Bois de Sioux Watershed District
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BOARD MEETING AGENDA – DECEMBER 18, 2025

Agendas and Minutes are posted on www.bdswd.com. . Underscored times will be honored as closely as possible.

9:00 AM Verification of Quorum & Call to Order
Pledge of Allegiance
Consider Agenda Additions & Approve Agenda
Declarations of Conflict of Interest
Public Comment

Consent Agenda	Approve: Minutes of November 20, 2025; Claims of December 18, 2025 (includes JCWMP Pay Requests, Deposits, and Journal Entries); Treasurer's Report and Budget; State Grants Received/Expended

PERMIT APPLICATIONS

25-113, Graceville Township, Section 7 Moonshine Twp & Section 12 Graceville Twp, Big Stone County

103E DRAINAGE SYSTEMS REPORTS

Open the Public Hearing to consider the following petition requesting partial abandonment of Traverse County Ditch #48: Parcel #06-0238000, West ½, Section 14, Range 47, West Lake Valley Township (127), Traverse County

10:00 AM Open the Public Hearing on the Minn. Stat. 103E.261 Preliminary Survey Report for the proposed Improvement of Wilkin County Ditch #25

Open the Public Hearing on the Budgets for the 2026 General Fund and Construction Fund Levies, Lake Traverse Water Management District, and Assessments for the Ditch System Funds and Projects; Review All Fund Balances

GCD #3	Update
GCD #21	Update

103D WATERSHED PROJECTS

Doran Creek	Update
Redpath	Update, Pay Application
	Approve Letter in Response to Grant Extension
640th Ave Road Raise	Update, Pay Application
Soil Loss	Buffer Update
Monson Twp	Information Provided

FDRWG Updated Tech Paper: Culvert-Sizing Approaches in the Red River Basin of Minnesota

GENERAL ADMINISTRATION

Approve CliftonLarsonAllen Contract
Approve Beyer Authorized to Sign Pledges of Collaterol
Approve Journal Entries for District Local Match
Personnel Committee Recommendations: Cost of Living, Health Insurance, PFLA Policies

Managers	RRWMB, RRRA, RRBC, FDRWG, MAWD, Drainage Work Group & Committee Reports, Letters & Minutes

RECEIVED NOV 19 2025

(can this be upsized or not?)

area of water overtopping the road in high water events


PARCEL #06-0238000
TCD #48
HIGHWAY 27
TO WHEATON →
← TO BROWNS VALLEY
Image © 2025 Airbus
Google Earth
Imagery Date: 5/16/2024 45°48'24.36" N 96°32'36.09" W elev 992 ft eye alt 10028 ft

Bois de Sioux Watershed District

Judicial Ditch No. 11 Lateral 4 Improvement

Detailed Survey and Engineer's Report

I hereby certify that this report was prepared by me or under my direct supervision, and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

_____

James Guler, PE
License Number: 52466
Date: 9/22/25

moore engineering, inc.
mooreengineeringinc.com

Date: 09/22/2025
Project No. 24596

Contents

1. INTRODUCTION

The proposed project is an improvement of Judicial Ditch No. 11, Lateral 4 (JD #11, L4). Prior to this improvement, a portion of TCD #27 will be transferred to JD #11 L4 and improved with this project. Any repair portion of the work shall be separated from the improvement, and benefits and damages will be redetermined prior to the determination of benefits and damages related to the improvement.

JD #11 flows North along US Hwy 75 and West along MN Hwy 55, discharging into the Bois de Sioux River. L4 is in Traverse County, five miles west and one mile south of Tintah, MN and flows west along 780th St into JD #11 at US Hwy 75. Overall TCD #27 flows south and is approximately 12 miles long. However, the portion being transferred to JD #11 L4 currently flows North into JD #11 L4. This project will formalize that the upstream two miles of TCD 27, between 760th and 780th St in Sections 15 and 22 of Taylor Township, Traverse County, MN are part of JD #11. In this report this portion of TCD #27 will be referred to as JD #11 L4 Branch 1 (B1). The proposed project and its drainage area are shown in Appendix A – Overall Ditch Alignment and Watershed.

The proposed project is a result of a petition received by the Bois de Sioux Watershed District (BdSWD). A copy of the petition for improvement is included in Appendix B of this report.

2. LEGAL DESCRIPTIONS AND SCOPE OF IMPROVEMENT

The petition for the improvement to L4 states: "The proposed improvement of JD #11 L4 will consist of the reconstruction and enlargement of the ditch. The reconstruction and enlargement will result in a new channel bottom profile, new channel cross-sections, new road crossings, side inlet culverts and trap gates, grassed buffers, and grade stabilization features… The proposed improvement of two (2) miles of TCD #27 (as a new portion of JD #11) will consist of the reconstruction and enlargement of the ditch and redirection of the legal drainage profile to the north, towards JD #11 L4. The reconstruction and enlargement will result in a new channel bottom profile, new channel cross-sections, new road crossings, side inlet culverts and trap gates, grassed buffers, and grade stabilization features."

Per the Petition for Improvement, the general description is as follows:

> ***JD #11, Lateral 4: Commencing at a point in the main channel of JD #11 in the northwest corner of Section 17, Township 129 North, Range 46 West, Taylor Township, Traverse County, Minnesota; thence running easterly, along the north line of Sections 17, 16, and 15 to the northeast corner of said Section 15.***
>
> ***Transferred Portion of TCD #27 (Sections 15 and 22): Commencing at a point in JD #11, L4 near the North Quarter Corner of Section 15, Township 129 North, Range 46 West, Taylor Township,***

Traverse County, Minnesota; thence running southerly, over and across the east half of said Section 15, thence continuing southerly over and across the Northeast Quarter of Section 22 to the center of said Section 22, then continuing southerly along the north-south quarter line to the South Quarter Corner of said Section 22.

3. EXISTING DITCH SYSTEM

3.1. History

The following is a summary of the documents on record pertaining to L4. The intent of this summary is to provide the known historical timeline regarding the ditch's construction, improvements, and maintenance. This information may be carried forward, and updated as necessary, from previous reports.

1. The petition for construction of JD #11 was filed on September 23, 1943, by Otto Hamann and others, "for the purpose of draining and reclaiming large areas of wet and overflowed lands."
2. An Engineer's Preliminary Report by A. M. Hopeman was filed on May 22, 1944. It was based in part on information from a ditch proceeding that failed to establish Judicial Ditch 10 in the same area in 1916. He recommended only minor changes to the ditch described in the petition. Proposed profile and cross-section views were included for the main ditches and laterals 1 through 9.
3. A preliminary hearing was held in District Court in Wheaton on June 23, 1944. Judge E. R. Selnes adopted the engineer's recommended changes and ordered detailed surveys and plans.
4. An Engineer's Report by A. M. Hopeman was filed on November 24, 1944. A written alignment of the ditch was not reported. A bottom width would be 9' on the main ditches and 4' on the laterals. Side slopes would be 3:1 on the laterals and outslope of the mains. The inslope of the mains, alongside TH75 and TH55, would be 4:1. Profiles were included for laterals 2 through 9 showing minor differences in grade from those submitted with the May 22, 1944 engineer's report. Estimated construction cost of the laterals, including the additional Lateral 10 and an 1,800' extension of L4, was $36,567.81. Total construction cost including the main ditch, centerline culverts, side inlet culverts, and erosion control structures, was $147,637.81.
5. The Viewer's Report dated January 16, 1945 showed JD #11 total estimated benefits of $200,849.49, including $1,504.80 in road benefits to Traverse County. Damages to utility companies totaled $624.00 and $3,692.50 to landowners.
6. In a hearing held May 31, 1945, the District Court ordered that the ditch be constructed. Seven changes in assessments were ordered by the court between June 20, 1945 and May 21, 1946.
7. The contract for excavation of the mains and laterals was awarded August 9, 1945 to Megarry Bros of St. Cloud, MN. The contract for the box culvert structures was awarded August 9, 1945 to Zxontelli-Herbison Inc. of Ironton, MN.

8. The Final Engineer's Report filed on December 13, 1946, mentions an additional ½ mile extension of L4.
9. Petitions on file for repairs of JD #11 were dated 1984 (2) and 1986.
10. A major repair of the main branch of JD #11 was completed in 2017.
11. The Bois de Sioux Watershed District authorized cleanout of L4 in 2019.
12. As of the County Auditor's Ditch Assessment dated April 21, 2000, the total benefitted amount was $87,915.44, including $31,667.00 for Traverse County.
13. In 2020 a repair project was completed on the main branch of Judicial Ditch 11 adjacent to Highway 75 and 55. This included paying damages to landowners for additional ROW. A redetermination of benefits was also complete. The updated benefit amount is $24,208,749.73
14. On October 8, 2024, petitioners requested that Bois de Sioux Watershed District authorize improvement of JD #11, L4 and transfer a two-mile portion of TCD #27 to JD #11.

The following is a summary of the history of TCD #27, as stated in the petition for improvement.

1. The natural topography of the drainage area of the upstream 2 miles of TCD #27 is to the northwest, towards JD #11, L4.
2. TCD #27 was constructed in 1915 to direct flow from Sections 15 and 22 to the south, towards the Mustinka River.
3. With the construction of JD #11 in 1944, flow in Sections 15 and 22 was directed north into JD #11, L4; however, the ditch records and benefits were never corrected.
4. The petitioners requested that the Bois de Sioux Watershed District (Board) transfer a portion of TCD #27 into JD #11 as the water from this area is already draining into JD #11 and these properties are not paying assessments for benefits to JD #11. The transferred portion of TCD #27 will become part of JD #11 once ordered by the Board in accordance with the requirements provided under Minn. Stat. 103E.801, subd. 3.

3.2. Current Condition / Inadequacy / Improvement Discussion

A survey was completed by Moore Engineering, Inc. in 2024. This survey found JD #11 L4 to be in repair. However, even while in the repaired condition, frequent and prolonged flooding of agricultural lands is the landowners' main concern. Through meetings with the landowners, it was determined that the original condition does not sufficiently meet their drainage needs, nor the typical criteria of established design standards. A preferred path forward would be to improve the ditch and the crossings to meet current design standards.

3.3. Input from Preliminary Hearing

A public hearing was held on the Preliminary Engineer's Report on June 20, 2025. At this hearing, the MN DNR Advisory Letter was read (Appendix D). The requests and questions of this letter are included below, along with the responses.

Comment 1) maps showing the extent of flooding under current conditions and after the proposed improvements across various flow events;

Response 1) The hydraulic benefits from this project include a reduction in peak inundation, increased depth for drainage, and reduced duration of flooding on agricultural lands. Speaking with petitioners for this project it was determined that the additional effort to create inundation maps would not be necessary as they felt comfortable with the proposed benefits.

Comment 2) water storage and multi-purpose drainage management within the watershed of Judicial Ditch 11 could be further explored;

Comment 3) water quality impacts of the proposed drainage project should be further assessed, including incorporating best management practices from the 1W1P report to improve water quality in the final project design;

Comment 4) create a multipurpose drainage management plan that incorporates 1W1P BMPs and guidance from the BWSR MDM fact sheet;

Response 2, 3, 4) The BdSWD continues to encourage water storage and off channel multi drainage management on a voluntary basis. As the downstream capacity was adequate no water storage was determined with this specific project, but if volunteers are interested, their efforts would be supported. This project includes BMPs of additional grass buffering, continuous berms and side inlet culverts to reduce head cutting from the field into the ditch. While the location of the proposed side inlet culverts are not currently shown on the plans, during construction these BMPs are field placed with landowner input.

Comment 5) include a slightly deeper low-flow or inner berm channel;

Response 5) Due to the small watershed area, the flow in this channel is ephemeral. While the BdSWD is supportive of two stage ditches, it was decided to not pursue one due to the additional cost and right of way it would require.

Comment 6) incorporate native seed mixes to benefit pollinators into drainage buffers;

Response 6) The BdSWD partners on these projects with the local County SWCD who completes the seeding of the grass buffers. Native seeding will be used on the buffers.

Comment 7) follow MNDOT 2022 Standard Specifications for Construction for rolled erosion control materials that only use natural fibers.

Response 7) This project will utilize rolled erosion control materials with natural fibers as requested.

No landowner comments were received during this hearing that alter the design of this project.

3.4. Grade line

The original grade line for JD #11 L4 was estimated from the historical repair plans and recent survey information. The difference between the original grade line and the proposed improvement grade line can be seen on the attached plans (Appendix E). The goal of the improvement grade line is to match the original outlet elevation and flatten the channel profile (deepen) as it continues upstream. The flatter profile will inherently reduce channel velocities. The overall goal of the project is to have consistent design capacity of the channel along the entire length of the ditch so that the entire drainage system performs equally from the headwater to the outlet. Therefore, when flows exceed the capacity of the ditch system, breakouts should occur across the entire length of the ditch system.

3.5. Hydrology and Hydraulics

As described in the petition "the purpose of the improvement is to reconstruct the facility, where feasible, to the 10-year design standard according to the BTSAC BP 3 Water Management Options for Surface Drainage published September 15, 2014." With this improvement, the channel will be sized nearly to a 10-year 24-hour rain event. Downstream channel considerations were evaluated to ensure the capacity of JD #11 L4 is consistent with the main branch of JD #11. The design goal for this improvement is to provide the capacity needed for frequent summer rainfall events. However, large rainfall events and spring snowmelt runoff events will be limited by the culvert capacity. The adjacent spoil bank will be set at an elevation so that during larger flood events, excess flows will break out of the channel into the adjacent field. This design will restore or maintain the floodplain by utilizing adjacent fields for floodwater storage and therefore reduce the downstream flood burden.

Table 1: Culvert Notes / Future Size Recommendations

Culvert Notes / Future Size Recommendations

		Existing		Proposed Improvement Size	
Plan Name	Description	Culvert(s) Size [in]	Cross Sectional Area [sft]	Culvert(s) Size [in]	Cross Sectional Area [sft]
CULV-E 0	JD 11 Main - 780th St	(2) 64" X 43" CSPA	29.4	No change	
CULV-E 1	Sec 17 - Field Approach	30" RCP	4.9	(2) 49" x 33" CSPA	17.8
CULV-E 2	T - 128	30" RCP	4.9	(2) 49" x 33" CSPA	17.8
CULV-E 3	Sec 16 - Field Approach	30" RCP	4.9	(2) 49" x 33" CSPA	17.8
CULV-E 4	Sec 16 - Driveway	30" RCP	4.9	(2) 49" X 33" CSPA	17.8
CULV-E 5	690th Ave	36" RCP	7.1	(2) 36" RCP	14.2
CULV-E 6	Sec 15 - Field Approach	24" CSP	3.1	24" CSP	3.1
CULV-E 7	T-124	30" CSP	4.9	24" CSP	3.1
CULV-E 8	L4 Branch 1 Outlet	18" CSP	1.8	(2) 42" x 29" CSPA (Or Remove)	13
CULV-E 9	Sec 15 - Field Approach	36" RCP	7.1	(2) 30" CSP (Or Remove)	9.8
CULV-E 10	T-126	36" RCP	7.1	36" CSP	7.1
CULV-E 11	County Road 99	48" RCP	12.6	Remove and Do Not Replace	

Table 1 above shows the crossings for L4 and L4B1 and the recommended culvert sizes for this improvement project. Removal of CULV-E 11 is proposed. All new culverts will be placed so the invert of the pipe matches the improvement grade line. There are seven separate crossings along L4 and three along L4B1 up for improvement. Table 1 references the culverts as named in the plan set. Most of the existing culverts are undersized.

XP Stormwater and Wastewater Management Model (XPSWMM) was used to build existing and proposed condition models for L4B1, L4, and two miles of JD #11. StreamStats (USGS) was used

to calculate the inflow from the section of JD #11 upstream of L4, using delineated area from International Water Institute (IWI). Watershed delineation within the project area was completed using satellite imagery and LiDAR from 2021. Soil curve numbers (CN) were calculated using USDA Web Soil Survey Hydrologic Soils Group, 2023 crop data, and satellite. Existing culvert information was taken from previous plan and profile drawings and survey data confirmed by satellite imagery.

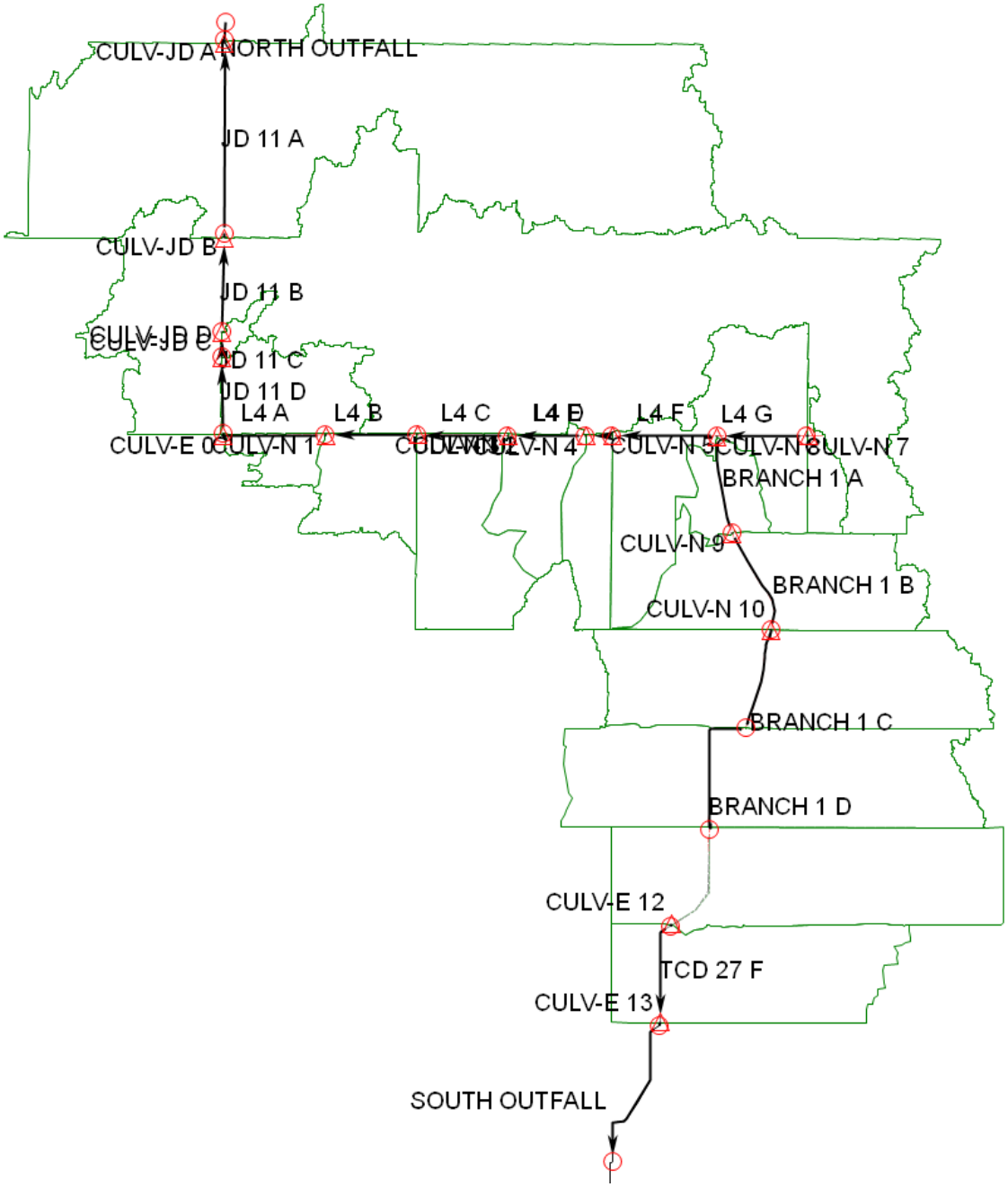


Figure 1: XPSWMM proposed conditions model.

The model area is shown in Figure 1. The project area was delineated at each culvert and the model extends approximately two miles north of the project area and one mile south so that downstream impacts are captured by the model.

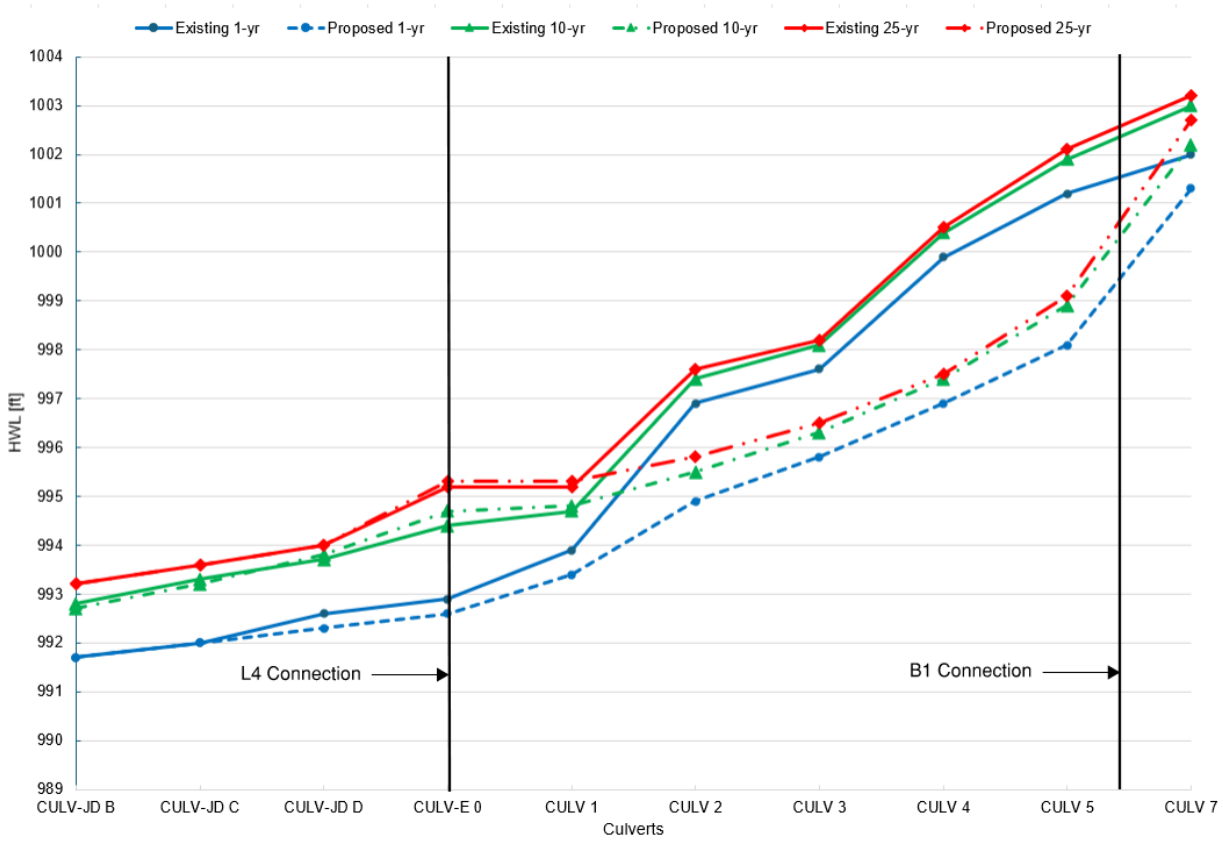


Figure 2: Proposed change in HWL at L4 and JD #11 culvert crossings.

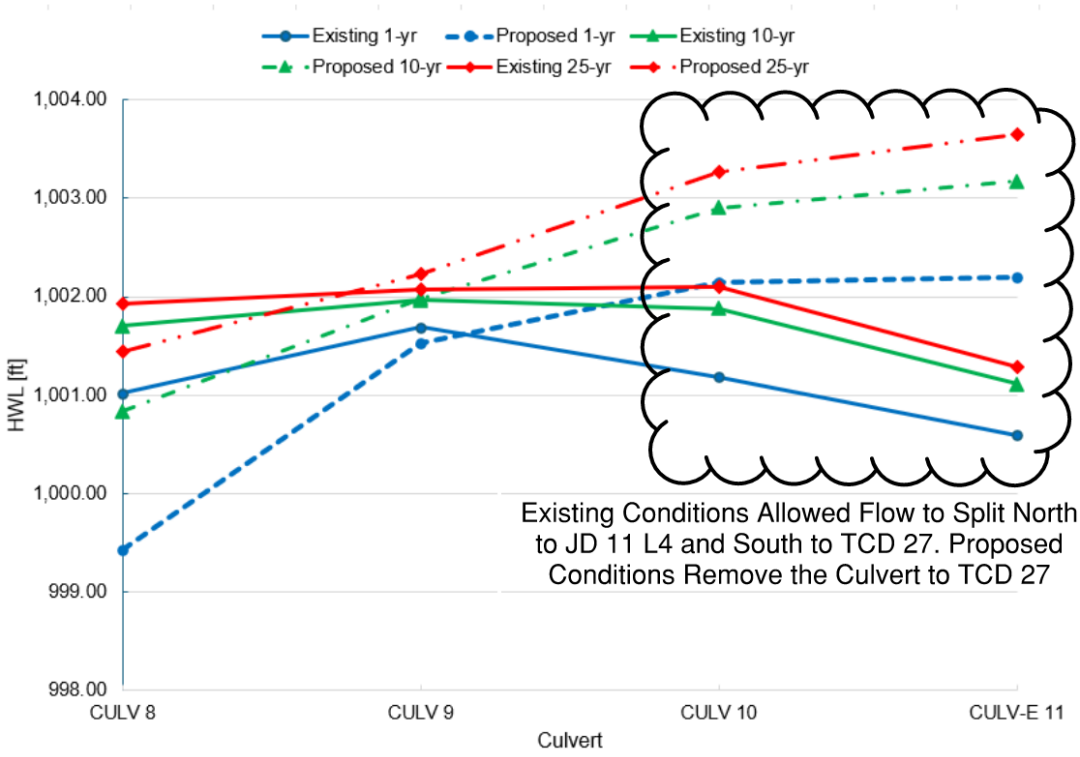


Figure 3: Proposed change in HWL at Branch 1 culvert crossings.

Figure 2 shows the impact on high water level (HWL) by improvement along L4 and JD #11. The model shows HWL decreases up to three feet in the mid-section of L4, but impact is buffered by the time L4 meets up with JD #11 at CULV-E 0. This could be partially explained by the proposed L4 being over two feet deeper in some places than the existing L4. Also, the proposed L4 elevation will match existing at CULV-E 0. However, the change in HWL is greater than this difference in elevation, and the impact to peak flow discussed later shows that the improvements will have a greater impact than simply a lower HWL where the ditch is deeper.

Figure 3 illustrates that re-grading L4B1 will increase the HWL upstream starting at CULV-E 11, where high flow events currently cause only some flow to go north. The assumption for the existing conditions model was that water could flow north or south at CULV-E 11, since it was reported by landowners that flow can come from TCD 27 into JD #11 through this culvert. In the proposed condition, CULV-E 11 is removed, and flow will all be forced north. The improvement will ultimately result in a lower HWL where L4B1 meets up with L4 at CULV 8.

Table 2: Proposed Change in Flow at L4 Discharge CULV-E 0

Storm Event	Existing Peak Flow [cfs]	Proposed Peak Flow [cfs]	Change in Peak Flow [cfs]	Percent Change [%]
1-year	61.1	79.2	+18.1	+29.6
10-year	126.9	134.6	+7.7	+6.1
25-year	153.3	154.1	+0.8	+0.5

3.6. Capacity of the Outlet

A goal of the JD #11 L4 improvement projects is to increase the capacity of the ditch systems to support beneficial drainage for current farming and drainage practices. The difference in capacity will be most evident at the very frequent rain events. However, the culverts at every road crossing have been sized to provide consistent storage in line with the receiving ditch.

With this project, seven of the upstream crossings will be replaced with larger or more culverts. The size of these culverts is shown in Table 1. The most upstream culverts for L4 will remain the same size or get smaller. At the outlet of L4, the original ditch elevation will match the improvement elevation, meaning the improved ditch system will not be deeper than the original ditch at the outlet. From the outlet the improvement grade line will have a flatter profile. This causes the improvement grade line to gradually become deeper than the original grade line as you move upstream. Additionally, the improved cross section of the ditch system for the outlet mile has the same bottom width but adjusts the side slopes from 2.5 on 1 to 3 on 1. This results in a slightly larger cross-sectional area of the channel. Along with the flatter profile, this will result in reduced velocities and less chance of in-channel erosion.

Moore compared existing and proposed condition models to determine the downstream impact of removing CULV-E 11 and regrading L4 and L4B1. The modeled change in high water level (HWL) in JD #11 at the intersection of T-123 and Highway 75 is shown in Table 3 . The HWL change determines the impact of the proposed changes.

Table 3: Proposed HWL Change in JD #11 at Co. Hwy 20 and US Hwy 75 Intersection (CULV-JD B) 1 Mile Downstream of L4 Outlet)

Storm Event	Change in HWL [ft]
1-year	< 0.1
10-year	< 0.1
25-year	< 0.1

In conclusion, the proposed improvement projects have a minimal downstream impact on JD #11.

4. LEGAL PROCESS

The Bois de Sioux Watershed District acting as the drainage authority, having been petitioned by resident landowners in the district for an improvement of L4 and L4 Branch 1, are given the authority to order a Preliminary Survey Report by Minnesota Statutes 103E.241 and 103E.245.

Following the filing of the Preliminary Survey Report, the District will hold a preliminary hearing in accordance with MS 103E.261. At the close of this hearing the District must either:

1) adjourn the hearing to a later date.

2) dismiss the improvement proceedings; or

3) state by order its findings and changes, if any.

If the proceedings are not dismissed and after the preliminary hearing order is filed, the District, following MS 103E.265, shall order the Engineer to make a detailed survey with plans and specifications.

When this order is made, the District shall, by order, appoint viewers to assess benefits and damages in accordance with MS 103E.321. The District shall hold a hearing in accordance with MS 103E.325. At this hearing, the District has the authority under MS 103E.335 to:

1) adjourn and reconvene the hearing, as necessary.

2) may amend the Engineer's Detailed Survey Report or the Viewers' Report or resubmit matters to the Engineer or to the Viewers for immediate consideration; or

3) resubmit the reports to the Engineer and Viewers for reexamination.

Following these proceedings, MS 103E.341 gives the District the authority to either dismiss the proceedings or order the improvement project.

4.1. Content of the Survey Reports

Minnesota Statutes 103E.245 requires the designated Engineer, if finding the improvement feasible, and compliant with the environmental and land use criteria in MS 103E.015 to include in the Preliminary Survey Report a preliminary plan of the drainage project showing the proposed ditches, tile, laterals, and other improvements, the outlet of the project, the watershed of the drainage project or system, and the property likely to be affected and its known users.

The plan must show:

1. The elevation of the outlet and the controlling elevations of the property likely to be affected referenced to standard sea level datum, if practical;
2. The probable size and character of the ditch necessary to make the plan practicable and feasible;
3. The character of the outlet and whether it is sufficient;
4. The probable cost of the drains and improvements shown on the plan;
5. All other information and data necessary to disclose the practicability, necessity, and feasibility of the proposed drainage project;
6. Consideration of the drainage project under the environmental and land use, and multipurpose water management criteria in Section 103E.015; and
7. Other information as ordered by the drainage authority.

Minnesota Statute 103.265 requires the Engineer, if ordered by the drainage authority and following the filing of the preliminary hearing order, to make a detailed survey and submit a Detailed Survey Report. Minnesota Statute 103E.285 requires that the Detailed Survey Report include the following data and information:

1. Map. A complete map of the proposed drainage project and drainage system must be drawn to scale, showing:
    a. The terminus and course of each drain and whether it is ditch or tile, and the location of other proposed drainage works;
    b. The location and situation of the outlet;
    c. The watershed of the proposed drainage project and the sub watershed of main branches, if any, with the location of existing highway bridges and culverts;
    d. All property affected, with the names of the known owners;
    e. Public roads and railways affected;
    f. The outline of any lake basin, wetland, or public water body affected;
    g. Other physical characteristics of the watershed necessary to understand the proposed drainage project and the affected drainage system; and
    h. The area to be acquired to maintain a grass strip under Section 103E.021.
2. Profile of drainage lines.
3. Bridge and culvert plans.
4. Tabular statement of excavation, construction, and cost. A tabular statement must be prepared showing:
    a. The number of cubic yards of excavation, linear feet of tile, and average depth of each tile line;
    b. The bridges, culverts, and works to be constructed under the plans for the drainage project; and
    c. The estimated unit cost of each item, a summary of the total cost, and an estimate of the total cost of completing the proposed drainage project that includes engineering and other costs.
5. Right-of-way acreage. The acreage must be shown that will be taken for ditch right-of-way on each government lot, 40-acre tract, or fraction of a lot or tract under separate ownership. The ditch right-of-way must include the area to be taken to maintain a grass strip under Section 103E.021.
6. Drain tile specifications (if applicable).
7. Soil survey report (if required).
8. Recommendation for division of work.
9. Other information on practicability and necessity of drainage project. Other data and information to inform the drainage authority of the practicability and necessity of the proposed drainage project must be made available including a comprehensive examination and the recommendation by the Engineer regarding the environmental and land use criteria in Section 103E.015.

5. PERMITS REQUIRED

5.1. Local

1. A permit will be obtained from the Traverse County Highway Dept. for working within their right of way.

5.2. State

1. This project is proceeding as a 103E ditch improvement and requires that the MnDNR and Minnesota Board of Water and Soil Resources have the responsibility to review the Engineer's Report and provide an Advisory Report to the Watershed District.
2. This channel project does not affect a public water and does not require a public water permit.
3. A permit will be obtained from the MNDOT to work within their right of way.
4. A Stormwater Pollution Prevention Plan (SWPPP) will be developed, and a permit will be required from the Minnesota Pollution Control Agency, since construction activities will disturb more than one acre of land.
5. 5. Work in or near wetlands may trigger a need for A Minnesota Wetland Conservation Act (WCA) approval. Based on preliminary wetland investigation that indicates that many of the wetlands within the proposed project area are within cropland or previously impacted by drainage, the proposed activities would likely meet the criteria for a WCA No Loss or Exemption approval. Additional investigation would be required to document wetlands and obtain WCA approval prior to implementation of the project.

5.3. Federal

1. For the improvement; a permit may be required under Section 404 of the Clean Water act if discharge of dredged or fill material will be placed within waters of the United States.
2. The Swampbuster provision of the 1985 Farm Bill was aimed at reducing the conversion of wetlands for agricultural purposes. Farmers who drain, fill, level, clear stumps or otherwise alter a wetland may lose eligibility for U.S. Department of Agriculture (USDA) program benefits. According to the National Wetlands Inventory of Minnesota there are almost no wetlands within one mile of this ditch system. It is not anticipated this improvement will result in any alteration of a wetland. If any landowner has concerns about compliance with the 1985 farm bill, they should contact their local FSA office and complete Form AD-1026.

6. PROJECT BENEFIT

6.1. Private Benefits

The private benefits to be expected from the project are mainly to agricultural lands. Private benefits would be experienced through a reduction in the frequency of flooding within the watershed, an outlet for field drainage within the watershed, reduced sediment transport, reduced erosion, and reduced flooding of approximately three field approaches and one private driveway. A secondary benefit is reduced maintenance cost, as the project will incorporate best management practices to reduce sediment transport from the field to the ditch.

6.2. Public Benefits

Public transportation systems that will be benefited by the proposed project include 780th St, T-128, and 690th Ave. The proposed project will reduce the frequency of standing water adjacent to these roads and provide new CSPA, CSP, and RCP culverts. The project will also result in water quality benefits by reducing erosion and reducing sediment transport.

7. PROJECT COST

The Engineer's Opinion of Probable Cost for the improvement of JD #11 L4 as currently proposed is approximately $2,140,000. This opinion of cost includes expected construction costs, design and construction administration fees, and utility relocations. The opinion of cost also includes an estimated right-of-way cost necessary for the project and 103E grass buffers. However, the final right-of-way cost, which includes "damages," will be determined by the viewers. A detailed opinion of cost can be seen in Appendix C.

8. ALTERNATIVES TO PROJECT

MN Statutes 103E.015 requires the consideration of alternative measures for the problem being addressed by the project. Alternative measures identified in state and locally adopted water management plans would include changing land use by restoring wetlands, enrolling the effected land in a permanent easement program through the state of MN (Reinvest in Minnesota) or the federal government (i.e., Conservation Reserve Program, Wetland Reserve Easement, etc.), or flood storage easements throughout the watershed. All these alternative measures involve landowner participation on a voluntary basis. Lands within the project area are utilized almost exclusively for agricultural production and, from conversations with local landowners, it would be unlikely that they would participate in these programs voluntarily.

9. ENVIRONMENTAL IMPACT

9.1. Water Quality

Due to the installation of side inlet culverts, grassed buffers, and grade stabilization features, an improvement in water quality is anticipated because of this project. An MPCA construction erosion control permit is required for this project. This permit requires the establishment of an erosion control plan. This plan will incorporate temporary rock checks, straw waddles, and establish permanent grass as soon as possible once construction is complete. These features help to reduce erosion that may occur during construction.

9.2. Fish and Wildlife

The watershed of L4 and B1 contains minimal wildlife habitat areas. What area that is available for wildlife use consists of some wetlands, farmstead tree groves, fence lines, and road ditches. These areas, outside of the construction limits, are not proposed to be impacted. From this improvement project negligible impact on fish and wildlife is expected. The land use within the watershed is well defined and extensively agricultural. According to the National Wetland Inventory minimal wetland area is within the watershed and is located at the very upstream extents. Little to no land use change is expected to occur from this improvement. Therefore, this improvement project will have little adverse effect on the wildlife in the watershed. Alternatively, widening the ditch system and installing the 103E grass buffer will add additional acres of grassed habitat to the watershed.

9.3. Ground Water

Open channels influence shallow groundwater elevations adjacent to the channel. Because a significant channel already exists, and because the change in depth is minor, the change in lateral effect is anticipated to be minimal. In addition, most existing adjacent private tile lines have been constructed at about 4 feet below the ground surface and utilize pump systems to lift the water into the current ditch. Therefore, no change in the availability, distribution, or use of the ground water beyond that necessary to provide for the efficient production of crops within the watershed is anticipated by this improvement.

9.4. Other Environmental Effects

Tree removal along right of way will cause localized damage. Soil erosion will increase in these areas due to loss of root system, increased runoff and soil degradation.

Temporary adverse effects of the proposed improvement are as follows:

Temporary noise and dust generation can be expected from the construction operations. These impacts are not viewed as significant since there are very few residences near the proposed construction route.

Temporary erosion of soil is likely to occur in the construction area until permanent ground cover is established along the top and banks of the ditch. Although these effects need to be considered, they are probably not significantly different than the current topsoil loss that occurs annually from the erosion of topsoil due to overland flow in the watershed. This construction erosion will be minimized using temporary ditch blocks, inlet protection, and rapid establishment of permanent grass cover.

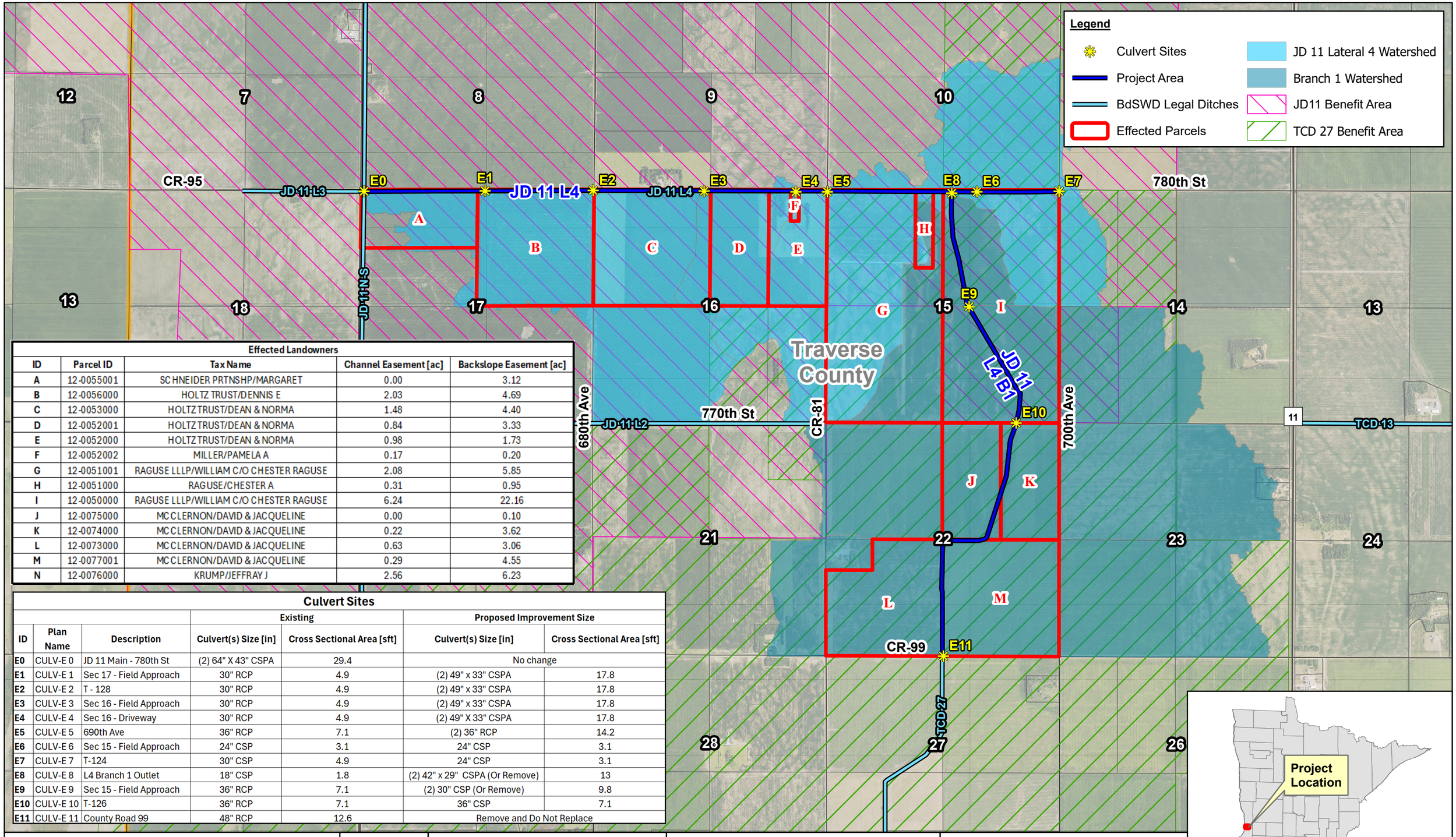
10. INVESTIGATING POTENTIAL EXTERNAL SOURCES OF FUNDING AND TECHNICAL ASSISTANCE

In accordance with MN Statutes 103E.015, the Engineer on behalf of the Bois de Sioux Watershed District investigated the potential use of external sources of funding to facilitate the purposes of MN Statutes 103E.011, subd. 5. The BdSWD partnered with the Traverse SWCD and will apply for a competitive clean water fund grant administered by BWSR. This grant would fund specific portions of the project that contribute to a reduction in sediment from the field to the ditch. Additionally, the BdSWD have developed an internal funding source for clean water elements and inline culvert crossings to aid the landowners in financing these projects.

11. RECOMMENDATION

The proposed improvement to Judicial Ditch No 11, Lateral 4 and Branch 1 as described is practical and feasible. It is proposed to be completed in a manner that includes responsible culvert sizing to provide benefit to agricultural land within the watershed while limiting efficiency during large events. Given the hydraulic benefits, infrastructure benefits, water quality benefits, and habitat benefits anticipated by this project, it is recommended that this project proceed.

12. APPENDIX A – OVERALL DITCH ALIGNMENT AND WATERSHED



Effected Landowners

ID	Parcel ID	Tax Name	Channel Easement [ac]	Backslope Easement [ac]
A	12-0055001	SCHNEIDER PRTNSHP/MARGARET	0.00	3.12
B	12-0056000	HOLTZ TRUST/DENNIS E	2.03	4.69
C	12-0053000	HOLTZ TRUST/DEAN & NORMA	1.48	4.40
D	12-0052001	HOLTZ TRUST/DEAN & NORMA	0.84	3.33
E	12-0052000	HOLTZ TRUST/DEAN & NORMA	0.98	1.73
F	12-0052002	MILLER/PAMELA A	0.17	0.20
G	12-0051001	RAGUSE LLLP/WILLIAM C/O CHESTER RAGUSE	2.08	5.85
H	12-0051000	RAGUSE/CHESTER A	0.31	0.95
I	12-0050000	RAGUSE LLLP/WILLIAM C/O CHESTER RAGUSE	6.24	22.16
J	12-0075000	MCCLERNON/DAVID & JACQUELINE	0.00	0.10
K	12-0074000	MCCLERNON/DAVID & JACQUELINE	0.22	3.62
L	12-0073000	MCCLERNON/DAVID & JACQUELINE	0.63	3.06
M	12-0077001	MCCLERNON/DAVID & JACQUELINE	0.29	4.55
N	12-0076000	KRUMP/JEFFRAY J	2.56	6.23

Culvert Sites

			Existing		Proposed Improvement Size	
ID	Plan Name	Description	Culvert(s) Size [in]	Cross Sectional Area [sft]	Culvert(s) Size [in]	Cross Sectional Area [sft]
E0	CULV-E 0	JD 11 Main - 780th St	(2) 64" X 43" CSPA	29.4	No change	
E1	CULV-E 1	Sec 17 - Field Approach	30" RCP	4.9	(2) 49" x 33" CSPA	17.8
E2	CULV-E 2	T - 128	30" RCP	4.9	(2) 49" x 33" CSPA	17.8
E3	CULV-E 3	Sec 16 - Field Approach	30" RCP	4.9	(2) 49" x 33" CSPA	17.8
E4	CULV-E 4	Sec 16 - Driveway	30" RCP	4.9	(2) 49" X 33" CSPA	17.8
E5	CULV-E 5	690th Ave	36" RCP	7.1	(2) 36" RCP	14.2
E6	CULV-E 6	Sec 15 - Field Approach	24" CSP	3.1	24" CSP	3.1
E7	CULV-E 7	T-124	30" CSP	4.9	24" CSP	3.1
E8	CULV-E 8	L4 Branch 1 Outlet	18" CSP	1.8	(2) 42" x 29" CSPA (Or Remove)	13
E9	CULV-E 9	Sec 15 - Field Approach	36" RCP	7.1	(2) 30" CSP (Or Remove)	9.8
E10	CULV-E 10	T-126	36" RCP	7.1	36" CSP	7.1
E11	CULV-E 11	County Road 99	48" RCP	12.6	Remove and Do Not Replace	

Judicial Ditch 11 Lateral 4 Improvements
Effected Landowner Map
Bois de Sioux Watershed District

Created By: TJS Date Created: 06/05/25 Date Saved: 06/10/25 Date Plotted: N/A Date Exported: 06/10/25
Plotted By: Parcel Date: 02/16/25 Aerial Image: 2024 FM Metro Elevation Data: Lidar
Horizontal Datum: NAD 1983 HARN Adj MN Traverse Feet Vertical Datum: NAVD1988
T:\Projects\18100\18139\18139 - RFMs\18139-711 - JD11\JD11 L2&4 Review\JD11 L2&4 Review.aprx

N W E S

0 2,000 4,000 Feet

1:24,000

Bois de Sioux Watershed District

moore engineering, inc.

14. APPENDIX C – ENGINEER'S OPINION OF COST

moore engineering, inc.

24596
June 20, 2025

Judicial Ditch #11 Lateral 4 Improvement

Bois de Sioux Watershed District
Traverse & Wilkin County, MN

Preliminary Opinion of Cost

					Repair Costs		Improvement Additions	
		ITEM	*UNIT*	*UNIT PRICE*	*QUANTITY*	*TOTAL*	*QUANTITY*	*TOTAL*
		Crossings						
1.	024200	Culvert - Remove (All Types & Sizes)	LF	$ 30.00		$ -	452.0	$ 13,560.00
2.	024200	Culvert - Remove & Salvage (All Types & Sizes)	LF	$ 140.00		$ -	66.0	$ 9,240.00
3.	334213	RCP - 36" CL III	LF	$ 500.00		$ -	56.0	$ 28,000.00
4.	334213	RCP - 36" - End Section	EA	$ 2,200.00		$ -	2.0	$ 4,400.00
5.	334213.	CSPA - 49" X 33"	LF	$ 175.00		$ -	468.0	$ 81,900.00
6.	334213.	CSPA - 42" X 29"	LF	$ 165.00		$ -	252.0	$ 41,580.00
7.	334213.	CSP - 36"	LF	$ 220.00		$ -	50.0	$ 11,000.00
8.	334213.	CSP - 30"	LF	$ 110.00		$ -	100.0	$ 11,000.00
9.	334213.	CSP - 24"	LF	$ 85.00		$ -	134.0	$ 11,390.00
10.	310516.	Select Backfill (P)	CY	$ 50.00		$ -	926.0	$ 46,300.00
11.	313700	Riprap - Class IV	CY	$ 80.00		$ -	800.0	$ 64,000.00
12.	313700	Riprap Filter Blanket	SY	$ 3.25		$ -	1,200.0	$ 3,900.00
13.	321123	Road Surface Aggregate	CY	$ 50.00		$ -	180.0	$ 9,000.00
						$ -		$ -
		Remaining Construction				$ -		$ -
14.	012000	Mobilization	LS	$ 62,000.00	0.5	$ 31,000.00	0.5	$ 31,000.00
15.	024200	Culvert - Remove (All Types & Sizes)	LF	$ 26.00	250.0	$ 6,500.00		$ -
16.	024200	Tile Outlet Modification	LS	$ 10,000.00		$ -	1.0	$ 10,000.00
17.	312213	Excavation - Channel	CY	$ 1.50		$ -	106,000.0	$ 159,000.00
18.	312213	Spoil Bank Leveling	MILE	$ 12,000.00		$ -	5.2	$ 62,500.00
19.	312213	Topsoil Stripping and Spreading	MILE	$ 20,000.00		$ -	5.2	$ 104,166.67
20.	334213	CSP - 18"	LF	$ 65.00	1,000.0	$ 65,000.00		$ -
21.	334213	CSP - 24"	LF	$ 85.00	530.0	$ 45,050.00		$ -
22.	334213	CSP - 30"	LF	$ 110.00	300.0	$ 33,000.00		$ -
23.	334213	CSP - 36"	LF	$ 200.00	120.0	$ 24,000.00		$ -
24.	334213	Adjustable Flap Gate - 18" Steel	EA	$ 950.00	24.0	$ 22,800.00		$ -
25.	334213	Adjustable Flap Gate - 24" Steel	EA	$ 1,100.00	8.0	$ 8,800.00		$ -
26.	334213	Adjustable Flap Gate - 30" Steel	EA	$ 1,400.00	4.0	$ 5,600.00		$ -
27.	334213	Adjustable Flap Gate - 36" Steel	EA	$ 1,850.00	2.0	$ 3,700.00		$ -
28.	024200	Flap Gates - Salvage & Reinstall (All Types & Sizes)	EA	$ 600.00	2.0	$ 1,200.00		$ -
29.	334213	Flared End Section - 18" CSP	EA	$ 450.00	24.0	$ 10,800.00		$ -
30.	334213	Flared End Section - 24" CSP	EA	$ 600.00	8.0	$ 4,800.00		$ -
31.	334213	Flared End Section - 30" CSP	EA	$ 840.00	4.0	$ 3,360.00		$ -
32.	334213	Flared End Section - 36" CSP	EA	$ 1,200.00	2.0	$ 2,400.00		$ -
33.	313700	Riprap - Class III	CY	$ 81.00	760.0	$ 61,560.00		$ -
34.	313700	Riprap Filter Blanket	SY	$ 3.50	1,520.0	$ 5,320.00		$ -
35.	312500	Rock Check - Temporary	EA	$ 650.00		$ -	5.0	$ 3,250.00
36.	312500	Sedimentation Control Wattle - 9"	LF	$ 2.75		$ -	900.0	$ 2,475.00
37.	312500	Rolled Erosion Prevention Product	SY	$ 2.25		$ -	1,000.0	$ 2,250.00
38.	312500	Silt Fence	LF	$ 1.50		$ -	600.0	$ 900.00
39.	312500	Temporary Stabilized Construction Entrance	LS	$ 2,500.00		$ -	1.0	$ 2,500.00
40.	311000	Site Clearing and Grubbing	LS	$ 20,000.00	0.5	$ 10,000.00	0.5	$ 10,000.00
41.	312500	Storm Water Management	LS	$ 4,500.00	1.0	$ 4,500.00		$ -
42.	014000	Material Testing	Invoice	$ 12,500.00	1.000	$ 12,500.00		$ -
43.	015000	Traffic Control	LS	$ 2,500.00	1.0	$ 2,500.00		$ -
44.	329219	Seeding	AC	$ 1,095.00		$ -	70.0	$ 76,650.00
45.	329219	Mulching Only (16.5' Buffer)	AC	$ 625.00	12.6	$ 7,878.79		$ -
					Total Construction	$ 372,268.79		$ 799,961.67
					Contingencies (20%)	$ 75,722.83		$ 162,045.23
					Engineering (Redetermination of Benefits/Project Development, 200 & 201)			$ 60,000.00
					Viewers (Redetermination of Benefits			$ 30,000.00
					R/W Monumentation / Legal Descriptions			$ 20,000.00
					Engineering (Final Design, 300)	$ 33,504.19		$ 71,996.55
					Engineering (Construction Staking, Construction Administration, 400)	$ 33,504.19		$ 71,996.55
					Legal Fees			$ 15,000.00
					Utilities - Construction and Coordination			$ 20,000.00
					BdSWD Staff Construction and Administration Services			$ 7,500.00
					Grant Application and Administration Assistance			$ 7,500.00
					Project Bonding / Fiscal			$ 34,000.00
					Right of Way Administration			$ 20,000.00
					Land for Improvement - Permanent ROW (~ 18 Acres)			$ 126,000.00
					Land for Improvement - Temporary Construction Easement (~ 64 Acres)			$ 44,800.00
					Private Drain Tile Pump Relocations			$ 60,000.00
					TOTAL	**$ 515,000.00**		**$ 1,550,800.00**

	Total Project Cost	**$ 2,065,800.00**	

	Potential Repair Funding Sources		***Potential Improvement Funding***
Clean Water Funding (MDM/1W1P)	*$305,830.00*		*$332,400.00*
Bois de Sioux Watershed District Inline Culvert Grant	*$0.00*		*$335,270.00*
JD 11 District	$209,170.00	Improvement WS	$883,130.00

Existing District Area (acres)		*16,411*		*3,136*
Average Cost/Acre (Assumes equal benefit for all lands)	*$*	*12.75*	*$*	*281.61*
Average Cost Per Acre Per Year Assuming 15 Years at 4%	*$*	*1.15*	Improvement WS	*$ 25.33*

15. APPENDIX D – MN DNR PRELIMINARY ADVISORY LETTER

Ecological and Water Resources
2115 Birchmont Beach Rd NE
Bemidji, MN 56601

July 15, 2025

Jamie Beyer, Administrator
Bois de Sioux Watershed District
704 Hwy 75 South
Wheaton, MN 56296

Re: Preliminary Survey and Engineer's Report for BdSWD Judicial Ditch No. 11 Lateral 4 Improvement

Dear Jamie Beyer,

On behalf of the Commissioner of the Minnesota Department of Natural Resources (MN DNR), I offer the following preliminary advisory report on the Bois de Sioux Watershed District Preliminary Survey and Engineer's Report for the Judicial Ditch No. 11 Lateral 4 Improvement following MN Statute 103E.255.

- The Preliminary Survey Report appears to be adequate as it contains all the required information; however, we have recommendations for the final engineering report below.
- At the time of our review of the preliminary plans, the project will not require a Public Water Works permit or permissions from the DNR.
- A soil survey is not recommended at this time.

Maps showing the extent of flooding under current conditions and after the proposed improvement across various flow events will help the watershed district and landowners understand the project's benefits.

Recommendations to improve the evaluation of environmental, land use, and multipurpose water management criteria

The Bois de Sioux – Mustinka Comprehensive Watershed Management Plan (1W1P) notes that altered hydraulic conditions, sediment loading to surface waters, and unstable river and stream channels are high-priority issues. Practices such as water storage and multi-purpose drainage management within the watershed of Judicial Ditch 11 could be further explored as ways to reduce or mitigate the effects of changed hydrology at the system outlet and downstream in the Bois de Sioux River. These include filtration and storage treatments, filter (buffer) strips, riparian herbaceous cover, grassed waterways

and swales, alternative (gravel or blind) tile intakes, and other practices like wetland restoration, constructed wetlands, water and sediment control basins, and drainage water management.

The drainage authority should further assess the water quality impacts of the proposed drainage project in the final engineer's report. We encourage incorporating best management practices to improve water quality in the final project design. The BMPs outlined in the 1W1P report can serve as a resource. The drainage authority could also create a comprehensive multipurpose drainage management (MDM) plan for the project, incorporating BMPs from the 1W1P report and following guidance in the BWSR MDM fact sheet.

Recommendations for project design

Please consider including a slightly deeper low-flow or inner berm channel in the proposed wider ditch bottom, similar to the existing ditch low-flow channel, to help maintain channel stability, sediment transport, and higher water quality.

MN DNR recommends incorporating native seed mixes to benefit pollinators into drainage buffers. The Minnesota Board of Soil and Water Resources (BWSR) seed mixes Pollinator Plot NW (38-441), Mid Diversity Moist Buffer South and West (32-251), and Mid Diversity Mesic to Dry Buffer South and West (32-231) mixes may be good choices. See the BWSR website for more information on seed mixes: https://bwsr.state.mn.us/seed-mixes.

To reduce the potential entanglement of small animals in plastic mesh, project erosion control materials should follow the Minnesota Department of Transportation 2020 Standard Specifications for Construction for rolled erosion control materials that use only natural fibers (https://www.dot.state.mn.us/pre-letting/spec/).

Thank you for the consideration of these comments. Please contact Environmental Assessment Ecologist Owen Baird (owen.baird@state.mn.us) with any concerns or questions.

Sincerely,

Nathan Kestner
Regional Manager, Ecological and Water Resources

CC: Ryan Bjerke, Area Hydrologist
Owen Baird, NW Region Environmental Assessment Ecologist
Randall Doneen, DNR Conservation Assistance and Regulation Section Manager
Erik Anthonisen, DNR NW Region Southern District Manager

Equal Opportunity Employer

16. APPENDIX E – PLAN AND PROFILE

JUDICIAL DITCH 11 LATERAL 4 IMPROVEMENTS

BOIS DE SIOUX WATERSHED DISTRICT

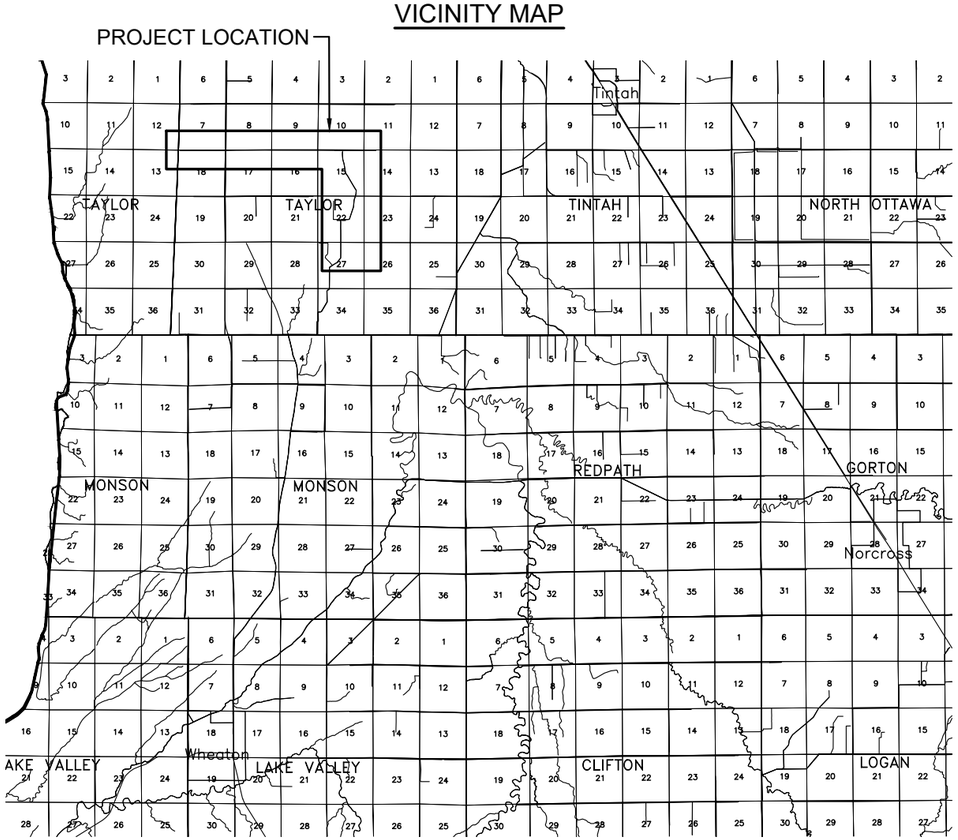
TRAVERSE COUNTY, MINNESOTA

moore engineering, inc.
Consulting Engineering • Land Surveying
www.mooreengineeringinc.com

ADMINISTRATOR: JAMIE BEYER
TECHNICIAN: TROY FRIDGEN
ATTORNEY: LUKAS CROAKER
ENGINEER: CHAD ENGELS

BOARD OF MANAGERS:
LINDA VAVRA
ALLEN WOLD
SCOTT GILLESPIE
JASON BEYER
JOHN KAPPHAHN
JEROME DEAL
DOUG DAHLEN
BEN BRUTLAG
STEVEN SCHMIDT

VICINITY MAP



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PROJECT No. 24596

PRELIMINARY

FILE LOCATION: Q:\Projects\24000\24500\24596 WilkinCoMN JudicialDitch11Lat4Imp\CADICD\Production\24596-COVER.dwg

PRELIMINARY

Sheet List Table

Rev #	Rev Date	Sheet Number	Sheet Title
GENERAL			
		G-001	COVER SHEET
		G-002	TABLE OF CONTENTS
CIVIL			
		C-001	LEGEND
		C-002	GENERAL NOTES
		C-003	GENERAL NOTES
		C-004	GENERAL NOTES
PROJECT LAYOUTS			
		C-101	GENERAL LAYOUT
DETAILS			
		C-201	EROSION CONTROL DETAILS
		C-202	TYPICAL DETAILS
		C-203	TYPICAL DETAILS
PLAN AND PROFILE			
		C-401	JUDICAL DITCH 11 - LATERAL 4
		C-402	JUDICIAL DITCH 11 - LATERAL 4
		C-403	JUDICIAL DITCH 11 - LATERAL 4
		C-404	LATERAL 4 - BRANCH 1
		C-405	LATERAL 4 - BRANCH 1
CROSS SECTIONS			
		C-801	JUDICIAL DITCH 11 - LATERAL 4
		C-802	JUDICIAL DITCH 11 - LATERAL 4
		C-803	JUDICIAL DITCH 11 - LATERAL 4
		C-804	JUDICIAL DITCH 11 - LATERAL 4
		C-805	JUDICIAL DITCH 11 - LATERAL 4
		C-806	LATERAL 4 - BRANCH 1
		C-807	LATERAL 4 - BRANCH 1

moore engineering, inc.

GENERAL
JUDICIAL DITCH 11 LATERAL 4 IMPROVEMENTS
BOIS DE SIOUX WATERSHED DISTRICT
TRAVERSE COUNTY, MINNESOTA
TABLE OF CONTENTS

DATE:	9.4.2025
REV DATE:	----
REV NUM:	----
RECORD:	----
PROJECT No.	24596
MANAGER:	JAG
DESIGNER:	JAG
DRAFTER:	RJK
REVIEWER:	JAG

G-002

CIVIL LEGEND

EXISTING

- BENCHMARK
- IRON MONUMENT FOUND
- EXISTING PROPERTY LINE
- EXISTING PLAT LOT LINE
- EXISTING RIGHT OF WAY LINE
- EXISTING EASEMENT LINE
- EXISTING PLAT EASEMENT LINE
- EXISTING GAS LINE MARKER
- EXISTING GAS GATE VALVE
- EXISTING POWER POLE
- EXISTING LIGHT POLE
- EXISTING LIGHT POLE W/SIGN
- EXISTING GUY WIRE
- EXISTING TRAFFIC SIGNAL ARM
- EXISTING SIGN
- EXISTING CULVERT W/FLARED END SECTION (F.E.S.)
- EXISTING FLARED END SECTION (F.E.S.)
- EXISTING CURB STOP
- EXISTING HYDRANT W/GATE VALVE
- EXISTING GATE VALVE
- EXISTING PROPANE TANK
- EXISTING SANITARY SEWER MANHOLE
- EXISTING SANITARY SEWER CLEANOUT
- EXISTING STORM SEWER CATCH BASIN
- EXISTING STORM SEWER MANHOLE
- W — EXISTING WATER MAIN
- EXISTING WATER SERVICE W/CURB STOP
- SS — EXISTING SANITARY SEWER
- SS — EXISTING SANITARY SEWER (RELINE W/ CIPP)
- SS–FM — EXISTING SANITARY FORCEMAIN
- EXISTING SANITARY SEWER SERVICE
- ST — EXISTING STORM SEWER
- ST–FM — EXISTING STORM SEWER FORCEMAIN
- STEAM — EXISTING STEAM PIPE
- EXISTING AIR CONDITIONER
- U — EXISTING UTILITY PEDESTAL
- EXISTING UTILITY MANHOLE
- EXISTING UTILITY VAULT
- C — EXISTING UNDERGROUND COMMUNICATIONS
- F — EXISTING UNDERGROUND FIBER
- T — EXISTING UNDERGROUND TELEPHONE
- OHT — EXISTING OVERHEAD TELEPHONE
- TV — EXISTING UNDERGROUND TELEVISION
- OHTV — EXISTING OVERHEAD TELEVISION
- G — EXISTING UNDERGROUND GAS
- E — EXISTING UNDERGROUND ELECTRIC
- OHP — EXISTING OVERHEAD POWER
- X — EXISTING BARBED WIRE FENCE
- EXISTING CHAIN LINK/STEEL FENCE
- EXISTING PVC/WOOD FENCE
- EXISTING RAILROAD
- EXISTING SHRUB
- EXISTING STUMP
- EXISTING BOULDER
- EXISTING TREE/TREE CLUSTER
- EXISTING SPRINKLER HEAD
- 12 — EXISTING CLUSTER BOX UNIT (CBU)
- EXISTING MAILBOX
- EXISTING CURB AND GUTTER

PROPOSED

- NEW PROPERTY LINE
- NEW PLAT LOT LINE
- NEW RIGHT OF WAY LINE
- NEW EASEMENT LINE
- NEW PLAT EASEMENT LINE
- CONST–ESMT — CONSTRUCTION EASEMENT
- CONST–LIMITS — CONSTRUCTION LIMITS
- NEW LIGHT POLE
- NEW LIGHT POLE W/SIGN
- NEW GUY WIRE
- NEW SIGN
- TRAFFIC CONTROL – DRUM
- TRAFFIC CONTROL – TUBULAR MARKER
- NEW CULVERT W/FLARED END SECTION (F.E.S.)
- NEW FLARED END SECTION (F.E.S.)
- NEW CURB STOP
- NEW HYDRANT W/GATE VALVE
- NEW GATE VALVE
- NEW TAPPING SLEEVE
- NEW FITTINGS
- NEW PLUG
- NEW SANITARY SEWER MANHOLE
- NEW SANITARY SEWER CLEANOUT
- NEW STORM SEWER CATCH BASIN
- NEW STORM SEWER MANHOLE
- W — NEW WATER MAIN
- W — NEW WATER MAIN (DIRECTIONAL DRILLED, CASED OR BURST)
- NEW WATER SERVICE W/CURB STOP (S.B. ELEV.)
- SS — NEW SANITARY SEWER
- SS — NEW SANITARY SEWER (DIRECTIONAL DRILLED OR CASED)
- SS–FM — NEW SANITARY FORCEMAIN
- NEW SANITARY SEWER SERVICE (S.S. ELEV.)
- ST — NEW STORM SEWER
- ST — NEW STORM SEWER (DIRECTIONAL DRILLED OR CASED)
- ST–FM — NEW STORM SEWER FORCEMAIN
- STEAM — NEW STEAM PIPE
- IN — INSULATION PER DETAIL
- X — NEW BARBED WIRE FENCE
- NEW CHAIN LINK/STEEL FENCE
- NEW PVC/WOOD FENCE
- 12 — NEW CLUSTER BOX UNIT (CBU)
- NEW MAILBOX
- NEW LARGE DECIDUOUS TREE
- NEW SMALL DECIDUOUS TREE
- NEW SHRUB
- NEW LARGE EVERGREEN TREE
- NEW SMALL EVERGREEN TREE

REMOVALS

- SS — INDICATES REMOVAL
- REMOVE CURB AND GUTTER
- REMOVE ASPHALT PAVEMENT
- REMOVE CONCRETE PAVEMENT
- REMOVE AGGREGATE SURFACE

PAVEMENT REHAB

- UNIFORM MILL & OVERLAY
- TAPERED MILL & OVERLAY
- LEVELING COURSE
- RECLAIM
- ASPHALT PATCH
- CHIP SEAL

PAVEMENT

- NEW INFLOW CURB AND GUTTER
- NEW OUTFLOW CURB AND GUTTER
- NEW ASPHALT SURFACE
- NEW CONCRETE SURFACE
- NEW GRANULAR SURFACE
- NEW CRUSHED CONCRETE SURFACE
- NEW DECORATIVE COLORED CONCRETE
- NEW ASPHALT SIDEWALK/MULTI–USE PATH
- NEW CONCRETE SIDEWALK/MULTI–USE PATH
- NEW CONCRETE APPROACH/DRIVEWAY
- NEW DETECTABLE WARNING PANEL
- NEW GRAVEL APPROACH/DRIVEWAY
- NEW CONCRETE VALLEY GUTTER
- NEW MEDIAN NOSE APRON
- NEW ADA RAMP W/WARNING PANEL

SOIL DISTURBANCE

- DISTURBANCE AREA / TOPSOIL REMOVAL
- REMOVE STOCKPILE
- EXISTING STOCKPILE
- TEMPORARY STOCKPILE
- PERMANENT STOCKPILE
- REAR YARD GRADING
- GRASS BUFFER STRIP

SOIL STABILIZATION

- DISTURBED SOIL STABILIZATION
- STRAW MULCH
- SEEDING & STRAW MULCH
- SEEDING & HYDRO MULCH
- TOPSOIL, SEEDING & STRAW MULCH
- TOPSOIL, SEEDING & HYDRO MULCH
- TOPSOIL, SEEDING & BLANKET

MISCELLANEOUS

- EXISTING RIPRAP
- NEW RIPRAP
- EXISTING LANDSCAPING AREA
- NEW LANDSCAPING AREA
- EXISTING WATER SURFACE
- NEW WATER SURFACE
- EXISTING WETLAND

EROSION CONTROL

- DRAINAGE BREAK LINE
- EXISTING DRAINAGE DIRECTION
- 2.0% — FINISHED DRAINAGE DIRECTION & SLOPE
- 4:1 — FINISHED GRADE
- 895 — EXISTING CONTOUR ELEVATION
- 895 — FINISHED CONTOUR ELEVATION
- FL: 900.07 — GRADE ELEVATIONS
- SEDIMENTATION CONTROL WATTLE
- SEDIMENTATION CONTROL FENCE
- ROCK CHECK
- S.C.E. — STABILIZED CONSTRUCTION ENTRANCE
- CONCRETE WASHOUT
- INLET PROTECTION DEVICE

ABBREVIATIONS:

BOC = BACK OF CURB
BOW = BACK OF WALK
C = COMMUNICATION
CB# = STORM SEWER CATCH BASIN
CIPP = CURED IN PLACE PIPE
CL = CENTERLINE
CSP = CORRUGATED STEEL PIPE
CO# = SANITARY SEWER CLEANOUT
CS# = CONTROL STRUCTURE
DIA = DIAMETER
DIP = DUCTILE IRON PIPE
E = ELECTRICAL
ECC = EDGE OF CRUSHED CONCRETE
EG = EXISTING GRADE
EOC = EDGE OF CONCRETE
EOG = EDGE OF GRAVEL
EOP = EDGE OF PAVEMENT
EOW = EDGE OF WALK
EX = EXISTING
F = FIBER OPTIC
FES = FLARED END SECTION
FG = FINISHED GRADE
FL = FLOWLINE
FM = FORCEMAIN
G = GAS LINE
HP = HIGH POINT
INV = INVERT
LP = LOW POINT
MA = MATCH
M# = STORM SEWER MANHOLE
MT# = STORM SEWER TEE MANHOLE
MM# = STORM SEWER MULTI–MANHOLE
MC = MIDPOINT OF CURVE
OHP = OVERHEAD POWER
OHT = OVERHEAD TELEPHONE
OHTV = OVERHEAD TELEVISION
PC = POINT OF CURVATURE
PRC = POINT OF REVERSE CURVE
PVC = POLYVINYL CHLORIDE PIPE
PT = POINT OF TANGENCY
RIM = RIM OF STRUCTURE
S# = SANITARY SEWER MANHOLE
S.B. ELEV = STOP BOX ELEVATION
S.S. ELEV = SANITARY SEWER SERVICE INVERT
SS = SANITARY SEWER
ST = STORM SEWER
STA = ALIGNMENT STATION
T = TELEPHONE
TOC = TOP OF CONCRETE
TOP = TOP OF PAVEMENT
TOP = TOP OF PIPE
TOW = TOP OF WALK
TR# = SANITARY TELEVISING RISER
TRANS = TRANSFORMER
TV = TELEVISION
U = UTILITY (UNKNOWN UTILITY)

PRELIMINARY

moore engineering, inc.

CIVIL
JUDICIAL DITCH 11 LATERAL 4 IMPROVEMENTS
BOIS DE SIOUX WATERSHED DISTRICT
TRAVERSE COUNTY, MINNESOTA
LEGEND

DATE:	9.4.2025
REV DATE:	----
REV NUM:	----
RECORD:	----
PROJECT No.	24596
MANAGER:	JAG
DESIGNER:	JAG
DRAFTER:	RJK
REVIEWER:	JAG

C-001

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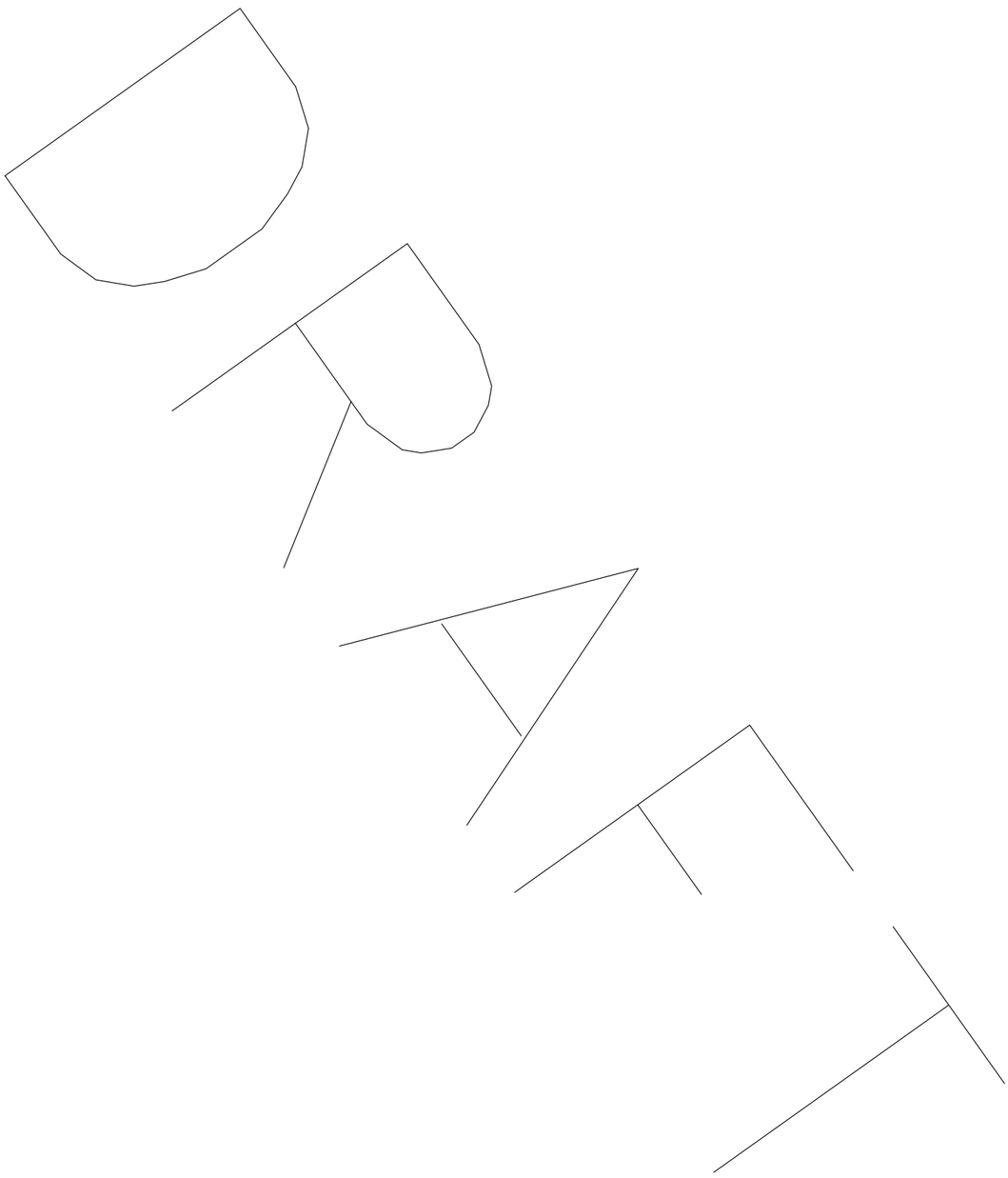


PRELIMINARY

moore engineering, inc.

CIVIL
JUDICIAL DITCH 11 LATERAL 4 IMPROVEMENTS
BOIS DE SIOUX WATERSHED DISTRICT
TRAVERSE COUNTY, MINNESOTA
GENERAL NOTES

DATE:	9.4.2025
REV DATE:	---
REV NUM:	---
RECORD:	---
PROJECT No.	24596
MANAGER:	JAG
DESIGNER:	JAG
DRAFTER:	RJK
REVIEWER:	JAG

C-002

FILE LOCATION: Q:\Projects\24000\24500\24596 WilkinCoMN JudicialDitch11Lat4Imp\CADICD\Production\24596-COVER.dwg

DRAFT

PRELIMINARY

moore
engineering, inc.

CIVIL
JUDICIAL DITCH 11 LATERAL 4 IMPROVEMENTS
BOIS DE SIOUX WATERSHED DISTRICT
TRAVERSE COUNTY, MINNESOTA
GENERAL NOTES

DATE:	9.4.2025
REV DATE:	----
REV NUM:	----
RECORD:	----
PROJECT No.	24596
MANAGER:	JAG
DESIGNER:	JAG
DRAFTER:	RJK
REVIEWER:	JAG

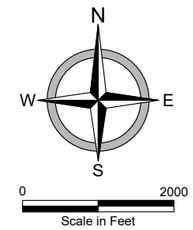
C-003

CIVIL
JUDICIAL DITCH 11 LATERAL 4 IMPROVEMENTS
BOIS DE SIOUX WATERSHED DISTRICT
TRAVERSE COUNTY, MINNESOTA
GENERAL NOTES

moore engineering, inc.

DATE:	9.4.2025
REV DATE:	---
REV NUM:	---
RECORD:	---
PROJECT No.	24596
MANAGER:	JAG
DESIGNER:	JAG
DRAFTER:	RJK
REVIEWER:	JAG

C-004



PRELIMINARY

moore engineering, inc.

HORIZONTAL CONTROL

MINNESOTA COUNTY COORDINATE SYSTEM, NAD83: TRAVERSE COUNTY.

VERTICAL CONTROL

NORTH AMERICAN VERTICAL DATUM (NAVD) 88

BENCHMARKS/SURVEY CONTROL

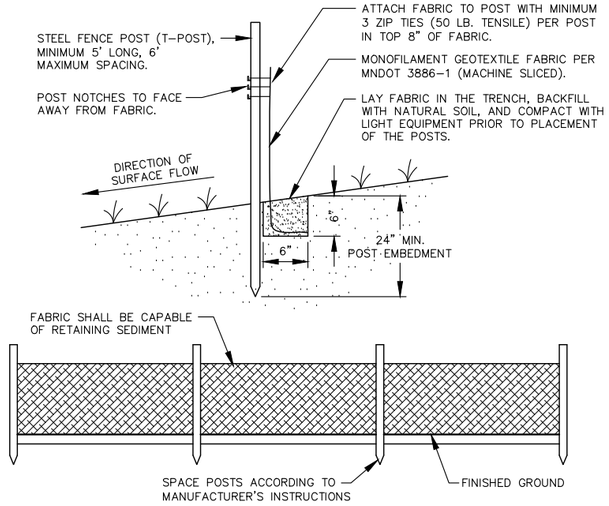
PRIOR TO PROJECT START, OWNER WILL SET AND ESTABLISH BENCHMARKS AND SURVEY CONTROL FOR THE PROJECT.

		Existing		Proposed Improvement Size	
Plan Name	Description	Culvert(s) Size [in]	Cross Sectional Area [sft]	Culvert(s) Size [in]	Cross Sectional Area [sft]
CULV-E 0	JD 11 Main - 780th St	(2) 64" X 43" CSPA	29.4	No change	
CULV-E 1	Sec 17 - Field Approach	30" RCP	4.9	(2) 49" x 33" CSPA	17.8
CULV-E 2	T - 128	30" RCP	4.9	(2) 49" x 33" CSPA	17.8
CULV-E 3	Sec 16 - Field Approach	30" RCP	4.9	(2) 49" x 33" CSPA	17.8
CULV-E 4	Sec 16 - Driveway	30" RCP	4.9	(2) 49" X 33" CSPA	17.8
CULV-E 5	690th Ave	36" RCP	7.1	(2) 36" RCP	14.2
CULV-E 6	Sec 15 - Field Approach	24" CSP	3.1	24" CSP	3.1
CULV-E 7	T-124	30" CSP	4.9	24" CSP	3.1
CULV-E 8	L4 Branch 1 Outlet	18" CSP	1.8	(2) 42" x 29" CSPA (Or Remove)	13
CULV-E 9	Sec 15 - Field Approach	36" RCP	7.1	(2) 30" CSP (Or Remove)	9.8
CULV-E 10	T-126	36" RCP	7.1	36" CSP	7.1
CULV-E 11	County Road 99	48" RCP	12.6	Remove and Do Not Replace	

PROJECT LAYOUTS
JUDICIAL DITCH 11 LATERAL 4 IMPROVEMENTS
BOIS DE SIOUX WATERSHED DISTRICT
TRAVERSE COUNTY, MINNESOTA
GENERAL LAYOUT

DATE:	9.4.2025
REV DATE:	----
REV NUM:	----
RECORD:	----
PROJECT No.	24596
MANAGER:	JAG
DESIGNER:	JAG
DRAFTER:	RJK
REVIEWER:	JAG

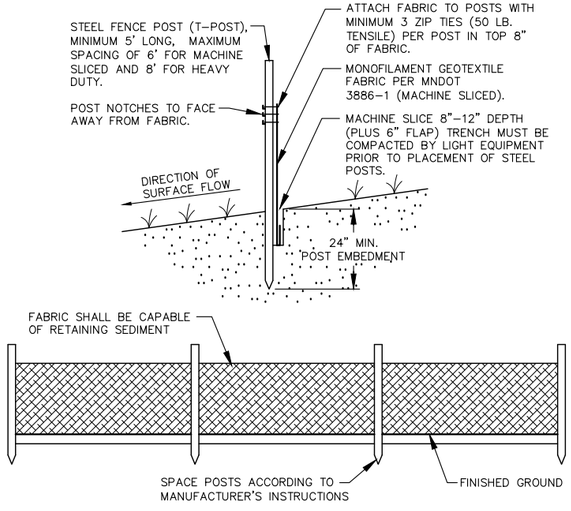
C-101



STANDARD SILT FENCE DETAIL

NO SCALE

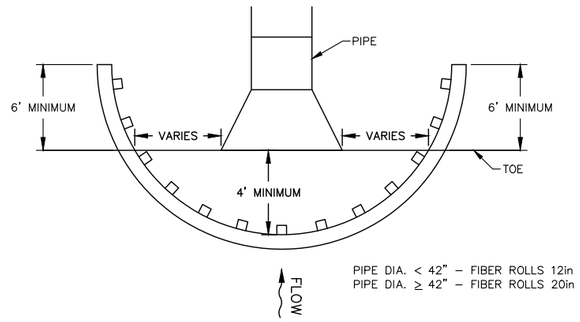
NOTES:
1. INSPECT AND REPAIR AFTER EACH STORM EVENT, AND REMOVE SEDIMENT WHEN NECESSARY.
2. REMOVED SEDIMENTS SHALL BE DEPOSITED IN AN AREA THAT WILL NOT CONTRIBUTE SEDIMENT OFF-SITE AND CAN BE PERMANENTLY STABILIZED.



MACHINED SILT FENCE DETAIL

NO SCALE

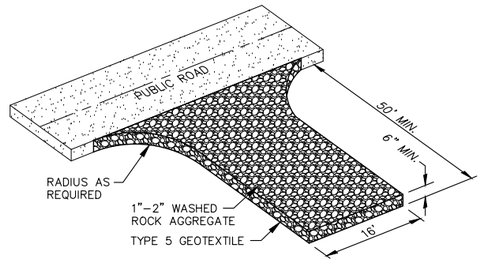
NOTES:
1. INSPECT AND REPAIR AFTER EACH STORM EVENT, AND REMOVE SEDIMENT WHEN NECESSARY.
2. REMOVED SEDIMENTS SHALL BE DEPOSITED IN AN AREA THAT WILL NOT CONTRIBUTE SEDIMENT OFF-SITE AND CAN BE PERMANENTLY STABILIZED.



FIBER ROLL PROTECTION INLET OF PIPE END

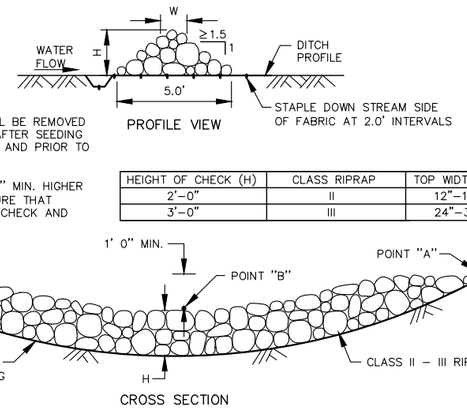
NO SCALE

NOTES:
1. INSTALL PER MNDOT 3885.2A STANDARD SPECIFICATIONS FOR CONSTRUCTION



TEMPORARY ROCK – SITE ENTRANCE

NO SCALE



NOTES:
1. ROCK DITCH CHECK SHALL BE REMOVED FROM THE CLEAR ZONE AFTER SEEDING OR TURF IS ESTABLISHED AND PRIOR TO FINAL ACCEPTANCE.
2. POINT "A" MUST BE 1'-0" MIN. HIGHER THAN POINT "B" TO ENSURE THAT WATER FLOWS OVER THE CHECK AND NOT AROUND THE ENDS.

HEIGHT OF CHECK (H)	CLASS RIPRAP	TOP WIDTH (W)
2'-0"	II	12"-18"
3'-0"	III	24"-30"

TEMPORARY ROCK CHECK DETAIL

NO SCALE

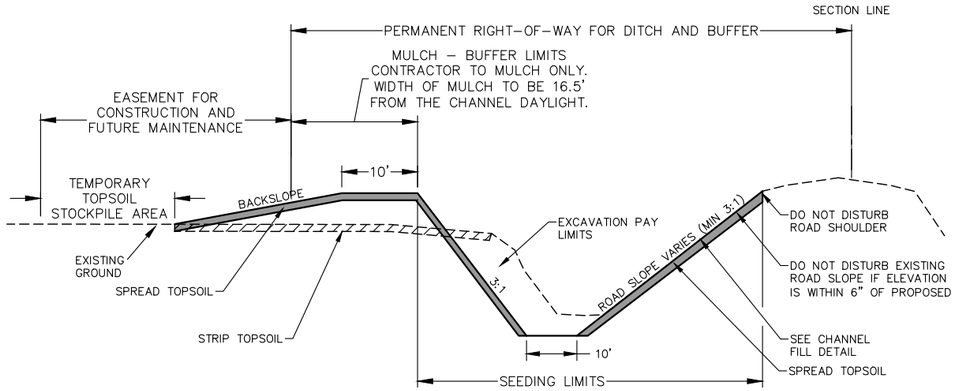
PRELIMINARY

moore engineering, inc.

DETAILS
JUDICIAL DITCH 11 LATERAL 4 IMPROVEMENTS
BOIS DE SIOUX WATERSHED DISTRICT
TRAVERSE COUNTY, MINNESOTA
EROSION CONTROL DETAILS

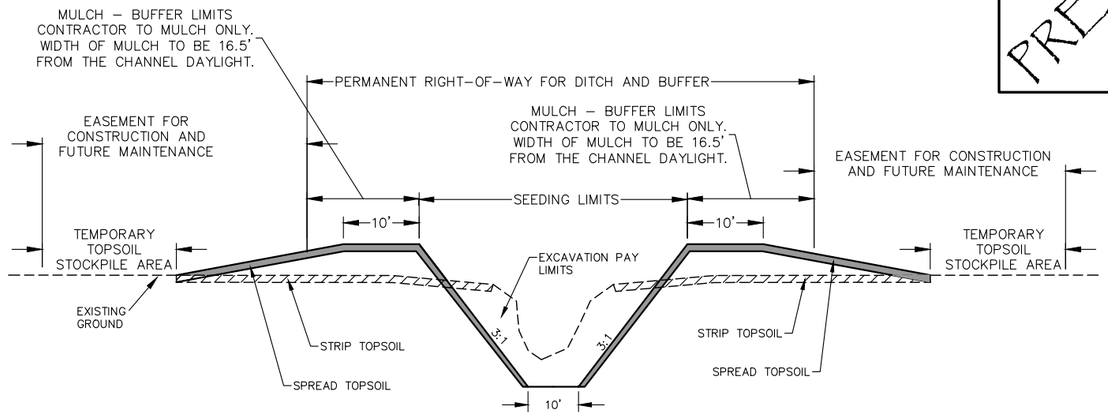
DATE:	9.4.2025
REV DATE:	----
REV NUM:	----
RECORD:	----
PROJECT No.	24596
MANAGER:	JAG
DESIGNER:	JAG
DRAFTER:	RJK
REVIEWER:	JAG

C-201



TYPICAL SECTION 1

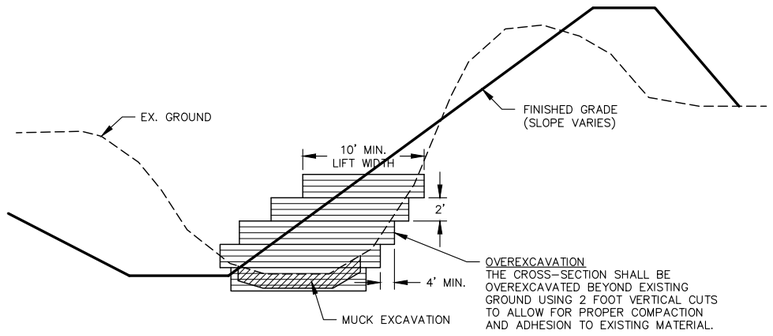
NO SCALE



NOTES:
1. SEE PLAN NOTES FOR VARIATIONS FROM TYPICAL.
2. SEE PLAN AND PROFILE FOR CONSTRUCTION LIMITS.
3. SEE BERM DETAIL FOR MINIMUM SPOIL BANK.
4. STRIP TOPSOIL DEPTH OF 12".

TYPICAL SECTION 2

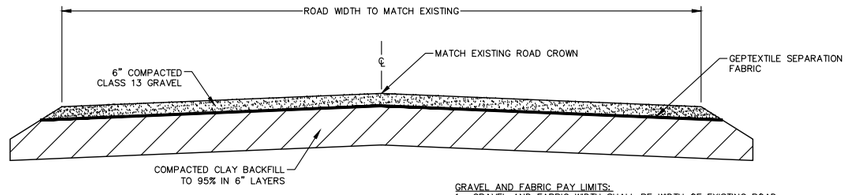
NO SCALE



EMBANKMENT NOTES:
1. THE CROSS–SECTION SHALL BE OVEREXCAVATED BEYOND EXISTING GROUND USING 2 FOOT VERTICAL CUTS TO ALLOW FOR PROPER COMPACTION AND ADHESION TO EXISTING MATERIAL.
2. THE EMBANKMENT MATERIAL SHALL BE OBTAINED BY AN APPROVED BORROW PIT AND SHALL BE CLAY ONLY. THE EMBANKMENT MATERIAL SHALL BE PLACED IN HORIZONTAL LAYERS NOT TO EXCEED 6 INCHES IN DEPTH AND COMPACTED TO A MINIMUM OF 95% OF MAXIMUM DENSITY AS DETERMINED BY A STANDARD PROCTOR TEST IN ACCORDANCE WITH ASTM D698. MOISTURE CONTENT SHALL BE MAINTAINED DURING COMPACTION BETWEEN 2% BELOW OPTIMUM AND 3% ABOVE OPTIMUM AS DETERMINED BY STANDARD PROCTOR.
3. ALL CONSTRUCTED EMBANKMENT LAYERS SHALL BE TIED INTO UNDISTURBED SOIL ALONG THE OVEREXCAVATION SLOPE BY CONSTRUCTING VERTICAL WALLS 2 FEET HIGH. ALL CONSTRUCTED EMBANKMENT LAYERS SHALL BE A MINIMUM OF 10 FEET WIDE. THE CROSS–SECTION SHALL BE OVERFILLED TO ALLOW FOR PROPER COMPACTION AND EXCAVATED TO FINAL GRADES AND SLOPES.
3. NO PAYMENT IS MADE FOR OVEREXCAVATION/OVERBUILD NEEDED TO FILL THE CHANNEL SLOPE AS PER THE DETAIL SHOWN.

TYPICAL SECTION – CHANNEL FILL DETAIL

NO SCALE



GRAVEL AND FABRIC PAY LIMITS:
1. GRAVEL AND FABRIC WIDTH SHALL BE WIDTH OF EXISTING ROAD.
2. DEPTH OF GRAVEL SHALL BE 6".
3. LENGTH OF FABRIC AND GEOTEXTILE INSTALLATION SHALL BE NO LONGER THAN LENGTH OF TRENCH NEEDED TO INSTALL CULVERTS AS SHOWN ABOVE IN SELECT BACKFILL PAY LIMIT DETAIL.

TYPICAL GRAVEL ROAD SECTION

NO SCALE *XXXXX-XX 12.15.17*

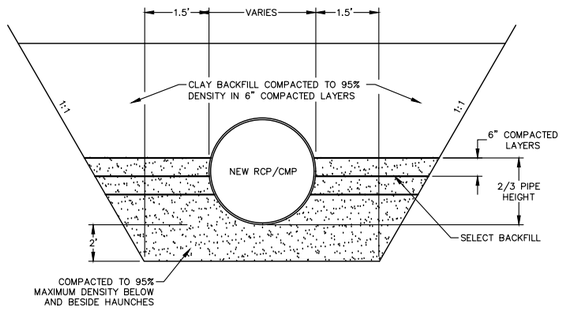
PRELIMINARY

moore engineering, inc.

DETAILS
JUDICIAL DITCH 11 LATERAL 4 IMPROVEMENTS
BOIS DE SIOUX WATERSHED DISTRICT
TRAVERSE COUNTY, MINNESOTA
TYPICAL DETAILS

DATE:	9.4.2025
REV DATE:	----
REV NUM:	----
RECORD:	----
PROJECT No.	24596
MANAGER:	JAG
DESIGNER:	JAG
DRAFTER:	RJK
REVIEWER:	JAG

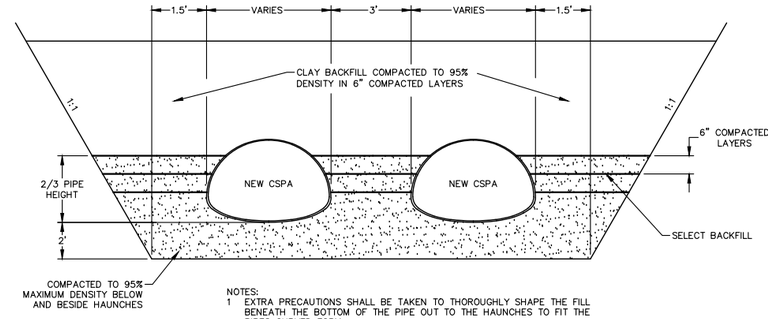
C-202



NOTES:
1 EXTRA PRECAUTIONS SHALL BE TAKEN TO THOROUGHLY SHAPE THE FILL BENEATH THE BOTTOM OF THE PIPE OUT TO THE HAUNCHES TO FIT THE PIPES CURVED FORM.
2 THE ABOVE DIMENSIONS ARE SHOWN TO ESTABLISH MINIMUM REQUIREMENTS. NO EXTRA PAYMENT SHALL BE GIVEN FOR GOING OUTSIDE THOSE MINIMUMS.
3 RAILROAD TRACK AND BALLAST TO BE REMOVED AND RELAYED BY RRV&W. SUBGRADE REMOVAL AND REPLACEMENT IS THE CONTRACTOR'S RESPONSIBILITY.

SECTION A-A (SINGLE PIPE)

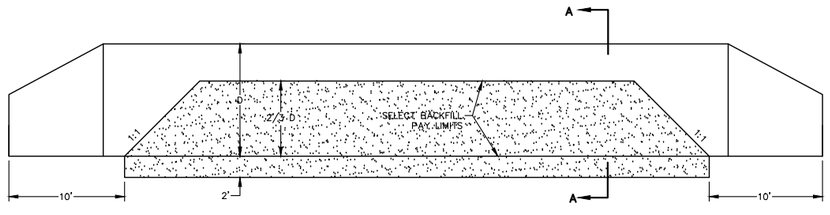
NO SCALE *XXXXX-XX 02.15.17*



NOTES:
1 EXTRA PRECAUTIONS SHALL BE TAKEN TO THOROUGHLY SHAPE THE FILL BENEATH THE BOTTOM OF THE PIPE OUT TO THE HAUNCHES TO FIT THE PIPES CURVED FORM.
2 THE ABOVE DIMENSIONS ARE SHOWN TO ESTABLISH MINIMUM REQUIREMENTS. NO EXTRA PAYMENT SHALL BE GIVEN FOR GOING OUTSIDE THOSE MINIMUMS.

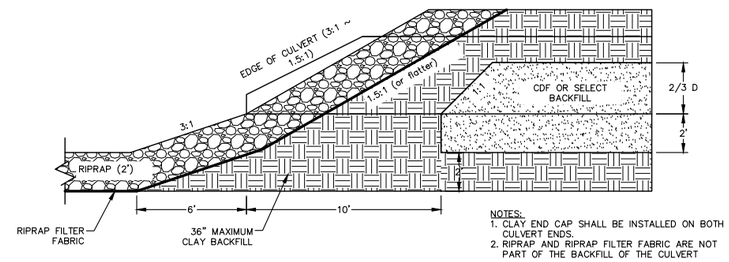
SECTION A-A (DUAL ARCH)

NO SCALE *XXXXX-XX 02.15.17*



SELECT BACKFILL PAY LIMITS

NO SCALE *XXXXX-XX 12.15.17*



NOTES:
1. CLAY END CAP SHALL BE INSTALLED ON BOTH CULVERT ENDS.
2. RIPRAP AND RIPRAP FILTER FABRIC ARE NOT PART OF THE BACKFILL OF THE CULVERT

END OF CULVERT BACKFILL DETAIL

NO SCALE *XXXXX-XX 02.15.17*

PRELIMINARY

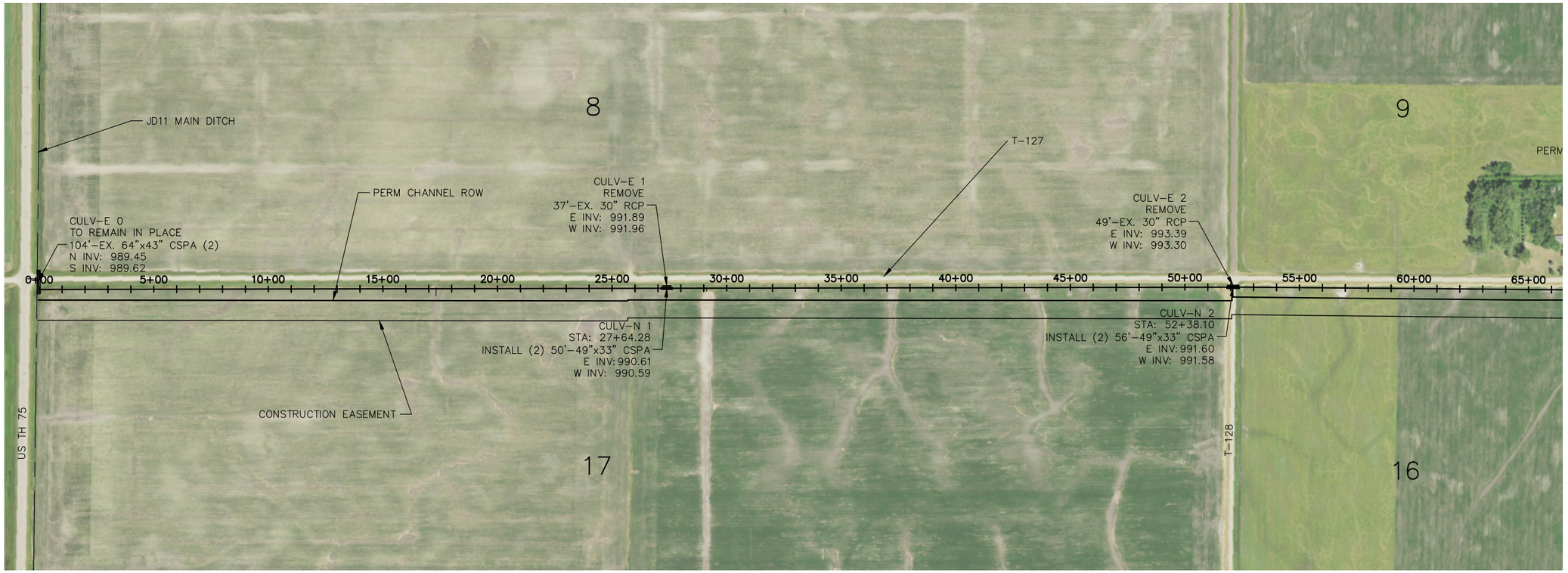
moore engineering, inc.

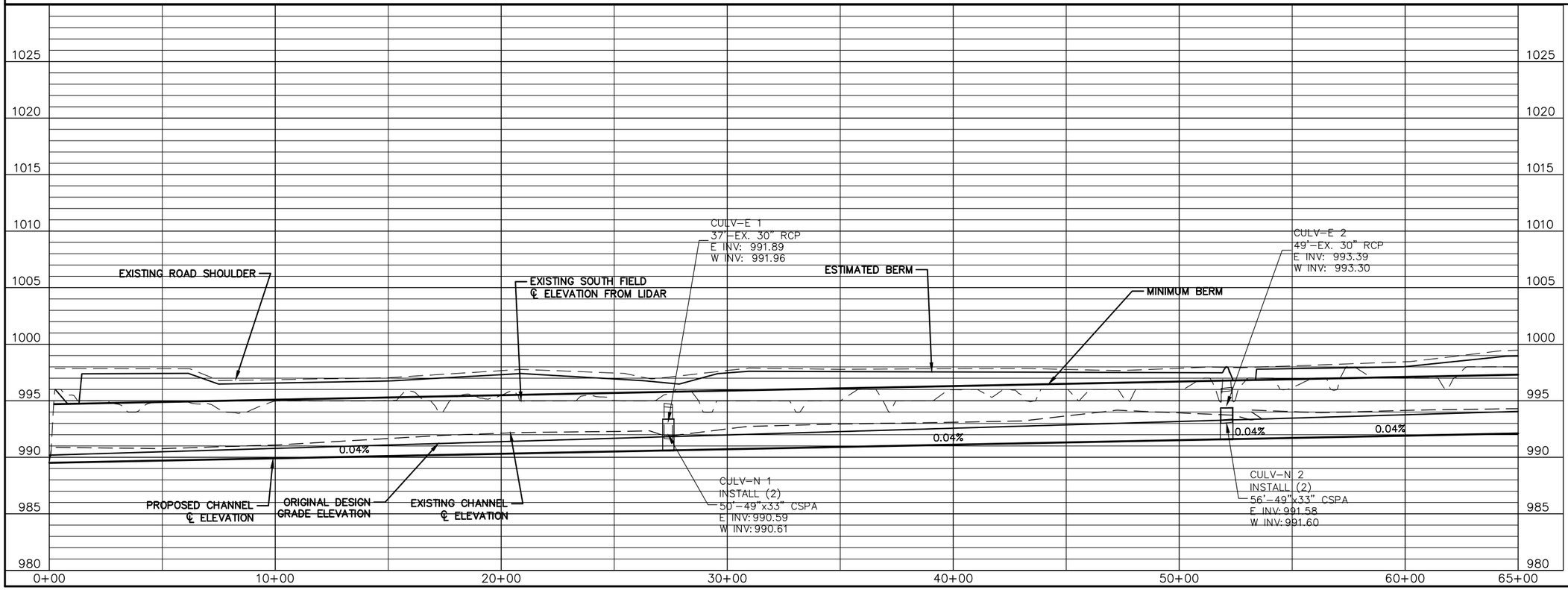
DETAILS
JUDICIAL DITCH 11 LATERAL 4 IMPROVEMENTS
BOIS DE SIOUX WATERSHED DISTRICT
TRAVERSE COUNTY, MINNESOTA
TYPICAL DETAILS

DATE:	9.4.2025
REV DATE:	----
REV NUM:	----
RECORD:	----
PROJECT No.	24596
MANAGER:	JAG
DESIGNER:	JAG
DRAFTER:	RJK
REVIEWER:	JAG

C-203

FILE LOCATION: Q:\Projects\24000\24500\24596 WilkinCoMN JudicialDitch11Lat4Imp\CADIC3D\Production\24596-PP.dwg





PRELIMINARY

N
W
E
S

0 500
Scale in Feet

moore engineering, inc.

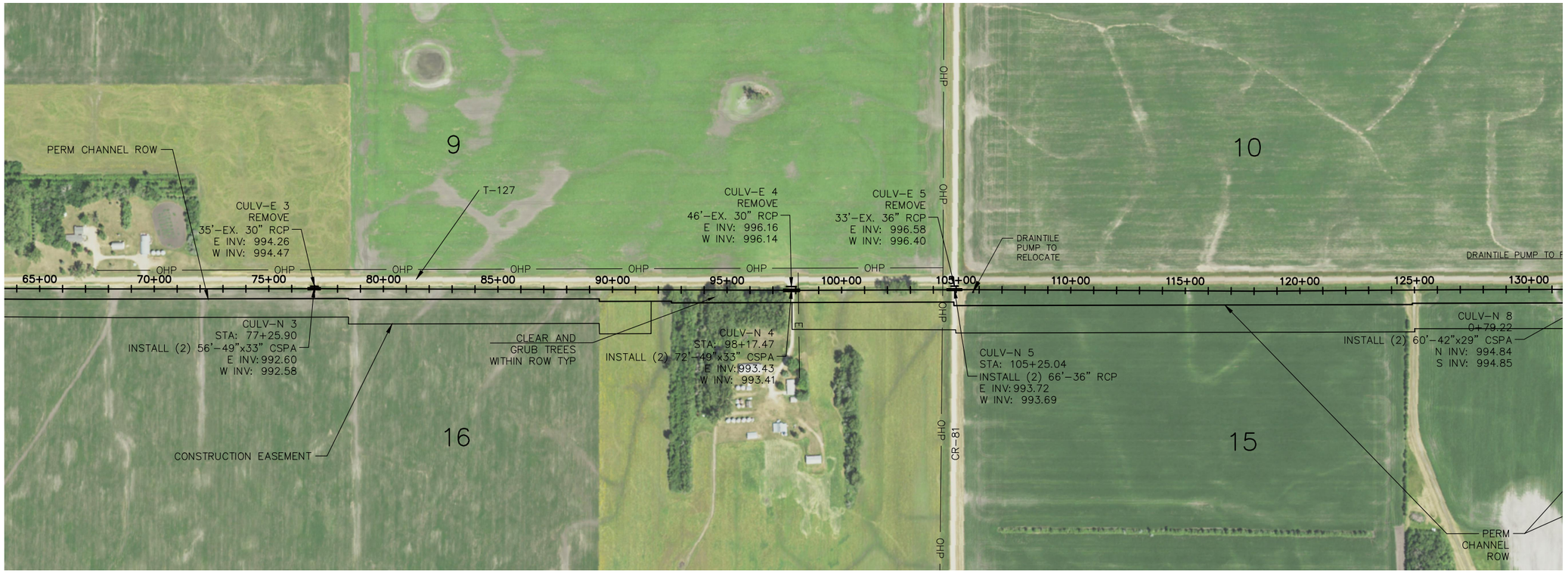
PLAN AND PROFILE
JUDICIAL DITCH 11 LATERAL 4 IMPROVEMENTS
BOIS DE SIOUX WATERSHED DISTRICT
TRAVERSE COUNTY, MINNESOTA
JUDICAL DITCH 11 - LATERAL 4

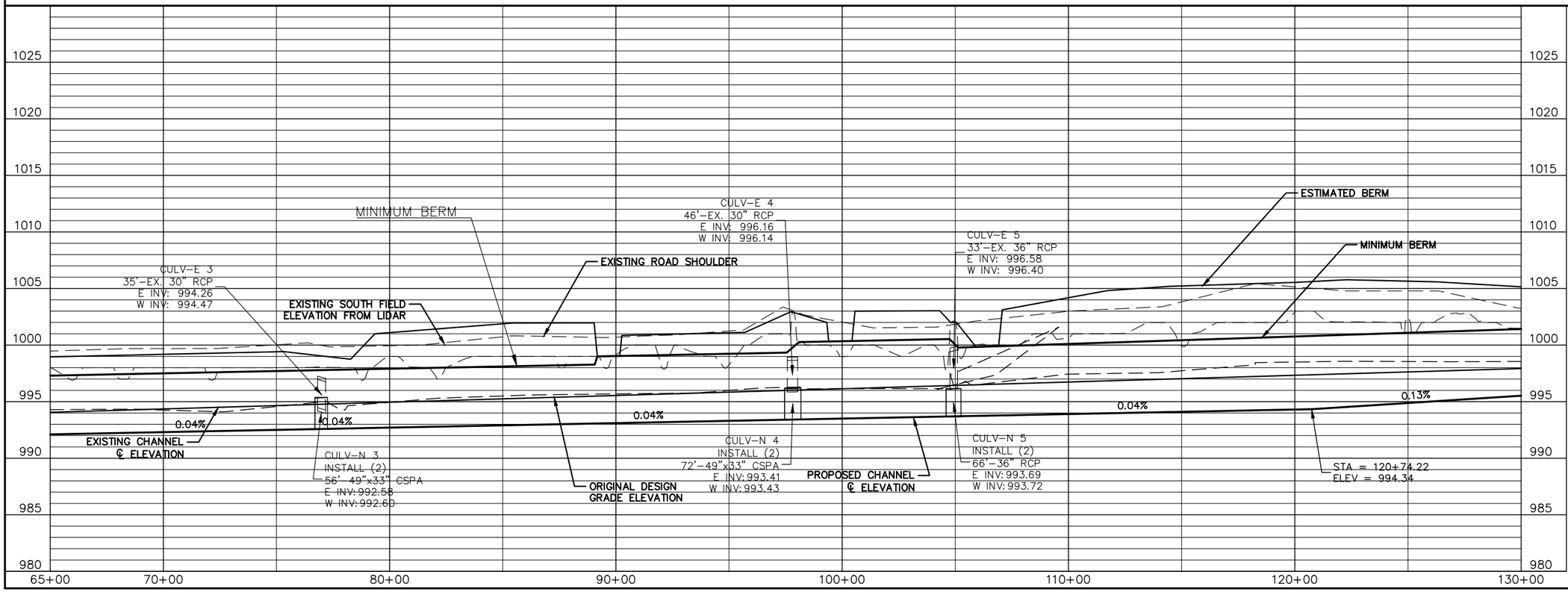
DATE:	9.4.2025
REV DATE:	----
REV NUM:	----
RECORD:	----
PROJECT No.	24596
MANAGER:	JAG
DESIGNER:	JAG
DRAFTER:	RJK
REVIEWER:	JAG

C-401

FILE LOCATION: Q:\Projects\24000\24500\24596 WilkinCoMN Judicial\Ditch11Lat4\mp\CADIC3D\Production\24596-PP.dwg

PRELIMINARY





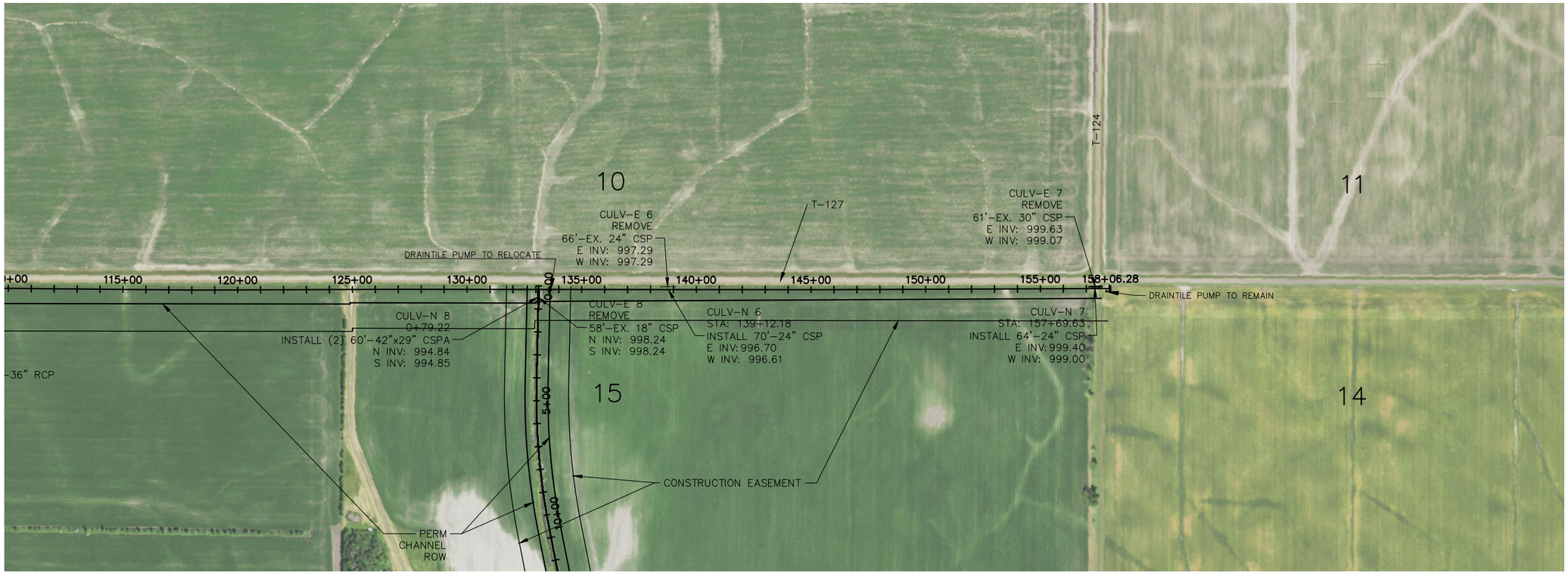
moore engineering, inc.

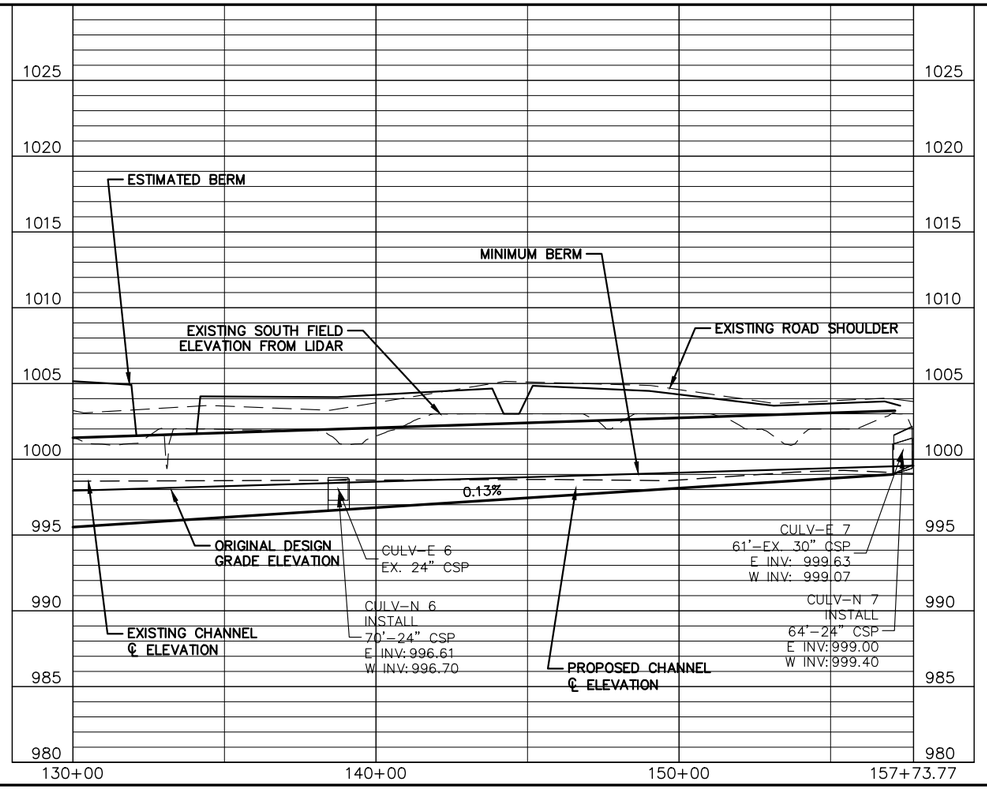
PLAN AND PROFILE
JUDICIAL DITCH 11 LATERAL 4 IMPROVEMENTS
BOIS DE SIOUX WATERSHED DISTRICT
TRAVERSE COUNTY, MINNESOTA
JUDICIAL DITCH 11 - LATERAL 4

DATE:	9.4.2025
REV DATE:	----
REV NUM:	----
RECORD:	----
PROJECT No.	24596
MANAGER:	JAG
DESIGNER:	JAG
DRAFTER:	RJK
REVIEWER:	JAG

C-402

FILE LOCATION: Q:\Projects\24000\24500\24596 WilkinCoMN JudicialDitch11Lat4Imp\CADIC3D\Production\24596-PP.dwg





PRELIMINARY

N
W
E
S

0 500
Scale in Feet

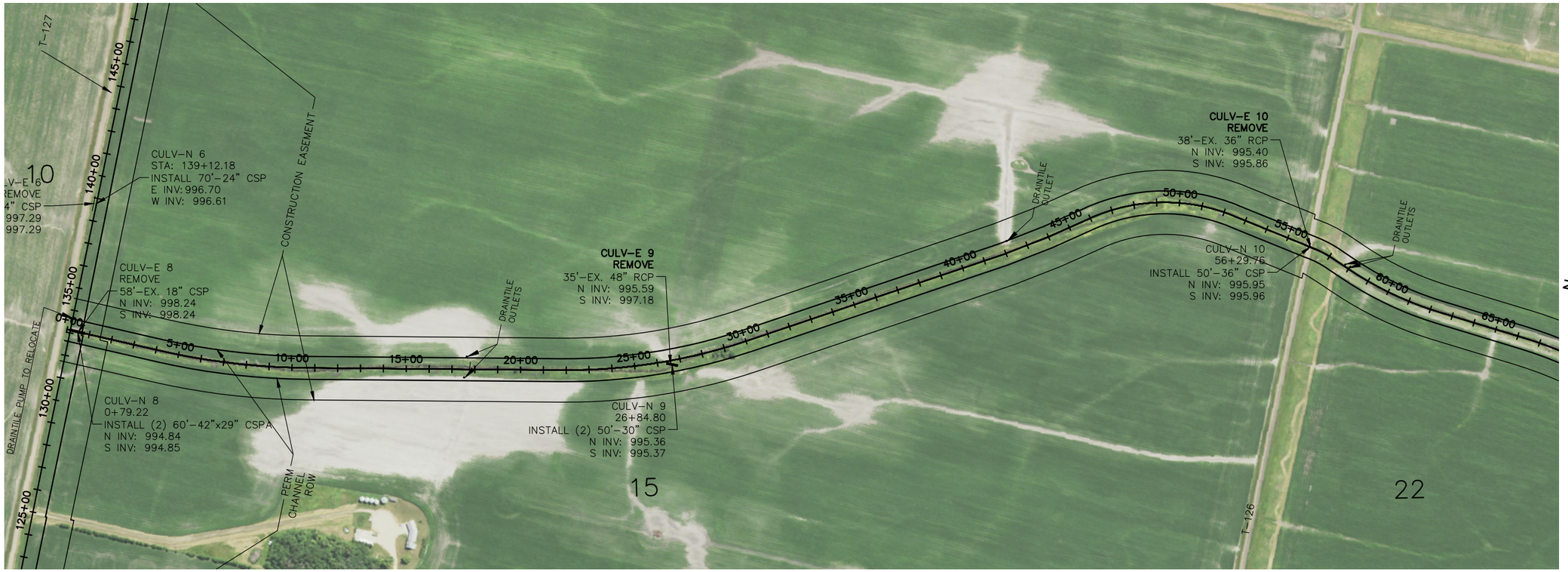
moore
engineering, inc.

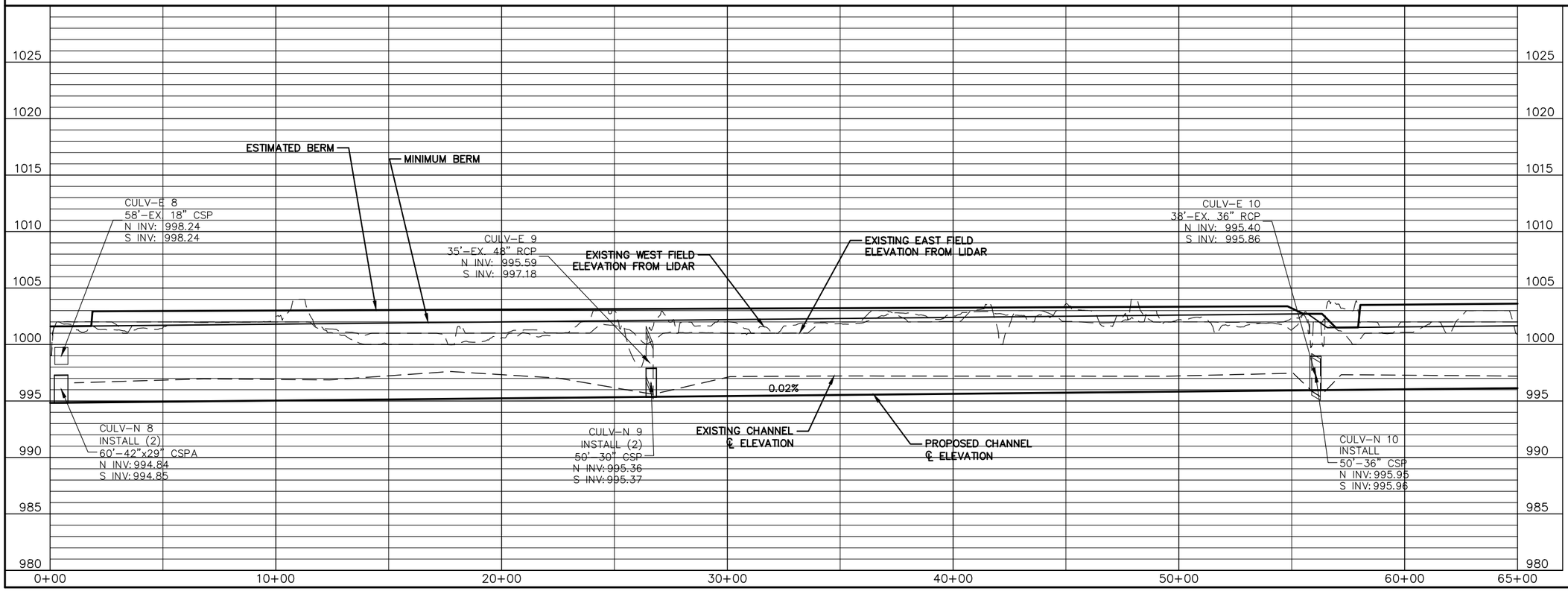
PLAN AND PROFILE
JUDICIAL DITCH 11 LATERAL 4 IMPROVEMENTS
BOIS DE SIOUX WATERSHED DISTRICT
TRAVERSE COUNTY, MINNESOTA
JUDICIAL DITCH 11 - LATERAL 4

DATE:	9.4.2025
REV DATE:	----
REV NUM:	----
RECORD:	----
PROJECT No.	24596
MANAGER:	JAG
DESIGNER:	JAG
DRAFTER:	RJK
REVIEWER:	JAG

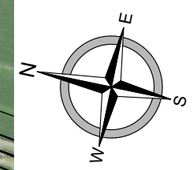
C-403

FILE LOCATION: Q:\Projects\24000\24500\24596 WilkinCoMN JudicialDitch11Lat4Imp\CADIC3D\Production\24596-PP.dwg





PRELIMINARY



moore engineering, inc.

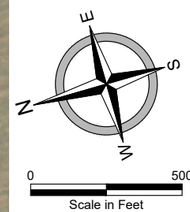
PLAN AND PROFILE
JUDICIAL DITCH 11 LATERAL 4 IMPROVEMENTS
BOIS DE SIOUX WATERSHED DISTRICT
TRAVERSE COUNTY, MINNESOTA
LATERAL 4 - BRANCH 1

DATE:	9.4.2025
REV DATE:	----
REV NUM:	----
RECORD:	----
PROJECT No.	24596
MANAGER:	JAG
DESIGNER:	JAG
DRAFTER:	RJK
REVIEWER:	JAG

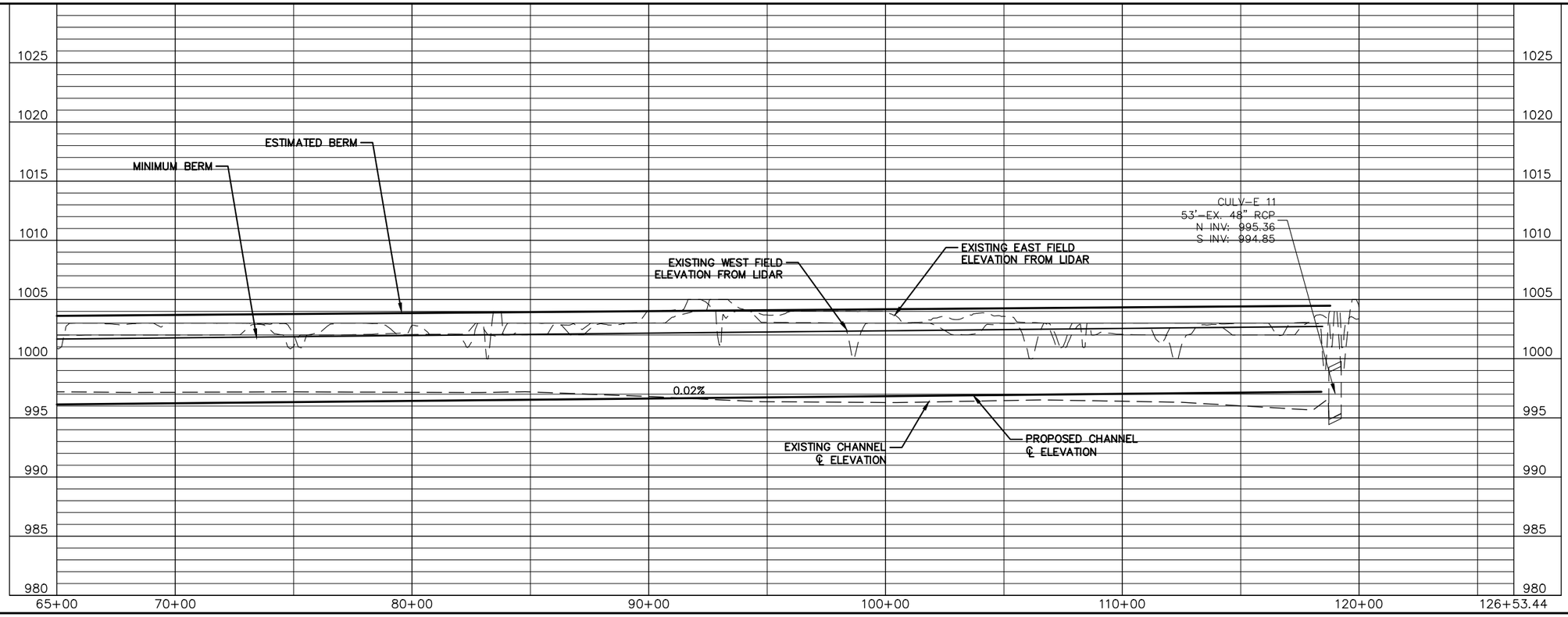
C-404

FILE LOCATION: Q:\Projects\24000\24500\24596 WilkinCoMN JudicialDitch11Lat4Imp\CADIC3D\Production\24596-PP.dwg

PRELIMINARY



moore engineering, inc.

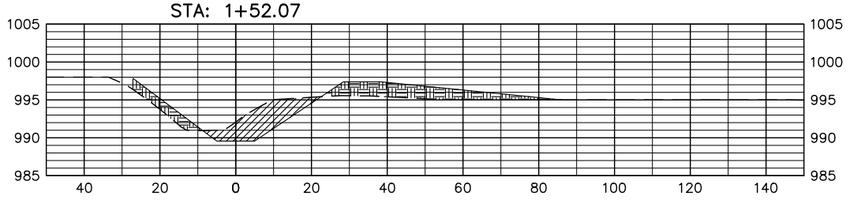


PLAN AND PROFILE
JUDICIAL DITCH 11 LATERAL 4 IMPROVEMENTS
BOIS DE SIOUX WATERSHED DISTRICT
TRAVERSE COUNTY, MINNESOTA
LATERAL 4 - BRANCH 1

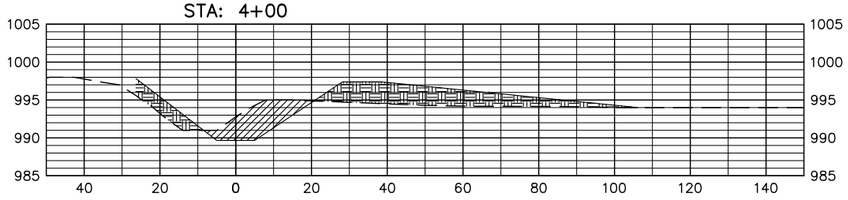
DATE:	9.4.2025
REV DATE:	----
REV NUM:	----
RECORD:	----
PROJECT No.	24596
MANAGER:	JAG
DESIGNER:	JAG
DRAFTER:	RJK
REVIEWER:	JAG

C-405

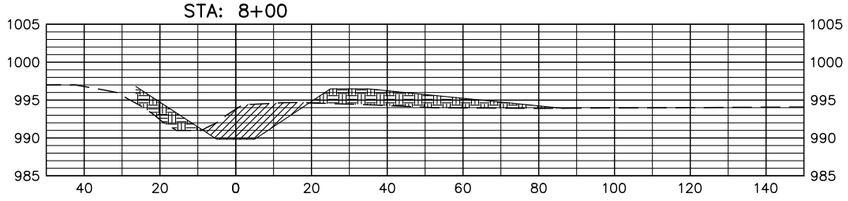
STA: 1+52.07



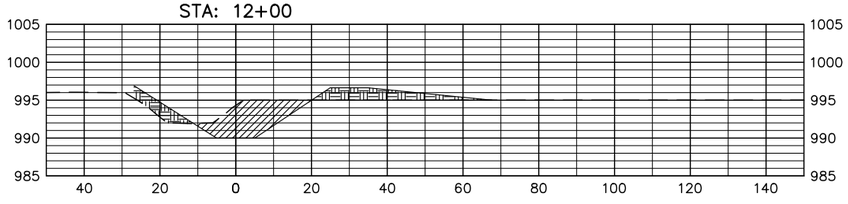
STA: 4+00



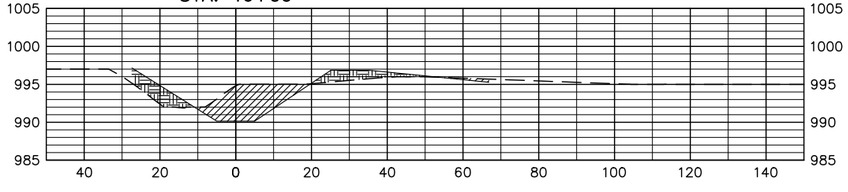
STA: 8+00



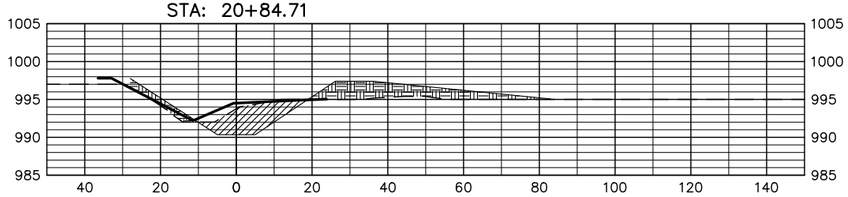
STA: 12+00



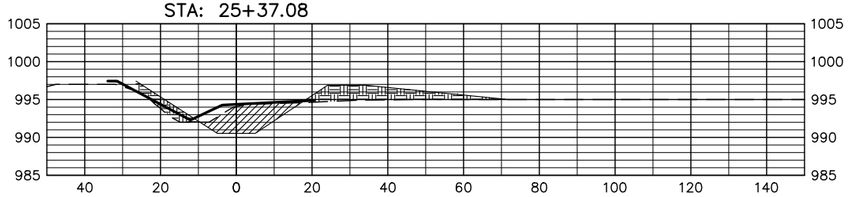
STA: 16+00



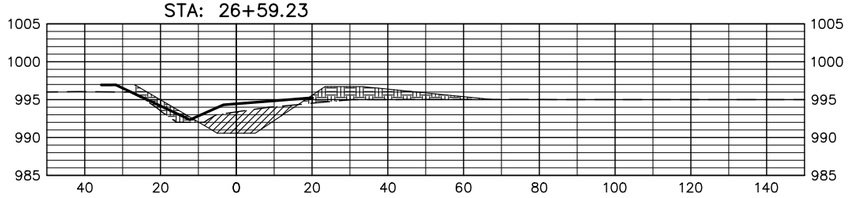
STA: 20+84.71



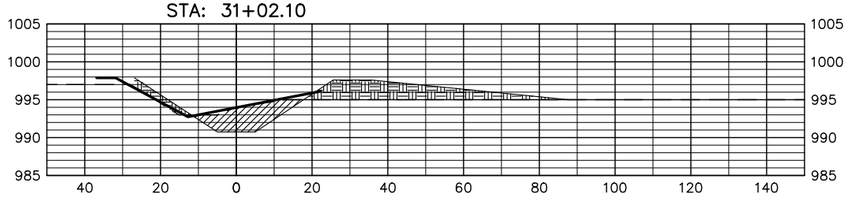
STA: 25+37.08



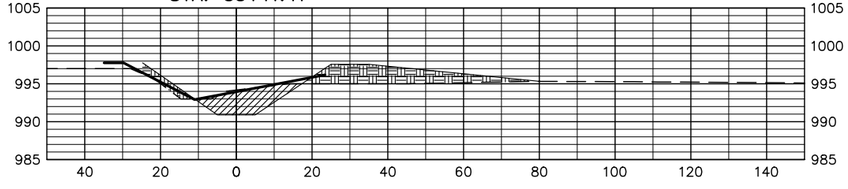
STA: 26+59.23



STA: 31+02.10



STA: 35+11.41



PRELIMINARY

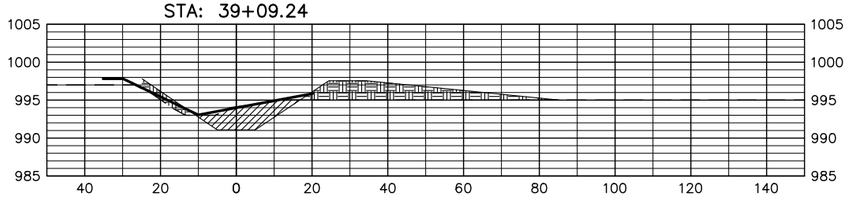
moore engineering, inc.

CROSS SECTIONS
JUDICIAL DITCH 11 LATERAL 4 IMPROVEMENTS
BOIS DE SIOUX WATERSHED DISTRICT
TRAVERSE COUNTY, MINNESOTA
JUDICIAL DITCH 11 - LATERAL 4

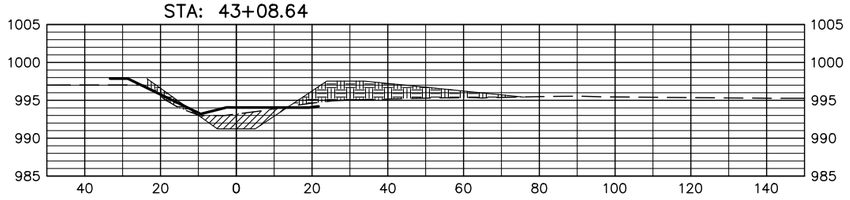
DATE:	9.4.2025
REV DATE:	----
REV NUM:	----
RECORD:	----
PROJECT No.	24596
MANAGER:	JAG
DESIGNER:	JAG
DRAFTER:	RJK
REVIEWER:	JAG

C-801

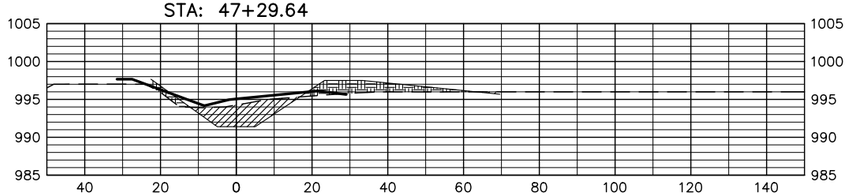
STA: 39+09.24



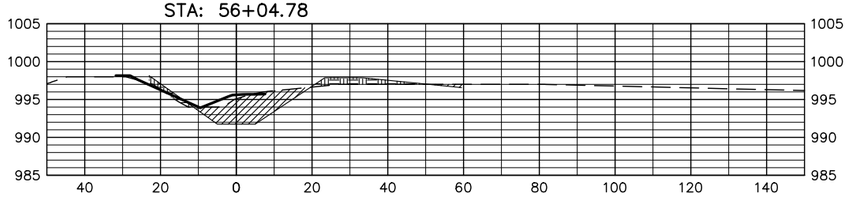
STA: 43+08.64



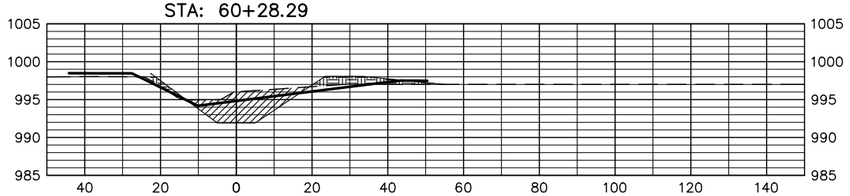
STA: 47+29.64



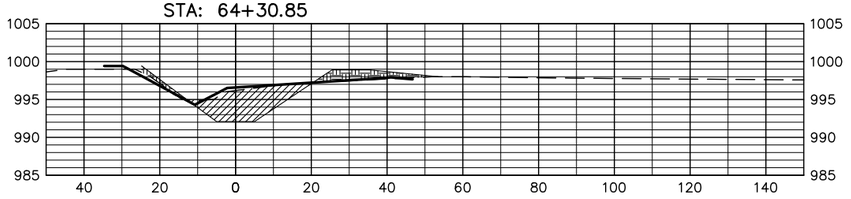
STA: 56+04.78



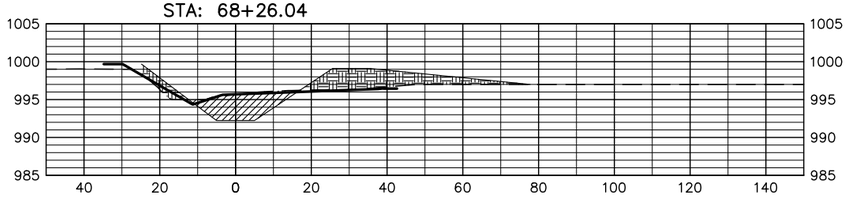
STA: 60+28.29



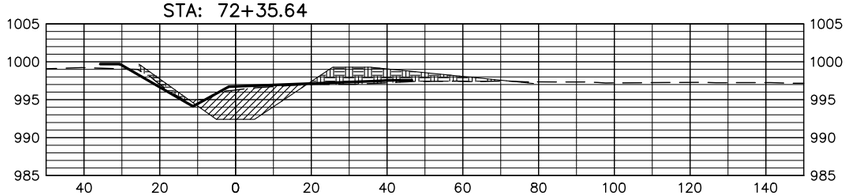
STA: 64+30.85



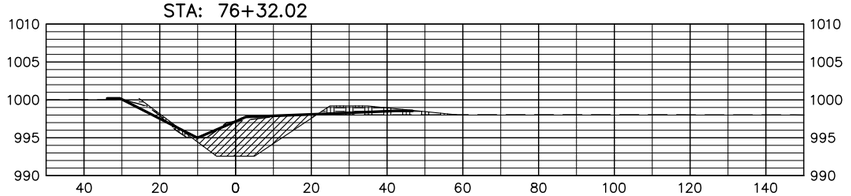
STA: 68+26.04



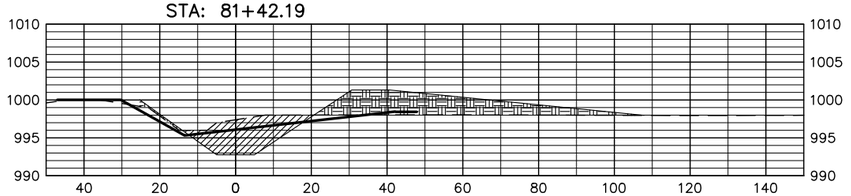
STA: 72+35.64



STA: 76+32.02



STA: 81+42.19



PRELIMINARY

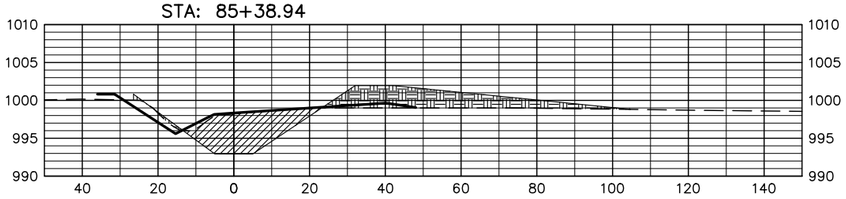
moore engineering, inc.

CROSS SECTIONS
JUDICIAL DITCH 11 LATERAL 4 IMPROVEMENTS
BOIS DE SIOUX WATERSHED DISTRICT
TRAVERSE COUNTY, MINNESOTA
JUDICIAL DITCH 11 - LATERAL 4

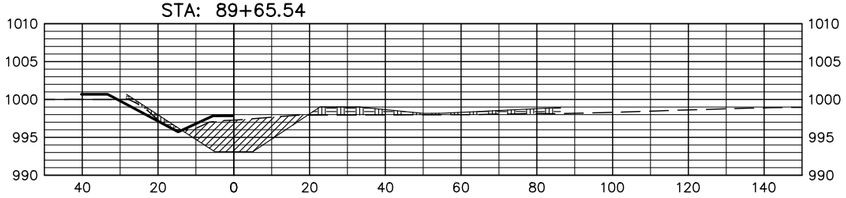
DATE:	9.4.2025
REV DATE:	----
REV NUM:	----
RECORD:	----
PROJECT No.	24596
MANAGER:	JAG
DESIGNER:	JAG
DRAFTER:	RJK
REVIEWER:	JAG

C-802

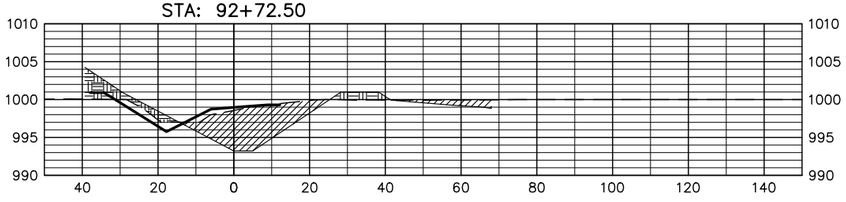
STA: 85+38.94



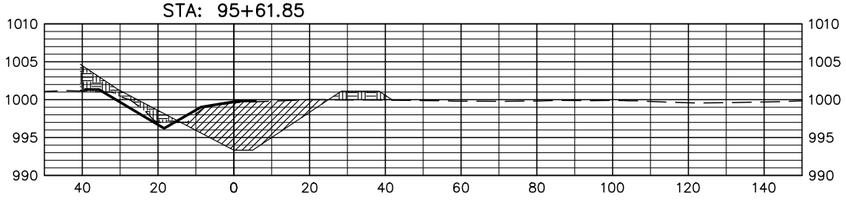
STA: 89+65.54



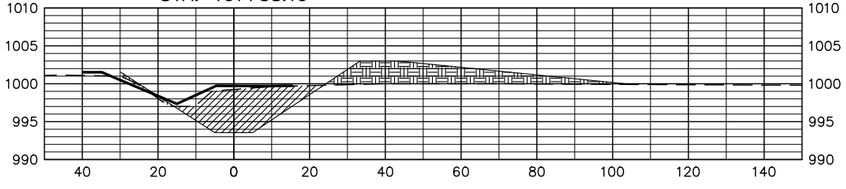
STA: 92+72.50



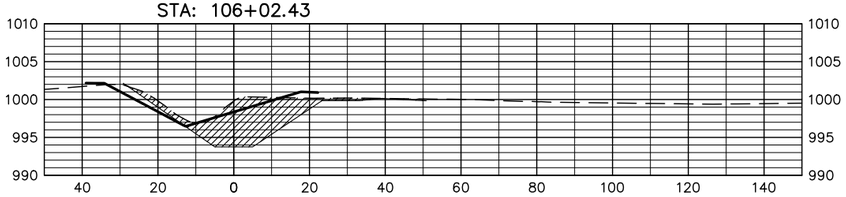
STA: 95+61.85



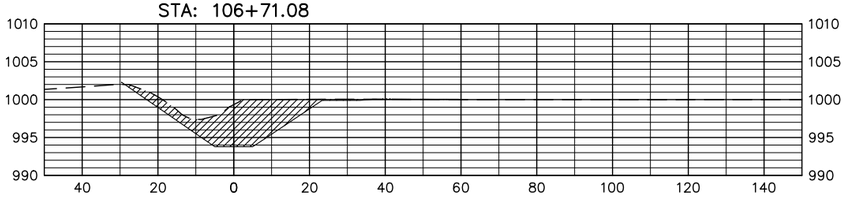
STA: 101+38.19



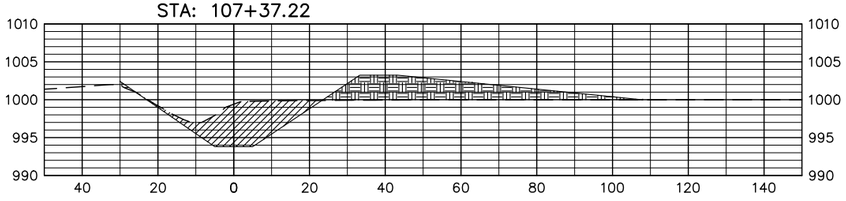
STA: 106+02.43



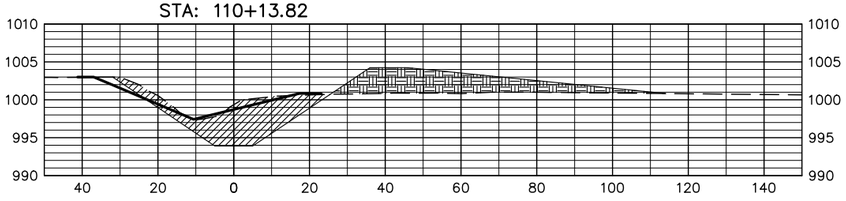
STA: 106+71.08



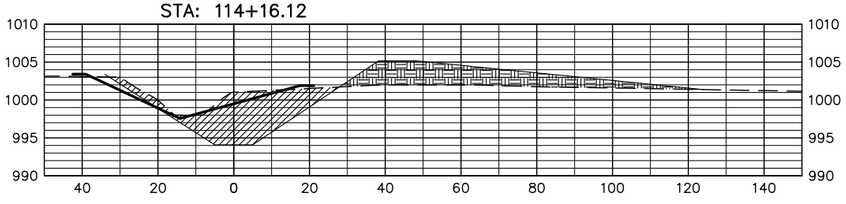
STA: 107+37.22



STA: 110+13.82



STA: 114+16.12



PRELIMINARY

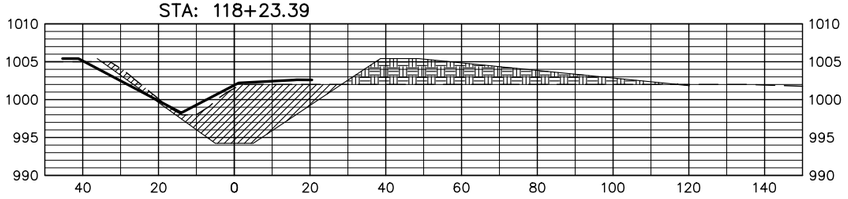
moore engineering, inc.

CROSS SECTIONS
JUDICIAL DITCH 11 LATERAL 4 IMPROVEMENTS
BOIS DE SIOUX WATERSHED DISTRICT
TRAVERSE COUNTY, MINNESOTA
JUDICIAL DITCH 11 - LATERAL 4

DATE:	9.4.2025
REV DATE:	----
REV NUM:	----
RECORD:	----
PROJECT No.	24596
MANAGER:	JAG
DESIGNER:	JAG
DRAFTER:	RJK
REVIEWER:	JAG

C-803

STA: 118+23.39



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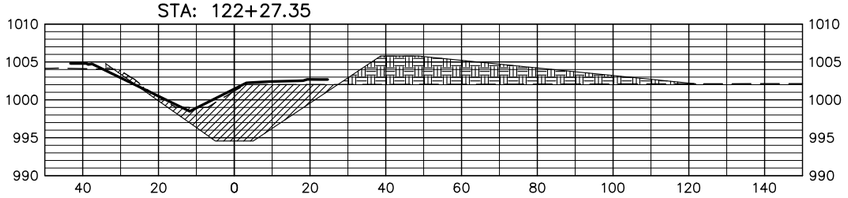
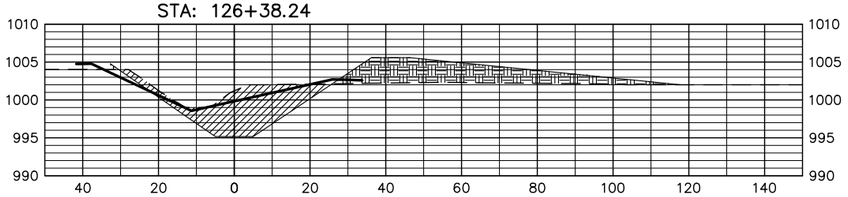
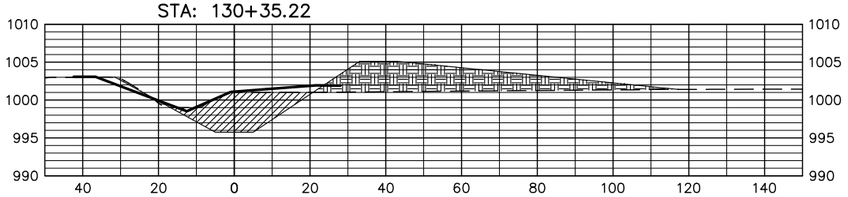


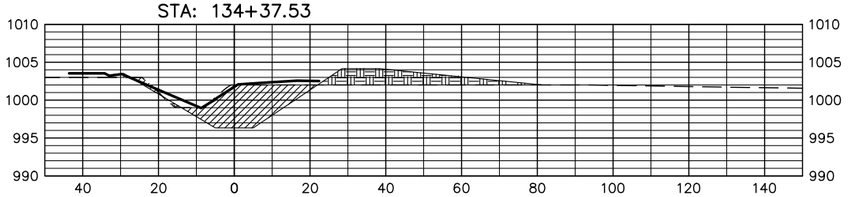
STA: 126+38.24



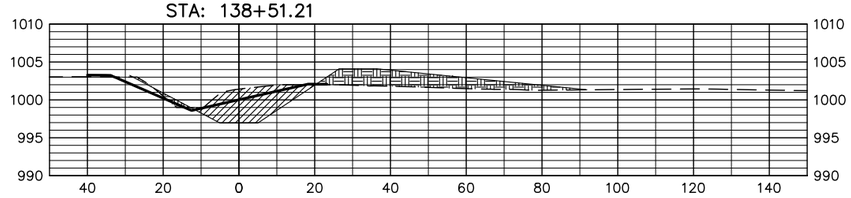
STA: 130+35.22



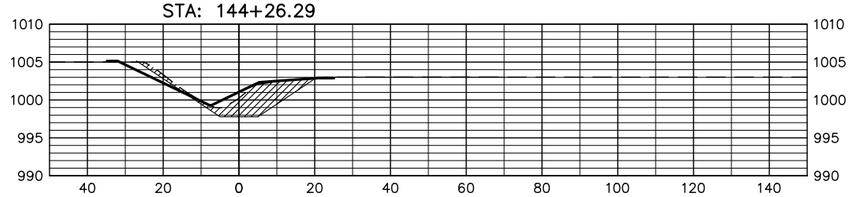
STA: 134+37.53



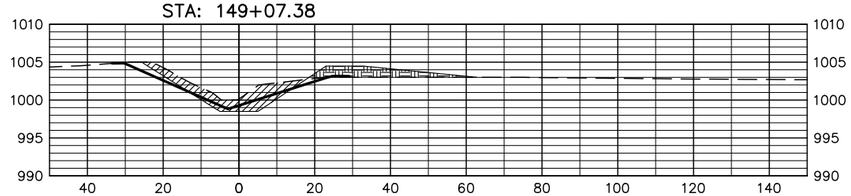
STA: 138+51.21



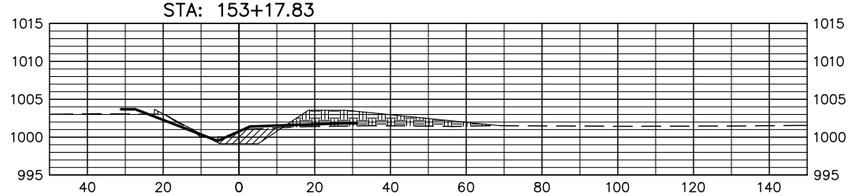
STA: 144+26.29



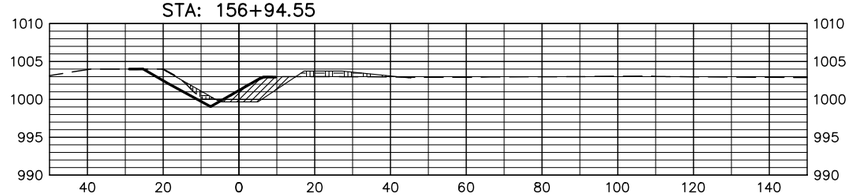
STA: 149+07.38



STA: 153+17.83



STA: 156+94.55



PRELIMINARY

moore engineering, inc.

CROSS SECTIONS
JUDICIAL DITCH 11 LATERAL 4 IMPROVEMENTS
BOIS DE SIOUX WATERSHED DISTRICT
TRAVERSE COUNTY, MINNESOTA
JUDICIAL DITCH 11 - LATERAL 4

DATE:	9.4.2025
REV DATE:	----
REV NUM:	----
RECORD:	----
PROJECT No.	24596
MANAGER:	JAG
DESIGNER:	JAG
DRAFTER:	RJK
REVIEWER:	JAG

C-804

PRELIMINARY

EARTHWORK VOLUMES						
Station	Cut Area (Ft^2)	Fill Area (Ft^2)	Cut Vol (Yd^3)	Fill Vol (Yd^3)	Total Cut (Yd^3)	Total Fill (Yd^3)
1+52.07	72.12	101.09	0.00	0.00	0.00	0.00
4+00	73.88	173.98	670.33	1262.94	670.33	1262.94
8+00	76.39	118.33	1113.07	2165.23	1783.40	3428.18
12+00	85.24	70.54	1197.20	1398.98	2980.60	4827.16
16+00	88.62	55.12	1287.79	930.82	4268.39	5757.98
20+84.71	67.00	101.89	1396.77	1409.38	5665.16	7167.35
25+37.08	61.10	85.57	1073.09	1570.43	6738.25	8737.79
26+59.23	51.75	75.16	255.28	363.60	6993.53	9101.39
31+02.10	63.54	118.66	945.52	1589.59	7939.05	10690.97
35+11.41	61.72	108.82	949.44	1724.22	8888.49	12415.19
39+09.24	55.98	113.84	867.08	1640.36	9755.57	14055.55
43+08.64	34.00	99.39	665.47	1577.09	10421.04	15632.63
47+29.64	58.72	55.04	722.85	1204.00	11143.89	16836.64
56+04.78	71.17	26.36	2105.04	1319.29	13248.93	18155.93
60+28.29	81.92	30.84	1200.65	448.66	14449.58	18604.59
64+30.85	86.73	36.19	1257.21	499.70	15706.79	19104.29
68+26.04	67.56	102.97	1129.12	1018.43	16835.91	20122.72
72+35.64	78.75	75.07	1109.75	1350.50	17945.67	21473.22
76+32.02	95.89	33.29	1281.85	795.43	19227.52	22268.66
81+42.19	102.84	162.61	1877.49	1850.83	21105.01	24119.49
85+38.94	122.22	134.62	1653.56	2183.75	22758.57	26303.24
89+65.54	90.64	46.24	1681.67	1428.79	24440.24	27732.03
92+72.50	139.83	50.39	1310.07	549.30	25750.31	28281.33
95+61.85	144.32	49.90	1522.57	537.41	27272.88	28818.74
101+38.19	137.25	140.83	3005.23	2035.68	30278.11	30854.43

EARTHWORK VOLUMES						
Station	Cut Area (Ft^2)	Fill Area (Ft^2)	Cut Vol (Yd^3)	Fill Vol (Yd^3)	Total Cut (Yd^3)	Total Fill (Yd^3)
106+02.43	152.69	0.15	2492.63	1212.04	32770.74	32066.46
106+71.08	150.73	0.49	385.74	0.82	33156.47	32067.28
107+37.22	129.81	155.26	343.64	190.78	33500.12	32258.06
110+13.82	159.24	161.61	1480.57	1623.03	34980.68	33881.09
114+16.12	186.99	165.28	2579.42	2435.34	37560.11	36316.43
118+23.39	198.23	169.87	2905.33	2527.78	40465.44	38844.22
122+27.35	184.67	196.03	2864.31	2737.19	43329.75	41581.41
126+38.24	165.18	167.84	2662.01	2768.69	45991.75	44350.09
130+35.22	115.71	214.20	2064.98	2808.58	48056.73	47158.67
134+37.53	119.65	75.88	1753.47	2161.10	49810.19	49319.78
138+51.21	94.66	101.74	1641.78	1360.70	51451.97	50680.48
144+26.29	70.17	0.12	1755.35	1084.79	53207.32	51765.28
149+07.38	67.62	41.09	1227.62	367.15	54434.94	52132.43
153+17.83	23.10	73.54	689.57	871.32	55124.51	53003.75
156+94.55	32.30	18.44	386.48	641.71	55510.99	53645.45
157+73.77	0.00	0.00	47.39	27.06	55558.38	53672.51

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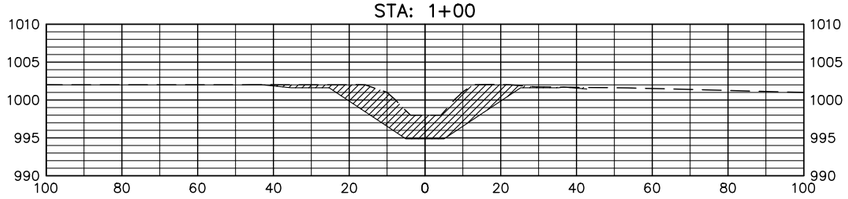
CROSS SECTIONS
JUDICIAL DITCH 11 LATERAL 4 IMPROVEMENTS
BOIS DE SIOUX WATERSHED DISTRICT
TRAVERSE COUNTY, MINNESOTA
JUDICIAL DITCH 11 - LATERAL 4

DATE:	9.4.2025
REV DATE:	----
REV NUM:	----
RECORD:	----
PROJECT No.	24596
MANAGER:	JAG
DESIGNER:	JAG
DRAFTER:	RJK
REVIEWER:	JAG

C-805

STA: 1+00



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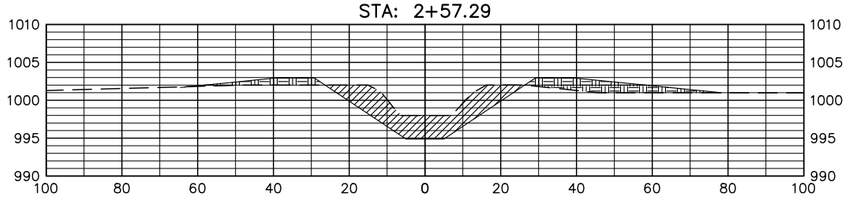

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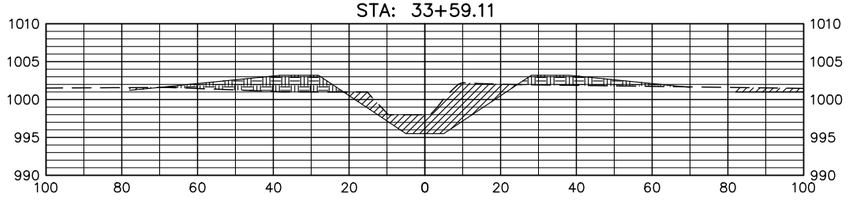

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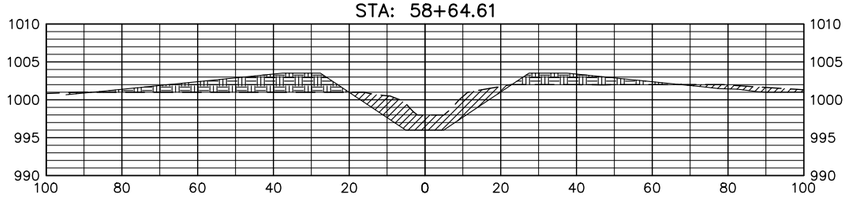

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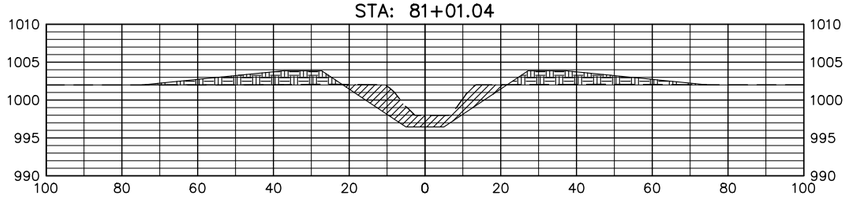

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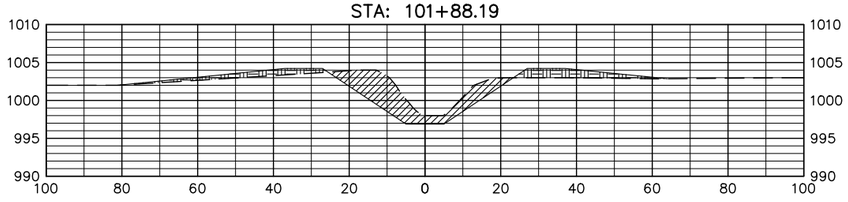

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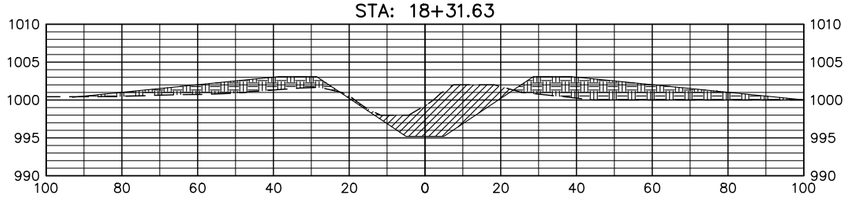

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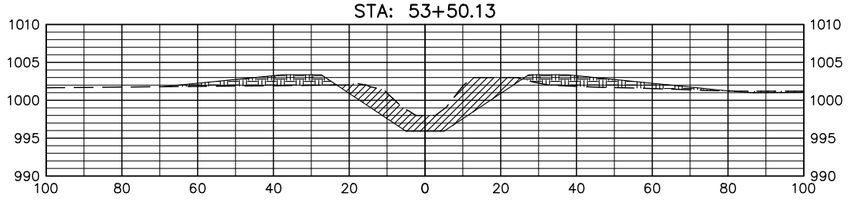

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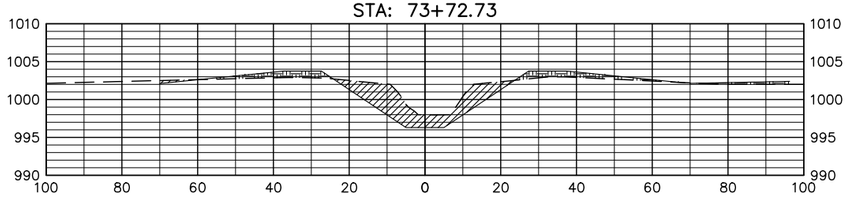

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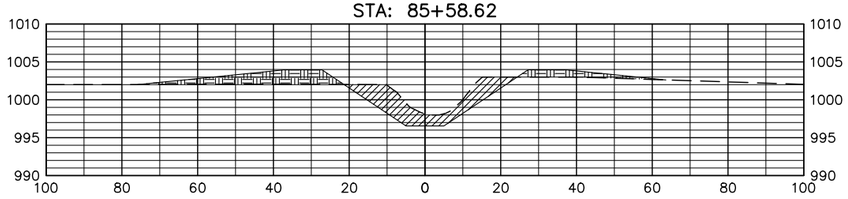

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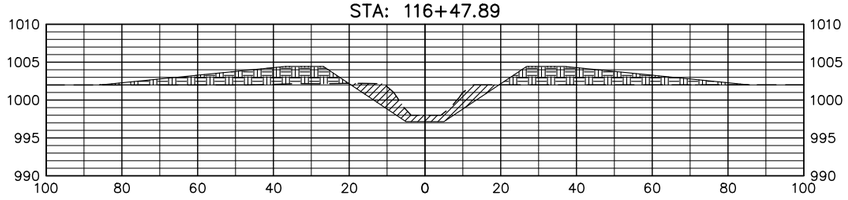

PRELIMINARY

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CROSS SECTIONS
JUDICIAL DITCH 11 LATERAL 4 IMPROVEMENTS
BOIS DE SIOUX WATERSHED DISTRICT
TRAVERSE COUNTY, MINNESOTA
LATERAL 4 - BRANCH 1

DATE:	9.4.2025
REV DATE:	----
REV NUM:	----
RECORD:	----
PROJECT No.	24596
MANAGER:	JAG
DESIGNER:	JAG
DRAFTER:	RJK
REVIEWER:	JAG

C-806

PRELIMINARY

moore engineering, inc.

EARTHWORK VOLUMES

Station	Cut Area (Ft^2)	Fill Area (Ft^2)	Cut Vol (Yd^3)	Fill Vol (Yd^3)	Total Cut (Yd^3)	Total Fill (Yd^3)
1+00	166.16	0.00	0.00	0.00	0.00	0.00
2+57.29	139.23	72.47	889.57	211.09	889.57	211.09
18+31.63	121.85	198.72	7613.96	7924.33	8503.52	8135.42
33+59.11	123.10	98.50	6940.29	8418.38	15443.82	16553.80
53+50.13	129.06	85.04	9274.35	6775.84	24718.17	23329.64
58+64.61	100.60	139.02	2182.96	2141.75	26901.13	25471.39
73+72.73	102.35	47.76	5668.23	5215.60	32569.36	30686.99
81+01.04	83.27	114.26	2502.84	2186.09	35072.20	32873.08
85+58.62	92.49	83.32	1491.05	1718.02	36563.25	34591.10
101+88.19	107.59	57.28	6026.27	4193.43	42589.52	38784.53
116+47.89	59.02	182.43	4504.23	6479.68	47093.76	45264.20

CROSS SECTIONS
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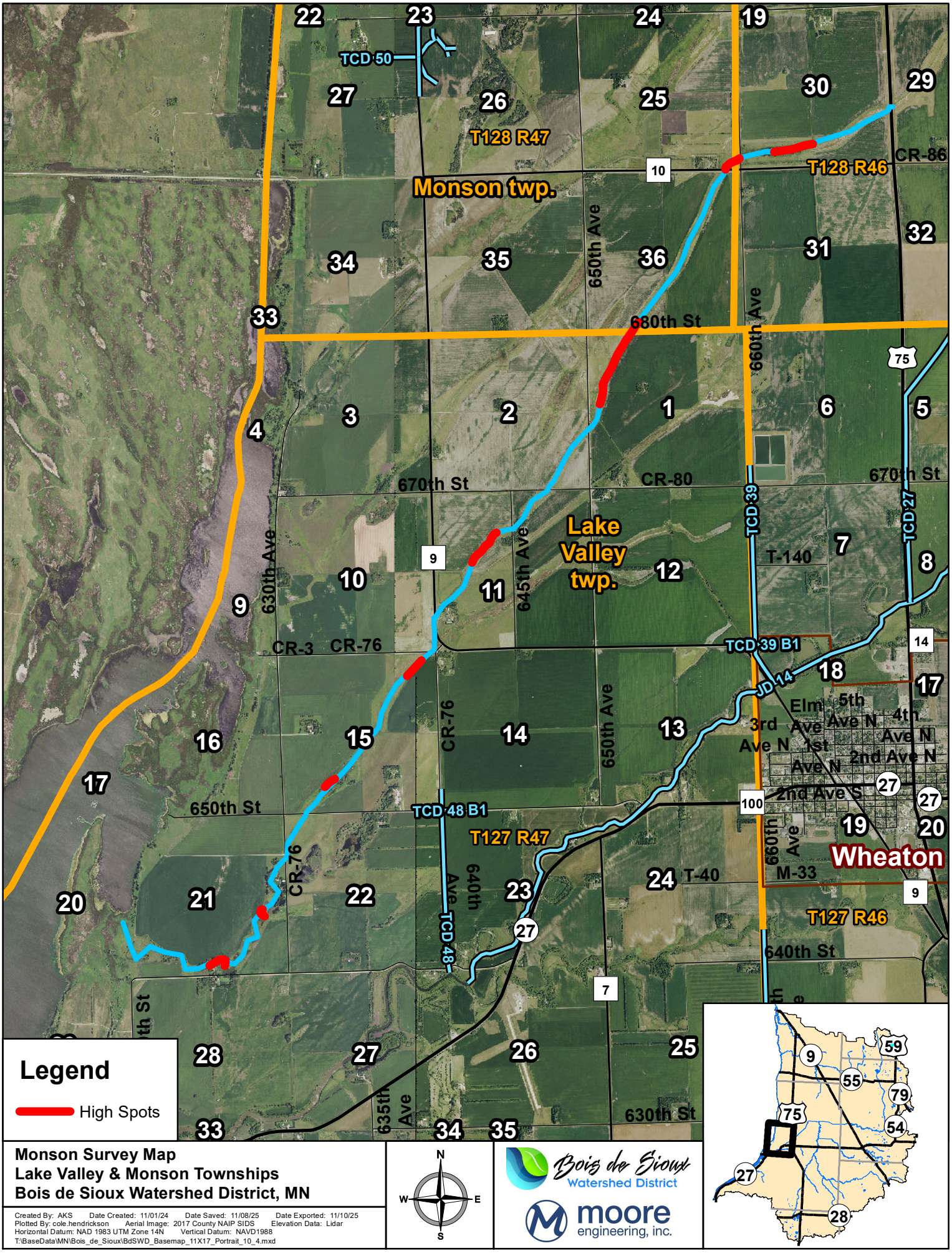
C-807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Lake Valley twp.
T128 R47
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T-140
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TCD 48 B1
TCD 39
TCD 39 B1
TCD 27
JD 14
CR-3
CR-76
CR-80
CR-86
650th St
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680th St
640th St
630th St
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640th Ave
645th Ave
650th Ave
660th Ave
Elm Ave
3rd Ave N
4th Ave N
5th Ave N
1st Ave N
2nd Ave N
2nd Ave S
Legend
High Spots
Monson Survey Map
Lake Valley & Monson Townships
Bois de Sioux Watershed District, MN
Created By: AKS Date Created: 11/01/24 Date Saved: 11/08/25 Date Exported: 11/10/25
Plotted By: cole.hendrickson Aerial Image: 2017 County NAIP SIDS Elevation Data: Lidar
Horizontal Datum: NAD 1983 UTM Zone 14N Vertical Datum: NAVD1988
T:\BaseData\MN\Bois_de_Sioux\BdSWD_Basemap_11X17_Portrait_10_4.mxd
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Bois de Sioux Watershed District
moore engineering, inc.

Bois de Sioux Watershed District
704 Highway 75 South | Wheaton, MN 56296
Phone | 320.563.4185
Fax | 320.563.4987
www.bdswd.com
bdswd@runestone.net

December 10, 2025

Board of Water and Soil Resources
c/o Travis Germundson
520 Lafayette Road North
St. Paul, MN 55155

Re: BWSR's Proposed Buffer Procedures

Dear Mr. Germundson:

The Bois de Sioux Watershed District (the "District") maintains local buffer enforcement authority for the legal drainage systems in portions of Grant, Traverse, and Wilkin Counties. This enforcement authority was granted to the District through its compliance with Minn. Stat. § 103F.48, subd. 7. On May 3, 2019, the Board of Water and Soil Resources ("BWSR") notified the District that its rule – *Create and Enact the Riparian Protection and Water Quality Practices Rule* (the "Buffer Rule" which is based on BWSR's model template) – was approved. This action came following many months of rule development, 45-day public notice, and two public hearing dates. Since that time, the District has complied with the statutory requirements provided under Minn. Stat. § 103F.48 (the "Buffer Law") and the District's own – BWSR approved – Buffer Rule. BWSR is now proposing procedures that interfere with the District's ability to work with landowners and its flexibility in enforcing the Buffer Law and Buffer Rule.

BWSR's *Proposed 2025 Buffer Program / Revised Procedures*, as a set, produce the following effect:

> In order to <u>retain</u> jurisdiction, watershed and county boards must subvert their statutory authority to soil and water conservation district/BWSR employees in nearly every aspect: compliance determinations, eligibility of alternative practices, evaluation of alternative practice comparable benefit calculations, and working timelines.

The District respectfully opposes the overreaching extent of this effort as it prescribes mandates that are not provided under state law – simply put, these proposed procedures equate to regulatory overreach.

As stated in the June 2024 BWSR Snapshots report, "Nearly a decade after Minnesota's buffer law was enacted, 99.8% of parcels adjacent to Minnesota waters are in compliance with the law." In this BWSR article, all 87 of Minnesota's counties are further defined into very narrow compliance categories: 94 – 98.9%, 99%, and 100%. No matter how a person may try to segment the data, by any measure, the current status of 50' and 16.5' buffers represent extremely high statewide compliance.

Despite this near-perfect compliance success rate, the 2024 Minnesota Legislature modified the Buffer Law to insert a provision allowing BWSR to revoke jurisdiction from a county or watershed district based on BWSR-adopted procedures. Under Minn. Stat. § 103F.48, subd. 1(j): "[t]his determination is revocable by board action if the adoption and implementation of rule, ordinance, or official controls are not in compliance with the requirements of this section ***or board-adopted procedures***." (Emphasis added). However, this provision

certainly does not provide unfettered authority for BWSR to implement procedures that subvert or supersede state law. Some of these proposed procedures modify existing statute without authorization by the Minnesota Legislature.

There have been several lawsuits against the State of Minnesota (or its statutes and agencies) challenging the state's preemption of local government authority over various police powers, such as labor standards, firearms regulation, police accountability, housing discrimination, and building codes. These cases typically involve local governments or residents arguing that state preemption violates home rule authority under the Minnesota Constitution or creates conflicts with local ordinances. As is described below, that is certainly a problem with the procedures being proposed by BWSR as the procedures subvert the Buffer Law and local rules and ordinances already approved by counties and watershed districts with enforcement authority of the Buffer Law.

The District appreciates the opportunity to provide public comment on the proposed procedures. The comment effort is complex as one has to compare BWSR's proposed procedures to 1) Minnesota Statutes; 2) BWSR's Current Buffer Program Procedures; 3) local county and watershed district ordinances/rules; and 4) real world application. Providing comments was made more difficult by BWSR staff's decision to reorder the current Buffer Program Procedures. It would have been extremely helpful to have a legend, similar to the following:

Revised Procedures			Current Procedures
Procedure 1	(Election of Jurisdiction)	→	Procedure 8
Procedure 2	(BWSR Reviews Rules)	→	Procedure 9
Procedure 3*	(soil and water conservation district, Compliance)		
Procedure 4*	(soil and water conservation district, More Compliance)		
Procedure 5	(MS4 Exemption)	→	Procedure 3
Procedure 6*	(soil and water conservation district Alt. Practices)		
Procedure 7**	(BWSR Alt. Practices)	→	Not Really Proc. 5
Procedure 8	(Jurisdiction Standards)	→	None – Added
Procedure 9	(Withholding Money)	→	Procedure 7
Procedure 10	(Revoking Jurisdiction)	→	None – Added
Procedure 11	(Adding Watercourses)	→	Procedure 6

Additionally, BWSR currently promotes a document titled "Guide to the Buffer Compliance Process" (https://bwsr.state.mn.us/guide-buffer-compliance-process) – which itself has nested procedures, e.g. Step 1 soil and water conservation district Compliance Review; Step 2 Initial Contacts with Landowner; Step 3 Notification of Noncompliance; Step 4 Corrective Action Notice Sent; Step 5 Issuing Enforcement Action; Step 6 Parcel is Compliant. It is unclear if there are proposed changes to these procedures as well?

*The Revised Procedure is proposed exclusively for soil and water conservation districts. Does BWSR believe that soil and water conservation district-exclusive procedures produce soil and water conservation district-exclusive authorities? Ignoring caveats for BWSR staff/board to interject, the revised procedures state or imply that only soil and water conservation districts evaluate alternative practices; only soil and water conservation districts can (and must) approve alternative practices; only soil and water conservation districts track and report compliance or non-compliance; only soil and water conservation districts can (and must) determine compliance or non-compliance; only soil and water conservation districts can (and must) "validate" a county or watershed district's determination that noncompliance is resolved.

***The content in Revised Procedure 7 is a new procedure, not a revision of Current Procedure 5.* The Current Procedure 5 is an optional process for an alternative practice to be proposed and considered for statewide adoption, resulting in statewide eligibility. The Revised Procedure 7 subverts the availability of any alternative practice for a parcel (apart from the soil and water conservation districts approval and BWSR's common alternative practices), to a multi-layered state approval process. This is contrary to the eligible alternative practices listed under Minn. Stat. § 103F.48, subd. 3(b).

General Comments: "New" Procedures.
The Official Notice published in the State Register highlights two new procedures: Procedure #8 and Procedure #10. *These PROPOSED procedures require all counties and watershed districts to operate different than they do today in order to maintain the election of their local enforcement authority.* Procedure #8 mandates unworkable and inflexible deadlines on counties and watershed districts, and infer that BWSR's requirements may conflict with, or are preempting, local ordinances and rules (that BWSR required counties and watershed districts to enact, including the model language).

Procedure #10 creates an arduous standard for counties and watershed districts to comply with to maintain enforcement jurisdiction. Counties and watershed districts must follow the Buffer Law and their local ordinance/rule and all BWSR adopted procedures, now and forever – without any acknowledgement that the proposed BWSR procedures are in and of themselves unworkable, and/or conflict with state law and local ordinances/rules.

General Comments: "Updates and Clarifications."
The implications presented by the remaining revisions are substantial and problematic. The Official Notice states, "…updates and clarifications have been made throughout the entire document." These "updates and clarifications" impose novel controls on landowners, counties, watershed districts, technical professional employees and create and expand exclusive authorities for soil and water conservation districts. Under the guise of "consistency," the Official Notice states that "BWSR has revised the procedures to ensure alignment with the current law." This is a false statement. The revised procedures restrict or remove authority and rights granted by the Buffer Law to landowners, counties, watershed districts, and technical professional employees – a contradiction of state statute.

BWSR's revisions in Procedures #6, #7, and #8 have the following effect:

- Include a new proclamation that – because soil and water conservation districts must track parcel status, soil and water conservation districts solely determine parcel status.
- Require every alternative practice to be formally approved.
- Result in a requirement that any and all alternative practices can only be approved by BWSR or soil and water conservation district.
- Define "water quality protection comparable to a buffer" for soil and water conservation district alternative practices by a narrow three prong-assessment that, depending on circumstances, could be considered arbitrary, difficult, or impossible to calculate. The Buffer Law provides flexibility in determining whether an alternative practice "provide[s] water quality protection comparable to the buffer protection for the water body that the property abuts."
- Subvert existing county and watershed district authorities to BWSR-proposed expanded authorities for soil and water conservation districts and BWSR.

BWSR is proposing these changes – subversion, preemption, new limits on statutory authorities, and expansion of non-statutory authorities – despite a 99.8% compliance rate statewide. The Revised Buffer Program Procedures fail to address soil and water conservation district restrictions and limitations, the unique position of legal drainage ditch authorities, and the nature of the Buffer Law as a flexible performance standard.

> **Failure to Address: soil and water conservation district Restrictions and Limitations.** soil and water conservation district offices have enacted their own buffer-related limits, rules, and restrictions that vary significantly by county. Based on the District's experience, soil and water conservation district limits, rules, and restrictions are not publicly known; inconsistent from year-to-year; inconsistent

between staff; and some are approved by soil and water conservation district boards while some are not.

Over the past eight years, soil and water conservation district staff in the Bois de Sioux and Mustinka River Watersheds have declared that:

- NRCS Field Office Technical Guide-based alternative practices can only be applied to whole "fields" regardless of "field" acreage, despite sub-watershed boundaries, and despite the width of the buffer.
- RUSLE2 can evaluate ½ mile long buffers (it was not designed for areas of this length, and BWSR staff have been notified by NRCS staff of this fact).
- There are no alternative practices for a 16.5' buffer.
- Alternative practices cannot be installed until a buffer is installed.
- Alternative practices can only be installed if there is a negative slope to the drainage system.
- An alternative practice cannot be installed without a 5' buffer.
- One or more of BWSR's statewide alternative practices cannot be used.
- 16.5' buffer landowners can install any of the 6 of BWSR's common alternative practices (however, only 3 of BWSR's common alternative practices apply to 16.5' buffers).

It is unclear if these buffer-related internal policies are written, compiled, noticed, published, or in any way distributed or made available to the public. Obviously, these internal controls limit soil and water conservation district activities, but not the rights described in the Buffer Law for landowners, counties, watershed districts, and technical professional employees.

BWSR's Revised Procedures – which attempt to subvert approval of all alternative practices and compliance determinations primarily to the sole discretion local soil and water conservation districts – will result in conflicts between soil and water conservation district internal policies and the rights described in the Buffer Law for landowners, counties, watershed districts, and technical professional employees.

soil and water conservation districts may be forced to use the services of attorneys as a result of these procedures as enforcement activities can necessitate several different legal proceedings. Gathering information, and evaluating that information, is an important activity when enforcement staff evaluate the merits of more formal penal and legal action. These activities are familiar to most counties and watershed districts that deal with the legal requirements associated with public records retention, Government Data Practices Act requests, Open Meeting Law, conflicts of interest, local riparian rules/ordinance terms, and Buffer Law terms. BWSR's Revised Procedures ensure that any legal case or action will be more centrally dependent upon the policies, activities, and determinations of an soil and water conservation district. The legal risk is shared by BWSR.

Failure to Address: Position of Legal Drainage Ditch Authorities. Legal drainage authorities assume a great deal of statutory responsibility for the caretaking of shared legal drainage systems. Because of our low-slope topography, there are many actions that our landowners can take to prevent sediment from leaving parcels. Our landowners proactively install surface and subsurface drainage systems on their own property, at their own significant cost. They support drainage maintenance, repairs, and improvements, at their own significant cost. They support additional local programs like the Wilkin soil and water conservation district Buffer Installation Cost Share Program, the Traverse soil and water conservation district Lined Waterway Cost Share Program, the Stevens County/Wilkin County Cover Crop Program, Grant/Traverse/Wilkin Buffer Seeding and District Staking Programs, and targeted Side

Inlet Culvert Cost Share Program. Implementation of these programs requires landowner interest, planning, funding, permitting, and execution. The success of these programs hinges on our partnerships with local soil and water conservation districts. These partnerships facilitate the construction of long-term improvements to permanently reduce sediment transport and increase water quality. They will be strained by unending pressure from BWSR staff to define and aggressively pursue 100% buffer compliance, 100% of the time, year round. A hostile revocation of a drainage authority's buffer enforcement authority could create some legally unique consequences. Unlike drainage authorities, BWSR and the soil and water conservation district do not have the legal authority to inspect 16.5' riparian buffers legal drainage systems located on private lands. Conflicts could arise if soil and water conservation districts and drainage authorities disagree on the comparability of proposed alternative practices for 16.5' buffers.

Drainage authorities are closely connected with the purpose of the Buffer Law (keeping sediment in-field) because they are responsible for removing sediment when it accumulates in the legal drainage ditch channel.

Failure to Address: The Buffer Law is a Flexible Performance Standard.
The water quality benefit of riparian buffers is site-specific and multi-layered. There are many aspects of the Buffer Law that reflect this local variability and the statute offers flexible options in response. District staff attempted to narrow the data gap to compare benefits of a 16.5' buffer to alternative practices by utilizing a wide variety of very expensive tools – modeling products.

The District uses PTMApp, HEI custom BEAST tables, BWSR's Decision Tool, and Nutrient Reduction Study Appendices to compare the benefits of alternative practices to the buffer protection for the water body that the property abuts. These tools typically have to be modified in order to provide sediment and nutrient reduction estimates for 16.5' buffers, and rarely take into account areas with low-to-no-slope conditions found in the District's boundaries. These tools can also be used by landowners to demonstrate the comparability of alternative practices. Many counties and watershed districts have access to additional software and engineering staff who can more accurately substantiate comparability. Comparability itself is flexible as the Buffer Law does not provide quantitative or qualitative metrics to measure.

BWSR states in their Alternative Practices Introduction, "[t]he law doesn't direct BWSR to prescribe alternative practices . . ." However, that is exactly what is being described in these proposed procedures. It is also occurring when landowners meet with soil and water conservation district staff, who limit 16.5' buffer alternative practice options to a handful or less of practices.

When District staff meet with landowners, they explain that the Buffer Law and the Buffer Rule authorize the landowner to choose how to comply:

> ***A landowner*** owning property adjacent to a water body identified in a buffer-protection map and whose property is used for cultivation farming ***may meet the requirements under paragraph (a) by adopting an alternative riparian water quality practice***, or combination of structural, vegetative, and management practices . . . that provide water quality protection comparable to the buffer protection for the water body that the property abuts.

Minn. Stat. § 103F.48, subd. 3(b). (Emphasis added).

This section provides flexibility for the landowner to choose either a buffer or alternative practice that suits their parcel, with a few guardrails. The statutory alternative practice guardrails do not prevent questioning as to whether an alternative practice is "comparable" to a 16.5' buffer – so inherently, there is some level of legal risk exposure with every alternative practice.

The District explains to the landowner that they can adopt an alternative riparian water quality practice, or combination of structural, vegetative, and management practices, based on: (1) the Natural Resources Conservation Service Field Office Technical Guide, (2) common alternative practices adopted and published by the board, (3) other practices approved by the board, (4) or practices based on local conditions approved by the local soil and water conservation district that are consistent with the Field Office Technical Guide.

BWSR's Revised Procedures create a lengthy, contentious bureaucratic process in order for landowners to make decisions about how they desire to comply with the Buffer Law. The Buffer Law provides a considerable number of alternative practices found in the Natural Resources Conservation Service Field Office Technical Guide. BWSR is attempting to restrict these alternative practices by creating procedures that require the alternative practices to be BWSR-approved or soil and water conservation district-approved – a regulatory overreach in direct contradiction to state law. BWSR-approved alternative practices for 16.5' buffers do not even include retention ponds and alternative measures that prevent overland flow to the water resource which are explicitly referenced in Minn. Stat. § 103F.48, subd. 3(b).

The District does not believe it was the Minnesota Legislature's intent for the revocation of county and watershed district authorities to be based on strict compliance with the subversion of statutory authorities to self-expanded BWSR and soil and water conservation district staff bureaucratic, regulatory overreach for nearly every related point of discretion associated with the Buffer Law. Despite the type of buffer (50' or 16.5'), discretion is proposed for the sole authority of soil and water conservation districts and BWSR. Counties and watershed districts are only permitted to send Corrective Action Notices and pursue enforcement – and if these two duties are not carried out to the present and future standards of the BWSR Board, BWSR can revoke jurisdiction and secure a portion of the annual $8,000,000 Riparian Aid for itself.

It is extremely disappointing that BWSR staff made little-to-no effort to collect information from interested stakeholders like the District, or Drainage Work Group, prior to formulating the Revised Procedures. This is a dramatic, top-down initiative that completely missed an opportunity to identify common areas of conflict or frustration, and to create better guidance on the administration and enforcement of the Buffer Law.

Sincerely,

Jamie Beyer
Administrator
Bois de Sioux Watershed District

CC: Linda Vavra, President, Bois de Sioux Watershed District
Lukas Croaker, District Attorney, Bois de Sioux Watershed District

December 9, 2025

Sarah Strommen
Commissioner
Minnesota Department of Natural Resources
500 Lafayette Road North
St. Paul, MN 55155

Dear Commissioner Strommen,

Thank you again for attending our October 2025 regular board meeting to discuss the results of the new DNR process to score and rank applications for funds through the Flood Hazard Mitigation Grant Assistance Program (FHMGAP). Two projects in the Red River Basin (RRB) were allocated funds of $4.2 million collectively and this funding is critical. We also appreciated hearing your comments about the importance of the relationship between the Red River Watershed Management Board (RRWMB) and DNR.

The RRWMB and its membership recently had an opportunity to meet with Matt Bauman, Emily Javens, and Nathan Kestner on November 21, 2025 to discuss the FHMPGAP scoring and ranking process and opportunities to potentially enhance the process. This has built off our discussions over the last couple of years to enhance the FHMGAP and bring about greater openness and transparency and enhanced communication between our organizations.

While these conversations have been timely and positive and much progress has been made, we believe there is still room for additional improvement to the FHMGAP. In the spirit of our relationship, we have the following comments and suggestions regarding the FHMGAP:

1. **Greater Clarification About Project vs. Phase:** The RRWMB requests clarification about DNR FHMGAP application materials. Currently, there is confusion and miscommunication regarding project vs. phase. Local government needs clarity about what DNR will fund as many large projects have multiple phases to reach completion. Our local engineers tell us that inflation for large flood impoundment – water storage projects is currently at 10 percent on an annual basis.

   Each time a watershed district had to redesign a new phase, costs escalate and overall project costs increase significantly. The lack of consistent bond funds is another factor that affects when projects can be completed. Local government needs to know what the strategy is so that we can better utilize the new grant process to fund muti-purpose and multi-phase projects.

DNR has relayed that watershed districts should anticipate how large of a phase to design before applying for the next grant. If a design is too big of a phase, the watershed districts have to accept all of the cost overruns themselves. This is a "Catch 22" with major financial implications and no certainty.

2. **Clarification on MMB and DNR Contracts Regarding Match/Leverage:** Our membership relies on local funds and match from the RRWMB. One critical area that needs to be adjusted is when local funds "count" towards matching state funds. In our recent meeting with your staff, DNR committed to reviewing areas of statute where adjustments could be made so that the use of match funds is not so limited regarding when the clock starts. In addition, no assumptions should be made about RRWMB match and DNR staff should be inquiring with the RRWMB directly regarding how our funds are used to match local projects of our membership.

   Legal, pre-construction engineering, permitting, design and bid work costs are significant. When these costs cannot be counted towards local match, it places additional pressure on the RRWMB and our membership to find additional funds for match requirements. We have limited tax authority and can only levy in accordance with state laws. There are many pressures on our taxpayers, which are largely farmers and rural landowners. RRB projects benefit not only local and regional areas, but the State of Minnesota, which should be sharing in these costs.

3. **Grant Extensions:** The grant agreement construction window is too narrow and will require frequent extensions, thus requiring additional and unnecessary work. We request that DNR review this process and determine if there is additional flexibility and streamlining that can be invoked.

4. **MS 103F.161 and Mediation Agreement:** Subdivision 3 references Red River Basin flood mitigation projects and states: "Notwithstanding subdivision 2, a grant for implementation of a flood hazard mitigation project in the Red River basin that is consistent with the 1998 mediation agreement and approved by the Red River flood damage reduction work group may be for up to 75 percent of the cost of the proposed mitigation measures."

   The RRWMB requests that the next version of the application materials includes consideration or points for projects that are within the 1998 Mediation Process in accordance with MS 103F.161. In addition, the Flood Damage Reduction Work Group (FDRWG) has a Natural Resource Enhancement scoring and ranking process that was developed by screened by members of the FDRWG, including DNR, the RRWMB, MPCA, BWSR, and others.

   We recommend that the DNR review this and implement the use of this valuable tool during the DNR scoring and ranking process for FHMGAP funding. The FDRWG uses a thorough process to vet projects according to the 1998 Mediation Agreement and to ensure that they consider both Natural Resources Enhancements and Flood Damage Reduction aspects. If a project is approved by the FDRWG, a letter signed by each of the Co-Chairs is provided to the DNR for consideration. These letters are provided specifically to satisfy requirements under MS 103F.161 Subdiv. 3.

The statute seems to suggest that projects that have gone through this process are eligible to receive higher percentages of funding. However, it is not clear to us that these requirements were considered by DNR during this past round of funding, and we strongly suggest that DNR gives weight to projects that have been approved by the FDRWG.

5. **Existing vs. New Projects:** The RRWMB recommends that existing projects that are not complete having significant state funds already invested be given priority over new project start-ups in the new review process. We need to collectively work together to ensure that projects that are under construction are not ignored or left behind due to their size of ask compared to other smaller size projects.

6. **FHMGAP Funding Strategy:** Presently, we are not aware of any longer-term vision for funding flood mitigation – water storage projects in the State of Minnesota. We ask that the DNR work with local government to develop a vision to fund the total known needs of the FHMGAP of $140 million over the next two bonding cycles. Flood mitigation – water storage projects in the RRB are collectively working toward a goal of 20% peak flow reduction on the Red River mainstem and it is not clear that the State of Minnesota is committed to achieving any short or long-term goals.

7. **Collaboration During 2026 MN Legislative Session:** To promote the FHMGAP, the RRWMB requests that DNR be supportive and assist with organizing legislative hearings with a focus on the FHMGAP. The RRWMB can provide the lobbying expertise for collaborative efforts such as this.

8. **FHMGAP Policy Changes:** We request that any new policy decisions made about the FHMGAP be communicated to all local governmental units and entities receiving funds through the FHMGAP that have current contracts with DNR.

9. **Enhanced FHMGAP Communication:** The RRWMB suggests that the DNR develop an electronic e-newsletter to highlight projects funded through the FHMGAP. In addition, policy changes and added information could be shared through such a platform. As an alternative, the DNR's Water Talk e-newsletter or similar format could be used.

10. **Information Sought About Recent FHMGAP Applications:** The RRWMB requests project information about recent applications to the latest round of funding for the $9 million allocated by the 2025 Minnesota Legislative special session. Specifically, we request application materials and scoring/ranking materials by the DNR. As an example, applications to the LSOHC and other state funds are open and transparent. This information would increase awareness, promote the Program, and aide unsuccessful applicants for the future.

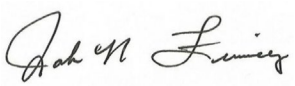
11. **Presentation Process:** The RRWMB requests that FHMGAP applicants be granted the opportunity to present projects to the DNR review team similar to the LSOHC process or other state funding processes. Applicants, their technical staff and engineers, and other funding partners such as the RRWMB should be part of this process to share information and to increase understanding of individual projects.

12. **Update the DNR Known Needs List:** We request that the Known Needs List be updated and shared publicly by January 1, 2026.

We are also encouraged to see the DNR's preliminary capital budget request of $45 million for the FHMGAP. We appreciate the DNR's recognition of the immense need for investments in this Program. We work collectively with our membership to ensure a strong future remains in the RRB for our residents, landowners, and farmers.

The RRWMB requests a follow-up meeting to discuss the matters outlined in this letter prior to the start of the 2026 Minnesota Legislative session. We look forward to your timely respond and to collaborate with you during the 2026 Minnesota legislative session. Thank you.

Sincerely,



John Finney
President

Sincerely

Robert L. Sip
Executive Director

CC: RRWMB Managers
RRWMB Membership