☼ CLEARING AND GRUBBING (TO BE COMPLETED BY OTHERS)
- ▨ CLEARING AND GRUBBING (ACRE)
- ▨ REMOVE BITUMINOUS PAVEMENT
- ▨ REMOVE CONCRETE WALK
- ▨ REMOVE BITUMINOUS WALK
- ▨ MILL AND OVERLAY

**GENERAL NOTES**

1. EXACT LIMITS OF CLEARING AND GRUBBING WILL BE ESTABLISHED IN THE FIELD. NO CLEARING OR GRUBBING SHALL OCCUR WITHOUT THE ENGINEER'S APPROVAL.
2. SAWCUTTING FOR CONCRETE CURB AND GUTTER, CONCRETE WALK, AND BITUMINOUS WALK SHALL BE INCIDENTAL.
3. CONTRACTOR TO REMOVE EXISTING AGGREGATE SURFACING IN ALL AREAS NOT INDICATED FOR NOW PAVEMENT OR AGGREGATE SURFACING.

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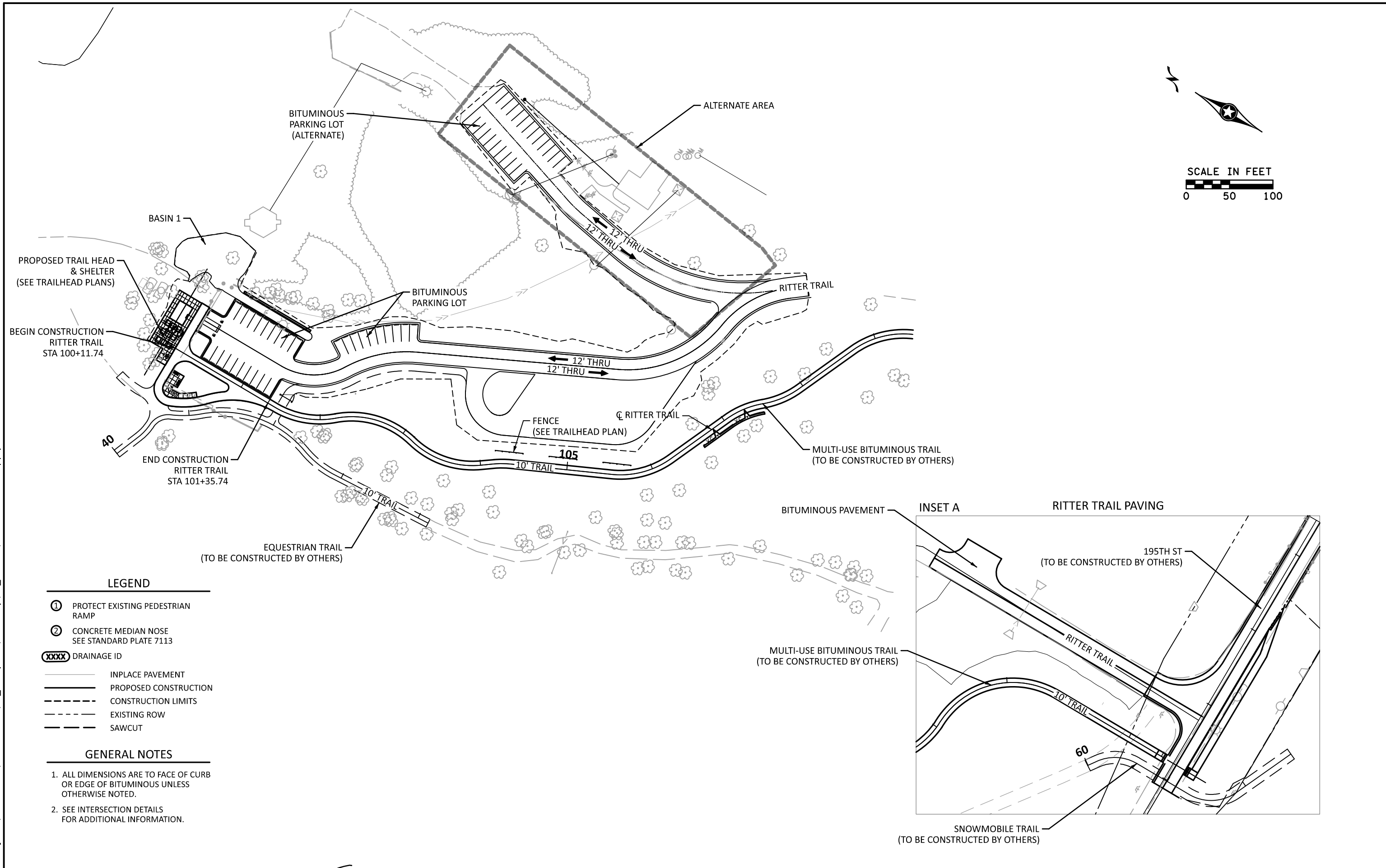
SIGNATURE: *Taylor D. Olson*  
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 DATE: 3/27/2026 LIC. NO. 57274



DAKOTA COUNTY PARKS AND CITY OF LAKEVILLE  
 LAKE MARION GREENWAY PROJECT  
 CITY OF LAKEVILLE, MINNESOTA

**REMOVAL PLAN**  
 DOWNTOWN LAKEVILLE GATEWAY

DATE: 27-MAR-2026  
 FILENAME: Projects\Minnesota\027938-000\05\_Discipline\Roadway\03\_Sheets\027938-000-185cpp-plan-001

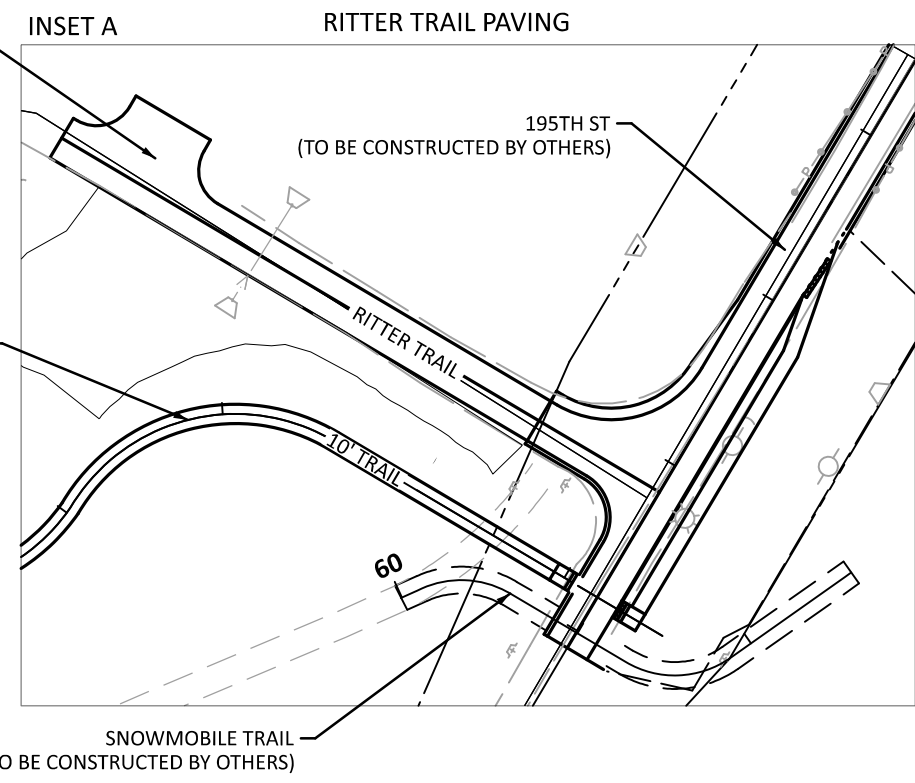


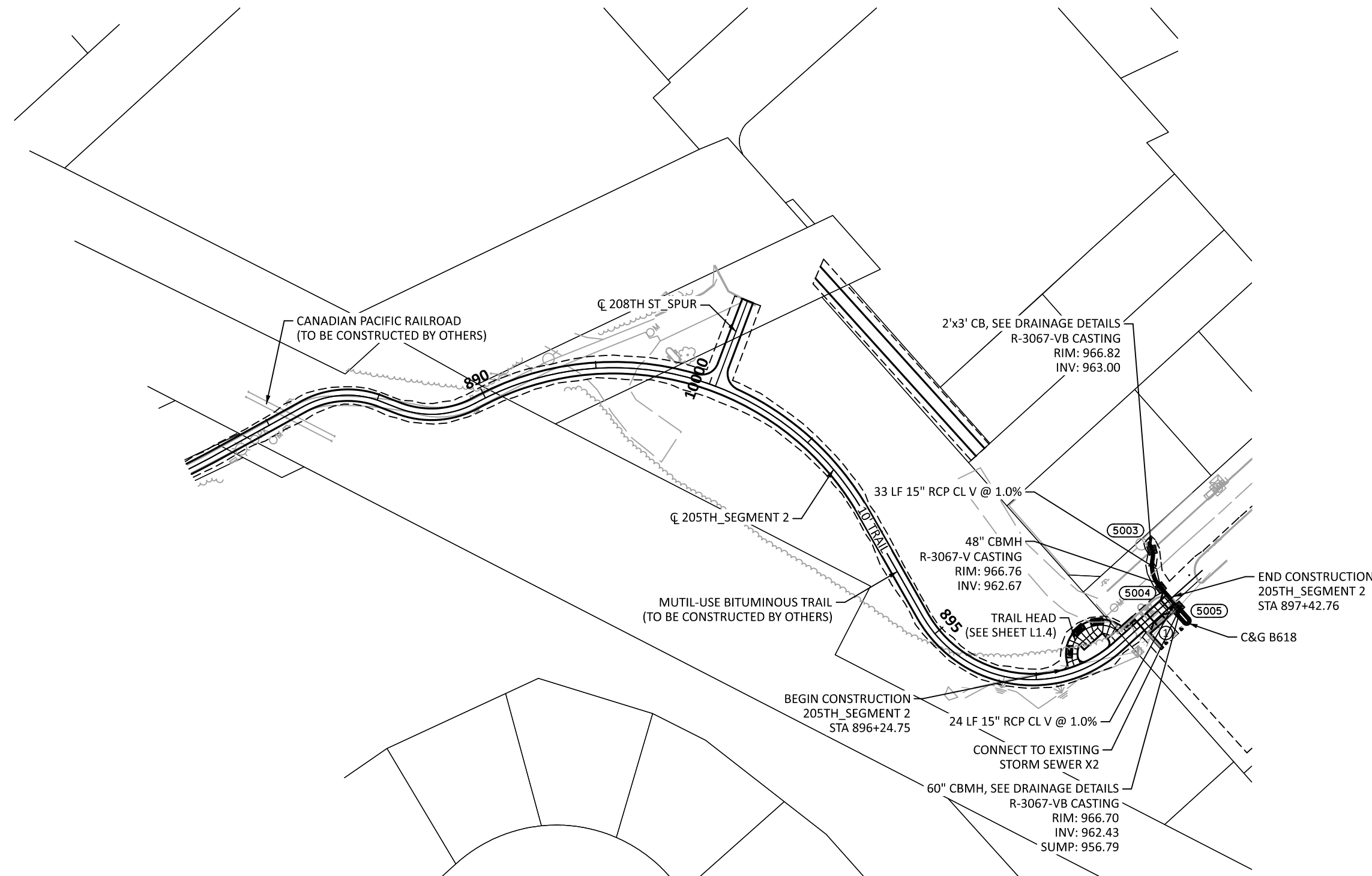
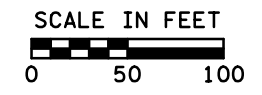
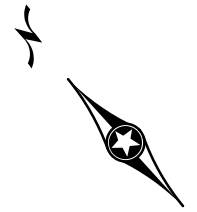
**LEGEND**

- ① PROTECT EXISTING PEDESTRIAN RAMP
- ② CONCRETE MEDIAN NOSE SEE STANDARD PLATE 7113
- XXXX DRAINAGE ID
- INPLACE PAVEMENT
- PROPOSED CONSTRUCTION
- - - CONSTRUCTION LIMITS
- - - EXISTING ROW
- - - SAWCUT

**GENERAL NOTES**

1. ALL DIMENSIONS ARE TO FACE OF CURB OR EDGE OF BITUMINOUS UNLESS OTHERWISE NOTED.
2. SEE INTERSECTION DETAILS FOR ADDITIONAL INFORMATION.





**LEGEND**

①	PROTECT EXISTING PEDESTRIAN RAMP
②	CONCRETE MEDIAN NOSE SEE STANDARD PLATE 7113
XXXX	DRAINAGE ID
—	INPLACE PAVEMENT
—	PROPOSED CONSTRUCTION
- - - -	CONSTRUCTION LIMITS
- - - -	EXISTING ROW
- - - -	SAWCUT

- GENERAL NOTES**
- ALL DIMENSIONS ARE TO FACE OF CURB OR EDGE OF BITUMINOUS UNLESS OTHERWISE NOTED.
  - SEE INTERSECTION DETAILS FOR ADDITIONAL INFORMATION.

DATE: 27-MAR-2026  
FILENAME: Projects\Minnesota\027938-000\05\_Discipline\Roadway\03\_Sheets\027938-000-185cpp-plan-001

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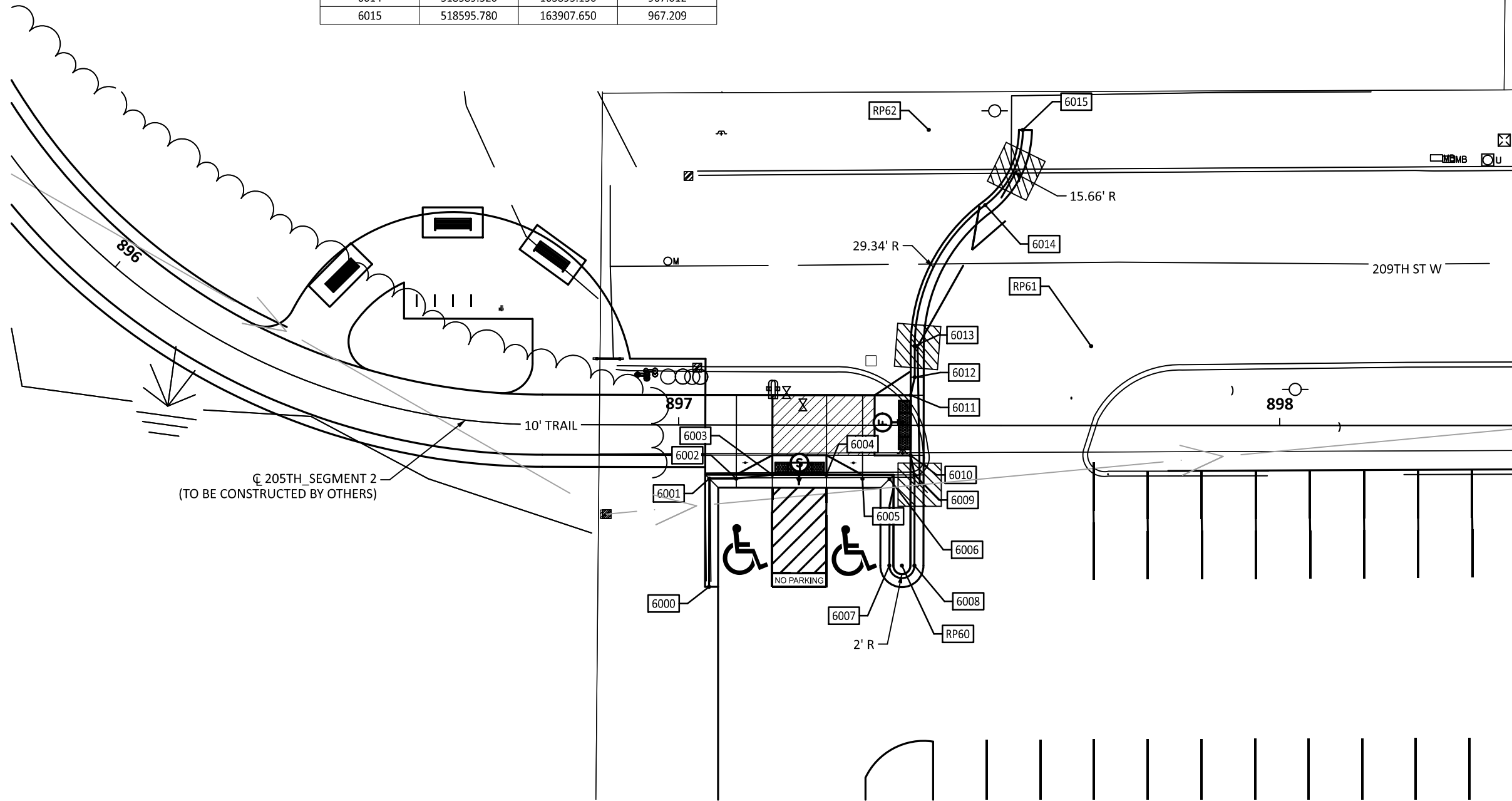
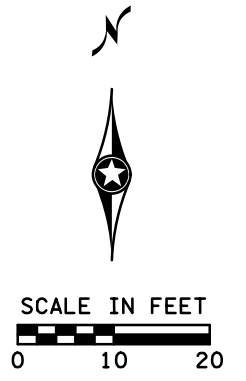


DAKOTA COUNTY PARKS AND CITY OF LAKEVILLE  
LAKE MARION GREENWAY PROJECT  
CITY OF LAKEVILLE, MINNESOTA

**CONSTRUCTION PLAN**  
DOWNTOWN LAKEVILLE GATEWAY

GUTTERLINE POINTS			
POINT NO.	X	Y	ELEVATION
6000	518543.563	163831.662	967.201
6001	518543.590	163849.662	966.651
6002	518548.090	163849.655	966.628
6003	518554.091	163850.306	966.656
6004	518563.090	163850.290	966.707
6005	518563.091	163850.292	966.733
6006	518573.590	163849.620	966.641
6007	518573.570	163835.200	966.745
6008	518577.740	163835.190	966.750
6009	518577.760	163850.270	966.752
6010	518577.100	163853.530	966.657
6011	518577.120	163863.530	966.753
6012	518577.780	163866.530	966.753
6013	518577.790	163871.730	966.751
6014	518589.520	163895.150	967.012
6015	518595.780	163907.650	967.209

RADIUS POINTS		
POINT NO.	X	Y
RP60	518575.65	163835.20
RP61	518607.13	163871.69
RP62	518580.12	163907.68



- LEGEND**
- XXXX CONTROL POINTS
  - RPXX RADIUS POINTS
  - DRAINAGE FLOW ARROW
  - [Hatched Box] CATCH BASIN
  - EXISTING SIGNAL POLE
  - x" CURB HEIGHT
  - [Dotted Box] TRUNCATED DOMES
  - [Hatched Box] LANDING AREA - 4' X 4' MIN. DIMENSIONS AND MAX 2.0% SLOPE IN ALL DIRECTIONS
  - [Dotted Box] 6" CONCRETE WALK
  - (S) INDICATES PEDESTRIAN RAMP - SLOPE SHALL BE BETWEEN 5.0% MINIMUM AND 8.3% MAXIMUM IN THE DIRECTION SHOWN AND CROSS SLOPE SHALL NOT EXCEED 2.0%.
  - (F) INDICATES PEDESTRIAN RAMP - SLOPE SHALL BE GREATER THAN 2.0% AND LESS THAN 5.0% IN THE DIRECTION SHOWN AND CROSS SLOPE SHALL NOT EXCEED 2.0%.

- GENERAL NOTES**
- MAINTAIN A MINIMUM 4' WIDE PEDESTRIAN ACCESS ROUTE OBSTRUCTION TO OBSTRUCTION AND/OR OBSTRUCTION TO FAR EDGE OF WALK.
  - THE CROSS SLOPE OF THE PEDESTRIAN ACCESS ROUTE SHALL NOT EXCEED 0.020 FT/FT
  - PROVIDE A SAWCUT (INCIDENTAL) AT ALL CONCRETE WALK AND BITUMINOUS TRAIL REMOVAL LIMITS.
  - ALL CURB RAMPS AND LANDING AREAS SHALL BE 6" CONCRETE WALK ON 3" AGGREGATE BASE CLASS 5.
  - LANDINGS SHALL BE CONNECTED TO EXISTING SIDEWALKS MAINTAINING A 4' WIDE (MINIMUM) PEDESTRIAN ACCESS ROUTE WITH A CROSS SLOPE THAT DOES NOT EXCEED 0.020 FT/FT AND A RUNNING SLOPE THAT DOES NOT EXCEED 0.050 FT/FT.
  - ALL DISTURBED AREAS IN CUT SECTION THAT ARE NOT OTHERWISE SURFACED SHALL BE GRADED FLUSH WITH NEW SURFACING AT A 1:6 SLOPE FOR A DISTANCE OF UP TO 5 FEET FROM THE EDGE OF WALK TO MATCH SURROUNDING CONTOURS.

DATE: 27-MAR-2026  
FILENAME: Projects\Minnesota\027938-000\05\_Discipline\Roadway\03\_Sheets\027938-000-185int-det1-001

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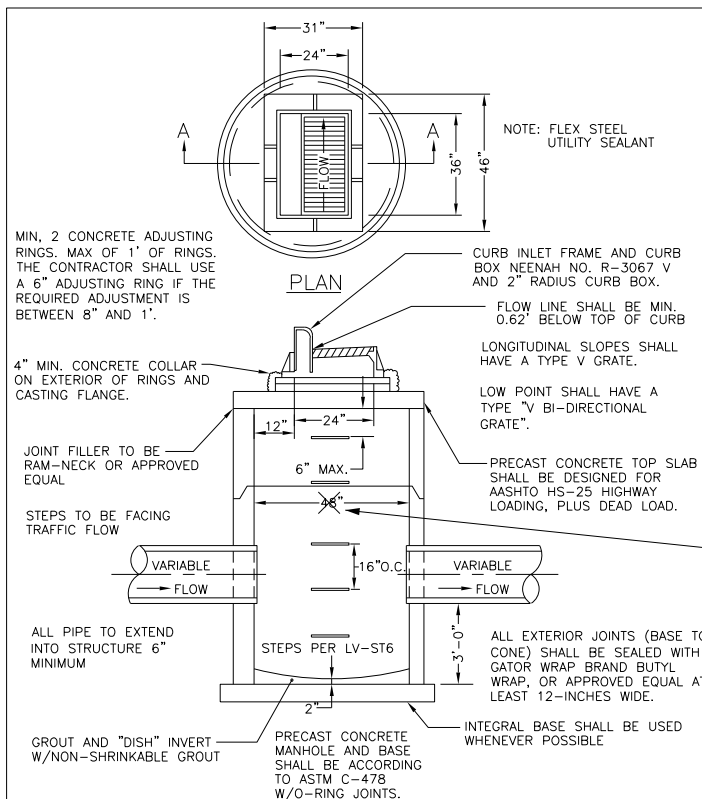


DAKOTA COUNTY PARKS AND CITY OF LAKEVILLE  
LAKE MARION GREENWAY PROJECT  
CITY OF LAKEVILLE, MINNESOTA

INTERSECTION DETAILS  
DOWNTOWN LAKEVILLE GATEWAY

Sheet No. 42 of 74 Sheets

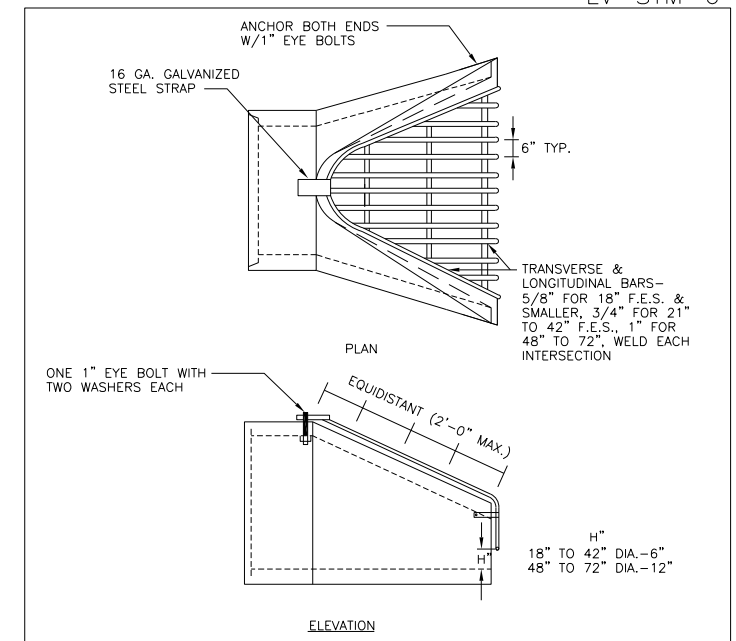
LV-STM-16



	STORM SEWER SUMP	PLATE NO. LV-STM-16
	CATCH BASIN MANHOLE	DATE 02/2024

60" FOR CBMH 5003

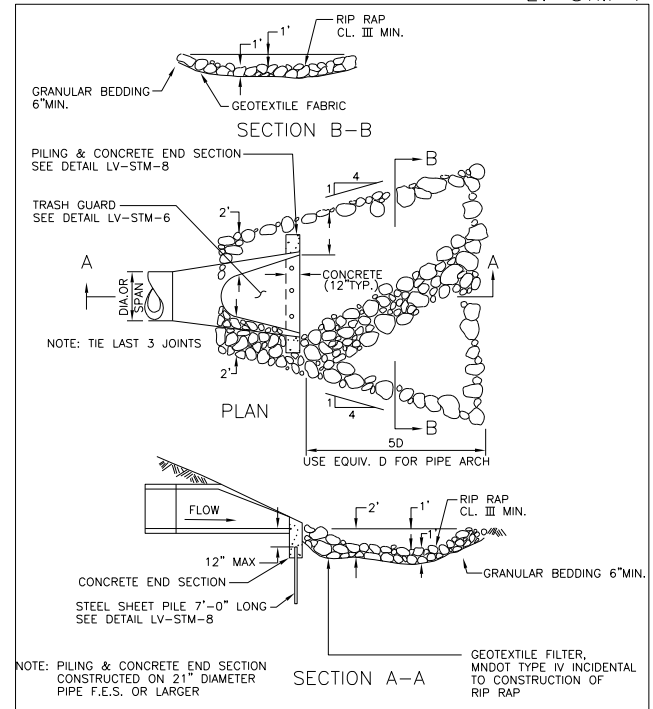
LV-STM-6



- NOTES:
- ENTIRE HEAVY DUTY TRASH GUARD ASSEMBLY TO BE HOT-DIP GALVANIZED AFTER FABRICATION.
  - SIZE OF TRASH GUARD VARIABLE DEPENDENT ON SIZE OF FLARED END SECTION.
  - PLACE TRASH GUARDS ON APRONS 18" AND LARGER.

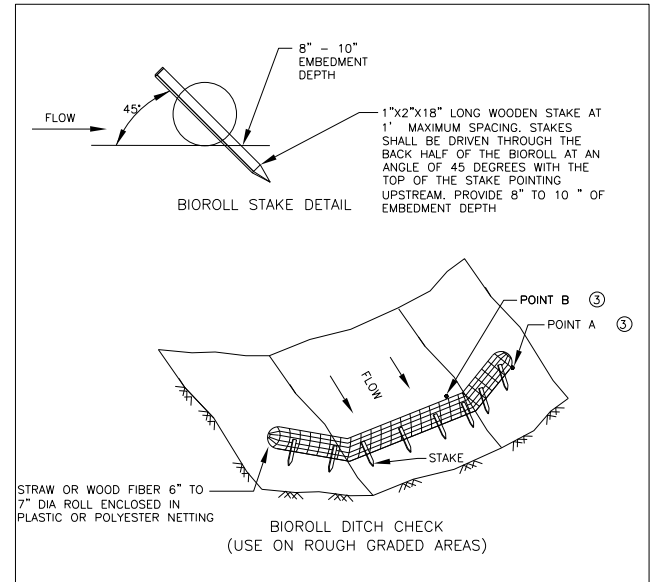
	STORM SEWER	PLATE NO. LV-STM-6
	TRASH GUARD FOR APRON	DATE 02/2024

LV-STM-7



	STORM SEWER	PLATE NO. LV-STM-7
	HAND PLACE RIP RAP	DATE 02/2024

LV-STM-20



- NOTES:
- SEE MNDOT SPECS 2573, & 3889
  - APPROXIMATE SPACING OF DITCH CHECK (FT) =  $Y = \frac{\text{DITCH CHECK HEIGHT (FT)}}{\% \text{ CHANNEL SLOPE}} \times 100$
  - POINT "A" MUST BE A MINIMUM OF 6 INCHES HIGHER THAN POINT "B" TO ENSURE THAT WATER FLOWS OVER THE DIKE AND NOT AROUND THE ENDS.

	BIOROLL DITCH CHECK	PLATE NO. LV-STM-20
	TEMPORARY SEDIMENT CONTROL	DATE 02/2024

DATE: 27-MAR-2026 FILENAME: Projects\Minnesota\027938-000\05\_Discipline\Drainage\03\_Sheets\027938-000 Ditch Grading Plan Sheet\TRAILHEAD.dgn

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DAKOTA COUNTY PARKS AND CITY OF LAKEVILLE  
 LAKE MARION GREENWAY PROJECT  
 CITY OF LAKEVILLE, MINNESOTA

DRAINAGE DETAILS

Sheet No. 43 of 74 Sheets

**TABLE OF QUANTITIES  
RIPRAP AT RCP OUTLETS**

DIA. OF ROUND PIPE (IN.)	L (FT.)	CLASS II d <sub>50</sub> = 6"			CLASS III d <sub>50</sub> = 9"			CLASS IV d <sub>50</sub> = 12"		
		GEO-TEXTILE FILTER UNDER APRON (SQ. YD.)	GRANULAR FILTER UNDER APRON (CU. YD.)	12" DEPTH RIPRAP (CU. YD.)	GEO-TEXTILE FILTER UNDER APRON (SQ. YD.)	GRANULAR FILTER UNDER APRON (CU. YD.)	18" DEPTH RIPRAP (CU. YD.)	GEO-TEXTILE FILTER UNDER APRON (SQ. YD.)	GRANULAR FILTER UNDER APRON (CU. YD.)	24" DEPTH RIPRAP (CU. YD.)
12	8	16.9	0.2	3.0	19.6	0.3	4.4	22.6	0.3	3.9
15	8	18.0	0.2	3.2	20.8	0.3	4.8	23.9	0.4	6.4
18	10	22.4	0.3	4.3	25.6	0.4	6.4	29.0	0.5	8.5
21	10	24.1	0.4	4.7	27.4	0.6	7.1	30.9	0.7	9.4
24	12	29.7	0.5	6.2	35.4	0.8	9.2	37.3	1.0	12.3
27	12	31.4	0.6	6.6	35.2	0.9	9.9	39.2	1.2	13.2
30	14	37.4	0.8	8.2	41.6	1.1	12.3	46.0	1.5	16.4
36	16	45.9	1.1	10.6	50.5	1.6	15.8	55.4	2.1	21.1
42	18	52.8	1.2	12.5	57.8	1.7	18.7	63.0	2.3	24.9
48	20	61.1	1.5	14.8	66.5	2.2	22.2	72.0	2.9	29.6

**TABLE OF QUANTITIES  
RIPRAP AT RCP-A OUTLETS**

SPAN OF PIPE ARCH (IN.)	L (FT.)	CLASS II d <sub>50</sub> = 6"			CLASS III d <sub>50</sub> = 9"			CLASS IV d <sub>50</sub> = 12"		
		GEO-TEXTILE FILTER UNDER APRON (SQ. YD.)	GRANULAR FILTER UNDER APRON (CU. YD.)	12" DEPTH RIPRAP (CU. YD.)	GEO-TEXTILE FILTER UNDER APRON (SQ. YD.)	GRANULAR FILTER UNDER APRON (CU. YD.)	18" DEPTH RIPRAP (CU. YD.)	GEO-TEXTILE FILTER UNDER APRON (SQ. YD.)	GRANULAR FILTER UNDER APRON (CU. YD.)	24" DEPTH RIPRAP (CU. YD.)
22	10	22.4	0.3	4.1	25.6	0.4	6.1	29.0	0.5	8.1
28	12	29.5	0.5	5.7	33.2	0.7	8.5	37.1	0.9	11.3
36	14	37.3	0.8	7.5	41.5	1.1	11.2	45.8	1.5	14.9
43	16	45.9	1.1	9.5	50.5	1.6	14.3	55.3	2.1	19.0
51	18	52.5	1.2	11.3	57.5	1.7	16.9	62.7	2.3	22.5
58	20	59.9	1.3	13.2	65.2	1.9	19.8	70.7	2.5	26.4

**NOTES:**  
 REQUIREMENTS FOR GEOTEXTILE TYPE, RIPRAP SIZE AND THICKNESS WILL BE DESIGNATED IN THE PLANS.  
 PIPE SIZES LARGER THAN THOSE SHOWN REQUIRE A SPECIAL DESIGN.  
 ① FOR PIPES GREATER THAN OR EQUAL TO 30", USE 1.5'.  
 ② GEOTEXTILE FILTER, SPEC. 3733, SHALL COVER THE BOTTOM AND SIDES OF THE AREA EXCAVATED FOR THE RIPRAP, GRANULAR FILTER MATERIALS.  
 ③ DIMENSION E IS GIVEN ON STANDARD PLATES 3100 AND 3110.  
 ④ GRANULAR FILTER, SPEC. 3601, MAY BE USED AS A CUSHION LAYER. PLACE FILTER PER SPEC. 2511. THE CUSHION LAYER IS INCIDENTAL.  
 ⑤ GRANULAR FILTER OR RIPRAP, SPEC. 3601, TO EXTEND UNDER ENTIRE OPEN PORTION OF PIPE APRON. DEPTH OF MATERIAL UNDER APRON SHALL MATCH RIPRAP DEPTH. WHEN USING RIPRAP INCREASE RIPRAP QUANTITY ACCORDINGLY AND PLACE A 3" LAYER OF 1.5" CRUSHED ROCK UNDER THE APRON TO AID IN GRADING FOR APRON PLACEMENT. CRUSHED ROCK IS INCIDENTAL.

APPROVED DECEMBER 9, 2013 <i>Christopher R. [Signature]</i> STATE DESIGN ENGINEER	STATE OF MINNESOTA DEPARTMENT OF TRANSPORTATION <b>RIPRAP AT RCP OUTLETS</b>	SPECIFICATION REFERENCE 3100 3110 3601 3733 2511	STANDARD PLATE NO. 3133D
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**TABLE**

C.B. OR MAN. DIA.	COVER DIAMETER	WEIGHT OF SECTION	T	K	L	BOTTOM BARS EACH WAY
48"	58"	1140 LBS.	6"	6"	8"	NO. 5 AT 6"
54"	65"	1990 LBS.	8"	6"	8"	NO. 5 AT 8"
60"	72"	2510 LBS.	8"	7"	9"	NO. 5 AT 7"
66"	79"	3090 LBS.	8"	7"	9"	NO. 5 AT 7"
72"	86"	3720 LBS.	8"	8"	10"	NO. 5 AT 6"
78"	93"	4400 LBS.	8"	8"	10"	NO. 5 AT 5"
84"	100"	5140 LBS.	8"	9"	11"	NO. 5 AT 5"
90"	107"	5930 LBS.	8"	9"	11"	NO. 5 AT 5"
96"	114"	6770 LBS.	8"	9"	11"	NO. 5 AT 6"
102"	121"	7670 LBS.	8"	9"	12"	NO. 6 AT 5"
108"	128"	8620 LBS.	12"	10"	12"	NO. 5 AT 6"
120"	140"	15560 LBS.	12"	11"	13"	NO. 5 AT 6"

**NOTES:**  
 AASHTO HS 25 LOADING.  
 MAXIMUM FILL HEIGHT 15 FT.  
 THE NO. 4020 SHALL BE PERMANENTLY MARKED ON THE TOP OF THE COVER.  
 EQUIVALENT STEEL AREAS IN WIRE MESH MAY BE USED.  
 REINFORCEMENT PER SPEC. 3301, GRADE 60, ANY STEEL REINFORCEMENT THAT IS WELDED DURING FABRICATION SHALL MEET THE REQUIREMENTS OF ASTM A106.  
 REFER TO PLANS FOR STEP REQUIREMENTS, HEIGHT, & DIAMETER. SEE SHEET (2 OF 2) FOR INSTALLATION DETAILS.  
**DESIGNER NOTE:**  
 WHEN STRUCTURE IS USED AS A CATCH BASIN, GIVE X & Y COORDINATES OF BOTH THE CENTERLINE FOR A, C, F OR G STRUCTURE AND THE CENTERLINE FOR THE 4020 STRUCTURE.  
 DESIGNATIONS:  
 DESIGN DIA. - STANDARD PLATE      EXAMPLES DESIGN 66 - 4020

① ONLY NECESSARY TO USE BOTTOM LAYER OF STEEL.

APPROVED NOV. 22, 2000 <i>Robert W. [Signature]</i> STATE DESIGN ENGINEER	STATE OF MINNESOTA DEPARTMENT OF TRANSPORTATION <b>MANHOLE OR CATCH BASIN FOR USE WITH OR WITHOUT TRAFFIC LOADS</b>	SPECIFICATION REFERENCE 2506	STANDARD PLATE NO. 4020J 1 OF 2
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**NOTES:**  
 WHEN STRUCTURE IS USED AS A CATCH BASIN, GIVE X, Y COORDINATES OF BOTH THE CENTERLINE FOR A, C, F OR G STRUCTURE AND THE CENTERLINE FOR THE 4020 STRUCTURE.  
 SEE SHEET 1 OF 2 FOR HANDLING HOLE DETAILS AND ADDITIONAL INFORMATION.  
 ① PROVIDE A FULL MORTAR BED.  
 ② WALL CONSTRUCTION MAY BE CLASS II PRECAST PIPE - STANDARD PLATE 3000 - REINFORCED CONCRETE PIPE CAST-IN-PLACE CONCRETE MEETING THE REQUIREMENTS OF CLASS II PIPE OR MASONRY CONSTRUCTION (BRICK OR BLOCK), STANDARD PLATE 4000 - MANHOLE OR CATCH BASIN MASONRY.  
 ③ PROVIDE MORTAR FILLETS TO FIT BOTTOM PORTIONS OF PIPE TO DIRECT FLOW TO OUTLET.

APPROVED NOV. 22, 2000 <i>Robert W. [Signature]</i> STATE DESIGN ENGINEER	STATE OF MINNESOTA DEPARTMENT OF TRANSPORTATION <b>MANHOLE OR CATCH BASIN FOR USE WITH OR WITHOUT TRAFFIC LOADS</b>	SPECIFICATION REFERENCE 2506 REVISED 10-25-2013 M.L.L.	STANDARD PLATE NO. 4020J 2 OF 2
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DRAWN BY: JMP	DESIGNED BY: TDO	CHECKED BY: TDO	I HEREBY CERTIFY THAT THIS SHEET WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.	SIGNATURE: <i>Taylor D. Olson</i>	PRINTED NAME: TAYLOR OLSON, PE	DATE: 3/27/2026	LIC. NO.: 57274
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		<b>DAKOTA COUNTY PARKS AND CITY OF LAKEVILLE</b> LAKE MARION GREENWAY PROJECT CITY OF LAKEVILLE, MINNESOTA
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<b>DRAINAGE DETAILS</b>	Sheet No. 44 of 74 Sheets
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# DRAINAGE TABULATION

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STRUCTURE NO.		STRUCTURE LOCATION			DRAINAGE STRUCTURES					TOP OF CASTING ELEV	FLOWS FROM PIPE OUTLET ELEV	FLOWS TO PIPE INLET ELEV	CONNECT TO EXISTING STORM SEWER	15" RC PIPE SEWER DES 3006 CL LIN FT	REMARKS	
FLOWS FROM	FLOWS TO	ALIGN.	STATION	OFFSET	TYPE	CONSTRUCT DRAINAGE STRUCTURE DESIGN			CASTING ASSEMBLY TYPE							STEPS REQ'D
						SPEC 1	48-4020	60-4020								
						LIN FT	LIN FT	LIN FT								
5005	5004	205TH_SEGMENT 2	897+56.2	42.3L	CB	3.7			B-9		966.82	963.00	962.67	33	(B)	
5004	5003	205TH_SEGMENT 2	897+39.8	13.2L					B-9		966.76					
	5003	205TH_SEGMENT 2	897+39.6	14.0L	CB		4.0					962.67	962.43	24		
5003	EX. 72D-2	205TH_SEGMENT 2	897+39.8	9.9R					B-9	YES	966.70			2	(A),(C)	
	EX. 72D-2	205TH_SEGMENT 2	897+41.1	9.8R	CB			9.8				959.79				
<b>DRAINAGE TAB TOTAL:</b>						<b>3.7</b>	<b>4.0</b>	<b>9.8</b>						<b>2</b>	<b>57</b>	

**GENERAL NOTES:**

- STATIONS, OFFSETS, AND ELEVATIONS ARE GIVEN TO:
  - END OF APRON FOR ALL CONCRETE APRONS.
  - CENTER OF CASTING FOR ALL STORM STRUCTURES
  - FOR -4020 STRUCTURES, THE 2ND LINE IN THE TABULATION LISTS STA. AND O/S TO CENTER OF STRUCTURE.

**REMARKS:**

- (A) - DRAINAGE STRUCTURE PAY HEIGHT INCLUDES SUMP DEPTH.
- (B) - REFER TO DRAINAGE DETAILS FOR LAKEVILLE STANDARD PLATE NO. LV-STM-1A
- (C) - REFER TO DRAINAGE DETAILS FOR LAKEVILLE STANDARD PLATE NO. LV-STM-16

DATE: 27-MAR-2026  
FILENAME: Projects\Minnesota\027938-000\05\_Discipline\Drainage\03\_Sheets\027938-000D Ditch Grading Plan Sheet\TRAILHEAD.dgn



DATE: 27-MAR-2026  
 FILENAME: Projects\Minnesota\027938-000\05\_Discipline\Roadway\03\_Sheets\027938-000-320swp-det-001TRAILHEAD

3. APPLICATION OF MULCH, HYDROMULCH, TACKIFIER AND POLYACRYLAMIDE ARE NOT ACCEPTABLE STABILIZATION METHODS IN THESE AREAS.
4. STABILIZE ALL AREAS OF THE SITE PRIOR TO THE ONSET OF WINTER. ANY WORK STILL BEING PERFORMED WILL BE MULCHED OR BLANKETED WITHIN THE TIME FRAMES IN THE NPDES PERMIT.
5. TOPSOIL BERMS MUST BE STABILIZED TO BE CONSIDERED PERIMETER CONTROL BMPs. USE RAPID STABILIZATION METHOD 3. THE SEED MIX USED IN THE RAPID STABILIZATION MAY BE SUBSTITUTED AS FOLLOWS:
  - A. SINGLE YEAR CONSTRUCTION BETWEEN MAY 1 - AUGUST 1, SEED WITH SEED MIX OATS (O)
  - B. SINGLE YEAR CONSTRUCTION BETWEEN AUGUST 1 - OCTOBER 31, SEED WITH SEED MIX WINTER WHEAT (WW)
  - C. MULTI YEAR TEMPORARY STABILIZATION TWO-YEAR COVER CROP (TCC)
6. KEEP DITCHES AND EXPOSED SOILS IN AN EVEN ROUGH GRADED CONDITION IN ORDER TO BE ABLE TO APPLY EROSION CONTROL MULCHES, HYDROMULCHES, AND BLANKETS.

**SITE INSPECTION AND MAINTENANCE**

THE EROSION CONTROL OFFICER IS TO INSPECT THE ENTIRE CONSTRUCTION SITE AT LEAST ONCE EVERY SEVEN (7) DAYS DURING ACTIVE CONSTRUCTION AND WITHIN 24 HOURS AFTER A RAINFALL EVENT GREATER THAN 0.5 INCHES IN 24 HOURS. THE OPERATOR SHALL PROVIDE A RAINFALL GAUGE ON-SITE AT VARIOUS MILE INTERVALS ALONG THE ALIGNMENT. INSPECT ALL TEMPORARY AND PERMANENT PROJECT BMPs UNTIL THE SITE HAS UNDERGONE FINAL STABILIZATION AND THE NOT HAS BEEN SUBMITTED. INSPECT SURFACE WATER INCLUDING DRAINAGE DITCHES FOR SIGNS OF EROSION AND SEDIMENT DEPOSITION. INSPECT CONSTRUCTION SITE VEHICLE EXIT LOCATIONS FOR EVIDENCE OF TRACKING ONTO PAVED SURFACES. INSPECT SURROUNDING PROPERTIES FOR EVIDENCE OF OFF-SITE SEDIMENT ACCUMULATION. INSPECT INFILTRATION AREAS FOR SIGN OF SEDIMENT DEPOSITION AND COMPACTIONS (TO ENSURE THAT EQUIPMENT IS NOT BEING DRIVEN ACROSS THE AREA). ALL INSPECTIONS AND MAINTENANCE CONDUCTED MUST BE RECORDED IN WRITING BY THE OPERATOR AND RETAINED WITH THE SWPPP. SUBMIT INSPECTION REPORTS IN A FORMAT THAT IS ACCEPTABLE TO THE PROJECT ENGINEER. RECORDS OF EACH INSPECTION AND MAINTENANCE ACTIVITY SHALL INCLUDE:

- A. DATE, TIME, AND NAME OF PERSON(S) CONDUCTING INSPECTIONS;
- B. FINDINGS OF INSPECTIONS, INCLUDING RECOMMENDATIONS FOR CORRECTIVE ACTIONS;
- C. CORRECTIVE ACTIONS TAKEN (INCLUDING DATES, TIMES, AND PARTY COMPLETING MAINTENANCE ACTIVITIES); INCLUDING DOCUMENTATION/PHOTOS OF IMPLEMENTED BMPs INTENDED TO CORRECT A PROBLEM BUT FAILED.
- D. DATE AND AMOUNT OF ALL RAINFALL EVENTS GREATER THAN 0.5 INCHES IN 24 HOURS;
- E. DOCUMENTATION OF CHANGES MADE TO THE SWPPP.

REPLACE, REPAIR OR SUPPLEMENT ALL NONFUNCTIONAL BMPs BY THE END OF THE NEXT BUSINESS DAY FOLLOWING DISCOVERY UNLESS LISTED DIFFERENTLY BELOW:

- A. REPAIR, REPLACE, OR SUPPLEMENT PERIMETER CONTROL DEVICES WHEN THEY BECOME NONFUNCTIONAL OR SEDIMENT REACHES 1/2 THE HEIGHT OF THE DEVICE. COMPLETE REPAIRS BY THE END OF THE NEXT BUSINESS DAY FOLLOWING DISCOVERY.
- B. REPAIR OR REPLACE INLET PROTECTION DEVICES WHEN THEY BECOME NONFUNCTIONAL OR SEDIMENT REACHES 1/2 THE HEIGHT AND/OR DEPTH OF THE DEVICE.
- C. DRAIN AND REMOVE SEDIMENT FROM TEMPORARY AND PERMANENT SEDIMENT BASINS ONCE THE SEDIMENT HAS REACHED 1/2 THE STORAGE VOLUME. COMPLETE WORK WITHIN 72 HOURS OF DISCOVERY.
- D. REMOVE ALL DELTAS AND SEDIMENT DEPOSITED IN SURFACE WATERS INCLUDING DRAINAGE WAYS, CATCH BASINS, AND OTHER DRAINAGE SYSTEMS. STABILIZE ANY AREAS THAT ARE DISTURBED BY SEDIMENT REMOVAL OPERATIONS. SEDIMENT REMOVAL AND STABILIZATION MUST BE COMPLETED WITHIN 7 DAYS OF DISCOVERY.
- E. REMOVE TRACKED SEDIMENT FROM PAVED SURFACES BOTH ON AND OFF SITE WITHIN ONE (1) CALENDAR DAY OF DISCOVERY. STREET SWEEPING MAY HAVE TO OCCUR MORE OFTEN TO MINIMIZE OFF SITE IMPACTS. LIGHTLY WET THE PAVEMENT PRIOR TO SWEEPING.
- F. MAINTAIN ALL BMPs UNTIL WORK HAS BEEN COMPLETED, SITE HAS GONE UNDER FINAL STABILIZATION, AND THE NOT HAS BEEN SUBMITTED TO THE MPCA.

**CONSTRUCTION ACTIVITY REQUIREMENTS: EROSION/SEDIMENT CONTROL, PROCEDURES, & MAINTENANCE STANDARDS**

1. AMEND THE SWPPP AND DOCUMENT ALL CHANGES TO THE SWPPP AND ASSOCIATED PLAN SHEETS WITHIN 7 DAYS. SWPPP AMENDMENTS AND SITE PLANS WILL BE PREPARED BY THE OPERATOR AND SUBMITTED TO THE OWNER FOR REVIEW AND WRITTEN APPROVAL BY THE PROJECT OWNER (OR DESIGNATED REPRESENTATIVE). STORE THE SWPPP AND ALL AMENDMENTS ON SITE AT ALL TIMES.
2. PREPARE AND SUBMIT A SITE MANAGEMENT PLAN FOR THE ENGINEER'S ACCEPTANCE FOR STAGING/STOCKPILE MANAGEMENT AREAS, CONCRETE MANAGEMENT, CONCRETE SLURRY APPLICATION AREAS, FUGITIVE DUST CONTROL PLAN, SPILL CONTAINMENT PLAN, HAZARDOUS MATERIAL MANIFEST & MANAGEMENT PLAN, WETLAND MANAGEMENT PLAN, VEGETATION PRESERVATION & MAINTENANCE PLAN, WORK IN AND NEAR AREAS OF ENVIRONMENTAL SENSITIVITY, AREAS IDENTIFIED IN THE PLANS AS "SITE MANAGEMENT PLAN AREA", ANY WORK THAT WILL REQUIRE DEWATERING, ANY ADDITIONAL PLANS LISTED IN THE PROJECT SPECIFICATIONS, AND AS REQUIRED BY THE ENGINEER. SUBMIT ALL SITE MANAGEMENT PLANS TO THE ENGINEER IN WRITING. ALLOW A MINIMUM OF 7 DAYS FOR PROJECT ENGINEER 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.
3. THERE IS NO CONSTRUCTION PHASING OR STAGING DEFINED BY THE OWNER FOR THIS PROJECT. THE SCHEDULE FOR INSTALLING TEMPORARY BMPs SHALL BE INCORPORATED INTO THE OPERATOR'S WEEKLY SCHEDULE FOR EACH CONSTRUCTION STAGE AND PRESENTED TO THE OWNER'S REPRESENTATIVE.
4. BURNING OF ANY MATERIAL IS NOT ALLOWED WITHIN PROJECT BOUNDARY.
5. DO NOT DISTURB AREAS OUTSIDE OF THE CONSTRUCTION LIMITS. DELINEATE AREAS NOT TO BE DISTURBED AND WETLANDS (EVEN AREAS THAT ARE PERMITTED FOR CONSTRUCTION) PRIOR TO STARTING GROUND DISTURBING ACTIVITIES. IF IT BECOMES NECESSARY TO DISTURB AREAS OUTSIDE OF THE CONSTRUCTION LIMITS, OBTAIN WRITTEN PERMISSION FROM THE PROJECT ENGINEER PRIOR TO PROCEEDING. PRESERVE ALL NATURAL BUFFERS SHOWN ON THE PLANS.
6. ROUTE STORMWATER AROUND UNSTABILIZED AREAS OF THE SITE WHENEVER FEASIBLE. PROVIDE EROSION CONTROL AND VELOCITY DISSIPATION DEVICES AS NEEDED TO KEEP CHANNELS FROM ERODING AND TO PREVENT NUISANCE CONDITIONS AT THE OUTLET.
7. DIRECT DISCHARGE FROM BMPs TO VEGETATED AREAS WHENEVER FEASIBLE. PROVIDE VELOCITY DISSIPATION DEVICES AS NEEDED TO PREVENT EROSION.
8. LOCATE PERIMETER CONTROL ON THE CONTOUR TO CAPTURE OVERLAND, LOW-VELOCITY SHEET FLOWS DOWN GRADIENT OF ALL EXPOSED SOILS AND PRIOR TO DISCHARGING TO SURFACE WATERS. PLACE J-HOOKS AT A MAXIMUM OF 100-FOOT INTERVALS.
9. ALL STOCKPILES MUST HAVE PERIMETER SEDIMENT CONTROLS IMPLEMENTED AND MAINTAINED AT ALL TIMES AND SHOULD BE INSTALLED PRIOR TO INITIATION OF STOCKPILING. PILES CANNOT BE PLACED IN BUFFER AREAS OR SURFACE WATERS, INCLUDING STORMWATER CONVEYANCES SUCH AS CURB AND GUTTER SYSTEMS, OR CONDUITS AND DITCHES UNLESS THERE IS A BYPASS IN PLACE TO PREVENT STORMWATER RUN-ON INTO THE STOCKPILE.

10. STEEP SLOPES MAY BE TEMPORARILY CREATED DURING GRADING OPERATIONS. STABILIZATION OF STEEP SLOPES (3:1 OR GREATER) SHALL BE PROPERLY CAT-TRACKED AND STABILIZED PER THE EROSION CONTROL PLAN. LONG SLOPES CAN BE BROKEN UP WITH SEDIMENT CONTROL LOGS IF EROSION IS EVIDENT.
11. DITCH CHECKS WILL BE PLACED AS INDICATED ON THE PLANS DURING ALL PHASES OF CONSTRUCTION.
12. ALL STORM DRAIN INLETS, THAT RECEIVE PROJECT STORMWATER, MUST BE PROTECTED BY APPROPRIATE BMPs DURING CONSTRUCTION UNTIL ALL SOURCES WITH POTENTIAL FOR DISCHARGING TO THE INLET HAVE BEEN STABILIZED. INLET PROTECTION MAY BE REMOVED FOR A PARTICULAR INLET IF A SPECIFIC SAFETY CONCERN (STREET FLOODING/FREEZING) HAS BEEN IDENTIFIED AND THE PERMITTEE(S) HAS RECEIVED WRITTEN CORRESPONDENCE FROM THE JURISDICTIONAL AUTHORITY VERIFYING THE NEED FOR REMOVAL. WRITTEN CORRESPONDENCE MUST BE DOCUMENTED IN THE SWPPP.
13. SILT FENCE IS NOT AN ACCEPTABLE CATCH BASIN INLET PROTECTION BMP. CONTACTOR SHALL CLEAN, REMOVE AND DISPOSE OF SEDIMENT, AND/OR REPLACE STORM DRAIN INLET PROTECTION ON A ROUTINE BASIS TO ENSURE THE DEVICE IS FULLY FUNCTIONAL PRIOR TO THE NEXT FORECASTED PRECIPITATION EVENT (30% OR GREATER).
14. DISCHARGE TURBID OR SEDIMENT LADEN WATER TO TEMPORARY SEDIMENT BASINS WHENEVER FEASIBLE. 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. CLEAN OUT ALL PERMANENT STORMWATER BASINS REGARDLESS OF WHETHER USED AS TEMPORARY SEDIMENT BASINS/TRAPS TO THE DESIGN CAPACITY AFTER COMPLETING ALL UP-GRADIENT LAND DISTURBING ACTIVITY. USE A SKIMMER DEVICE FOR BASIN DRAINING.
15. PROVIDE STABILIZATION IN ANY TRENCHES CUT FOR DEWATERING OR SITE DRAINING PURPOSES.
16. THE CONTRACTOR SHALL SUBMIT A DEWATERING PLAN AND NARRATIVE TO THE PROJECT ENGINEER FOR APPROVAL 7 DAYS PRIOR TO UNDERTAKING THESE ACTIVITIES. DEWATERING PLAN MUST INCLUDE BMP'S TO PREVENT SEDIMENT TRANSPORT, EROSION, AND ADVERSE IMPACTS TO DOWNSTREAM RECEIVING WATERS. THE DEWATERING PLAN MUST ALSO INCLUDE ANY SPECIFIC CHEMICAL TREATMENTS (FLOC, POLYMERS, ETC.) THAT WILL BE USED. THE CONTRACTOR IS RESPONSIBLE TO OBTAIN ANY PERMIT NECESSARY FOR THESE ACTIVITIES; THE DEWATERING PLAN AND DNR APPROPRIATIONS PERMIT WILL BECOME PART OF THE SWPPP. THE CONTRACTOR SHALL VISUALLY CHECK AND PHOTOGRAPH THE DISCHARGE AT THE BEGINNING AND AT LEAST ONCE EVERY 24 HOURS OF OPERATION TO ENSURE ADEQUATE TREATMENT HAS BEEN OBTAINED AND NUISANCE CONDITIONS WILL NOT RESULT FROM THE DISCHARGE.

**TEMPORARY & PERMANENT EROSION CONTROL BMPs**

**SEED MIX:** SEED MIX SHALL BE USED IN CONSTRUCTION AND REVEGETATION PROJECTS IN ORDER TO ENHANCE SOIL NUTRIENT AVAILABILITY AND BIOLOGICAL SOIL STRUCTURE, ENCOURAGE NATIVE PLANT SUCCESSION, REDUCE EROSION, AND DISCOURAGE INVASIVE PLANT SPECIES. INOCULATION OF SOILS WITH MYCORRHIZAL FUNGI OR THE PRESENCE OF PRE-EXISTING SOIL MICROBES IS ESSENTIAL FOR THE STABILIZATION OF ADVERSE SOILS, ESTABLISHMENT OF NATIVE GRASSES, AND THE EXCLUSION OF NON-NATIVE "ANNUALS" AND NOXIOUS WEEDS.

**EROSION CONTROL BLANKET:** EROSION CONTROL BLANKETS (ECBS) ARE A SOIL STABILIZATION (EROSION CONTROL) BMP, INTENDED TO PROTECT DISTURBED SOIL SURFACES FROM RAINDROP IMPACT EROSION. ECBS ARE CARPET-LIKE MATS, INSTALLED OVER AND ANCHORED TO THE PROPERLY PREPARED SOIL SURFACES. PROPERLY SELECTED AND INSTALLED, ECBS CAN MIMIC THE BENEFICIAL EFFECTS OF VEGETATIVE COVER THEREBY REDUCING EROSION RATES BY OVER 90%. ECBS ALSO PROTECT SEEDS AND PROVIDE A BENEFICIAL ENVIRONMENT FOR VEGETATION TO BECOME ESTABLISHED. CONTRACTOR SHALL VERIFY DURING REGULAR INSPECTIONS THAT NO GULLIES, RILLS, OR SCOUR HOLES HAVE FORMED UNDER EROSION CONTROL BLANKETS AND MATS AND CORRECT ALL ERODED AREAS WITHIN 14 DAYS. ALL REPAIRS MUST BE COMPLETED WITHIN 24 HOURS OF DISCOVERY, OR AS SOON AS FIELD CONDITIONS ALLOW ACCESS.

**HYDRAULIC MATRICES:** HYDRAULIC MATRICES ARE EROSION CONTROL PRODUCTS THAT ARE USED TO STABILIZE EXPOSED SOILS. THESE MATRICES ARE APPLIED IN A SLURRY, PRODUCED BY MIXING FIBER, WATER AND A BINDING AGENT TOGETHER IN A MECHANICAL HYDRO-SEEDER. WOOD FIBER IS WIDELY USED BUT OTHER FIBERS CAN INCLUDE PAPER, STRAW, COIR, CORN, ETC. THE EFFECTIVENESS OF THESE HYDRAULIC MATRICES ARE DEPENDENT ON:

- PROPER SOIL PREPARATION
- APPLICATION RATES (DEPENDENT ON THE MANUFACTURERS RECOMMENDATIONS)
- THE TYPE OF FIBERS USED
- THE TYPE OF BOND AGENT(S) ADDED

THESE HYDRAULIC MATRICES ARE CLASSIFIED IN THE MNDOT SPEC BOOK AND APPROVED PRODUCTS LIST, DEPENDING ON THE PRODUCT CHARACTERISTICS, STRENGTH, AND LONGEVITY. HYDRAULIC MATRICES USED INCLUDE: ORGANIC FIBER MATRIX, HYDRAULIC MULCH MATRIX, STABILIZED FIBER MATRIX, BONDED FIBER MATRIX, AND FIBER REINFORCED MATRIX.

**SOD TYPE LAWN:** SOD IS A PERMANENT EROSION PREVENTION BMP THAT PROVIDES INSTANTANEOUS SOIL STABILIZATION. THE CONTRACTOR IS RESPONSIBLE FOR MAINTENANCE OF SOD AS OUTLINED IN THE PROJECT SPECIFICATIONS.

**ENERGY DISSIPATER:** AN ENERGY DISSIPATER IS A STRUCTURE DESIGNED TO CONTROL EROSION AT THE OUTLET OF A CHANNEL OR CONDUIT.

**RAPID STABILIZATION METHOD #2:** THIS METHOD SHALL CONSIST OF TYPE 3 MULCH (1.5 TON PER ACRE) OR 3884 TYPE STABILIZED FIBER MATRIX (750 LBS PER ACRE) BE SPREAD IN AREAS THAT HAVE BEEN UNWORKED FOR 14 DAYS. THIS METHOD SHALL BE USED ON SLOPES LESS THAN 3:1.

**RAPID STABILIZATION METHOD #3:** THIS WORK SHALL CONSIST OF OPERATIONS NECESSARY TO RAPIDLY STABILIZE SMALL CRITICAL AREAS WITHIN 200 FEET OF SURFACE WATERS, TO PREVENT OFF SITE SEDIMENTATION AND / OR TO COMPLY WITH PERMIT REQUIREMENTS. THIS FORM OF RAPID STABILIZATION EMPLOYS SEM, SEED MIX OATS, AND FERTILIZER TYPE 3. THIS METHOD SHALL BE USED ON SLOPES LESS THAN 3:1. INSTALL PER MNDOT SPECIFICATION 2575.3.M.1.C.

**RAPID STABILIZATION METHOD #4:** THIS METHOD SHALL CONSIST OF CATEGORY 20/25 EROSION CONTROL BLANKET (NATURAL NET ONLY) IN COMBINATION WITH MNDOT SEED MIX OATS (2 LBS PER 100 SQ. YD.) AND TYPE 3 SLOW RELEASE FERTILIZER (8 LBS PER 100 SQ. YD.). THIS IS AN ACCEPTABLE BMP FOR DISTURBED AREAS ADJACENT TO ENVIRONMENTALLY SENSITIVE AREAS, SURFACE WATERS, AND WITHIN THE LAST 200 FEET OF DITCH BOTTOMS.

**TEMPORARY & PERMANENT SEDIMENT CONTROL BMPs**

SEDIMENT CONTROL BMPs	ESTIMATED QUANTITIES
SEED SOUTHERN SHORTGRASS ROADSIDE	312 LBS

DRAWN BY: JMP  
 DESIGNED BY: TDO  
 CHECKED BY: TDO

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

SIGNATURE: *Taylor D Olson*  
 PRINTED NAME: TAYLOR OLSON, PE  
 DATE: 3/27/2026 LIC. NO. 57274



DAKOTA COUNTY PARKS AND CITY OF LAKEVILLE  
 LAKE MARION GREENWAY PROJECT  
 CITY OF LAKEVILLE, MINNESOTA

STORMWATER POLLUTION PREVENTION PLAN

Sheet No. 47 of 74 Sheets

SEEDING SPECIAL	291 LBS
SEDIMENT CONTROL LOG	LF
SILT FENCE TYPE MS	24558 LF
HYDRAULIC BONDED FIBER MATRIX	11235 LBS
INLET PROTECTION	EACH
ROCK CONSTRUCTION EXIT	1 EACH
EROSION CONTROL BLANKET	SF

**SEDIMENT CONTROL LOGS:** SEDIMENT CONTROL LOGS ARE MANUFACTURED FROM STRAW, WOOD EXCELSIOR, COCONUT FIBERS, AND/OR OTHER MATERIALS THAT ARE BOUND WITH POLYPROPYLENE OR BIODEGRADABLE NETTING INTO TIGHT TUBULAR ROLLS. FIBER ROLLS CONTROL THREE TYPES OF EROSIONAL PROCESSES; EROSION CONTROL, RUN OFF CONTROL, AND SEDIMENT CONTROL. SEDIMENT CONTROL LOGS CAN BE USED FOR THE FOLLOWING:

- SLOPE INTERRUPTERS TO REDUCE EROSION ON NEWLY CONSTRUCTED SLOPES
- TEMPORARY DITCH CHECKS TO REDUCE RUNOFF VELOCITIES IN DRAINAGE CHANNELS
- SEDIMENT CONTROL BARRIERS FOR SMALL DISTURBED SOIL AREAS SUCH AS STOCKPILES, DISCRETE SLOPES, OR INDIVIDUAL LOTS

**MACHINE SLICED SILT FENCE:** A SILT FENCE IS A TEMPORARY SEDIMENT BARRIER CONSISTING OF FILTER FABRIC ENTRENCHED INTO THE SOIL AND ATTACHED TO SUPPORTING POSTS. SILT FENCE IS INTENDED TO BE INSTALLED WHERE SEDIMENT-LADEN WATER CAN POND, THUS ALLOWING THE SEDIMENT TO FALL OUT OF SUSPENSION AND SEPARATE FROM THE RUNOFF. SILT FENCE INSTALLED WITH A TRENCHER OR BY SLICING IS THE MOST EFFECTIVE INSTALLATION METHOD TO ENSURE AGAINST COMMON SILT FENCE FAILURES. THE BMP WILL BE CLEANED OUT OR REPLACED WHEN THE SEDIMENT REACHES 1/2 THE HEIGHT OF THE FENCE.

**STABILIZED CONSTRUCTION EXIT:** TEMPORARY CONSTRUCTION EXITS ARE CONSTRUCTED AT THE EGRESS POINT FROM THE CONSTRUCTION AREA ONTO A PAVED ROAD. A STABILIZED CONSTRUCTION EXIT IS A TRACKING CONTROL BMP INTENDED TO PREVENT TRACKING OF SOIL FROM THE CONSTRUCTION SITE BY EQUIPMENT AND VEHICLES. THE EXITS ARE CONSTRUCTED OF LARGE ANGULAR ROCK, STEEL RIBS (RUMBLE STRIPS), OR TRACK PADS INTENDED TO KNOCK THE MUD OFF THE TIRES BEFORE TRAVELING ONTO THE ROADWAY.

**CHEMICAL TREATMENTS:** OPERATOR MUST AMEND THE SWPPP TO INCLUDE THE INTENDED USES AND LOCATIONS OF FLOCCULANTS, POLYMERS, AND OTHER SEDIMENTATION TREATMENT CHEMICALS. CHEMICAL TREATMENTS MUST BE IN COMPLIANCE WITH PART 9.18.

**DUST CONTROL:** OPERATOR WILL COMPLY WITH STATE RULE 7011.0150 ON DUST PREVENTION REQUIREMENTS. DUST FROM THE SITE WILL BE CONTROLLED BY INCREASED STREET SWEEPING AND/OR USING A MOBILE PRESSURE-TYPE DISTRIBUTOR TRUCK TO APPLY POTABLE WATER TO DISTURBED AREAS. THE MOBILE UNIT WILL APPLY WATER AT A RATE NECESSARY TO PREVENT RUNOFF AND PONDING.

**POLLUTION PREVENTION MANAGEMENT**

POTENTIAL SOURCES OF POLLUTANTS FROM CONSTRUCTION ACTIVITIES INCLUDE, BUT NOT LIMITED TO:

1. SEDIMENT AND FUGITIVE DUST GENERATED FROM CLEARING AND GRUBBING, IMPORT/EXPORT OPERATIONS, REMOVALS/COMPACTION, MASS/FINE GRADING, EXCAVATIONS, TRENCHING, TOPSOIL STRIPING STOCKPILING, WET/DRY PAVEMENT CUTTING, STREET CONSTRUCTION.
2. BASIC/ACIDIC PH LEVELS FROM CURB AND GUTTER, MANHOLE STRUCTURES, SIDEWALKS, DRIVEWAY APRONS, FOUNDATIONS, BRIDGE ABUTMENTS, WET/DRY PAVEMENT CUTTING, MASONRY WASHOUT/CLEANOUT.
3. EXCESS NUTRIENTS FROM LANDSCAPING INSTALLATIONS, SOIL ADDITIVES, FERTILIZATION, MULCHING.
4. HYDROCARBONS FROM STREET CONSTRUCTION, DEMOLITION/REMOVALS, WET/DRY PAVEMENT CUTTING.

OPERATOR WILL COMPLY WITH ALL OF THE POLLUTION PREVENTION AND MANAGEMENT MEASURES IDENTIFIED IN THE NPDES-CSW PERMIT, PART 12.1. STORAGE AND DISPOSAL OF CONSTRUCTION AND HAZARDOUS WASTES MUST BE IN COMPLIANCE WITH MPCA REGULATIONS.

- A. POSITION AND STAKE DOWN ALL PORTABLE TOILETS SO THEY CANNOT BE TIPPED OR KNOCKED OVER. SUPPLY ADEQUATE SECONDARY CONTAINMENT.
- B. SECONDARY CONTAINMENT IS NEEDED AROUND ALL STATIONARY EQUIPMENT (GENERATORS, PUMPS, LIGHT PLANTS, ETC.) PROVIDE CONTAINMENT FOR ALL HAZARDOUS MATERIALS AND TOXIC WASTE.
- C. NO ENGINE DEGREASING IS ALLOWED ON SITE.
- D. VEHICLE AND EQUIPMENT WASHING TO OCCUR IN DESIGNATED AREA AS DETERMINED BY THE CONTRACTOR SUBMITTAL OF A MANAGEMENT PLAN FOR THESE ACTIVITIES.
- E. PROPERLY CLEAN UP AND REPORT ALL SPILLS AS REQUIRED BY THE MPCA AND MNDOT SPECIFICATIONS.
- F. PROVIDE A SPILL KIT AT EACH WORK LOCATION ON THE SITE.
- G. PROVIDE A SECURE STORAGE AREA WITH RESTRICTED ACCESS FOR ALL HAZARDOUS MATERIALS AND TOXIC WASTE. RETURN ALL HAZARDOUS MATERIALS AND TOXIC WASTE TO THE DESIGNATED STORAGE AREA AT THE END OF THE BUSINESS DAY UNLESS INFEASIBLE. STORE ALL HAZARDOUS MATERIALS AND TOXIC WASTE (INCLUDING BUT NOT LIMITED TO OIL, DIESEL FUEL, GASOLINE, HYDRAULIC FLUIDS, PAINT, PETROLEUM BASED PRODUCTS, WOOD PRESERVATIVES, ADDITIVES, CURING COMPOUNDS, AND ACIDS) IN SEALED CONTAINERS WITH SECONDARY CONTAINMENT. CLEAN UP SPILLS IMMEDIATELY. STORE, COLLECT AND DISPOSE OF ALL SOLID WASTE.
- H. SLURRY FROM CONCRETE OPERATIONS MUST BE VACUUMED UP IMMEDIATELY. NO CONCRETE WASHOUT SHALL COME IN CONTACT WITH THE GROUND AND MUST BE PROPERLY DISPOSED OF.
- I. A SIGN MUST BE INSTALLED ADJACENT TO EACH CONCRETE WASHOUT FACILITY.
- J. CREATE AND FOLLOW A WRITTEN DISPOSAL PLAN FOR ALL WASTE MATERIALS. INCLUDE IN THE PLAN HOW THE MATERIAL WILL BE DISPOSED OF AND THE LOCATION OF THE DISPOSAL SITE. SUBMIT PLAN TO THE ENGINEER PRIOR TO CONSTRUCTION.
- K. 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.

**FINAL STABILIZATION**

FINAL STABILIZATION IS ACHIEVED WHEN NPDES CGP PARTS 13.1-13.8 (AS APPLICABLE) ARE COMPLETED PRIOR TO SUBMISSION OF THE NOTICE OF TERMINATION (NOT) TO MPCA.

1. ALL AREAS MUST BE STABILIZED WITH A UNIFORM PERENNIAL VEGETATIVE COVER WITH A DENSITY OF 70% OF ITS EXPECTED FINAL GROWTH.
2. ALL TEMPORARY SEDIMENT CONTROL BMP MEASURES MUST BE REMOVED PRIOR TO SUBMITTING PERMIT NOT.

3. THE NOT SUBMITTAL MUST INCLUDE EITHER GROUND OR AERIAL PHOTOGRAPHS SHOWING THE AFOREMENTIONED REQUIREMENTS OF HAVE BEEN MET.

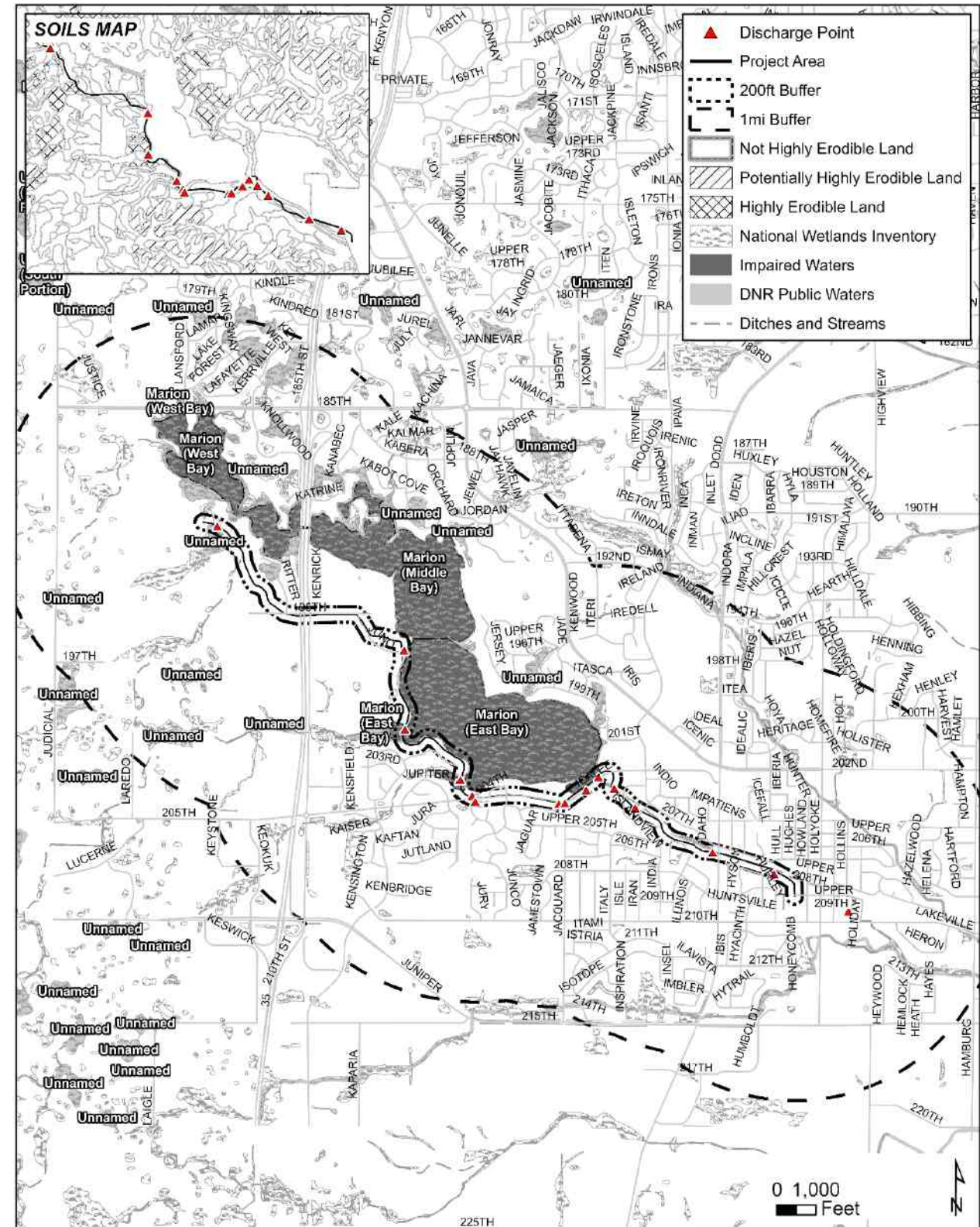


Figure 1. SWPPP Resource Map

DATE: 27-MAR-2026 FILENAME: Projects\Minnesota\027938-000\05\_Discipline\Roadway\03\_Sheets\027938-000-320swp-det-001TRAILHEAD

DRAWN BY:	JMP
DESIGNED BY:	TDO
CHECKED BY:	TDO

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

SIGNATURE: *Taylor D Olson*  
 PRINTED NAME: TAYLOR OLSON, PE  
 DATE: 3/27/2026 LIC. NO. 57274



DAKOTA COUNTY PARKS AND CITY OF LAKEVILLE  
 LAKE MARION GREENWAY PROJECT  
 CITY OF LAKEVILLE, MINNESOTA

STORMWATER POLLUTION PREVENTION PLAN

Sheet No. 48 of 74 Sheets

**EROSION CONTROL AND TURF ESTABLISHMENT NOTES**

**SEDIMENT CONTROL PRACTICES:**

1. SEDIMENT CONTROL MUST BE IN PLACE AND APPROVED BY THE ENGINEER BEFORE ANY PHASE OF CONSTRUCTION CAN BEGIN.
2. INLET PROTECTION WILL BE INSTALLED AT ALL CATCH INLETS WITHIN THE PROJECT AREA PER STANDARD DETAILS.
3. TEMPORARY STABILIZATION MEASURES SHALL BE EMPLOYED WITHIN 200 FEET, OF THE NORMAL WETTED PERIMETER OF ALL DISCHARGE POINTS WITHIN 24 HOURS. MULCH IS NOT AN APPROVED MEASURE.
4. IN THE EVENT THAT PERMANENT STABILIZATION CANNOT BE IMPLEMENTED WITHIN 7 DAYS AFTER CONSTRUCTION ACTIVITY IN THE DISTURBED AREA HAS CEASED, TEMPORARY STABILIZATION BMPs MUST BE SCHEDULED TO OCCUR WITHIN THAT 7 DAY TIME FRAME (EXCEPT WHERE CALLED OUT BY NOTE BELOW)
5. RAPID STABILIZATION METHOD 4 SHALL BE EMPLOYED WITHIN 200 FEET OF THE NORMAL WETTED PERIMETER OF ALL DISCHARGE POINTS WITHIN 24 HOURS.
6. A SEDIMENT TRAP MUST BE INSTALLED PER THE APPROVED STANDARD DETAILS WITHIN 24 HOURS OF CONNECTING THE UTILITIES.
7. ALL STOCKPILES MUST HAVE DOWN GRADIENT PERIMETER SEDIMENT CONTROL IMPLEMENTED AND MAINTAINED AT ALL TIMES. STOCKPILES TO RECEIVE TEMPORARY STABILIZATION IF UNWORKED FOR 7 DAYS.
8. STOCKPILES MAY NOT BE PLACED WITHIN ANY DRAINAGE OR CURB LINE UNLESS PROPER BYPASS IS INSTALLED PRIOR TO STOCKPILE PLACEMENT.
9. CONTRACTOR TO INSTALL SEDIMENT CONTROL LOGS DOWN GRADIENT FROM ANY EXPOSED AREAS.

**EROSION PREVENTION PRACTICES:**

1. STABILIZATION OF DISTURBED AREAS SHALL BE DONE BY PERMANENT TURF ESTABLISHMENT WHENEVER POSSIBLE.

**POLLUTION PREVENTION MANAGEMENT MEASURES:**

1. A ROCK CONSTRUCTION ENTRANCE WILL BE PLACED AT ALL ENTRANCES THAT LEAD TO THE PROJECT SITE IN ACCORDANCE WITH THE STORMWATER POLLUTION PREVENTION PLAN AND THE APPROVED STANDARD DETAILS.
2. ALL STREETS IN AND ADJACENT TO THE PROJECT SHALL REMAIN CLEAN AND PASSABLE AT ALL TIMES. ADJACENT STREET AND CURB LINE TO BE SWEEPED FREE OF DEBRIS AT THE END OF EACH WORK DAY, OR AS DIRECTED BY THE ENGINEER.
3. SLURRY FROM CONCRETE OPERATIONS MUST BE VACUUMED UP IMMEDIATELY. NO CONCRETE WASHOUT SHALL COME IN CONTACT WITH THE GROUND AND MUST BE PROPERLY DISPOSED OF. ALL HAZARDOUS MATERIALS MUST BE KEPT UNDER COVER AND WITHIN PROPER CONTAINMENT WHEN NOT IN USE.







**MISCELLANEOUS:**




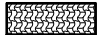

1. ADDITIONAL EROSION AND SEDIMENT CONTROL MAY BE ADDED DURING ANY PHASE OF CONSTRUCTION AS APPROVED BY THE ENGINEER.
2. IF PROJECT CONSISTS OF MILL & OVERLAY OF SECTIONS, ENSURE MILLINGS ARE NOT A THREAT FROM WASHING OFF THE PROJECT RIGHT OF WAY.

**NOTES:**

1. THE CONTRACTOR SHALL AMEND THE SWPPP AND ESC PLAN SHEETS TO SHOW THE LOCATIONS OF PROPOSED STAGING AREAS, PROPOSED STOCKPILES, POTENTIAL POLLUTANT GENERATING ACTIVITIES (IE DESIGNATED CONCRETE WASHOUT AREAS, FUELING LOCATIONS, ETC.), ETC.

**LEGEND**

-  SURFACE DRAINAGE DIRECTION
-  SILT FENCE, TYPE MS
-  CULVERT END CONTROLS
-  STORM DRAIN INLET PROTECTION
-  INPLACE PAVEMENT
-  CONSTRUCTION LIMITS

-  PERMANENT:  
MNL RUSTY PATCHED BUMBLE BEE MIX  
SPEED MIX SPECIAL
-  PERMANENT:  
SOUTHERN BOULEVARD (160 LBS/ACRE)  
FERTILIZER TYPE 3 (350 LBS/ACRE)  
HYDRAULIC BONDED FIBER MATRIX (3000 LBS/ACRE)
-  PERMANENT:  
WET DITCH (20LBS/ACRE)  
FERTILIZER TYPE 4 (120LBS/ACRE) (INCIDENTAL)  
EROSION CONTROL BLANKET CATEGORY 20 (INCIDENTAL)
-  PERMANENT:  
WET DITCH (20LBS/ACRE)
-  CONSTRUCTION EXIT

DATE: 27-MAR-2026  
FILENAME: Projects\Minnesota\027938-000\05\_Discipline\Roadway\03\_Sheets\027938-000-325erc-plan-001.dgn

DRAWN BY: JMP  
DESIGNED BY: TDO  
CHECKED BY: TDO

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

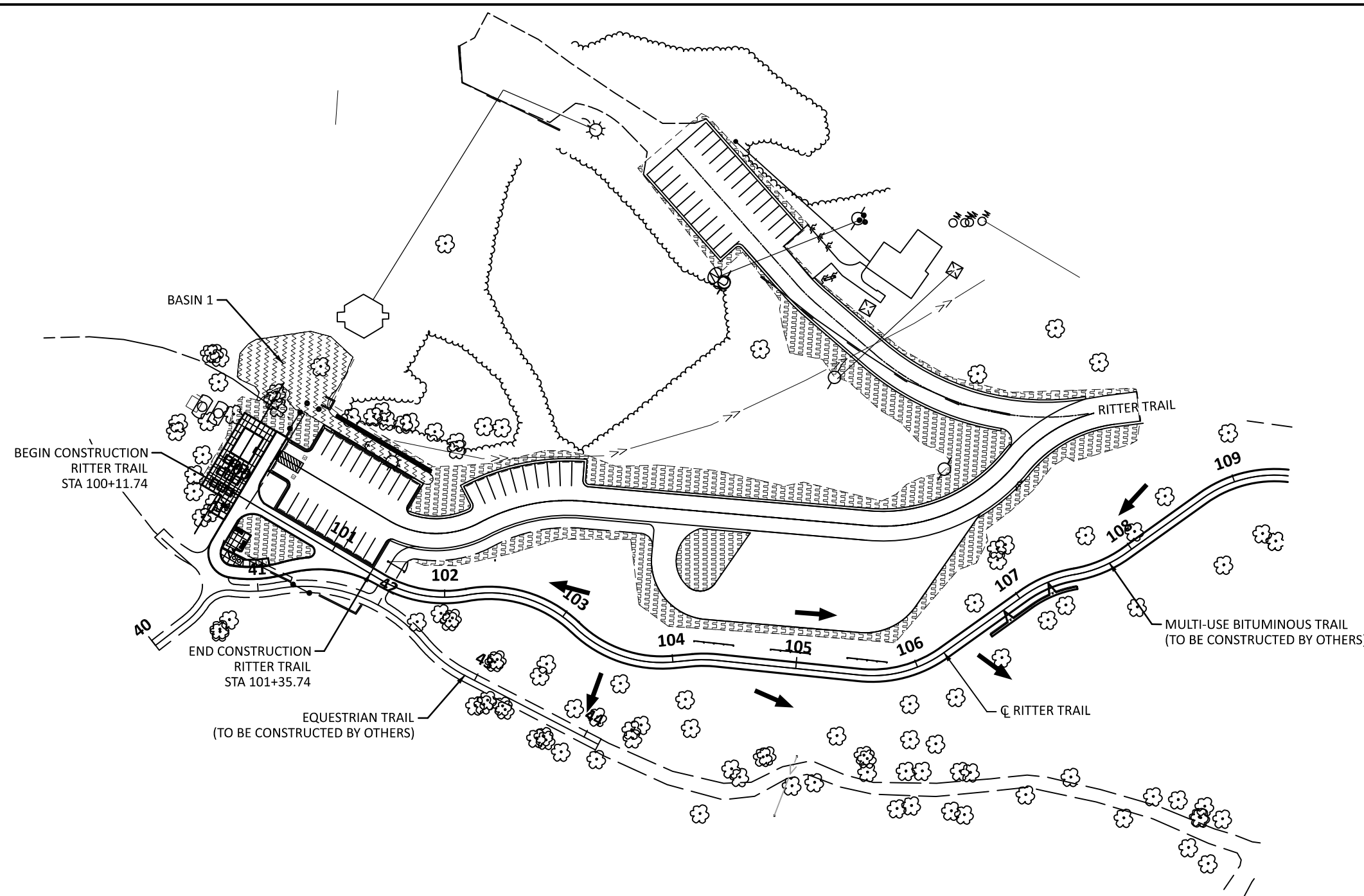
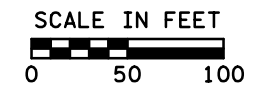
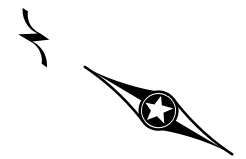
SIGNATURE:   
PRINTED NAME: TAYLOR OLSON, PE  
DATE: 3/27/2026 LIC. NO. 57274



DAKOTA COUNTY PARKS AND CITY OF LAKEVILLE  
LAKE MARION GREENWAY PROJECT  
CITY OF LAKEVILLE, MINNESOTA

**EROSION CONTROL & TURF ESTABLISHMENT PLAN**  
NOTES & LEGEND

DATE: 27-MAR-2026  
 FILENAME: Projects\Minnesota\027938-000\05\_Discipline\Roadway\03\_Sheets\027938-000-325erc-plan-001.dgn



LEGEND

- SURFACE DRAINAGE DIRECTION
- SILT FENCE, TYPE MS
- CULVERT END CONTROLS
- STORM DRAIN INLET PROTECTION
- INPLACE PAVEMENT
- CONSTRUCTION LIMITS
  
- PERMANENT:  
MNL RUSTY PATCHED BUMBLE BEE MIX  
SEED MIX SPECIAL
  
- PERMANENT:  
SOUTHERN SHORTGRASS ROADSIDE (160 LBS/ACRE)  
FERTILIZER TYPE 3 (350 LBS/ACRE)  
HYDRAULIC BONDED FIBER MATRIX (3000 LBS/ACRE)
  
- PERMANENT:  
WET DITCH (20LBS/ACRE)  
FERTILIZER TYPE 4 (120 LBS/ACRE) (INCIDENTAL)  
EROSION CONTROL BLANKET CATEGORY 20 (INCIDENTAL)

DRAWN BY: JMP  
 DESIGNED BY: TDO  
 CHECKED BY: TDO

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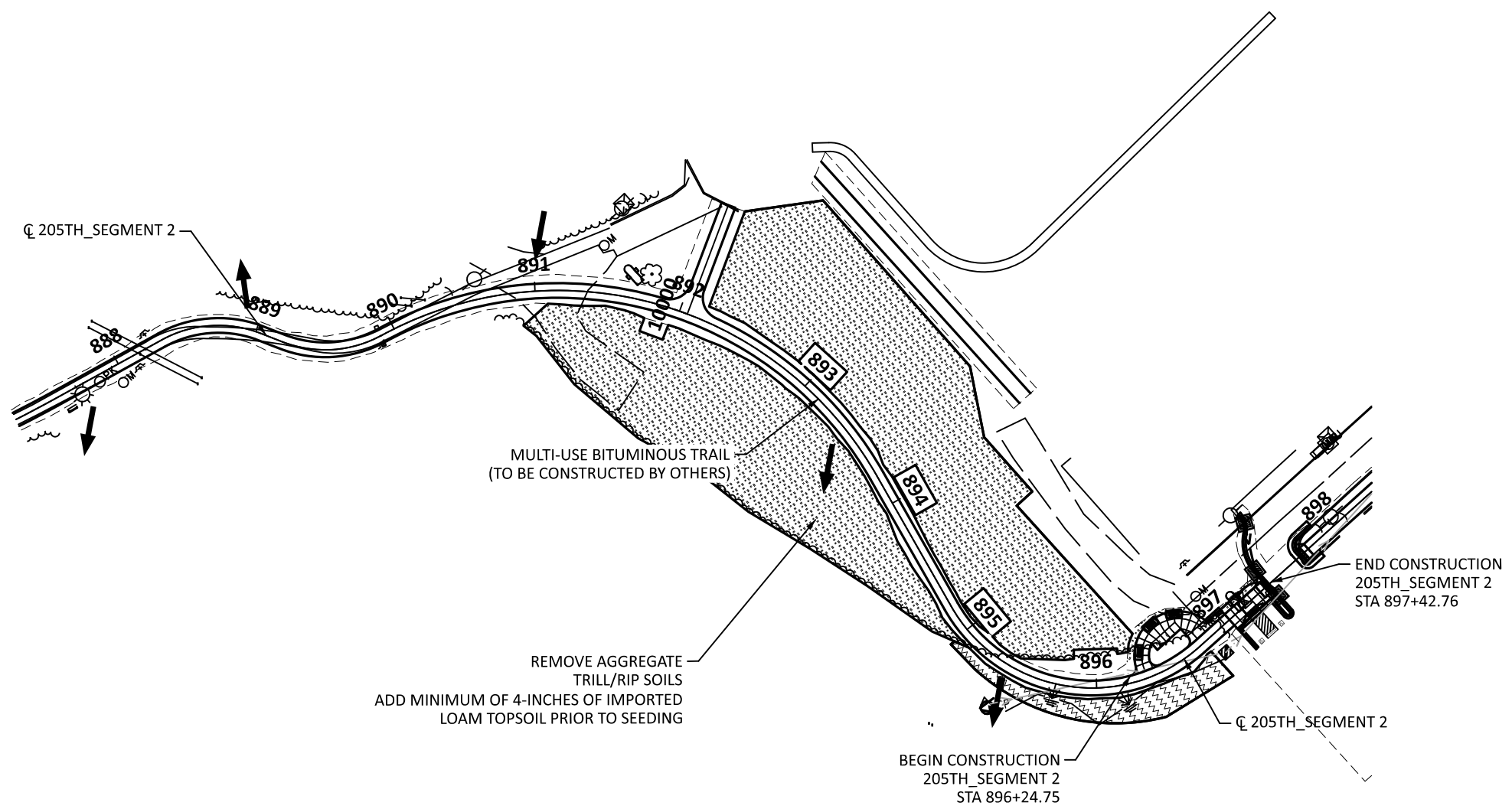
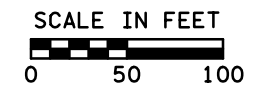
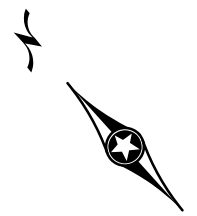
SIGNATURE: *Taylor D Olson*  
 PRINTED NAME: TAYLOR OLSON, PE  
 DATE: 3/27/2026 LIC. NO. 57274



DAKOTA COUNTY PARKS AND CITY OF LAKEVILLE  
 LAKE MARION GREENWAY PROJECT  
 CITY OF LAKEVILLE, MINNESOTA

EROSION CONTROL & TURF ESTABLISHMENT PLAN  
 RITTER TRAIL

Sheet No. 50 of 74 Sheets



LEGEND

- SURFACE DRAINAGE DIRECTION
- SILT FENCE, TYPE MS
- CULVERT END CONTROLS
- STORM DRAIN INLET PROTECTION
- INPLACE PAVEMENT
- CONSTRUCTION LIMITS
- PERMANENT: MNL RUSTY PATCHED BUMBLE BEE MIX SPEED MIX SPECIAL
- PERMANENT: SOUTHERN SHORTGRASS ROADSIDE (160 LBS/ACRE) FERTILIZER TYPE 3 (350 LBS/ACRE) HYDRAULIC BONDED FIBER MATRIX (3000 LBS/ACRE)
- PERMANENT: WET DITCH (20LBS/ACRE) FERTILIZER TYPE 4 (120 LBS/ACRE) (INCIDENTAL) EROSION CONTROL BLANKET CATEGORY 20 (INCIDENTAL)

DATE: 27-MAR-2026 FILENAME: Projects\Minnesota\027938-000\05\_Discipline\Roadway\03\_Sheets\027938-000-325erc-plan-001.dgn

DRAWN BY: JMP  
DESIGNED BY: TDO  
CHECKED BY: TDO

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

SIGNATURE: *Taylor D Olson*  
PRINTED NAME: TAYLOR OLSON, PE  
DATE: 3/27/2026 LIC. NO. 57274

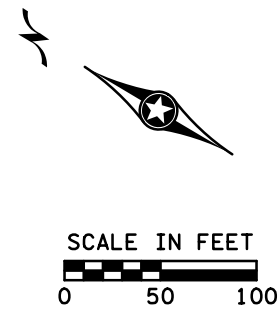
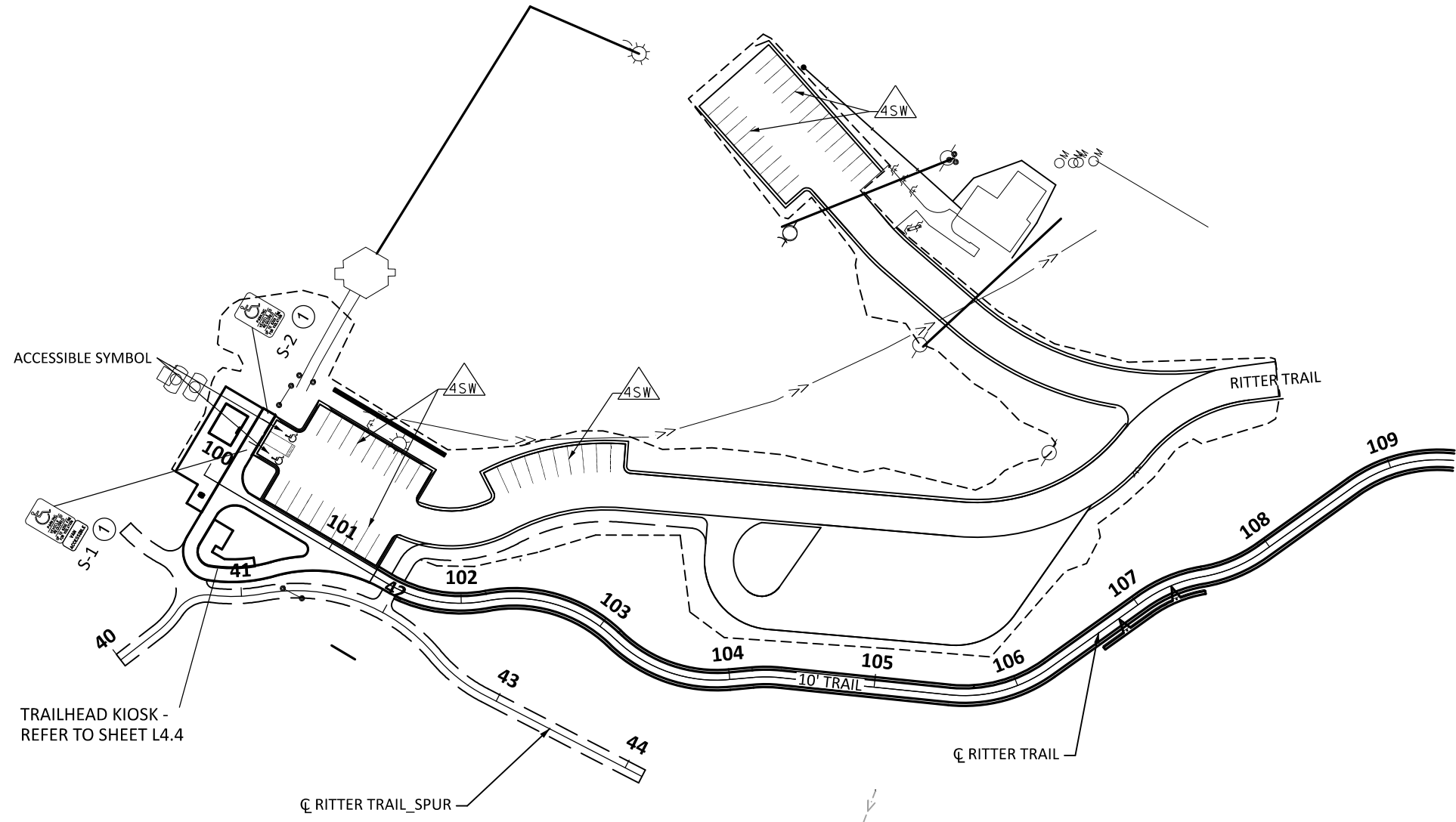


DAKOTA COUNTY PARKS AND CITY OF LAKEVILLE  
LAKE MARION GREENWAY PROJECT  
CITY OF LAKEVILLE, MINNESOTA

**EROSION CONTROL & TURF ESTABLISHMENT PLAN**  
205TH STREET TRAIL - SEGMENT 2

Sheet No. 51 of 74 Sheets

DATE: 27-MAR-2026  
 FILENAME: Projects\Minnesota\027938-000\05\_Discipline\Roadway\03\_Sheets\027938-000-410tdt-plan-001



SIGNING LEGEND	
①	FURNISH & INSTALL
③	SALVAGE
④	REMOVE
⑥	INSTALL
STRIPING LEGEND	
	TRIANGLE - PAINT
	CROSSWALK - PAINT
	PAVEMENT MESSAGE - PAINT
1ST DIGIT WIDTH 4", 8", ETC.	3RD DIGIT COLOR W = WHITE Y = YELLOW B = BLACK G = GREEN
2ND DIGIT PATTERN S = SOLID B = BROKEN D = DOUBLE T = DOTTED	

DRAWN BY: JMP  
 DESIGNED BY: TDO  
 CHECKED BY: TDO

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

SIGNATURE: *Taylor D Olson*  
 PRINTED NAME: TAYLOR OLSON, PE  
 DATE: 3/27/2026 LIC. NO. 57274



DAKOTA COUNTY PARKS AND CITY OF LAKEVILLE  
 LAKE MARION GREENWAY PROJECT  
 CITY OF LAKEVILLE, MINNESOTA

**SIGNING & PAVEMENT MARKING PLAN**  
 RITTER TRAIL

Sheet No. 52 of 74 Sheets

DATE: 27-MAR-2026  
 FILENAME: Projects\Minnesota\027938-000\05\_Discipline\Roadway\03\_Sheets\027938-000-410tdt-plan-001

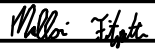
SIGN SPECIAL									I
SIGN NUMBER	PANEL			SUPPORT			SALVAGE SIGN PANEL SPECIAL	INSTALL SIGN PANEL SPECIAL	
	LEGEND	SIZE (W x H)	MOUNTING HEIGHT	TYPE	RISER POST SIZE	NUMBER OF POSTS			
		INCH	FEET		INCHES				
							EACH	EACH	
(1)	S-4	195TH ST W	36 x 9	9.5			1	1	
		RITTER PARK TR	42 x 9						
(1)	S-7	KENRICK AVE	39 x 9	9.5			1	1	
		195TH ST W	36 x 9						
(2)	S-10	PARK DIRECTION					1		
TOTAL							3	2	

NOTES:  
 (1) MOUNTED ABOVE STOP SIGN  
 (2) SALVAGE SIGN TO CITY OF LAKEVILLE

STANDARD PLANS			
INDEX NO.	SUBJECT	APPROVED	REVISED
5-297.701	STANDARD SIGN PLACEMENT	08-09-2023	
5-297.702	DELINEATOR AND MARKER PLACEMENT	06-04-2024	
5-297.718 (1 of 3)	SQUARE TUBE SIGN MOUNTING DETAILS	08-09-2023	
5-297.718 (2 of 3)	SQUARE TUBE SIGN MOUNTING DETAILS	08-09-2023	
5-297.718 (3 of 3)	SQUARE TUBE SIGN MOUNTING DETAILS	08-09-2023	
5-297.721	THREE WALL BASE - FOR 1-3/4" SQUARE TUBE RISER POST	11-29-2022	
5-297.722	FIN BASE FOR 2" SQUARE-TUBE RISER POST IN SOIL	08-09-2023	
5-297.724	SLIP BASE FOR 2-1/2" SQUARE-TUBE RISER POST	08-09-2023	

SIGN AND DELINEATOR / MARKER												J
SIGN NUMBER	PANEL				SUPPORT			REMOVE SIGN	SIGN	DELINEATOR/MARKER PANEL	SALVAGE SIGN	
	PANEL CODE	LEGEND	SIZE (W x H)	MOUNTING HEIGHT	TYPE	RISER POST SIZE	NUMBER OF POSTS					
			INCHES	FEET		INCHES						
							EACH	SQ FT	EACH	EACH		
S-1	R7-8M	ACCESSIBLE PARKING	12 x 18	7	SQ-CONC	2	1				1.50	
	R7-8BP	VAN ACCESSIBLE	12 x 6								0.50	
S-2	R7-8M	ACCESSIBLE PARKING	12 x 18	7	SQ-CONC	2	1				1.50	
S-3	R1-1	STOP	30 x 30	7	SQ-SOIL	2	1	1			6.25	
S-5	DESIGN	DIRECTIONAL SIGN	66 x 48	7	SQ-SOIL	2 1/2	2				22.00	
S-6	W11-15a	TRAIL CROSSING	x					1				
	W16-7PL	DOWN LEFT ARROW PLAQUE	x									
S-8	R1-1	STOP	30 x 30	7	SQ-SOIL	2	1	1			6.25	
S-9	W11-15a	TRAIL CROSSING	x					1				
	W16-7PL	DOWN LEFT ARROW PLAQUE	x									
S-11	DESIGN	DIRECTIONAL SIGN	66 x 48	7	SQ-SOIL	2 1/2	2				22.00	
S-12	R4-7	KEEP RIGHT	24 x 30	7	SQ-CONC	2	1				5.00	
	OM1-2	TYPE 1 OBJECT MARKER	18 x 18								1	
S-13	R4-7	KEEP RIGHT	24 x 30	7	SQ-CONC	2	1				5.00	
	OM1-2	TYPE 1 OBJECT MARKER	18 x 18								1	
S-14	R1-1	STOP	30 x 30	7	SQ-SOIL	2	1	1			6.25	
S-15	R1-1	STOP	30 x 30	7	SQ-SOIL	2	1	1			6.25	
	R1-3P	ALL WAY	18 x 6								0.75	
S-16	W16-1P	SHARE THE ROAD	18 x 24	7	SQ-SOIL	2	1				3.00	
S-17	W11-2	PEDESTRIAN CROSSING	x					1				
	W16-7PL	DOWN LEFT ARROW PLAQUE	x									
S-18	W11-15	COMBINED BICYCLE/PEDESTRIAN CROSSING	30 x 30	7	SQ-SOIL	2	1				6.25	
	W16-7PL	DOWN LEFT ARROW PLAQUE	24 x 12								2.00	
S-19	W11-2	PEDESTRIAN CROSSING	x					1				
	W16-7PL	DOWN LEFT ARROW PLAQUE	x									
S-20	W11-15	COMBINED BICYCLE/PEDESTRIAN CROSSING	30 x 30	7	SQ-SOIL	2	1				6.25	
	W16-7PL	DOWN LEFT ARROW PLAQUE	24 x 12								2.00	
S-21	W11-15	COMBINED BICYCLE/PEDESTRIAN CROSSING	30 x 30	7	SQ-SOIL	2	1				6.25	
	W16-7PL	DOWN LEFT ARROW PLAQUE	24 x 12								2.00	
S-22	W11-2	PEDESTRIAN CROSSING	x					1			1	
S-23	W11-2	PEDESTRIAN CROSSING	x					1			1	
S-24	W11-15	COMBINED BICYCLE/PEDESTRIAN CROSSING	30 x 30	7	SQ-SOIL	2	1				6.25	
	W16-7PL	DOWN LEFT ARROW PLAQUE	24 x 12								2.00	
TOTAL							10	119.3	2	4		

THE LISTED STANDARD PLANS AND/OR STANDARD PLATES ARE INCORPORATED BY REFERENCE INTO THE PLAN SET. THE CERTIFICATION ON THIS SHEET SIGNIFIES THE ENGINEER SELECTED THE STANDARD PLANS AND/OR STANDARD PLATES AS APPROPRIATE FOR USE ON THE PROJECT.

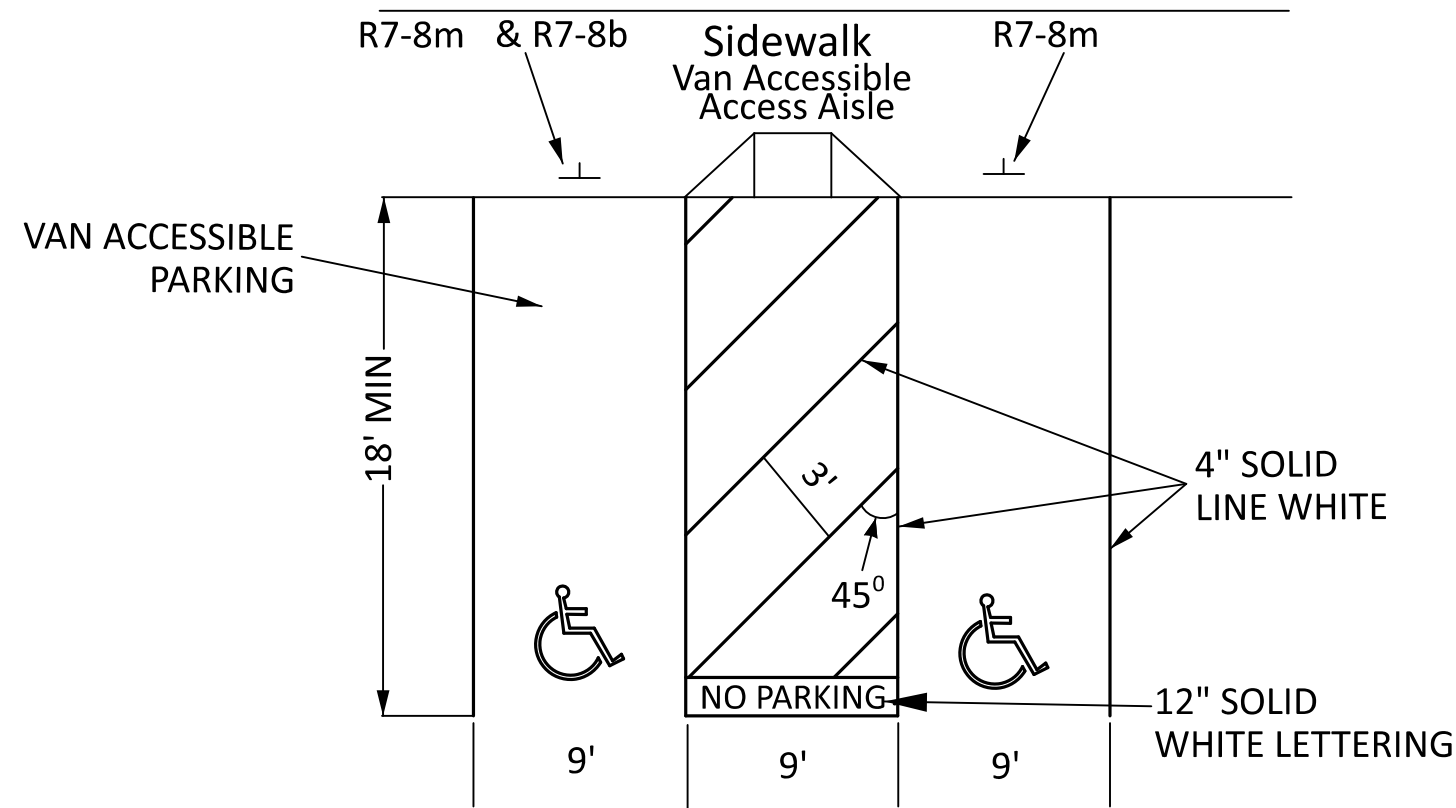
DRAWN BY: DM	I HEREBY CERTIFY THAT THIS SHEET WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.	SIGNATURE: 
DESIGNED BY: MF		PRINTED NAME: MALLORI FITZPATRICK, PE
CHECKED BY: MF		DATE: 3/27/2026 LIC. NO. 58640



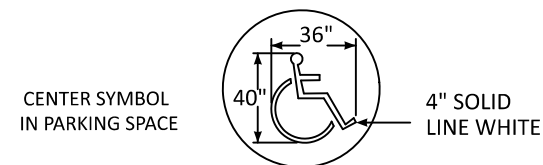
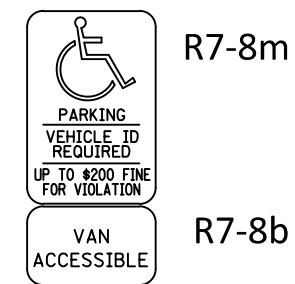
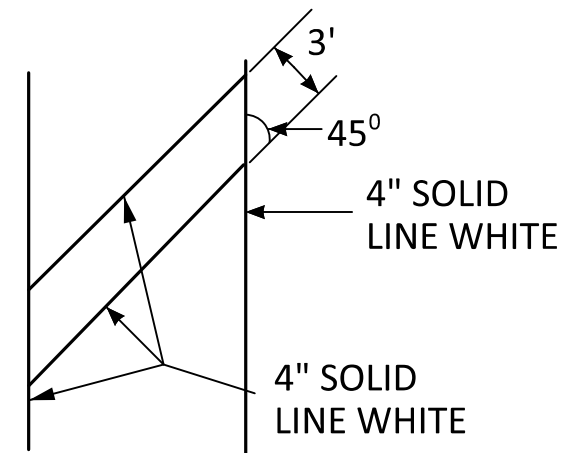
DAKOTA COUNTY PARKS AND CITY OF LAKEVILLE  
 LAKE MARION GREENWAY PROJECT  
 CITY OF LAKEVILLE, MINNESOTA

SIGNING & PAVEMENT MARKING PLAN  
 SIGNING TABULATION

# ACCESSIBLE PARKING FOR PARKING LOTS



## TYPICAL MARKINGS FOR ACCESS AISLE



DATE: 27-MAR-2026  
FILENAME: Projects\Minnesota\027938-000\05\_Discipline\Roadway\03\_Sheets\027938-000-410tdt-plan-001

DRAWN BY: DM  
DESIGNED BY: MF  
CHECKED BY: MF

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

SIGNATURE: *Mallori Fitzpatrick*  
PRINTED NAME: MALLORI FITZPATRICK, PE  
DATE: 3/27/2026 LIC. NO. 58640

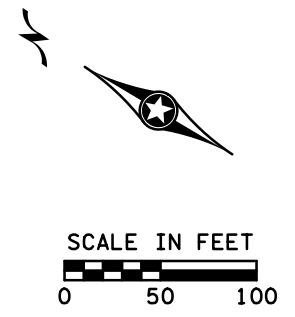
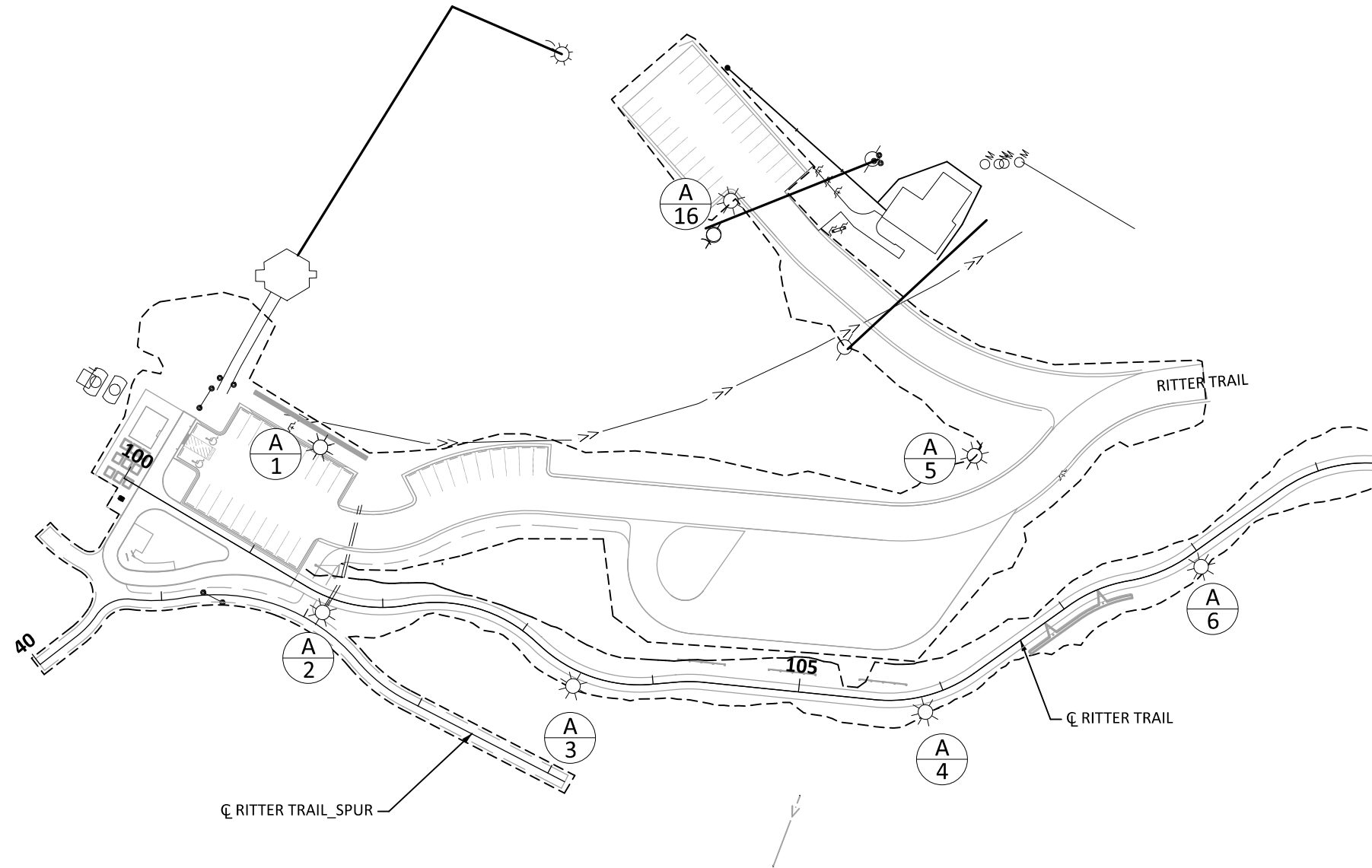


DAKOTA COUNTY PARKS AND CITY OF LAKEVILLE  
LAKE MARION GREENWAY PROJECT  
CITY OF LAKEVILLE, MINNESOTA




**SIGNING & PAVEMENT MARKING PLAN**  
ACCESSIBLE PARKING MARKINGS DETAIL

Sheet No. 54 of 74 Sheets

DATE: 27-MAR-2026  
 FILENAME: Projects\Minnesota\027938-000\05\_Discipline\Roadway\03\_Sheets\027938-000-415\lit-plan-001



**LIGHTING LEGEND**

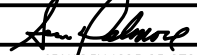
-  LIGHTING UNIT (BY OTHERS)
-  LIGHTING SUBSET  
LIGHTING UNIT #
-  2" NON-METALLIC CONDUIT

**NOTES**

CONTRACTOR SHALL COORDINATE WITH ELECTRICAL UTILITY REGARDING LIGHTING SYSTEM INSTALLATION  
 ALL CONDUIT SHALL INCLUDE #14 TRACER WIRE AND PULL CORD  
 CAP EACH CONDUIT END WITH A STEEL CAP FOR FUTURE LOCATING

DRAWN BY: DS  
 DESIGNED BY: ES  
 CHECKED BY: SD

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

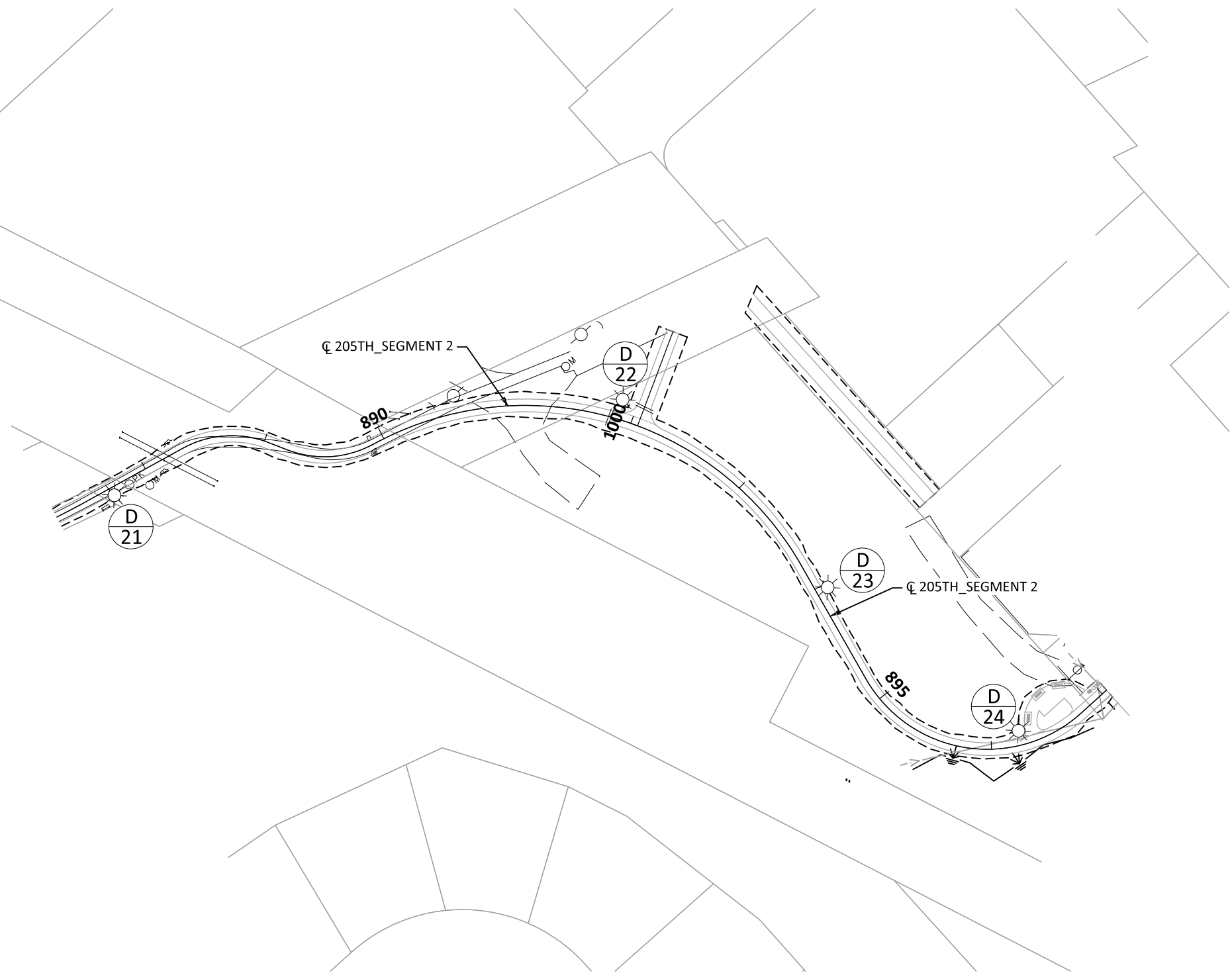
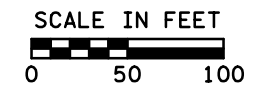
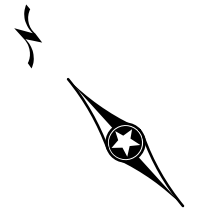
SIGNATURE:   
 PRINTED NAME: SEAN DELMORE, PE, PTOE  
 DATE: 3/27/2026 LIC. NO. 40945






DAKOTA COUNTY PARKS AND CITY OF LAKEVILLE  
 LAKE MARION GREENWAY PROJECT  
 CITY OF LAKEVILLE, MINNESOTA

**LIGHTING PLAN**  
 RITTER TRAIL

Sheet No. 55 of 74 Sheets



**LIGHTING LEGEND**

-  LIGHTING UNIT (BY OTHERS)
-  LIGHTING SUBSET  
LIGHTING UNIT #
-  2" NON-METALLIC CONDUIT

**NOTES**

CONTRACTOR SHALL COORDINATE WITH ELECTRICAL UTILITY REGARDING LIGHTING SYSTEM INSTALLATION

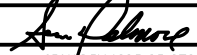
ALL CONDUIT SHALL INCLUDE #14 TRACER WIRE AND PULL CORD

CAP EACH CONDUIT END WITH A STEEL CAP FOR FUTURE LOCATING

DATE: 27-MAR-2026  
FILENAME: Projects\Minnesota\027938-000\05\_Discipline\Roadway\03\_Sheets\027938-000-415\lit-plan-001

DRAWN BY: DS  
DESIGNED BY: ES  
CHECKED BY: SD

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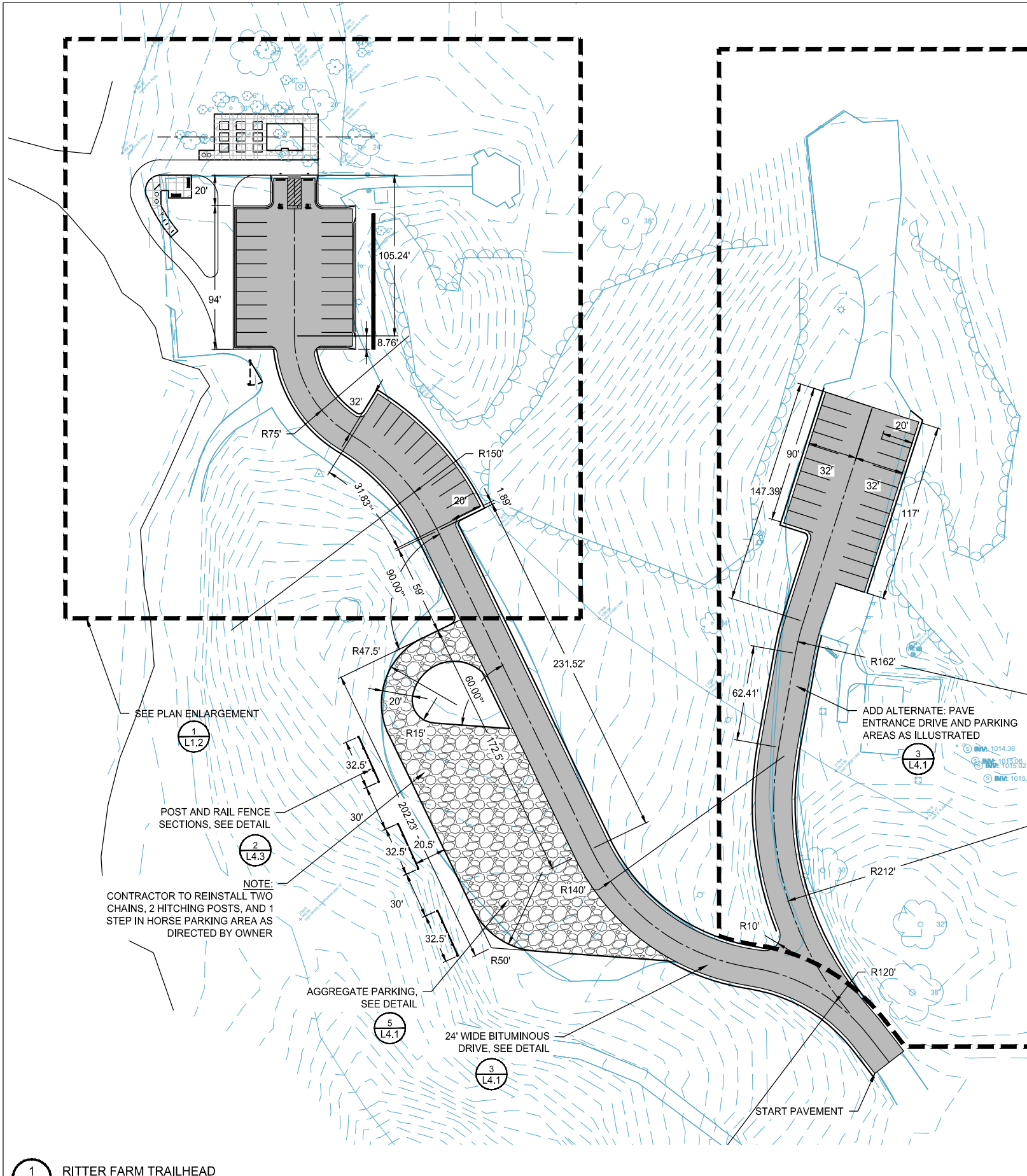
SIGNATURE:   
PRINTED NAME: SEAN DELMORE, PE, PTOE  
DATE: 3/27/2026 LIC. NO. 40945



DAKOTA COUNTY PARKS AND CITY OF LAKEVILLE  
LAKE MARION GREENWAY PROJECT  
CITY OF LAKEVILLE, MINNESOTA

**LIGHTING PLAN**  
205TH ST

DATE: 9/22/2025 8:39 AM  
 FILENAME: M:\027938-000\CAD\03\_Sheets\027938-000-LP-PLAN-SITE.dwg



**TRAILHEAD & GATEWAY PROJECT NOTES**

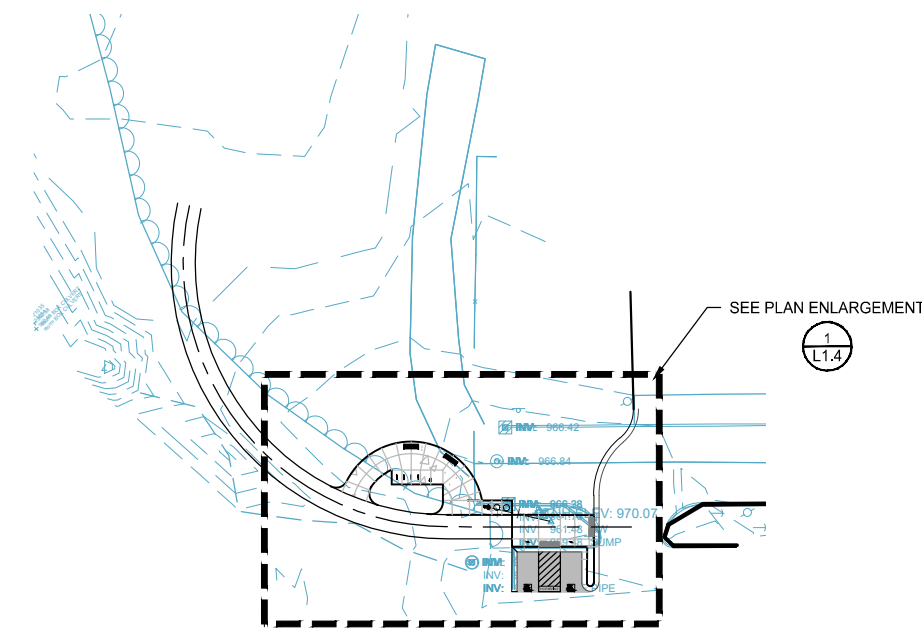
1. CONDUCT ALL WORK IN ACCORDANCE WITH THE PLAN NOTES, CURRENT MINNESOTA DEPARTMENT OF TRANSPORTATION (MNDOT) STANDARD SPECIFICATIONS, AND CITY OF LAKEVILLE STANDARD CONSTRUCTION DETAILS AND SPECIFICATIONS.
2. IMMEDIATELY REPORT ANY AND ALL DISCREPANCIES FOUND ON THE PROJECT SITE IN CONTRAST TO THE PLANS OR DIFFERING SITE CONDITIONS TO THE OWNER'S REPRESENTATIVE.
3. CONTRACTOR SHALL FIELD VERIFY EXACT LOCATION AND DEPTH OF ALL UTILITIES PRIOR TO DEMOLITION OR CONSTRUCTION ACTIVITIES.
4. CONTRACTOR IS RESPONSIBLE FOR ALL FABRICATION, ASSEMBLY, AND INSTALLATION OF SITE STRUCTURES, FURNISHINGS, AND AMENITIES AS NOTED, INCLUDING ALL RELATED FOOTINGS, FOUNDATIONS, HARDWARE, CONNECTIONS, AND ANY RELATED PAINTING AND SEALING AS NECESSARY, IN ACCORDANCE TO MANUFACTURER'S SPECIFICATIONS AND INDUSTRY STANDARDS.
5. ALL PRODUCTS LISTED SHALL NOT BE SUBSTITUTED WITHOUT WRITTEN APPROVAL. SUBSTITUTION REQUESTS MUST BE RECEIVED NOT LESS THAN 7 DAYS PRIOR TO BID OPENING DATE. REQUESTS MUST INCLUDE ALL TECHNICAL DATA FOR COMPARISON.
6. SITE FURNISHINGS AND STRUCTURES TO BE PROVIDED, FABRICATED, AND INSTALLED BY THE CONTRACTOR UNLESS NOTED OTHERWISE.
7. SITE FURNISHINGS PROVIDED BY THE OWNER, TO BE FABRICATED AND INSTALLED BY THE CONTRACTOR, TO INCLUDE:  
 PICNIC TABLES - 9  
 TRASH RECEPTACLES - 3  
 RECYCLING RECEPTACLES - 3  
 BENCHES - 5

**LEGEND**

- CONSTRUCTION LIMITS
- ☼ EXISTING DECIDUOUS TREE
- ☼ EXISTING CONIFER TREE
- LAYOUT CONTROL POINT
- CENTERLINE
- BITUMINOUS DRIVE & PARKING PAVEMENT
- ▨ AGGREGATE DRIVE & PARKING PAVEMENT
- ▨ 6" THICK CONCRETE WALK

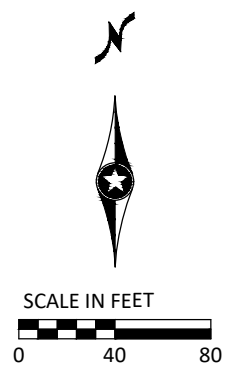
ADD ALTERNATE PAVEMENT AREA

ADD ALTERNATE: PAVE ENTRANCE DRIVE AND PARKING AREAS AS ILLUSTRATED



1 L1.1 RITTER FARM TRAILHEAD

2 L1.1 DOWNTOWN LAKEVILLE GATEWAY



DRAWN BY: LJ	I HEREBY CERTIFY THAT THIS SHEET WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL LANDSCAPE ARCHITECT UNDER THE LAWS OF THE STATE OF MINNESOTA.	SIGNATURE: <i>Candace Amberg</i>
DESIGNED BY: CA		PRINTED NAME: CANDACE AMBERG, PLA
CHECKED BY: CA		DATE: 03/27/2026 LIC. NO. 40646

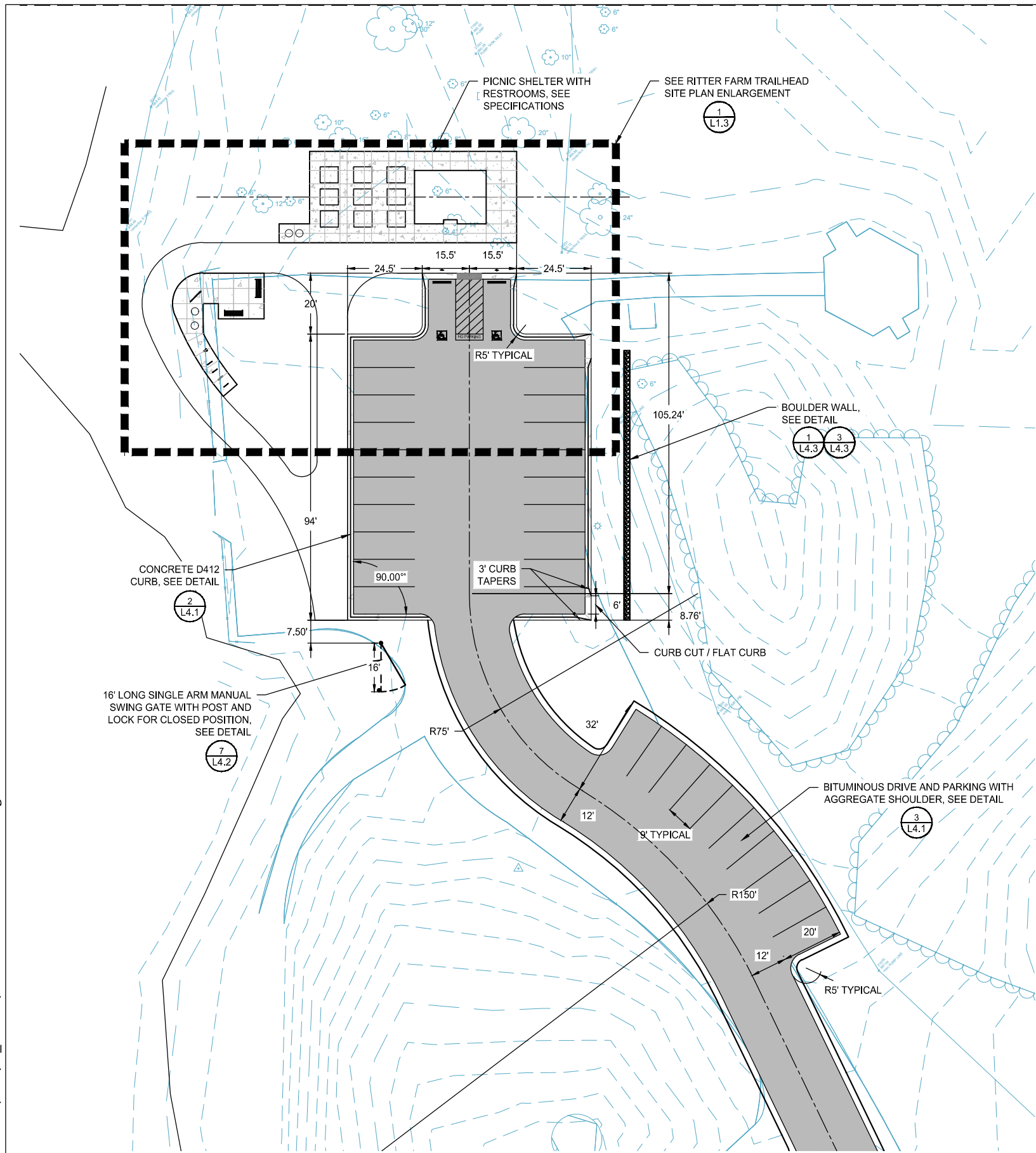


**DAKOTA COUNTY HIGHWAY DEPARTMENT**  
 LAKE MARION GREENWAY PROJECT  
 CITY OF LAKEVILLE, MINNESOTA

OVERALL TRAILHEAD SITE PLAN

S.A.P. XXX-XXX-XXX  
 Sheet No. L1.1 of 74 Sheets

DATE: 9/22/2025 8:39 AM  
 FILENAME: M:\027938-000\CAD\03\_Sheets\027938-000-LP-PLAN-SITE.dwg



**LEGEND**

- CONSTRUCTION LIMITS
- EXISTING DECIDUOUS TREE
- EXISTING CONIFER TREE
- LAYOUT CONTROL POINT
- CENTERLINE
- BITUMINOUS DRIVE & PARKING PAVEMENT
- AGGREGATE DRIVE & PARKING PAVEMENT
- 6" THICK CONCRETE WALK

1  
L1.2 RITTER FARM TRAILHEAD



DRAWN BY: LJD	I HEREBY CERTIFY THAT THIS SHEET WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL LANDSCAPE ARCHITECT UNDER THE LAWS OF THE STATE OF MINNESOTA.	SIGNATURE:
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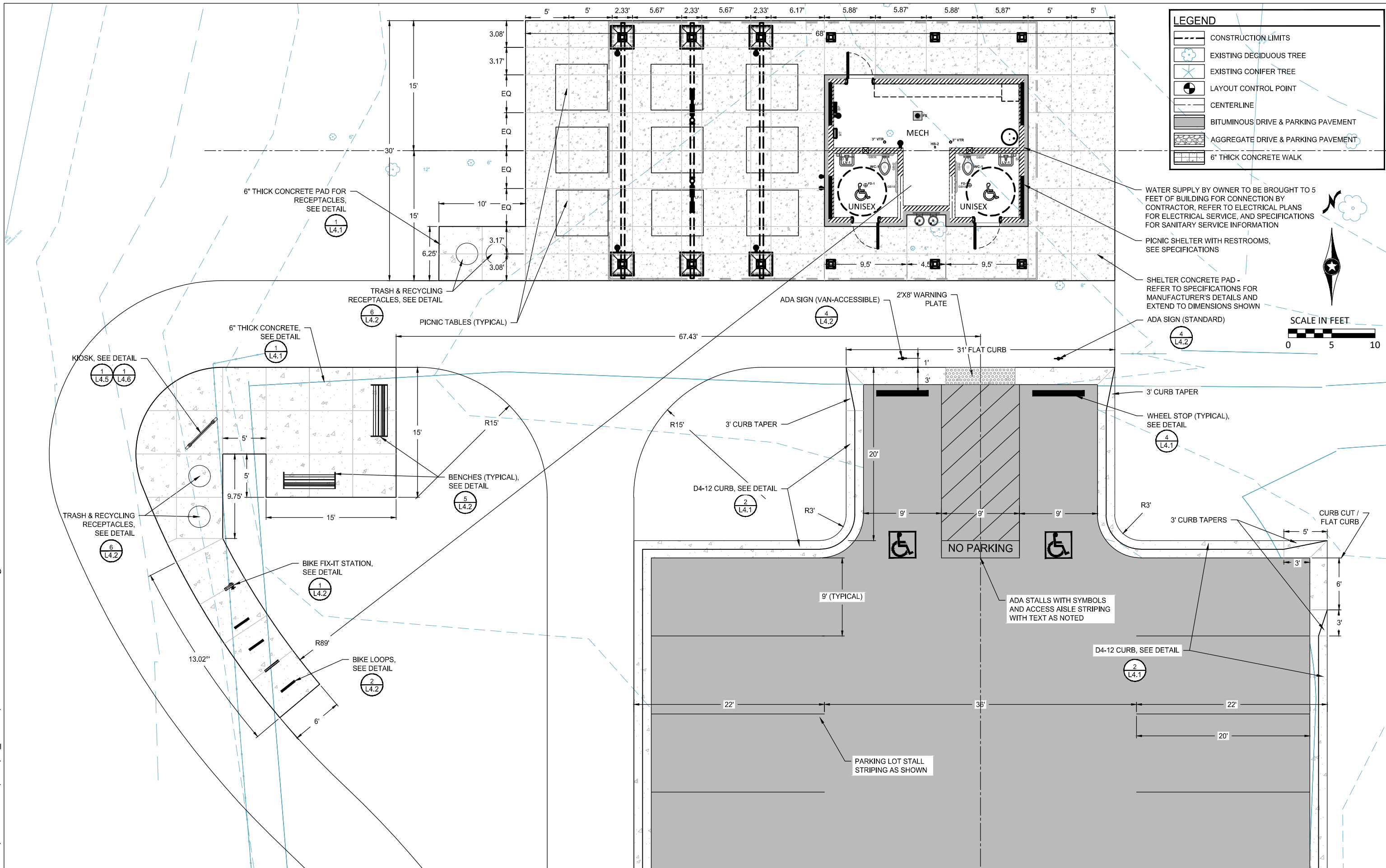


DAKOTA COUNTY HIGHWAY DEPARTMENT  
 LAKE MARION GREENWAY PROJECT  
 CITY OF LAKEVILLE, MINNESOTA

RITTER FARM TRAILHEAD ENLARGEMENT SITE PLAN

S.A.P. XXX-XXX-XXX  
 Sheet No. L1.2 of 74 Sheets

DATE: 9/22/2025 8:39 AM  
 FILENAME: M:\027938-000\CAD\03\_Sheets\027938-000-LP-PLAN-SITE.dwg



**LEGEND**

- CONSTRUCTION LIMITS
- EXISTING DECIDUOUS TREE
- EXISTING CONIFER TREE
- LAYOUT CONTROL POINT
- CENTERLINE
- BITUMINOUS DRIVE & PARKING PAVEMENT
- AGGREGATE DRIVE & PARKING PAVEMENT
- 6" THICK CONCRETE WALK

WATER SUPPLY BY OWNER TO BE BROUGHT TO 5 FEET OF BUILDING FOR CONNECTION BY CONTRACTOR. REFER TO ELECTRICAL PLANS FOR ELECTRICAL SERVICE, AND SPECIFICATIONS FOR SANITARY SERVICE INFORMATION

PICNIC SHELTER WITH RESTROOMS, SEE SPECIFICATIONS

SHELTER CONCRETE PAD - REFER TO SPECIFICATIONS FOR MANUFACTURER'S DETAILS AND EXTEND TO DIMENSIONS SHOWN

ADA SIGN (VAN-ACCESSIBLE)

ADA SIGN (STANDARD)

SCALE IN FEET  
 0 5 10

DRAWN BY: LJD  
 DESIGNED BY: CA  
 CHECKED BY: CA

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

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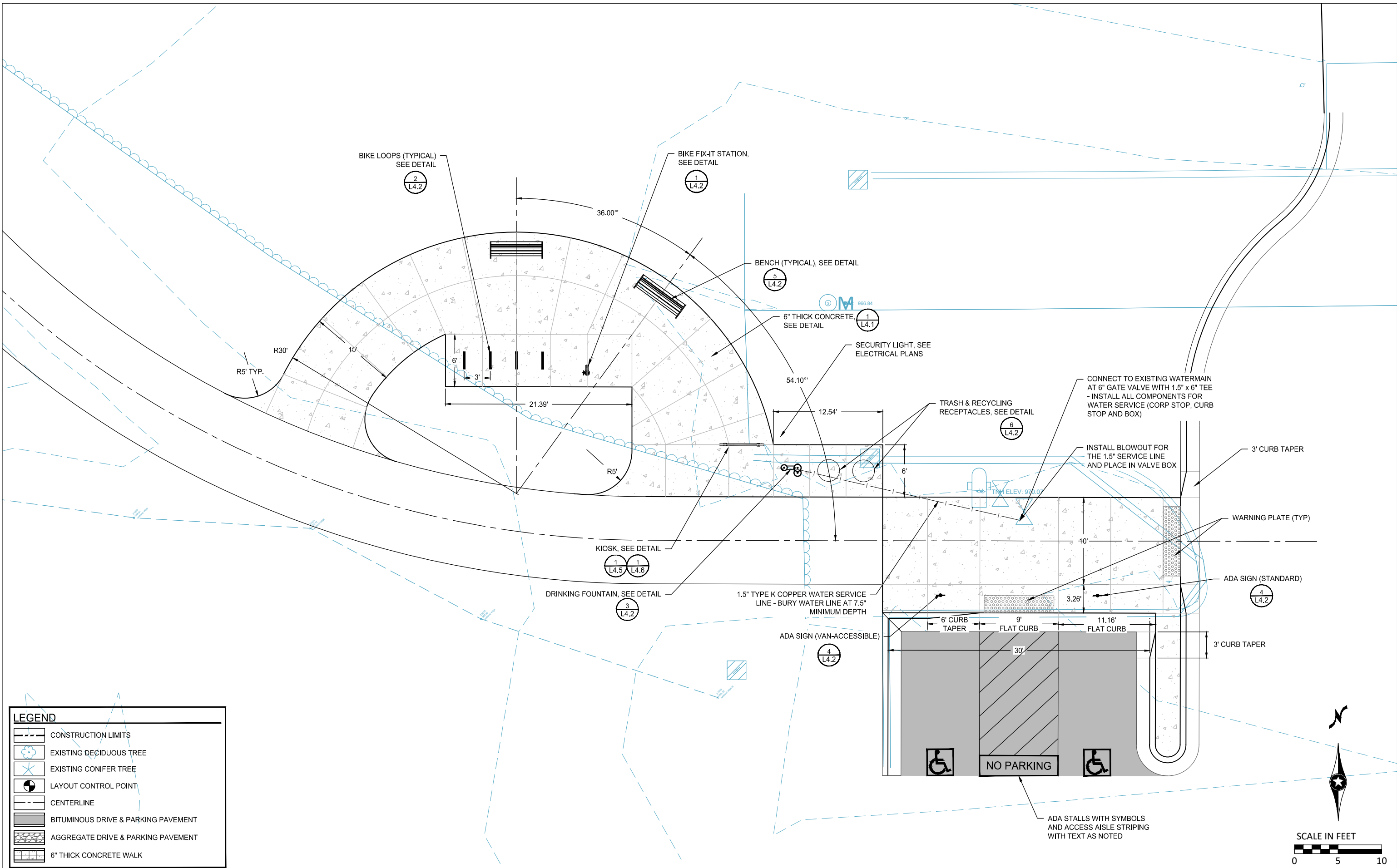


**DAKOTA COUNTY HIGHWAY DEPARTMENT**  
**LAKE MARION GREENWAY PROJECT**  
 CITY OF LAKEVILLE, MINNESOTA

**ITTER FARM TRAILHEAD ENLARGEMENT SITE PLAN**

S. A. P. XXX-XXX-XXX  
 Sheet No. L1.3 of 74 Sheets

DATE: 9/22/2025 8:39 AM  
 FILENAME: M:\027938-000\CAD\03\_Sheets\027938-000-LP-PLAN-SITE.dwg



LEGEND	
	CONSTRUCTION LIMITS
	EXISTING DECIDUOUS TREE
	EXISTING CONIFER TREE
	LAYOUT CONTROL POINT
	CENTERLINE
	BITUMINOUS DRIVE & PARKING PAVEMENT
	AGGREGATE DRIVE & PARKING PAVEMENT
	6" THICK CONCRETE WALK

DRAWN BY: LJD	I HEREBY CERTIFY THAT THIS SHEET WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL LANDSCAPE ARCHITECT UNDER THE LAWS OF THE STATE OF MINNESOTA.	SIGNATURE:
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CHECKED BY: CA		DATE: 03/27/2026 LIC. NO. 40646



**DAKOTA COUNTY HIGHWAY DEPARTMENT**  
**LAKE MARION GREENWAY PROJECT**  
 CITY OF LAKEVILLE, MINNESOTA

**DOWNTOWN GATEWAY ENLARGEMENT SITE PLAN**

S.A.P. XXX-XXX-XXX  
 Sheet No. L1.4 of 74 Sheets

1500 GALLON TWO-COMPARTMENT SEPTIC TANK

300 GALLON HDPE SEPTIC PUMP TANK

SEE PLAN ENLARGEMENT

ENSURE A MINIMUM 10-FOOT HORIZONTAL AND 18-INCH VERTICAL SEPARATION OF WATER SERVICE LINE FROM SANITARY LINES - CITY TO PROVIDE OFFSET OVER SANITARY LINE WITH INSULATION AS NECESSARY TO ENSURE WATER IS ABOVE THE SANITARY

4" PVC SANITARY LINE FROM BUILDING INTO SEPTIC TANK AT 2% MINIMUM SLOPE - CONFIRM CONNECTION POINTS AT TIME OF CONSTRUCTION (REFER ALSO TO SPECS)

RUN FIBER OPTIC CABLE FROM THE EXISTING ELC BUILDING TO THE PROPOSED SHELTER STORAGE ROOM (COORDINATE WITH OWNER)

DIRECTIONALLY BORE 4" HDPE SANITARY FORCEMAIN LINE (~710 LF) FROM PUMP TANK TO CONNECT INTO SANITARY MANHOLE - REFER TO SPECS FOR ADDITIONAL INFORMATION

**UTILITIES NOTE:**  
REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION ON THE SANITARY DESIGN & CALCULATIONS DEVELOPED BY OTHERS BUT REFERENCED ON THIS PLAN

LEGEND	
	CONSTRUCTION LIMITS
	EXISTING CONTOUR
	EXISTING DECIDUOUS TREE
	EXISTING CONIFER TREE
	PROPOSED CONTOUR
	PROPOSED SPOT ELEVATION
	HIGH POINT
	LOW POINT
	INVERT ELEVATION
	TOP OF CURB
	BOTTOM OF CURB
	CROSS SLOPE DIRECTION
	NON-PERFORATED DRAINTILE
	PERFORATED DRAINTILE

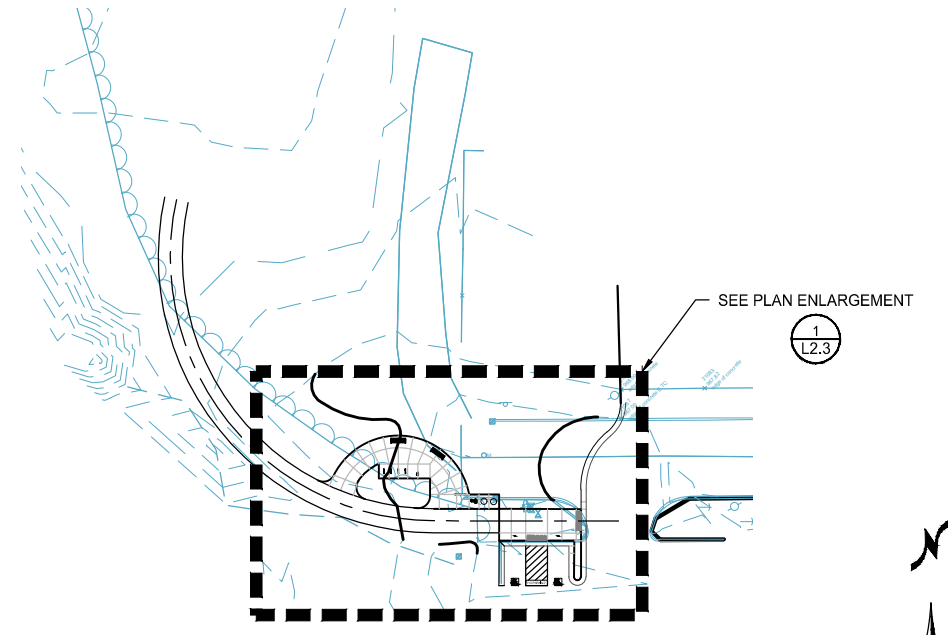
CITY TO PROVIDE A CURB STOP AND WATER SERVICE LINE (~490 LF) AT A MINIMUM 7.5' DEPTH FROM THE EXISTING WELL TO WITHIN 5 FEET OUTSIDE OF THE PROPOSED BUILDING PAD/WALK FOR CONNECTION BY THE CONTRACTOR - VERIFY CONNECTION POINT AT TIME OF CONSTRUCTION

ADD ALTERNATE PAVEMENT AREA

CONNECT INTO EXISTING 4" SANITARY LINE CONNECTED TO FIRST SEPTIC TANK. CONFIRM CONNECTION POINT AND INVERT ELEVATION AT TIME OF CONSTRUCTION (~1014.50)

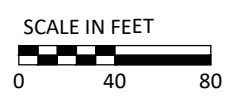
APPROX. 50 LF OF 4" PVC SANITARY PIPE @ 2% MINIMUM SLOPE (GRAVITY FLOW)

48" SANITARY MANHOLE PER STANDARD DETAIL PLATE LV-SS-1 RIM: 2019.0 INVERTS TO BE CONFIRMED AT TIME OF CONSTRUCTION



1 L2.1 RITTER FARM TRAILHEAD

2 L2.1 DOWNTOWN LAKEVILLE GATEWAY



DATE: 9/22/2025 8:39 AM  
FILENAME: M:\027938-000\CAD\03\_Sheets\027938-000-LP-PLAN-GRAD.dwg

DRAWN BY: LD	I HEREBY CERTIFY THAT THIS SHEET WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL LANDSCAPE ARCHITECT UNDER THE LAWS OF THE STATE OF MINNESOTA.	SIGNATURE:
DESIGNED BY: CA		PRINTED NAME: CANDACE AMBERG, PLA
CHECKED BY: CA		DATE: 03/27/2026 LIC. NO.: 40646



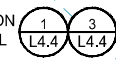
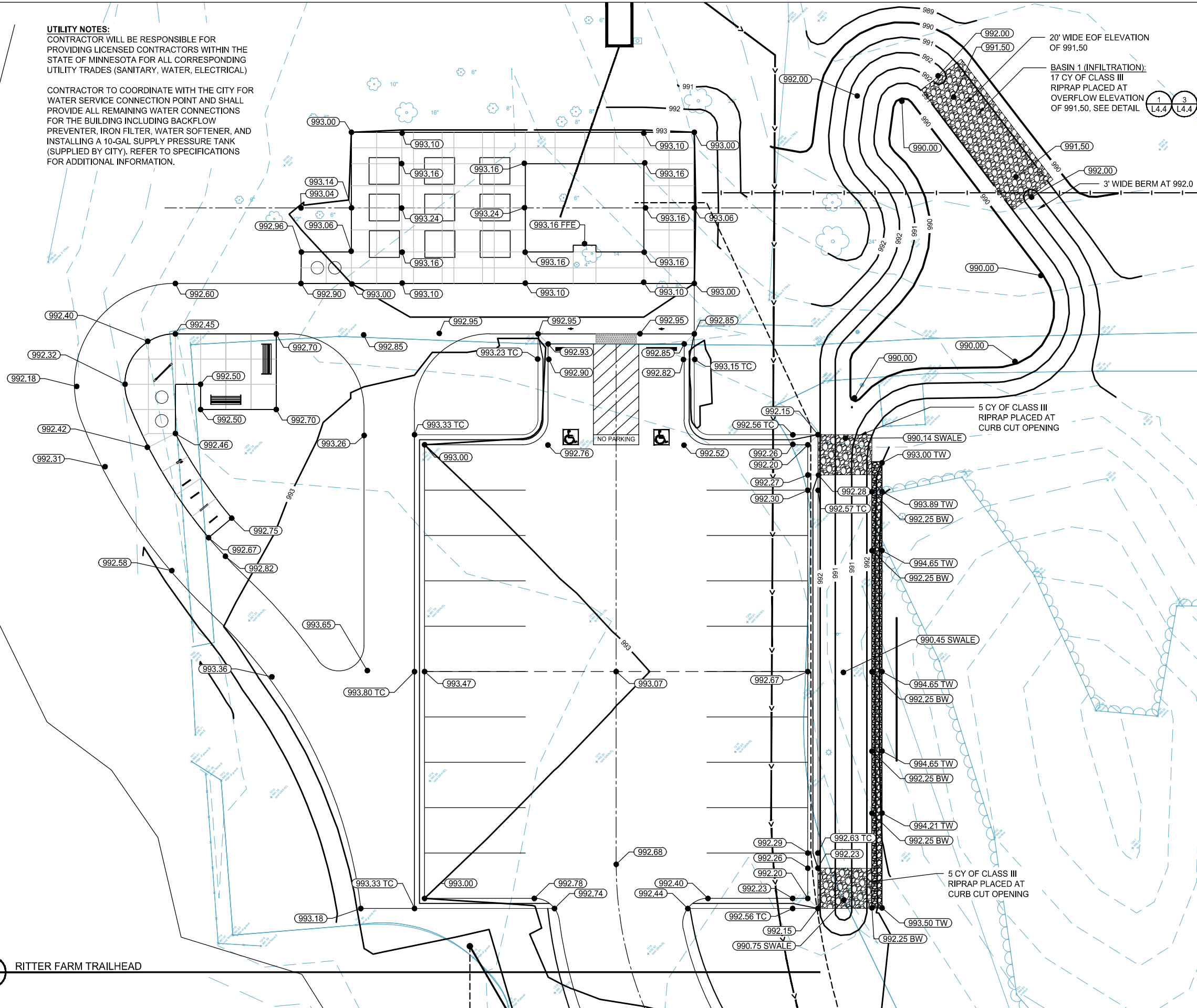
**DAKOTA COUNTY HIGHWAY DEPARTMENT**  
LAKE MARION GREENWAY PROJECT  
CITY OF LAKEVILLE, MINNESOTA

OVERALL TRAILHEAD GRADING & UTILITY PLAN

S. A. P. XXX-XXX-XXX  
Sheet No. L2.1 of 74 Sheets

**UTILITY NOTES:**  
 CONTRACTOR WILL BE RESPONSIBLE FOR PROVIDING LICENSED CONTRACTORS WITHIN THE STATE OF MINNESOTA FOR ALL CORRESPONDING UTILITY TRADES (SANITARY, WATER, ELECTRICAL)

CONTRACTOR TO COORDINATE WITH THE CITY FOR WATER SERVICE CONNECTION POINT AND SHALL PROVIDE ALL REMAINING WATER CONNECTIONS FOR THE BUILDING INCLUDING BACKFLOW PREVENTER, IRON FILTER, WATER SOFTENER, AND INSTALLING A 10-GAL SUPPLY PRESSURE TANK (SUPPLIED BY CITY). REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION.



DATE: 9/22/2025 8:39 AM  
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1  
 L2.2  
 RITTER FARM TRAILHEAD



DRAWN BY: LD	I HEREBY CERTIFY THAT THIS SHEET WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL LANDSCAPE ARCHITECT UNDER THE LAWS OF THE STATE OF MINNESOTA.	SIGNATURE:
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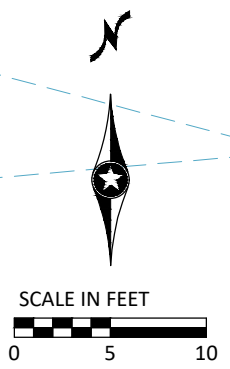
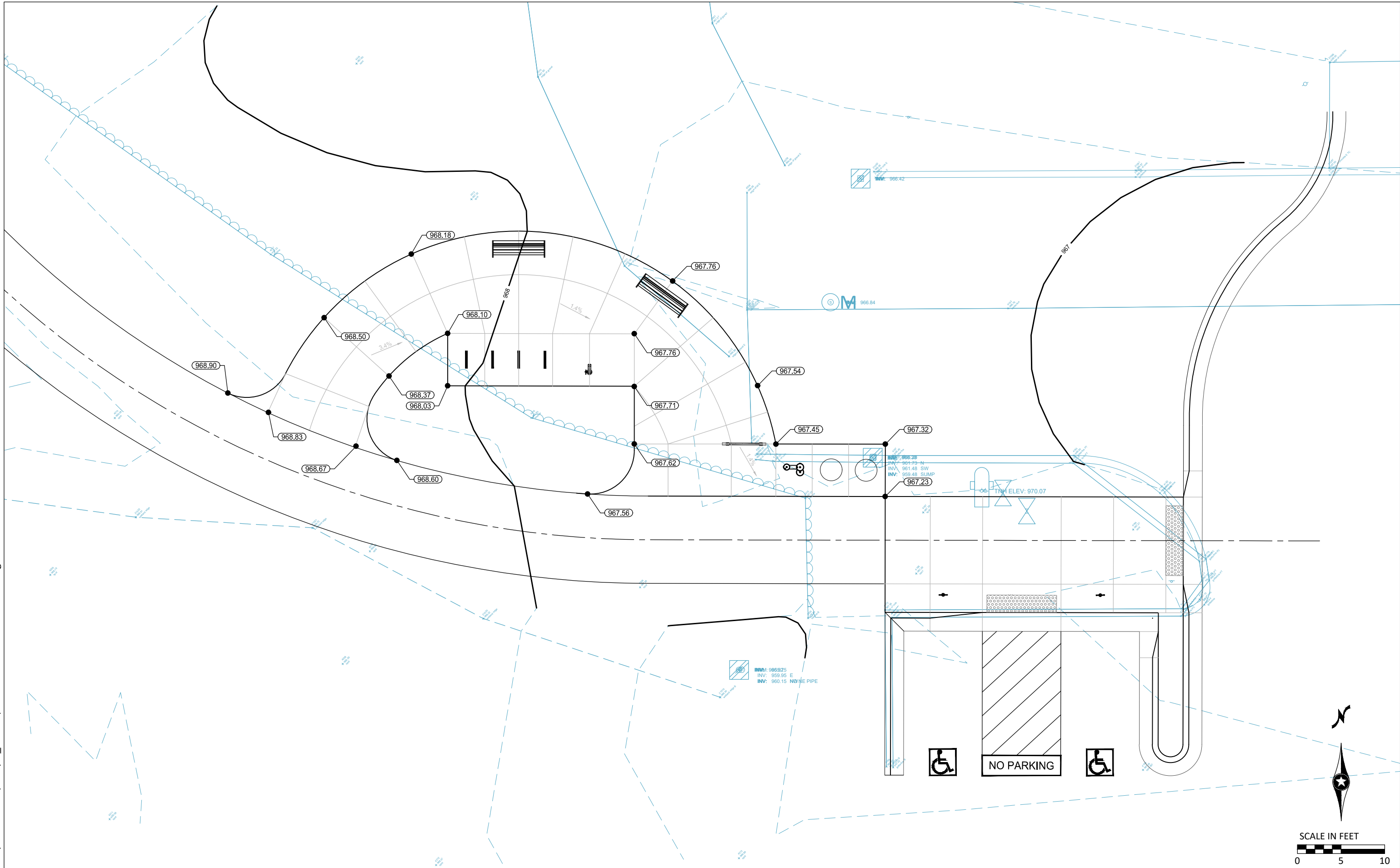


**DAKOTA COUNTY HIGHWAY DEPARTMENT**  
 LAKE MARION GREENWAY PROJECT  
 CITY OF LAKEVILLE, MINNESOTA

RITTER FARM BASIN GRADING

S.A.P. XXX-XXX-XXX  
 Sheet No. L2.2 of 74 Sheets

DATE: 9/22/2025 8:39 AM  
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DRAWN BY: LJD  
 DESIGNED BY: CA  
 CHECKED BY: CA

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SIGNATURE: *[Signature]*  
 PRINTED NAME: CANDACE AMBERG, PLA  
 DATE: 03/27/2026 LIC. NO. 40646

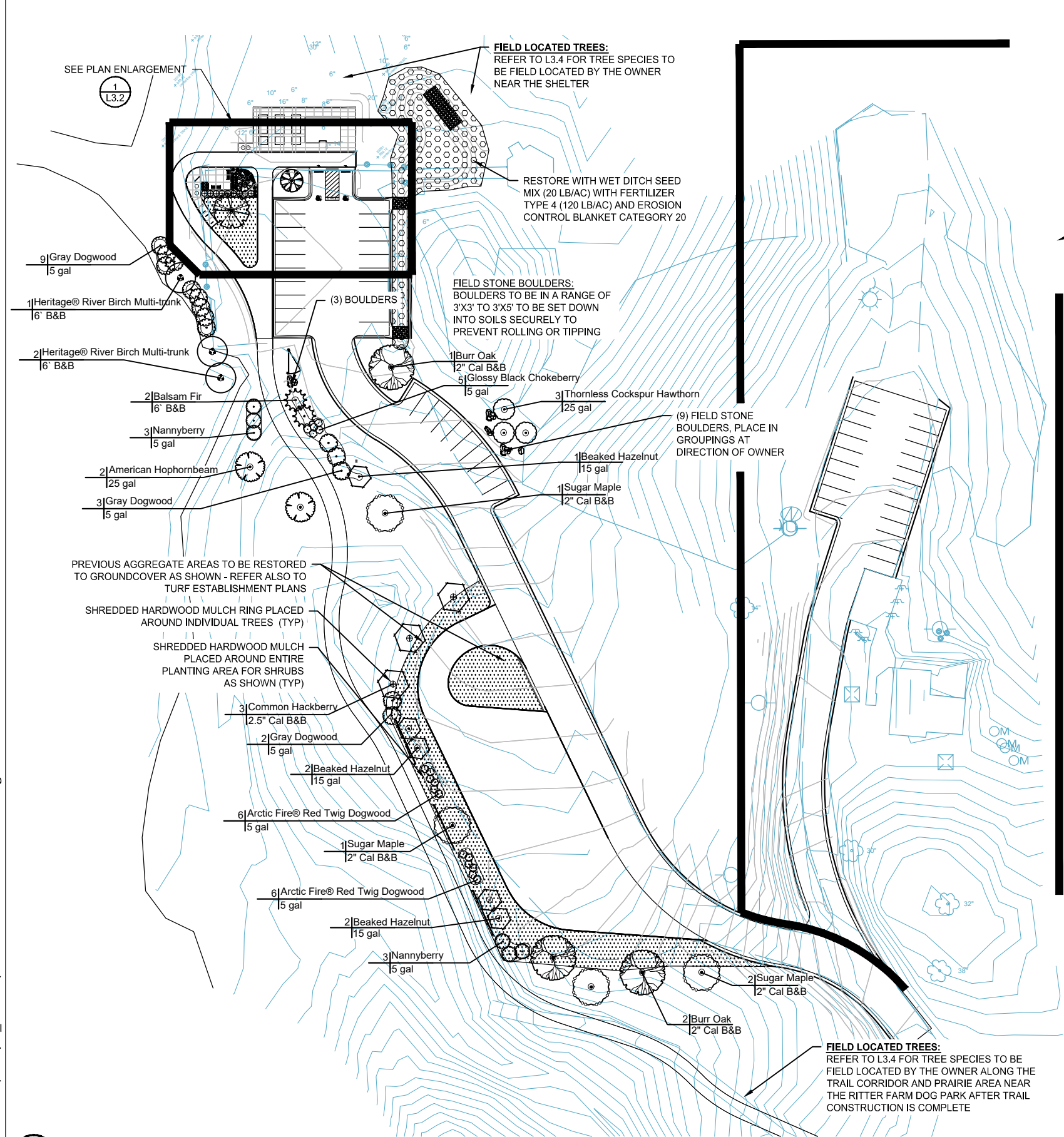


DAKOTA COUNTY HIGHWAY DEPARTMENT  
 LAKE MARION GREENWAY PROJECT  
 CITY OF LAKEVILLE, MINNESOTA

DOWNTOWN GATEWAY GRADING PLAN

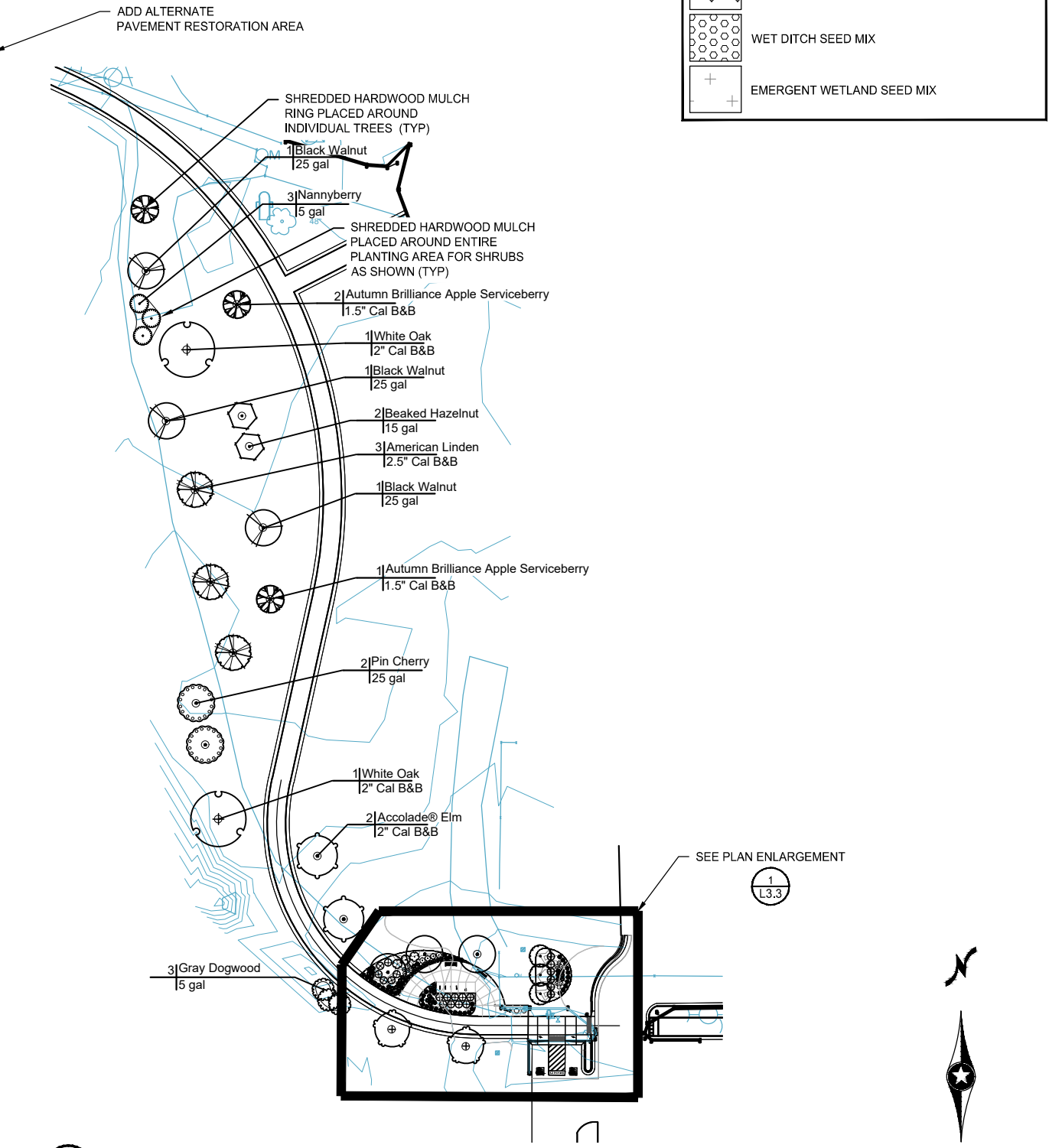
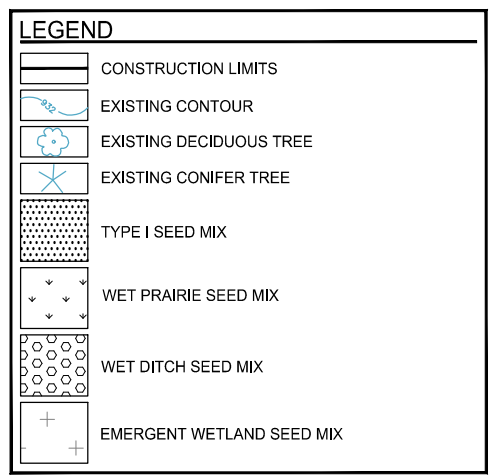
S.A.P. XXX-XXX-XXX  
 Sheet No. L2.3 of 74 Sheets

DATE: 9/22/2025 8:39 AM  
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**RESTORATION NOTES:**

- ALL EXISTING GRAVEL AREAS TO BE CONVERTED TO GREEN SPACE SHALL HAVE ALL AGGREGATE REMOVED, ALL SUBSOILS SHALL BE TILLED / RIPPED TO A MINIMUM DEPTH OF 12 INCHES, THEN TOP WITH A MINIMUM OF A 6 INCH DEPTH OF IMPORTED TOPSOIL PRIOR TO SEEDING. REFER ALSO TO OVERALL EROSION CONTROL AND TURF ESTABLISHMENT PLANS FOR ADDITIONAL INFORMATION.



1 L3.1 RITTER FARM TRAILHEAD

2 L3.2 DOWNTOWN LAKEVILLE GATEWAY



DRAWN BY: LD  
 DESIGNED BY: CA  
 CHECKED BY: CA

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

SIGNATURE: *Candace Amberg*  
 PRINTED NAME: CANDACE AMBERG, PLA  
 DATE: 03/27/2026 LIC. NO.: 40646



DAKOTA COUNTY HIGHWAY DEPARTMENT  
 LAKE MARION GREENWAY PROJECT  
 CITY OF LAKEVILLE, MINNESOTA


LANDSCAPE PLAN - OVERALL

S.A.P. XXX-XXX-XXX  
 Sheet No. L3.1 of 74 Sheets

DATE: 9/22/2025 8:39 AM  
 FILENAME: M:\027938-000\CAD\03\_Sheets\027938-000-LP-PLAN-REST.dwg

DRAWN BY: LJD  
 DESIGNED BY: CA  
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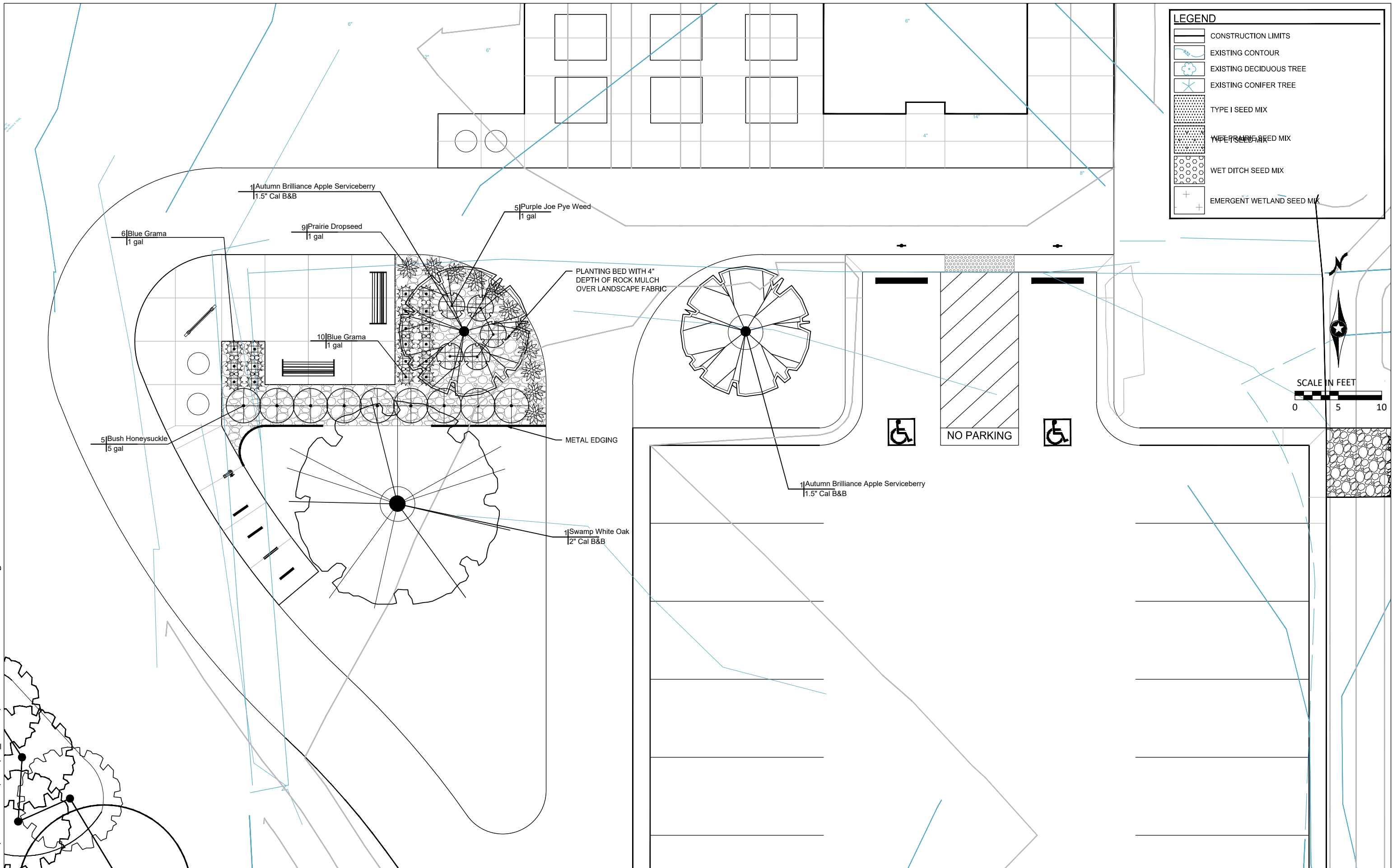
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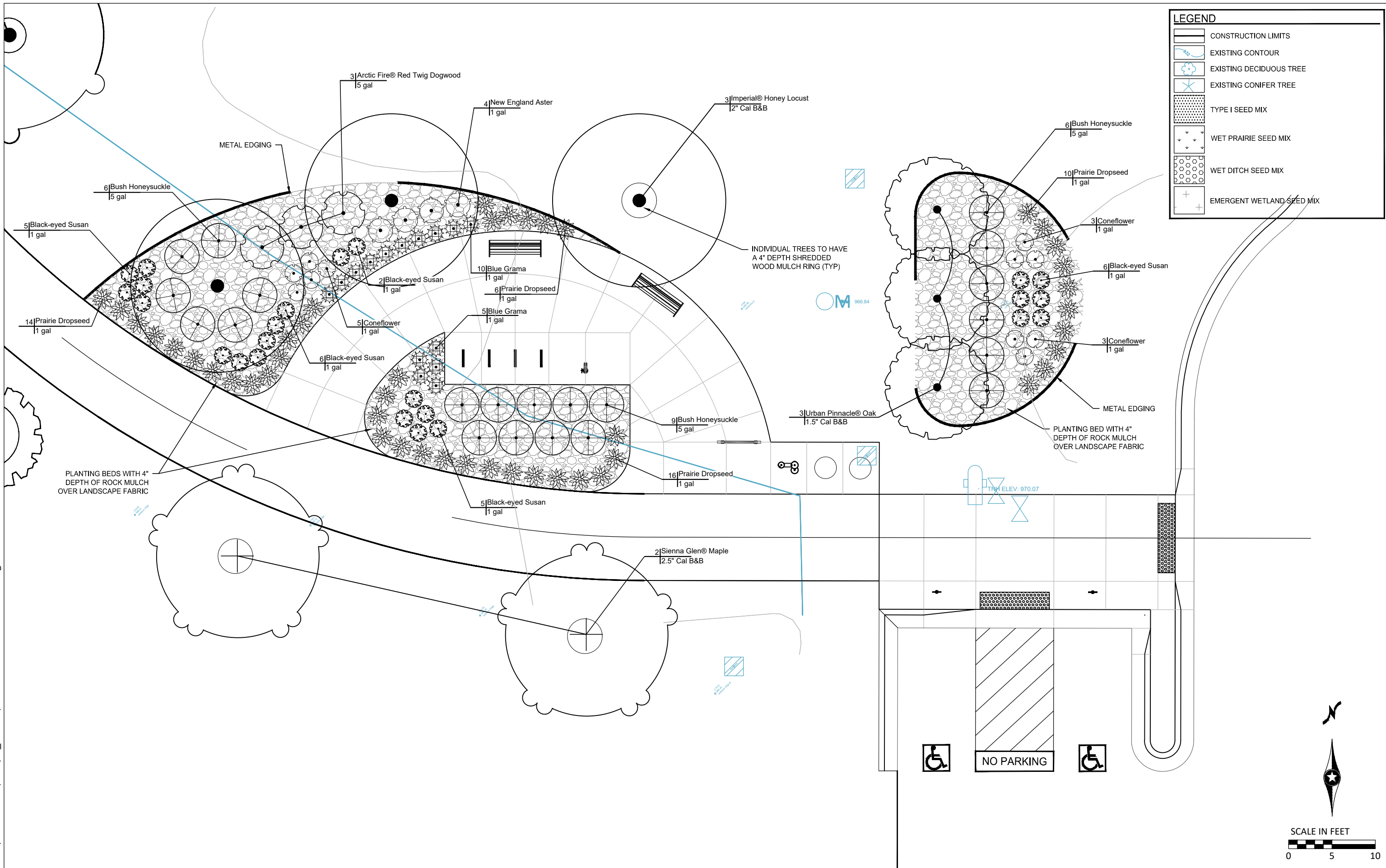
DAKOTA COUNTY HIGHWAY DEPARTMENT  
 LAKE MARION GREENWAY PROJECT  
 CITY OF LAKEVILLE, MINNESOTA

RITTER FARM TRAILHEAD LANDSCAPE PLAN

S.A.P. XXX-XXX-XXX  
 Sheet No. L3.2 of 74 Sheets



DATE: 9/22/2025 8:39 AM  
 FILENAME: M:\027938-000\CAD\03\_Sheets\027938-000-LP-PLAN-REST.dwg



LEGEND	
	CONSTRUCTION LIMITS
	EXISTING CONTOUR
	EXISTING DECIDUOUS TREE
	EXISTING CONIFER TREE
	TYPE I SEED MIX
	WET PRAIRIE SEED MIX
	WET DITCH SEED MIX
	EMERGENT WETLAND SEED MIX

DRAWN BY: LJD	I HEREBY CERTIFY THAT THIS SHEET WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL LANDSCAPE ARCHITECT UNDER THE LAWS OF THE STATE OF MINNESOTA.	SIGNATURE:
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DAKOTA COUNTY HIGHWAY DEPARTMENT  
 LAKE MARION GREENWAY PROJECT  
 CITY OF LAKEVILLE, MINNESOTA

DOWNTOWN GATEWAY LANDSCAPE PLAN

S.A.P. XXX-XXX-XXX  
 Sheet No. L3.3 of 74 Sheets



PLANT SCHEDULE RITTER FARM

SYMBOL	BOTANICAL / COMMON NAME	CONT	QTY
<b>TREES</b>			
	Acer saccharum / Sugar Maple	2" Cal B&B	4
	Amelanchier x grandiflora 'Autumn Brilliance' / Autumn Brilliance Apple Serviceberry	1.5" Cal B&B	2
	Betula nigra 'Cully Improved' / Heritage® River Birch Multi-trunk	6" B&B	3
	Celtis occidentalis / Common Hackberry	2.5" Cal B&B	3
	Corylus cornuta / Beaked Hazelnut	15 gal	5
	Crataegus crus-galli inermis / Thornless Cockspur Hawthorn	25 gal	3
	Ostrya virginiana / American Hophornbeam	25 gal	2
	Quercus bicolor / Swamp White Oak	2" Cal B&B	1
	Quercus macrocarpa / Burr Oak	2" Cal B&B	3
<b>EVERGREEN TREES</b>			
	Abies balsamea / Balsam Fir	6" B&B	2
<b>SHRUBS</b>			
	Aronia melanocarpa elata / Glossy Black Chokeberry	5 gal	5
	Cornus racemosa / Gray Dogwood	5 gal	14
	Cornus sericea 'Farrow' / Arctic Fire® Red Twig Dogwood	5 gal	12
	Diervilla lonicera / Bush Honeysuckle	5 gal	9
	Viburnum lentago / Nannyberry	5 gal	6
<b>ORNAMENTAL GRASSES</b>			
	Bouteloua gracilis / Blue Grama	1 gal	18
	Sporobolus heterolepis / Prairie Dropseed	1 gal	11
<b>PERENNIALS</b>			
	Eutrochium maculatum 'Atropurpureum' / Purple Joe Pye Weed	1 gal	5

PLANT SCHEDULE DOWNTOWN LAKEVILLE

SYMBOL	BOTANICAL / COMMON NAME	CONT	QTY
<b>TREES</b>			
	Acer x freemanii 'Sienna' / Sienna Glen® Maple	2.5" Cal B&B	2
	Amelanchier x grandiflora 'Autumn Brilliance' / Autumn Brilliance Apple Serviceberry	1.5" Cal B&B	3
	Corylus cornuta / Beaked Hazelnut	15 gal	2
	Gleditsia triacanthos inermis 'Impcole' / Imperial® Honey Locust	2" Cal B&B	3
	Juglans nigra / Black Walnut	25 gal	3
	Prunus pensylvanica / Pin Cherry	25 gal	2
	Quercus alba / White Oak	2" Cal B&B	2
	Quercus macrocarpa 'JFS-KW3' / Urban Pinnacle® Oak	1.5" Cal B&B	3
	Tilia americana / American Linden	2.5" Cal B&B	3
	Ulmus davidiana japonica 'Morton' / Accolade® Elm	2" Cal B&B	2
<b>SHRUBS</b>			
	Cornus racemosa / Gray Dogwood	5 gal	3
	Cornus sericea 'Farrow' / Arctic Fire® Red Twig Dogwood	5 gal	3
	Diervilla lonicera / Bush Honeysuckle	5 gal	21
	Viburnum lentago / Nannyberry	5 gal	3
<b>ORNAMENTAL GRASSES</b>			
	Bouteloua gracilis / Blue Grama	1 gal	15
	Sporobolus heterolepis / Prairie Dropseed	1 gal	46
<b>PERENNIALS</b>			
	Aster novae-angliae / New England Aster	1 gal	4
	Echinacea purpurea / Coneflower	1 gal	11
	Rudbeckia hirta / Black-eyed Susan	1 gal	24

**ADDITIONAL FIELD LOCATED TREES:**

FIELD LOCATED TREES NEAR RITTER SHELTER TO CONSIST OF:

- 3 - BUR OAK (Quercus macrocarpa) 2" cal B&B
- 3 - WHITE OAK (Quercus bicolor) 2" cal B&B
- 2 - BEAKED HAZELNUT (Corylus cornuta) 15-gal potted

FIELD LOCATED TREES AT RITTER PRAIRIE (NEAR DOG PARK) TO CONSIST OF:

- 3 - BUR OAK (Quercus macrocarpa) 1.5" cal B&B (may be bare root for spring 2027 planting)
- 3 - WHITE OAK (Quercus bicolor) 1.5" cal B&B (may be bare root for spring 2027 planting)
- 3 - BEAKED HAZELNUT (Corylus cornuta) 15-gal potted

FIELD LOCATED TREES ALONG TRAIL CORRIDOR TO CONSIST OF:

- 8 - SUGAR MAPLE (Acer saccharum) 2" cal B&B (may be bare root for spring 2027 planting)
- 20 - BUR OAK (Quercus macrocarpa) 1.5" cal B&B or potted (may be bare root for spring 2027 planting)
- 20 - WHITE OAK (Quercus bicolor) 1.5" cal B&B or potted (may be bare root for spring 2027 planting)
- 12 - AMERICAN LINDEN (Tilia americana) 2" cal B&B or potted (may be bare root for spring 2027 planting)
- 10 - BITTERNUT HICKORY (Carya cordiformis) 15-gal potted
- 10 - BEAKED HAZELNUT (Corylus cornuta) 15-gal potted
- 10 - IRONWOOD (Ostrya virginiana) 15-gal potted

**TRAILHEAD & GATEWAY PROJECT NOTES**

1. CONDUCT ALL WORK IN ACCORDANCE WITH THE PLAN NOTES, CURRENT MINNESOTA DEPARTMENT OF TRANSPORTATION (MNDOT) STANDARD SPECIFICATIONS, AND CITY OF LAKEVILLE STANDARD CONSTRUCTION DETAILS AND SPECIFICATIONS.
2. IMMEDIATELY REPORT ANY AND ALL DISCREPANCIES FOUND ON THE PROJECT SITE IN CONTRAST TO THE PLANS OR DIFFERING SITE CONDITIONS TO THE OWNER'S REPRESENTATIVE.
3. PROVIDE ALL PLANTS IN ACCORDANCE TO LISTED SCIENTIFIC SPECIES AND SIZES. REQUESTS FOR VARIANCES SHALL BE SUBMITTED TO THE OWNER FOR REVIEW AND WRITTEN APPROVAL PRIOR TO PLANTING OPERATIONS.
4. CONTRACTOR SHALL STAKE ALL PLANT MATERIALS FOR FIELD REVIEW WITH OWNER FOR APPROVAL OR ADJUSTMENTS PRIOR TO INSTALLATION.
5. CONTRACTOR TO INCLUDE FERTILIZER AT TIME OF PLANTING.
6. ALL PLANT MATERIALS SHALL INCLUDE A 2-YEAR WARRANTY / GUARANTEE. PLANTS WILL BE REVIEWED AT THE APPROXIMATE 1-YEAR TIMEFRAME WITH ALL DEAD OR UNACCEPTABLE PLANT MATERIALS TO BE REPLACED, AT OWNER'S DIRECTION, AT CONTRACTOR'S EXPENSE. AN ADDITIONAL REVIEW WILL BE HELD AT THE END OF THE 2-YEAR ESTABLISHMENT PERIOD AND ALL DEAD OR UNACCEPTABLE PLANT MATERIALS, AT OWNER'S DIRECTION, SHALL BE REPLACED AT CONTRACTOR'S EXPENSE. NO FURTHER CARE OR WARRANTY WORK WILL BE INCLUDED BEYOND THIS TIMEFRAME.
7. CONTRACTOR IS RESPONSIBLE FOR MAINTENANCE OF ALL PLANTS THROUGH THE DURATION OF THE 2-YEAR PLANT ESTABLISHMENT PERIOD. THIS INCLUDES, BUT IS NOT LIMITED TO, WATERING, WEEDING, FERTILIZING, RODENT CONTROL, PROTECTION FENCING AS NECESSARY, TRIMMING, AND TREE STAKING.
8. WEED BARRIER FABRIC / PAPER SHALL BE OVERLAPPED A MINIMUM OF 4 INCHES ALONG SEAMS.
9. ALL WOOD MULCH SHALL BE PULLED AWAY FROM TRUNKS / STEMS OF PLANTS.
10. CONTRACTOR SHALL MAINTAIN ALL SEED AND SOD RESTORATION AREAS UNTIL FINAL ACCEPTANCE.
11. CONTRACTOR MUST SUBMIT SEED MIXTURES AND CERTIFICATION TO THE OWNER FOR REVIEW AND APPROVAL PRIOR TO SEED INSTALLATION.
12. FINAL ACCEPTANCE OF SOD INCLUDES A MINIMUM 30-DAY MAINTENANCE PERIOD, OR UNTIL THE SOD IS SUFFICIENTLY ROOTED IN, AS APPROVED BY THE OWNER.
13. FINAL ACCEPTANCE OF SEEDED AREAS INCLUDES ONGOING MAINTENANCE UNTIL THE SEEDED AREAS MEET A MINIMUM 70% UNIFORM COVERAGE, AS APPROVED BY THE OWNER. NATIVE SEED MIXTURES MUST INCLUDE VISUAL CONFIRMATION OF AT LEAST 5 VARYING FORB SPECIES AND 3 VARYING GRASS/SEDGE SPECIES FROM THE DESIGNATED SEED MIXTURES.
14. MAINTENANCE FOR SEED AND SOD AREAS, UNTIL FINAL ACCEPTANCE, INCLUDES, BUT IS NOT LIMITED TO, WATERING, WEEDING, FERTILIZING, RE-SEEDING AS NECESSARY, EROSION CONTROL, AND MOWING.
15. MOWING OF NATIVE AREAS TO BE COMPLETED ONCE THE PLANTINGS HAVE REACHED A HEIGHT OF 6 TO 12 INCHES AND ARE ROOTED IN, BUT PRIOR TO WEED SPECIES FORMING SEED HEADS. IF SEEDED AREAS ARE AT RISK OF DAMAGE FROM MOWING EQUIPMENT, CONTRACTOR SHALL USE A FLAIL TYPE PROCEDURE TO CUT THE PLANTINGS. NO MORE THAN 1/3 OF THE PLANT SHALL BE REMOVED DURING MOWING PROCEDURES. MOWING TO OCCUR 3-4 TIMES PER YEAR TO KEEP PLANTS AT A 4 TO 6 INCH HEIGHT.

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DESIGNED BY: CA		PRINTED NAME: CANDACE AMBERG, PLA
CHECKED BY: CA		DATE: 03/27/2026 LIC. NO. 40646



**DAKOTA COUNTY HIGHWAY DEPARTMENT**  
LAKE MARION GREENWAY PROJECT  
CITY OF LAKEVILLE, MINNESOTA

PLANT SCHEDULES

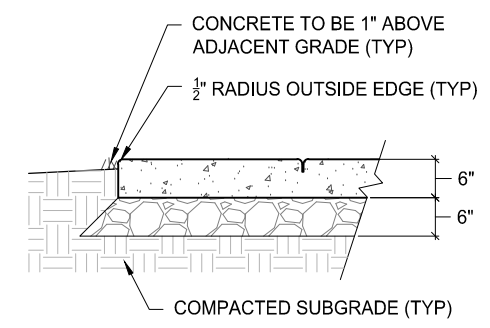
S.A.P. XXX-XXX-XXX

Sheet No. L3.4 of 74 Sheets

**CONCRETE PLACEMENT NOTE:**  
 CONCRETE SHALL HAVE 1.0% MIN. / 1.5% MAX. CROSS-SLOPE IN DIRECTION OF POSITIVE DRAINAGE FLOW, UNLESS INDICATED OTHERWISE (TYP) - REFER ALSO TO GRADING PLANS FOR ADDITIONAL INFORMATION.

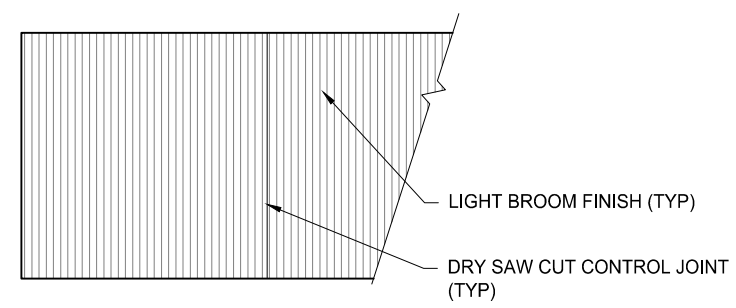
**CONTROL JOINT NOTE:**  
 REFER TO PLAN FOR LOCATIONS OF JOINTS AND VERIFY WITH LA-E AT TIME OF CONSTRUCTION. CRACK CONTROL JOINTS SHALL EXTEND TO 1/3 THE THICKNESS OF THE CONCRETE. REPLACE CONTROL JOINT WITH 1/2" EXPANSION JOINT AT MAX. 50' INTERVALS.

**CONCRETE SECTION:**  
 T" = DEPTH OF CONCRETE, SEE LAYOUT PLAN  
 6" THICK CONCRETE (4000 PSI) OVER 6" THICK COMPACTED DEPTH OF CRUSHED AGGREGATE BASE COMPACTED TO 100% STANDARD PROCTOR DENSITY



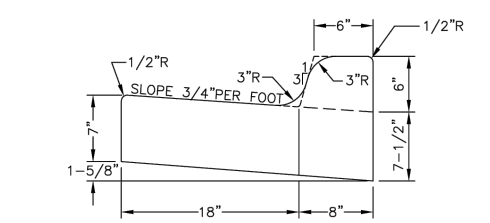
CONCRETE SECTION VIEWS

**CONCRETE FINISH:**  
 LIGHT BROOM FINISH WITH DRY SAW CUT JOINTS (1/8") (TYP) - REFER TO PLANS AND DETAILS FOR LOCATIONS

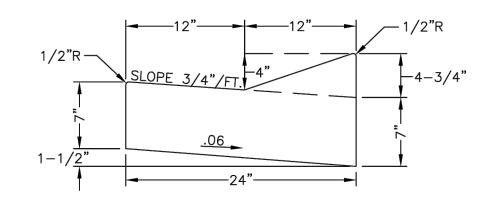


CONCRETE FINISH - PLAN VIEW

1 6" CONCRETE PAVEMENT DETAIL  
 L4.1



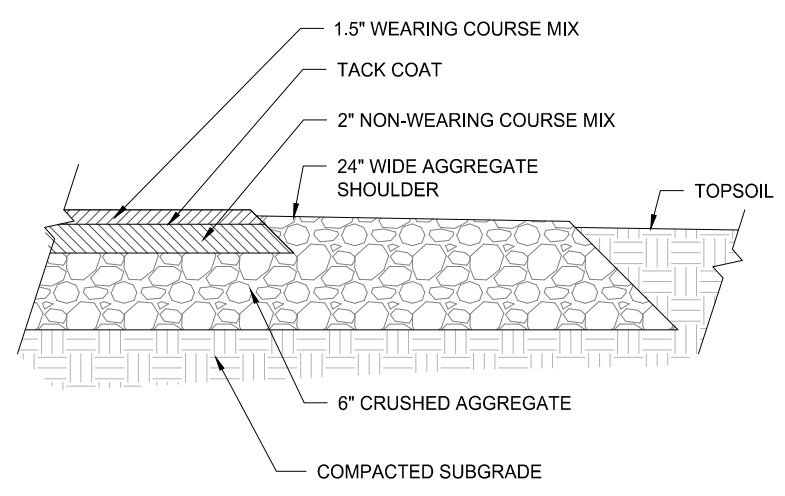
NOTE: B618 CURB AND GUTTER TO BE INSTALLED ON ALL RADII AND A 5' TRANSITION ON CATCH BASINS WHERE D412 CONCRETE CURB AND GUTTER IS SPECIFIED.



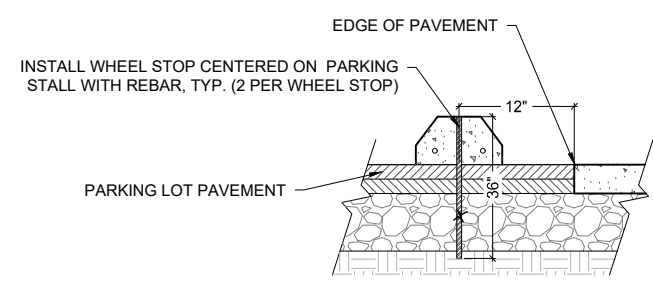
STREET  
 STANDARD CURB DETAILS

PLATE NO. LV-ST-2  
 DATE 01/2020

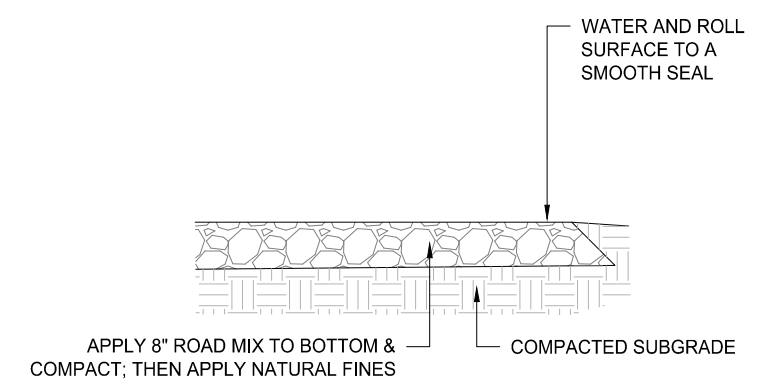
2 CURB DETAILS  
 L4.1



3 BITUMINOUS ROAD DETAIL  
 L4.1



4 WHEEL STOP DETAIL  
 L4.1



5 AGGREGATE PARKING DETAIL  
 L4.1

DATE: 9/17/2025 10:45 AM  
 FILENAME: M:\027938-000\CAD\03\_Sheets\027938-000\_L-LSCP-DET.L.dwg

DRAWN BY: LJD  
 DESIGNED BY: CA  
 CHECKED BY: CA

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

SIGNATURE: *Candace Amberg*  
 PRINTED NAME: CANDACE AMBERG, PLA  
 DATE: 03/27/2026 LIC. NO.: 40646



DAKOTA COUNTY HIGHWAY DEPARTMENT  
 LAKE MARION GREENWAY PROJECT  
 CITY OF LAKEVILLE, MINNESOTA

MISCELLANEOUS DETAILS

S.A.P. XXX-XXX-XXX  
 Sheet No. L4.1 of 74 Sheets



**STONE SELECTION AND INSTALLATION FOR BOULDER RETAINING WALLS:**

**BOULDER AND COBBLE TYPE:** IGNEOUS BOULDERS AND COBBLES THAT ARE NATIVE SOUTHEASTERN MINNESOTA.

**BOULDER SIZE:** BOULDERS SHALL NOT BE LESS THAN 2 CUBIC FEET NOR MORE THAN 16 CUBIC FEET IN VOLUME. THE MIX OF STONE SIZES SHALL BE SUCH THAT NO SINGLE SIZE SHALL COMPRISE MORE THAN 30% OF THE TOTAL EXPOSED FACE OF THE STONE PLACEMENT.

**COBBLE SIZE:** COBBLES SHALL BE SMALLER THAN THE BOULDERS AND BE SIZED TO FIT TIGHTLY BETWEEN BOULDERS TO AVOID DISLODGING AFTER WALL CONSTRUCTION IS COMPLETE.

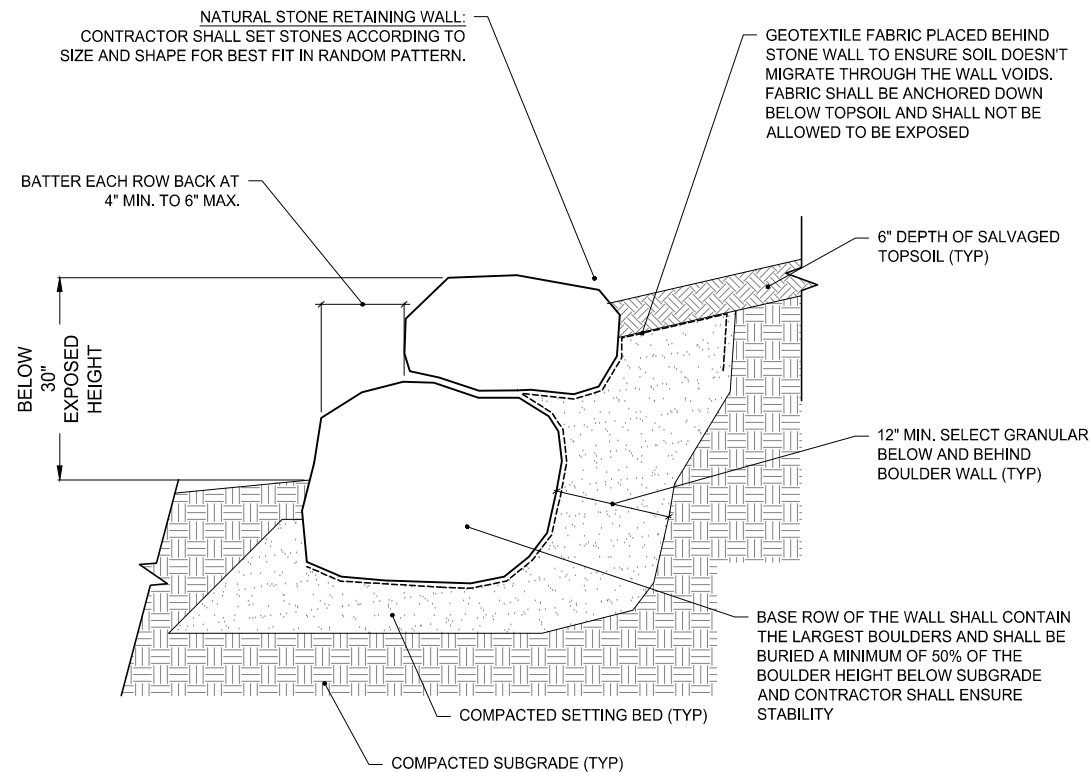
**BOULDER AND COBBLE SETTING BED AND BACKING:** STONES SHALL BE SET ON A MINIMUM 12" BED OF SELECT GRANULAR.

**SETTING STONES:** BASE STONES AND BORDER STONES NOT IN THE DRAINAGE FLOW, TO BE SET WITH A MINIMUM OF 20% OF THE STONE BURIED. BASE AND BORDER STONE SHALL APPEAR TO BE NATURALLY SET IN THE EARTH. STONES AT THE TOP OF THE DRAINAGE FLOW SHALL BE SET FLUSH WITH FINISHED GRADE.

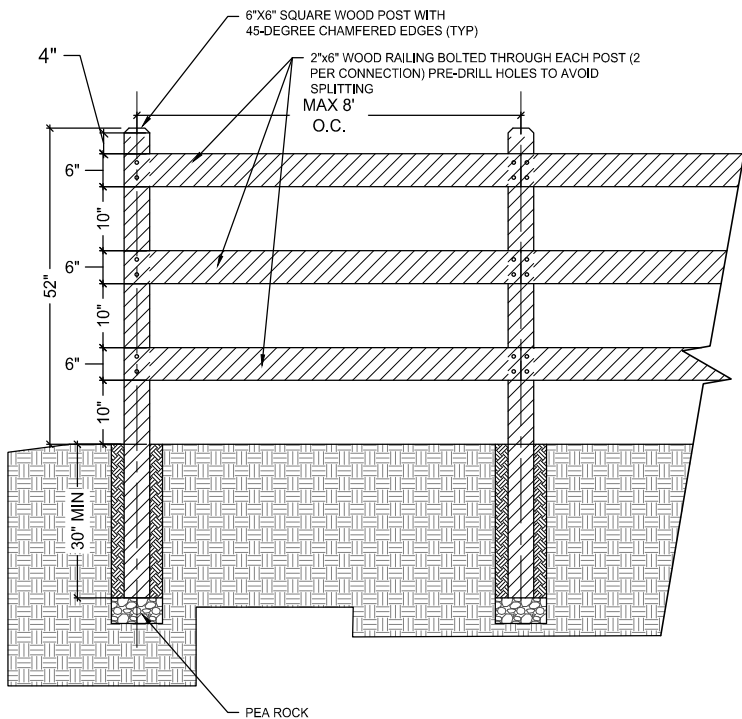
**BOULDER INSTALLATION:** ALL STONES SHALL BE HAND-SET. STONES SHALL BE PLACED WITH THE LARGEST STONES ON THE BOTTOM OF THE WALL. STONES SHALL BE PLACED SO THAT THE WIDEST DIMENSION OF THE STONE IS PARALLEL TO THE GROUND PLANE. THE SETBACK OF SUCCEEDING LAYERS SHALL BE NO MORE THAN 6" AND NO LESS THAN 4". ANY VARIATION IN SETBACK SHALL BE GRADUALLY ACROSS THE FACE OF THE INSTALLATION. THE SET BACK OF THE STONES SHALL BE DETERMINED IN THE FIELD AND SHALL BE A FACTOR OF INDIVIDUAL STONE SIZE AND EXISTING LAND CONTOURS. JOINTS SHALL BE STAGGERED BETWEEN LAYERS OF BOULDERS, SO THAT NO TWO JOINTS ALIGN. STONES SHALL BE CHOSEN TO INSURE A SECURE FIT AND STABLE FINAL INSTALLATION.

**FILTER FABRIC, SAND SETTING BED AND BACKING INSTALLATION:** - FILTER FABRIC SHALL BE ANCHORED BETWEEN THE FIRST STONE LAYER AND THE SAND BEDDING. FILTER FABRIC AND SAND BACKING SHALL BE INSTALLED PROGRESSIVELY AS THE STONES ARE PLACED. FABRIC JOINTS SHALL BE OVERLAPPED A MINIMUM OF 2 FEET. SAND BACKING SHALL EXTEND TO WITHIN 6" OF FINISHED GRADE BEHIND THE TOP STONES. FABRIC AT THE TOP OF THE STONE INSTALLATION SHALL EXTEND HORIZONTALLY 12" AWAY FROM THE BACK OF TOP STONES AND SHALL BE ANCHORED BENEATH THE TOPSOIL. SIMILARLY, THE FILTER FABRIC SHALL EXTEND 12" BEYOND THE SIDE EDGES OF THE STONE INSTALLATION AND SHALL BE BURIED SECURELY IN THE SUBSOIL. NO FILTER FABRIC SHALL BE EXPOSED TO VIEW UPON COMPLETION OF STONE INSTALLATION.

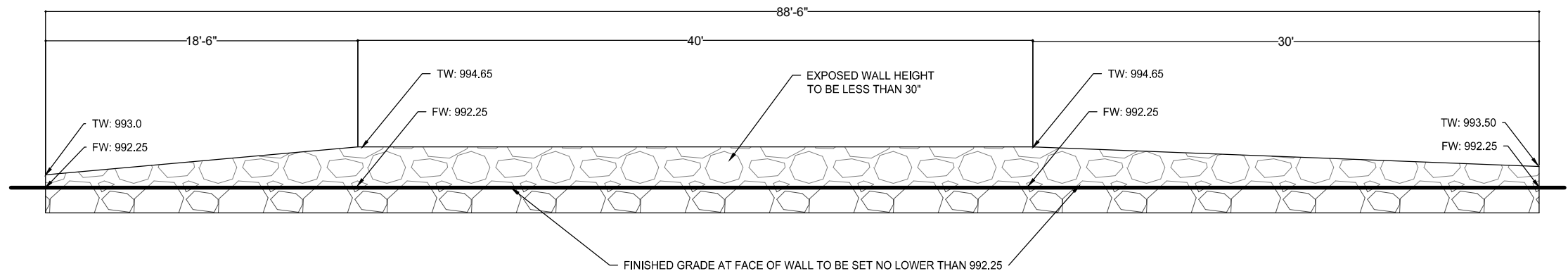
**STONE VOIDS:** VOIDS BETWEEN BOULDERS SHALL BE MINIMIZED. VOIDS GREATER THAN 3" IN SIZE SHALL NOT BE ACCEPTABLE. VOIDS SHALL BE PACKED WITH COBBLES.



**1**  
**L4.3**  
**BOULDER WALL**



**2**  
**L4.3**  
**POST AND RAIL FENCE**



**3**  
**L4.3**  
**WALL ELEVATION**

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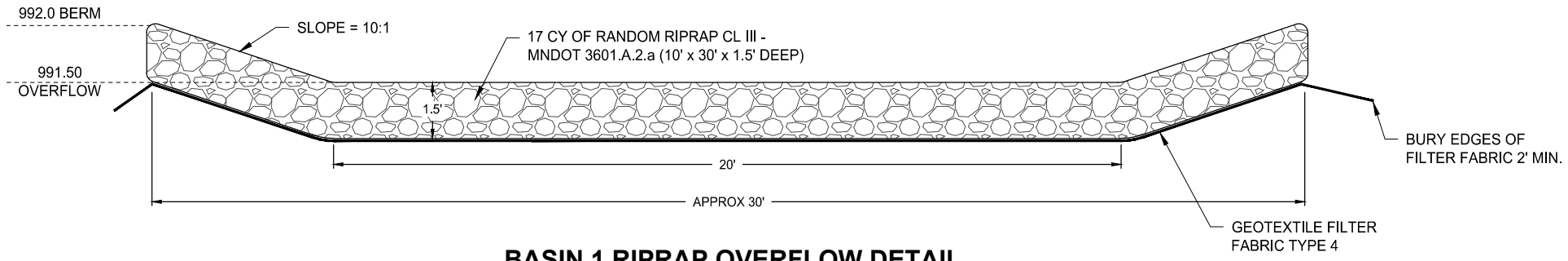
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DESIGNED BY: CA		PRINTED NAME: CANDACE AMBERG, PLA
CHECKED BY: CA		DATE: 03/27/2026 LIC. NO. 40646



**DAKOTA COUNTY HIGHWAY DEPARTMENT**  
**LAKE MARION GREENWAY PROJECT**  
**CITY OF LAKEVILLE, MINNESOTA**

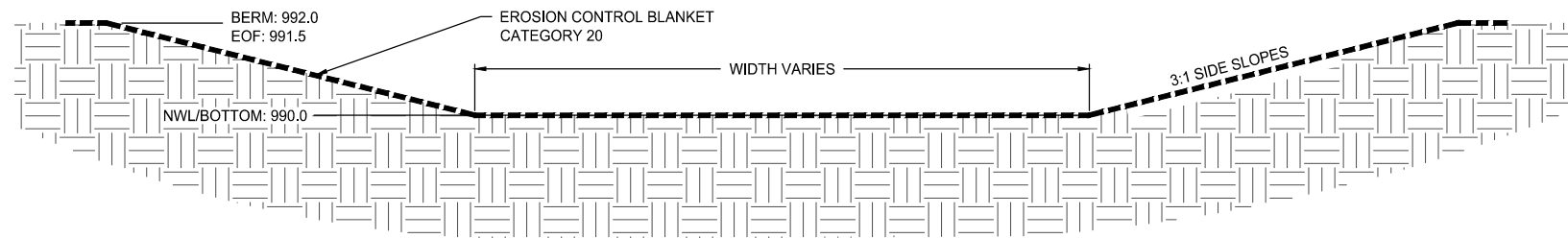
MISCELLANEOUS DETAILS

S.A.P. XXX-XXX-XXX  
Sheet No. L4.3 of 74 Sheets



**BASIN 1 RIPRAP OVERFLOW DETAIL**

NO SCALE



**BASIN 1 INFILTRATION BASIN**

NO SCALE

**1**  
**L4.4** **BASIN 1 RIPRAP OVERFLOW**

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**DAKOTA COUNTY HIGHWAY DEPARTMENT**  
**LAKE MARION GREENWAY PROJECT**  
**CITY OF LAKEVILLE, MINNESOTA**

MISCELLANEOUS DETAILS

S.A.P. XXX-XXX-XXX  
Sheet No. L4.4 of 74 Sheets

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## K-2 Kiosk - Medium

### Colors

- 1  WHITE
- 2  GREEN
- 3  LIGHT GREEN
- 4  DARK BROWN
- 5  BROWN
- 6  CUSTOM GRADIENT
- 7  LIGHT BROWN
- 8  TAN
- 9  SOFT BLUE
- 10  RED, REG
- 11  BLUE, REG
- 12  YELLOW, REG

Date	Description
07/13/22	DRAFT



415 S Union, 2nd Floor  
Traverse City, MI 49684  
(231) 947-1236



SCALE: 1" = 1'-0"

### Dakota County Greenways - Design Intent Drawings

**NOTE:**

- TRAIL NAME PANEL, HEADER PANEL, FOOTER PANEL AND MAP PANEL PROVIDED BY DAKOTA COUNTY
- ALL REMAINING MATERIALS, HARDWARE, AND INSTALLATION BY CONTRACTOR, INCLUDING CONCRETE FOOTINGS

**INSTALLATION NOTE:**  
CONTRACTOR TO CONSTRUCT KIOSK PER DETAIL AND ATTACH METAL SIGN PANELS PROVIDED BY DAKOTA COUNTY.

### 1 DAKOTA COUNTY STANDARD KIOSK

DRAWN BY: LJ	I HEREBY CERTIFY THAT THIS SHEET WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL LANDSCAPE ARCHITECT UNDER THE LAWS OF THE STATE OF MINNESOTA.	SIGNATURE:
DESIGNED BY: CA	PRINTED NAME: CANDACE AMBERG, PLA	DATE: 03/27/2026 LIC. NO. 40646
CHECKED BY: CA		



DAKOTA COUNTY HIGHWAY DEPARTMENT  
LAKE MARION GREENWAY PROJECT  
CITY OF LAKEVILLE, MINNESOTA

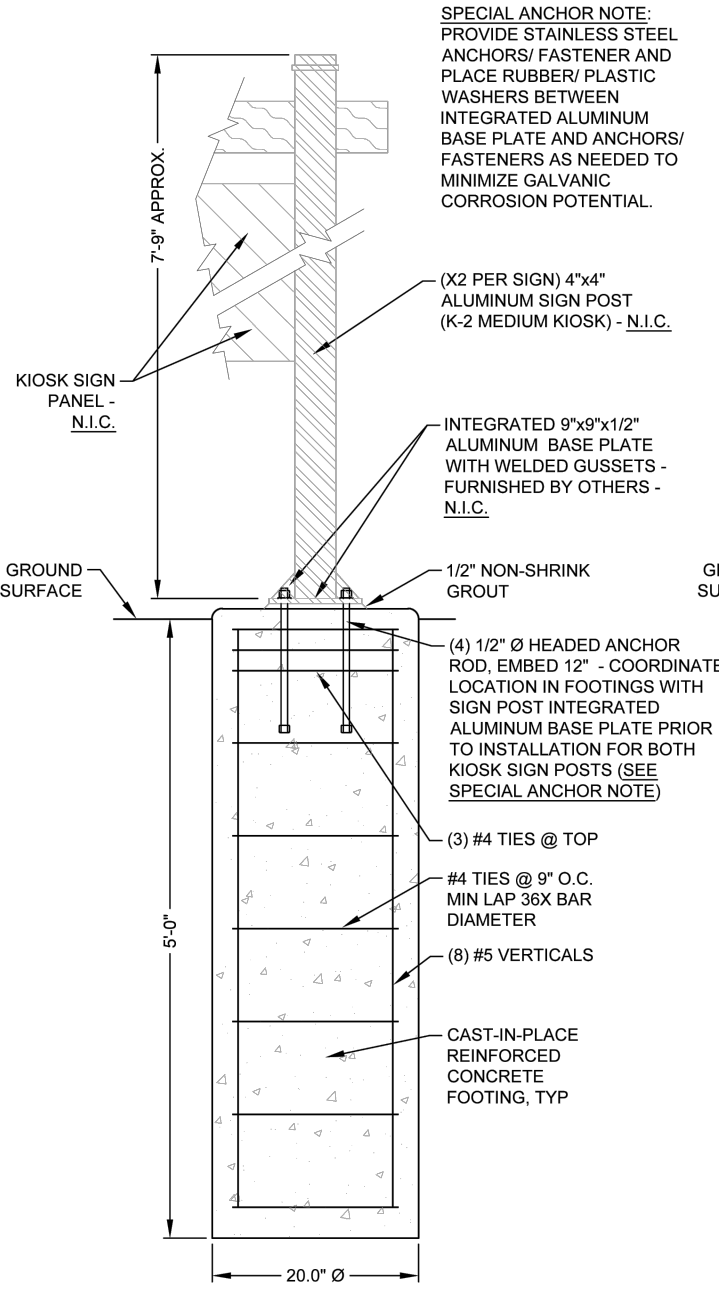
### KIOSK DETAILS

**FOOTING & REINFORCEMENT NOTES:**

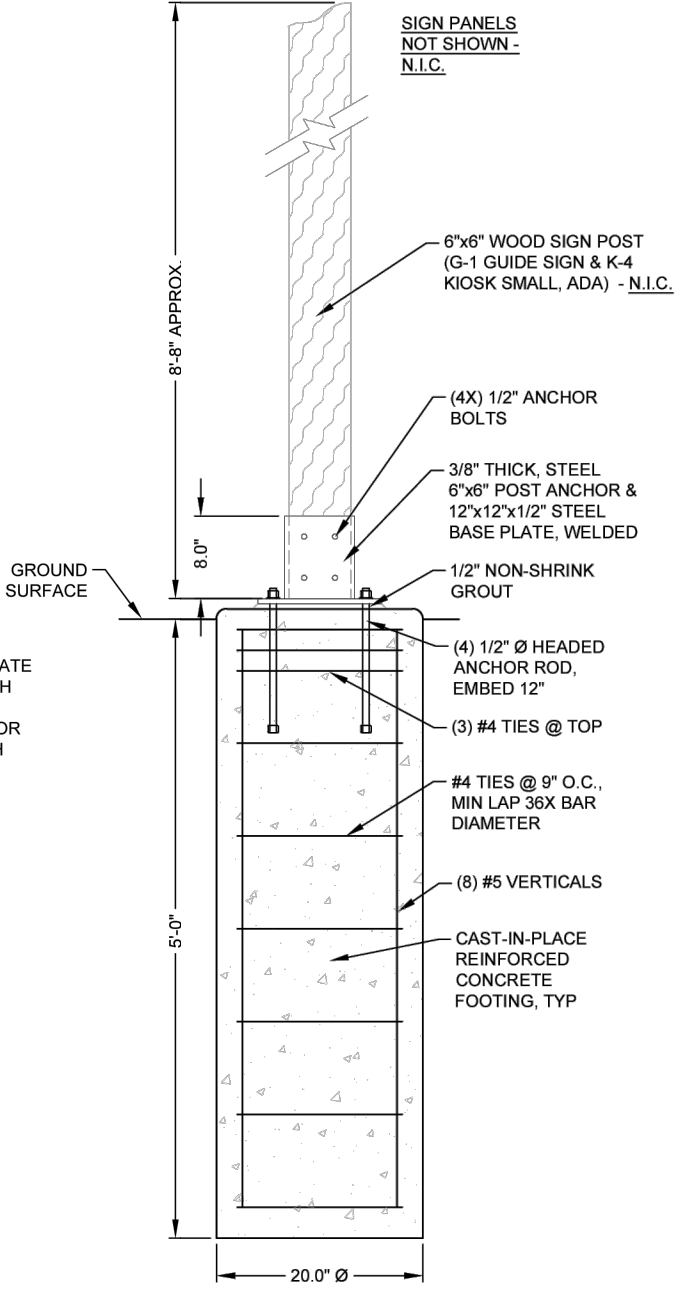
- CAST-IN-PLACE CONCRETE FOR FOOTING SHALL MEET REQUIREMENTS AS INDICATED IN SPECIFICATION SECTION 03 30 00 CAST-IN-PLACE CONCRETE:  $f_c'$  @ 28 DAYS 4000 PSI CONCRETE AIR ENTRAINED TO 6% ± 1.5%.
- REINFORCEMENT SHALL MEET REQUIREMENTS AS INDICATED IN THE SPECIFICATION SECTION 03 20 00 CONCRETE REINFORCING AND SHALL BE CONSIDERED INCIDENTAL. CLEAR MINIMUM COVER OVER REINFORCING STEEL SHALL BE AS FOLLOWS UNLESS SPECIFIED OTHERWISE:  
 3" - CONCRETE AGAINST EARTH  
 2" - ALL OTHER CONCRETE

**WAYFINDING SIGNAGE FOUNDATION NOTES:**

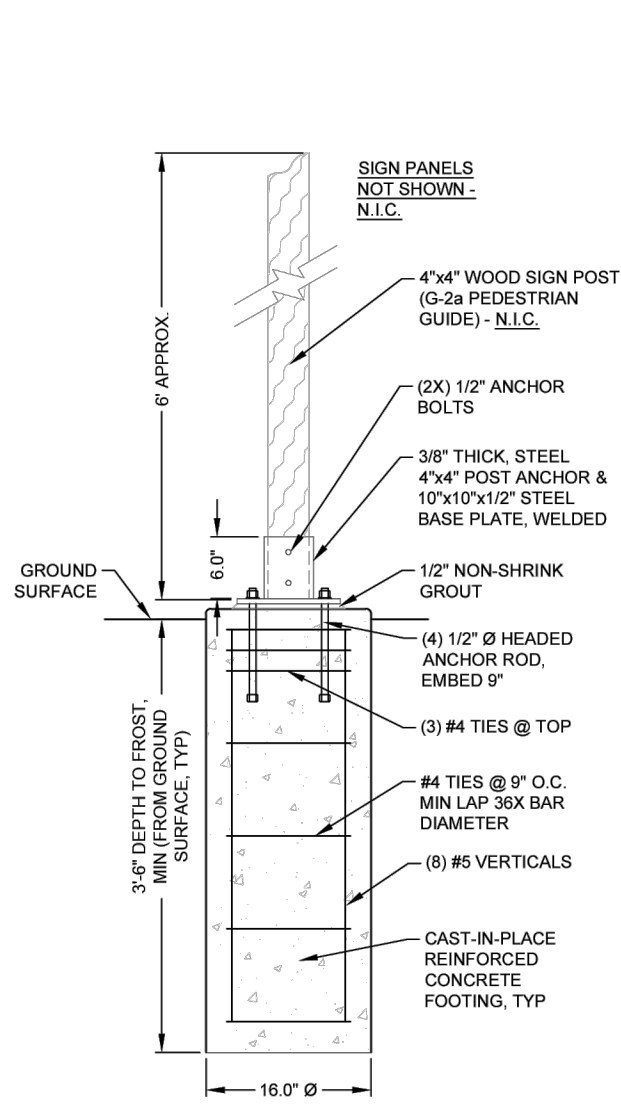
- CONTRACTOR SHALL SUBMIT SHOP DRAWINGS OF SIGN ANCHORS AND FOOTINGS FOR APPROVAL BY ENGINEER PRIOR TO CONSTRUCTION. PROVIDE WELDING AS NECESSARY FOR FABRICATION OF METAL ANCHORS.
- CONTRACTOR SHALL COORDINATE AND VERIFY LOCATIONS OF CONCRETE FOOTINGS FOR WAYFINDING SIGNS IN THE FIELD PRIOR TO FABRICATION. ALL SIGN POSTS SHALL BE CENTERED ON REINFORCED CONCRETE FOOTINGS.
- MEASUREMENT AND PAYMENT FOR THE WAYFINDING SIGNAGE SHALL BE UNIT PRICE FOR EACH SIGN TYPE OF ANCHOR AND FOOTING INSTALLED AS INDICATED IN THE BID FORM. SIGN POSTS AND SIGN PANELS ARE NOT IN CONTRACT AND SHALL BE FURNISHED BY OTHERS. CONTRACTOR SHALL COORDINATE THE CONSTRUCTION OF THE ANCHORING AND FOOTINGS WITH THE FABRICATION OF THE WAYFINDING SIGNAGE.
- ALL WAYFINDING ANCHORS AND BASE PLATES SHALL RECEIVE A DARK BROWN (#4) POWDERCOATED FINISH FROM STANDARD DAKOTA COUNTY GREENWAY WAYFINDING COLOR PALETTE.



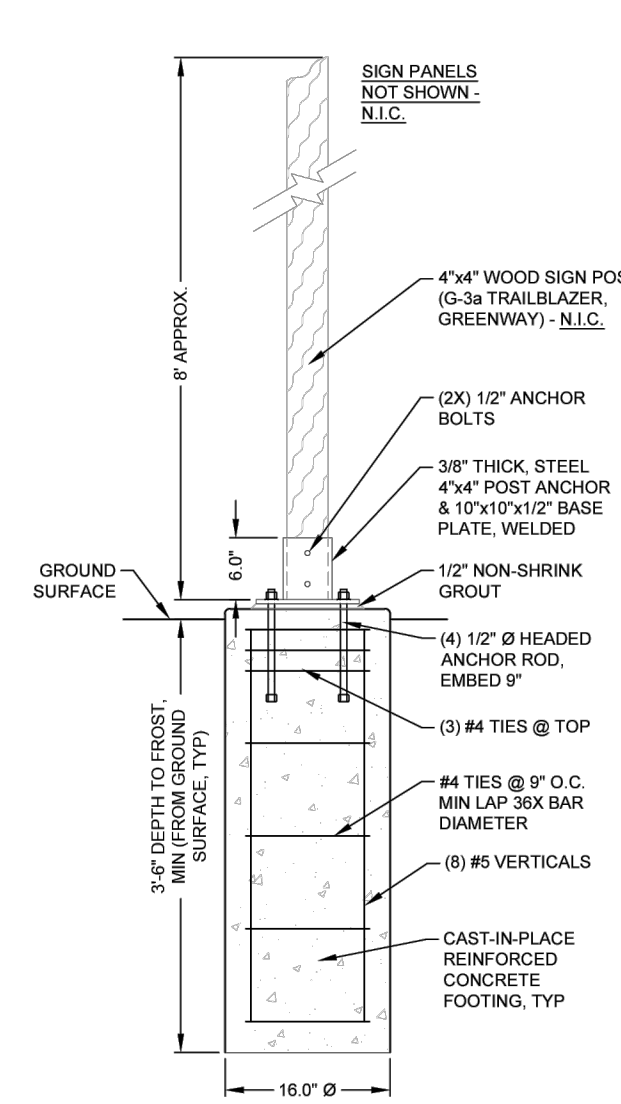
SECTION DETAIL: FOOTING FOR K-2 KIOSK MEDIUM



SECTION DETAIL: FOOTING FOR G-1 GUIDE SIGN & K-4 KIOSK SMALL, ADA



SECTION DETAIL: FOOTING FOR G-2a PEDESTRIAN GUIDE



SECTION DETAIL: FOOTING FOR G-3a TRAILBLAZER GREENWAY

**NOTE:**

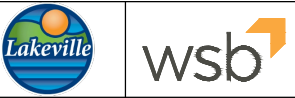
- LAKE MARION GREENWAY SIDE PANEL PROVIDED BY DAKOTA COUNTY
- ALUMINUM WAYFINDING MESSAGE SIGN PANEL PROVIDED BY DAKOTA COUNTY
- ALL REMAINING MATERIALS, HARDWARE, AND INSTALLATION BY CONTRACTOR, INCLUDING CONCRETE FOOTING

**INSTALLATION NOTE:**  
 CONTRACTOR TO CONSTRUCT WAYFINDING SIGNS PER DETAIL AND ATTACH METAL SIGN PANELS PROVIDED BY DAKOTA COUNTY.

DATE: 9/17/2025 10:45 AM  
 FILENAME: M:\027938-000\CAD\03\_Sheets\027938-000\_L-LSCP-DETL.dwg

1 DAKOTA COUNTY WAYFINDING SIGN ANCHOR AND FOOTING DETAILS  
 L4.6

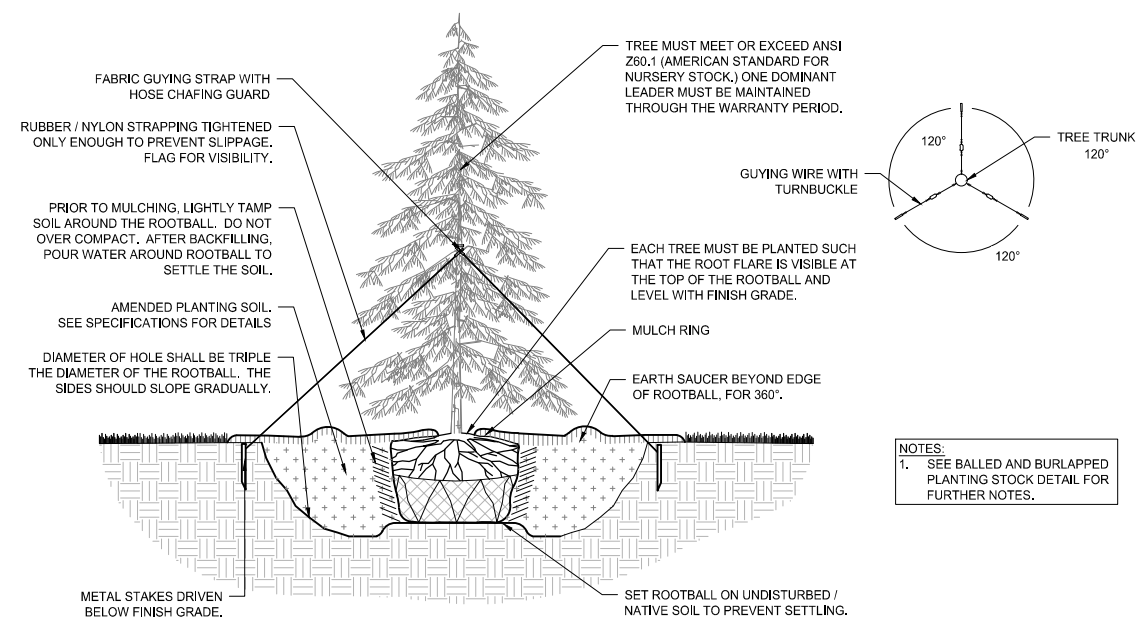
DRAWN BY: LD	I HEREBY CERTIFY THAT THIS SHEET WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL LANDSCAPE ARCHITECT UNDER THE LAWS OF THE STATE OF MINNESOTA.	SIGNATURE:
DESIGNED BY: CA		PRINTED NAME: CANDACE AMBERG, PLA
CHECKED BY: CA		DATE: 03/27/2026 LIC. NO.: 40646



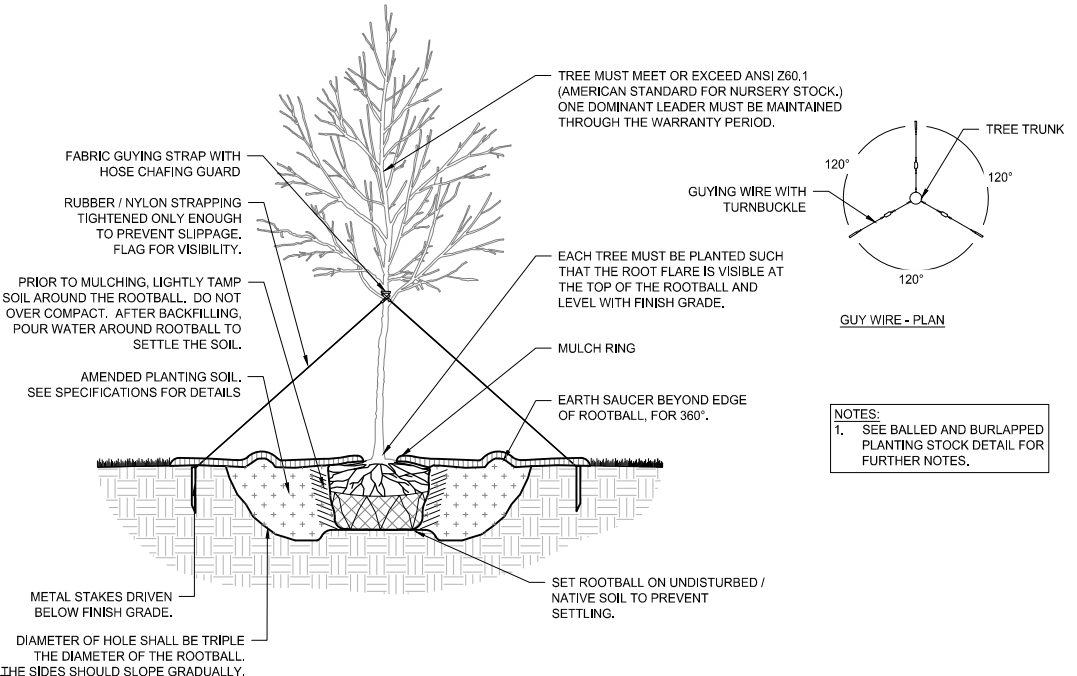
DAKOTA COUNTY HIGHWAY DEPARTMENT  
 LAKE MARION GREENWAY PROJECT  
 CITY OF LAKEVILLE, MINNESOTA

KIOSK FOOTING DETAILS

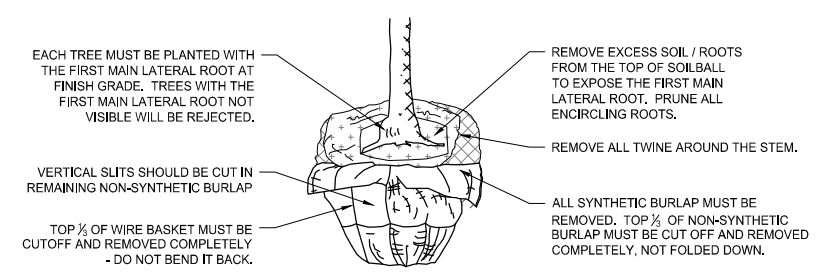
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**1 CONIFEROUS TREE PLANTING DETAIL**  
 L4.7



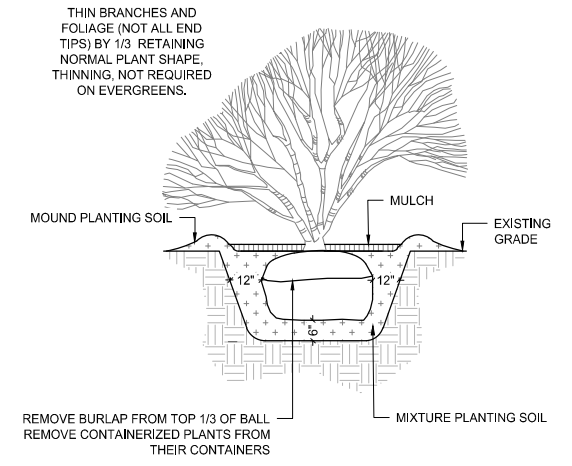
**2 DECIDUOUS TREE PLANTING DETAIL**  
 L4.7



**NOTES:**

1. ROOTS OF ALL BALLED AND BURLAPPED STOCK SHALL FILL THE SOIL BALL, BE FREE OF KINKS, CIRCLING AND GIRDLING, AND THE UPPERMOST ROOTS SHALL NOT BE MORE THAN FOUR INCHES BELOW THE TOP OF THE SOIL BALL. TRANSPORT ROOTS SHALL BE SYMMETRICAL AROUND THE TRUNK / STEM OF THE PLANTS. SOIL BALLS MUST BE CENTERED OR NO MORE THAN 10% OFF CENTER.
2. WHEN MOVING PLANTS, LIFT FROM BENEATH THE ROOT BALL. DO NOT LIFT BY THE TRUNK AND DO NOT BREAK OR LOOSEN THE ROOT BALL.
3. BACKFILL PLANTING PIT WITH ORIGINAL SOIL HALF WAY TO THE TOP OF THE ROOT BALL. BREAK UP CLOUDS OF SOIL. DO NOT USE PEAT AS PART OF BACKFILL IN CLAY SOILS. REMOVE ALL ROCKS AND DEBRIS FROM BACKFILL AND THEN WATER PLANT AND BACKFILLED AREA TO SETTLE PLANTS AND FILL VOIDS.
4. REMOVE ALL WIRE BASKETS FROM THE TOP 1/3 OF THE ROOT BALL AND CONTINUE BACKFILLING REMAINING PLANTING PIT WITH ORIGINAL SOIL.
5. WATER THOROUGHLY A SECOND TIME TO SETTLE PLANTS AND FILL VOIDS WITHIN TWO HOURS OF PLANTING. PLACE SPECIFIED MULCH WITHIN 48 HOURS OF THE SECOND WATERING. PROVIDE SUPPORT IF NECESSARY.
6. STAKING OF TREES SHALL BE THE CONTRACTOR'S OPTION. THE CONTRACT IS RESPONSIBLE TO INSURING THAT ALL PLANTINGS ARE INSTALLED PLUMB AND REMAIN PLUMB THROUGHOUT THE WARRANTY PERIOD OF 1 YEAR AFTER SUBSTANTIAL COMPLETION, WHICHEVER IS GREATER.
7. IF STAKING IS INSTALLED, ALL COMPONENTS SHALL BE REMOVED BY THE CONTRACTOR AT THE END OF THE WARRANTY PERIOD.

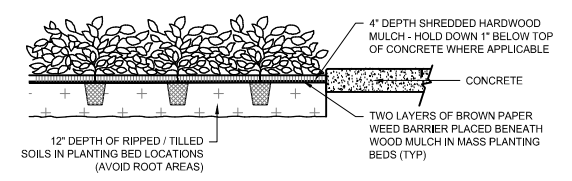
**3 BALL AND BURLAP DETAIL**  
 L4.7



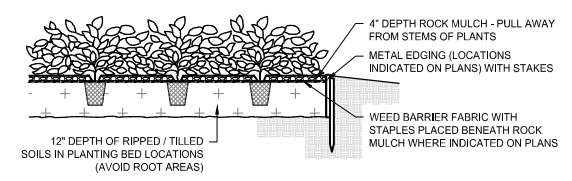
**NOTES:**

1. PLANT SHRUBS IN LOCATIONS PER PLAN AND APPROVED BY LAE.

**4 SHRUB PLANTING DETAIL**  
 L4.7



SECTION



SECTION

**5 PLANTING BED DETAILS**  
 L4.7

DRAWN BY: LJD	I HEREBY CERTIFY THAT THIS SHEET WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL LANDSCAPE ARCHITECT UNDER THE LAWS OF THE STATE OF MINNESOTA.	SIGNATURE:
DESIGNED BY: CA		PRINTED NAME: CANDACE AMBERG, PLA
CHECKED BY: CA		DATE: 03/27/2026 LIC. NO.: 40646



**DAKOTA COUNTY HIGHWAY DEPARTMENT**  
 LAKE MARION GREENWAY PROJECT  
 CITY OF LAKEVILLE, MINNESOTA

LANDSCAPE DETAILS

S.A.P. XXX-XXX-XXX  
 Sheet No. L4.7 of 74 Sheets