

RED LAKE WATERSHED DISTRICT

March 14, 2024

9:00 a.m.

Agenda

9:00 a.m.	Call to Order	Action
	Review and approve agenda	Action
	Requests to appear	Information
	February 22, 2024 Minutes	Action
	Financial Report dated March 13, 2024	Action
	BWSR Performance Review and Assistance Program (PRAP) Matt Fischer, BWSR	Information
	Mud River Project, RLWD Project No. 180C – Jim Graham, USFWS HDR – Task Order #3 Facilitation Agreement	Info/Action Info/Action
	Turtle Cross Connection Project, RLWD Project No. 114	Info/Action
	Houston Ave Project, RLWD Project No. 92	Info/Action
	Thief River 1W1P, RLWD Project No. 149A Bank Stabilization Projects – Drees/Stock	Info/Action
	Cardinal Ring Dike, RLWD Project No. 129BB	Action
	Houston Engineering – Permit Technology	Info/Action
	Red Lake SWCD Funding Requests: Randy Pahlen – Emardville 31 Danny Payment – Gervais 31 Nick Seeger – Red Lake Falls 17	Info/Action Info/Action Info/Action
	Ditch Maintenance	Action
	Withdrawn Permit: No. 24005-BNSF Railroad Company, Angus Township, Polk County	Action
	Tabled Permit: No. 24008-Bruce Stromstad, Kerstonville Township, Polk County	Action

Permits: 24006 and 24007	Action
RLWD Advisory Board Kelly Dahlen John Barrett	Info/Action
River Watch Forum	Information
Administrators Update	Information
Legal Counsel Update	Information
Managers' updates	Information
Adjourn	Action

UPCOMING MEETINGS:

March 14, 2024	RLWD Board Meeting
March 18, 2024	RLWD Advisory Committee Meeting, 9:30 am
March 19, 2024	RRWMB Meeting, Ada, 10 am
March 19 & 20, 2024	RRWMB/FDRWG March Conference, Moorhead
March 27 & 28, 2024	Tribal-State Relations Training, Redby

RED LAKE WATERSHED DISTRICT
Board of Manager's Minutes
February 22, 2024

President, Gene Tiedemann, called the meeting to order at 9:00 a.m. at the Red Lake Watershed District Office, Thief River Falls, MN.

Present: Managers: Gene Tiedemann, Tom Anderson, Brian Dwight, LeRoy Ose, Grant Nelson, and Allan Page. Absent: Terry Sorenson. Staff Present: Tammy Audette, Melissa Bushy, Elaine Rychlock, Nate Koland, Erick Huseth, Lindsey Kallis.

The Board reviewed the agenda. A motion was made by Ose, seconded by Anderson, and passed by unanimous vote that the Board approve the February 22, 2024, agenda as presented. Motion carried.

A request to appear was made by Marshall County resident, Darrold Rodahl.

The Board reviewed the February 8, 2024, minutes. Motion by Anderson, seconded by Nelson, to approve the February 8, 2024, board meeting minutes as presented. Motion carried.

The Board reviewed the Financial Report dated February 21, 2024. Motion by Anderson, seconded by Page, to approve the Financial Report dated February 21, 2024, as presented. Motion carried.

Darrold Rodahl shared his concerns and presented landowner signatures regarding the proposed Mud River Project, RLWD Project No. 180C, without first addressing downstream flooding issues. Rodahl requested a meeting with the District, for discussion on possible flooding solutions along State Ditch 83, RLWD Project No. 14. After discussion by the Board, a motion was made by Dwight, seconded by Ose, to authorize a meeting with Rodahl and delegates from the landowners, along with Manager Ose, Administrator Audette, and Engineer Nate Dalager, HDR Engineering, Inc. Motion carried. Audette will work with those involved to determine a meeting date.

Administrator Audette reviewed the IRS mileage rate increase for 2024. The IRS mileage rate increased to 67 cents a mile, up 1.5 cents from 2023.

Motion by Ose, seconded by Dwight, to authorize Administrator Audette the authority to sign the Amended 2022 Watershed Based Implementation Funding (WBIF) Grants to include the Supplemental Funds for the Red Lake River 1W1P, RLWD Project No. 149; and the Clearwater River 1W1P, RLWD Project No. 149B. Motion carried.

Manager Nelson discussed how the MN Dept of Agriculture (MDA) and local partners currently operate fourteen weather stations in the Minnesota Ag Weather Network (MAWN). This network provides local ag weather information and is integrated into the North Dakota Ag Weather Network (NDAWN). Nelson inquired if the District would allow the installation of a weather station near the Black River Impoundment, RLWD Project No. 176. Motion by Page,

seconded by Ose, to approve District staff and Manager Nelson to work with the MDA to determine if a site near the Black River Impoundment, RLWD Project No. 176, would be a viable site. Motion carried.

Administrator Audette and Engineer Nate Dalager, HDR Engineering, Inc., stated that the RRWMB approved funding in the amount of \$214,400 for the Chief's Coulee Project, RLWD Project No. 46S. This amount was determined to be a percentage of the Flood Damage Reduction (FDR) portion of the project. Audette stated that she had contacted Matt Bauman, MnDNR, who recently replaced Pat Lynch, to inquire if the MnDNR had any potential funding for the project. Motion by Ose, seconded by Nelson, to approve an application to the MnDNR for funding in the amount of \$106,000 for the Chief's Coulee Project, RLWD Project No. 46. Motion carried.

Rob Sip, Executive Director for the Red River Watershed Management Board (RRWMB) presented an update on RRWMB activities. Sip discussed the rollout of LiDAR; budgetary and financial information along with annual programs funded and current funding commitments by the RRWMB in 2024; and legislative efforts in 2024. Sip reminded the Board that the RRWMB/FDRWG March Conference will be held March 19-20th, in Moorhead.

Administrator Audette shared that Lauren Palmer has been hired to be our summer intern for 2024. She will start mid-May and work with us through August.

Administrator Audette discussed the possibility of getting a new logo design for the RLWD. Audette shared we need a new website as well as Houston Engineering would like to discontinue hosting our website.

Administrator Audette reviewed a financial donation request from the West Polk SWCD for the Area I Envirothon to be held on May 1, 2024, at Rydell Refuge. Motion by Page, seconded by Anderson, to approve the maximum donation request of \$300 to the West Polk SWCD for the Area 1 Envirothon. Motion carried.

The Board reviewed permits for approval. Motion by Ose, seconded by Page, to approve the following permits with conditions as stated on the permit: No. 24-003, Ogden Farder Jr., Badger Township, Polk County. Motion carried.

Administrators Update:

- **PRAP:** I was informed by BWSR employees, Matt Fischer and Don Bajumpaa that BWSR plans to complete a PRAP study on the District along with the Red Lake River 1W1P. I have an informational meeting scheduled for March 4th with Don. More information to follow.
- **RRWMB:** I attended the RRWMB meeting on February 20th in Ada. Discussion on culvert inventory was held at the meeting. More information to follow on this topic.
- **Legislative Update:** Included in the packet is a Legislative Update and information from Tom Gile regarding Legislative revisions to tiling requirements for land sales.
- **District Audit:** The RLWD Audit will be held the week of March 4th.

- **River Watch Forum:** Just a reminder that the River Watch Forum will be held on February 27 at the Alerus Center in Grand Forks.
- **Vehicle Maintenance:** Just a heads up that the Traverse needs new tires at a cost of \$1,300. Staff have scheduled an appointment for February 29th.
- **Vacation:** I will be on vacation starting February 23rd through March 1st, returning to the office on March 4th. I am accessible by phone/email if any questions arise while I am gone.
- **Wild Rice Allocation:** District staff were notified that one wild rice grower had begun pumping water from the Clearwater River. With ice conditions, District staff will need to stream gage to get an accurate amount of water. The District may need to look at purchase of newer stream gaging equipment.

Legal Counsel Sparby shared that the Oral Argument to the Supreme Court for the Improvement to Polk County Ditch 39, RLWD Project No. 179, is scheduled for March 5, 2024.

Manager Dwight stated that there is legislation that would turn the “Keep It Clean” campaign over to the MnDNR.

Manager Page reported on the meeting held with Jess Determan, Field Drainage, Inc.

Motion by Ose, seconded by Dwight, to adjourn the meeting. Motion carried.

LeRoy Ose, Secretary

RED LAKE WATERSHED DISTRICT
Financial Report for March 13, 2024

Ck#	Check Issued to:	Description	Amount
online	EFTPS	Withholding FICA,Fed,&Medicare(2/28/24pp)	\$ 4,514.39
online	MN Department of Revenue	Withholding taxes (2/28/24 payroll)	\$ 818.46
online	PERA	public employee retirement s account-payroll 3/13/24	\$ 2,809.21
41152-56	VOID	printer error	\$ -
41157	Rchards Publishing	annual newspaper subscription	\$ 45.00
41158	Aramark	Office rug rental	\$ 188.56
41159	Farmers Union Oil	Fuel for vehicles	\$ 314.91
41160	Hugo's	Meeting Expenses	\$ 242.95
41161	Olson Construction	Parking lot snow removal/sand	\$ 460.00
41162	Kristie Huseth	Cleaning of Building	\$ 612.50
41163	Les's Sanitation	Garbage Removal	\$ 35.74
41164	Marco	Office Phones	\$ 378.54
41165	Marshall Co. Hwy Dept	3 Flapgates-project #175,#169 & 1 available	\$ 1,666.50
41166	East Polk SWCD	1W1P Clearwater (T&E- Pro. Dev. March-Dec 2023)	\$ 48,380.60
41167	HDR	**See details below	\$ 41,744.70
41168	MN Assoc. of Drainage Inspectors	Membership & registration (Erick)	\$ 100.00
41169	Pennington SWCD	1W1P Clearwater,Thief & Red Lake River	\$ 7,965.28
41170	Thomas Reuters	MN Statutes subscription	\$ 133.00
41171	Marco	copier monthly fee	\$ 294.28
41172	Ann Joppru	Admin. Consulting (audit prep)	\$ 596.25
41173	West Polk SWCD	1W1P Thief River	\$ 7,954.64
41174	Houston Engineering	**See details below	\$ 22,985.00
41175	VOID	printer error	\$ -
41176	Pomp's	Traverse new tires	\$ 1,017.64
41177	Pennington Co. Highway Dept.	**See details below	\$ 40,912.40
online	Northwest Service Cooperative	Health Insurance Expense	\$ 10,100.02
online	Cardmember Services Credit Card	RR Basin Lodge, DOT Training, office supply	\$ 2,084.63
online	AFLAC	Staff paid insurance	\$ 326.24
online	INTUIT adjustment	DD fee	\$ 0.50
online	BD adjust from last DD	mileage	\$ 410.55
online	Delta Dental	Dental Insurance premium	\$ 597.05
online	City of Thief River Falls	Utilities	\$ 444.55
direct	Staff Payroll	3/13/2024	\$ 14,817.52
Total Checks			\$ 212,951.61
HDR		Mud River project management -	\$542.50
		Turtle Cross Lakes Feas Study -	\$41,202.20
Houston		Thief River/SD 83 Streambank Stabilization	\$564.00
		Clearwater River Channel Stability	\$5,190.50
		Ring Dikes/ Payment & Cardinal	\$831.00
		Elm Lake Farm Pools Structure	\$3,273.50
		Lost River Outlet Structure	\$3,753.00
		Houston Ave Streambank Stabilization	\$8,575.00
		Clearwater River-Rice Grow Pump Calibration	\$798.00

Pennington Co. Highway Dept.	T&E - Project Dev. June 2022-Aug. 2022	\$20,305.40
	CD #96 Project Construction -	\$20,307.00

Banking	Northern State Bank		
	Balance as of February 29, 2024		\$ 333,081.06
	Total Checks Written		\$ (212,951.61)
	Receipt #12202 State of MN JE #174	Swift for 319 Grant - 46R	\$ 170,252.50
	Balance as of March 13, 2024		\$ 1,375.00
	Current interest rate is 3.25%		<u>\$ 291,756.95</u>

	American Federal Bank-Fosston		
	Balance as of February 29, 2024		\$ 5,219,335.61
	Balance as of March 13, 2024		
	Current interest rate is 3.3%		<u>\$ 5,219,335.61</u>

CD's	Edward Jones		
	Balance	12 month CD 5.02% Expiry 5-07-24	<u>\$ 237,000.00</u>

	Edward Jones		
	Balance	12 month CD 5.02% Expiry 5-07-24	<u>\$ 237,000.00</u>

	Edward Jones		
	Balance	12 month CD 5.02% Expiry 5-07-24	<u>\$ 26,000.00</u>

	Edward Jones		
	Balance	12 month CD 5.45% Expiry 9-19-24	<u>\$ 241,000.00</u>

	Edward Jones		
	Balance	12 month CD 5.5% Expiry 9-29-24	<u>\$ 237,000.00</u>

	Edward Jones		
	Balance	12 month CD 5.5% Expiry 9-29-24	<u>\$ 33,000.00</u>

	Edward Jones		
	Balance	12 month CD 4.85% Expiry 12-15-24	<u>\$ 238,000.00</u>

	Edward Jones		
	Balance	12 month CD 4.55% Expiry 12-15-24	<u>\$ 238,000.00</u>

Edward Jones Balance	12 month CD 4.75% Expiry 12-15-24	<u>\$ 24,000.00</u>
Edward Jones Balance	12 month CD 4.9% Expiry 2-5-25	<u>\$ 237,000.00</u>
Edward Jones Balance	12 month CD 4.9% Expiry 2-5-25	<u>\$ 237,000.00</u>
Total CD Investments		\$ 1,985,000.00
Total Cash (NSB + AFB + CD's)		\$ 7,259,092.56
Cash that has been received and earmarked for projects:		
	2022 Grant Thief River 1W1P Proj. #149A	\$ 264,946.00
	2023 Grant Clearwater 1W1P Proj. #149B	\$ 487,363.00
	2024 Grant Red Lake River 1W1P Proj. #149	\$ 850,219.50
	Mid Point Grant Proj. #149	\$ 25,000.00
	Chief Coulee Proj. #46S	<u>\$ 214,375.00</u>
		\$ 1,841,903.50
Payables committed to by board action:		
	TRF Reservoir Water Intake Proj. #63	\$ 38,400.00
	Chief Coulee Proj. #46S	<u>\$ 800,000.00</u>
		\$ 838,400.00
Total accessible cash (Est)		\$ 4,578,789.06

Performance Review and Assistance Program (PRAP)

BWSR's Performance Review and Assistance Program (PRAP) was authorized by the legislature (Statute 103B.102) in 2007 to monitor and assess the performance of local units of government (counties, SWCDs, watershed districts, and watershed management organizations), responsible for the conservation of water and related land resources. In addition to conducting reviews, BWSR uses this program to provide organizational improvement or assistance grants to local government units (LGUs) in need and prepares an annual report to the legislature outlining the work conducted under the program.

PRAP Review

The program includes an Annual Statewide Summary and three types of assessments.

The **Annual Statewide Summary** is an annual tabulation of required plans and reports for all LGUs. This information is included within the Annual Legislative Report.

Organizational Assessments are routine, interactive reviews intended to assess all LGUs at least once every 10 years. These reviews evaluate operational effectiveness, partner relationships, and whether the LGU has achieved county water plan, watershed management plan, and/or SWCD comprehensive plan implementation goals.* Organizational reviews also assess compliance with performance standards and the Wetland Conservation Act, where applicable.

Watershed-based Assessments are routine reviews conducted with partnerships of local governments working together to implement comprehensive watershed management plans (CWMPs) developed through the One Watershed, One Plan Program. Assessment occurs when a CWMP has reached or passed the 5-year plan evaluation checkpoint. This type of review evaluates progress on plan implementation and analyzes partners working relationships.**

Special Assessments are conducted with LGUs experiencing significant obstacles or performance deficiencies and may include BWSR Board action to assign penalties as authorized by statute.

* Within an Organizational Assessment, the plan review may be omitted or waived depending on multiple factors, including plan expiration, status of water planning efforts by the LGU/within the jurisdiction, and status of approved comprehensive watershed management plans within the jurisdiction.

** Within the watershed partnership, individual LGUs may be selected to complete an Organizational Assessment to coincide with the Watershed-based Assessment. Doing this simultaneously will reduce the time individual LGUs are involved in a PRAP assessment, resulting in a less time-consuming process for both BWSR and the LGUs.

Program History

Since 2008, BWSR's Performance Review and Assistance Program (PRAP) has assessed the performance of the units of government that constitute Minnesota's local delivery system for conservation of water and related land resources. The program goal is to assist these local government partners to be the best they can be in their management of Minnesota's land and water resources. Review of LGU compliance with the Wetland Conservation Act was added in 2017.

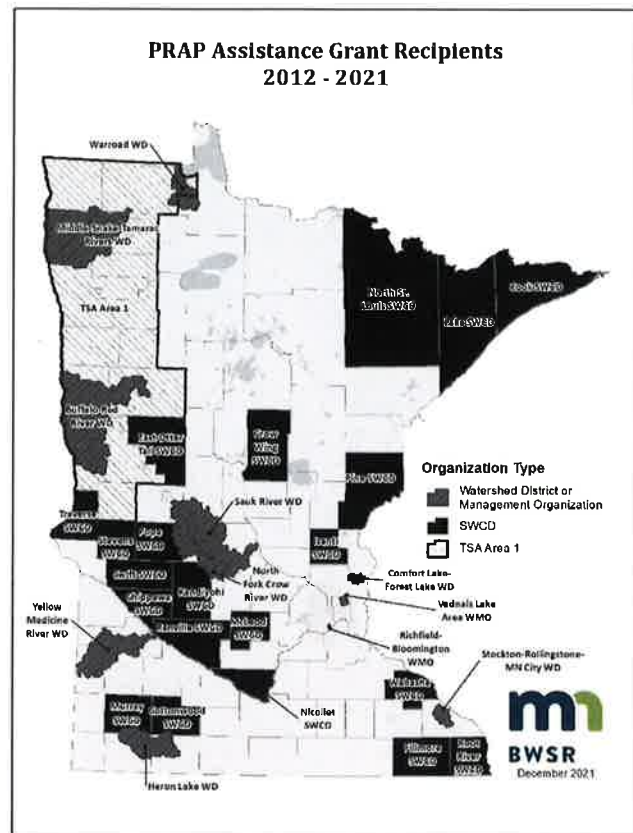
In 2022, the program was redesigned, to accommodate for the ongoing transition from county-based local water management plans to watershed planning.

PRAP Assistance

The “assistance” part of the PRAP program comes through grants made to LGUs to improve operating performance and execute planned goals and objectives. Grant activities typically include facilitation, mediation or consulting services related to organizational improvement activities such as reorganizations/mergers, strategic planning, organizational development, benchmarking, audits, and staff and board capacity assessments. LGUs do not need to have been the subject of a PRAP performance review to apply for these grants, but funding priority is given to activities recommended to an LGU as part of a PRAP review.

Since the program began in 2012, more than \$125,000 has been awarded to LGUs around Minnesota.

In 2021, BWSR changed some of the application requirements for PRAP assistance funds and provided clarity about what types of activities and expenses are eligible. Additional changes include an increase to \$20,000 for partnerships that apply for assistance funding. A \$50,000 annual cap on PRAP assistance awards was also removed to accommodate the potential for more partnership applications.



PRAP Reporting

BWSR prepares an annual PRAP report for the Minnesota legislature containing the results of the previous year’s program activities as well as a general assessment of the performance of LGUs that provide land and water conservation services and programs. These reports contain an Annual Statewide Summary or Tabulation of data regarding reporting and plan status for all LGUs, as well as summaries and findings from all Organizational Assessments, Watershed-based Assessments and Special Assessment PRAP reviews completed during the reporting year.

To learn more about the PRAP program, or to view past Legislative reports, visit the PRAP page of the BWSR website at <http://www.bwsr.state.mn.us/PRAP>

GREATER MN WATERSHED DISTRICT PERFORMANCE STANDARDS

LGU Name: _____

Performance Area	Performance Standard		Level of Review		Rating	
	★	■	I	II	YES	NO
	High Performance standard	Basic practice or Statutory requirement <i>(see instructions for explanation of standards)</i>	Annual Compliance	BWSR Staff Review & Assessment (1/10 yrs.)	Yes, No, or Value	
Administration	■	Annual report: submitted on time	I			
	■	Financial audit: completed on time	I			
	■	Drainage authority buffer strip report submitted on time	I			
	■	eLINK Grant Report(s): submitted on time	I			
	■	Rules: date of last revision or review – Please enter month/year (i.e., 01/20)	II			
	■	Personnel policy: exists and reviewed/updated within last 5 years	II			
	■	Data practices policy: exists and reviewed/updated within last 5 years	II			
	■	Manager appointments: current and reported	II			
	■	WD has resolution assuming WCA responsibilities & appropriate delegation resolutions as warranted. (N/A if not LGU)	II			
	■	WD has knowledgeable & trained staff that manages WCA program or has secured a qualified delegate. (N/A if not WCA LGU)	II			
	★	Administrator on staff	II			
	★	Board training: orientation and continuing education plan and record for board members	II			
	★	Staff training: orientation and continuing education plan/record for each staff	II			
	★	Operational guidelines exist and current	II			
★	Public drainage records: meet modernization guidelines	II				
Planning	■	Watershed management plan: up-to-date	I			
	★	Prioritized, Targeted, Measurable criteria used in WD Plan	II			
	★	Strategic plan identifies short-term activities & budgets based on state and local watershed priorities	II			
	★	Member of County Water Plan Advisory Committee(s)	II			
Execution	■	Engineer Reports: submitted for DNR & BWSR review	II			
	■	WCA decisions and determinations made in conformance with all WCA requirements. (N/A if not LGU)	II			
	■	WCA TEP reviews/recommendations coordinated (N/A if not LGU)	II			
	★	Certified wetland delineator on staff or retainer	II			
	■	Total expenditures per year for past 10 years	II		attach	
	★	Water quality trends tracked for key water bodies	II			
Communication & Coordination	★	Watershed hydrologic trends monitored / reported	II			
	■	Functioning advisory committee: recommendations on projects, reports, maintains 2-way communication with Board	II			
	■	Communication piece sent within last 12 months	II			
	■	Website: contains annual report, financial statement, board members, contact info, grant report(s), watershed management plan, meeting notices, agendas & minutes, updated after each board meeting	II			
	★	Obtain stakeholder input: within last 12 months	II			
	★	Coordination with watershed based initiatives	II			
	★	Track progress for I & E objectives in Plan	II			
	★	Coordination with County Board, SWCD Board, City/Township officials	II			
★	Partnerships: cooperative projects/tasks with neighboring districts, counties, soil and water districts, non-governmental organizations	II				

Year	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Expenditures	4,765,542	4,308,907	2,552,455	2,116,438	3,594,896	3,131,674	2,609,332	13,078,693	7,090,931	4,015,780

**PERFORMANCE
REVIEW AND
ASSISTANCE
PROGRAM
(PRAP)**



Red Lake WD

Meeting: March 14,
2024

THE PRAP PROGRAM

- Initiated in 2008
- Authorized by legislature (Statute 103B.102)
- Assess the performance of local units of government responsible for conservation of water and related land resources
- Assist partners to be the best they can be

Guiding Principles

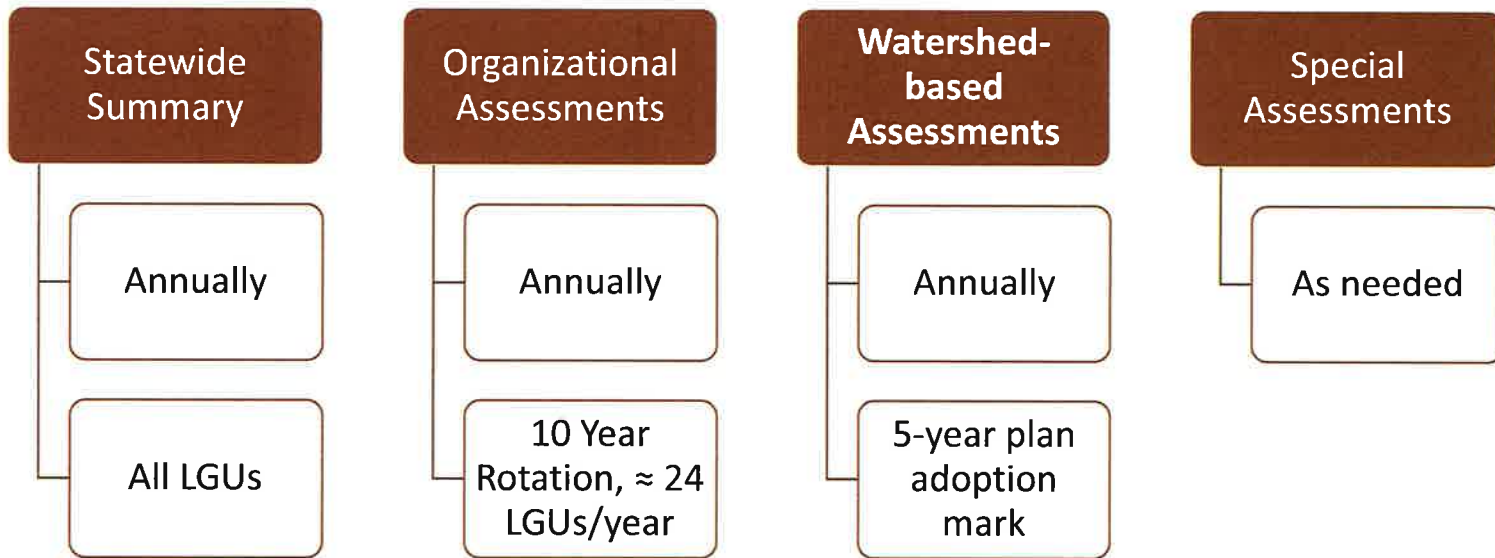
Pre-emptive- diagnose early

Systematic- thorough, consistent, expectation clear

Constructive- helps those that need help, showcases successes

Transparent- allows for public awareness and participation





THE PRAP PROGRAM: OVERVIEW



Annual Tabulation of Required LGU Plans/Reports

- Drainage Buffer Report
- Annual Audits
- Long Range Plan Status (ie Overdue or Not)
- Grant Reporting

Completed by BWSR

Compiled/Found in Annual PRAP Legislative Report

THE PRAP PROGRAM STATEWIDE SUMMARY



Consist of 3 or 4 parts:

- Performance Standards Evaluation Checklist
- Organizational Assessment Survey
- Water Plan Progress Assessment (occurs at recommendation of BWSR staff)
- Wetland Conservation Act Spot Check

THE PRAP PROGRAM ORGANIZATIONAL ASSESSMENT



- Occurs once every ten years
- Track if LGU is meeting performance standards, achieving goals in adopted water plan and meeting expectations of Board, staff and partners

Note: Water Plan review may be omitted if LGU is actively implementing Comprehensive Watershed MGMT Plan

THE PRAP PROGRAM ORGANIZATIONAL ASSESSMENT



- Routine Assessment
- Occur at roughly the 5-year plan adoption mark
- Contains 3 parts:
 1. Watershed Operations Evaluation Checklist
 2. Watershed Plan Progress Evaluation Spreadsheet
 3. Partner and Advisory Committee reflection surveys

Note: During Watershed Review, individual LGUs may be selected to complete an Organizational Assessment to coincide.

THE PRAP PROGRAM WATERSHED-BASED ASSESSMENT



- Conducted on an as needed basis
- Done at BWSR staff or LGU recommendation
- Assessment includes in-depth look at LGU performance issues
- Used to provide targeted assistance to LGU to address performance needs

THE PRAP PROGRAM SPECIAL ASSESSMENT





QUESTIONS

GREATER MN WATERSHED DISTRICT PERFORMANCE STANDARDS

LGU Name: _____

Performance Area	Performance Standard	Level of Review	Rating	
			YES	NO
Administration	★ High Performance standard	I Annual Compliance	Yes, No, or Value	
	■ Basic practice or Statutory requirement <i>(see instructions for explanation of standards)</i>	II BWSR Staff Review & Assessment (1/10 yrs.)		
	■ Annual report: submitted on time	I		
	■ Financial audit: completed on time	I		
	■ Drainage authority buffer strip report submitted on time	I		
	■ eJNK Grant Report(s): submitted on time	I		
	■ Rules: date of last revision or review – Please enter month/year (i.e., 01/20)	II		
	■ Personnel policy: exists and reviewed/updated within last 5 years	II		
	■ Data practices policy: exists and reviewed/updated within last 5 years	II		
	■ Manager appointments: current and reported	II		
	■ WD has resolution assuming WCA responsibilities & appropriate delegation resolutions as warranted. <i>(N/A if not LGU)</i>	II		
	■ WD has knowledgeable & trained staff that manages WCA program or has secured a qualified delegate. <i>(N/A if not WCA LGU)</i>	IS		
	★ Administrator on staff	II		
	★ Board training: orientation and continuing education plan and record for board members	II		
	★ Staff training: orientation and continuing education plan/record for each staff	II		
★ Operational guidelines exist and current	II			
★ Public drainage records: meet modernization guidelines	II			
Planning	■ Watershed management plan: up-to-date	I		
	★ Prioritized, Targeted, Measurable criteria used in WD Plan	II		
	★ Strategic plan identifies short-term activities & budgets based on state and local watershed priorities	II		
	★ Member of County Water Plan Advisory Committee(s)	II		
Execution	■ Engineer Reports: submitted for DNR & BWSR review	II		
	■ WCA decisions and determinations made in conformance with all WCA requirements. <i>(N/A if not LGU)</i>	II		
	■ WCA TEP reviews/recommendations coordinated <i>(N/A if not LGU)</i>	II		
	★ Certified wetland delineator on staff or retainer	II		
	■ Total expenditures per year for past 10 years	II		attach
	★ Water quality trends tracked for key water bodies	II		
Communication & Coordination	★ Watershed hydrologic trends monitored / reported	II		
	■ Functioning advisory committee: recommendations on projects, reports, maintains 2-way communication with Board	II		
	■ Communication piece sent within last 12 months	II		
	■ Website: contains annual report, financial statement, board members, contact info, grant report(s), watershed management plan, meeting notices, agendas & minutes, updated after each board meeting	II		
	★ Obtain stakeholder input: within last 12 months	II		
	★ Coordination with watershed based initiatives	II		
	★ Track progress for I & E objectives in Plan	II		
	★ Coordination with County Board, SWCD Board, City/Township officials	II		
	★ Partnerships: cooperative projects/tasks with neighboring districts, counties, soil and water districts, non-governmental organizations	II		
Year				
Expenditures				

PERFORMANCE STANDARDS CHECKLIST



SWCD/County Staff
Name

Organization

email address

SWCD Supervisors
Name

Organization

email address

County Board Members
Name

Organization

email address

Water Plan Task Force Members
Name

Organization

email address

Partners (minimum of 15)
Name

Organization

email address

SURVEY PARTICIPANT LIST





2022 Organizational Assessment PRAP Survey -

2021 Level II PRAP Survey

* 1. For which organization are you providing survey information?  0

- Warroad Watershed District
- Martin County
- Martin SWCD
- Yellow Medicine County
- Yellow Medicine SWCD
- Lincoln County
- Lincoln SWCD
- Yellow Medicine Watershed District

 NEW QUESTION 

or Copy and paste questions

Next

THE SURVEY



RED LAKE WD: ORGANIZATIONAL ASSESSMENT TIMELINE

Proposed Schedule, Timeline and Process

Date	Accomplishment
March 6 th , 2024	Meet with WD Staff <ul style="list-style-type: none">- Discuss Performance Standards Checklist (deadline)- Survey (deadline)- Participation List (deadline)
March 14 th , 2024	Meet with WD Board <ul style="list-style-type: none">- Review PRAP Organizational Assessment process (Fact sheet, survey, etc)- Discuss time commitment from staff (10 hours)- Encourage participation in survey
March 15 th , 2024	<ul style="list-style-type: none">- Survey Participant List sent to BWSR
March 15 th , 2024	Provide Survey to WD Staff, Board and Partners
March 29 th , 2024	Deadline for Survey/Performance Standards
April 12 th , 2024	Review Draft Report with BC
April 15 th , 2024	Review Draft Report with LGU
April 25 th , 2024	Meet with Board to Deliver Report



A top-down view of a dark wooden desk. On the left is a white coffee cup on a saucer. In the top right is a portion of a silver keyboard. A yellow pen lies horizontally on the right side. Five small, rectangular sticky notes are scattered across the desk, each with a single black question mark drawn on it. The notes are in various shades of light blue and grey. The word "QUESTIONS" is printed in large, white, bold, sans-serif capital letters in the lower right quadrant of the image.

QUESTIONS

GREATER MN WATERSHED DISTRICT PERFORMANCE STANDARDS

LGU Name: _____

Performance Area	Performance Standard		Level of Review		Rating	
	★	■	I	II	YES	NO
	High Performance standard		Annual Compliance		Yes, No, or Value	
	Basic practice or Statutory requirement <i>(see instructions for explanation of standards)</i>		BWSR Staff Review & Assessment (1/10 yrs.)			
Administration	■	Annual report: submitted on time	I		X	
	■	Financial audit: completed on time	I		X	
	■	Drainage authority buffer strip report submitted on time	I		X	
	■	eLINK Grant Report(s): submitted on time	I		X	
	■	Rules: date of last revision or review – Please enter month/year (i.e., 01/20)	II		8/27/15	
	■	Personnel policy: exists and reviewed/updated within last 5 years	II		X	
	■	Data practices policy: exists and reviewed/updated within last 5 years	II		X	
	■	Manager appointments: current and reported	II		X	
	■	WD has resolution assuming WCA responsibilities & appropriate delegation resolutions as warranted. <i>(N/A if not LGU)</i>	II			n/a
	■	WD has knowledgeable & trained staff that manages WCA program or has secured a qualified delegate. <i>(N/A if not WCA LGU)</i>	II			n/a
	★	Administrator on staff	II		X	
	★	Board training: orientation and continuing education plan and record for board members	II			X
	★	Staff training: orientation and continuing education plan/record for each staff	II			X
	★	Operational guidelines exist and current	II		X	
★	Public drainage records: meet modernization guidelines	II		X		
Planning	■	Watershed management plan: up-to-date	I		X	
	★	Prioritized, Targeted, Measurable criteria used in WD Plan	II		X	
	★	Strategic plan identifies short-term activities & budgets based on state and local watershed priorities	II			X
	★	Member of County Water Plan Advisory Committee(s)	II		X	
Execution	■	Engineer Reports: submitted for DNR & BWSR review	II		X	
	■	WCA decisions and determinations made in conformance with all WCA requirements. <i>(N/A if not LGU)</i>	II			n/a
	■	WCA TEP reviews/recommendations coordinated <i>(N/A if not LGU)</i>	II			n/a
	★	Certified wetland delineator on staff or retainer	II		n/a	
	■	Total expenditures per year for past 10 years	II		attach	
	★	Water quality trends tracked for key water bodies	II		X	
Communication & Coordination	★	Watershed hydrologic trends monitored / reported	II		X	
	■	Functioning advisory committee: recommendations on projects, reports, maintains 2-way communication with Board	II		X	
	■	Communication piece sent within last 12 months	II		X	
	■	Website: contains annual report, financial statement, board members, contact info, grant report(s), watershed management plan, meeting notices, agendas & minutes, updated after each board meeting	II		X	
	★	Obtain stakeholder input: within last 12 months	II		X	
	★	Coordination with watershed based initiatives	II		X	
	★	Track progress for I & E objectives in Plan	II			X
	★	Coordination with County Board, SWCD Board, City/Township officials	II		X	
★	Partnerships: cooperative projects/tasks with neighboring districts, counties, soil and water districts, non-governmental organizations	II		X		

Year	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Expenditures	4,765,542	4,308,907	2,552,455	2,116,438	3,594,896	3,131,674	2,609,332	13,078,693	7,090,931	4,015,780

January 25, 2024

Tammy Audette, Administrator
Red Lake Watershed District
1000 Pennington Avenue South
Thief River Falls, MN 56701

RE: Proposal – Mud River – Task Order #3 – Preliminary Design

Dear Ms. Audette,

In response to your request for engineering services for the **Mud River Enhancement Project**, HDR Engineering, Inc. (HDR) is pleased to provide the following proposal for preliminary design of the Mud River Enhancement Project. Future tasks and services required to successfully complete the project may be identified separately as they arise, under additional task orders.

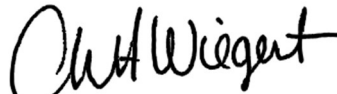
We look forward to the opportunity to work with you on this project. If you have any questions regarding the attached scope of services, please contact Nate at (218) 681-6100.

Sincerely,

HDR Engineering, Inc.



Nathan Dalager, P.E.
Project Manager



Christine Wiegert, Vice President
MN/WI Area Manager

Encl: Proposal, Task Order #3
HDR Engineering, Inc. Terms and Conditions for Professional Services

Mud River Enhancement Engineering Services

Proposed Action Description

HDR understands that the Red Lake Watershed District (RLWD) is interested in completing the preliminary design of an enhanced channel with natural resource enhancement, water quality, and flood damage reduction benefits on portions of the Mud River (Judicial Ditch 11 system) in Eckvoll Wildlife Management Area and Agassiz National Wildlife Refuge. In the previous phase of planning and alternatives analysis, the Project Team reached consensus and recommended further development of an enhanced channel with floodplain access. This scope of work includes tasks and deliverables that will enable the project sponsors (US Fish and Wildlife, MN Department of Natural Resources, and RLWD) to apply for funding, continue early coordination with permitting agencies, and hold a public hearing to establish the project.

Proposed Project Team

The project team will consist of HDR staff that will provide engineering, evaluation, and relevant engineering project management-related services. Key members of the team may consist of the following staff:

Role	Staff
Client and Project Manager	Nate Dalager, PE (MN)
Senior Civil Engineer	Glen Krogman, PE (SD)
Water Resources Engineer	Jacob Huwe, PE (MN)
Water Resources Coordinator	Aly Foty
Design/ Survey Technician	Randy Knott
Structural Engineer	Goran Stekovic
Geotechnical Engineer	Kerrie Berg, PE (MN)
Senior Geotechnical Engineer	Matt Schuster, PE (MN)
Environmental Scientist	Torin McCormack

Scope of Services

1.0 Project Management and Coordination

This task consists of the overall management of the project, project communication, and coordination conferences/meetings.

- 1.1 **Project Management:** Monitor and control the project budget, scope of work and schedule; manage the project goals and objectives; manage and coordinate resources including staff scheduling and invoicing.
- 1.2 **Project Meetings:** Schedule, review, prepare, participate, and help conduct meetings and teleconferences. This includes RLWD Board of Managers meetings, one public hearing, landowner meetings, and project team meetings.

- 1.3 Coordinate with Funding Partners:** HDR will provide assistance in coordinating with funding partners such as the Flood Damage Reduction Work Group and Red River Watershed Management Board.

Deliverables:

- Monthly invoices for each individual task and coordination with RLWD Administrator.
- Attendance at RLWD Board meetings, presentations, and updates to the Board.
- Attendance and presentation at one public hearing.
- Attendance at up to two landowner meetings.
- Attendance and presentation at up to three project team and two sub-committee meetings.

Assumptions:

- Duration of the task is 12 months.
- All meetings will be held in Thief River Falls and attended by one or two HDR team members.
- A total of three RLWD Board meetings are anticipated.

2.0 Preliminary Design

This task includes preliminary design analyses of the project concept for channel enhancement. Each subtask will have HDR internal quality control reviews and documentation. The following subtasks will be included:

- 2.1 Enhancement design criteria:** This sub-task will define the criteria needed to design the Mud River Enhancement. HDR has completed preliminary modeling of an enhanced channel fitting normal criteria for stream restorations. Additional criteria may be beneficial to the Project, and continued coordination with DNR Ecological staff will help in clearly defining the proposed channel and its associated features.
- 2.2 Alternative alignments:** Evaluate up to two alternative alignments for the enhanced channel. One option will be entirely on public lands.
- 2.3 Data collection:** Field survey is required to establish design elevations and quantity calculations for the areas likely to be affected by the proposed project. Survey may include one day for up to 3 miles of existing ditch, structures and other miscellaneous Project features. Processing publicly available elevation data is included in this task. HDR will solicit soils borings by a third party, and then review and incorporate the data into the preliminary design of the Project.
- 2.4 Hydraulics.** Perform modeling of the preliminary design for the 24-hour, 10-year precipitation event. This task includes updating the previously developed hydraulic models with preliminary design of channels, structures, and bypass structures.
- 2.5 Hydraulic Structure Design:** Perform preliminary structure design including sizing/selection of hydraulic structures required for the preferred alternative and determined by the preliminary hydraulic model. The anticipated structures include two diversion weir structures and one gated control structure.

Deliverables:

- Deliverables for preliminary design are included in Task 4 – Engineer’s Report.
- Field survey and topographic data.
- Hydraulic model.

Assumptions:

- Up to three coordination meetings will be held with be USFWS/DNR Ecological staff.

- Reference reach will not require additional study.
- Peak flows and volumes developed in previous phase of the project are sufficient for preliminary design and no additional hydrological analysis will be required.
- Additional design alternatives will be considered as additional services.
- RLWD will hire a third party to complete soil borings and lab testing.

3.0: Permitting and Environmental Compliance

This task involves support activities which are necessary for early coordination with the United States Army Corps of Engineers. The enhanced channel concept includes spoil materials that have potential for wetland impacts requiring mitigation under section 404 of the United States Code of Federal Regulations. The following sub-tasks will be completed in order to determine potential avoidance, minimization, or avoidance of wetland impacts associated with the project.

- 3.1 Wetland Delineation:** HDR will perform level 2 wetland delineation as needed for the preferred alternative. HDR will delineate the proposed construction footprint and anticipated spoil disposal areas.
- 3.2 Coordination Meetings:** Prepare technical data and solicit input from permitting agencies through early coordination meetings.
- 3.3 Delineation Report:** This task includes completing a wetland report that can be submitted to the Technical Evaluation Panel.

Deliverables:

- Level 2 wetland delineation, wetland report, and basic application submittal.

Assumptions:

- Field delineation will be two HDR staff and up to 3 days of field work.
- One round of review to approve the delineation.
- Natural resource enhancement or water quality benefit calculations are not included in this task.
- A cultural resources survey will be done under separate task order and will not trigger any further investigations or design modifications.
- No mitigation plan will be included.
- Grant applications are not included but may be initiated under additional scope of work.

4.0: Engineer's Report

This task involves documentation of the preliminary design of the Preferred Alternative, including impact considerations and project implementation. Grant applications will be supported by providing preliminary plans, maps, and cost estimates.

- 4.1 Preliminary Engineer's Report:** This task includes a preliminary report of the analyses of the preferred alternative. The resulting Engineer's Report will be compliant with MN Statutes 103D.711 for engineer's reports for watershed projects, and HDR will deliver a Preliminary Engineer's Report with information and results from Tasks 2 and 3 as well as recommendations.
- 4.2 Preliminary Plans – 30%:** This task includes computer-aided drafting of preliminary plans of the Project. The plans will be drafted in AutoCAD Civil 3D. HDR will include civil site plans, estimated quantities, civil cross-sections, typical details, structural details, and civil plan and profile sheets. A total of 26 sheets are estimated for this task.

4.3 Engineer's Opinion of Probable Construction Cost: HDR will provide an engineer's opinion of probable construction costs for the preferred alternative. Costs will be at a conceptual level and based on 30% level of design.

Deliverables:

- One Electronic copy (PDF) and two bound versions of the Engineer's Report will be provided.

Assumptions:

- The report will be filed and submitted to MnDNR and BWSR prior to the public hearing to solicit review and comments.

Cost Estimate

The design fee estimates for the completion of Tasks 1 through 4 is \$190,550, which will be performed on a time and materials not-to-exceed basis. HDR will invoice monthly based on work progress. Our estimated costs are based upon our understanding of the scope of work and assumptions listed. Should the scope of work be modified, it may be necessary to review scope changes and our cost estimate.

Future Task Orders – Engineering

The following tasks are anticipated for future phases of this project. *These tasks are not included in the price proposal provided herein*, and would be scoped, estimated, and authorized separately at such time as the Red Lake Watershed District (RLWD) elects to initiate them.

- Environmental Assessment
- USACE Individual Permit Application and Mitigation Plan
- Water Quality Certification
- Final Design and Plans for Construction
- Legal Boundaries and Property Right-of-Way Survey

Notice to Proceed

Please indicate your acceptance of this proposal by signing the Notice to Proceed (below) and returning one copy of the signed proposal to HDR.

If you have any questions, please contact me (Nate) at 218.681.6100.

NOTICE TO PROCEED

Client

Red Lake Watershed District

By: _____

Name: _____

Title: _____

Consultant

HDR Engineering, Inc.

By: 

Name: Christine Wiegert

Title: Vice President/MN-WI Area Manager

Table 1. Budget Table

Task No.	Task/Title	Client and Project Manager	Senior Civil Engineer	Water Resources Engineer	Water Resources Coordinator	Design Technician	Structural Engineer	Geotechnical Engineer	Senior Geotechnical Engineer	Environmental Scientist	Hours	Labor Fee
Hourly Rates		\$245	\$240	\$180	\$110	\$160	\$180	145	\$180	\$160		
1	Project Management and Coordination	22	0	18	6	0	0	0	0	0	46	\$9,290
2	Preliminary Design	18	20	60	176	60	40	18	2	14	408	\$61,380
3	Permitting and Environmental Compliance	18	4	16	40	38	0	0	2	116	234	\$37,650
4	Engineer's Report	34	20	110	161	134	24	0	4	16	503	\$79,680
Totals		92	44	204	383	232	64	18	8	146	1,191	\$188,000
											HDR Labor Subtotal	\$188,000
											Mileage (\$0.75/mile)	\$300
											GPS Rental (\$350/day)	\$2,100
											Printing / Plotting	\$150
											HDR Direct Expenses Subtotal	\$2,550
											Total Fee	\$190,550

Date, 2024

Mr. Robert Sip
Executive Director
Red River Watershed Management Board
11 5th Ave East, Suite B
Ada, MN 56510

Dear Mr. Sip:

By this letter I would like to communicate the Red Lake Watershed District's approval of **Task Order HEI-MR-02** (attached) which provides for facilitation services by Houston Engineering, Inc. (HEI) in support of the District's Mud River Project Team. The District agrees to cover 50 percent of the cost of these services. When added to the prior agreement by the District to pay up to \$6,601.74 for services described in a prior task order, this will increase the District's total share of facilitation costs for the Mud River Project Team to a maximum obligation of **\$7,783.09**.

We understand the RRWMB will use funds from the Red River Basin Flood Damage Reduction Work Group (FDRWG) to pay invoices for the approved services received from Houston Engineering, Inc., and will seek payments from the District either monthly or quarterly to reimburse the FDRWG for the District's share. Further, we understand that costs to the District will not exceed the amount listed above, unless an amended or supplemental task order is approved in advance by the District in writing.

We appreciate the steps taken by the FDRWG and RRWMB to arrange facilitation services for this Project Team.

Sincerely,

Approver's signature/title, etc.

Cc: Andrew Graham, Minnesota DNR - Red River Basin Coordinator

TASK ORDER
Facilitation of RLWD's Mud River Project Team
Under RRWMB Contract No. 2022CA-04

Task Order No. HEI-MR-02

Consultant: Houston Engineering, Inc.

Project Team Sponsor: Red Lake Watershed District

Project Team requiring facilitation: Mud River Project Team

Background:

The Mud River Project Team (PT) was convened by the Red Lake Watershed District (RLWD, or Project Team Sponsor) to address ongoing, excessive deposition of sediment from the Mud River watershed in wildlife pools within the Agassiz National Wildlife Refuge (Agassiz NWR). The PT includes representatives from local, state and federal government agencies, as well as local landowners. At the November 2023 meeting, the PT reached partial consensus on a project concept and recommended it for consideration by the RLWD Board of Managers. In December 2023, the Board of Managers discussed the proposed project and determined that it should be advanced to the next stage of design and analysis and requested HDR Engineering to prepare a proposal and cost estimate for those activities.

A previous Task Order HEI-MR-01 authorized Houston Engineering, Inc. (HEI) to facilitate 4 meetings of the PT, and to participate in coordination calls and related services. The total authorized fee was \$13,203.48. Five meetings were facilitated in 2022 and 2023. Cumulative billings for services through December 31, 2023 are \$10,940.66. This leaves \$2,262.82 unspent.

The Red Lake Watershed District has indicated it requires facilitation of two additional Project Team meetings in 2024, together with coordination calls and related services.

Outcome Desired from Services in this Task Order

The Facilitator shall seek continued engagement by the Project Team with the RLWD and its engineering consultant, such that the Project Team understands the design and operations of the proposed Mud River project and has the opportunity to ask questions and provide meaningful input as additional design details and technical analyses are developed by HDR and the RLWD.

Task 2-1: Startup and Steering Committee Communications

Task Activities:

Schedule and lead four 60-minute videoconferences with the Steering Committee (SC), one before and one after each PT meeting in Task 2-2 below.

Assumptions: The videoconferences will be similar to those led by the Facilitator in 2023.

Deliverables: Brief meeting summary, in email format, plus updated list of action items from each videoconference with the SC.

Task 2-2: Project Team Meetings

Task Purpose: Organize and facilitate PT meetings to accomplish the purposes of this Task Order.

Task Activities:

- update the existing meeting plan, summarizing milestones achieved by the PT to date and milestones that are upcoming, and outlining topics to be included in two meetings in 2024.
- Facilitate two additional meetings of the PT in 2024, including preparation of agendas and meetings notes.
- As needed, contact members of the PT for follow-up on points needed to advance the project towards a consensus (or near-consensus) recommendation.

Assumptions:

- The Project Team has developed a productive working relationship in prior meetings and is familiar with the proposed project features and operations as of November 2023.

Responsibilities of Project Team Sponsor: Schedule all PT meetings, invite members and other attendees, and provide a meeting site and refreshments. Review meeting notes.

Deliverables: Draft and final notes from four PT meetings.

Task 2-3: Project Management

Task Purpose, Activities and Deliverables: Same as in Task Order HEI-MR-}1.

Budgeted Hours and Expenses

	Hours	Hourly Rates	Expense Units	Expense Rates	Totals (units x rates)
Task 2-1 Startup and Steering Committee Communications					
Labor					
Scientist 5 – Watershed Rates	8	162	N/A	N/A	1,296.00
<i>Subtotal - Task 1 labor</i>					1,296.00
Task 2-1 Total:					1,296.00
Task 2-2 Project Team Meetings					
Labor					
Scientist 5 – Watershed Rates	17	\$162			\$2,754.00
<i>Subtotal - Task 1 labor</i>					
Direct Expenses					
Mileage			384 miles	\$0.655/mile	\$251.52
<i>Subtotal - Task 1 expenses</i>					
Task 2-2 Total:					\$3,005.52
Task 2-3 Project Management					
Labor					
Scientist 5 – Watershed Rates	2	\$162			\$324
<i>Subtotal - Task 1 labor</i>					
Task 2-3 Total:					\$324
Task Order Total:					\$4,625.52
Less budget remaining from Task Order HEI-MR-01					(\$2,262.82)
Net Increase					\$2,362.70

The services provided under this task order shall not exceed the Net Increase listed above, unless an amended task order is prepared and signed by the RRWMB and CONSULTANT.

PERIOD OF PERFORMANCE

The services in this Task Order will be performed between January 1, 2024 and December 31, 2024.

Signatures:

[template – signature blocks for the RRWMB and HEI will be added.]

[Include signature dates]

PROJECT TEAMS – LIGHTNING ROUND III

RECENT STARTUPS

RRWMB / FDRWG Joint Annual Conference

March 2024

FEATURED PROJECTS

Project Name	Presenter/Affiliation
Turtle-Cross-Connection Lakes	
Twelvemile Creek	
Juneberry	

PROJECT LOCATIONS

(ANDREW WILL INSERT A MAP OF THE RRB
WITH PROJECT SITES INDICATED)



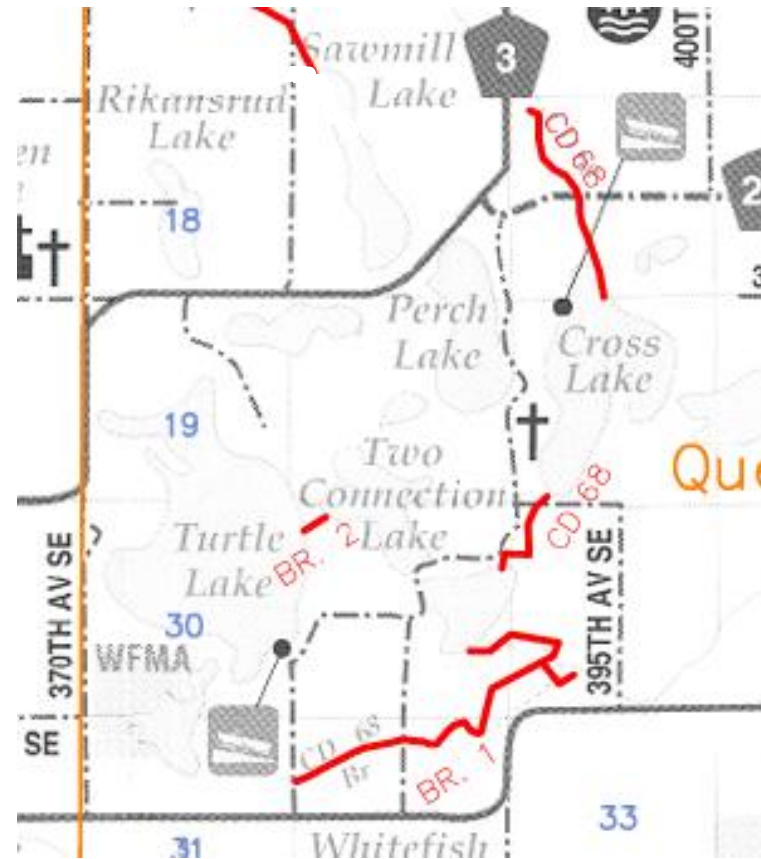
Turtle Connection Cross Lakes

Red Lake Watershed District



BACKGROUND

- Circa 1918: County Ditch #68 built to drain Turtle, Connections, & Cross.



BACKGROUND

- 1933: All three dams built, and water levels established by court order.
- 1934-1940: Much debate about removing the dams.
- Sometime between 1933 to 1991: Turtle Lake Dam washed out and has been non-functioning for years.
- Mid 1990s: Red Lake Watershed District completes “*Cross Lake and Turtle Lake Water Quality Study Report.*”
- Circa 2019: South Connection Lake Dam washed out.
- 2022 – MnDNR approaches RLWD about a consensus approach to replacing the aging dams

PURPOSE AND NEED FOR ACTION

Purpose and Need for Action

The purpose of this proposed action is ***Water Level Stabilization and Flood Damage Reduction***:

The proposed action is needed to stabilize water levels for the benefit of recreational users, landowners, and fish

Secondary benefits from the project may include:

- Temporary flood retention during high runoff events
- Contribution to a regional goal of reducing peak flows along the Red River by 20 percent during flooding events
- Maintenance of late Summer and Fall water levels in order to maintain recreational access for boaters

TURTLE - CONNECTION LAKE WATER LEVEL

EXISTING

FUTURE CONDITION

HIGH CONDITION

HIGH

1310'

1310'

1309'

1309'

1308'

1308'

1307'

NORMAL

1307'

1306'

DIFFERENCE

1306'

1305'

NORMAL

1305'

1304'

1304'

1303'

1303'

1302'

LOW

LOW

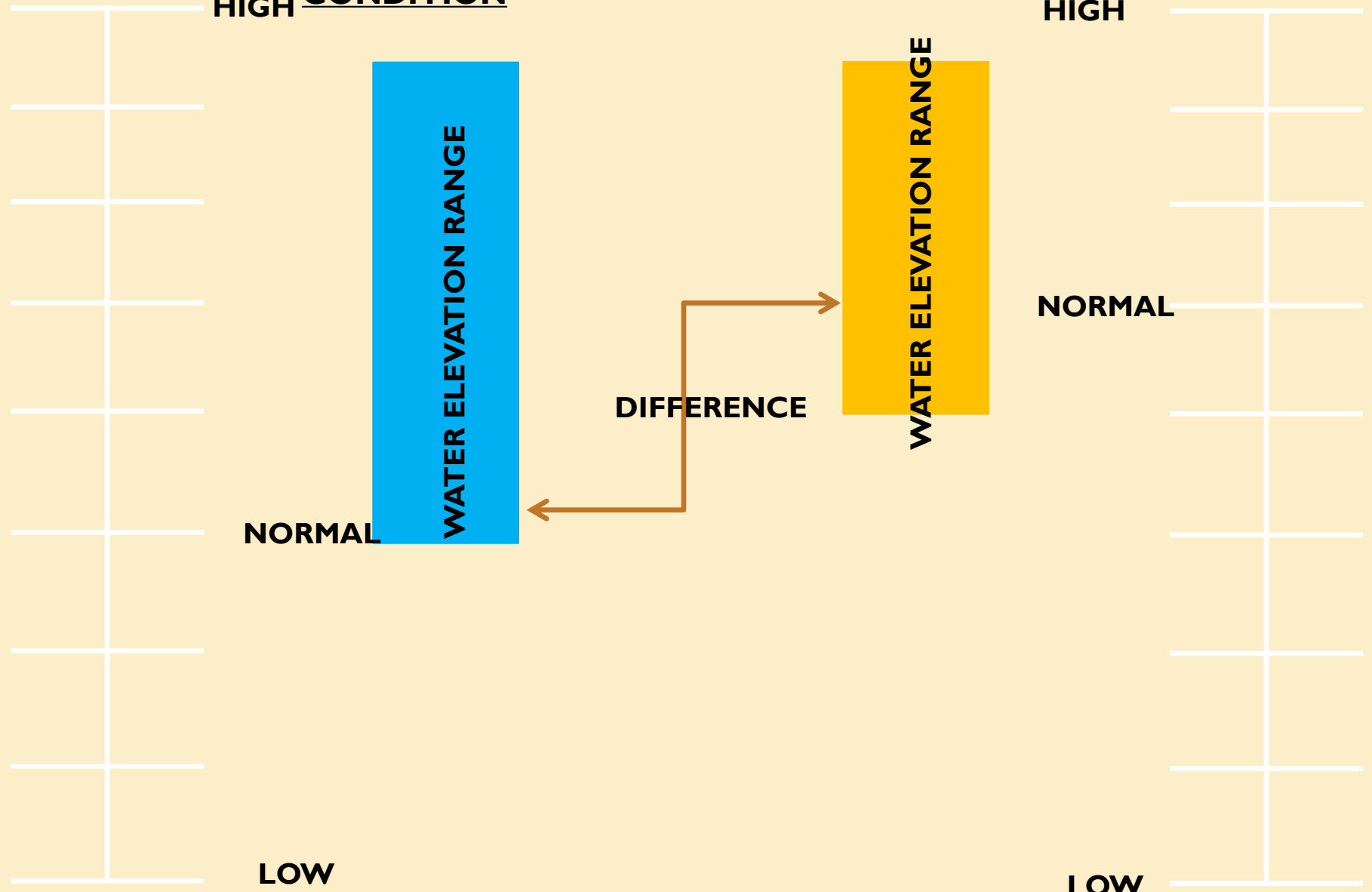
1302'

WATER SURFACE ELEVATION

WATER SURFACE ELEVATION

WATER ELEVATION RANGE

WATER ELEVATION RANGE



CROSS LAKE WATER LEVEL

EXISTING

FUTURE CONDITION

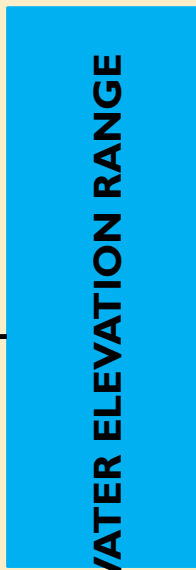
HIGH CONDITION

WATER SURFACE ELEVATION

1310'
1309'
1308'
1307'
1306'
1305'
1304'
1303'
1302'

NORMAL

LOW



CHANGE?



HIGH

NORMAL

LOW

WATER SURFACE ELEVATION

1310'
1309'
1308'
1307'
1306'
1305'
1304'
1303'
1302'



VOLUME RELATED TO DRAWDOWN

Size of Turtle Connection (not Cross) Lakes ~818 acres

6 inches of depth across lakes ~409 acre-feet

Total volume between El. 1307' – 1308.5' ~1,227 acre-feet

Drainage Area ~17 square miles (10,880 acres)

½" Runoff ~453 acre-feet

1" Runoff ~906 acre-feet

2" Runoff ~1,812 acre-feet

Summary: For Turtle and Connection Lakes, 1.0 feet of storage requires ~1" of runoff to fill a volume of 818 acre-feet, which is a common Spring occurrence. This volume would have a flood damage reduction benefit downstream in the RLWD.

IMPOUNDMENT SITE RANKING MATRIX

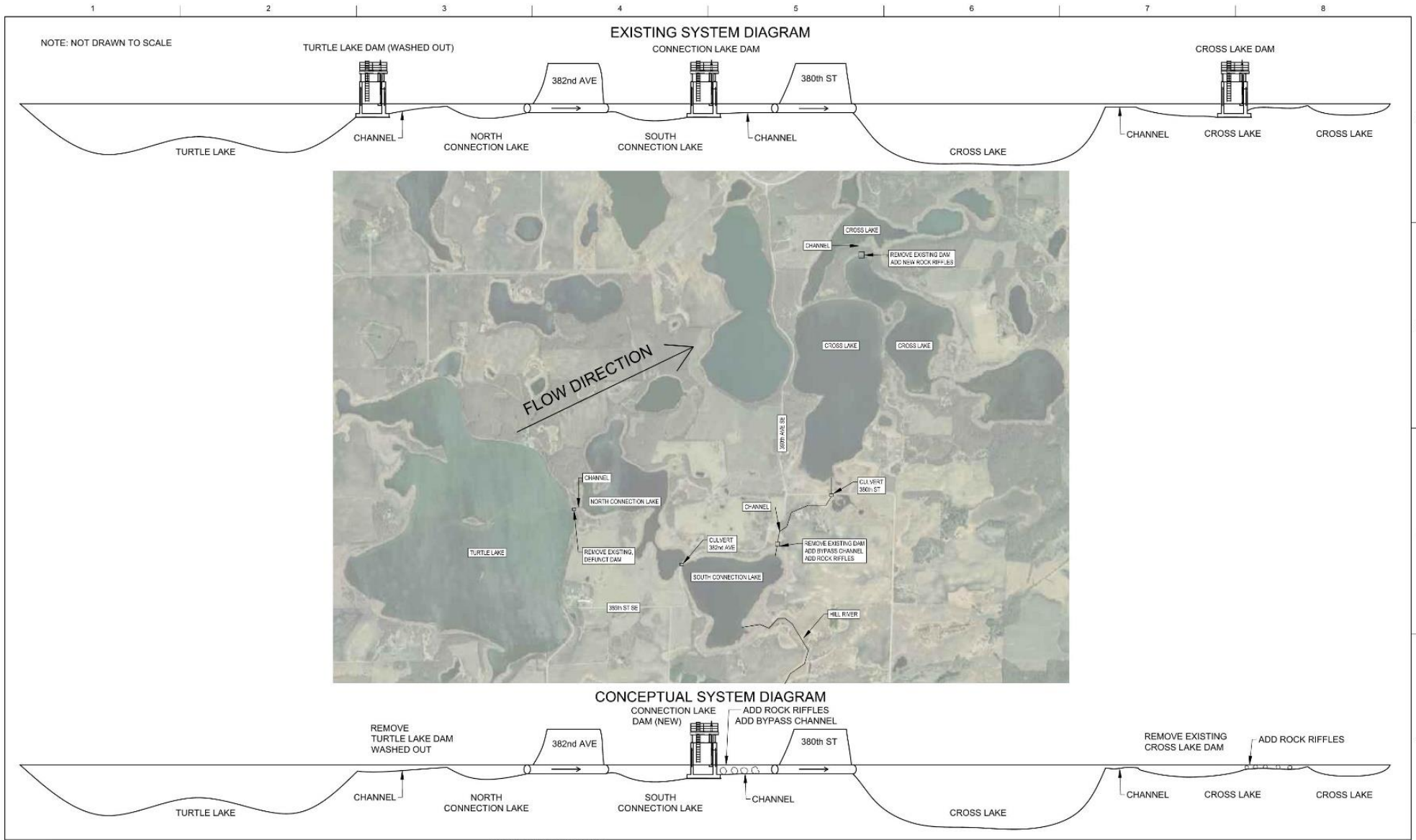
MATRIX OF CROSS TURTLE / CONNECTION

Site	Potential Structure Type	Drainage Area (Mi ²)	Lake Area (AC)	Inches of Runoff Captured for FDR	Shoreland Fringe Impact (AC)	Wetland Impact (AC)	Storage (AC-FT)	Number of landowners affected	Number of Homes/Barns Affected	Number of Docks affected	Number of Fields Affected	Number of Roadways/ Pathways Affected	Fish Passage	Winter Kill	Waterfowl	Recreation	Water Quality	Permit Complexity	Score	Relative Rank
A - Cross Existing Runout Elevation	Existing, rock arch, or structure with bypass and rock arch	25	320	0	0	0.07	0	14	0	0	0	0	Yes**	No change	No change	No change	No change	Moderate	7	2
B - Cross increase by 3 in	Rock arch, or structure with bypass and rock arch	25	322	0	2	0.07	0	14	0	0	1	1	Yes	Improve	Improve	Improve	Improve	Moderate	9	1
C - Cross increase by 6 in	Rock arch, or structure with bypass and rock arch	25	325	0	5	0.07	0	14	0	8	1	2	Yes	Improve	Improve	Improve	Improve	Moderate	6	3
D - Turtle Existing Runout Elevation	Rock arch, or structure with bypass and rock arch	17	525	0	0	0.06	0	8	0	0	0	0	Yes	No change	No change	No change	No change	Moderate	7	2
E - Turtle increase by 6 in	Rock arch, or structure with bypass and rock arch	17	566	0	41	0.07	0	8	0	1	3	1	Yes	Improve	Improve	Improve	Improve	Moderate	6	3
F - Turtle 1 ft Drawdown	Structure with bypass and rock arch	17	484	0.6	41	0.17	525	8	0	1	4	2	Yes	Worse	No change	No change	Improve	Moderate	2	6
G - Turtle 1 ft Bounce	Structure with bypass and rock arch	17	607	0.7	82	0.17	607	8	0	1	4	2	Yes	No change	Improve	Improve	Improve	Moderate	5	4
H- Connection Existing Runout Elevation	Rock arch, or structure with bypass and rock arch	17	226	0	0	0.06	0	12	0	0	0	0	Yes	No change	No change	No change	No change	Moderate	7	2
I- Connection increase by 6 in	Rock arch, or structure with bypass and rock arch	17	243	0	8	0.07	0	12	0	0	2	1	Yes	Improve	Improve	Improve	Improve	Moderate	9	1
J - Connection 1 ft Drawdown	Structure with bypass and rock arch	17	194	0.2	32	0.17	225	12	0	0	2	2	Yes	Worse	No change	No change	Improve	Moderate	3	5
K- Connection 1 Ft Bounce	Structure with bypass and rock arch	17	261	0.3	35	0.17	260	12	0	0	2	2	Yes	No change	Improve	Improve	Improve	Moderate	6	3

*-All lakes separated by potential stage

STORAGE OPTIONS

Lake Level Adjustment	Storage (Acre-Feet)
Connection and Turtle 0.5 ft Drawdown Below Court Ordered	340
Connection and Turtle 0.5 ft Increase Above Court Ordered	440
Connection and Turtle 1.0 ft Increase Above Court Ordered	898



ISSUE	DATE	DESCRIPTION

PROJECT MANAGER	XXXX X. XXXXXXX
PROJECT NUMBER	XXXXXXXXXXXXXXXXXXXX





RED LAKE WATERSHED DISTRICT

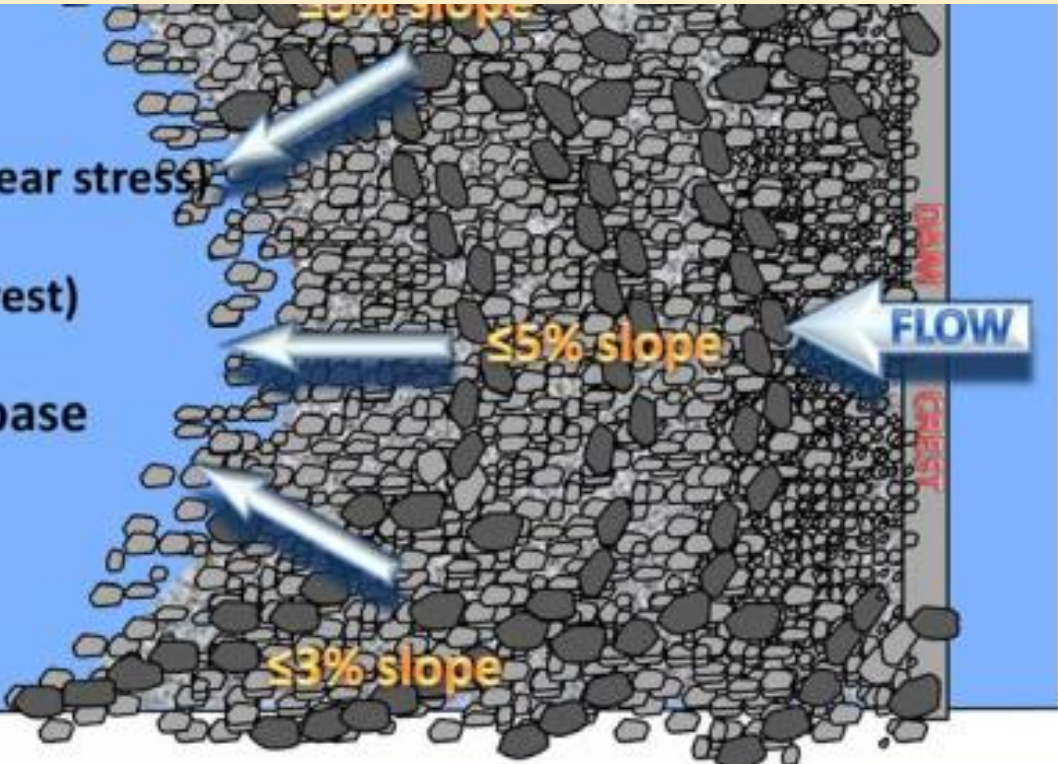
TURTLE, CONNECTION, AND CROSS LAKES
EXISTING AND CONCEPTUAL SYSTEM DIAGRAM

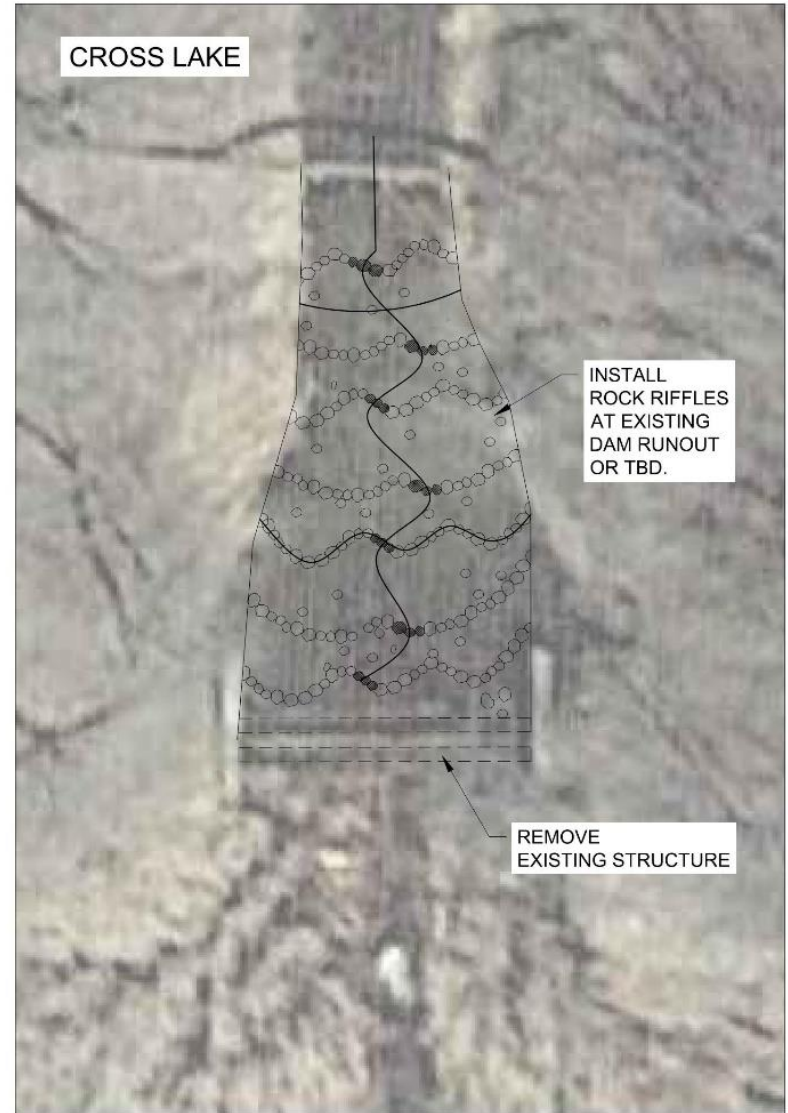


SHEET

ROCK SLOPE FISHWAY

-  3'- 6' FIELD STONE (for weirs)
-  1 - 3' FIELD STONE (depending on shear stress)
-  1"-6" COBBLE (for filling void near crest)
-  Fieldstone or waste concrete sub-base





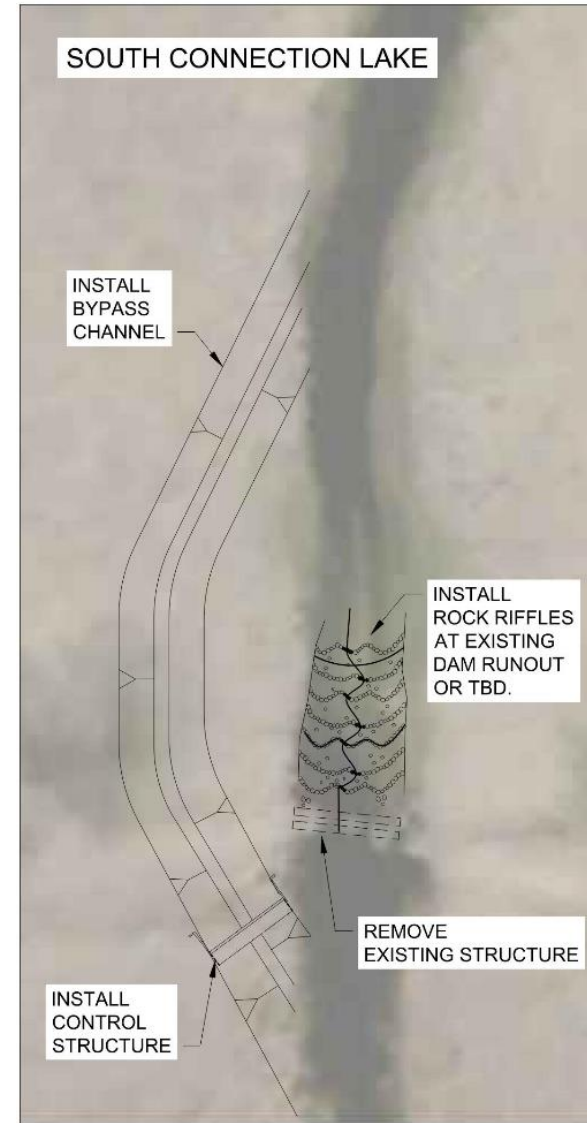
			PROJECT MANAGER XXX X XXXXXX
ISSUE	DATE	DESCRIPTION	PROJECT NUMBER XXXXXXXXXXXXXXXXXX

RED LAKE WATERSHED DISTRICT

TURTLE, CONNECTION, AND CROSS LAKES
CONCEPTUAL AERIAL VIEW



SHEET
2

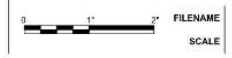


ISSUE	DATE	DESCRIPTION	PROJECT NUMBER

PROJECT MANAGER XXX X, XXXXXX
PROJECT NUMBER XXXXXXXXXXXXXXXXXX

RED LAKE WATERSHED DISTRICT

TURTLE, CONNECTION, AND CROSS LAKES
CONCEPTUAL AERIAL VIEW



SHEET
3



ROCK ARCH DAM



BYPASS CONTROL STRUCTURE

ALTERNATIVE AND LAKE IMPACT

Alternative	Starting Connection/Turtle Lake Elevation	Adjustments to Connection/Turtle Lake Elevation	South Connection Lake Outlet Structure	Cross Lake	Impact
Alternative 1	Connection/Turtle Runout Elevation at Court Ordered.	No change between existing and proposed 100-year lake elevation	Multi-tiered weir crest at the Rock Arch Rapids	Cross 0.5 ft above Court Ordered.	FDR benefit for the 10-year event, but not for the 100-year event. Creates a temporary bounce in Turtle and Connection Lake elevations for the 10-year with no change in 100-year.
Alternative 2	Connection/Turtle Runout Elevation at Court Ordered.	0.5 ft increase between existing and proposed 100-year lake elevation	Multi-tiered weir crest at the Rock Arch Rapids	Cross 0.5 ft above Court Ordered.	FDR benefit for the 100-year event by creating a temporary 0.5 ft bounce in 100-year Turtle and Connection Lake elevation.
Alternative 3	Connection/Turtle Runout Elevation at Court Ordered.	1.0 ft increase between existing and proposed 100-year lake elevation	Multi-tiered weir crest at the Rock Arch Rapids	Cross 0.5 ft above Court Ordered.	FDR benefit for the 100-year event by creating a temporary 1.0 ft bounce in 100-year Turtle and Connection Lake elevation.
Alternative 4	Connection/Turtle Runout Elevation 0.5 ft below Court Ordered.	No change between existing and proposed 100-year lake elevation	Multi-tiered weir crest at the Rock Arch Rapids	Cross 0.5 ft above Court Ordered.	FDR benefit for the 10-year event, but not for the 100-year event. Creates a temporary bounce in Turtle and Connection Lake elevations for the 10-year with no change in 100-year. Additional storage by 0.5 ft Connection/Turtle drawdown prior to event also provides FDR benefit.
Alternative 5	Connection/Turtle Runout Elevation 0.5 ft below Court Ordered.	0.5 ft increase between existing and proposed 100-year lake elevation	Multi-tiered weir crest at the Rock Arch Rapids	Cross 0.5 ft above Court Ordered.	FDR benefit for the 100-year event by creating a temporary 0.5 ft bounce in 100-year Turtle and Connection Lake elevation. Additional storage by 0.5 ft Connection/Turtle drawdown prior to event also provides FDR benefit.
Alternative 6	Connection/Turtle Runout Elevation 0.5 ft below Court Ordered .	1.0 ft increase between existing and proposed 100-year lake elevation	Multi-tiered weir crest at the Rock Arch Rapids	Cross 0.5 ft above Court Ordered.	FDR benefit for the 100-year event by creating a temporary 1.0 ft bounce in 100-year Turtle and Connection Lake elevation. Additional storage by 0.5 ft Connection/Turtle drawdown prior to event also provides FDR benefit.

100-YEAR EXISTING AND ALTERNATIVE 5 RESULTS

Model Run	Connection / Turtle Lakes Peak Lake Level	Cross Lake Peak Lake Level	Connection Lake Outlet Peak Flow	Cross Lake Outlet Peak Flow	Connection Lake Outlet Peak Velocity	Cross Lake Outlet Peak Velocity
Existing	1309.65	1308.06	103.86	137.39	3.17	1.52
Alternative 5	1309.97	1307.54	64.05	96.17	2.94	1.89
Change	+0.32	-0.52	-39.81	-41.22	-0.23	+0.37
% Change			-38.3%	-30.0%	-7.3%	+24.3%

BENEFITS OF NEW DAMS

- FDR Downstream
- Higher and More Stable Lake Levels
- Operational Flexibility / Access
- Fish Passage



NEXT STEPS

- RLWD Initiates Project
- RLWD hearings
- Engineer submits Engineer's Report to BWSR / DNR
- RRWMB Step Process
- Project is Established Under MN Statute 103D.605 or 103D.711
- Apply for Permits
- Construction 2025

CHALLENGES AND SUCCESSES

- Healthy Project Team discussion
- Project Team process Gold Star....so far
- Very close to a consensus alternative
- Permitting and funding are likely next hurdles
- But overall, there is broad support for this project!

TWELVEMILE CREEK

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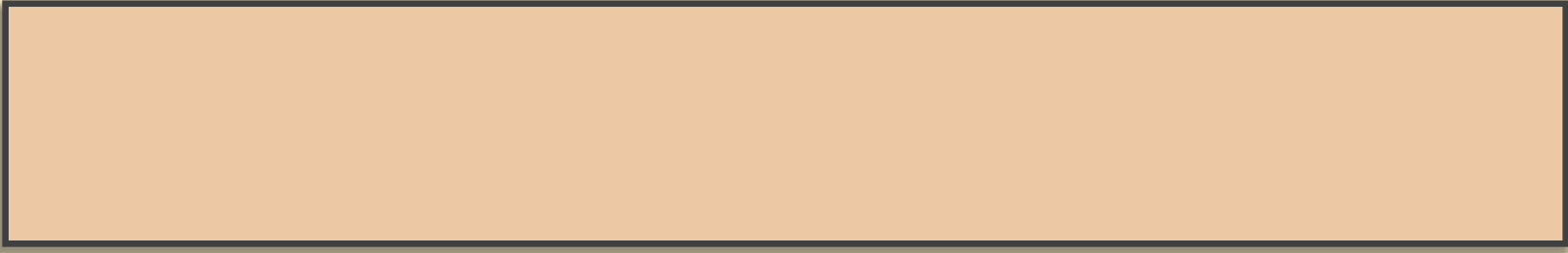


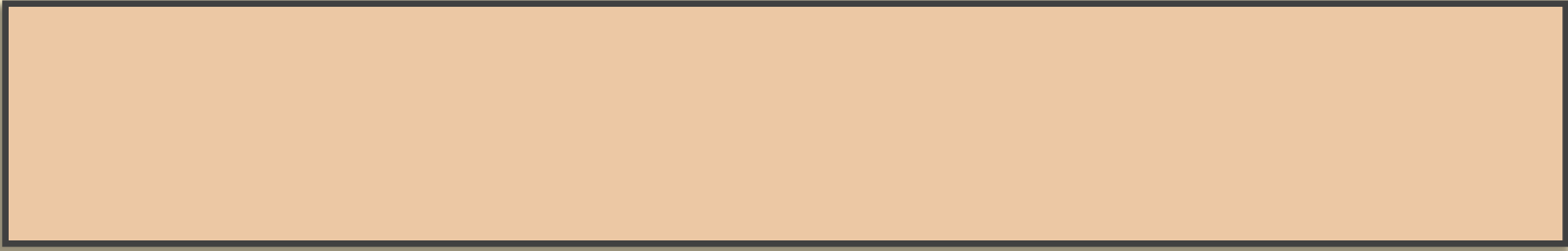


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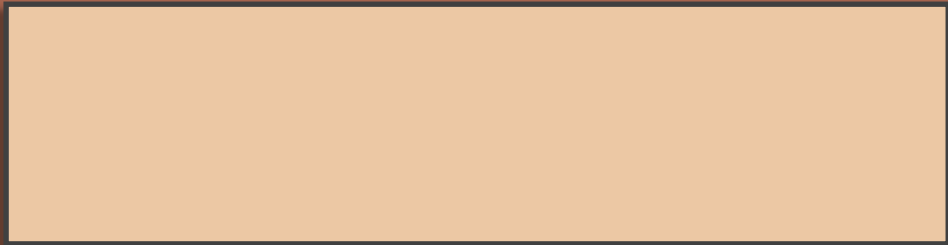
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QUESTIONS/DISCUSSION

Geotechnical Risk Assessment

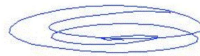
Bank Instability Along the Red Lake River
235-297 Houston Avenue and 401 Hunter Street
Crookston, Minnesota

Prepared for

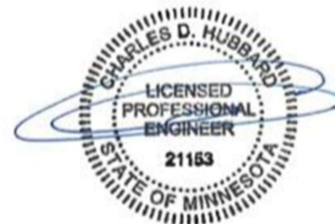
Houston Engineering, Inc.

Professional Certification:

I hereby certify that this plan, specification, or 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.



Charles D. Hubbard, PE, PG
Technical Leader, Principal Engineer-Geologist
License Number: 21153
March 1, 2024



March 1, 2024

Project B2400102

Mr. Tony Nordby
Houston Engineering, Inc.
125 3rd Street East
Thief River Falls, MN 56701

Re: Geotechnical Risk Assessment
Bank Instability Along the Red Lake River
235-297 Houston Avenue and 401 Hunter Street
Crookston, Minnesota

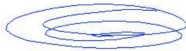
Dear Mr. Nordby:

We are pleased to present this Geotechnical Risk Assessment for the Houston Avenue and Hunter Street properties in Crookston, Minnesota. Please read the report in its entirety.

Thank you for partnering with Braun Intertec on this project. If you or others you share this report with have questions or desire additional services to support or advance our findings, contact Charles Hubbard at 307.757.7954 (chubbard@braunintertec.com).

Sincerely,

BRAUN INTERTEC CORPORATION



Charles D. Hubbard, PE, PG
Technical Leader, Principal Engineer-Geologist

Steven P. Nagle, PE
Vice President, Principal Engineer

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Appendix

Project Imagery

Plans and Cross Sections

Analytical Graphics

A. Introduction

A.1. Project Description

This Geotechnical Risk Assessment addresses the Red Lake River's impact on bank stability adjacent to properties at 235 to 297 Houston Avenue and 401 Hunter Street, in Crookston, Minnesota. Development of the eight properties circled in Figure 1 dates back to around 1900. Since that time, the properties have experienced numerous episodes of bank failure and recession in response to seasonal high-water events.

Past and present structures have been moved in response to bank recession, which anecdotally has occurred in feet to tens of feet per episode and has exceeded 50 feet cumulatively. Many outbuildings (garages, sheds) and other structures (decks, fences) currently overhang, abut, or lie near the bank crest.

Figure 1. (Right to Left) 235-297 Houston Avenue and 401 Hunter Street, Crookston, Minnesota



A.2. Purpose

The purpose of our geotechnical risk assessment is to better qualify the impact of bank instability on the properties (including utility infrastructure) and determine if the structures supported thereon can remain as part of a bank stabilization project, or if abandonment of the properties is warranted.

A.3. Background Information and Reference Documents

We gathered and reviewed the following information and documents over the course of our work:

- Oral histories of bank instability by Ms. Gail Myers (247 Houston Ave) and Mr. Brian Olson (235 Houston Ave) given during a January 9, 2024, reconnaissance of the properties.
- Topographic and bathymetric survey data gathered by the Red Lake Watershed District in January and February of 2024.
- Topographic plans and cross sections published by HEI in January and February of 2024.
- Contract Drawings for Polk County – Crescent Avenue Stabilization: Minnesota Association of Soil and Water Conservation Districts, Red Lake Watershed District, and HDR, June 2023.
- Crescent Avenue Preliminary Alternative: HDR, undated.
- Widely Spaced Shear Walls for Slope Stabilization, Crookston, MN: Nicholson, Purdue Geotechnical Society, April 15, 2016.

HDR's Crescent Avenue Preliminary Alternative and Nicholson's Widely Spaced Shear Walls for Slope Stabilization documents specifically provided valuable information regarding local subsurface geologic conditions and material properties for concept-level slope stability analyses.

A.4. Scope of Services

We performed the tasks described below in accordance with our December 21, 2023, Proposal for a Geotechnical Risk Assessment to Mr. Tony Nordby of Houston Engineering, Inc. (HEI), who authorized our work under HEI Task Order No. 1020123-21-3655-0112-01.

A.4.a. Reconnaissance

We performed a reconnaissance of the properties and vicinity on January 9, 2024. We were accompanied by Ms. Gail Myers and Mr. Brian Olson (property owners), representatives of the Red Lake Watershed District, and Representatives of HEI. We took notes of Ms. Myers' and Mr. Olson's oral histories and documented evidence of bank instability impacts in photos.

A.4.b. Risk Assessment

We evaluated property asset risk from several perspectives: (1) proximity of structures to the bank crest, (2) imminence of risk, (3) opportunity for structure relocation, (4) impedance to stabilization efforts, and (5) scope, cost, limitations, and feasibility of bank stabilization alternatives.

We used the background information and reference documents to develop analytical models of the bank and qualify the existing conditions and stabilization alternatives technically. We performed our analyses with SLOPE/W from the GeoStudio 2019 R2 suite of geotechnical software. We first back-calculated material parameters to demonstrate a slope stability factor of safety near 1.0 for the existing conditions. We then determined setback factors of safety for trial failure surfaces originating from adjacent homes under existing conditions and with the bank crest trimmed back to a flatter gradient.

While we did not determine factors of safety for stabilization alternatives involving structural elements, we did determine probable geometric requirements and order-of-magnitude construction costs for anchored pile and soil nail retention alternatives.

A.4.c. Qualification of Stabilization Alternatives

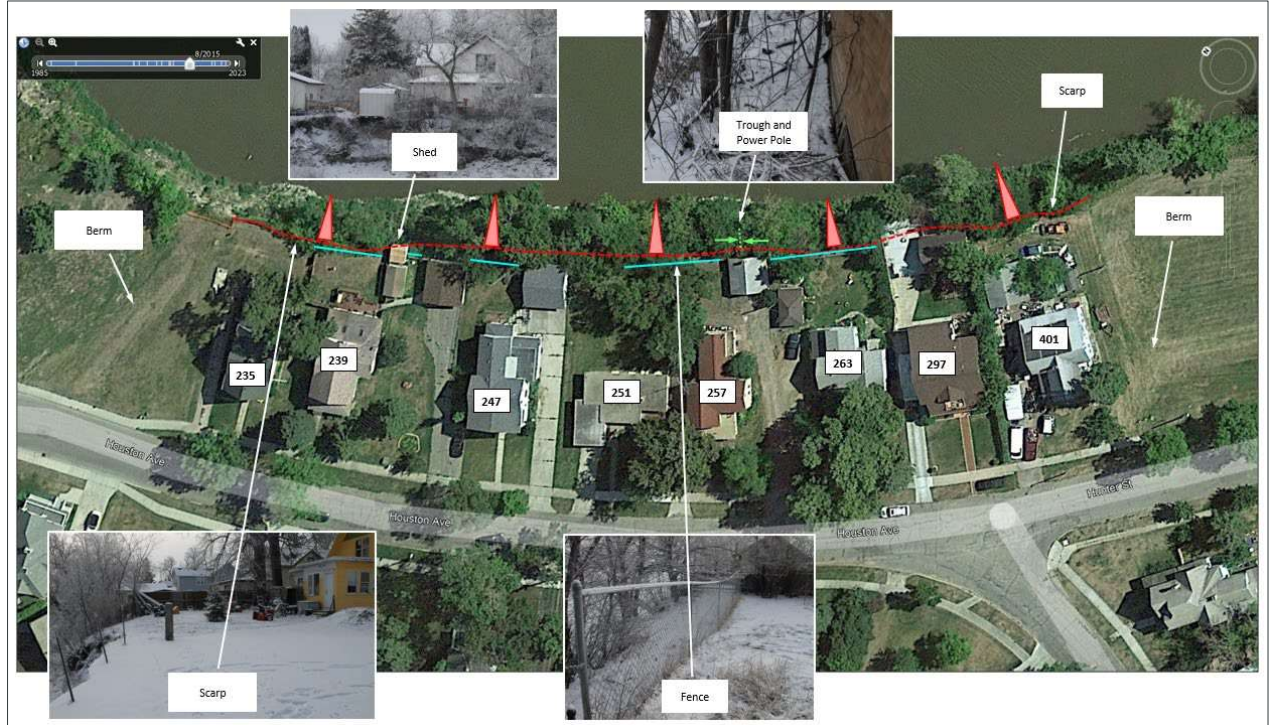
The outcomes of our risk assessment were used to develop opinions around stabilization prerequisites (equipment and material staging needs, construction sequencing and safety), feasibility (staging, safety, and cost), and effectiveness (factor of safety improvement, unmitigated risk).

B. Results

B.1. Site Conditions

Figure 2, from the Appendix, identifies the eight properties by numerical address, shows how the homes and outbuildings are situated relative to the bank crest, identifies features of interest, and highlights some of the more visible property impacts.

Figure 2. Property Addresses, Structures of Interest, and Bank Instability Impacts



Figures 3 and 4, also from the Appendix, show typical bank conditions as viewed from across the Red Lake River. The darker portions of the bank are the bank failure scarps, which are nearly vertical to overhanging. The lighter snow-covered portions of the bank are comprised of dislodged failure materials on which trees and shrubs have fallen and over which concrete slabs and other improvised armor have been placed. The failure materials continue beneath the frozen water surface to the channel bottom.

Figure 3. Bank Elevation (Right to Left), 235, 239, and 247 Houston Avenue



Figure 4. Bank Detail, 297 Houston Avenue



Bank elevation and detail photos of conditions impacting all eight properties are attached.

On average, the bank was determined to descend 20 or more vertical feet from crest elevations between 871 and 869 feet to the frozen surface of the Red Lake River near elevation 849 feet. Bathymetric data provided by the Red Lake Watershed District indicates the bank descends an additional 15 or so feet before breaking between elevations 836 and 832 at the channel bottom.

Upslope from the bank crest, snow concealed any evidence of tension cracks in the ground. Distortion of garages, sheds, decks, and fencing close to the bank crest, however, belied likely subsidence of the bank crest. The homes were estimated to be set as little as 35 horizontal feet back from the bank crest at 235 and 239 Houston Avenue and, per Figure 5, as much as 70 feet at 251 Houston Avenue.

Figure 5. Rear Yard Behind 251 Houston Avenue



B.2. Risk to Property, Structures, and Local Infrastructure

Left unattended, bank failure and recession will continue. What form it takes and at what rate it occurs is unpredictable. The risk to outbuildings overhanging, abutting, or near the bank crest, however, is more imminent than that to the homes. The garage and shed at 239 Houston Avenue, the garages at 247 and 257 Houston Avenue, and the garage and deck at 297 Houston Avenue are potential casualties of the next high-water and/or bank recession event.

From a slope stability perspective, home setbacks from the bank crest are still considered marginal. Our analyses of existing conditions based on HEI's cross sections at Stations 3+00 (235 Houston Avenue per Figure 6), 4+50 (247 Houston Avenue), and 7+00 (297 Houston Avenue) yielded respective slope stability factors of safety 1.17, 1.19, and 1.28 for trial failure surfaces originating from the homes. Defined as the ratio of forces resisting slope failure to those acting to precipitate failure, the factor of safety falls to 1.0 when failure is imminent. A factor of safety equal to 1.5 or higher is typically specified or required for slopes where life safety is concerned.

Figures 7 and 8 (along with additional analytical graphics included in the Appendix) present our results for the cross section at Station 3+00 (235 Houston Avenue). The back-calculation analysis yielded a slope stability factor of safety for the bank equal to 0.99, confirming material parameters for our setback analysis, which yielded a factor of safety equal to 1.17.

Figure 6. Analytical Cross Section Locations



We do not see bank instability as being impactful to local infrastructure (sidewalk, street, utilities). Required maintenance, improvement, and replacement are more likely to be driven by general aging, which we anticipate will outpace bank recession.

Figure 7. Back-Calculation of Material Parameters, Station 3+00 (235 Houston Avenue)

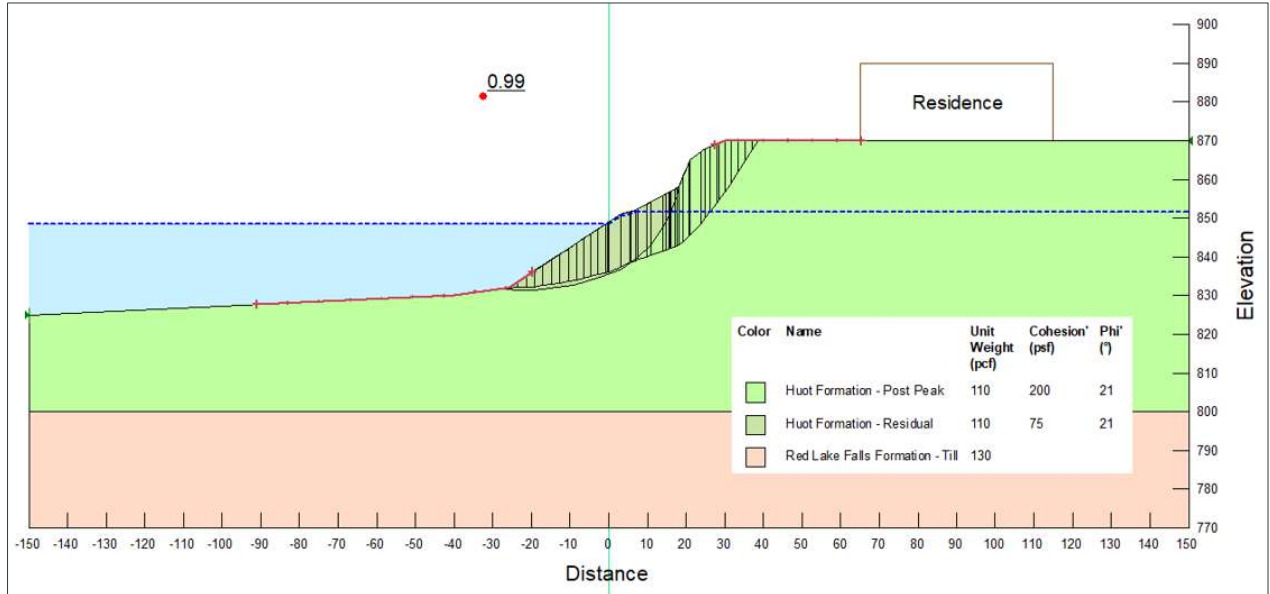
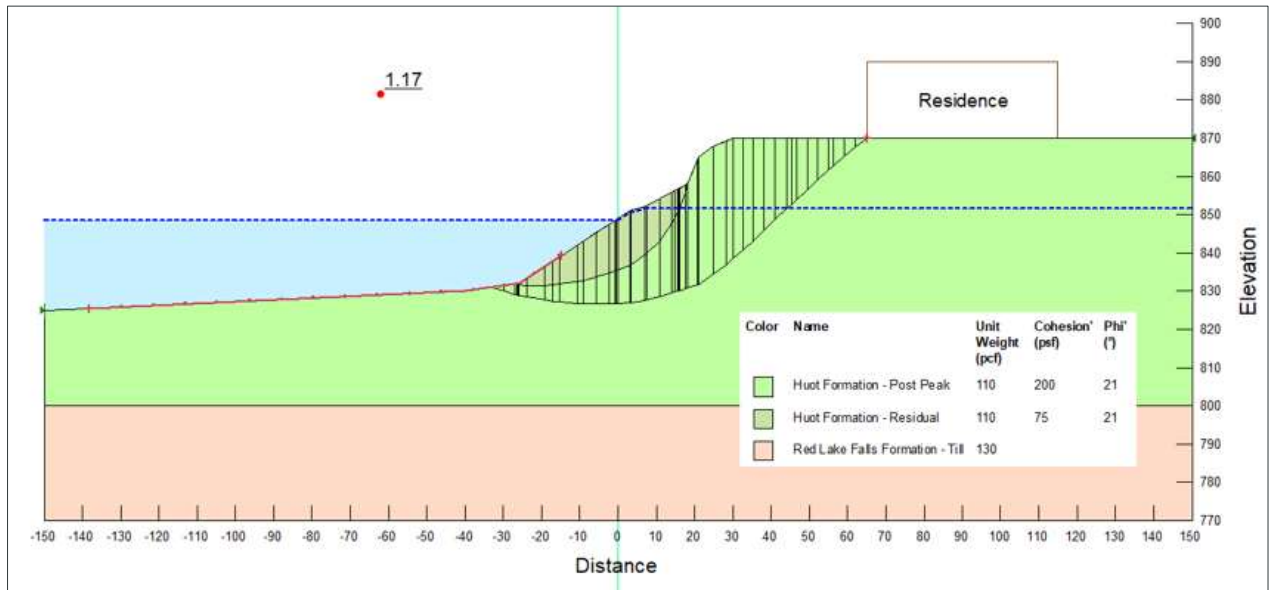


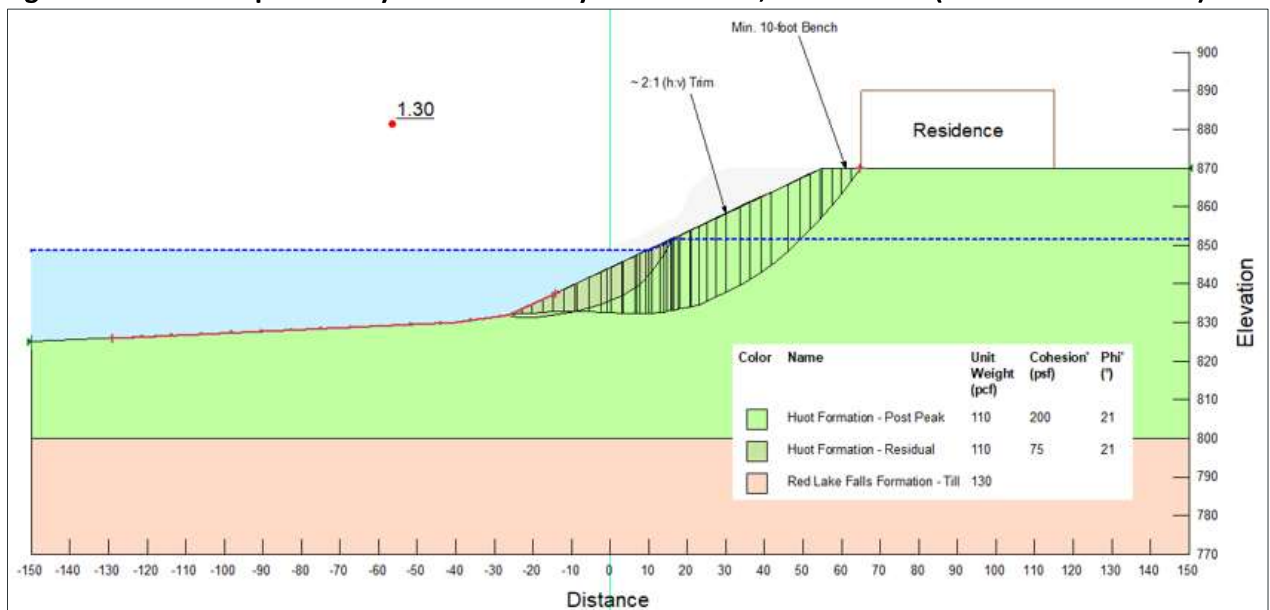
Figure 8. Setback Slope Stability Factor of Safety, Station 3+00 (235 Houston Avenue)



B.3. Stabilization Alternatives, Prerequisites, and Limitations

Changes to slope geometry alone can often mitigate stability concerns without the expense of structural reinforcement. Slope regrading opportunities in this case, however, are limited by existing home setbacks and would require the relocation or demolition of outbuildings to be implemented. Figure 9 indicates that the bank at Station 3+00 (235 Houston Avenue), where the existing setback measures approximately 35 feet, could not be cut flatter than 2:1 (horizontal:vertical) without also relocating the home. The slope stability factor of safety in this case would only improve from 1.17 to 1.30, still short of 1.5. While flatter slopes could likely be accommodated at Stations 4+50 and 7+00, factors of safety for a 2:1 bank trim at those locations yielded comparable factors of safety equal to 1.28 and 1.35, respectively.

Figure 9. Setback Slope Stability Factor of Safety with 2:1 Trim, Station 3+00 (235 Houston Avenue)



Structural alternatives involving anchored piles (Figure 10) and soil nails (Figure 11) would not limit disturbance of the bank and rear yard areas. Both alternatives would require excavations along the existing bank to create a working platform for construction, which would need to be sufficiently far from the existing bank crest to avoid exposing persons, equipment, and materials to failed bank materials. For the cross section at Station 3+00 (235 Houston Avenue), the line of retention could fall within approximately 20 horizontal feet of the home.

The scope of structural stabilization would also be extensive. The anchored pile wall (Figure 10) would involve driving or drilling piles down an estimated 70 feet below the bank crest and potentially extending anchors up to 100 feet behind the wall to gain bearing. The soil nail wall (Figure 11) would involve extending anchors 20 or so feet behind the bank cut.

Figure 10. Anchored Pile Wall Details

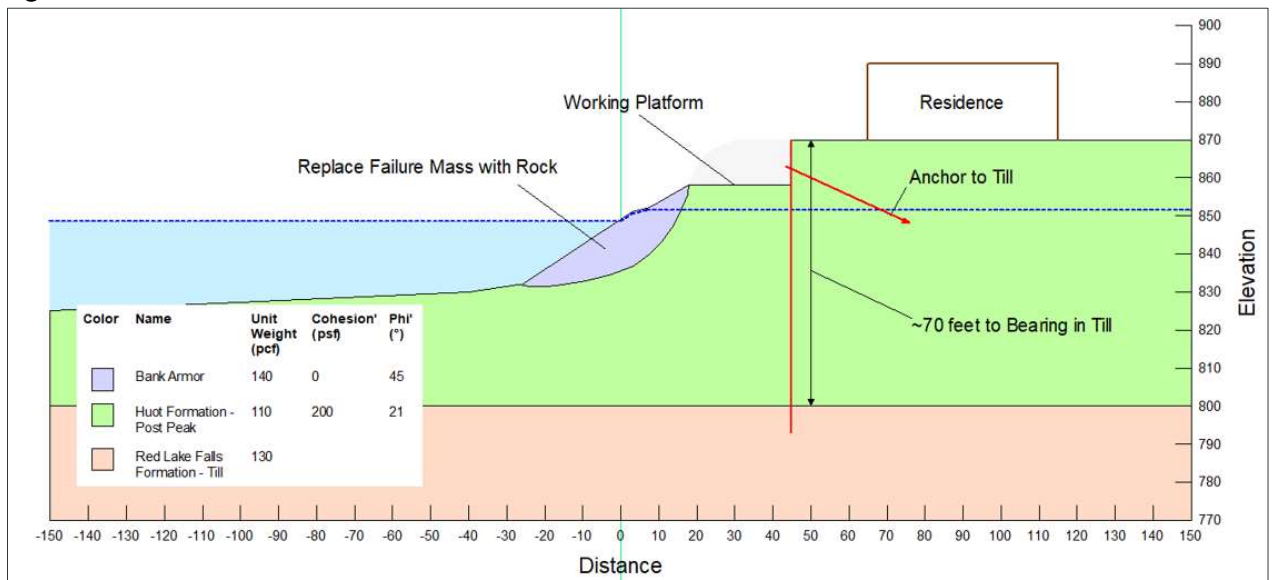
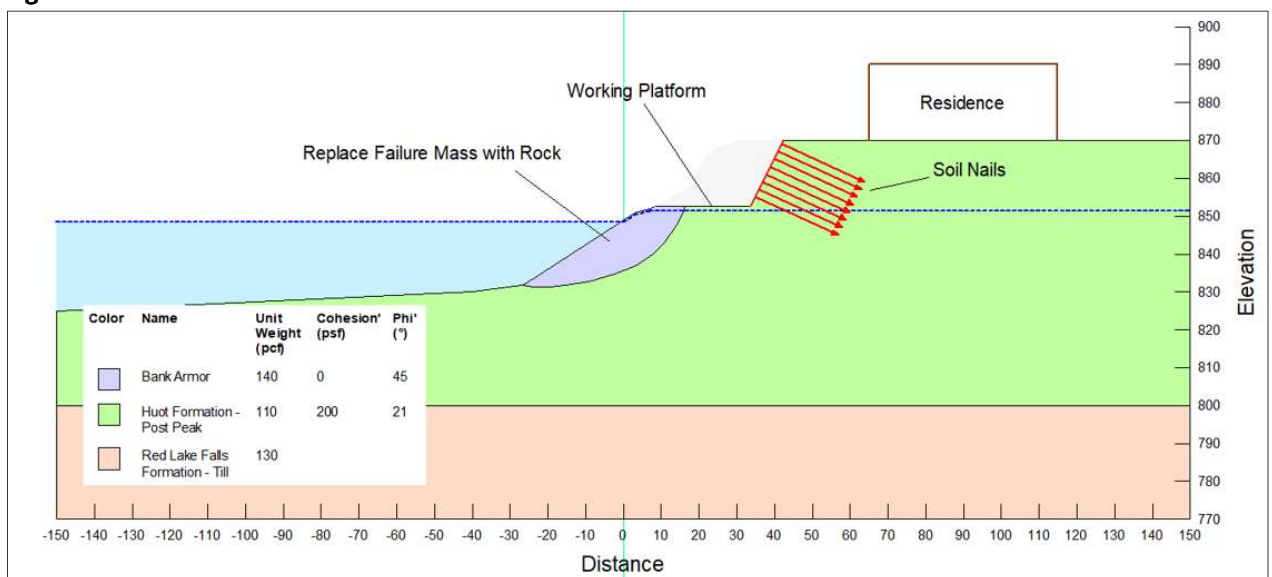


Figure 11. Soil Nail Wall Details



The anchored pile and soil nail alternatives could both be designed to achieve a slope stability factor of safety equal to 1.5. Both options would also be safer than trimming the bank crest, which would be difficult to maintain. None of the stabilization alternatives considered, however, address future channel scour, which might not be particularly impactful to an anchored pile wall but could compromise a soil nail wall or flattened bank. Scour potential could be mitigated by incorporating a bank armor detail into final design plans. Such a detail, however, would require hydraulic analysis and possibly permitting by the US Army Corps of Engineers.

C. Conclusions

C.1. Project Feasibility

Of the stabilization alternatives explored, the anchored pile alternative is considered the safest, most robust, and most reliable long-term. Flattening the bank will not yield acceptable slope stability factors of safety without the relocation of several homes (235, 239, and likely 247, 257, and 263 Houston Avenue). The soil nail alternative would secure that portion of the bank above the water line and provide some rear yard space but would require augmentation with bank armoring below the water line to mitigate the destabilizing effects of future scour on the system. (Scour protection would be recommended for the anchored pile alternative as well but considering that the piles would secure the entire bank and be set well back from the bank at the channel bottom it may not become an active part of the system before the serviceable lives of the protected homes have been reached.

From a funding perspective, neither the anchored pile nor the soil nail alternative will likely prove cost effective. Notes from a December 20, 2023, City Council Meeting suggest that the market value for all eight properties is estimated at \$1,200,000. Based on our experience with similar projects and given the breadth of the area requiring stabilization, we estimate that material and labor costs could exceed \$2,500,000 for anchored pile retention, and \$2,000,000 for soil nail retention. These costs do not include costs associated with final design, bank armor materials and labor, existing outbuilding relocation or demolition, and construction quality control. Either stabilization alternative would need to be advanced to final design to support a proper estimate based on a complete set of plans and specifications.

C.2. Geotechnical Design Services

If the impacted residents are willing to relocate or lose their outbuildings and can afford or obtain funding (and possibly permitting) of either bank stabilization alternative, Braun Intertec can assist with a more comprehensive geotechnical evaluation of the bank and properties. We envision such an evaluation would include exploratory borings, instrumentation (piezometers for groundwater monitoring and perhaps slope inclinometers for bank deformation monitoring), laboratory testing, and engineering analyses to support a final design and the preparation of plans and specifications for bidding.

We estimate the cost of this work would fall between \$75,000 and \$100,000, though a formal estimate would need to be prepared based on the preferred stabilization alternative. Construction quality control services (which would also be subject to formal estimation) could amount to half our design fees.

D. Qualifications

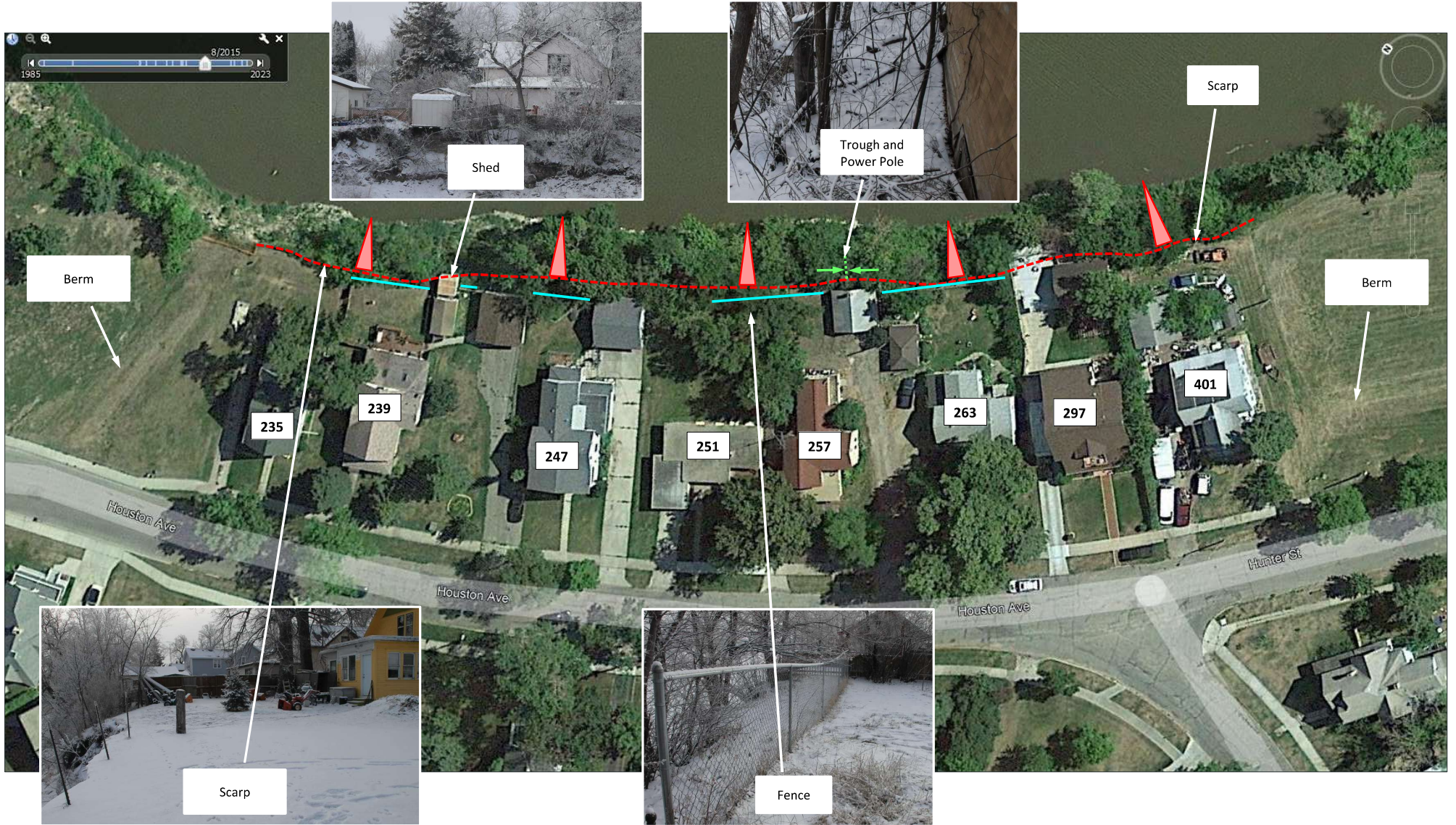
D.1. Use of Report

This report is for the exclusive use of the addressed parties. Without written approval, we assume no responsibility to other parties regarding this report. Our evaluation, analyses and recommendations may not be appropriate for other parties or projects.

D.2. Standard of Care

In performing its services, Braun Intertec used that degree of care and skill ordinarily exercised under similar circumstances by reputable members of its profession currently practicing in the same locality. No warranty, express or implied, is made.

B2400102: Geotechnical Risk Assessment – Project Imagery, 235-297 Houston Ave and 401 Hunter St



B2400102: Geotechnical Risk Assessment – Project Imagery, 235-297 Houston Ave and 401 Hunter St

Bank Elevation (Right to Left): 235, 239, and 247 Houston Ave



Failure Scarp – 235 Houston Ave



Undermined Deck and Telltale Flags – 239 Houston Ave



Garage and Fence – 247 Houston Ave



B2400102: Geotechnical Risk Assessment – Project Imagery, 235-297 Houston Ave and 401 Hunter St

Bank Elevation (Right to Left): 251, 257, and 263 Houston Ave



Rear Yard – 251 Houston Ave



Garages – 257 Houston Ave (R) and 263 Houston Ave (L)



Rear Yard – 263 Houston Ave



B2400102: Geotechnical Risk Assessment – Project Imagery, 235-297 Houston Ave and 401 Hunter St

Bank Elevation (Right to Left): 297 Houston Ave and 401 Hunter St



Garage Setback from Scarp (View from Deck) – 297 Houston Ave



Garages – 297 Houston Ave (R) and 401 Hunter St (L)



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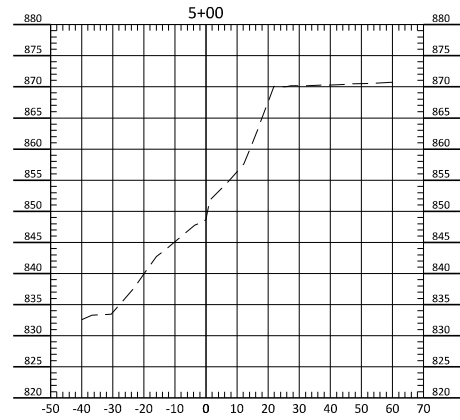
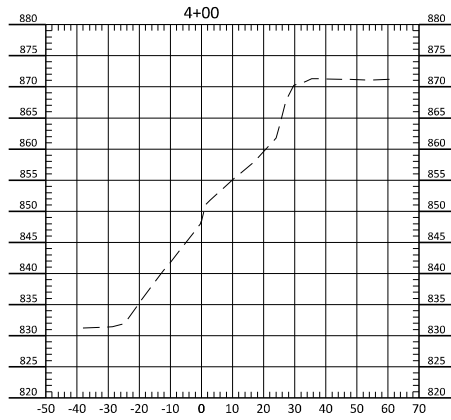
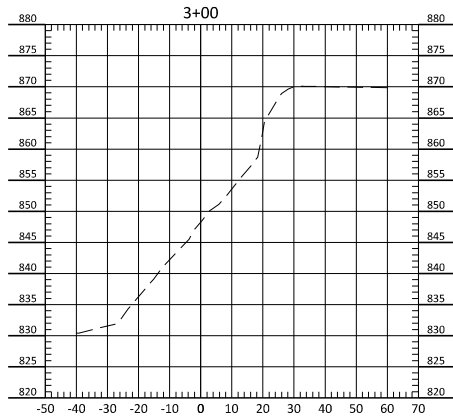
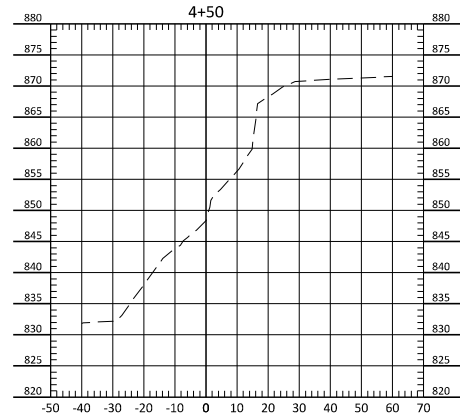
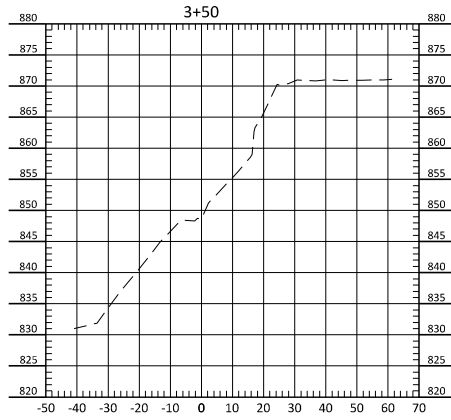
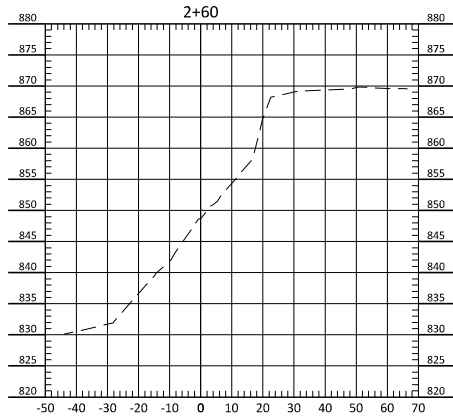


PRELIMINARY
NOT FOR CONSTRUCTION

Houston Ave
Red Lake River Bank
SITE MAP

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3655-0112
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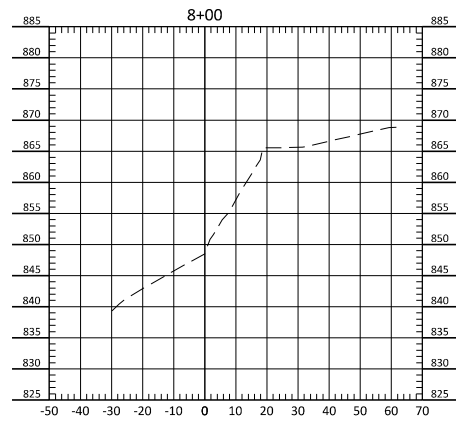
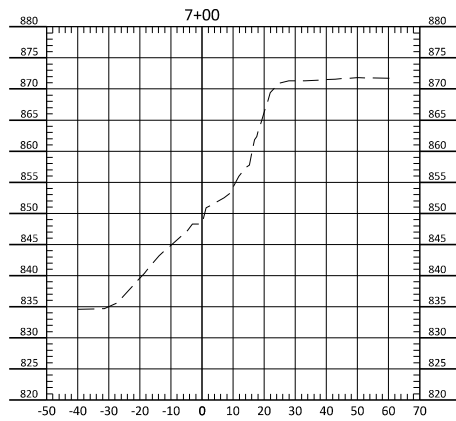
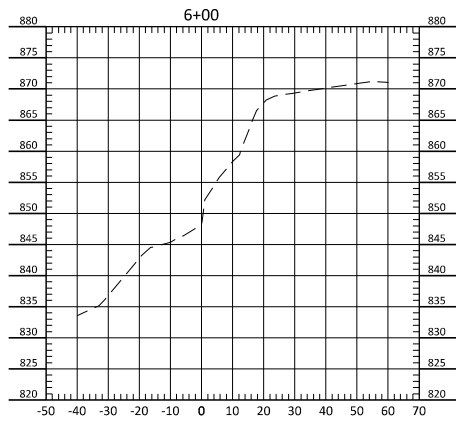
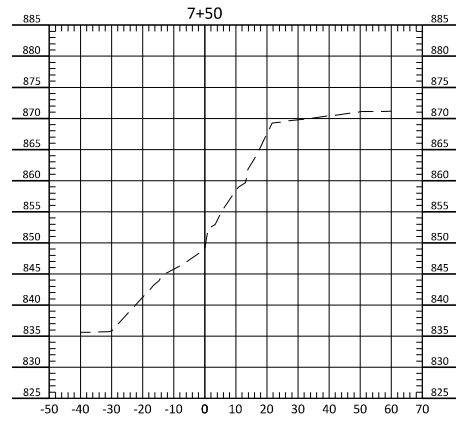
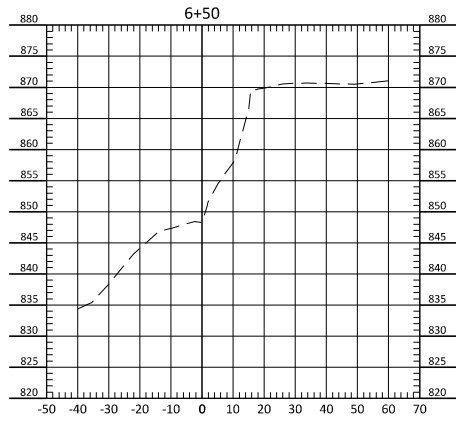
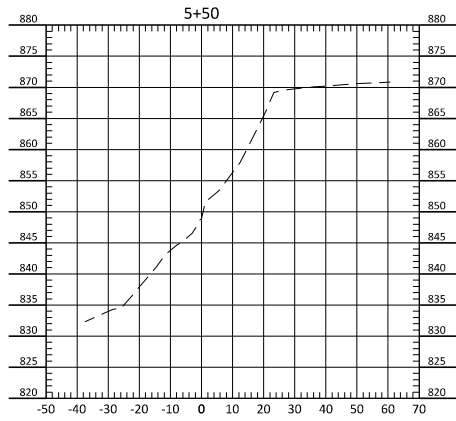
PRELIMINARY
NOT FOR CONSTRUCTION

HOUSTON AVE
R.I.U.S.
RED LAKE RIVER BANK
CROSS1

Project No.
3655-0112

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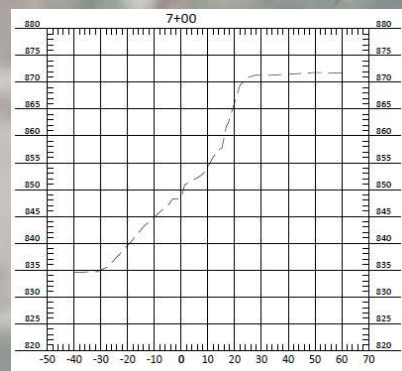
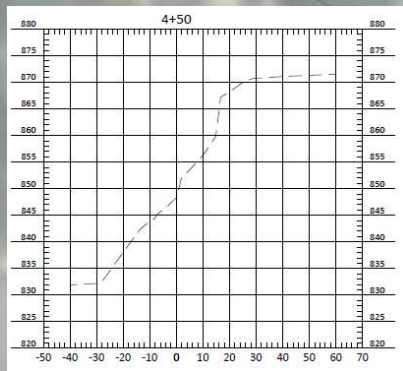
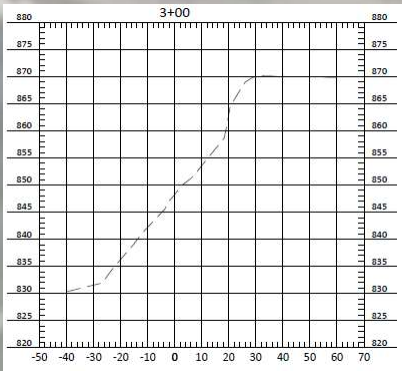


PRELIMINARY
NOT FOR CONSTRUCTION

HOUSTON AVE
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RED LAKE RIVER BANK
CROSSZ

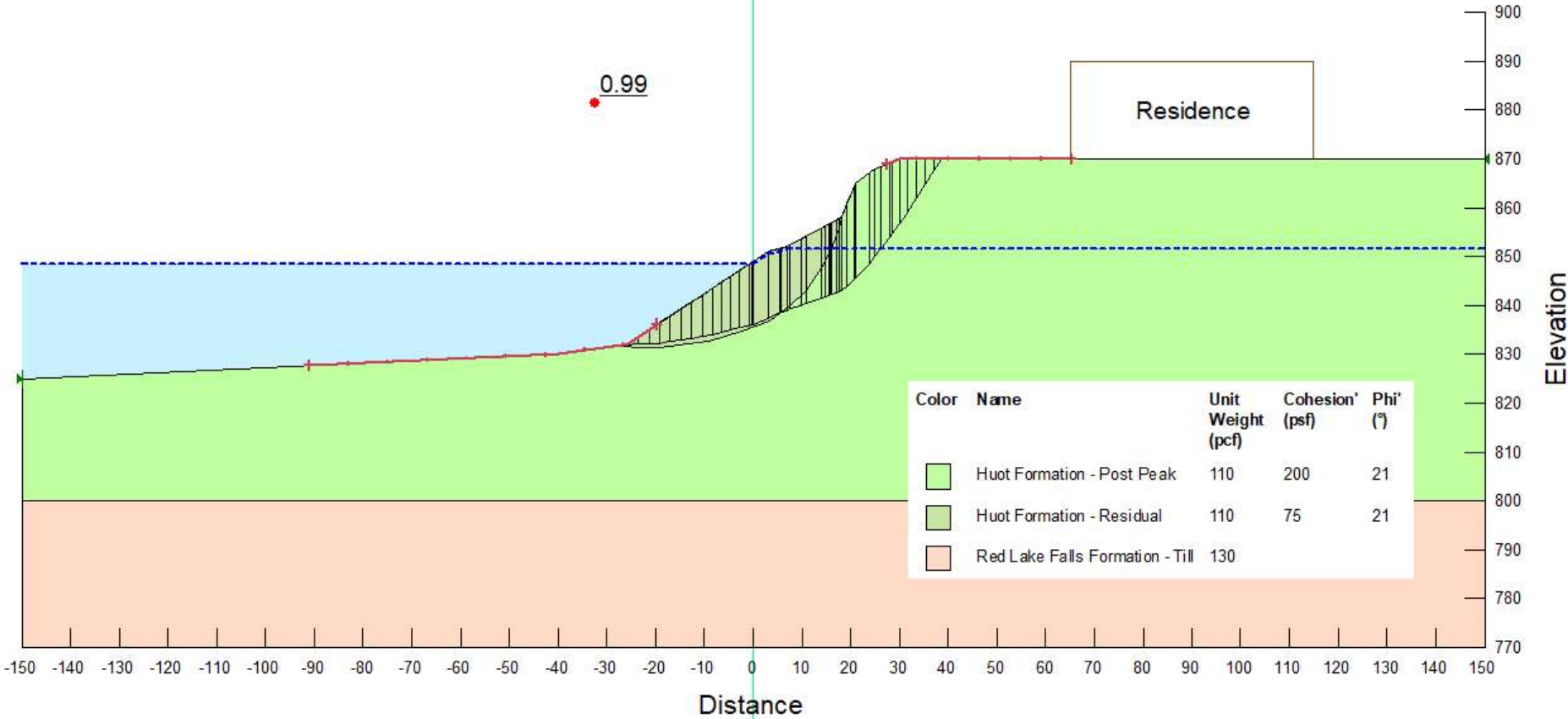
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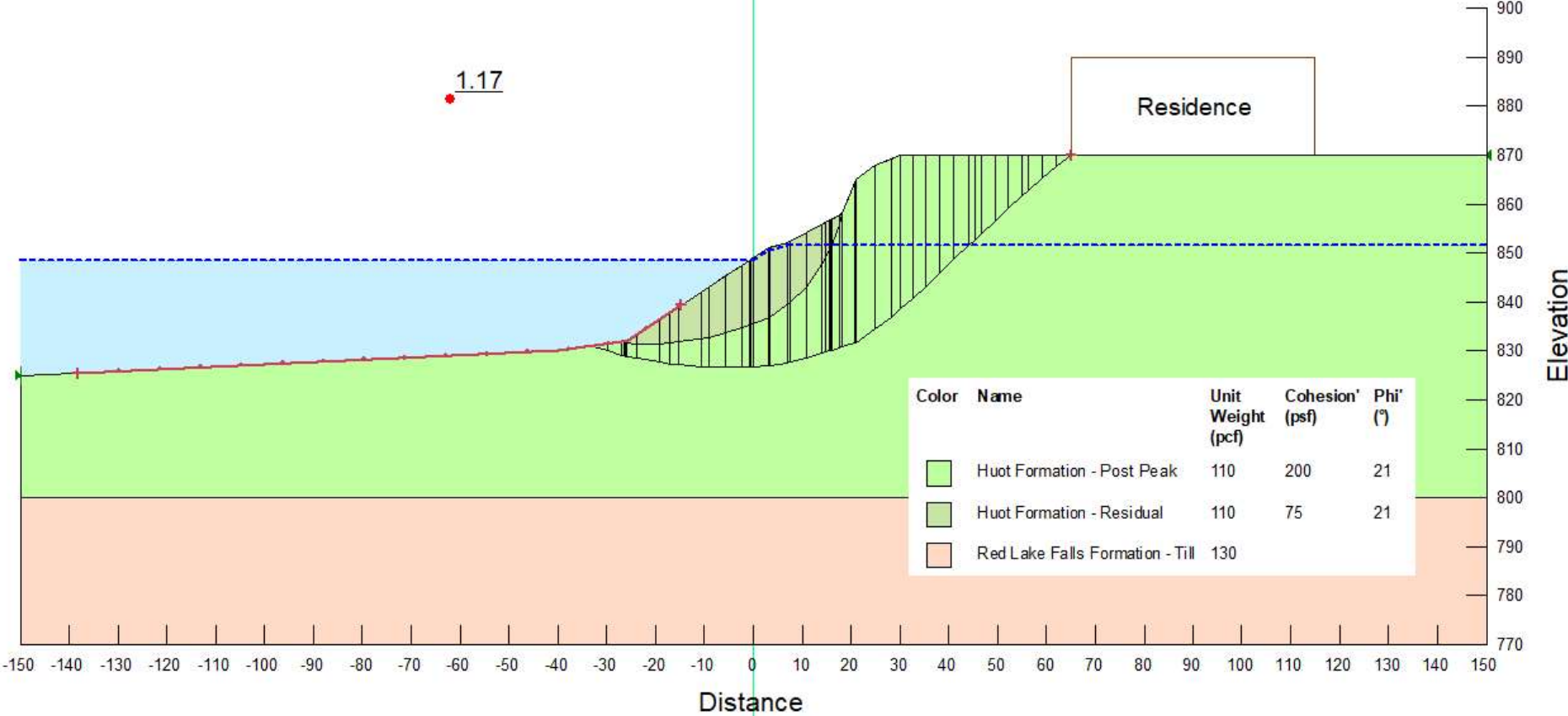
B2400102: Geotechnical Risk Assessment - Station 3+00, 235 Houston Ave

General Bank Stability



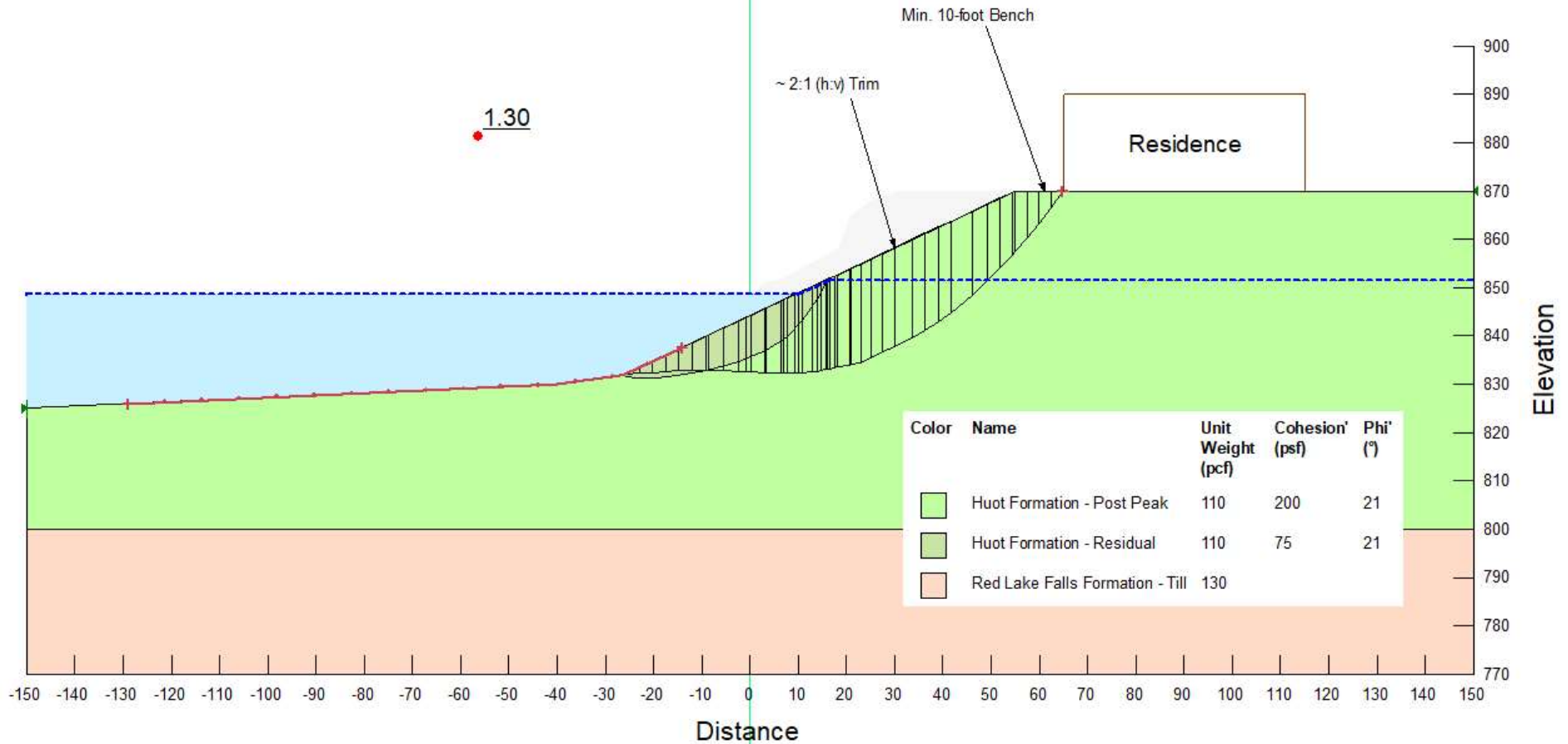
B2400102: Geotechnical Risk Assessment - Station 3+00, 235 Houston Ave

Setback Stability



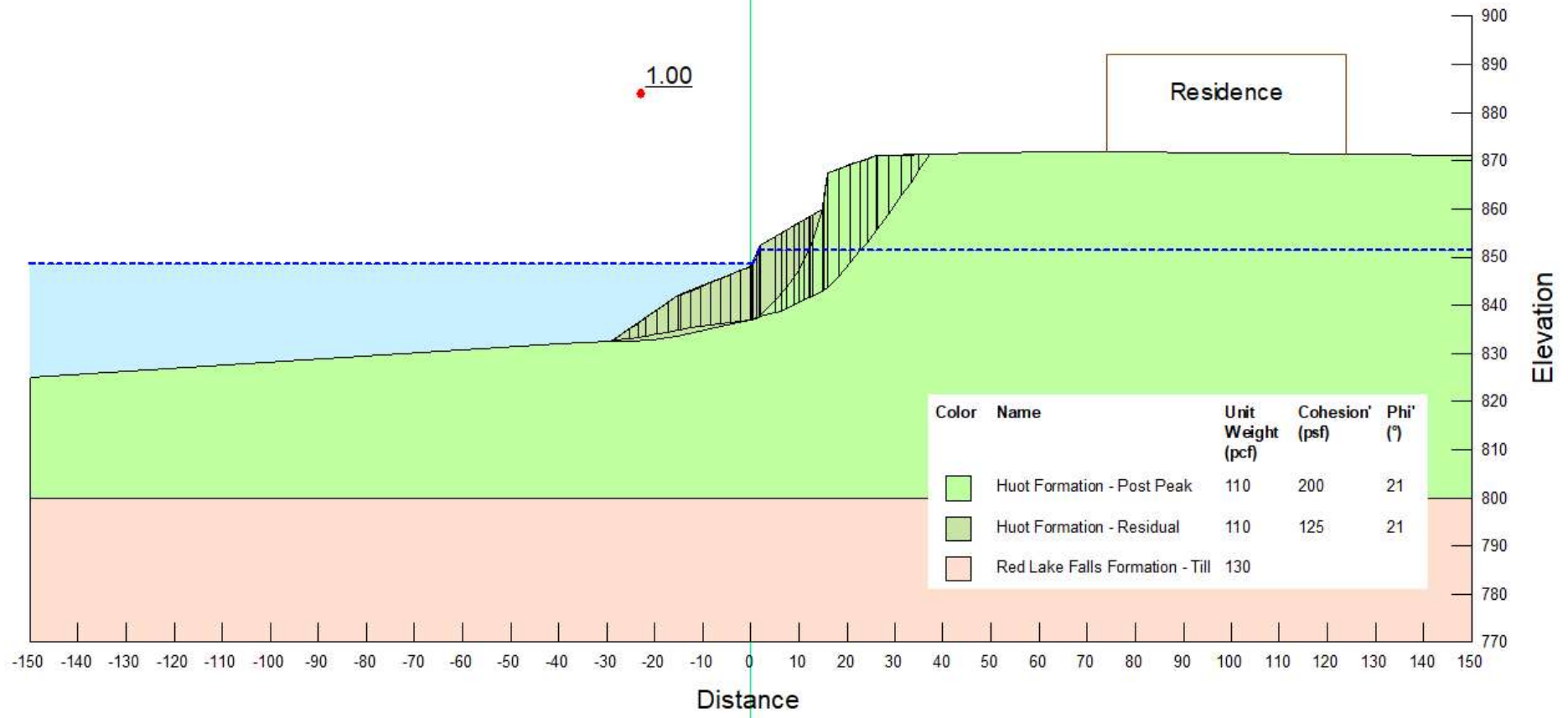
B2400102: Geotechnical Risk Assessment - Station 3+00, 235 Houston Ave

Setback Stability - ~2:1 (h:v) Bank Trim



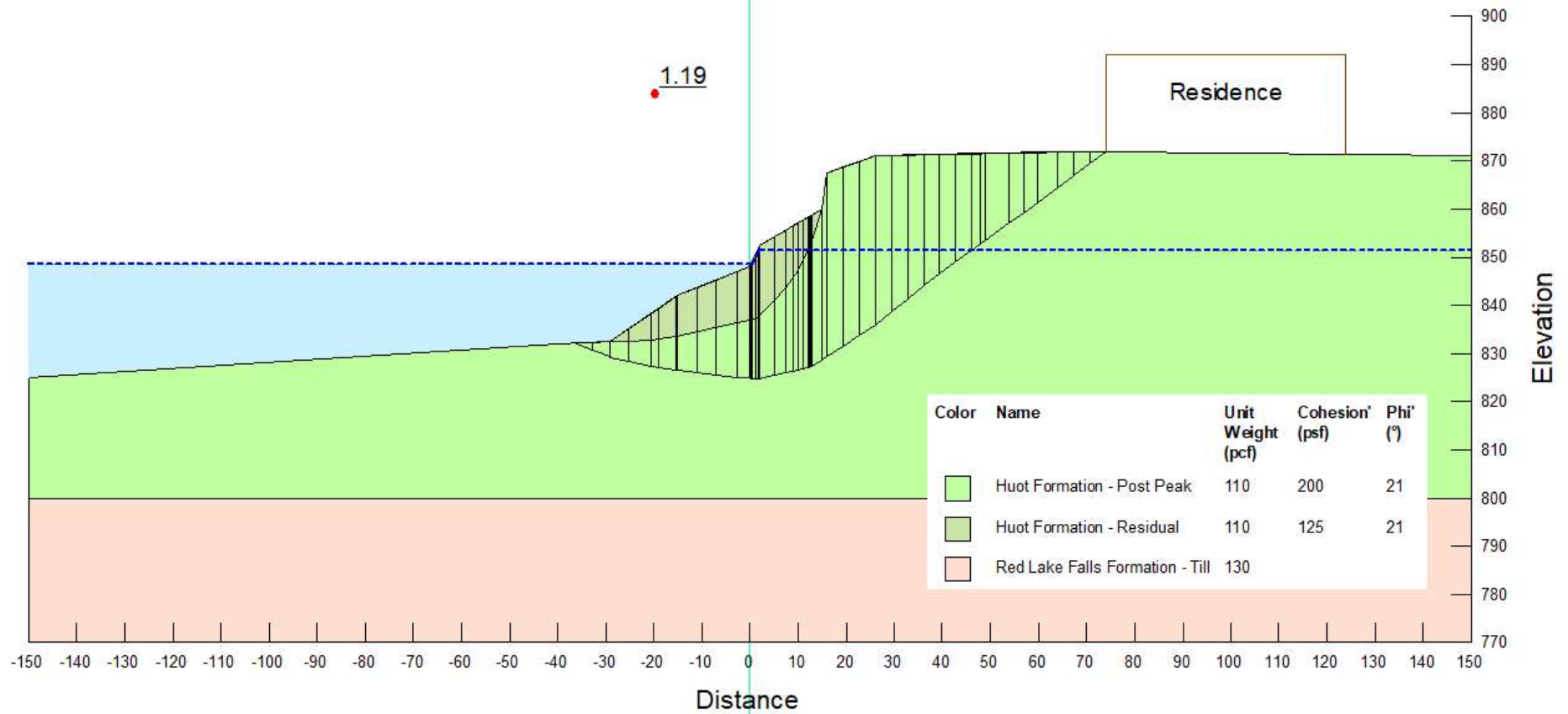
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General Bank Stability



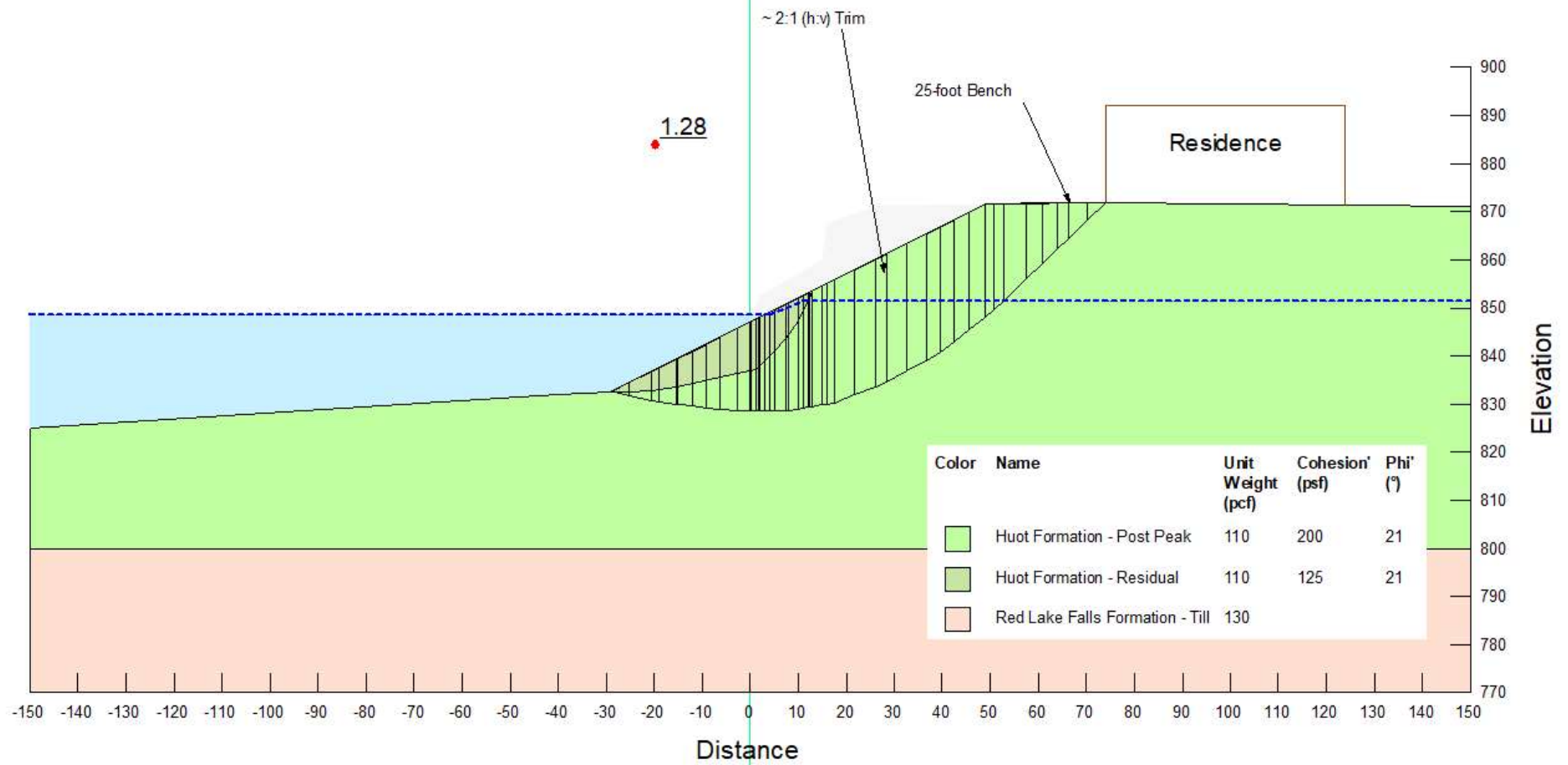
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Setback Stability



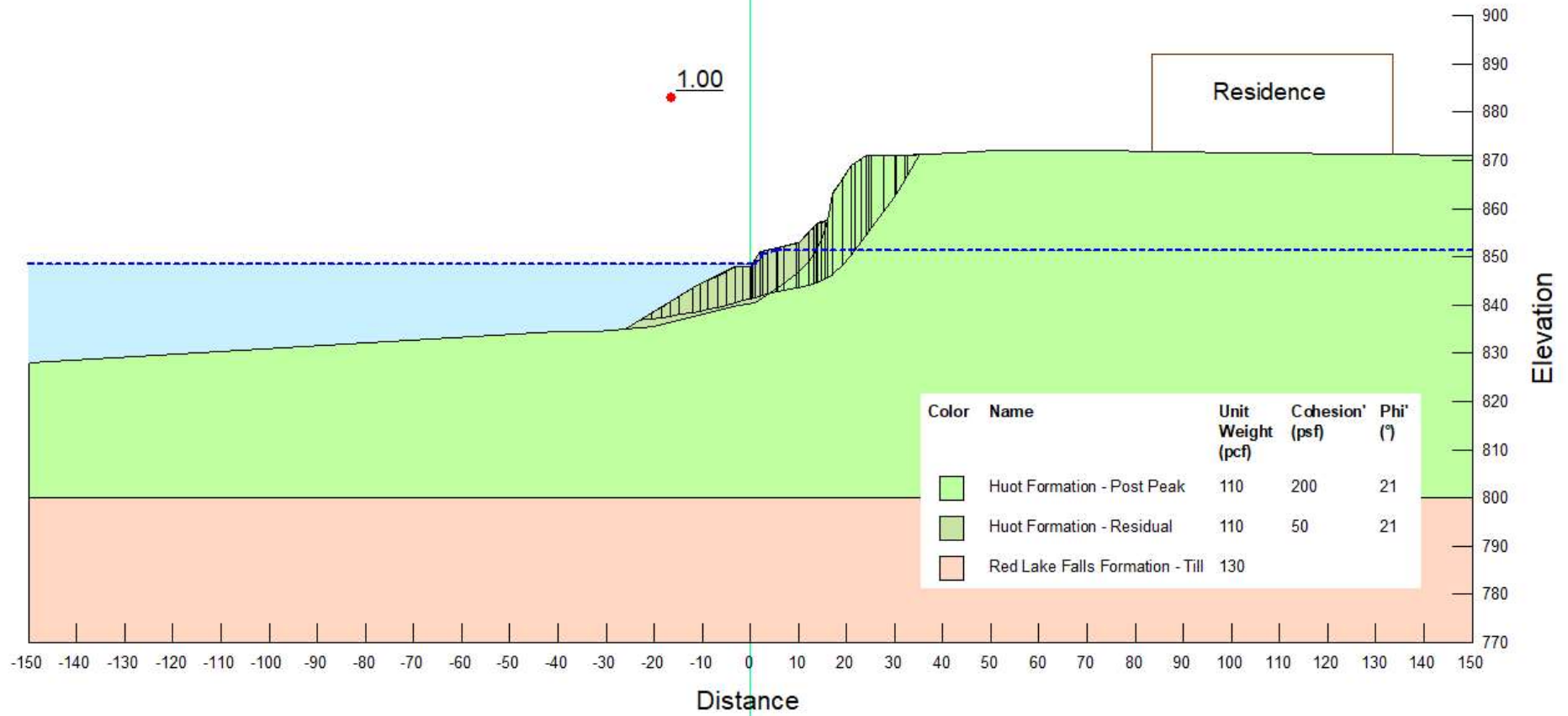
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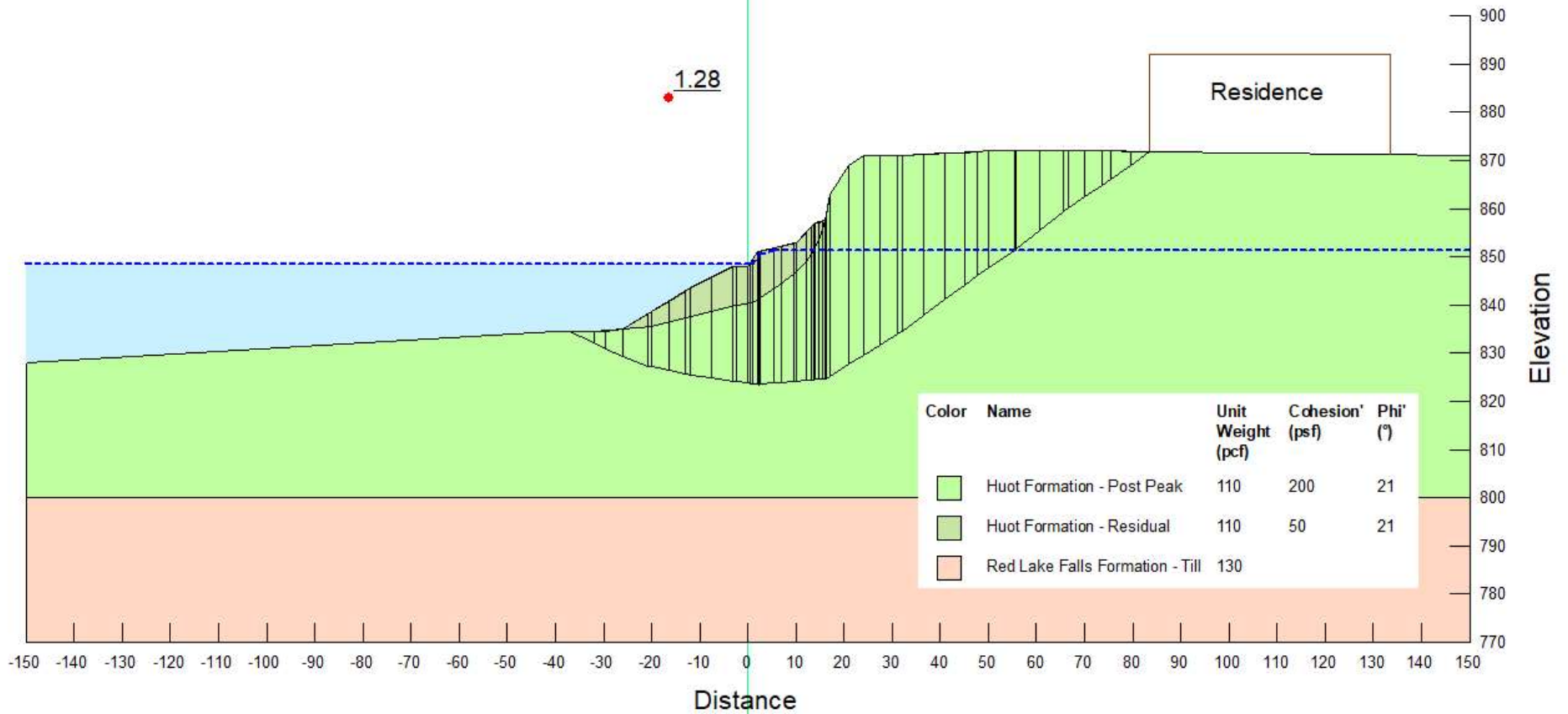
B2400102: Geotechnical Risk Assessment - Station 7+00, 297 Houston Ave

General Bank Stability



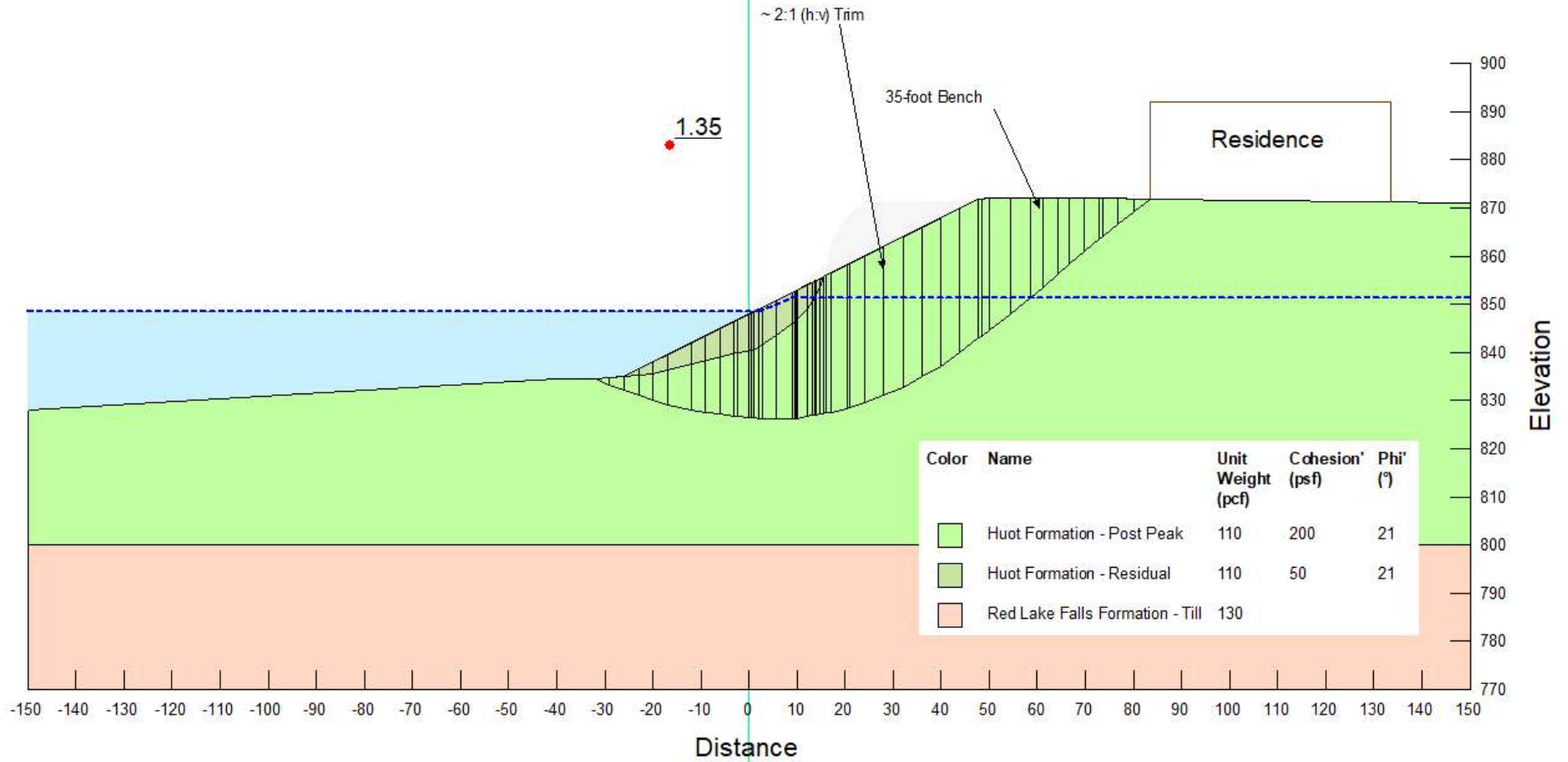
B2400102: Geotechnical Risk Assessment - Station 7+00, 297 Houston Ave

Setback Stability



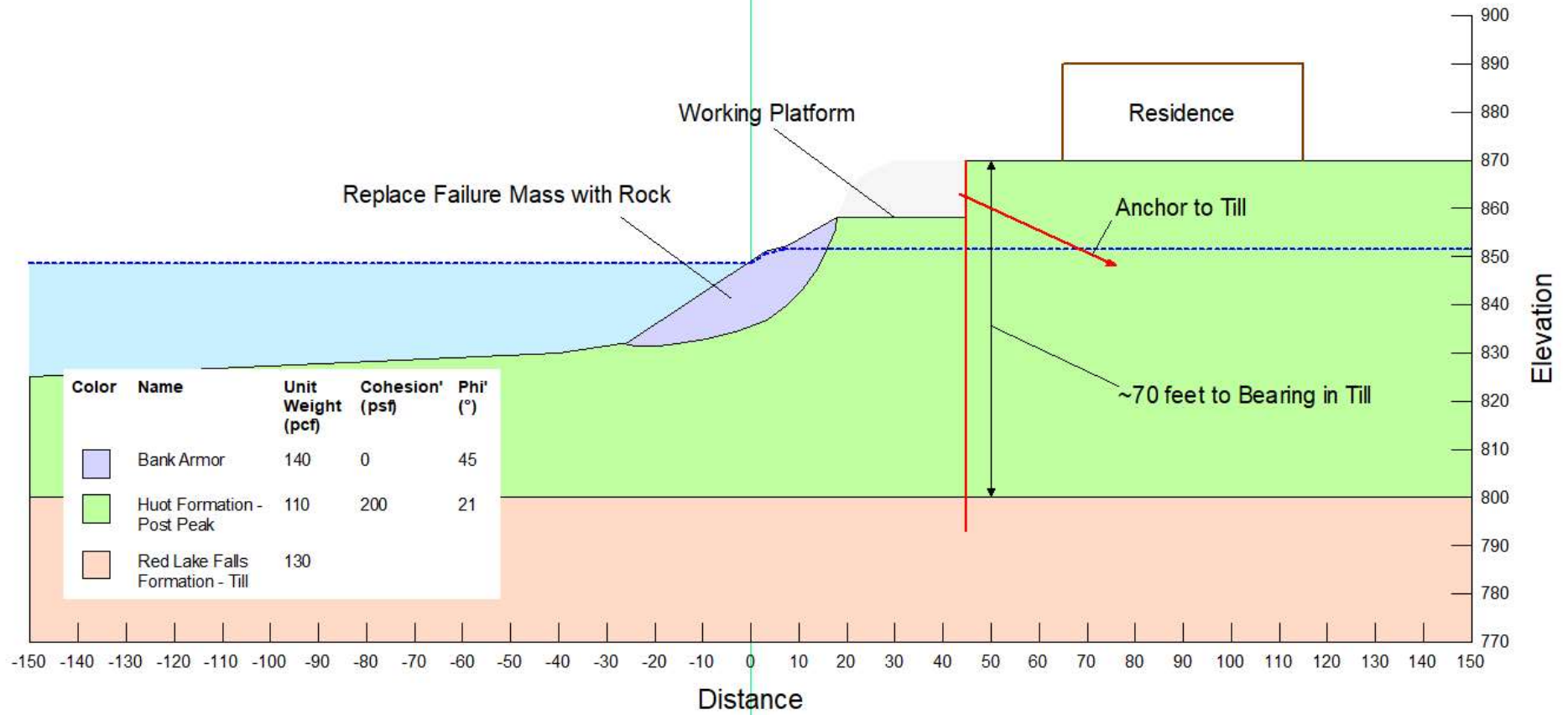
B2400102: Geotechnical Risk Assessment - Station 7+00, 297 Houston Ave

Setback Stability - ~2:1 (h:v) Bank Trim



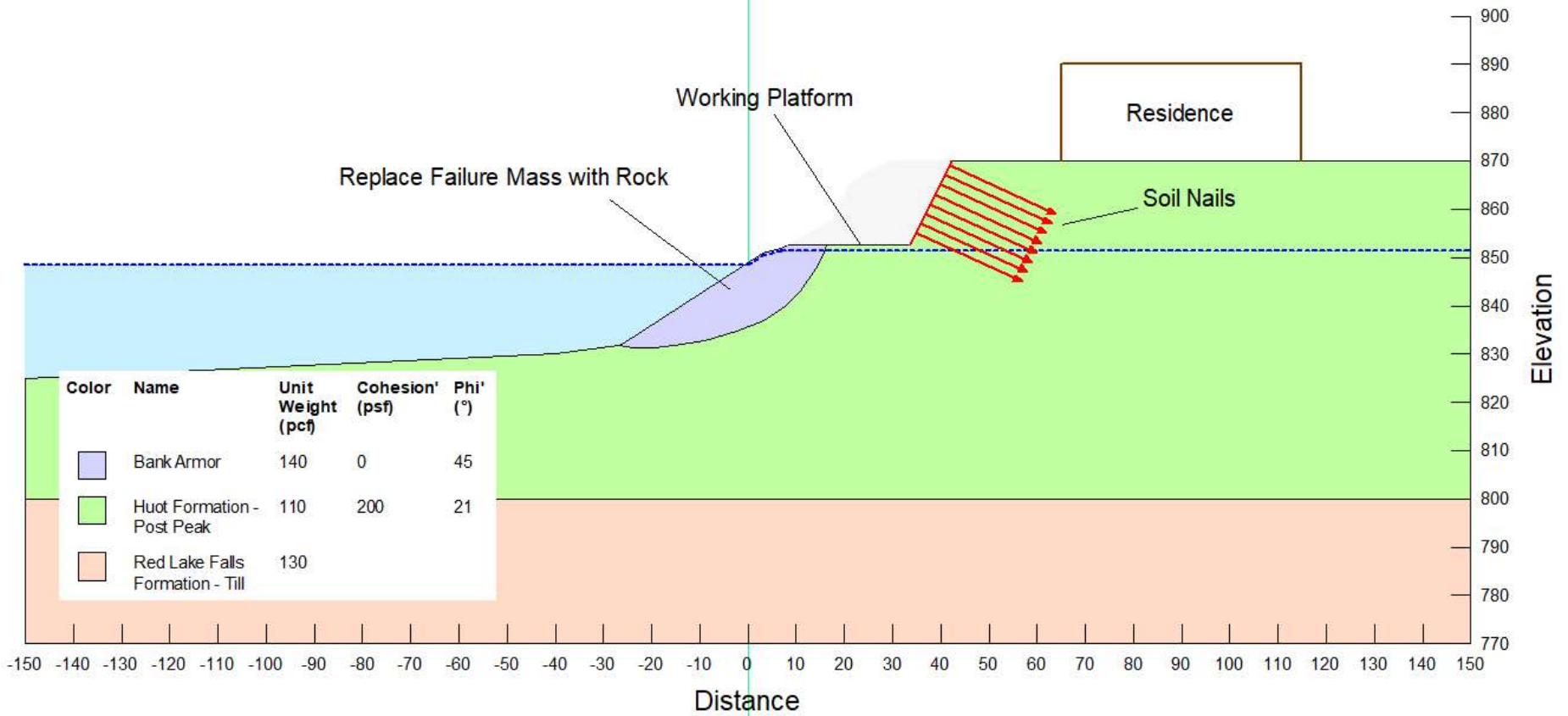
B2400102: Geotechnical Risk Assessment - Station 3+00, 235 Houston Ave

Anchored Wall Details



B2400102: Geotechnical Risk Assessment - Station 3+00, 235 Houston Ave

Soil Nail Details



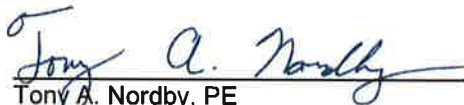
Project Manual
for
Jason & Sabrina Cardinal Ring Dike
Red Lake Watershed District
Section 2, Fairfax Twp.,
Polk County, Minnesota

November 2023



**Project Manual
For
Jason & Sabrina Cardinal Ring Dike
Section 2, Fairfax Township, Polk County
Red Lake Watershed District
November 2023**

I hereby certify that this plan, specification, or 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.



Tony A. Nordby, PE
License No. 51392

Date: 3-8-2024



125 3rd Street E
Thief River Falls, MN 56701
Phone (218) 681-2951
HE Project No. 3655-0106-005

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Red Lake Watershed District
November 2023

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PART 1

BIDDING REQUIREMENTS

SECTION 1.1

INFORMATION FOR BIDDERS

1.1.01 PROPOSALS are requested for the Jason & Sabrina Cardinal Ring Dike, Section 2, Fairfax Twp., Polk County, Minnesota.

Construction includes Clearing and Grubbing, Excavation – Common (P), Common Embankment (CV) (P), 24" CS Pipe Culvert, Turf Establishment, and other construction items in accordance with the Plans, Specifications, and other Contract Documents prepared by Houston Engineering, Inc., 125 3rd Street East, Thief River Falls, MN 56701.

- a. Form: Each Proposal shall be made on a form prepared by the Engineer and included as one of the Contract Documents and shall be submitted in a sealed envelope bearing the title of the work and the name of the Bidder.
- b. Modifications: Proposals shall not contain any recapitulations of the work to be done. Alternate proposals will not be considered unless called for. Oral proposals or modifications will not be considered.
- c. Certification of Compliance of Responsible Contractors Requirement: Per Minnesota Statute 16C.285 subdivision 4, eligible Proposals are required to contain a completed and signed copy of the RESPONSIBLE CONTRACTOR VERIFICATION AND CERTIFICATION OF COMPLIANCE form found in SECTION 1.3
- d. Examination of Contract Documents and Visit to Site: Before submitting a Proposal, bidders shall carefully examine the Drawings, read the Specifications and the other Contract Documents, shall visit the site of work, and shall fully inform themselves as to all existing conditions and limitations, and shall include in the Proposal a sum to cover the cost of all items included in the Contract Documents.
- e. Delivery of Proposals: Proposals shall be delivered by 4:30 pm on **April 10, 2024** at the office of the Red Lake Watershed District 1000 Pennington Ave. S, Thief River Falls, MN 56701. It is the sole responsibility of the bidder to see that his/her Proposal is received in proper time. Any Proposal received after the scheduled closing time for receipt of Proposals shall be returned to the bidder unopened.
- f. Withdrawal: Any bidder may withdraw his/her Proposal, either personally or by telegraphic or written request, at any time prior to the scheduled closing time for receipt of Proposals.
- g. Opening: It is the intention of the District and Houston Engineering, Inc. that the proposals will be publicly opened and read. Their content will be made public for the information of bidders and others interested. However, the right to adjourn the letting of the contract to a time and place other than noted herein, or to reject any and all bids, is reserved.
- h. Comparison of Bids. The quantities appearing in the bid schedule and the unit prices bid will be used as the basis for the calculation of the amount bid and for the comparison of bids.

Bids will be compared on the basis of the correct summation of the products of the listed quantities and the unit bid prices.

- i. **Award or Rejection**: It is the intention to award the Contract to the lowest responsible bidder complying with these instructions. The right is reserved to reject any or all proposals, to waive defects and technicalities, or to advertise for new proposals. No Bidder may withdraw his/her Proposal for a period of thirty (30) days after the date of the opening thereof. The Owner reserves the right to hold all bids for a period of thirty (30) days after the date of opening thereof.

1.1.02 INTERPRETATION OF DOCUMENTS: If any person contemplating submitting a Proposal is in doubt as to the true meaning of any part of the Drawings, Specifications, or other Contract Documents, or finds discrepancies in or omissions from the Drawings or Specifications, they may submit to the District a written request for an interpretation or correction thereof. The person submitting the request will be responsible for its prompt delivery. Any interpretation or correction of the documents will be made only by Addendum duly issued and a copy of the Addendum will be mailed or delivered to each person receiving a set of the Contract Documents. Neither the Owner nor the Engineer will be responsible for any other explanations or interpretations of the Contract Documents.

1.1.03 ADDENDA: Any addenda issued during the time of bidding or forming a part of the Contract Documents loaned to the Bidder for the preparation of his/her Proposal, shall be covered in the Proposal, and shall be made a part of the Contract. Receipt of each Addendum shall be acknowledged in the Proposal.

1.1.04 BIDDERS INTERESTED IN MORE THAN ONE PROPOSAL: No person, firm or corporation shall be allowed to make, file or to be interested in more than one Proposal for the same work, unless alternate Proposals are called for. A person, firm, or corporation who has submitted a sub-proposal to a Bidder, or who has quoted prices on materials to a Bidder, is not hereby disqualified from submitting a sub-proposal or quoting prices to other Bidders.

1.1.05 PROPOSAL GUARANTY: No proposal guaranty is required as a condition of the Project contract documents. If awarded the Contract, the Agreement will be promptly executed in accordance with the Proposal and the other Contract Documents.

1.1.06 PERFORMANCE BOND AND PAYMENT BOND: No Performance or Payment Bond is required as a condition of the Project contract documents.

1.1.07 GENERAL CONDITIONS OF THE CONTRACT (2018 edition): Copyrighted by Engineer's Joint Contract Document Committee, as bound herewith, are hereby made a part of the Contract Documents.

1.1.08 The NOTICE TO PROCEED shall be issued within ten (10) calendar days of the execution of the contract or such time as may be specified in the contract documents. In the event that the NOTICE TO PROCEED cannot be issued within the specified period, then the time may be extended by the mutual agreement of the contractor and the District.

1.1.9 COMPLETION DATE: All of the contract work must be completed within the time stated in the "Bid Form".

1.1.10 IC134 WITHHOLDING AFFIDAVIT FOR CONTRACTORS: This affidavit must be completed and approved by the Minnesota Department of Revenue before final contract payment is made.

SECTION 1.2

BID FORM

Board of Managers
Red Lake Watershed District
Thief River Falls, Minnesota

1.2.01 STIPULATED AMOUNT: The Undersigned hereby proposes and agrees to furnish all the necessary labor, materials, equipment, tools and services necessary for construction of the Jason & Sabrina Cardinal Ring Dike, Section 2, Fairfax Township, Polk County, Minnesota, all in accordance with the Drawings, Specifications, and other Contract Documents prepared by the Red Lake Watershed District, 1000 Pennington Avenue S., Thief River Falls, Minnesota 56701 and Houston Engineering, Inc., 125 3rd Street East, Thief River Falls, MN 56701 for the prices shown on the attached bid sheet.

1.2.02 KNOWLEDGE OF LOCAL CONDITIONS AND CONTRACT DOCUMENTS: The Undersigned has examined the location of the proposed work, the Drawings, Specifications, and other Contract Documents and is familiar with the local conditions at the place where the work is to be performed.

1.2.03 EXECUTION OF AGREEMENT: Within ten (10) days after notice of award, the Undersigned agrees to execute the Contract and to furnish required contract documents.

1.2.04 ADDENDA: The Undersigned hereby acknowledges receipt of the following addenda:

<u>Addendum No.</u>	<u>Dated</u>
_____	_____
_____	_____
_____	_____
_____	_____

SPEC. NO.	ITEM	UNIT	QUANTITY	UNIT PRICE	TOTAL PRICE
2021.501	MOBILIZATION	LUMP SUM	1		
2101.501	CLEARING AND GRUBBING	LUMP SUM	1		
2106.507	EXCAVATION - COMMON (P)	CU. YD.	1,250		
2106.507	COMMON EMBANKMENT (CV) (P)	CU. YD.	1,649		
2501.503	24" CS PIPE CULVERT	LIN. FT.	20		
2501.503	24" CS PIPE APRON	EACH	1		
2501.601	CANAL GATE FOR 24" CS PIPE	EACH	1		
2573.502	CULVERT END CONTROLS	EACH	1		
2575.501	TURF ESTABLISHMENT	LUMP SUM	1		
TOTAL BID AMOUNT					

1.2.06 CONTRACT TIME: If awarded the Contract, the Undersigned agrees to a substantial completion date of **August 23, 2024**, and final completion date of **August 30, 2024**. Construction shall be continuous to complete the project in a timely matter once construction activity is started. The Contractor will be issued A Notice to Proceed by the Owner, controlling the initiation of onsite construction operations. No work shall begin on the construction site prior to issuance of the Notice to Proceed.

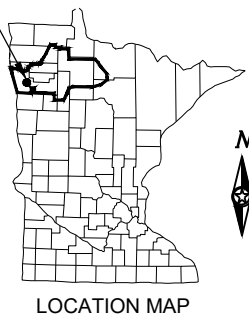
1.2.07 OWNER'S RIGHTS RESERVED: The Undersigned understands that the Owner reserves the right to reject any or all Proposals or to waive any informality or technicality in any Proposal in the interest of the Owner.

1.2.08 PARTIAL AWARD OF CONTRACT: The Owner reserves the right to award a reduced quantity of work listed in the Proposal in the event that the lowest qualified bid exceeds the available funds to construct the entire project as described in Specifications and Construction Plans. In the event that a partial award will be made, the quantities from the Proposal will be reduced and multiplied by the unit prices provided by the lowest qualified bidder until the total construction cost doesn't exceed the available funds. The total construction cost will include a 10% contingency above construction costs calculated from the quantities and bid prices from the lowest qualified bidder.

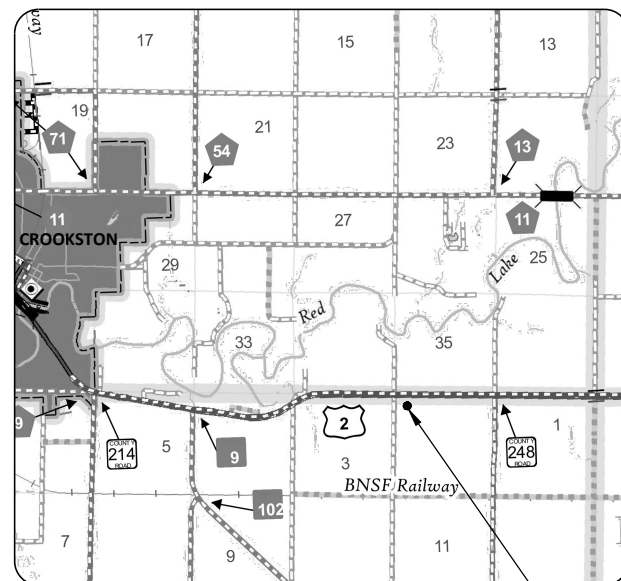
CONSTRUCTION PLANS FOR RED LAKE WATERSHED DISTRICT JASON & SABRINA CARDINAL RING DIKE SEC. 2, FAIRFAX TWP., POLK COUNTY NOVEMBER, 2023



PROJECT LOCATION



LOCATION MAP



VICINITY MAP

PROJECT LOCATION

INDEX SHEET	
SHEET NUMBER	SHEET TITLE
1	COVERSHEET
2	QUANTITIES
3	SITE MAP
4	PLAN & PROFILE
5-8	CROSS SECTIONS
9	EROSION CONTROL PLAN
10	STANDARD PLANS

GOVERNING SPECIFICATIONS:

THE 2020 EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR CONSTRUCTION" DIVISION II AND III AND THE "SUPPLEMENTAL SPECIFICATION" DATED SEPTEMBER 2022 SHALL GOVERN FOR CONSTRUCTION DETAILS AND MATERIALS

UTILITY NOTE:

THE UNDERGROUND UTILITIES WERE NOT LOCATED AS PART OF THE PRELIMINARY SURVEY OR DATA GATHERING FOR THIS SITE.

STATE LAW REQUIRES THE EXCAVATOR TO CONTACT GOPHER STATE ONE-CALL AT (800)-252-1166 FOR UTILITY LOCATION 48 HOUR PRIOR TO START OF EXCAVATION WORK.

I hereby certify that this plan, specification, or 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.

Tony A. Nordby
Tony A. Nordby
License No. 51392

Date: 11/27/2023

H:\JBM\3600\3655\3655-0106 Red Lake Watershed District Ring Dikes\005 Cardinal\CAD\PLANS\QUANTITIES.dwg-Layout-11/27/2023 10:14 AM-(tobson)

Note	Bid Item No.	Description	Unit of Measure	Contract Quantity
	2021.501	MOBILIZATION	LUMP SUM	1
6	2101.501	CLEARING AND GRUBBING	LUMP SUM	1
3, 4	2106.507	EXCAVATION - COMMON (P)	CU. YD.	1,250
3, 5, 7	2106.507	COMMON EMBANKMENT (CV) (P)	CU. YD.	1,649
9	2501.503	24" CS PIPE CULVERT	LIN. FT.	20
	2501.503	24" CS PIPE APRON	EACH	1
10	2501.601	CANAL GATE FOR 24" CS PIPE	EACH	1
	2573.502	CULVERT END CONTROLS	EACH	1
11	2575.501	TURF ESTABLISHMENT	LUMP SUM	1

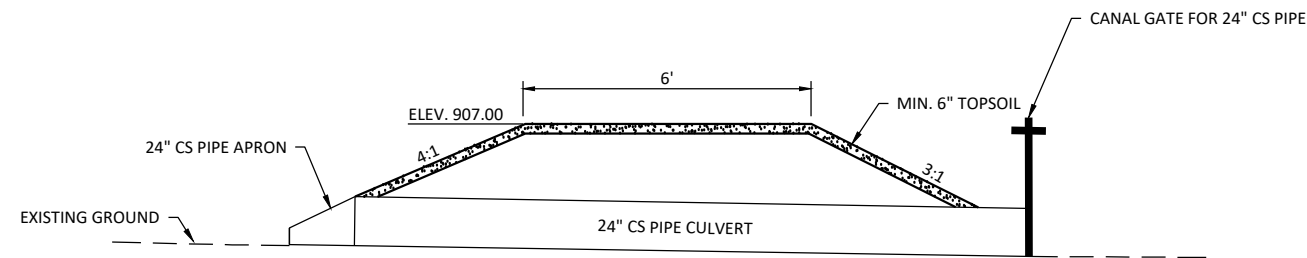
STANDARD PLATES	
THE FOLLOWING MNDOT STANDARD PLATES SHALL APPLY ON THIS PROJECT.	
PLATE NO.	DESCRIPTION
3041E	CORRUGATED METAL PIPE (3"X 1" OR 5"X 1" CORRUGATION)
3123J	METAL APRON FOR C.S. PIPE

CONSTRUCTION NOTES:

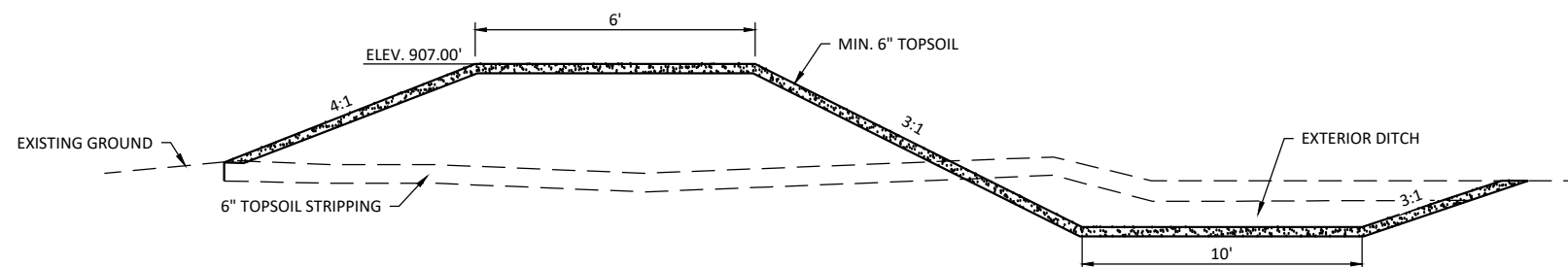
- THE CONTRACTOR SHALL VISIT THE SITE TO INFORM THEMSELVES AS TO ALL EXISTING CONDITIONS AND LIMITATIONS.
- THE CONTRACTOR SHALL LOCATE AND PROTECT ALL UTILITIES WHETHER OR NOT SHOWN IN THE PLANS.
- (P) DENOTES A PLAN QUANTITY ITEM WITH NO ADDITIONAL COMPENSATION MADE. (CV) DENOTES COMPACTED VOLUME.
- THE BID ITEM FOR "EXCAVATION - COMMON (P)" SHALL BE FOR THE 6" OF TOPSOIL STRIPPING WITHIN THE DIKE FOOTPRINT AND ALL EXCAVATED MATERIAL TO CONSTRUCT THE EXTERIOR DITCH TO THE PROFILE AND GRADE SHOWN IN THE PLAN. SEE SPECIAL PROVISIONS FOR MORE DETAIL.
- THE BID ITEM "COMMON EMBANKMENT (P) CV" INCLUDES MATERIAL NEEDED TO CONSTRUCT THE DIKE TO THE ELEVATION AND GRADES SHOWN IN THE PLANS. THIS SHALL INCLUDE 6" OF TOPSOIL PLACED BACK ON THE DIKE AND EXTERIOR DITCH AS SHOWN BELOW IN THE TYPICAL SECTION. COMMON EMBANKMENT MATERIAL SHALL BE EXCAVATION MATERIAL SHOWN IN THE PLANS AND BORROW MATERIAL FROM A BORROW SOURCE AGREED UPON BETWEEN CONTRACTOR AND LANDOWNER. STRIPPING AND SPREADING OF TOPSOIL AT THE BORROW AREA SHALL BE CONSIDERED INCIDENTAL WITH NO DIRECT COMPENSATION MADE THEREOF.
- TREE REMOVAL SHALL NOT BE STARTED WITHOUT THE PERMISSION OF THE ENGINEER OR FIELD REPRESENTATIVE. TREES TO BE REMOVED SHALL BE DETERMINED AND MARKED IN THE FIELD BY THE ENGINEER. AN ESTIMATE OF 0.36 ACRES OF CLEARING AND GRUBBING IS ANTICIPATED. ANY MATERIAL GENERATED BY CLEARING AND GRUBBING OPERATIONS SHALL BE THE CONTRACTOR'S RESPONSIBILITY AND BE DISPOSED OF OFF SITE OUTSIDE THE PROJECT LIMITS. SEE SPECIAL PROVISIONS FOR MORE DETAIL.
- THE EMBANKMENT FOOTPRINT SHALL BE FREE OF ALL TREES AND ROOTS PRIOR TO PLACEMENT OF ANY EMBANKMENT MATERIAL. THE SUBSURFACE WILL BE RIPPED TO A DEPTH 12 INCHES BELOW THE SUBSURFACE AND COMPACTED TO MEET MNDOT 2106.3G.2 QUALITY COMPACTION REQUIREMENTS PRIOR TO ANY BUILDING OF THE EMBANKMENT TO MINIMIZE DIFFERENTIAL SETTLEMENT. SUBSURFACE COMPACTION SHALL BE CONSIDERED INCIDENTAL WITH NO DIRECT COMPENSATION MADE THEREOF.
- CONSTRUCTION LIMITS TO BE IDENTIFIED IN THE FIELD BY THE ENGINEER OR FIELD REPRESENTATIVE.
- FOR BID ITEM "24" CS PIPE CULVERT", CULVERT INVERTS AND LOCATION TO BE STAKED IN THE FIELD BY THE ENGINEER OR FIELD REPRESENTATIVE.
- THE BID ITEM "CANAL GATE FOR 24" CS PIPE" SHALL BE WATERMAN MODEL C-10 CANAL GATE OR APPROVED EQUIVALENT.
- TURF ESTABLISHMENT (APPROXIMATELY 0.9 ACRES TOTAL) TO INCLUDE THE FOLLOWING ESTIMATED QUANTITIES AND APPLICATION RATES:
 - SEED MIXTURE 32-241 = 20.9 LBS (38 LBS/ACRE) - EMBANKMENT
 - SEED MIXTURE 25-121 = 21.4 LBS (61 LBS/ACRE) - EXTERIOR DITCH
 - MULCH MATERIAL TYPE 1 = 1.8 TONS (2 TONS/ACRE)
 - DISK ANCHORING = 0.9 ACRES

SEE THE SPECIAL PROVISIONS FOR ADDITIONAL INFORMATION.

THE QUANTITY SHOWN IS AN ESTIMATE ONLY. FINAL QUANTITY WILL DEPEND ON THE CONTRACTOR'S OPERATION. NO ADJUSTMENT IN UNIT PRICE WILL BE MADE FOR ANY INCREASE OR DECREASE IN THE FINAL AMOUNT. THE CONTRACTOR SHALL MAKE EVERY EFFORT TO KEEP THE DISTURBANCE OF VEGETATED AREAS TO A MINIMUM.



TYPICAL CULVERT SECTION
NOT TO SCALE



TYPICAL EMBANKMENT SECTION
NOT TO SCALE

I hereby certify that this plan, specification, or 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.

Tony A. Nordby

Tony A. Nordby
License No. 51392

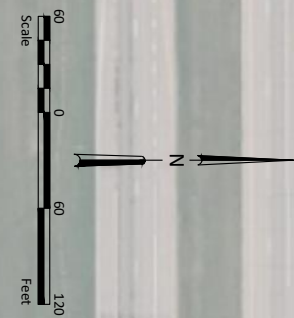
Date: 11/27/2023

By	
Date	
Revision	
No.	
QUANTITIES	
JASON & SABRINA CARDINAL RING DIKE RED LAKE WATERSHED DISTRICT SEC. 2, FAIRFAX TWP., POLK COUNTY	
Drawn By	TJO
Checked By	TAN
Date	11-15-2023
Scale	As Shown
Project No.	3655-0106
SHEET	2

H:\JBM\3600\3655\0106 Red Lake Watershed District Ring Dikes\005 Cardinal\CAD\PLANS\SITE MAP.dwg-Layout:3/8/2024 1:04 PM-(tolson)

SECTION 3
T149N R46W
(FAIRFAX TWP)

SECTION 2
T149N R46W
(FAIRFAX TWP)



STA 0+27
F&I - 24" X 20' CSP
W/ CANAL GATE & APRON
INLET INV. 905.10
OUTLET INV. 905.00

DITCH CATCH POINT

DIKE ALIGNMENT

DIKE CATCH POINT

ELECTRIC FENCE
-TO BE MOVED BY LAND OWNER PRIOR TO PROJECT START

CLEARING AND GRUBBING

POWER POLE

OVERHEAD WIRE

POWER POLE

US HWY 2



Drawn By
TJO

Checked By
TAN

Date
11-15-2023

Scale
As Shown

Project No.
3655-0106

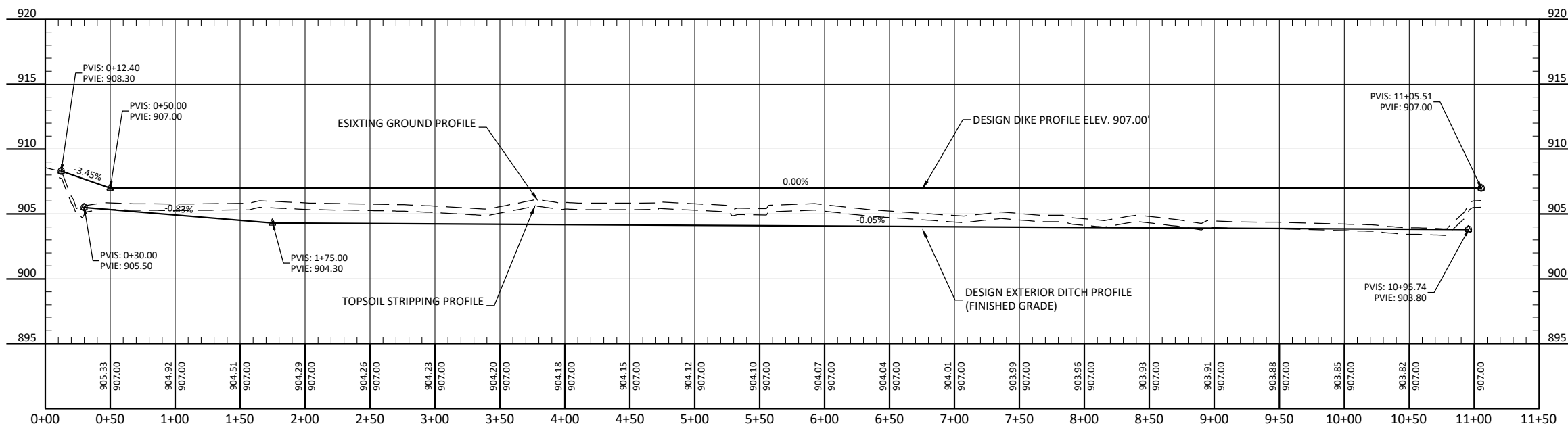
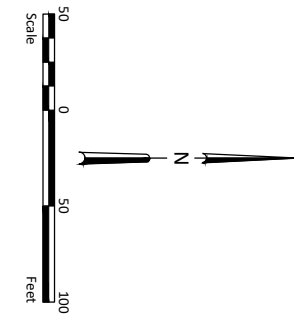
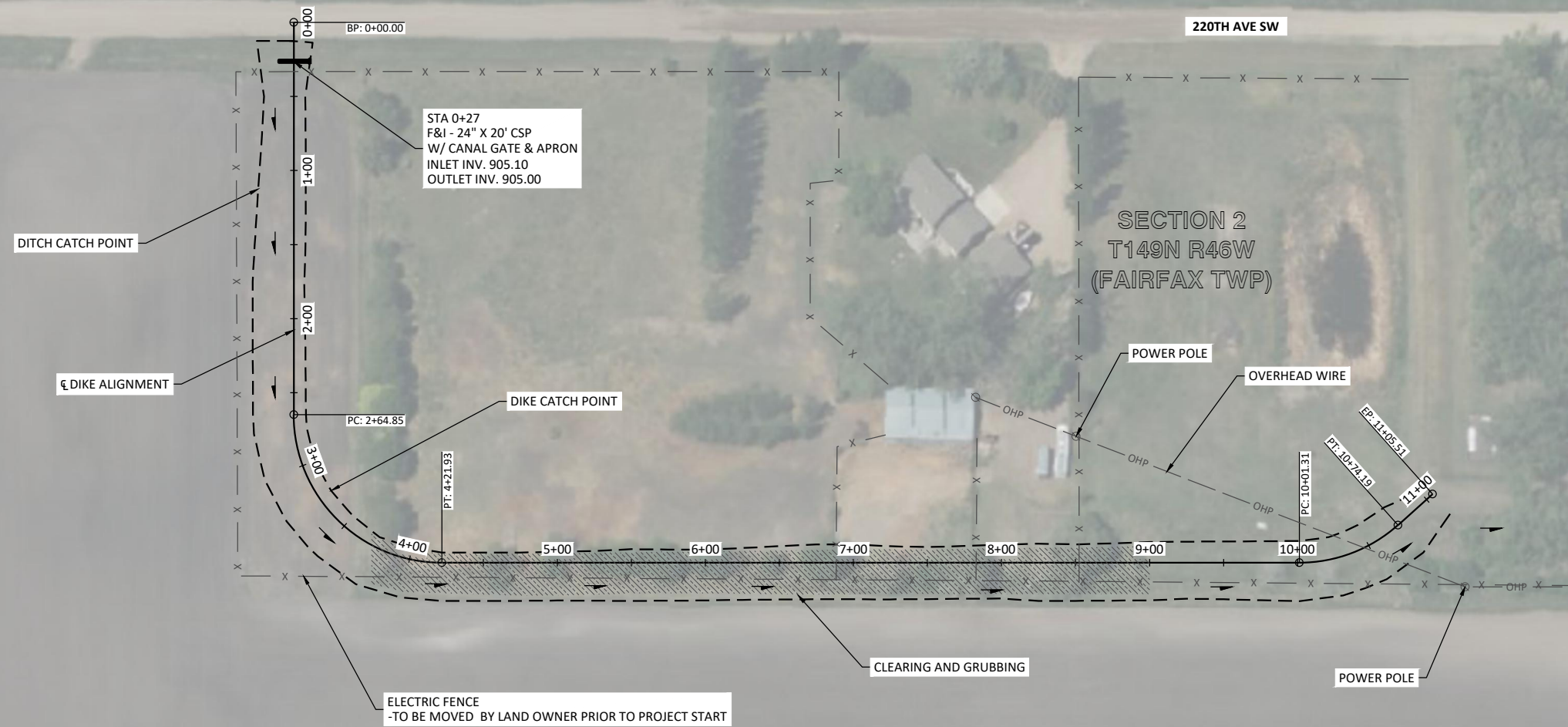
SHEET
3

I hereby certify that this plan, specification, or 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.
Tony A. Nordby
Tony A. Nordby
License No. 51392
Date: 11/27/2023

No.	Revision	Date	By

JASON & SABRINA CARDINAL RING DIKE
RED LAKE WATERSHED DISTRICT
SEC. 2, FAIRFAX TWP., POLK COUNTY
SITE MAP

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I hereby certify that this plan, specification, or 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.

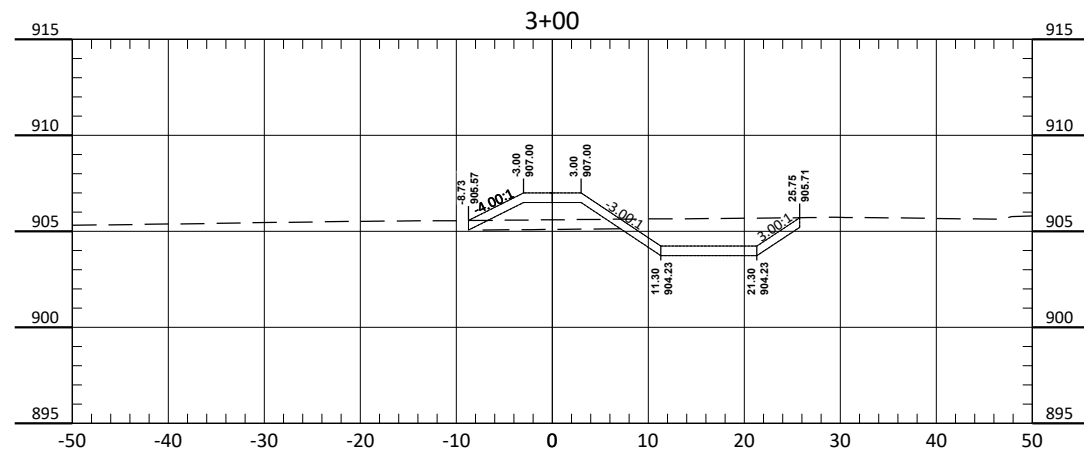
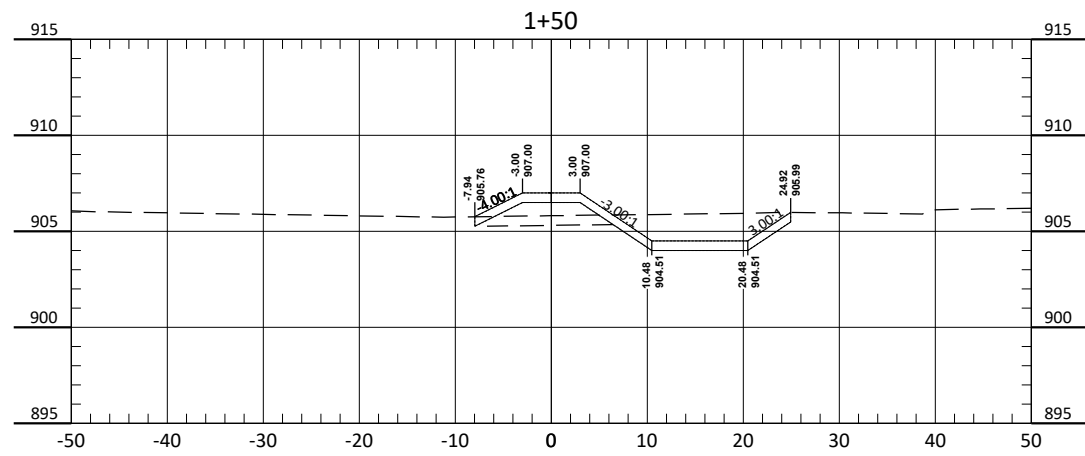
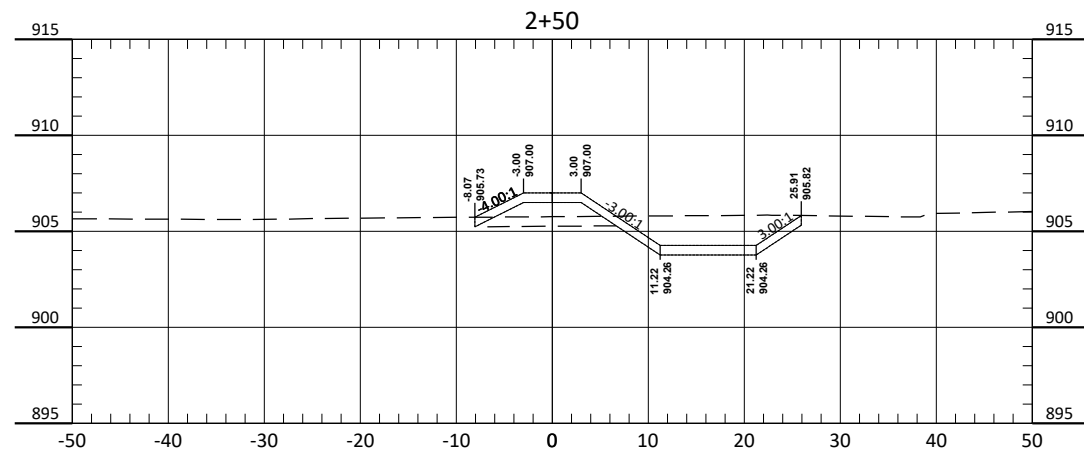
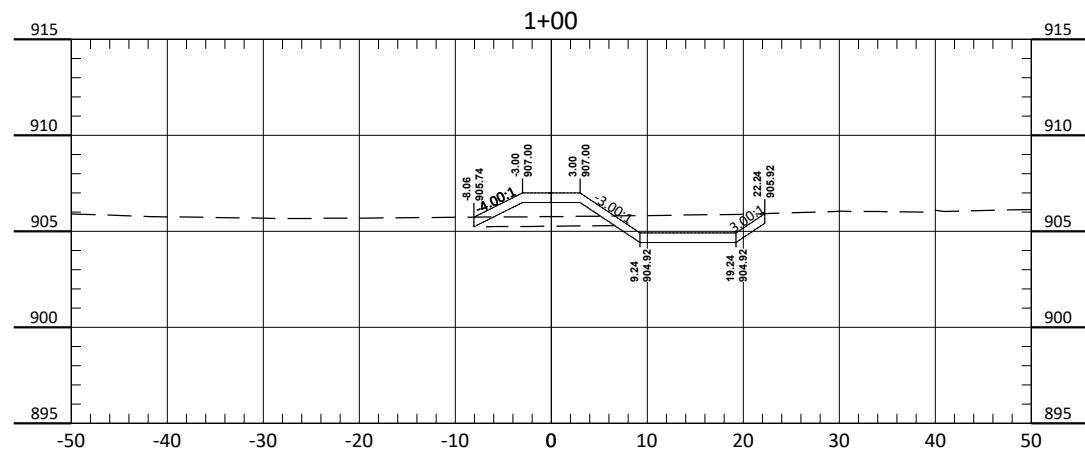
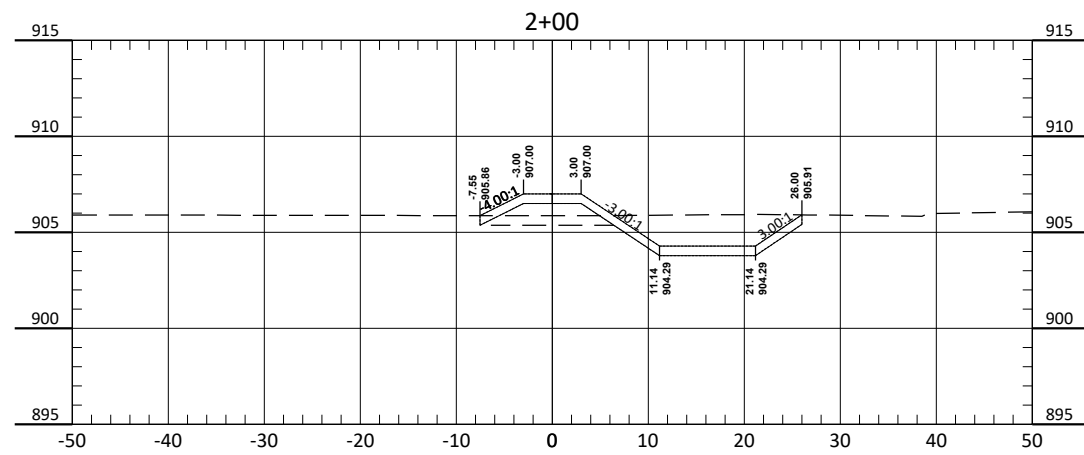
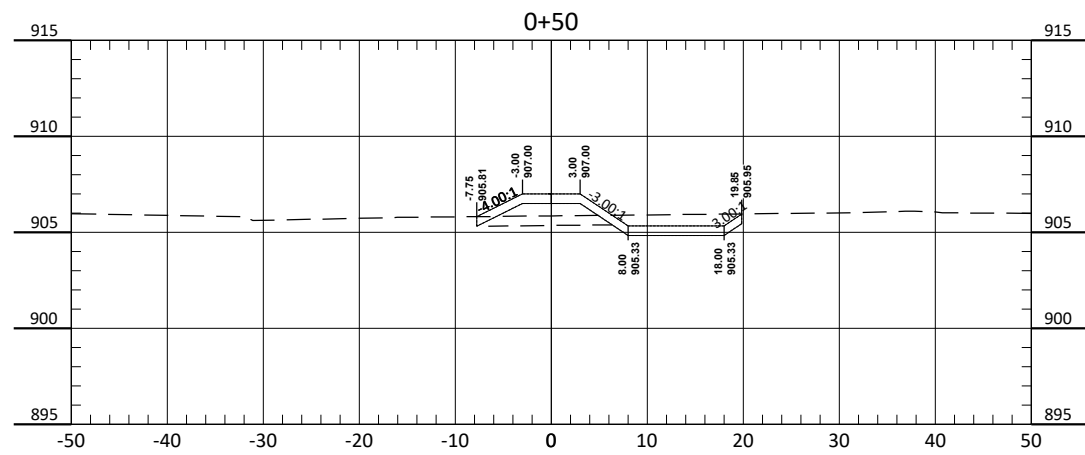
Tony A. Nordby

Tony A. Nordby
License No. 51392

Date: 11/27/2023

By	
Date	
Revision	
No.	
JASON & SABRINA CARDINAL RING DIKE RED LAKE WATERSHED DISTRICT SEC. 2, FAIRFAX TWP., POLK COUNTY PLAN & PROFILE	
Drawn By	TJO
Checked By	TAN
Date	11-15-2023
Scale	As Shown
Project No.	3655-0106
SHEET	4

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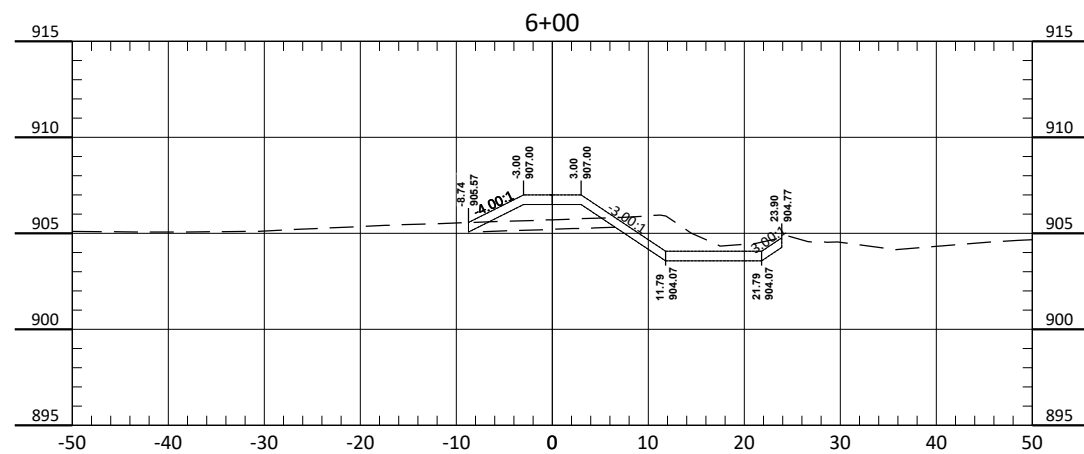
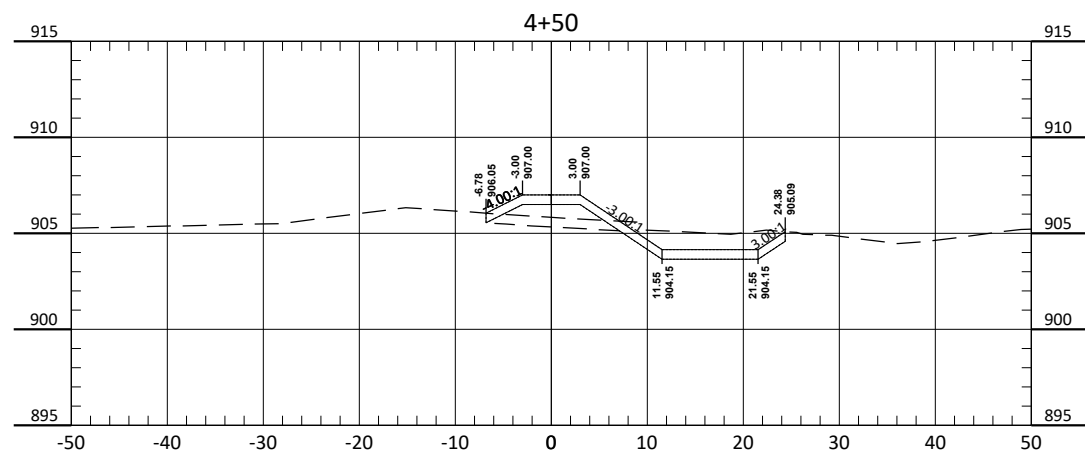
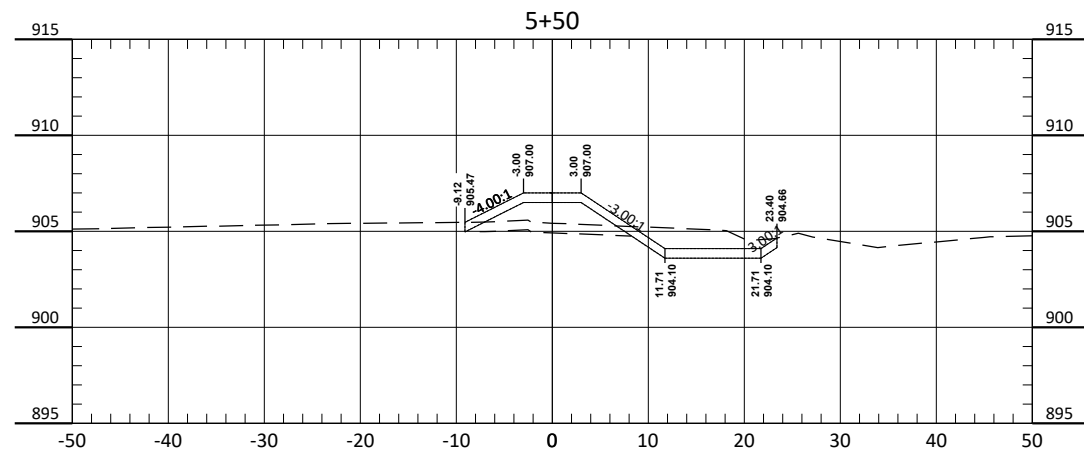
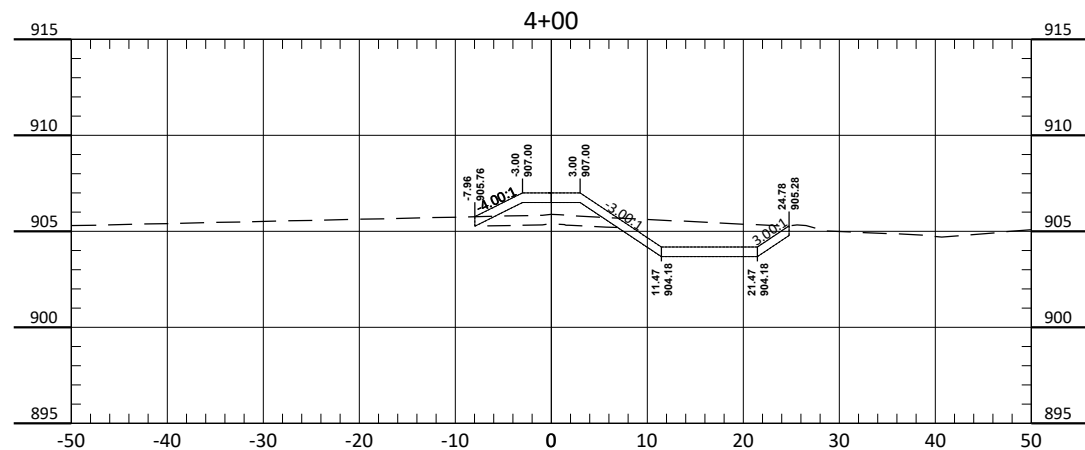
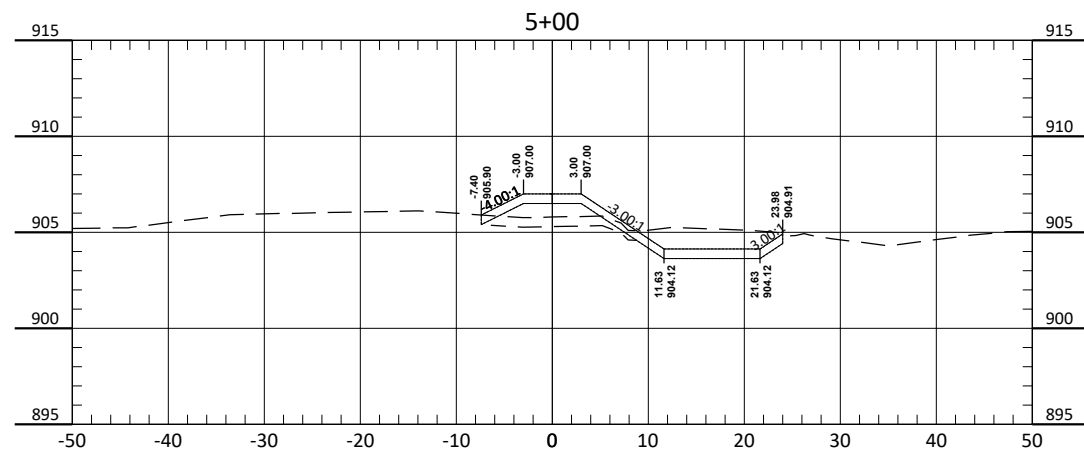
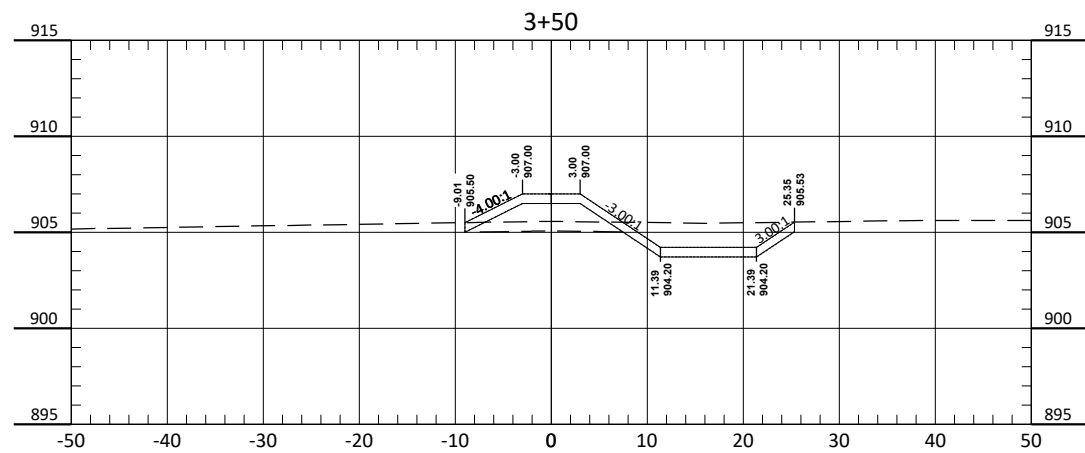
I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision, and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

Tony A. Nordby
 Tony A. Nordby
 License No. 51392

Date: 11/27/2023

By	
Date	
Revision	
No.	
JASON & SABRINA CARDINAL RING DIKE RED LAKE WATERSHED DISTRICT SEC. 2, FAIRFAX TWP., POLK COUNTY CROSS SECTIONS	
 Houston Engineering, Inc.	
Drawn By	TJO
Checked By	TAN
Date	11-15-2023
Scale	As Shown
Project No.	3655-0106
SHEET	
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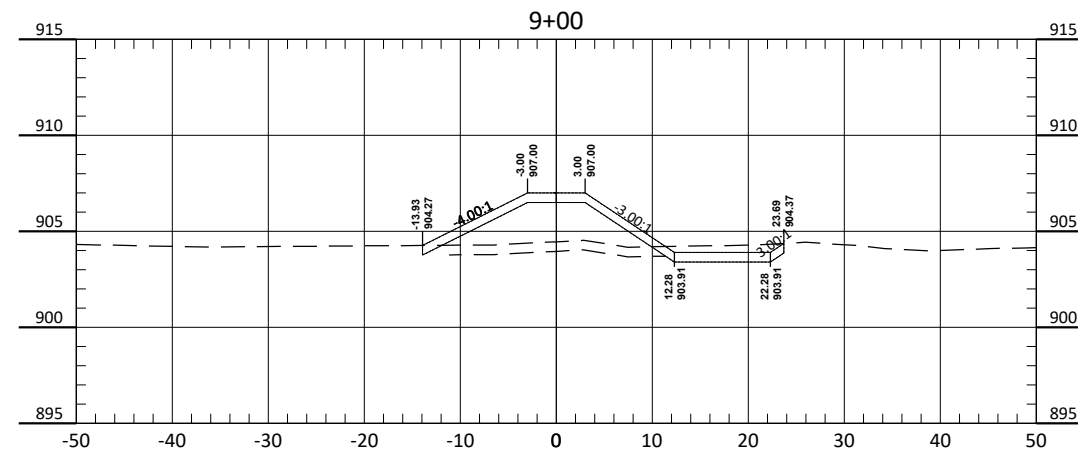
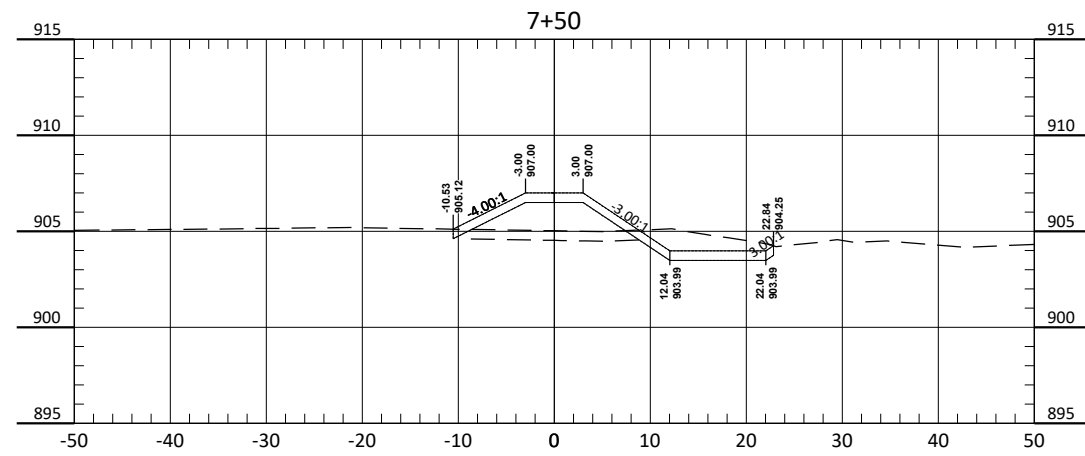
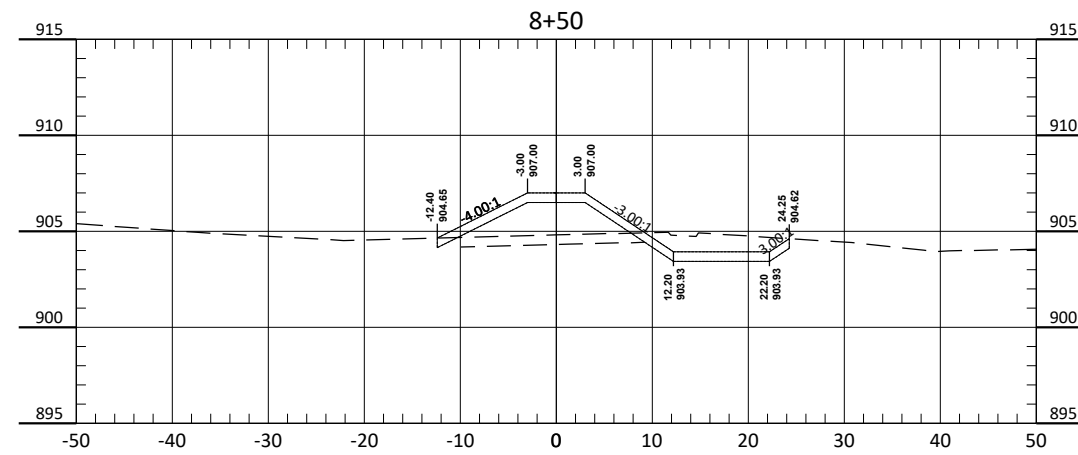
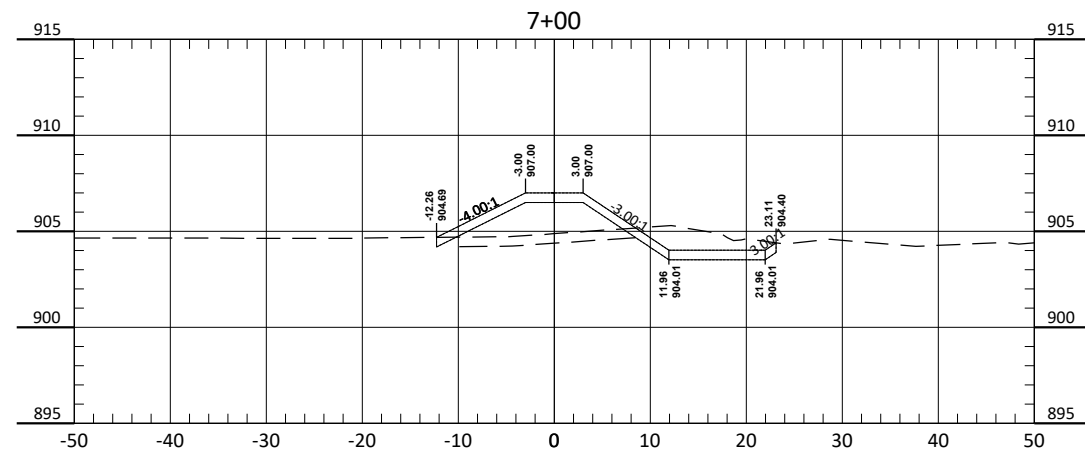
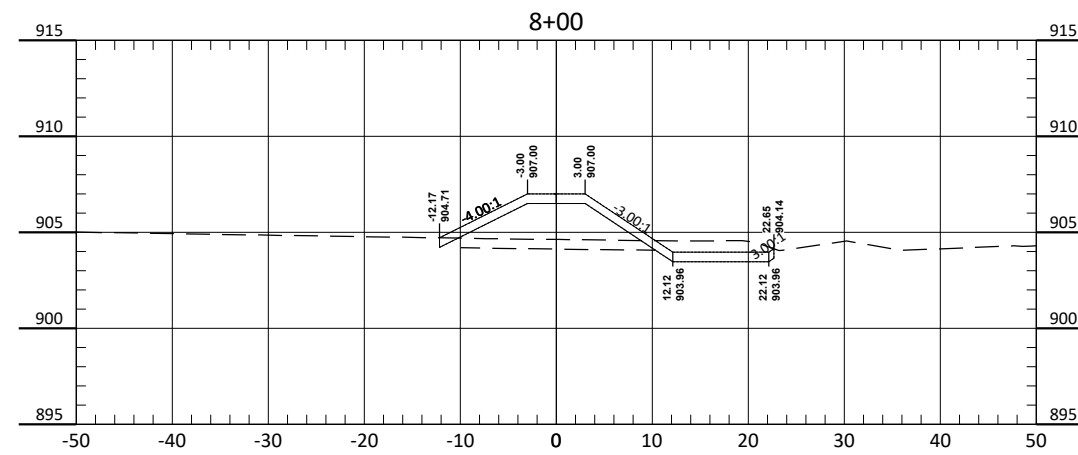
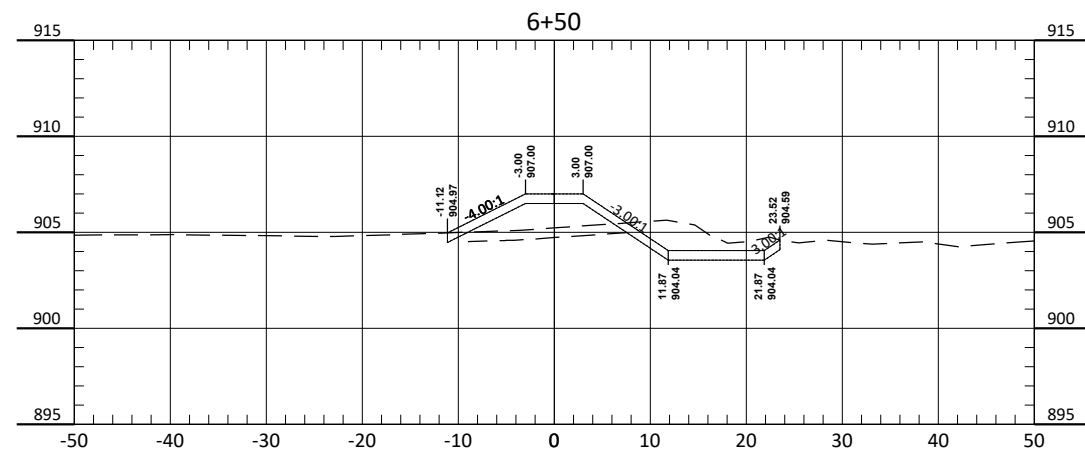
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Tony A. Nordby
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Date: 11/27/2023

By	
Date	
Revision	
No.	
JASON & SABRINA CARDINAL RING DIKE RED LAKE WATERSHED DISTRICT SEC. 2, FAIRFAX TWP., POLK COUNTY CROSS SECTIONS	
Drawn By	TJO
Checked By	TAN
Date	11-15-2023
Scale	As Shown
Project No.	3655-0106
SHEET	6

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Tony A. Nordby

Tony A. Nordby
License No. 51392

Date: 11/27/2023

No.	Revision	Date	By

JASON & SABRINA CARDINAL RING DIKE
RED LAKE WATERSHED DISTRICT
SEC. 2, FAIRFAX TWP., POLK COUNTY
CROSS SECTIONS



Drawn By
TJO

Checked By
TAN

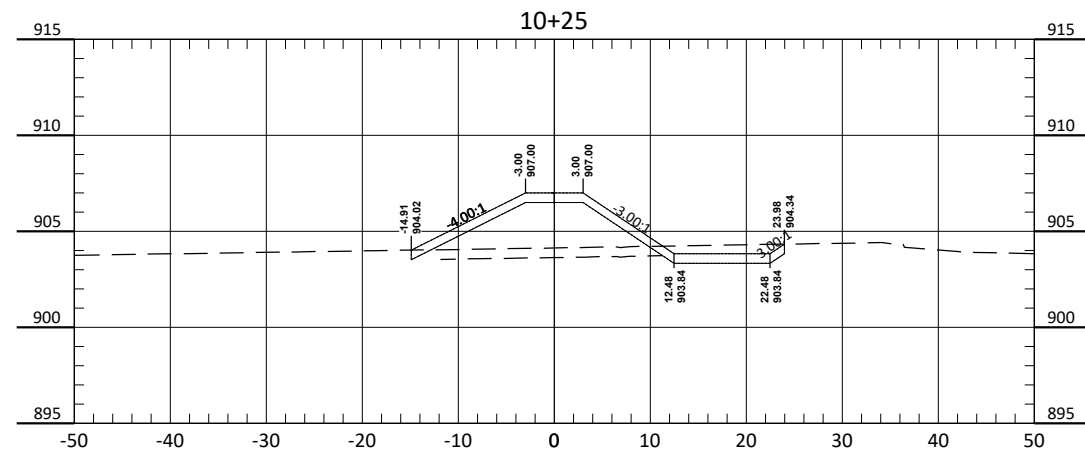
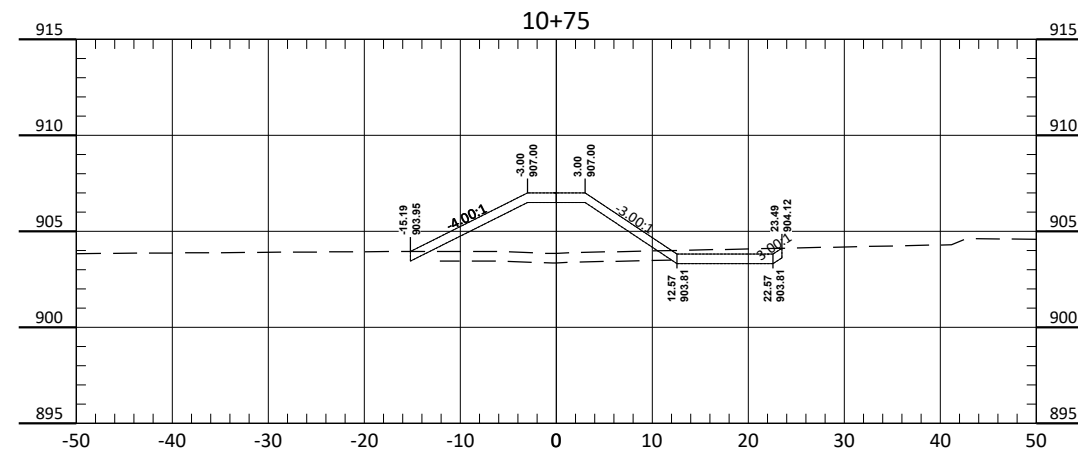
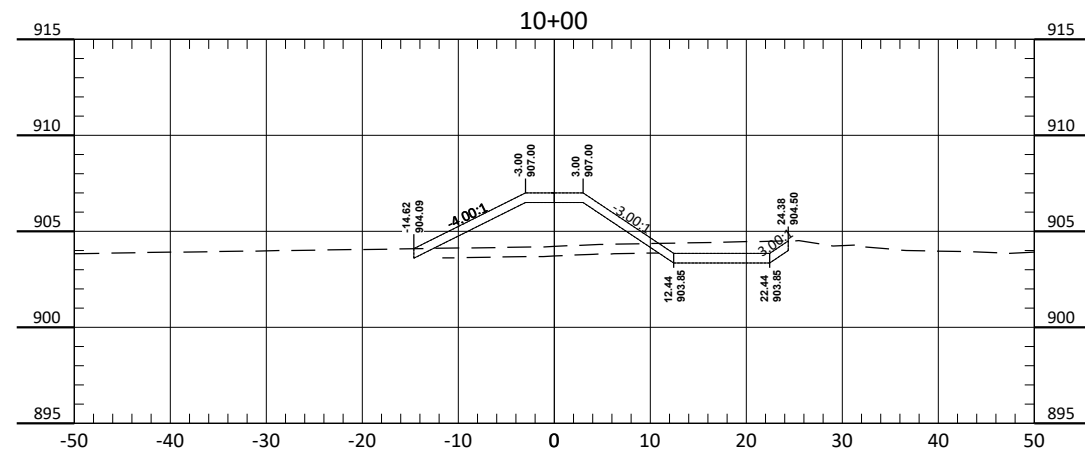
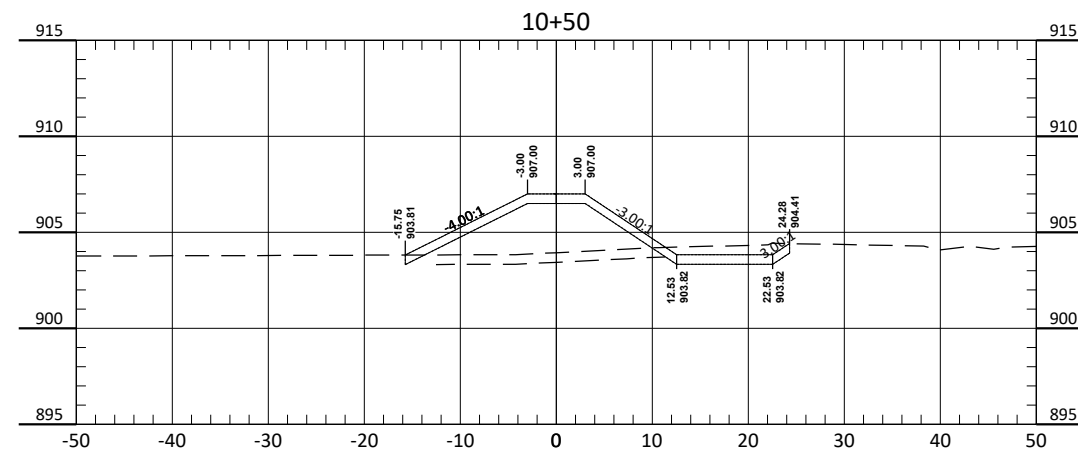
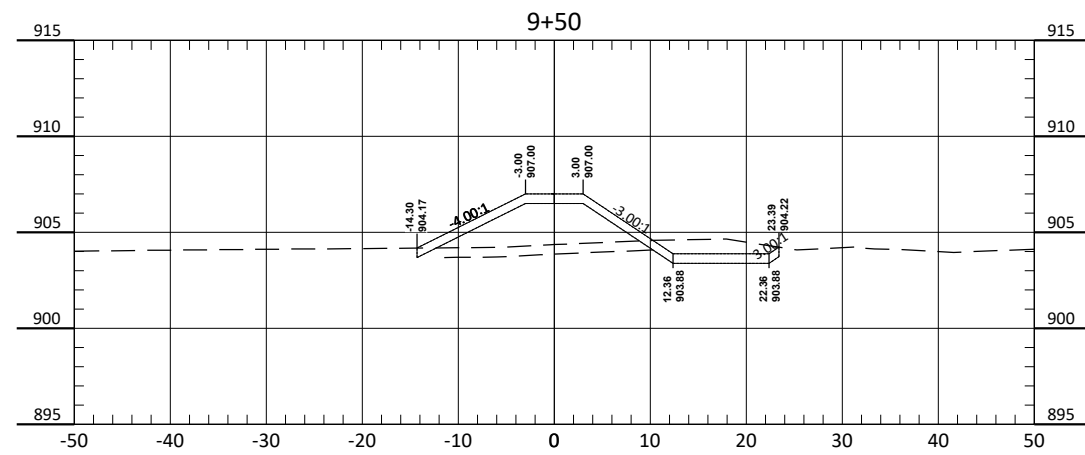
Date
11-15-2023

Scale
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Project No.
3655-0106

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No.	Revision	Date	By

JASON & SABRINA CARDINAL RING DIKE
 RED LAKE WATERSHED DISTRICT
 SEC. 2, FAIRFAX TWP., POLK COUNTY
 CROSS SECTIONS



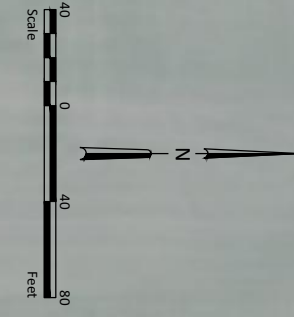
Drawn By	TJO
Checked By	TAN
Date	11-15-2023
Scale	As Shown
Project No.	3655-0106
SHEET	8

I hereby certify that this plan, specification, or 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.

Tony A. Nordby
 Tony A. Nordby
 License No. 51392

Date: 11/27/2023

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220TH AVE SW

SECTION 2
T149N R46W
(FAIRFAX TWP)

CULVERT END CONTROL

SEED MIXTURE 25-121

SEED MIXTURE 32-241

CLEARING AND GRUBBING


TURF ESTABLISHMENT (APPROXIMATELY 0.9 ACRES TOTAL) TO INCLUDE THE FOLLOWING ESTIMATED QUANTITIES AND APPLICATION RATES:

- A. SEED MIXTURE 32-241 = 20.9 LBS (38 LBS/ACRE) - EMBANKMENT
- B. SEED MIXTURE 25-121 = 21.4 LBS (61 LBS/ACRE) - EXTERIOR DITCH
- C. MULCH MATERIAL TYPE 1 = 1.8 TONS (2 TONS/ACRE)
- D. DISK ANCHORING = 0.9 ACRES
- E. CLEARING AND GRUBBING ESTIMATE 0.36 ACRES

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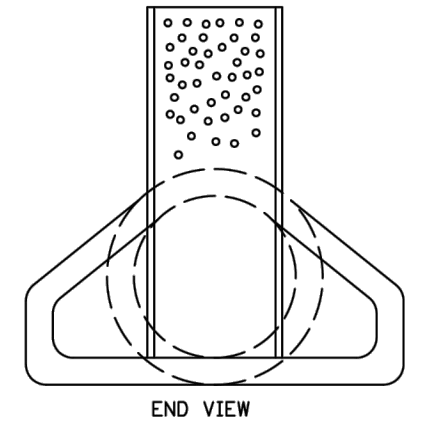
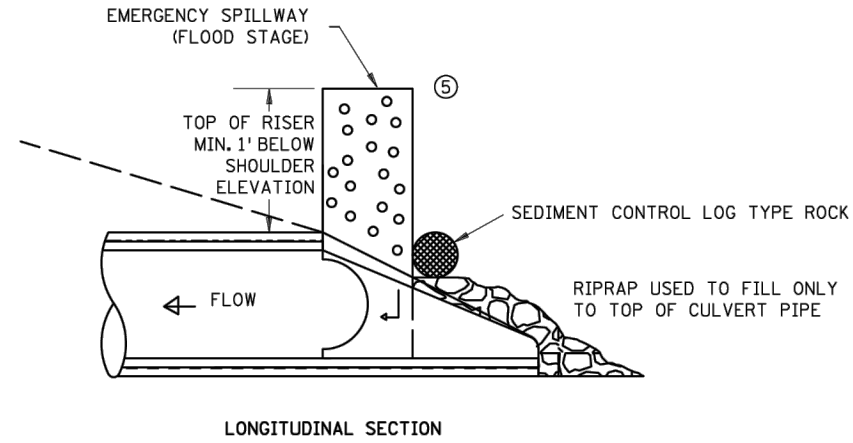
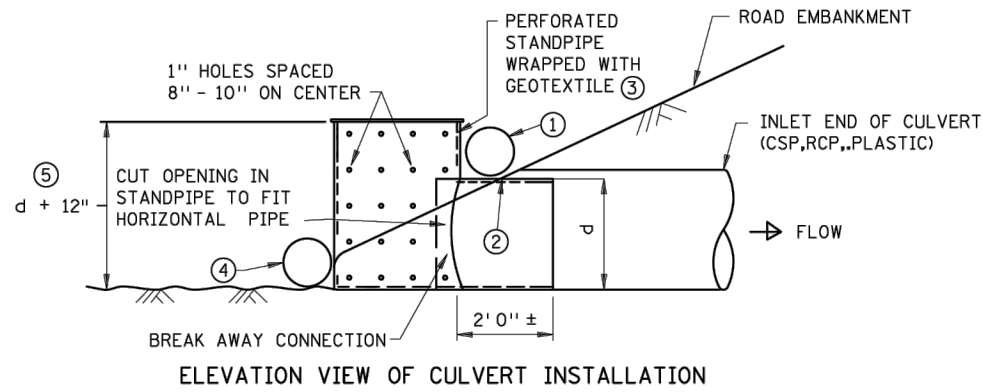
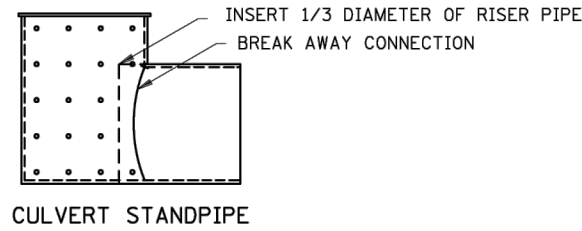
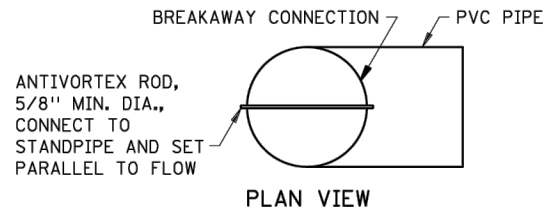
Tony A. Nordby
 Tony A. Nordby
 License No. 51392

Date: 11/27/2023

JASON & SABRINA CARDINAL RING DIKE RED LAKE WATERSHED DISTRICT SEC. 2, FAIRFAX TWP., POLK COUNTY		No.	Revision	Date	By
EROSION CONTROL PLAN					
 HOUSTON <small>engineering, inc.</small>		Drawn By	TJO	Checked By	TAN
		Date	11-15-2023	Scale	As Shown
		Project No.	3655-0106	SHEET	
				9	

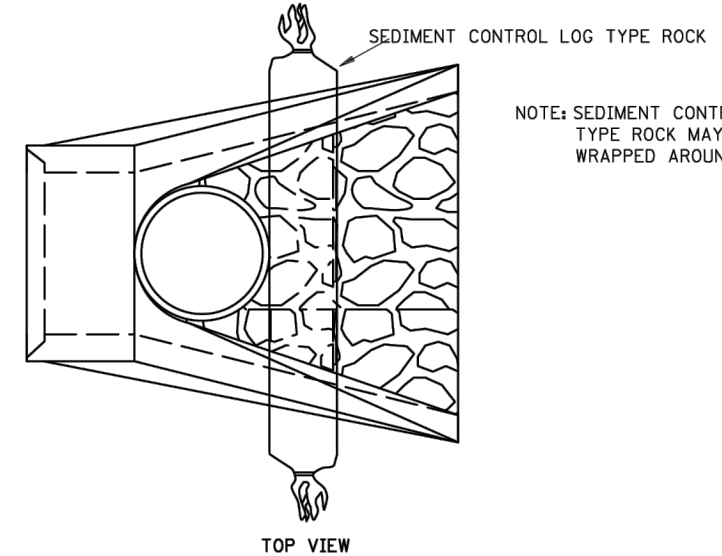
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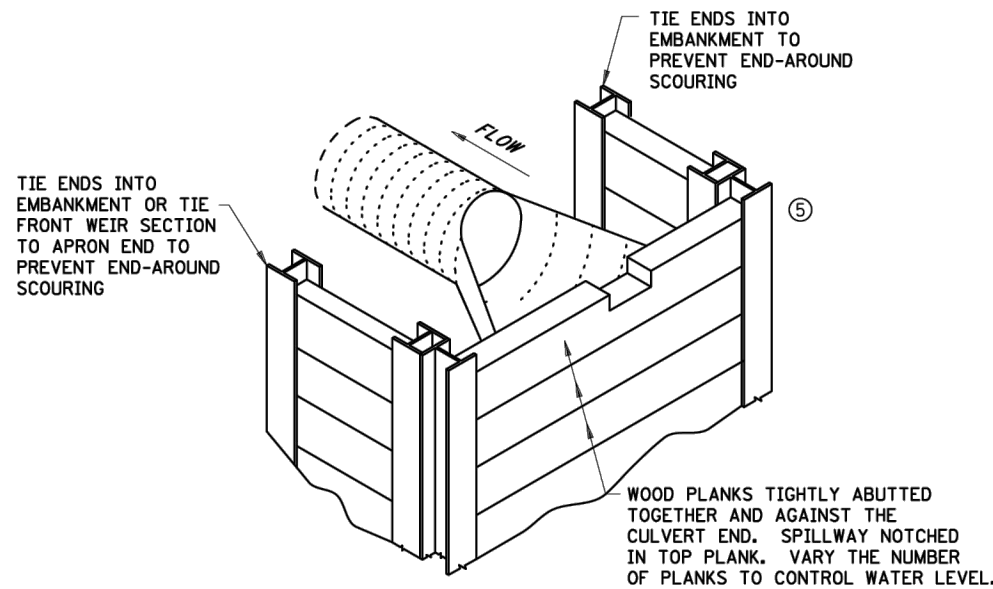
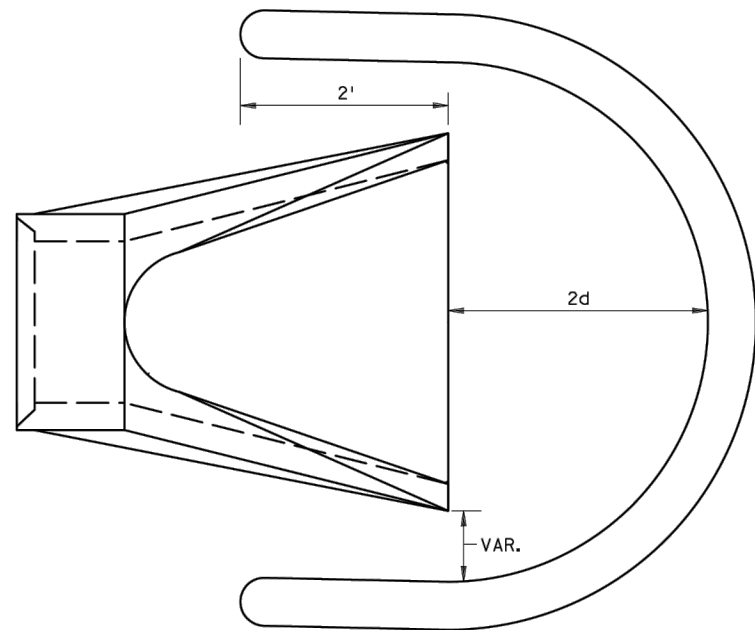


CULVERT STANDPIPE INSERT (D-RISER)

d= CULVERT SIZE: 12" - 36"



CULVERT STANDPIPE INSERT (D-RISER)



WOOD PLANK WEIR

NOTES:

- SEE SPECS. 2573, 3891 & 3893.
- FOR USE WHEN TEMPORARY PONDING IS NEEDED IN DITCH SECTIONS FOR SEDIMENT CONTROL.
- MANUFACTURED ALTERNATIVES LISTED ON MnDOT'S APPROVED PRODUCTS LIST MAY BE SUBSTITUTED AT NO ADDITIONAL COST.
- ① ROCK LOG OR SANDBAG TO HOLD STANDPIPE AND ACT AS A SEAL BETWEEN RISER PIPE AND CULVERT.
- ② PLACE CULVERT APRON AND SLIDE TEMPORARY STANDPIPE INTO CSP OR RCP CULVERT.
- ③ ALL GEOTEXTILE USED FOR CULVERT PROTECTION SHALL BE MONOFILAMENT IN BOTH DIRECTIONS, MEETING SPEC. 3886 FOR MACHINE SLICED.
- ④ ROCK LOG OR RIP RAP TO HOLD STANDPIPE AND ACT AS A FILTER BETWEEN RISER PIPE AND CULVERT.
- ⑤ HEIGHT OVERFLOW NOT TO CAUSE FLOODING OF ROAD OR ADJACENT PROPERTIES.

REVISION:
APPROVED: 2-28-2017
<i>[Signature]</i> CHIEF ENVIRONMENTAL OFFICER

I hereby certify that this plan, specification, or 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.
[Signature] Tony A. Nordby Date 11/27/2013
 License No. 51392



STANDARD PLAN 5-297.405

8 OF 8

[Signature]
STATE DESIGN ENGINEER

APPROVED: 2-28-2017
REVISED:

STATE PROJ. NO.

TEMPORARY SEDIMENT CONTROL

CULVERT END CONTROLS

(T.H.) SHEET NO. 10 OF 10 SHEETS

February 25, 2024

Tammy Audette
Red Lake Water Shed District
1000 Pennington Ave South, Thief River Falls, MN 56701

Subject: Quote for Purchase of MS4Front and Implementation of Permit and 1W1P Implementation Tracking Modules

Dear Ms. Audette

We would like to thank you for the opportunity to provide a quote for our MS4Front Software Platform. As per our discussion we are providing a quote for the use of our software platform for the districts permit tracking system. Our software platform allows users to configure as many data modules (aka "Pages") as needed for your organization. Another big enhancement is around a robust field solution. With this version of MS4Front it now integrates with your ESRI ArcGIS online account and allows you to leverage ESRI's Collector and Survey 123 mobile apps for a complete end to end solution. MS4Front is sold as a Software as a Service (SaaS) subscription by organizational license with unlimited user licenses for that organization.

Beyond the annual software subscription there are typically professional service fees for implementation activities such as module configurations, report creation, ArcGIS online integration, data migration (if applicable) and additional training. Our goal is to provide the most cost-effective solution possible while still being successful and sustainable for the future.

Deliverable 1: Purchase MS4Front, Configure and Migrate Data for Permit Program

Task 1 – Subscription to HEI's MS4Front Platform for Permit Program Tracking:

The cost of the annual subscription is \$6,000. The subscription will start at the beginning of the setup. The MS4Front subscription does not include professional services to assist organizations in implementation services.

Task 2 – Implementation of a Permit Data Module

HEI will lead the configuration of a permit module. Below are the subtasks that HEI will perform to complete the setup.

- Configure the permit module's sections and forms in MS4Front. The permit module will be configured as close to the Sand Hill River Watershed District's permit database data entry forms as possible but there could be slight changes to the data entry forms based on feedback from district staff.

- Integration of an ArcGIS online web map for the reference layers in the MS4Front map viewer.
- Configure advance searches and analytic cards in MS4Front.
- Creation of 2 letter report for permit issuance.
- Migration of the existing permit data to the new MS4Front configuration.
- HEI will facilitate meetings with RLWD to discuss the design and layout of a public application form that the district can use to place a link to on their website. The application form will allow the public to apply for a permit thru the district’s website and the information for the permit application will be inserted directly into the permit module inside MS4Front and create a new permit record for review. This implementation will include time for the design of the permit form on a webpage, setup the status workflow, creation of a permit received report and testing.

Cost Estimate: \$8,000 for the implementation of the permit module.

Cost Estimate Assumption: The cost assumes RLWD will provide access to their ArcGIS online for HEI to store and configure the GIS integration with MS4Front. ArcGIS online is provided by ESRI for free if the district has paid maintenance on a ArcGIS desktop software license.

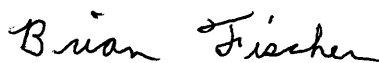
Cost Estimate Summary

Task	Estimate
Deliverable 1, Task 1 – MS4Front Subscription for Permit Program	\$6,000
Deliverable 1, Task 2 – Permit Module Implementation Services	\$8,000

If you have any questions, do not hesitate to reach out to me.

Sincerely,

HOUSTON ENGINEERING, INC.

A handwritten signature in black ink that reads 'Brian Fischer'.

Brian Fischer
Project Manager - Technology
Direct: 763.493.6664
bfischer@houstoneng.com

MS4FRONT
SOFTWARE AS A SERVICE
SUBSCRIPTION AGREEMENT

This Subscription Agreement ("Agreement") for use of the software service as described herein ("Service") is made between Houston Engineering, Inc. ("Provider") and the single business entity or organization identified as "Subscriber" in Schedule A hereto. In consideration of the payment by the Subscriber to Provider of the charges specified in Schedule B to this Agreement, Provider grants to the Subscriber a nonexclusive, worldwide access and use the Service in accordance with the following terms and conditions:

1. The Service.

(1) Provider shall provide to the Subscriber access to the MS4Front software product for MS4 permit compliance (the "Service"). The Specifications for the Service are provided in Schedule A hereto, which is incorporated by reference. Provider agrees that the Service will meet service level standards (SLAs) provided in Schedule A hereto, which is incorporated by reference.

(2) Provider shall promptly report to Subscriber any malfunctions in the System discovered by Provider or any cause for interruption or delay in the Services, together with Provider's proposed solution.

2. Term and Termination.

(1) Subject to the cancellation provisions set forth below, the minimum term for which the Service shall be provided to the Subscriber under this Agreement shall be twelve (12) months, commencing on start-up of the Service and satisfactory completion of reasonable testing and acceptance procedures for the Software and the Service in a "live" environment, as indicated by notice to be provided by Subscriber to Provider (the "Commencement Date"). The Service shall be subject to annual renewal, and payment to Provider and shall be renewed unless otherwise cancelled on or before the one year anniversary from the Commencement Date or any renewal date.

(2) Either party may cancel the Service after the expiration of the applicable minimum term. If Subscriber chooses to cancel the Service, they will provide ninety (90) days written notice and forfeit the remaining annual subscription fee for that year if applicable. If Provider chooses to cancel the Service they will provide the Subscriber one (1) year written notice.

(3) The Service may be cancelled at any time in the event that: (a) the Subscriber fails to pay the charges specified in Schedule B in accordance with Section 3, except as a result of a bona fide billing dispute, and such nonpayment is not cured within fifteen (15) days after Provider notifies the Subscriber of the nonpayment (it being understood that cancellation for such cause is solely Provider's option); or (b) either party is in material breach of this Agreement, and the breach is not cured within thirty (30) days after the non-breaching party notifies the breaching party of the breach (it being understood that cancellation for such cause is solely the non-breaching party's option).

(4) Except as expressly provided in this Agreement, any cancellation of the Service or termination of this Agreement shall not affect any accrued remedies or liabilities of either party and shall not affect or impair any provision of this Agreement which is expressly or by implication intended to come into force or continue in force on or after that cancellation or termination.

(5) In connection with any cancellation or termination of the Service, Provider will return or destroy all reports, files and data supplied to Provider by the Subscriber within 15 days after cancellation or termination. Provider will provide, at

Subscriber's cost, such assistance as Subscriber may reasonably request in order to accomplish a transition to another service provider, if applicable. If necessary, for Subscriber to meet legal and business requirements for the safekeeping and/or lookup of historical information, Provider shall permit Subscriber to retain a backup copy of the Service and/or employ a limited version of the Service, without charge.

3. Charges for Service.

(1) In return for the Service provided by Provider, the Subscriber agrees to pay the charges specified in Schedule B. The Subscriber may elect to add additional modules to the software at an additional fee to the subscriber.

(2) The charges set forth on Schedule B include API maintenance charges (if applicable), support (as described in the Schedule), and use of the number of browser-based user interfaces indicated in Schedule B.

(3) Subscriber is responsible for maintaining its own access to the Internet so as to access the Service, which is web-based.

(4) Subscriber shall also be responsible for payment of any and all sales, value added, use and other similar taxes or charges levied by any governmental, statutory, or regulatory authority in connection with Provider providing the Service under this Agreement. Provider agrees to consult with Subscriber before charging for any such taxes, and the parties will cooperate with each other to determine the amounts due and avoid the payment of taxes not legally required.

(5) The Subscriber shall pay to Provider, upon demand, interest accruing daily from the date an invoice becomes past due to the date of actual payment on any undisputed amounts which are thirty (30) days or more overdue under this Agreement at the rate of three per cent (3%) per annum.

4. Installation, Equipment and Support.

(1) The Subscriber shall promptly provide Provider with all information necessary for the configuration information necessary to provide the Service and will cooperate to facilitate prompt setup.

(2) As part of the Service, Provider shall provide to the Subscriber support for the Service during normal business hours (Central U.S. Time). Provider shall provide such support during Provider's normal business hours in accordance with the terms of the Schedule B.

5. Provider Software.

(1) Subscriber agrees that all software and related users' guides and documentation provided by Provider (collectively, the "Provider Software"), including all copies of the Provider Software, and all copyright and all other intellectual property rights in or relating to the Provider Software are and shall, as between the parties to this Agreement, remain the property of Provider. The Subscriber, acting itself and with its contractors and consultants, may use the Provider Software only in the ordinary course of its internal business and only on equipment that meets all the technical specifications provided in writing by Provider prior to execution of this Agreement.

(2) The Subscriber may not copy sell, transfer, rent, share, reverse engineer, decompile, copy, duplicate or translate into any language the Provider Software, or use the Provider Software or the Service to operate a service bureau for other users, except that the Subscriber may make copies of the Provider Software as necessary for Subscriber to have access to and use of the Service in accordance with this Agreement or for backup, test, training or development purposes. The Subscriber shall ensure that all copies of all or any part of the

Provider Software include all Provider's and its licensors' (if any) copyright and other proprietary rights notices.

(3) The Subscriber shall not modify any part of the Provider Software nor in any way make available to or provide copies of the whole or any part of the Provider Software to any third party.

(4) The Subscriber shall notify Provider promptly upon any unauthorized disclosure, use or copying of the Provider Software of which the Subscriber becomes aware.

6. Access to Service and Rights to Data.

(1) The Subscriber shall not permit anyone other than its employees (and any contractors or consultants who are responsible for supporting the Subscriber's relevant business operations) to use the Service, and agrees that the Service will be used only in accordance with the operating instructions and procedures established by Provider and provided from time to time by Provider to the Subscriber.

(2) Data and data compilations provided by Provider (except for data in the form supplied by the Subscriber or any data compilations including such data, which are and shall remain Subscriber's sole property) (collectively, the "Service Data"), and all database, copyright and other intellectual property rights in the Service Data, shall remain the property of Provider or its licensors, and no disclosure, reuse, extraction, re-transmission or storage of any of the Service Data shall be made except as necessary for use of the Service by the Subscriber hereunder or otherwise expressly permitted in writing by Provider. The Subscriber shall not gain or be entitled to assert any rights over the Service Data by virtue of the use or transmission of the Service Data on or through the Service. Subscriber shall ensure that the Service Data shall be kept confidential.

(3) Data cross references supplied by Provider or its licensors shall only be used with the Service and shall not be used for any other purpose.

7. Limitation of Liability.

(1) Provider will not be liable for the consequences of any decision taken by the Subscriber based on the Service Data or for any loss or damage that is, in whole or part, attributable to the Subscriber's failure to comply with this Agreement including, without limitation, Subscriber's obligations set out in Section 6.

(2) PROVIDER WARRANTS THAT THE SOFTWARE AND SERVICE WILL MEET ITS SPECIFICATIONS AND THAT THE SERVICE WILL BE PROVIDED IN A COMMERCIALY REASONABLE FASHION IN ACCORDANCE WITH INDUSTRY STANDARDS. ALTHOUGH PROVIDER WILL ENDEAVOR TO ENSURE THAT THE SERVICE DATA ACCURATELY REFLECTS INFORMATION AND DATA SUPPLIED TO IT BY THIRD PARTIES OR BY THE SUBSCRIBER, PROVIDER DOES NOT WARRANT THAT THE SERVICE DATA IS ACCURATE OR COMPLETE. IF PROVIDER DISCOVERS OR IS NOTIFIED OF ANY ERROR OR DEFICIENCY IN THE SERVICE DATA, PROVIDER WILL NOTIFY THE SUBSCRIBER AND TAKE COMMERCIALY REASONABLE EFFORTS TO CORRECT THE SAME.

(3) PROVIDER SHALL NOT BE LIABLE FOR ANY LOSS OR DAMAGE ARISING OUT OF ANY INACCURACY, ERROR OR OMISSION IN THE SERVICE DATA, HOWEVER THEY ARISE, UNLESS RESULTING FROM PROVIDER'S NEGLIGENCE OR WILLFUL MISCONDUCT, OR FOR ANY USE OR RELIANCE PLACED ON THE SERVICE DATA OR THE SERVICE.

(4) Provider will not be liable for any fault, delay or interruption to the Service or for any loss or damage that is in any way attributable to any data, information, equipment or software not supplied directly or indirectly by Provider or to any circumstances outside its control. The Subscriber will indemnify Provider against all losses, claims, expenses, costs, liability and

damages suffered or incurred by Provider in connection with: any claim or action by any client of the Subscriber or by any third party who has access to the Service or any information from or about the Service via the Subscriber; any claim or action which arises in connection with the Subscriber's failure or delay in complying with its obligations under this Agreement; and any claim or action by any counterparty or other person with whom the Subscriber has done business or is considering doing business; any act or omission of the Subscriber's including, without limitation, any decision to do or not to do business with that person, except in each case to the extent resulting from Provider's negligence or willful misconduct.

(5) In no circumstances whatsoever will either party be liable for any indirect, incidental or consequential loss or damage or for any loss of profits, loss of goodwill, loss of opportunity, or loss or spoiling of data, even if such party was advised of or knew of the likelihood of that loss or type of loss arising.

(6) The express terms of this Agreement are in lieu of all other warranties, conditions, terms and undertakings implied by statute, common law, custom, trade usage, course of dealing or otherwise, all of which are excluded and disclaimed to the fullest extent permitted by law.

(7) This Section 7 governs Provider's liability in respect of the Service, whether arising in tort (including negligence and willful misconduct), under these terms and conditions, this Agreement, the terms of any Service Level Agreement relating to the Service, any other agreement or document relating to the Service, or in any other way.

(8) Nothing in this Section 7 shall relieve Provider of liability for direct damages caused by the negligence or willful misconduct of Provider or Provider's violation of applicable law.

8. Confidentiality, Privacy and Security

(1) Except as otherwise expressly provided in this Agreement, Provider and Subscriber each agrees that (a) all information communicated to it by the other and reasonably known to be or identified as confidential, whether before or after the date hereof, (b) all other information reasonably known to be or identified as confidential to which it has access in connection with the Services, whether before or after the date hereof, and (c) technical specifications, nonstandard price and payment terms, or performance requirements applicable to the Services which are designated as confidential information of one party or the other, will be and will be deemed to have been received in confidence and will be used only for purposes of each party's (i) carrying out the terms of this Agreement, (ii) in Subscriber's case, using, managing, maintaining or replacing the System as its internal needs dictate, and (iii) as otherwise permitted by the Agreement.

(2) Each of Provider and Subscriber agrees to use the same means as it uses to protect its own confidential information, but in no event less than reasonable means, to prevent the unauthorized use or disclosure and to protect the confidentiality thereof. Except as otherwise permitted by the Agreement, no such information will be disclosed by the recipient party without the prior written consent of the other party; provided, however, that each party may disclose the other party's confidential information to those of the recipient party's employees, contractors, agents, attorneys, auditors, and insurers (if applicable) who have a need to have access to such information in connection with their employment (or engagement, if applicable) by the recipient party. The recipient party takes reasonable steps to require such individuals and entities to be bound by confidentiality obligations no less restrictive than those required hereunder.

(3) The foregoing will not prevent either party from disclosing information that (i) belongs to such party or is already known by the recipient party, free of any other confidentiality obligation (i.e., separate from the confidentiality obligation herein) directly or indirectly owed to the disclosing party, (ii) is publicly known or becomes publicly known through no unauthorized act of the recipient party, (iii) is rightfully received from a third party who is not

subject to any obligation of confidentiality directly or indirectly owed to the disclosing party, (iv) is independently developed without use of the other party's confidential information, or (v) is approved for unrestricted release by the disclosing party. If confidential information is required to be disclosed pursuant to a requirement of law (e.g., any applicable Freedom of Information or Public Records Act) or by lawful demand or order of a governmental authority, such confidential information may be disclosed pursuant to such requirement so long as the party required to disclose the confidential information, to the extent possible, provides the other party with timely prior notice of such requirement and coordinates with such other party in an effort to limit the nature and scope of such required disclosure, provided, however, that in the event of a tax audit or regulatory investigation, notice of a disclosure requirement in connection therewith will not be given, and the parties will use commercially reasonable efforts to ensure that any confidential information that is subject to a valid request for delivery of a copy of such information (including a copy of this Agreement) to the applicable government authority is not subject to further disclosure by it (such as by marking such information as a trade secret).

(4) Provider shall exercise reasonable care for the protection of personally identifiable information included in Subscriber's data processed by or stored by Provider pursuant to the Service and shall maintain reasonable data integrity safeguards against the deletion or alteration of such data. In the event that any such data is compromised, released, lost or destroyed, or there is any unauthorized intrusion into systems operated by Provider adversely affecting Subscriber data, then Provider shall notify Subscriber within 48 hours after Provider's discovery thereof and use commercially reasonable efforts to correct the matter.

(5) During the Term of this Agreement, both parties agree to comply with privacy laws directly applicable to their respective businesses. To the extent Subscriber is required by law to do so with respect to Subscriber data that is provided to Provider to perform the Services, Provider shall implement appropriate security measures, policies and procedures that are designed to meet applicable privacy laws.

9. Indemnification and Insurance

(1) Provider and Subscriber each will be responsible for any and all third party claims, actions, damages, liabilities, costs and expenses, including reasonable attorneys' fees and expenses (collectively, "Losses") to their respective tangible personal or real property or for personal bodily injury to its employees and agents except to the extent that such Losses result from the negligence or willful misconduct of the other party, its agents or employees.

(2) Provider and Subscriber each agrees to defend, indemnify and hold harmless the other party against any third party Losses to the extent that such action is based upon a claim that the systems, facilities or resources, including confidential information, provided by the indemnitor: (i) infringes a copyright recognized under United States statute, (ii) infringes a patent granted under United States law, (iii) constitutes an unlawful disclosure, use or misappropriation of another party's trade secret, or (iv) conflicts with or violates any contract limitation to which the indemnifying party is a party or otherwise subject. The indemnitor will bear the expense of such defense and pay any Losses that are attributable to such claim finally awarded by a court of competent jurisdiction at indemnitee's cost and expense.

10. Miscellaneous.

(1) This Agreement, including the Schedules attached hereto, constitutes the entire agreement of the parties on the subject matter of this Agreement, and supersedes all prior agreements and all oral or collateral representations, agreements and understandings between Provider and the Subscriber relating to that subject matter.

(2) Except as expressly provided in this Agreement, this Agreement may not be amended, waived or varied other than by an agreement in writing signed on behalf of both Provider and the Subscriber.

(3) Without the other party's prior written consent, neither party may assign, sublicense, transfer or otherwise dispose of any of its rights or subcontract, transfer or otherwise dispose of any of its obligations under this Agreement except to its present and future subsidiaries and affiliates and any successors to all or substantially all of its or their business. Subject to the foregoing, this Agreement shall inure to the benefit of, and shall be binding on, each party's respective successors and assigns.

(4) Notices under this Agreement shall be considered to have been duly given when delivered by hand, or two days after being mailed by first class, prepaid post, to Provider at 6901 East Fish Lake Road, Suite 140, Maple Grove, MN 55369-5400 or to the Subscriber at its address specified in Schedule A. Such addressees may be changed by notice given as provided in this Subsection (4).

(5) Failure by either party to enforce any term of this Agreement shall not be construed as a waiver.

(6) The invalidity, illegality or unenforceability of any of the provisions of this Agreement shall not affect the validity, legality and enforceability of the remaining provisions of this Agreement.

(7) Neither party shall be liable to the other for any delay or nonperformance of its obligations under this Agreement arising from any cause beyond its reasonable control. The party who so delays or fails to perform shall promptly notify the other party in writing of the cause and the likely duration of the cause.

(8) This Agreement is governed by and shall be construed in accordance with the laws of the United States and the State of North Dakota as it applies to a contract made and performed solely in such jurisdiction. Any dispute related to, or arising from, these terms or this Agreement shall be resolved by single-member arbitration in accordance with the AAA Commercial Rules of Arbitration, with such arbitration occurring in Fargo, North Dakota.

IN WITNESS WHEREOF, the parties hereto have executed and delivered this Agreement under seal.

Subscriber:

Provider:

Red Lake Watershed District

HOUSTON ENGINEERING, INC

By: _____
AUTHORIZED REPRESENTATIVE

By: _____
AUTHORIZED REPRESENTATIVE

Title: Administrator

Title: Vice President

Date: _____

Date: _____

SCHEDULE A

SUBSCRIBER (Name; Address; Primary Phone #):

Red Lake Watershed District
1000 Pennington Ave South
Thief River Falls, MN 56701

Subscribers Authorized Contact: Tammy Audette, Administrator, 218-681-5800

SOFTWARE AS A SERVICE (SaaS):

The Service is Provider's MS4Front software. See: www.ms4front.com. The MS4Front system is hosted on cloud servers and is accessible on a password-protected website via a web browser and standard internet connection. The service provides access to the software to the subscriber's organization with unlimited users for that organization. The service may not be shared with other individuals from other organizations under this agreement unless those individuals are contracted for services by the organization.

Software

Features include:

- Access to and entry of information via web-based interface
- Multiple users can simultaneously access the program
- Allows users account administrator the ability to control user permissions (i.e., full access, read only, or no access)
- Configurable pages and form fields to implement data management tracking for stormwater and water quality programs
- Web-based GIS mapping viewer
- Importing of existing databases in the provided template format in Microsoft Excel
- Exporting of MS4Front databases in Microsoft Excel format
- Ability to export data to commercially available formats
- Store photos of database records, screenings, inspections and maintenance actions

SOFTWARE SPECIFICATIONS:

MS4Front is a web-based application that requires a modern web browser to access. The software is designed for use on a personal computer web browser with a minimum resolution of 1024x768.

Supported Desktop Browsers:

- Microsoft Edge
- Mozilla Firefox
- Google Chrome
- Apple Safari

Mobile Support:

MS4Front may work on a mobile device such as an Ipad or smartphone device, but no guarantees are made with the software that all features will work on smartphones or tablets at this time. The web application was designed for a minimum screen resolution and touch events have not been tested. Mobile support for field use is provided thru ESRI's native mobile

applications.

Application Hosting:

MS4Front is a hosted solution. We strive for 100% uptime, but no guarantee can be made about uptime due to circumstance out of our control such as power outages. MS4Front makes every reasonable attempt to back up Subscriber's data on a nightly basis but does not retain every night's backup for the life of the service. Provider should make a reasonable attempt to export their data from time to time for a backup copy at Providers location.

Data Storage:

This subscription includes a 100GB storage limit for photos, attachments and videos for the account. Additional storage may be purchased if needed at a cost of \$100/year for additional 100GB blocks.

Software Security:

MS4Front is secured with SSL encryption.

Subscriber's Responsibilities

- Equipment (computers, monitors, smartphones, tablets, etc.)
- Internet access
- All data entry and management

SCHEDULE B

SaaS PRICING

Initial Account Creation and Set-up:

Provided under separate professional services agreement.

First Year Software as a Service Subscription Fee for MS4Front:

\$6,000

- Includes unlimited subscriber user accounts for staff of subscriber's organization
- All support requests must go through Subscribers authorized contacts

Annual Subscription Fee (starting on the renewal date of the 2nd year):

\$6,000

- Includes unlimited subscriber user accounts for staff of subscriber's organization
- All support requests must go through Subscribers authorized contact

3rd Party Licensing Requirements

- MS4Front can integrate with ESRI's mobile data collection apps. Subscriber is responsibility to provide appropriate licenses for their users to ESRI's mobile data collection apps, specifically Collector and Survey 123. Costs to integrate with ESRI's mobile data collection apps is included in initial setup and annual subscription fees.

Pricing Assumptions

- The provider reserves the right to increase annual subscription fees based on standard inflation rates and cloud server costs. Provider will provide 12 months' notice to subscriber of intent to increase any subscription fees. The provider will not increase the subscription fee for the year following the current active subscription by more than 10%.
- The provider reserves the right to create and sell optional modules that are developed to provide new functionality that is not included in the core software product.
- Professional service for configuration of modules, reports, custom features or data migration are not included in the subscription fee. These services can be provided upon request and a separate quote if needed.

Red Lake County SWCD
2602 Wheat Drive – Suite 103
Red Lake Falls, MN 56750

January 17, 2024

Tammy Audette, Administrator
Red Lake Watershed District
1000 Pennington Avenue
Thief River Falls, MN 56701

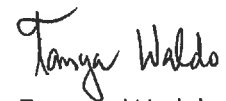
Red Lake County SWCD would like to request \$3,000.00, from the Red Lake Watershed District, for the installation of a Grade Stabilization Structure in Red Lake County.

The project that needs local assistance is in Emardville Township Section 31. The North POD has completed the survey and design work for this project. Red Lake County SWCD approved a bid from Knott's Excavating in the amount of \$18,814.00.

The Red Lake County SWCD would like to request \$3,000.00 from the Red Lake Watershed District to assist with the local match requirement for this project. The total project cost estimate was \$18,814.00. Red Lake County SWCD will be using BWSR Clean Water funding to fund 75% of this project. The local match requirement is \$4,703.50. The landowners will be responsible for paying \$1,703.50; if the Red Lake Watershed District approves the \$3,000.00 request.

If you have any questions, please give me a call at (218)253-2593.

Thank you,



Tanya Waldo, District Manager
Red Lake County SWCD

Date: Friday, July 21, 2023



VICINITY MAP

The landowner is responsible for locating and staking all existing tile lines prior to commencing any construction. The SWCD assumes no responsibility for damage to existing tile lines.

Minnesota specifications for conservation practices apply for all materials and construction work. These specifications are part of this plan.

The Owner shall notify the Engineer and SWCD at least two (2) working days prior to the start of construction.

NOTE: Changes in the drawings or specifications must be authorized by the owner and the NRCS, Engineer, or SWCD representative with the proper approval authority.

The owner is responsible for obtaining land rights and local, state, and federal permits or other permission necessary to perform and maintain the practice.

Before start of construction, the owner(s) of any utilities involved must be notified. State law requires the excavator is responsible for giving notice by calling "Gopher State One-Call" at (651) 454-0002 (twin cities metro area) or (800) 252-1166 (all other locations) at least 48 hours prior to any excavation.

GSOC Number _____

CONSTRUCTION CERTIFICATION

This installation meets NRCS standards

and specifications. Yes No

Inspected by: _____

Certified by: _____

Date: _____

NOTE: HORIZONTAL / VERTICAL ACCURACY UNKNOWN

HORIZONTAL DATUM: UTM ZONE 15 NORTH, NAD 1983
VERTICAL DATUM: NAVD 88, GEOID 18
US SURVEY FEET

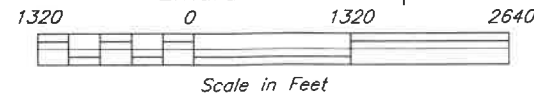
Detail Plans for Randy Pahlen
WASCB (638) & Underground Outlet (620)
Red Lake County, Minnesota
Total Drainage Area: 51.2 Acres

Project Location

R. 42 W.



LOCATION MAP
Emardville Township



INDEX OF DRAWINGS table with columns for Sheet Number and Title.

STATEMENT OF ESTIMATED QUANTITIES table with columns for AS-BUILT, QUANTITY, UNIT, ITEM, and SPEC.

- Notes: 1. Dual-Wall Tile to be Watertight
2. Oversize band needed to connect apron to dual-wall
3. Riser shall be dual-wall
4. Intake Assembly includes fittings necessary to make connections.

I have reviewed and understand the plans and specifications and agree to complete the work accordingly. Failure to meet these plans and specifications may jeopardize any cost share applied for. I understand that it is my responsibility to secure all necessary permits and licenses, and to complete the work in accordance with all local, state, and federal laws. Modifications of these plans or specifications must be approved by the Engineer before installation. I assume responsibility for negotiations and agreements with the contractors.

COOPERATORS SIGNATURE DATE

Revision table with columns for No., Revision, Date, and By.

COVER SHEET
WASCB (638) & Underground Outlet (620)
Randy Pahlen

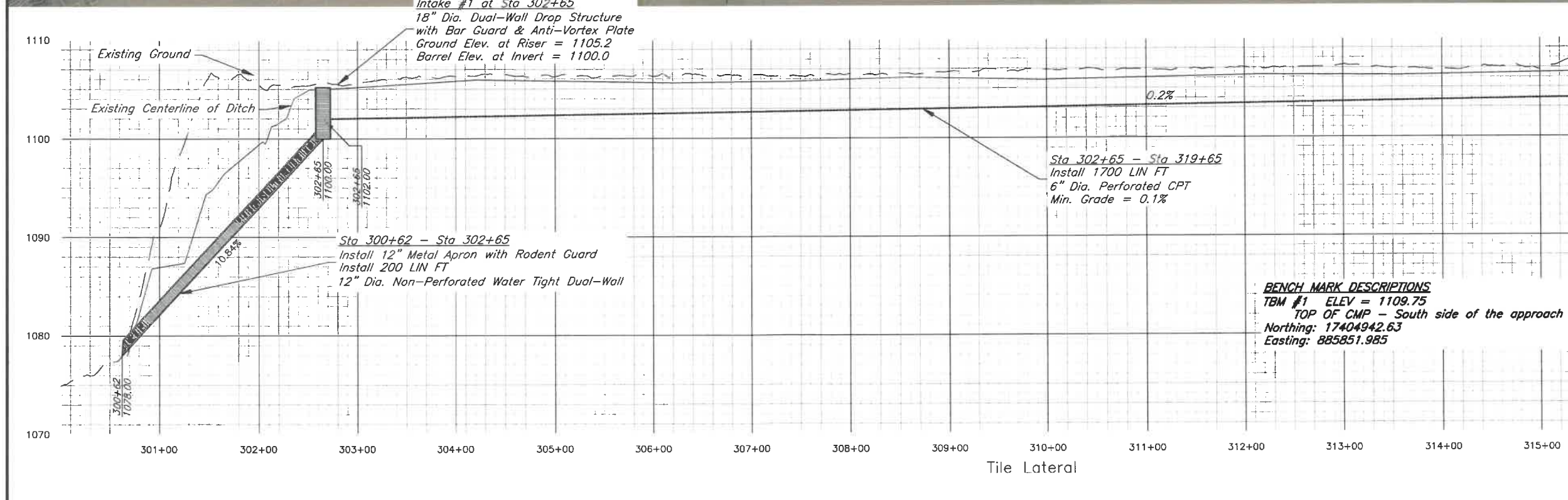
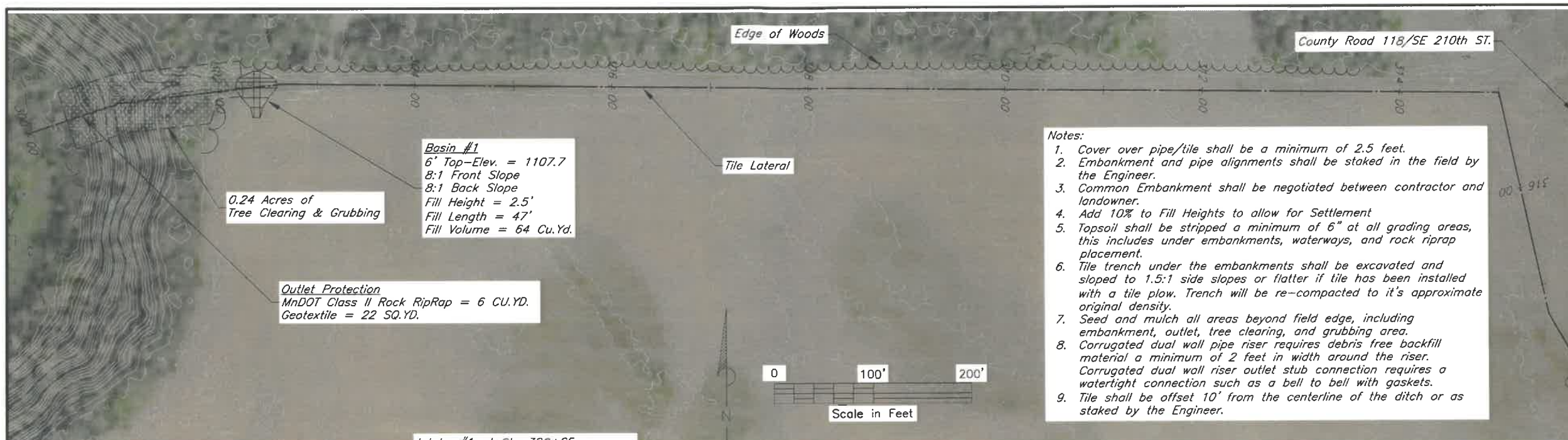


Red Lake SWCD
Designed Logan Handyside 3/17/2023
Drawn LAH 3/17/2023
Checked LAH 7/21/2023

I hereby certify that this plan, specification, or 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.
Signature: Logan Handyside Date: 7/21/2023 License #55889

File Name Pahlen.dwg
Eng. Job Class 1
Sheet 1 of 5

Date: Friday, July 21, 2023



No.	Revision	Date	By

CONSTRUCTION PLAN AND PROFILE
 WASCB (638) & Underground
 Outlet (620)

Randy Pahlen

Red Lake SWCD
 Date: 3/17/2023

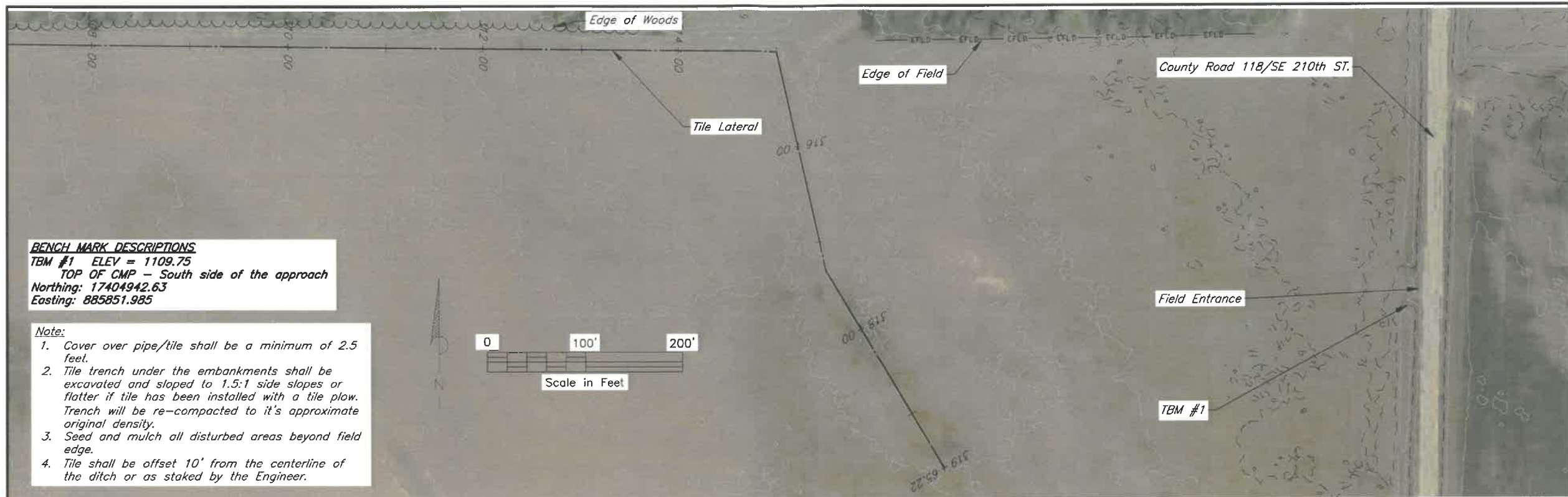
Designed: Logan Handyside
 Drawn: LAH
 Checked: LAH

I hereby certify that this plan, specification, or 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.

Signature: *Logan Handyside* Date: 7/21/2023 License #55889

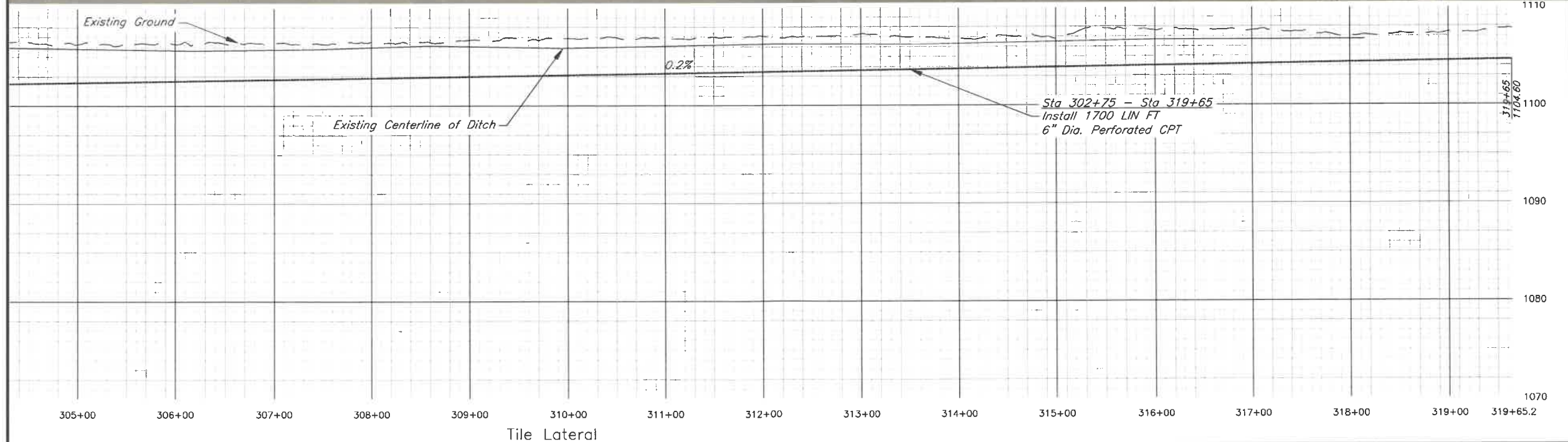
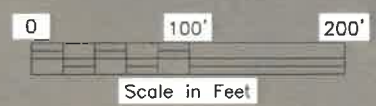
File Name: Pahlen.org
 Eng. Job Class: 1
 Sheet 2 of 5

Date: Friday, July 21, 2023



BENCH MARK DESCRIPTIONS
TBM #1 ELEV = 1109.75
 TOP OF CMP - South side of the approach
 Northing: 17404942.63
 Easting: 885851.985

- Note:**
1. Cover over pipe/tile shall be a minimum of 2.5 feet.
 2. Tile trench under the embankments shall be excavated and sloped to 1.5:1 side slopes or flatter if tile has been installed with a tile plow. Trench will be re-compacted to it's approximate original density.
 3. Seed and mulch all disturbed areas beyond field edge.
 4. Tile shall be offset 10' from the centerline of the ditch or as staked by the Engineer.



No.	Revision	Date	By

CONSTRUCTION PLAN AND PROFILE
 WASCB (638) & Underground
 Outlet (620)
 Randy Pahlen

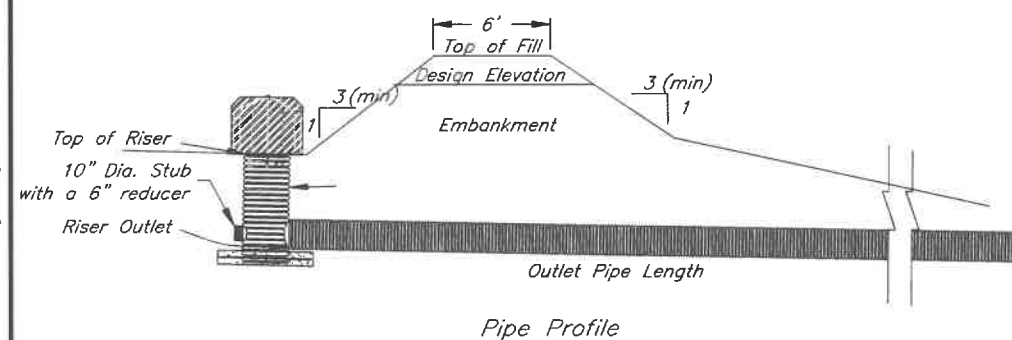
Red Lake SWCD
 Date
 Designed Logan Handyside 3/17/2023
 Drawn LAH 3/17/2023
 Checked LAH 7/21/2023



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 Signature: Logan Handyside Date: 7/21/2023 License #55889

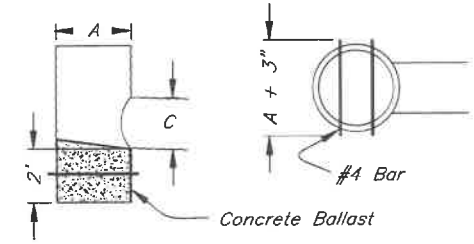
File Name
 Pohlen.dwg
 Eng. Job Class
 1
 Sheet 3 of 5

Date: Friday, July 21, 2023



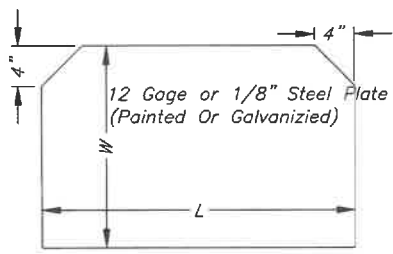
Pipe Profile

Quantities for Riser Base	
Diameter of Riser	18"
Concrete, CU YD	0.8
Steel Reinforcement - #4 Bars, LN FT	28
Number of Bars	8



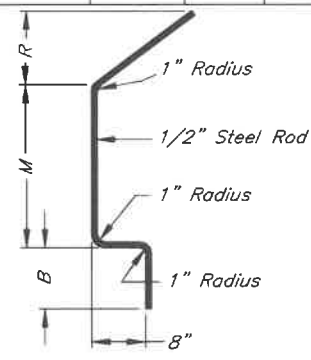
Riser Details

Trash Rack & Anti-Vortex Dimensions							
Pipe I.D. In.	Strap Dia. In.	S In.	B In.	M In.	R In.	W In.	L In.
12	11 1/4	5-6	9	9	12	N/A	N/A
15	14 1/4	5-6	9	9	13	N/A	N/A
18	17 1/4	6-7	9	9	14	N/A	N/A
24	23 1/4	7-8	12	15	11	25	40
30	29 1/4	8-9	12	18	10	27	46

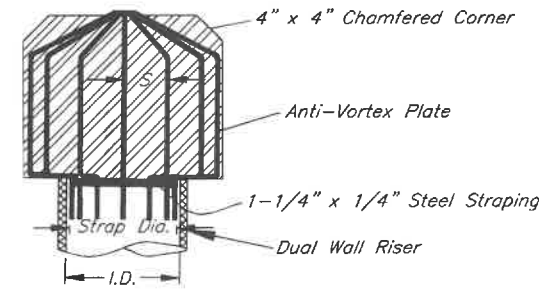


Anti-Vortex Detail

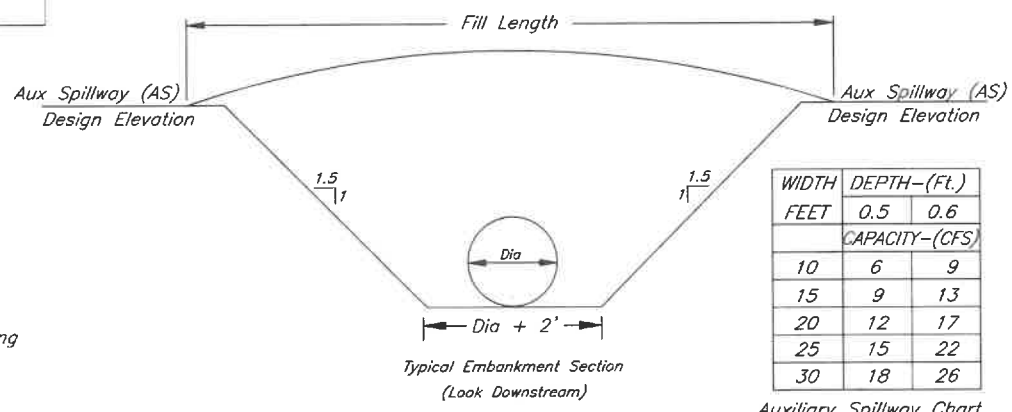
- Construction Notes**
- The rounded trench bottom should closely fit the outside of the pipe to provide sufficient support of the pipe. A rounded trench may be formed with a half attachment to an excavator bucket, also referred to as a spoon. If spoon trench bottom procedure is not implemented, hand tamping and shoveling under the pipe is required to fill voids.
 - Fill material shall be compacted to density equal to adjoining undisturbed ground. Dozer compaction will require complete coverage of the area with the track and lifts not to exceed 5" before compaction.
 - All pipe shall be installed to the grade shown on the drawings and properly placed to provide lateral restraint against deflection and collapse of the tubing. A minimum of 2.5 ft of cover over the top of the tubing is required, except near the outlet. Trench depths over 5 ft will require OSHA approved trenching procedures.
 - Contractor may use a reducing tee or prefabricated elbow in place of the drop structure.



Rod Bending Detail



Trash Rack/Anti-Vortex Detail



Typical Embankment Section (Look Downstream)

WIDTH FEET	DEPTH-(Ft.)	
	0.5	0.6
	CAPACITY-(CFS)	
10	6	9
15	9	13
20	12	17
25	15	22
30	18	26

Auxiliary Spillway Chart (Design Q - Pipe Q)

MNDOT II	MNDOT III
Pipe Q < 25 cfs	Pipe Q < 38 cfs
T - 15"	T - 24"
H - 2.5'	H - 3'
100% - 12"	100% - 18"
75% - 9"	75% - 12"
50% - 6"	50% - 9"
10% - 2"	10% - 3"

LDS

Pipe #	Riser Dia. (A)	Riser Height (B)	Outlet Dia. (C)	Outlet Height (D)	6" Structure Support Tile (F)	Top Fill Elev	Asbuilt Top Fill Elev	Design Elev	Asbuilt Design Elev	Riser Elev	Asbuilt Riser Elev	Riser Out Elev	Asbuilt Riser Out Elev	Outlet Pipe Length	Asbuilt Pipe Length	Fill Length	Asbuilt Fill Length	Design Q(cfs)	Pipe Q(cfs)	AS Depth	AS Width	Outlet Ditch Elev	Outlet Rock Class
1	18"	74"	12"	62"	38"	1108.0		1107.7		1105.2		1100.0		200'		47'		12.1	8.5			1078	II

* 6 degree angle from invert of drop structure to outlet

No.	Revision	Date	By

PROJECT DETAILS
WASCB (638) & Underground Outlet (620)
Randy Pahlen



Red Lake SWCD
Date
Designed Logan Handyside 3/17/2023
Drawn LAH 3/17/2023
Checked LAH 7/21/2023

I hereby certify that this plan, specification, or 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.
Signature: Logan Handyside Date: 7/21/2023 License #55889

File Name Pahlen.dwg
Eng. Job Class I
Sheet 4 of 5

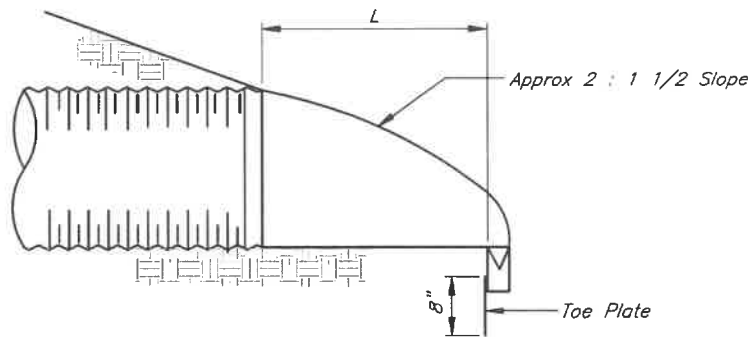
Date: Friday, July 21, 2023

PIPE DIA	SHEET THICKNESS	DIMENSIONS					
		A * 1"	B MAX	H * 1"	L * 1 1/2"	W * 2"	C
12"	.064"	6"	6"	6"	21"	24"	24"

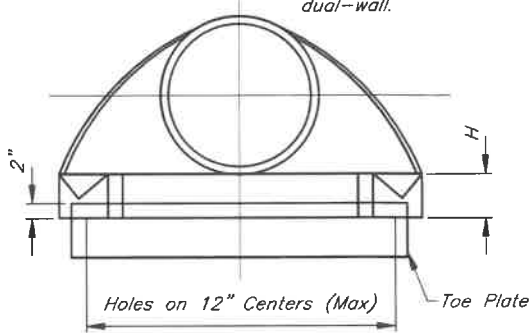
* = Tolerance

METAL APRON NOTES:

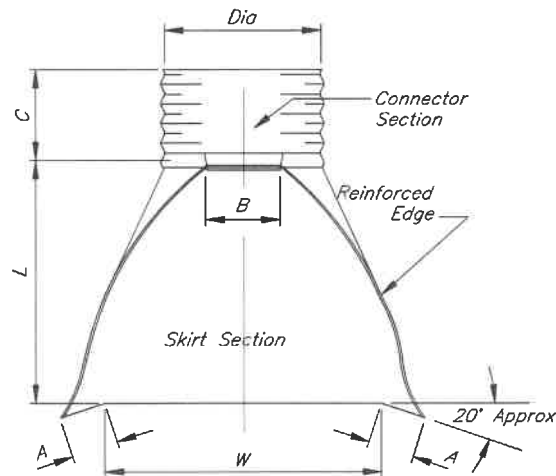
1. Toe plate, where needed, to be punched to match holes in skirt lip. 3/8" galv. bolts to be furnished. Length of toe plate is W+10" for 12" to 30" dia. pipe and W+22" for 36" to 60" dia. pipe.
2. Skirt section for 12" to 30" dia. pipe to be made in one piece.
3. Connector section, corner plate and toe plate to be same sheet thickness as skirt.
4. End sections and fittings are to be galvanized steel or aluminum alloy for use with like pipe.
5. Will need an oversized band to connect to dual-wall.



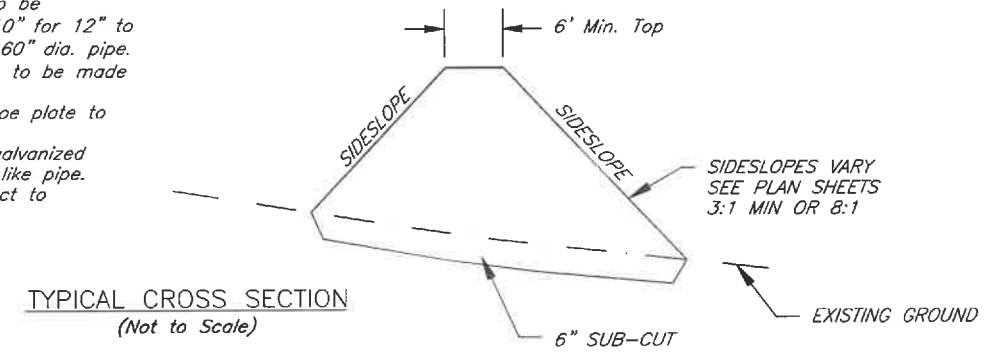
TYPICAL CROSS SECTION



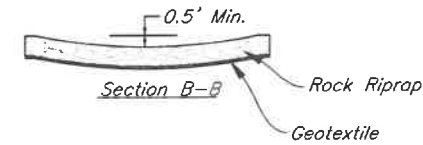
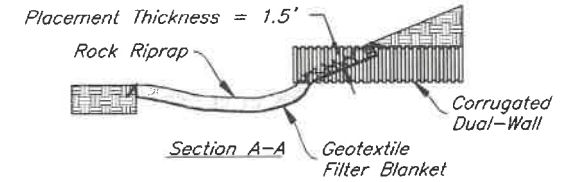
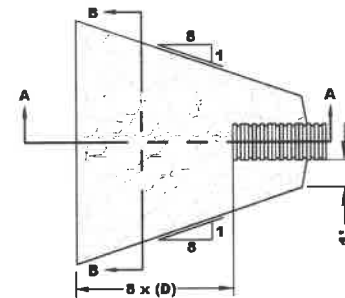
ELEVATION



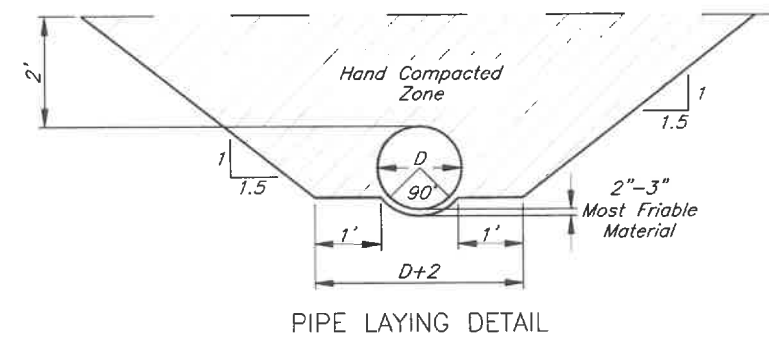
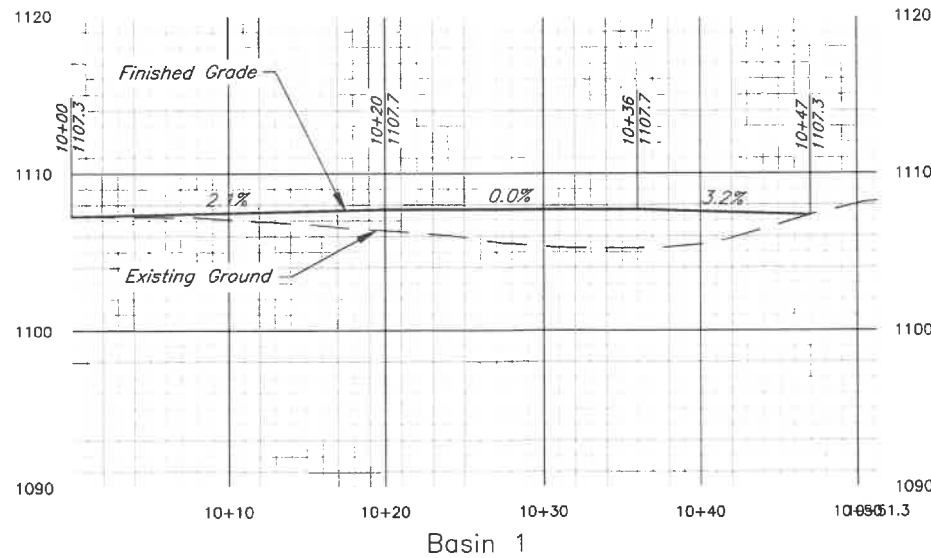
PLAN



TYPICAL CROSS SECTION
(Not to Scale)



Typical Pipe Outlet Riprap Detail
(Not to Scale)



PIPE LAYING DETAIL

No.	Revision	Date	By

PROJECT DETAILS
WASCB (638) & Underground
Outlet (620)
Randy Pahlen



Red Lake SWCD
Date: 3/17/2023
Designed: Logan Handyside
Drawn: LAH
Checked: LAH
Date: 7/21/2023

I hereby certify that this plan, specification, or 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.
Signature: Logan Handyside
Date: 7/21/2023
License # 55889

File Name: Pahlen.dwg
Eng. Job Class: 1
Sheet 5 of 5

Red Lake County SWCD
2602 Wheat Drive – Suite 103
Red Lake Falls, MN 56750

February 26, 2024

Tammy Audette, Administrator
Red Lake Watershed District
1000 Pennington Avenue
Thief River Falls, MN 56701

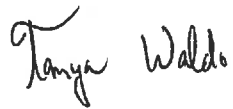
Red Lake County SWCD would like to request \$5,000.00, from the Red Lake Watershed District, for the construction of two Grade Stabilization Structures in Red Lake County.

The project that needs local assistance is in Gervais Township Section 31. Houston Engineering has completed the survey and design work for this project. Red Lake County SWCD approved a bid from Ryan's Backhoe Service in the amount of \$30,266.04 at the February 12, 2024 SWCD Board Meeting.

The Red Lake County SWCD would like to request \$5,000.00 from the Red Lake Watershed District to assist with the local match requirement for this project. The total project bid was \$30,266.04. Red Lake County SWCD will be using BWSR Clean Water funding to fund 75% of this project. The local match requirement is \$7,566.51. The landowner will be in charge of paying \$2,566.51; if the Red Lake Watershed District approves the \$5,000.00 request.

If you have any questions, please give me a call at (218)253-2593.

Thank you,



Tanya Waldo, District Manager
Red Lake County SWCD

DARREL-DANNY PAYMENT - GRADE STABILIZATION PROJECT
SECTION 31, GERSVAIS TWP.
OPINION OF PROBABLE COST
RED LAKE COUNTY SWCD

8/26/2022

Bid Item No.	Description	Unit of Measure	Contract Quantity	Unit Price (\$)	Contract Amount (\$)
2021.501	MOBILIZATION	LUMP SUM	1	\$2,500.00	\$2,500.00
2106.507	COMMON EMBANKMENT (P) (CV)	C.Y.	265	\$12.00	\$3,180.00
2503.503	18" CP PIPE SEWER (SMOOTH)	LIN. FT.	236	\$55.00	\$12,980.00
2503.601	24" CP PIPE RISER (SMOOTH)	LIN. FT.	22	\$475.00	\$10,450.00
2503.602	24" ANTI-VORTEX TRASH RACK	EACH	2	\$1,000.00	\$2,000.00
2511.507	RANDOM RIPRAP CLASS II	C.Y.	34	\$125.00	\$4,250.00
2575.501	TURF ESTABLISHMENT	LUMP SUM	1	\$1,200.00	\$1,200.00
Total Construction Cost =					\$36,560.00

DARREL-DANNY PAYMENT - GRADE STABILIZATION PROJECT
SECTION 31, GERVAIS TWP.
BID FORM
RED LAKE COUNTY SWCD

8/26/2022

Bid Item No.	Description	Unit of Measure	Contract Quantity	Unit Price (\$)	Contract Amount (\$)
2021.501	MOBILIZATION	LUMP SUM	1	1,200.00	1,200.00
2106.507	COMMON EMBANKMENT (P) (CY)	C.Y.	265	9.00	2,385.00
2503.503	18" CP PIPE SEWER (SMOOTH)	LIN. FT.	236	38.39	9,060.04
2503.601	24" CP PIPE RISER (SMOOTH)	LIN. FT.	22	383.00	8,426.00
2503.602	24" ANTI-VORTEX TRASH RACK	EACH	2	1,047.50	2,095.00
2511.507	RANDOM RIPRAP CLASS II	C.Y.	34	100.00	3,400.00
2575.501	TURF ESTABLISHMENT	LUMP SUM	1	3,700.00	3,700.00
Total Bid Amount =					

\$30,266.04

Contractor's Signature: Ryan SL

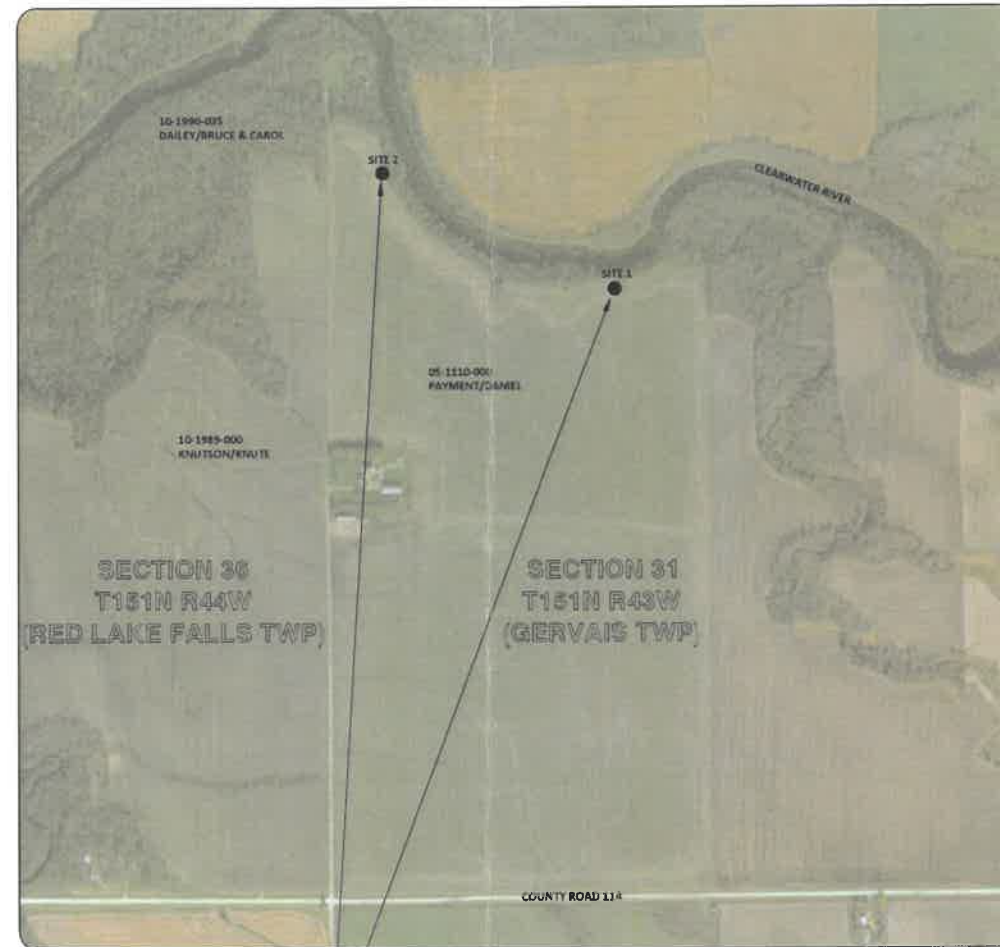
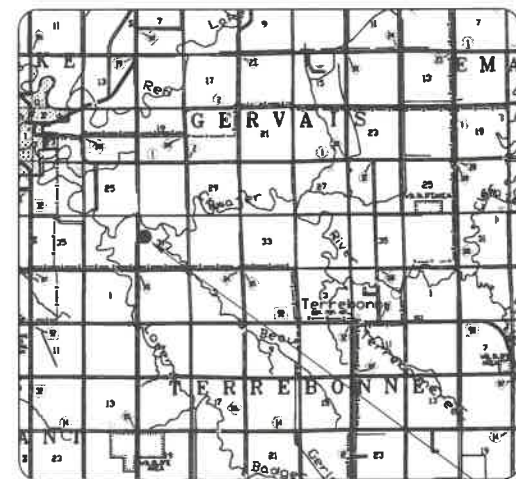
Date: 2/1/24

Ryan's backhoe Service, LLC

CONSTRUCTION PLANS FOR DARREL-DANNY PAYMENT-GRADE STABILIZATION PROJECT RED LAKE COUNTY SOIL & WATER CONSERVATION DISTRICT SEC. 31, GERVAIS TWP, RED LAKE COUNTY AUGUST, 2022



PROJECT LOCATION



LOCATION MAP

PROJECT LOCATION

INDEX SHEET

- 1 COVER SHEET
- 2 ESTIMATED QUANTITIES AND NOTES
- 3 PLAN AND PROFILE SITE 1
- 4 PLAN AND PROFILE SITE 2
- 5 RISER DETAILS
- 6-7 STANDARD PLANS

THIS PLAN CONTAINS 7 SHEETS

GOVERNING SPECIFICATIONS:

THE 2020 EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR CONSTRUCTION" DIVISION II AND III SHALL GOVERN FOR CONSTRUCTION DETAILS AND MATERIALS.

UTILITY NOTE:

THE UNDERGROUND UTILITIES WERE NOT LOCATED AS PART OF THE PRELIMINARY SURVEY OR DATA GATHERING FOR THIS SITE.

STATE LAW REQUIRES THE EXCAVATOR TO CONTACT GOPHER STATE ONE-CALL AT (800)-252-1166 FOR UTILITY LOCATION 48 HOUR PRIOR TO START OF EXCAVATION WORK.

HORIZONTAL AND VERTICAL CONTROLS

- 1. ALL COORDINATES LISTED IN THIS PLAN ARE MNDOT, RED LAKE COUNTY, U.S FOOT
- 2. ALL ELEVATIONS ARE NAVD 88 DATUM

I hereby certify that this plan, specification, or 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.

Tony A. Nordby

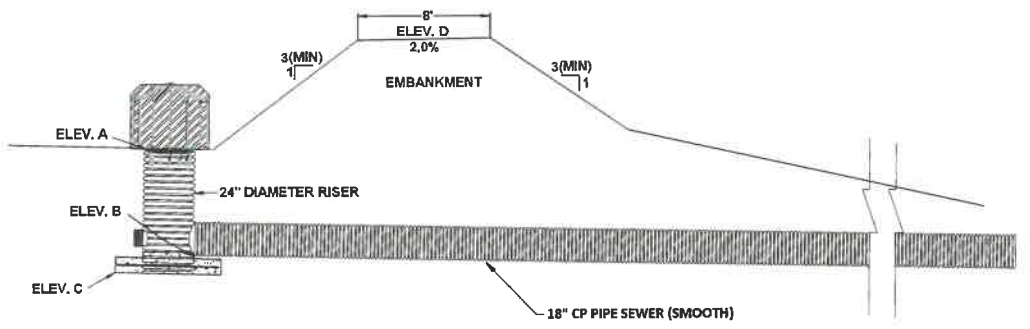
Tony A. Nordby
License No. 51392

Date: 08/26/2022

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STATEMENT OF ESTIMATED QUANTITIES				
NOTES	ITEM NO.	ITEM	UNIT	TOTAL ESTIMATED QUANTITIES
	2021.501	MOBILIZATION	LUMP SUM	1
(1) (2)	2106.507	COMMON EMBANKMENT (P) (CV)	C.Y.	265
(6)	2503.503	18" CP PIPE SEWER (SMOOTH)	LIN. FT.	236
(5)	2503.601	24" CP PIPE RISER (SMOOTH)	LIN. FT.	22
	2503.602	24" ANTI-VORTEX TRASH RACK	EACH	2
(3)	2511.507	RANDOM RIPRAP, CLASS II	C.Y.	34
(4)	2575.501	TURF ESTABLISHMENT	LUMP SUM	1

- CONSTRUCTION NOTES:
- (P) DENOTES A PLAN QUANTITY ITEM WITH NO ADDITIONAL COMPENSATION MADE. (CV) DENOTES COMPACTED VOLUME.
 - ITEM NO. 2106.507, "COMMON EMBANKMENT (P) (CV)" INCLUDES THE QUANTITY FOR CONSTRUCTING THE DIKE TO THE PROFILE. TOP WIDTH, AND SLOPES AS SHOWN IN THE PLAN SHEETS. THE COMMON EMBANKMENT MATERIAL FOR THE DIKE SHALL INCLUDE MATERIAL SUPPLIED BY THE CONTRACTOR. FINISHED SURFACE SHOWN ON THE PLAN CROSS SECTIONS, GRADES, AND PROFILES INCLUDES PLACEMENT OF 4" OF TOPSOIL. SEE SPECIAL PROVISIONS FOR MORE DETAIL.
 - ITEM NO. 2511.507, "RANDOM RIPRAP CLASS II" SHALL BE FOR CONSTRUCTION OF THE INLET AND OUTLET PROTECTION FOR THE RISER STRUCTURE AND PIPE OUTLET. GEOTEXTILE FABRIC TYPE III SHALL BE PLACED UNDER ALL RIPRAP AND IS CONSIDERED INCIDENTAL TO ITEM NO. 2511.507, "RANDOM RIPRAP CLASS II" AND NO ADDITIONAL COMPENSATION WILL BE MADE THEREOF. EXCAVATION FOR INSTALLATION OF RIPRAP IS CONSIDERED INCIDENTAL TO ITEM NO. 2511.507, "RANDOM RIPRAP CLASS II" AND NO ADDITIONAL COMPENSATION WILL BE MADE THEREOF. SEE SPECIAL PROVISIONS FOR MORE DETAIL.
 - SEE THE SPECIAL PROVISIONS FOR MORE DETAIL ON SPECIFICATIONS FOR ITEM NO. 2575.501, "TURF ESTABLISHMENT."
 - CONCRETE BALLAST FOR ITEM NO. 2503.601, "24" CP PIPE RISER (SMOOTH)" SHALL BE PRECAST OR POURED IN PLACE. CONCRETE BALLAST SHALL MEET THE REQUIREMENTS OF MNDOT 2411. ALL REBAR AND CONCRETE SHALL BE INCIDENTAL TO ITEM NO. 2503.601, "24" CP PIPE RISER (SMOOTH)" AND NO DIRECT COMPENSATION SHALL BE MADE THEREOF.
 - THE CONTRACTOR SHALL USE PIPE BEDDING METHOD A OR B SHOWN IN THE PLAN ON SHEET 2 AND ALL GRANULAR BEDDING SHALL MEET MNDOT 2451 AND BE CONSIDERED INCIDENTAL TO RESPECTIVE ITEM NO. 2503.503, "CP PIPE SEWER (SMOOTH)" WITH NO ADDITIONAL PAYMENT MADE THEREOF.

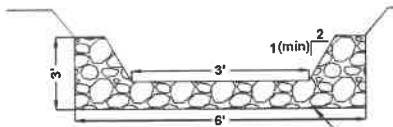


ELEVATIONS TABLE		
	SITE 1	SITE 2
ELEV. A	1042.13'	1049.40'
ELEV. B	1032.13'	1039.40'
ELEV. C	1031.13'	1038.40'
ELEV. D	1045.50'	1051.60'
ELEV. E	1012.60'	1006.90'

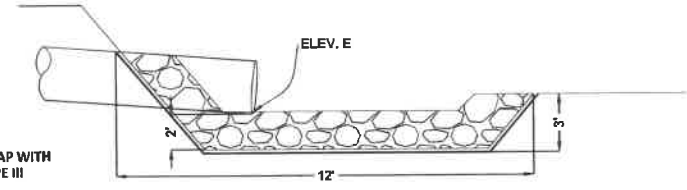
PIPE PROFILE

DIA	X	Y
8"	9-1/2"	21-1/2"
10"	11-5/8"	23-5/8"
12"	14-1/4"	26-1/4"
15"	18-3/8"	30-3/8"
18"	21-1/2"	33-1/2"
24"	28-1/2"	40-1/2"

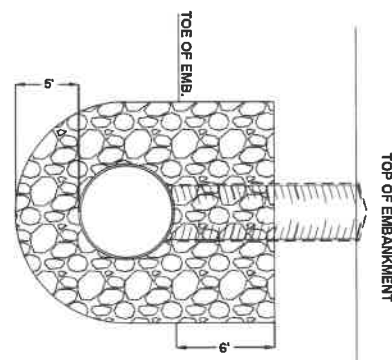
TRENCH SPOON DIMENSIONS FOR DETAIL A



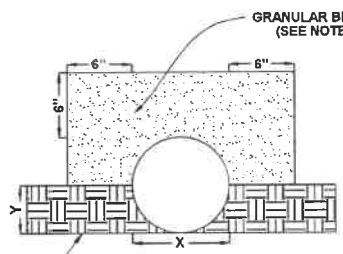
PIPE OUTLET CROSS SECTION



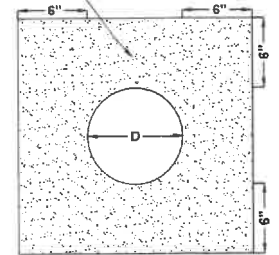
PIPE OUTLET PROFILE



INLET PROTECTION DETAILS



TRENCH DETAIL A
BEDDING FOR TRENCH WITH
CLOSE FITTING TEMPLATE



TRENCH DETAIL B

BASIS OF ESTIMATED QUANTITIES	
SEED, MIXTURE 25-141	59 LB PLS/ACRE
SEED, MIXTURE 21-112	25 LB PLS/ACRE
MULCH MATERIAL, TYPE 1	2 TON/ACRE
FERTILIZER, TYPE 1 (20-20-10)	250 LB/ACRE

I hereby certify that this plan, specification, or 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.

Tony A. Nordby

Tony A. Nordby
License No. 51392

Date: 08/26/2022

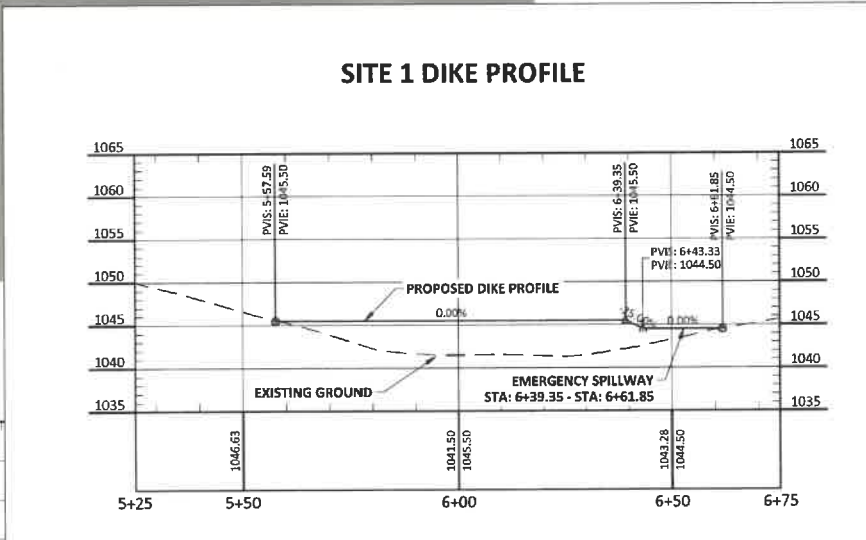
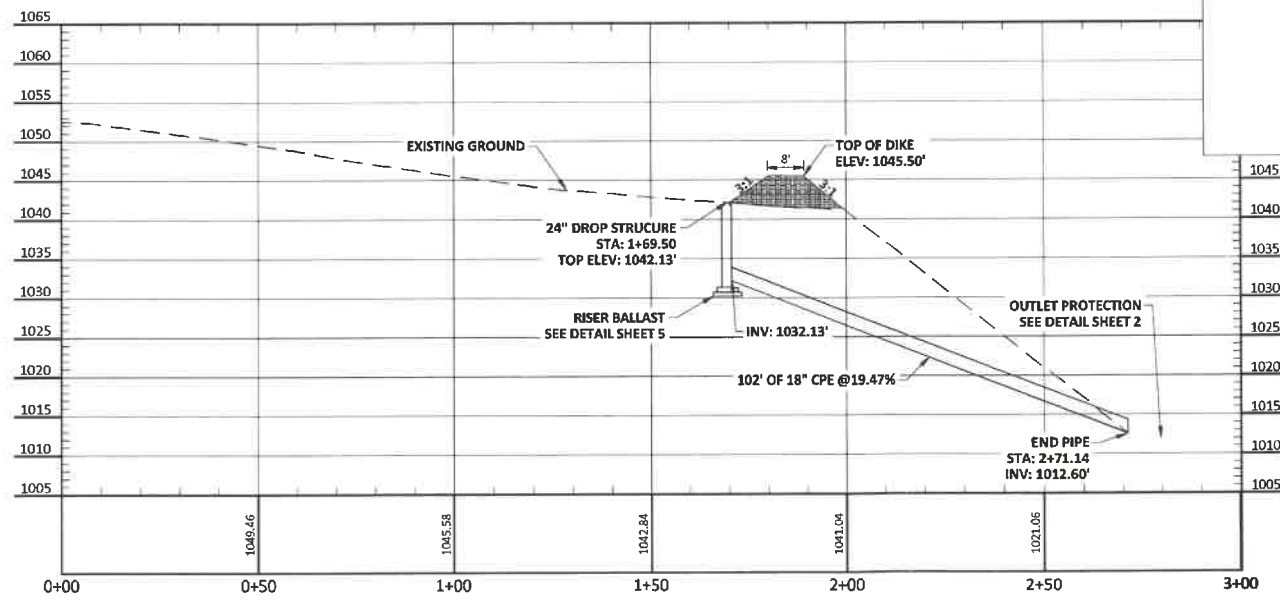
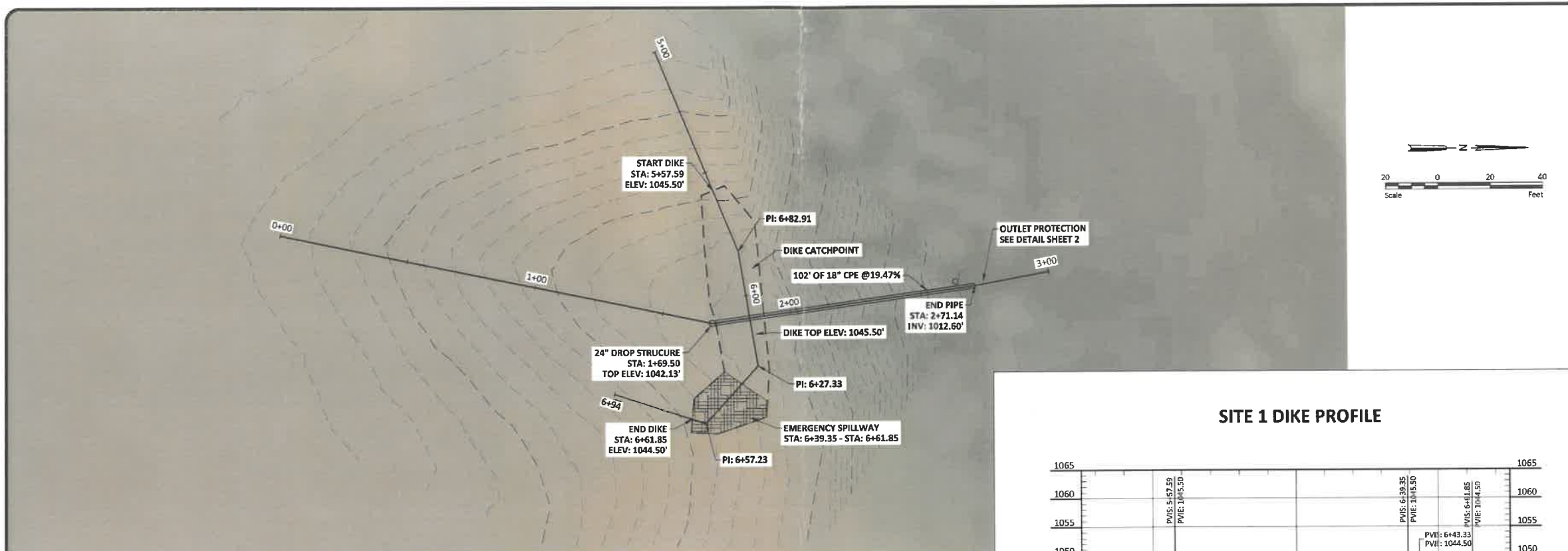
DARREL-DANNY PAYMENT-GRADE STABILIZATION PROJECT
 RED LAKE COUNTY SOIL & WATER CONSERVATION DISTRICT
 SEC. 31, GERVAIS TWP, RED LAKE COUNTY
 ESTIMATED QUANTITIES AND NOTES

No.	Revision	Date	By

Drawn By: KAK
 Checked By: TAN
 Date: 8-22-22
 Scale: As Shown
 Project No: 10861-0013
 SHEET 2

H:\B\10861\10861\10861_0013 Danny\CAD\ESTIMATED QUANTITIES.dwg: ESTIMATED QUANTITIES AND NOTES-8/22/2022 4:50 PM (kalkwork)

H:\BIM\10861\10861_0013 Darryl\CAD\PS&P.dwg-PLAN AND PROFILE SITE 1-8/22/2022 4:30 PM-(Malkowski)



SITE #1 ESTIMATED QUANTITIES
 COMMON EMBANKMENT (CV): 137 C.Y.
 18" CP PIPE SEWER (SMOOTH): 102 FT.
 24" CP PIPE RISER (SMOOTH): 11 FT.
 RANDOM RIPRAP, CLASS II: 17 C.Y.
 REBAR: 15 FT

- NOTES:**
- COVER OVER PIPE SHALL BE A MINIMUM OF 2.5 FEET.
 - SEE DETAILS ON SHEET 4 FOR PIPE SIZES AND ELEVATIONS.
 - DIKE AND PIPE ALIGNMENTS SHALL BE STAKED IN THE FIELD BY THE ENGINEER.
 - COMMON EMBANKMENT MATERIAL SHALL BE NEGOTIATED BETWEEN CONTRACTOR AND LANDOWNER.
 - 4" OF TOPSOIL SHALL BE STRIPPED FOR PLACEMENT AS FINISH ON DIKE.

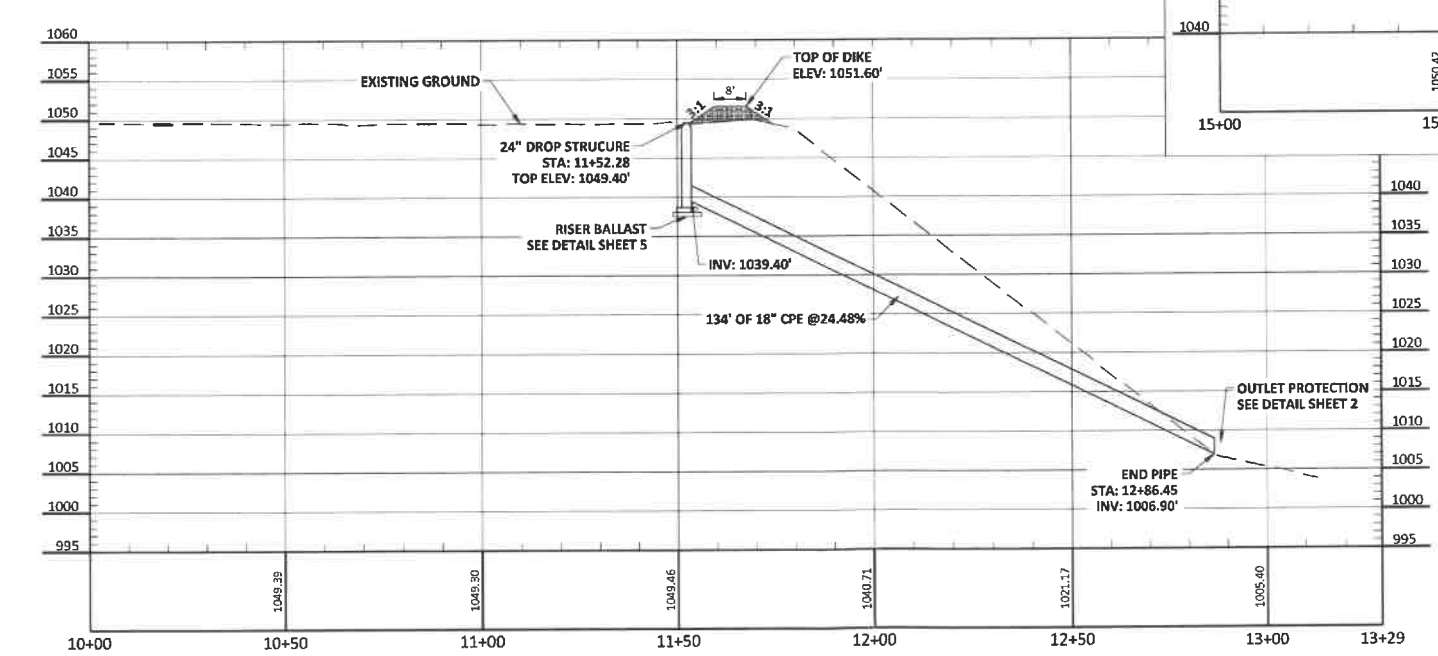
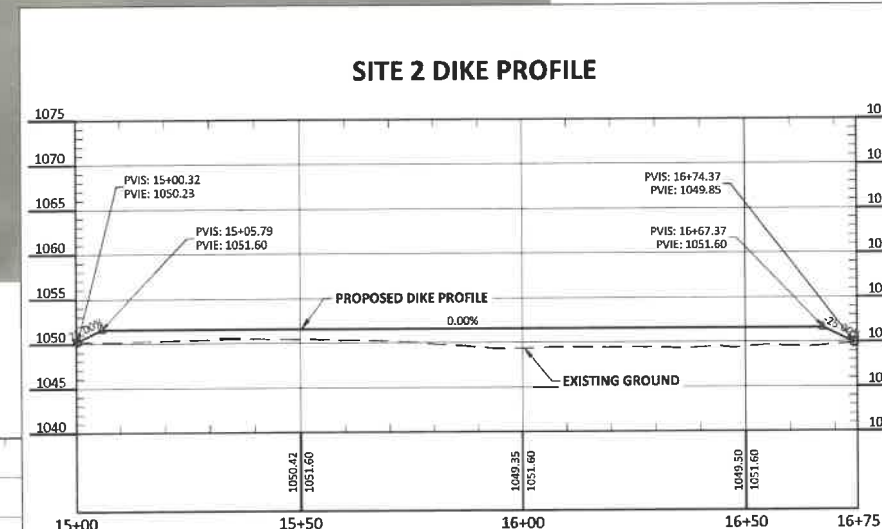
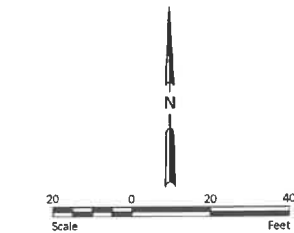
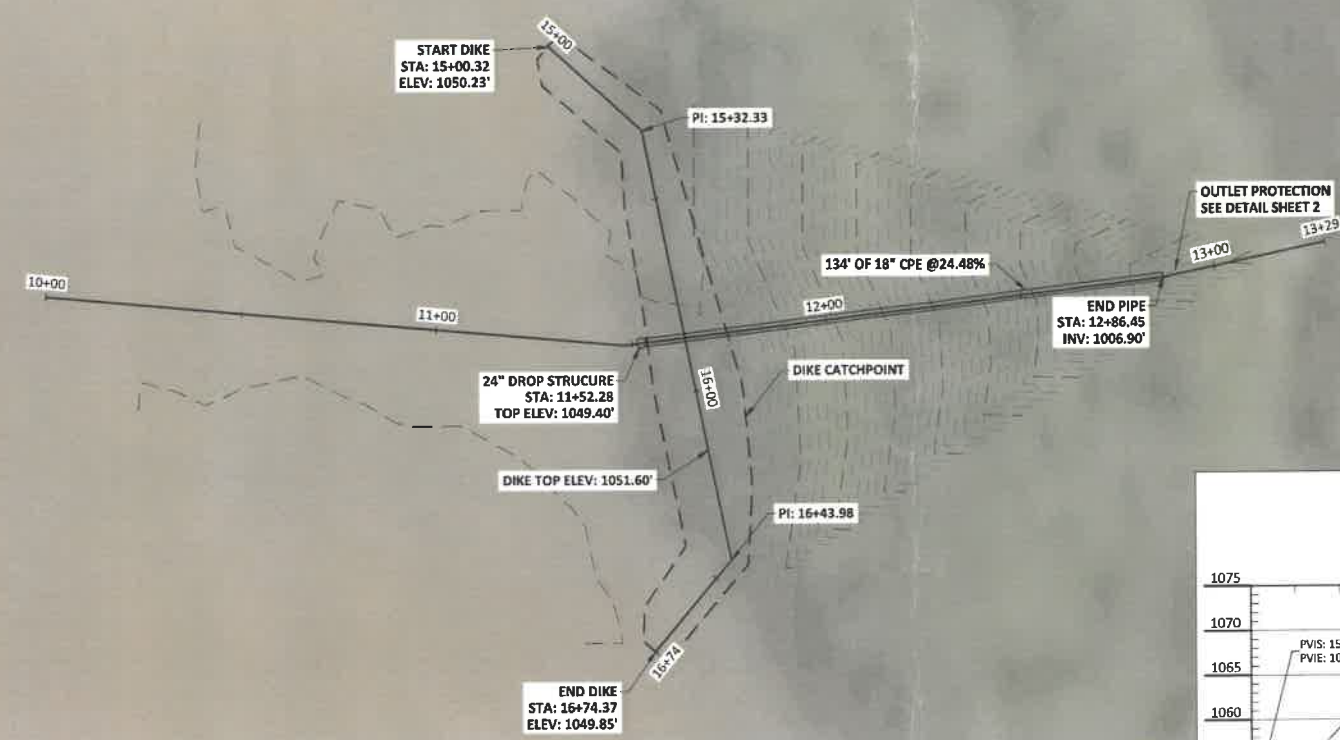
I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision, and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

Tony A. Nordby
 Tony A. Nordby
 License No. 51392

Date: 08/26/2022

No.	Revision	Date	By
PLAN AND PROFILE SITE 1			
DARREL-DANNY PAYMENT-GRADE STABILIZATION PROJECT RED LAKE COUNTY SOIL & WATER CONSERVATION DISTRICT SEC. 31, GERVAIS TWP., RED LAKE COUNTY			
 Houston engineering, inc.			
Drawn By KAK			
Checked By TAN			
Date 8-22-22			
Scale As Shown			
Project No. 10861-0013			
SHEET 3			

H:\BNA\10861\10861_0013 Danny\CAD\848\848_Plan and Profile Site 3-8/22\2022-4-30 PM\kukowak




SITE #3 ESTIMATED QUANTITIES
 COMMON EMBANKMENT (CV): 128 C.Y.
 18" CP PIPE SEWER (SMOOTH): 134 FT.
 24" CP PIPE RISER (SMOOTH): 11 FT.
 RANDOM RIPRAP, CLASS II: 17 C.Y.
 REBAR: 15 FT

- NOTES:**
- COVER OVER PIPE SHALL BE A MINIMUM OF 2.5 FEET.
 - SEE DETAILS ON SHEET 4 FOR PIPE SIZES AND ELEVATIONS.
 - DIKE AND PIPE ALIGNMENTS SHALL BE STAKED IN THE FIELD BY THE ENGINEER.
 - COMMON EMBANKMENT MATERIAL SHALL BE NEGOTIATED BETWEEN CONTRACTOR AND LANDOWNER.
 - 4" OF TOPSOIL SHALL BE STRIPPED FOR PLACEMENT AS FINISH ON DIKE.

I hereby certify that this plan, specification, or 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.

Tony A. Nordby
 Tony A. Nordby
 License No. 51392

Date: 08/26/2022

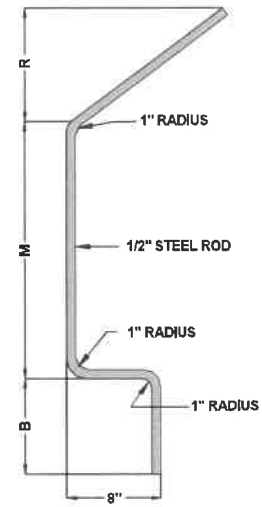
No.	Revision	Date	By
PLAN AND PROFILE SITE 2			
DARREL-DANNY PAYMENT-GRADE STABILIZATION PROJECT RED LAKE COUNTY SOIL & WATER CONSERVATION DISTRICT SEC. 31, GERVAIS TWP, RED LAKE COUNTY			
 Houston Engineering, Inc.			
Drawn By		KAK	
Checked By		TAN	
Date		8-22-22	
Scale		As Shown	
Project No.		10861-0013	
SHEET		4	

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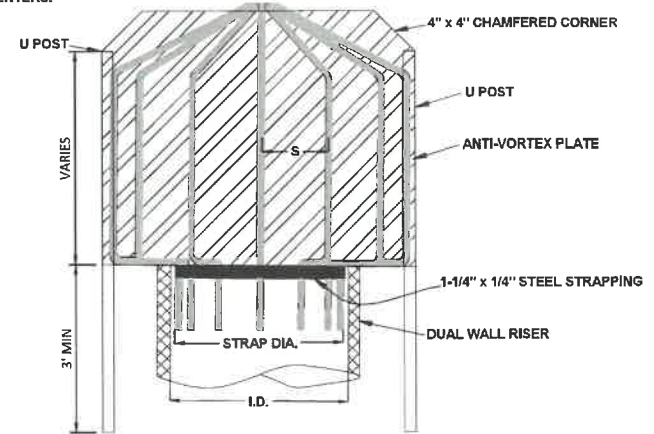
TRASH RACK AND ANTI-VORTEX DIMENSIONS								
PIPE I.D. (IN)	STRAP DIA. (IN)	S (IN)	B (IN)	M (IN)	R (IN)	T (IN)	L (IN)	X (IN)
12	11 1/4	5-6	9	9	12	20	28	12
15	14 1/4	5-6	9	9	13	21	31	13
18	17 1/4	6-7	9	9	14	22	34	14
24	23 1/4	7-8	12	12	11	25	40	17
30	29 1/4	8-9	12	12	10	27	46	19
36	35 1/4	9-10	12	12	9	29	52	21

NOTE:
ANCHOR TO ANTI-VORTEX PLATE WITH FOUR 7/16" BOLTS WITH WASHERS AND LOCKNUTS OR AN APPROVED EQUIVALENT METHOD.

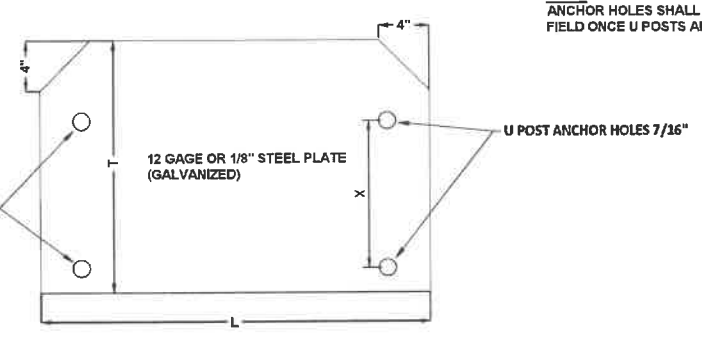
U POSTS SHALL BE 2.75 LB/FT AND 7/16" HOLES ON 1" CENTERS.



ROD BENDING DETAIL



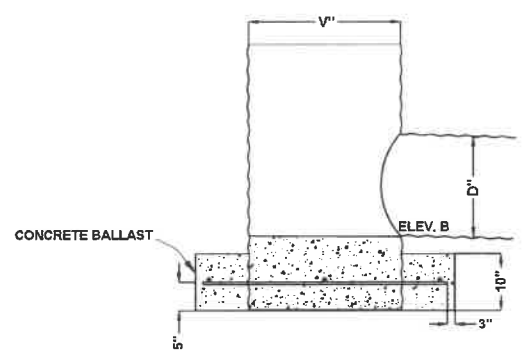
TRASH RACK/ANTI VORTEX DETAIL



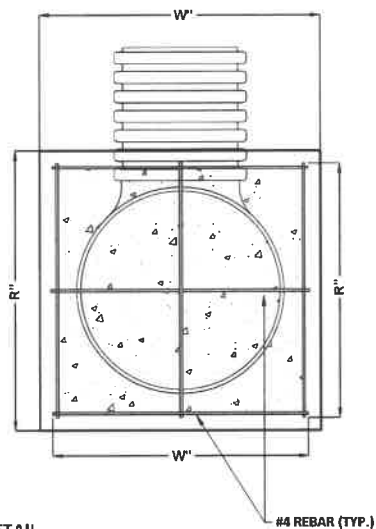
ANTI-VORTEX DETAIL

NOTE:
ANCHOR HOLES SHALL BE DRILLED IN THE FIELD ONCE U POSTS ARE IN PLACE.

DUAL WALL RISER TABLE		
	SITE 1	SITE 2
ELEV. A	1042.13'	1049.40'
ELEV. B	1032.13'	1039.40'
ELEV. C	1031.13'	1038.40'
H	11"	11"
D	18"	18"
V	24"	24"

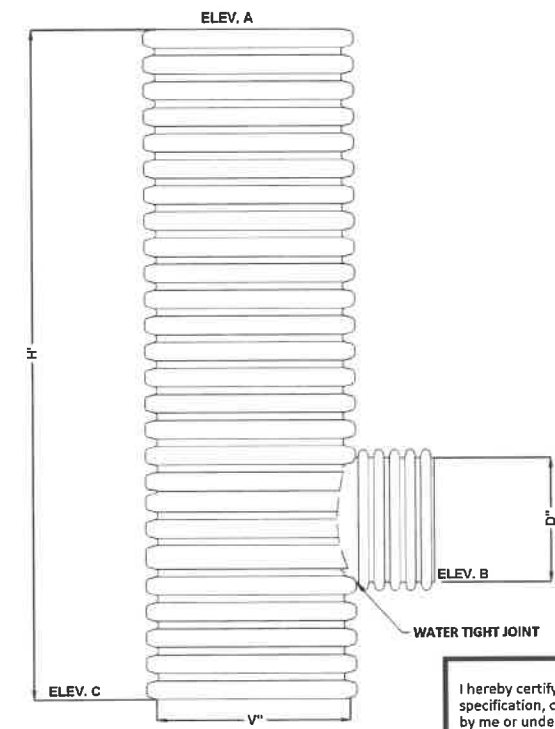


RISER BALLAST DETAIL



- NOTES:
- RISER SHALL BE CAST INSIDE THE CONCRETE BALLAST WITH #4 REBAR DOWELED THROUGH CENTER AS SHOWN IN "RISER BALLAST DETAIL"
 - CONCRETE INSIDE OF RISER SHALL BE LEVEL WITH ELEVATION B AS SHOWN ON THIS SHEET "RISER BALLAST DETAIL"
 - STEEL REINFORCEMENT IS #4 BAR. CONCRETE WILL REQUIRE ADEQUATE CONSOLIDATION TO ELIMINATE VOIDS, HONEYCOMB AND FULLY ENCASE REBAR AND EMBEDMENTS.

RISER BALLAST SIZING CHART			
PIPE SIZE	R	W	REBAR LIN FT
12"	24"	24"	9'
18"	30"	30"	12'
24"	36"	36"	15'
30"	42"	42"	18'
54"	66"	66"	30'



DUAL WALL RISER DETAIL

I hereby certify that this plan, specification, or 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.

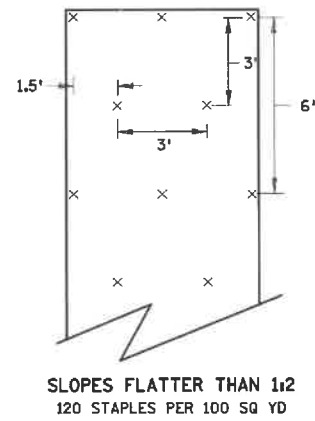
Tony A. Nordby
Tony A. Nordby
License No. 51392

Date: 08/26/2022

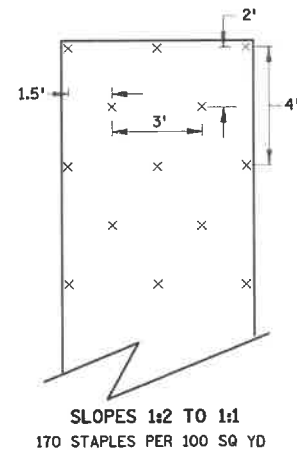
By	
Date	
No.	Revision
RISER DETAILS	
DARREL-DANNY PAYMENT-GRADE STABILIZATION PROJECT RED LAKE COUNTY SOIL & WATER CONSERVATION DISTRICT SEC. 31, GERVAIS TWP, RED LAKE COUNTY	
 Houston Engineering, Inc.	
Drawn By	KAK
Checked By	TAN
Date	8-22-22
Scale	As Shown
Project No.	10861-0013
SHEET	
5	

PLOTTED/REVISED: 24-JAN-2020

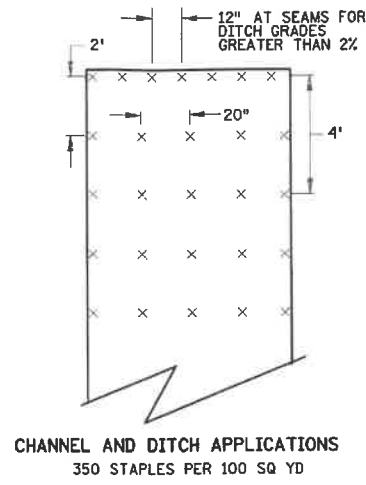
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SLOPES FLATTER THAN 1:2
 120 STAPLES PER 100 SQ YD

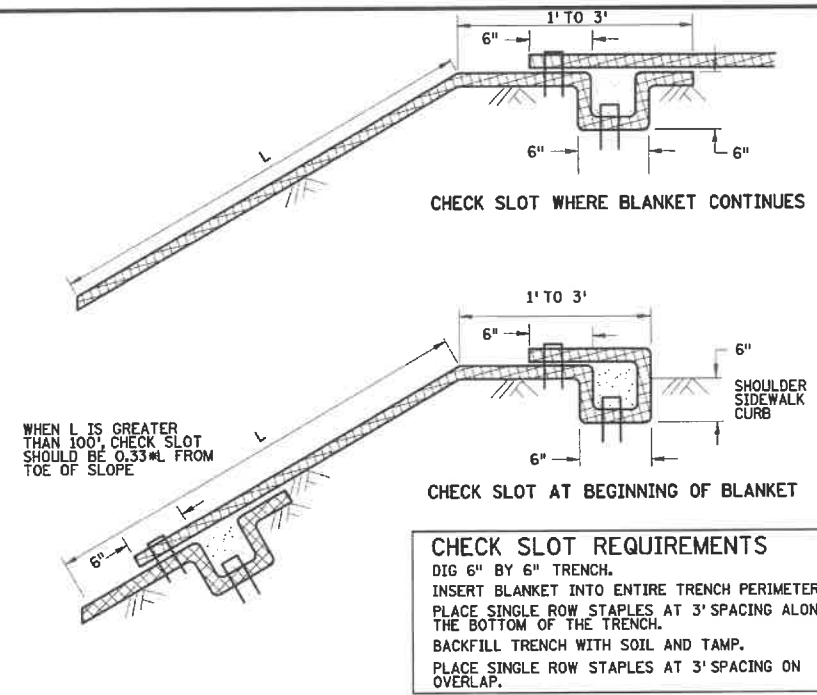


SLOPES 1:2 TO 1:1
 170 STAPLES PER 100 SQ YD

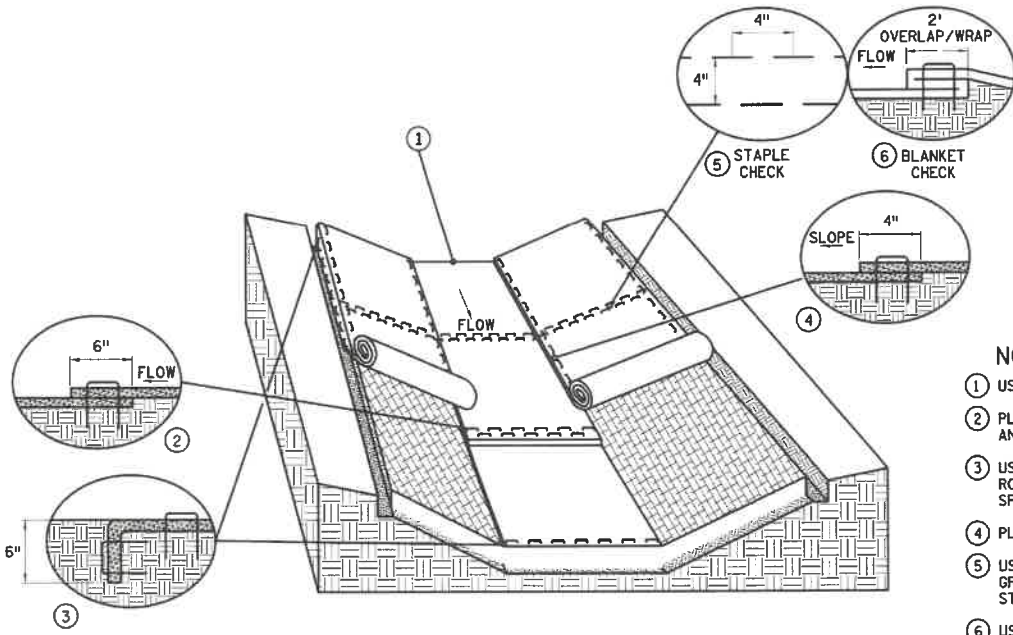


CHANNEL AND DITCH APPLICATIONS
 350 STAPLES PER 100 SQ YD

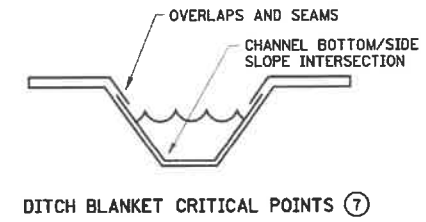
BLANKET STAPLE PATTERN



CHECK SLOT REQUIREMENTS
 DIG 6" BY 6" TRENCH.
 INSERT BLANKET INTO ENTIRE TRENCH PERIMETER.
 PLACE SINGLE ROW STAPLES AT 3' SPACING ALONG THE BOTTOM OF THE TRENCH.
 BACKFILL TRENCH WITH SOIL AND TAMP.
 PLACE SINGLE ROW STAPLES AT 3' SPACING ON OVERLAP.



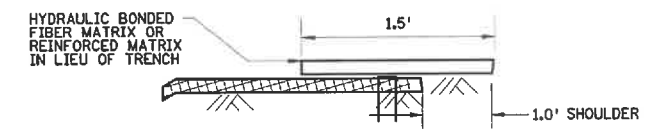
DITCH BLANKET STAPLE DETAIL



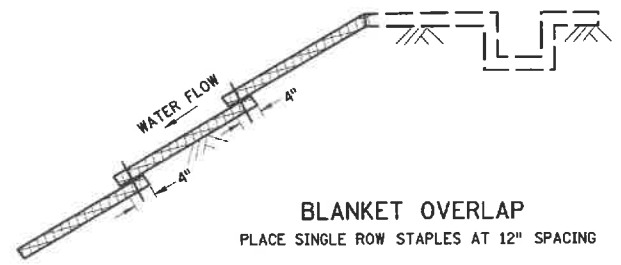
DITCH BLANKET CRITICAL POINTS ⑦

NOTES:

- ① USE CHECK SLOT DETAIL (NO ALTERNATES).
- ② PLACE DOUBLE ROW OF STAPLES STAGGERED 4" APART AND 4" ON CENTER.
- ③ USE 6" X 6" TRENCH TO PLACE BLANKET. PLACE SINGLE ROW OF STAPLES ON TOP AND TRENCH SIDES AT 12" SPACING. BACKFILL TRENCH WITH SOIL AND TAMP.
- ④ PLACE SINGLE ROW OF STAPLES AT 12" SPACING.
- ⑤ USE STAPLE CHECK FOR CHANNEL SLOPES LESS THAN 2.5%. GRADE AT 100' INTERVALS. PLACE DOUBLE ROW OF STAPLES STAGGERED 4" APART AND AT 4" SPACING.
- ⑥ USE BLANKET CHECKS FOR THE FOLLOWING SLOPES:
 2.5%-3% 100' INTERVALS
 3%-5% 50' INTERVALS
 5%-7% 25' INTERVALS
- ⑦ CRITICAL POINTS SHALL BE SECURED WITH PROPER STAPLE PATTERNS.



CHECK SLOT ALTERNATIVE
 PLACE SINGLE ROW STAPLES AT 12" SPACING
 CHECK SLOT DETAILS



BLANKET OVERLAP
 PLACE SINGLE ROW STAPLES AT 12" SPACING

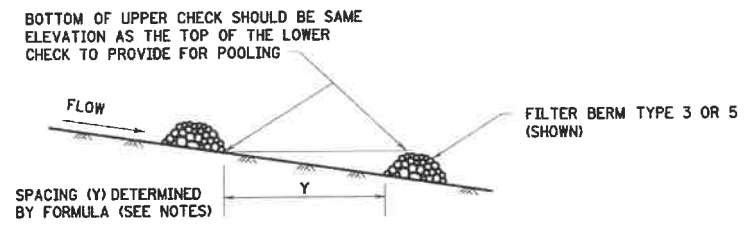
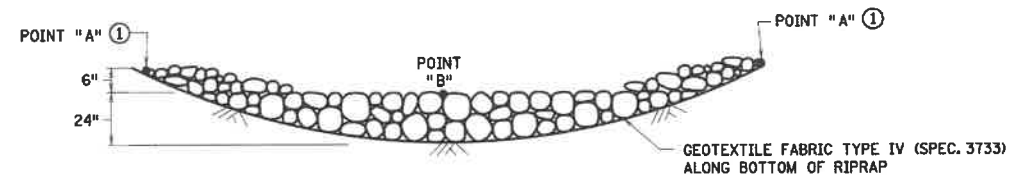
GENERAL BLANKET INSTALLATION REQUIREMENTS
 REPP = ROLLED EROSION PREVENTION PRODUCT.
 PREPARE SOIL AS PER SPECIFICATION 2574.
 LAY PARALLEL OR PERPENDICULAR TO THE DIRECTION OF WATER FLOW.
 OVERLAP ADJACENT STRIP EDGES A MINIMUM OF 4".
 OVERLAP BLANKET 6" (MINIMUM) AT EACH END. OVERLAP BOTTOM END OF UPPER BLANKET OVER TOP END OF LOWER BLANKET. STAPLE ALONG OVERLAP EVERY 1.5'.
 THE UPPERMOST BLANKET OF ALL SLOPE APPLICATIONS MUST START IN A CHECK SLOT. IF SLOPE LENGTH (L) IS 100' OR GREATER, INSERT BLANKET INTO A CHECK SLOT 1/3 FROM THE BOTTOM OF THE SLOPE.

REVISION:
 APPROVED: JANUARY 8, 2020
Mari Kaporoski
 MARI KAPOROSKI
 CHIEF ENVIRONMENTAL OFFICER

m MINNESOTA
 DEPARTMENT OF TRANSPORTATION
 STANDARD PLAN 5-297.404 3 OF 3
 APPROVED: 1-8-2020
 REVISED:
 STATE PROJ. NO.

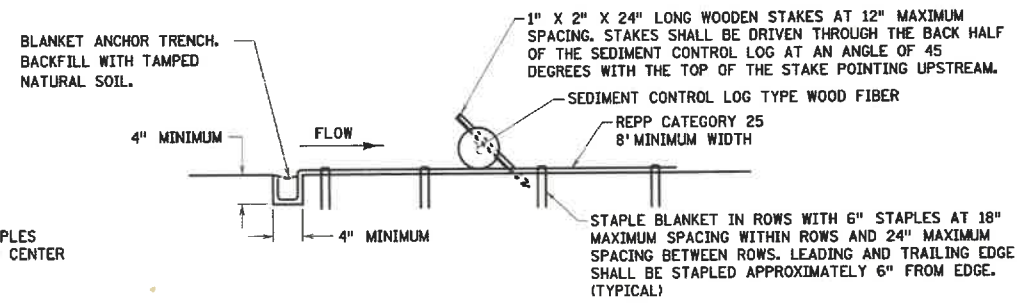
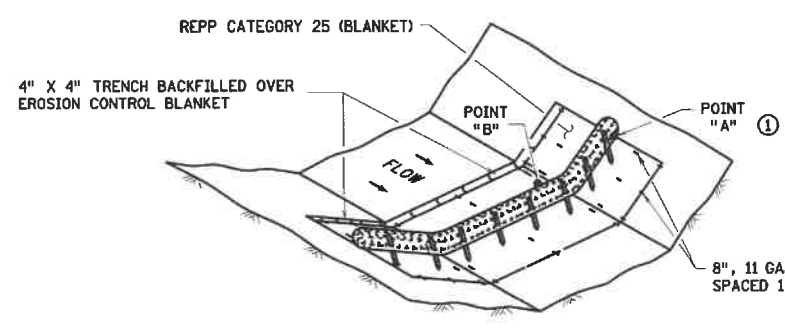
PERMANENT EROSION CONTROL
 REPP (BLANKET) STAPLE PATTERN FOR SLOPES
 (T.H.) SHEET NO. 6 OF 7 SHEETS

PLOTTED/REVISED: 24-JAN-2020
 I/PLOT NAME: s405_3_spn
 PATH & FILENAME: OTS\DesignStandards\Development\StandardPlans\DEV400_Series\405_3_spn.dgn

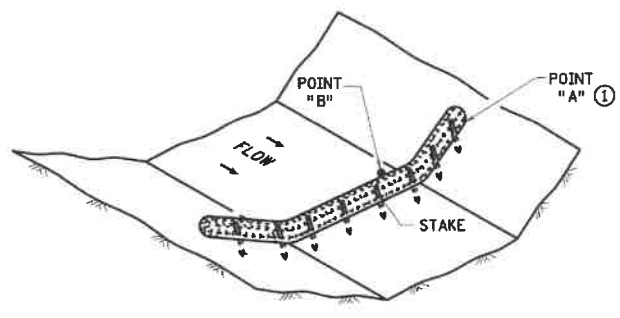


ROCK DITCH CHECKS
 FILTER BERMS TYPE 3 (ROCK WEEPER) OR FILTER TYPE 5 (ROCK) ③
 FOR USE ON ROUGH-GRADED AREAS
 ONLY FOR USE OUTSIDE CLEAR ZONE ②

DITCH CHECK SPACING
 FOR ALL FILTER BERM TYPES



SEDIMENT CONTROL LOG TYPE REPP (BLANKET) SYSTEM ④



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

- NOTES:**
- REPP = ROLLED EROSION PREVENTION PRODUCT.
 - SEE SPECS. 2573, 3601, 3733, 3885, 3886 & 3889.
 - FOR DITCH CHECKS, PLACE SEDIMENT CONTROL LOG PERPENDICULAR TO FLOW AND IN A CRESCENT SHAPE WITH THE ENDS FACING UPSTREAM.
 - APPROXIMATE SPACING BETWEEN EACH DITCH CHECK SHOULD BE DETERMINED FROM THE FOLLOWING SPACING FORMULA:
- $$\text{APPROXIMATE SPACING OF DITCH CHECKS (FT.)} = Y = \frac{\text{DITCH CHECK HEIGHT (FT.)}}{\% \text{ CHANNEL SLOPE}} \times 100$$
- ① POINT "A" MUST BE A MINIMUM OF 6" HIGHER THAN POINT "B" TO ENSURE THAT WATER FLOWS OVER THE DIKE AND NOT AROUND THE ENDS.
 - ② ROCK DITCH CHECKS PLACED WITHIN THE CLEAR ZONE ARE TO BE 18" OR LESS IN HEIGHT. A 1:6 APPROACH AND DEPARTURE SLOPE SHALL BE PROVIDED.
 - ③ DITCH GRADE 3% - 5%, MAX. FLOW VELOCITY 12 FT./SEC.
 - ④ DITCH GRADE 1.5% - 3%, MAX. FLOW VELOCITY 4.5 FT./SEC.
 - ⑤ DITCH GRADE 1.5% - 3%, MAX. FLOW VELOCITY 1.5 FT./SEC.

REVISION:
 APPROVED: JANUARY 8, 2020
Ward Kawowski
 WARD KAWOWSKI
 CHIEF ENVIRONMENTAL OFFICER

MINNESOTA
 DEPARTMENT OF TRANSPORTATION
 STANDARD PLAN 5-297.405 3 OF 8
 APPROVED: 1-8-2020
 REVISED:
Tom Szm
 THOMAS TYRBICKI
 STATE DESIGN ENGINEER

TEMPORARY SEDIMENT CONTROL
DITCH CHECK
 STATE PROJ. NO. (T.H.) SHEET NO. 7 OF 7 SHEETS

Red Lake County SWCD
2602 Wheat Drive – Suite 103
Red Lake Falls, MN 56750

February 26, 2024

Tammy Audette, Administrator
Red Lake Watershed District
1000 Pennington Avenue
Thief River Falls, MN 56701


Red Lake County SWCD would like to request \$1,500.00, from the Red Lake Watershed District, for the construction of a Grade Stabilization Structure in Red Lake County.

The project that needs local assistance is in Red Lake Falls Township Section 17. Houston Engineering has completed the survey and design work for this project. Red Lake County SWCD approved a bid from Nathan Knott in the amount of \$27,960.00.

The Red Lake County SWCD would like to request \$1,500.00 from the Red Lake Watershed District to assist with the local match requirement for this project. The total project bid was \$27,960.00. Red Lake County SWCD will be using Red Lake River WBIF funding to fund 90% of this project. The local match requirement is \$2,796.00. The landowner will be in charge of paying \$1,296.00; if the Red Lake Watershed District approves the \$1,500.00 request.

If you have any questions, please give me a call at (218)253-2593.

Thank you,



Tanya Waldo, District Manager
Red Lake County SWCD

NICK SEEGER GRADE STABILIZATION PROJECT
SECTION 17 RED LAKE FALLS TOWNSHIP, RED LAKE COUNTY
OPINION OF PROBABLE COST
RED LAKE COUNTY SWCD

03/08/2023

Spec. No.	Item	Unit	Quantity	Unit Price	Total Cost
2021.501	MOBILIZATION	LUMP SUM	1	\$3,000.00	\$3,000.00
2101.501	CLEARING AND GRUBBING	LUMP SUM	1	\$1,500.00	\$1,500.00
2106.507	EXCAVATION - COMMON (P)	CU. YD.	261	\$10.00	\$2,610.00
2106.507	COMMON EMBANKMENT (P) (CV)	CU. YD.	930	\$12.00	\$11,160.00
2503.503	24" CP PIPE SEWER (SMOOTH)	LIN. FT.	100	\$60.00	\$6,000.00
2503.601	30" CP PIPE RISER (SMOOTH)	LIN. FT.	6	\$700.00	\$4,200.00
2503.602	30" ANTI-VORTEX TRASH RACK	EACH	1	\$1,600.00	\$1,600.00
2511.507	RANDOM RIPRAP CLASS II	CU. YD.	20	\$120.00	\$2,400.00
2573.501	STORM DRAIN INLET PROTECTION	EACH	1	\$200.00	\$200.00
2573.503	SEDIMENT CONTROL LOG TYPE COMPOST	LIN. FT.	90	\$3.00	\$270.00
2575.501	TURF ESTABLISHMENT	LUMP SUM	1	\$2,500.00	\$2,500.00
2575.504	ROLLED EROSION PREVENTION CATEGORY 25	SQ. YD.	605	\$3.00	\$1,815.00
TOTAL CONSTRUCTION					\$37,255.00

NICK SEEGER GRADE STABILIZATION PROJECT
SECTION 17 RED LAKE FALLS TOWNSHIP, RED LAKE COUNTY

03/08/2023

BID FORM
RED LAKE COUNTY SWCD

Spec. No.	Item	Unit	Quantity	Unit Price	Total Cost
2021.501	MOBILIZATION	LUMP SUM	1	250	250.00
2101.501	CLEARING AND GRUBBING	LUMP SUM	1	1,350	1,350
2106.507	EXCAVATION - COMMON (P)	CU. YD.	261	10	2,610
2106.507	COMMON EMBANKMENT (P) (CV)	CU. YD.	930	11	10,230
2503.503	24" CP PIPE SEWER (SMOOTH)	LIN. FT.	100	45	4,500
2503.601	30" CP PIPE RISER (SMOOTH)	LIN. FT.	6	500	3,000
2503.602	30" ANTI-VORTEX TRASH RACK	EACH	1	900	900
2511.507	RANDOM RIPRAP CLASS II	CU. YD.	20	150	3,000
2573.501	STORM DRAIN INLET PROTECTION	EACH	1	150	150
2573.503	SEDIMENT CONTROL LOG TYPE COMPOST	LIN. FT.	90	3	270
2575.501	TURF ESTABLISHMENT	LUMP SUM	1	500	500
2575.504	ROLLED EROSION PREVENTION CATEGORY 25	SQ. YD.	605	1.98	1,200
				TOTAL BID	27,960

Nathan Knott
CONTRACTOR NAME

Nat Knott
AUTHORIZED SIGNATURE

10/8/23
DATE

CONSTRUCTION PLANS FOR NICK SEEGER - GRADE STABILIZATION PROJECT RED LAKE COUNTY SOIL & WATER CONSERVATION DISTRICT SEC. 17, RED LAKE FALLS TWP., RED LAKE COUNTY MARCH, 2023



PROJECT LOCATION



LOCATION MAP



VICINITY MAP

PROJECT LOCATION



LOCATION MAP

INDEX SHEET

- 1 COVER SHEET
- 2 ESTIMATED QUANTITIES AND NOTES
- 3-4 RISER DETAILS
- 5 PLAN & PROFILE
- 6-7 CROSS SECTIONS
- 8 EROSION AND SEDIMENT CONTROL PLAN
- 9-12 STANDARD PLANS

THIS PLAN CONTAINS 12 SHEETS

GOVERNING SPECIFICATIONS:

THE 2020 EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR CONSTRUCTION" DIVISION II AND III, AND THE SUPPLEMENTAL SPECIFICATIONS DATED SEPTEMBER 2022, SHALL GOVERN FOR CONSTRUCTION DETAILS AND MATERIALS.

UTILITY NOTE:

THE UNDERGROUND UTILITIES WERE NOT LOCATED AS PART OF THE PRELIMINARY SURVEY OR DATA GATHERING FOR THIS SITE.

STATE LAW REQUIRES THE EXCAVATOR TO CONTACT GOPHER STATE ONE-CALL AT (800)-252-1166 FOR UTILITY LOCATION 48 HOUR PRIOR TO START OF EXCAVATION WORK.

HORIZONTAL AND VERTICAL CONTROLS

- 1. ALL COORDINATES LISTED IN THIS PLAN ARE MNDOT, RED LAKE COUNTY, U.S FOOT
- 2. ALL ELEVATIONS ARE NAVD 88 DATUM

I hereby certify that this plan, specification, or 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.

Tony A. Nordby
Tony A. Nordby
License No. 51392

Date: 03-08-2023

H:\WORK\10800\10861\10861_0017_Nick Seeger\CAO\Plans\COVERSHEET.dwg COVER:3/8/2023 11:59 AM (trelson)

Project No. 10861-0016

WF120 10861-0016

NOTES	ITEM NO.	ITEM	UNIT	QUANTITY
	2021.501	MOBILIZATION	LUMP SUM	1
(7)	2101.501	CLEARING AND GRUBBING	LUMP SUM	1
(1) (5)	2106.507	EXCAVATION - COMMON (P)	CU. YD.	261
(1) (2)	2106.507	COMMON EMBANKMENT (P) (CV)	CU. YD.	930
(6)	2503.503	24" CP PIPE SEWER (SMOOTH)	LIN. FT.	100
(4)	2503.601	30" CP PIPE RISER (SMOOTH)	LIN. FT.	6
	2503.602	30" ANTI-VORTEX TRASH RACK	EACH	1
(3) (11)(12)	2511.507	RANDOM RIPRAP CLASS II	CU. YD.	20
(13)	2573.501	STORM DRAIN INLET PROTECTION	EACH	1
(8)	2573.503	SEDIMENT CONTROL LOG TYPE COMPOST	LIN. FT.	90
(9)	2575.501	TURF ESTABLISHMENT	LUMP SUM	1
	2575.504	ROLLED EROSION PREVENTION CATEGORY 25	SQ. YD.	605

BASIS OF ESTIMATED QUANTITIES	
SEED MIXTURE 21-112	25 LB PLS/ACRE
SEED MIXTURE 25-141	59 LB PLS/ACRE
FERTILIZER TYPE 1 (10-10-10)	250 LB/ACRE

CONSTRUCTION NOTES:

- (P) DENOTES A PLAN QUANTITY ITEM WITH NO ADDITIONAL COMPENSATION MADE. (CV) DENOTES COMPACTED VOLUME.
- ITEM NO. 2106.507, "COMMON EMBANKMENT (P) (CV)" INCLUDES THE QUANTITY FOR CONSTRUCTING THE DIKES TO THE PROFILE, TOP WIDTH, AND SLOPES AS SHOWN IN THE PLAN SHEETS. THE COMMON EMBANKMENT MATERIAL FOR THE DIKE SHALL INCLUDE USING EXCAVATION MATERIAL FROM THE DRAINAGE DITCH EXCAVATION AS SHOWN ON SHEET 5 AND ADDITIONAL EMBANKMENT MATERIAL LOCATIONS SHALL BE NEGOTIATED BETWEEN THE LANDOWNER AND THE CONTRACTOR FOR COMPLETING THE DIKE CONSTRUCTION. FINISHED SURFACE SHOWN ON THE PLAN CROSS SECTIONS, GRADES, AND PROFILES INCLUDES PLACEMENT OF 4" OF TOPSOIL. SEE SPECIAL PROVISIONS FOR MORE DETAIL.
- ITEM NO. 2511.507, "RANDOM RIPRAP, CLASS II" SHALL BE FOR CONSTRUCTION OF THE INLET AND OUTLET PROTECTION FOR THE RISER STRUCTURE AND PIPE OUTLET. GEOTEXTILE FABRIC TYPE III SHALL BE PLACED UNDER ALL RIPRAP AND IS CONSIDERED INCIDENTAL TO ITEM NO. 2511.507, "RANDOM RIPRAP, CLASS II" AND NO ADDITIONAL COMPENSATION WILL BE MADE THEREOF. EXCAVATION FOR INSTALLATION OF RIPRAP IS CONSIDERED INCIDENTAL TO ITEM NO. 2511.507, "RANDOM RIPRAP, CLASS II" AND NO ADDITIONAL COMPENSATION WILL BE MADE THEREOF. SEE SPECIAL PROVISIONS FOR MORE DETAIL.
- CONCRETE BALLAST FOR ITEM NO. 2503.601, "30" CP PIPE RISER (SMOOTH)" SHALL BE PRECAST OR POURED IN PLACE. CONCRETE BALLAST SHALL MEET THE REQUIREMENTS OF MNDOT 2411. GRANULAR BACKFILL MATERIAL FOR ITEM NO. 2503.601, "30" CP PIPE RISER (SMOOTH)" SHALL MEET GRADATION REQUIREMENTS MEETING MNDOT TABLE 3149.2-6. ALL REBAR, CONCRETE, AND GRANULAR BACKFILL SHALL BE INCIDENTAL TO ITEM NO. 2503.601, "30" CP PIPE RISER (SMOOTH)" AND NO DIRECT COMPENSATION SHALL BE MADE THEREOF.
- ITEM NO. 2106.507, "EXCAVATION - COMMON (P)" SHALL INCLUDE 4" MIN TOPSOIL STRIPPING OF ALL EMBANKMENT FOOTPRINT PRIOR TO EMBANKMENT PLACEMENT AND ALL EXCAVATION OF DRAINAGE DITCH INCLUDING STRIPPING AND PLACING OF 4" OF TOPSOIL ON FINISHED DRAINAGE DITCH SIDE SLOPES.
- THE CONTRACTOR SHALL USE PIPE BEDDING METHOD A OR B SHOWN IN THE PLAN ON SHEET 8 AND ALL GRANULAR BEDDING SHALL MEET MNDOT 2451 AND BE CONSIDERED INCIDENTAL TO RESPECTIVE ITEM NO. 2503.503, "24" CP PIPE SEWER (SMOOTH)" WITH NO ADDITIONAL PAYMENT MADE THEREOF.
- CLEARING AND GRUBBING SHALL INCLUDE ALL TREE AND BRUSH REMOVAL NECESSARY TO INSTALL PROPOSED DITCH, INSTALL PROPOSED DIKE, INSTALL PROPOSED STRUCTURE, AND INSTALL PROPOSED RIPRAP OUTLET PROTECTION AS DETAILED IN THE PLANS. ANY MATERIAL GENERATED BY CLEARING AND GRUBBING OPERATIONS SHALL BE THE CONTRACTOR'S RESPONSIBILITY AND DISPOSED OF OFF SITE OUTSIDE THE PROJECT LIMITS. SEE THE SPECIAL PROVISIONS FOR ADDITIONAL INFORMATION.
- SEE THE EROSION AND SEDIMENT CONTROL PLAN ON SHEET 8 OF THE PLANS FOR ADDITIONAL INFORMATION.
- TURF ESTABLISHMENT TO INCLUDE THE FOLLOWING ESTIMATED QUANTITIES AND APPLICATION RATES:
 - SEED MIXTURE 25-141 = 16 LB (59 LB/ACRE)
 - FERTILIZER TYPE 3, NPK OF 10-10-10 = 70 LB (250 LB/ACRE)
 - SEED MIXTURE 21-112 = 7 LB (25 LB/ACRE)

SEE THE SPECIAL PROVISIONS FOR ADDITIONAL INFORMATION.

THE QUANTITY SHOWN IS AN ESTIMATE ONLY. FINAL QUANTITY WILL DEPEND ON THE CONTRACTOR'S OPERATION. NO ADJUSTMENT IN UNIT PRICE WILL BE MADE FOR ANY INCREASE OR DECREASE IN THE FINAL AMOUNT. THE CONTRACTOR SHALL MAKE EVERY EFFORT TO KEEP THE DISTURBANCE OF VEGETATED AREAS TO A MINIMUM. ANY AREA DISTURBED BY THE CONTRACTOR FOR ACCESS AND THE COMPLETION OF THE PROJECT SHALL BE INCLUDED IN THE TURF ESTABLISHMENT BID PRICE.
- GEOTEXTILE FABRIC, TYPE III SHALL BE PLACED UNDER ALL RANDOM RIPRAP CLASS II AND CONSIDERED INCIDENTAL TO BID ITEM "RANDOM RIPRAP CLASS II" WITH NO ADDITIONAL PAYMENT MADE THEREOF.
- ROCK DITCH CHECK TYPE 5 SHALL BE INSTALLED IMMEDIATELY DOWNSTREAM OF THE EXISTING PLUNGE POOL PRIOR TO CONSTRUCTION ACTIVITY. THE ROCK DITCH CHECK SHALL BE RANDOM RIPRAP CLASS II AND SHALL BE PAID FOR UNDER BID ITEM "RANDOM RIPRAP CLASS II." THE ROCK DITCH CHECK SHALL BE REUSED AS ADDITIONAL OUTLET CONTROL ON THE 24" CP PIPE SEWER OUTLET AS DETERMINED BY THE ENGINEER IN THE FIELD AT THE END OF CONSTRUCTION. SEE SHEET 9 FOR MORE INFORMATION ABOUT ROCK DITCH CHECK TYPE 5.
- ITEM NO. 2573.501, "STORM DRAIN INLET PROTECTION" SHALL BE AN OPTION LISTED ON SHEET 13 OR AN APPROVED EQUIVALENT VERIFIED BY THE ENGINEER.

No.	Revision	Date	By

NICK SEEGER - GRADE STABILIZATION PROJECT
 RED LAKE COUNTY SOIL & WATER CONSERVATION DISTRICT
 SEC. 17, RED LAKE FALLS TWP., RED LAKE COUNTY, MN
 ESTIMATED QUANTITIES AND NOTES



Drawn By	TMN
Checked By	TAN
Date	3-7-23
Scale	As Shown
Project No.	10861-0017
SHEET	2

I hereby certify that this plan, specification, or 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.

Tony A. Nordby
 Tony A. Nordby
 License No. 51392

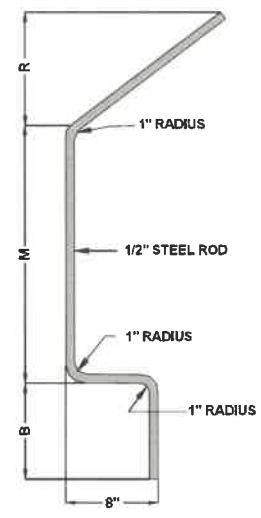
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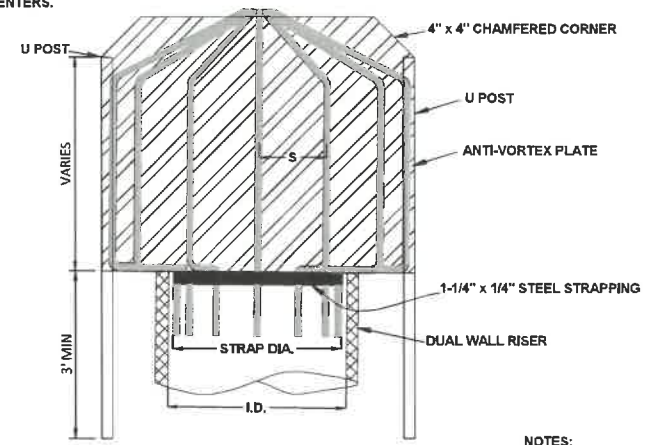
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TRASH RACK AND ANTI-VORTEX DIMENSIONS								
PIPE I.D. (IN)	STRAP DIA. (IN)	S (IN)	B (IN)	M (IN)	R (IN)	T (IN)	L (IN)	X (IN)
12	11 1/4	5-6	9	9	12	20	28	12
15	14 1/4	5-6	9	9	13	21	31	13
18	17 1/4	6-7	9	9	14	22	34	14
24	23 1/4	7-8	12	12	11	25	40	17
30	29 1/4	8-9	12	12	10	27	46	19
36	35 1/4	9-10	12	12	9	29	52	21

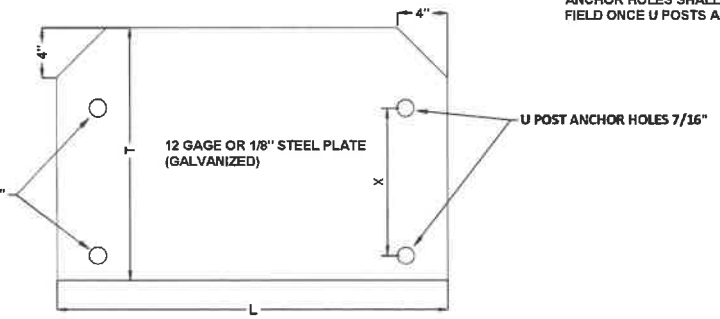
NOTE:
ANCHOR TO ANTI-VORTEX PLATE WITH FOUR 7/16" BOLTS WITH WASHERS AND LOCKNUTS OR AN APPROVED EQUIVALENT METHOD.
U POSTS SHALL BE 2.75 LB/FT AND 7/16" HOLES ON 1" CENTERS.



ROD BENDING DETAIL



TRASH RACK/ANTI VORTEX DETAIL

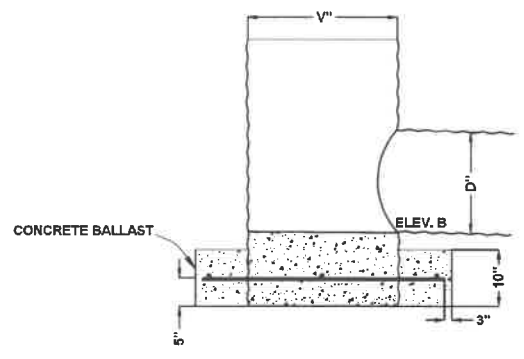


ANTI-VORTEX DETAIL

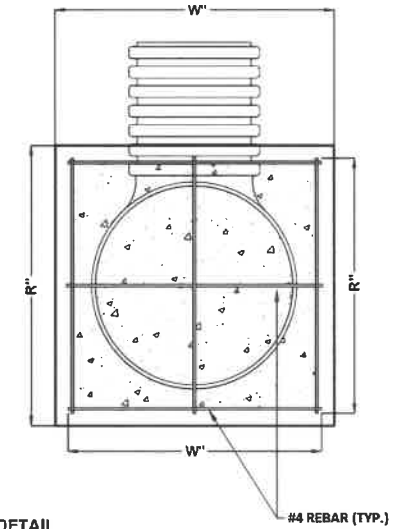
NOTE:
ANCHOR HOLES SHALL BE DRILLED IN THE FIELD ONCE U POSTS ARE IN PLACE.

DUAL WALL RISER TABLE	
ELEV. A	954.9'
ELEV. B	949.9'
ELEV. C	948.9'
H	6'
D	24"
V	30"

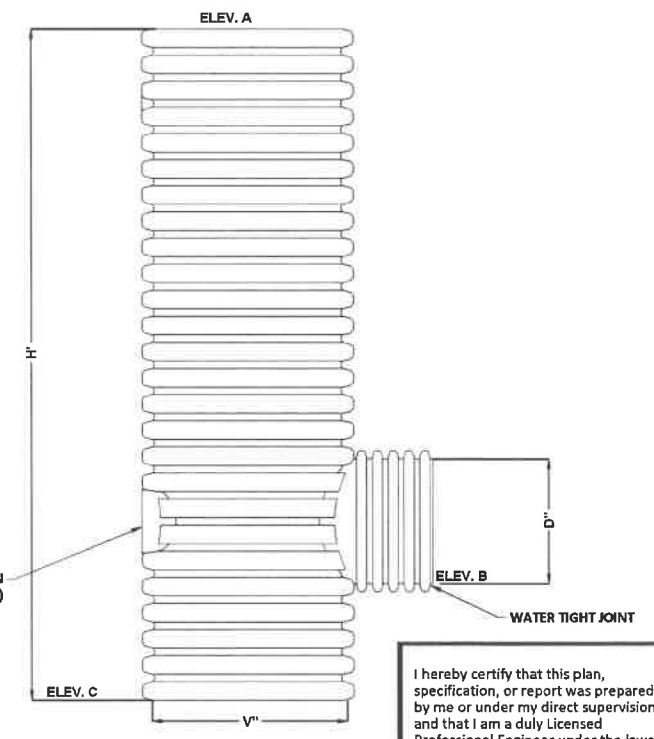
- NOTES:
- RISER SHALL BE CAST INSIDE THE CONCRETE BALLAST WITH #4 REBAR DOWELED THROUGH CENTER AS SHOWN IN "RISER BALLAST DETAIL"
 - CONCRETE INSIDE OF RISER SHALL BE LEVEL WITH ELEVATION B AS SHOWN ON THIS SHEET "RISER BALLAST DETAIL"
 - STEEL REINFORCEMENT IS #4 BAR. CONCRETE WILL REQUIRE ADEQUATE CONSOLIDATION TO ELIMINATE VOIDS, HONEYCOMB AND FULLY ENCASE REBAR AND EMBEDMENTS.
 - CORRUGATED DUAL WALL PIPE RISER REQUIRES GRANULAR BACKFILL MATERIAL A MINIMUM 2 FEET WIDTH AROUND THE CORRUGATED DUAL WALL RISER. THE OUTLET STUB CONNECTION REQUIRES A WATERTIGHT CONNECTION SUCH AS A BELL TO BELL WITH GASKETS.



RISER BALLAST DETAIL



RISER BALLAST SIZING CHART			
PIPE SIZE	R	W	REBAR LIN FT
12"	24"	24"	9'
18"	30"	30"	12'
24"	36"	36"	15'
30"	42"	42"	18'
54"	66"	66"	30'

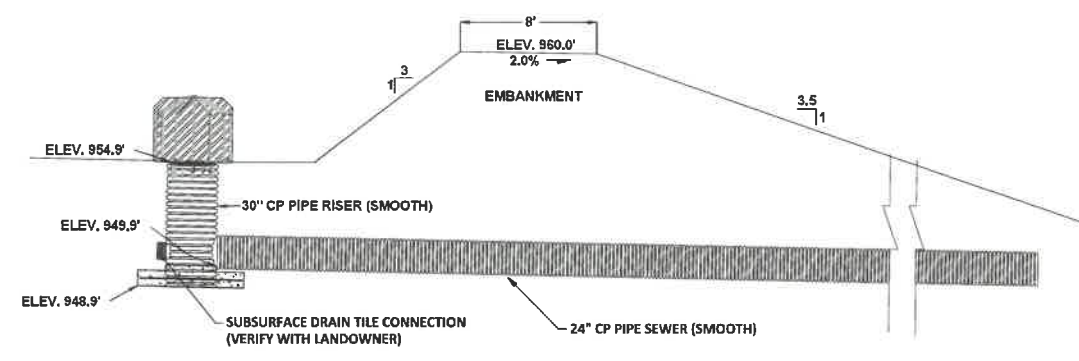


DUAL WALL RISER DETAIL

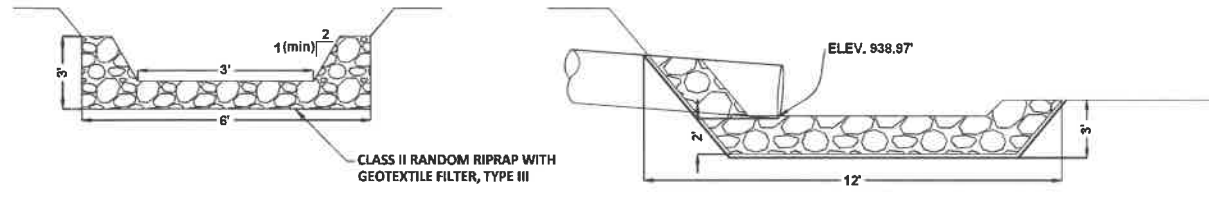
I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision, and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.
Tony A. Nordby
Tony A. Nordby
License No. 51392
Date: 03-08-2023

No.	Revision	Date	By
RISER DETAILS			
NICK SEEGER - GRADE STABILIZATION PROJECT RED LAKE COUNTY SOIL & WATER CONSERVATION DISTRICT SEC. 17, RED LAKE FALLS TWP., RED LAKE COUNTY, MN			
HOUSTON engineering, inc.			
Drawn By TMN			
Checked By TAN			
Date 3-7-23			
Scale As Shown			
Project No. 10861-0017			
SHEET 3			

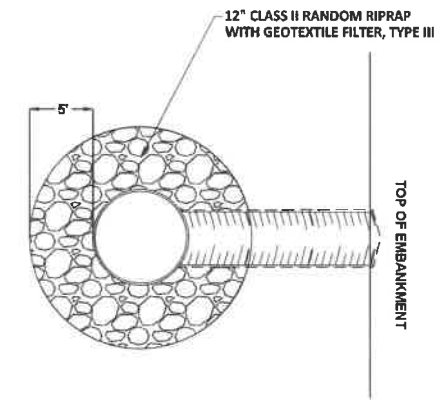
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STRUCTURE PROFILE



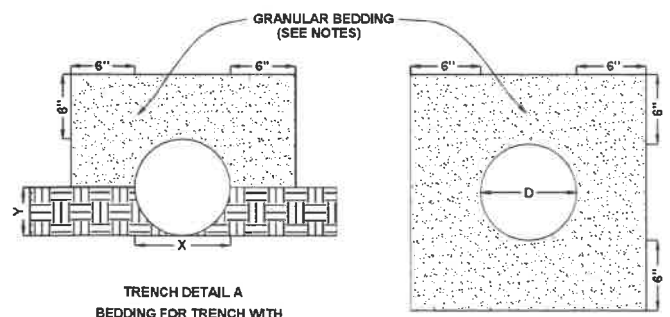
OUTLET PROTECTION DETAILS



INLET PROTECTION DETAILS

DIA	X	Y
8"	9-1/2"	21-1/2"
10"	11-5/8"	23-5/8"
12"	14-1/4"	26-1/4"
15"	18-3/8"	30-3/8"
18"	21-1/2"	33-1/2"
24"	28-1/2"	40-1/2"

TRENCH SPOON DIMENSIONS FOR DETAIL A



TRENCH DETAIL A
BEDDING FOR TRENCH WITH
CLOSE FITTING TEMPLATE

TRENCH DETAIL B

PIPE BEDDING DETAILS

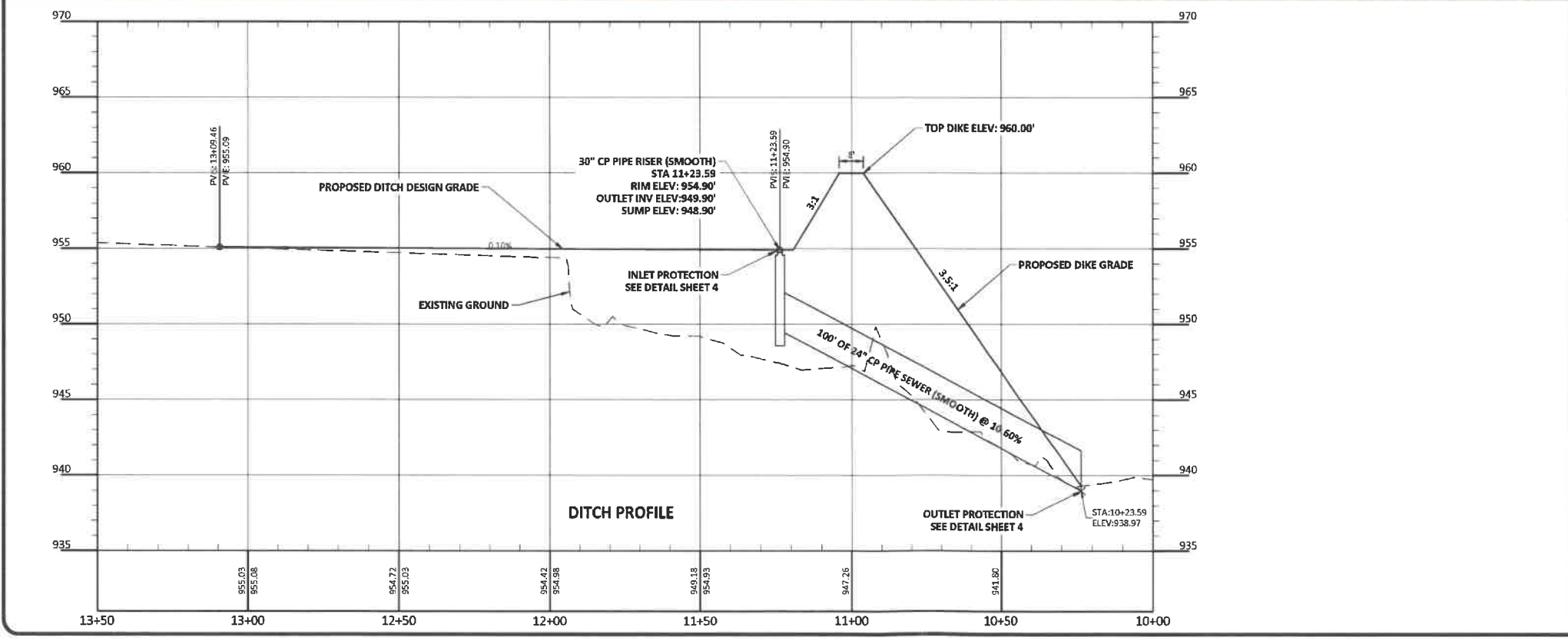
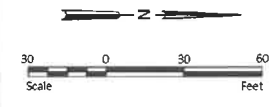
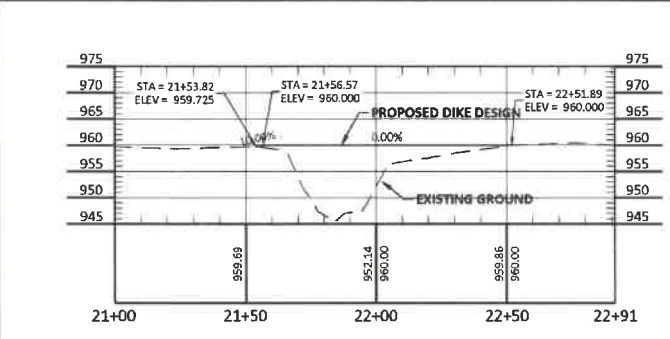
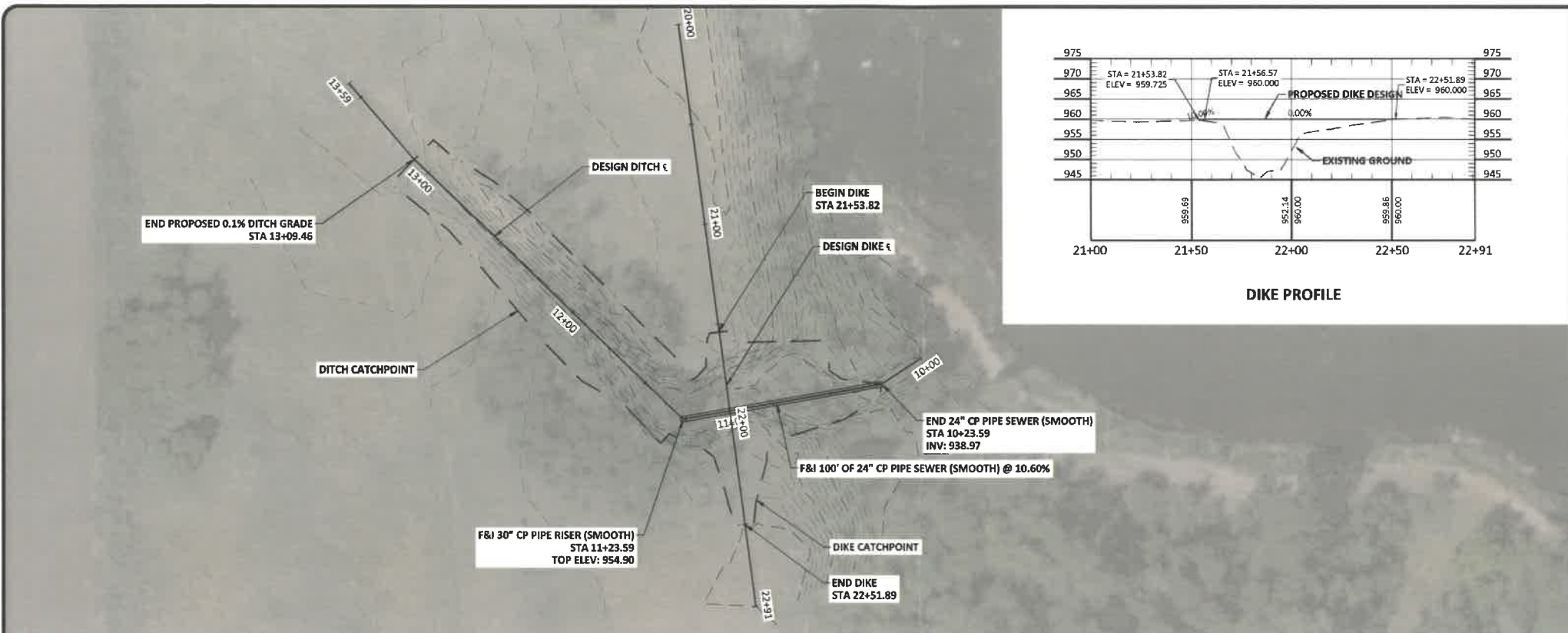
I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision, and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

Tony A. Nordby
 Tony A. Nordby
 License No. 51392

Date: 03-08-2023

No.		Revision	Date	By
RISER DETAILS				
NICK SEEGER - GRADE STABILIZATION PROJECT RED LAKE COUNTY SOIL & WATER CONSERVATION DISTRICT SEC. 17, RED LAKE FALLS TWP., RED LAKE COUNTY, MN				
 HOUSTON engineering, inc.		Drawn By TMN		
Checked By TAN		Date 3-7-23		
Scale As Shown		Project No. 10861-0017		
SHEET 4		Date: 03-08-2023		

H:\BY\10861\10861\10861_0017 Nick Seeger\CAD\Drawings\10861-0017 PLAN & PROFILE.dwg; PLAN & PROFILE: 3/8/2023 11:59 AM; (reborn)



I hereby certify that this plan, specification, or 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.

Tony A. Nordby
 Tony A. Nordby
 License No. 51392

Date: 03-08-2023

No.	Revision	Date	By

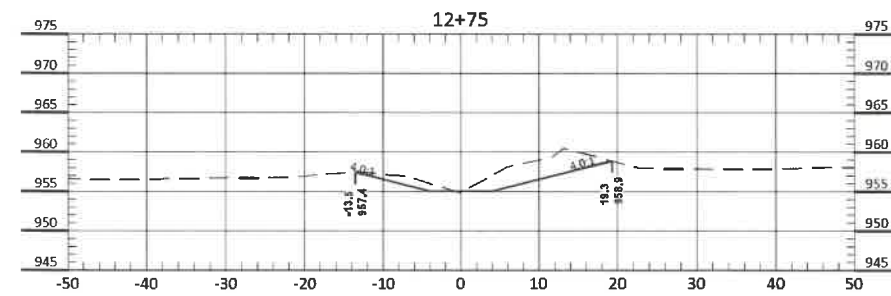
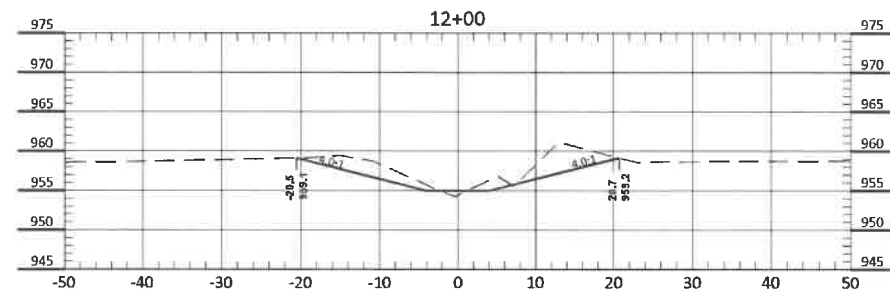
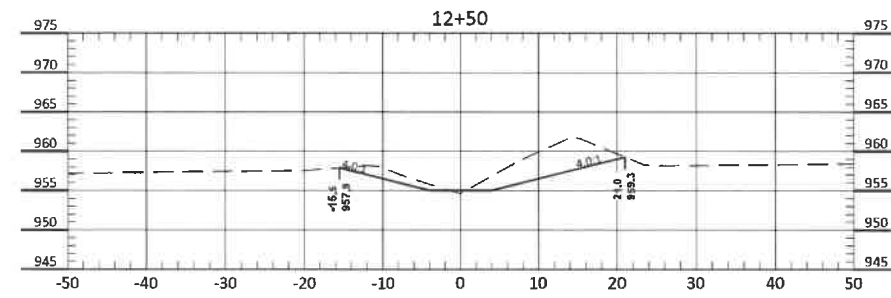
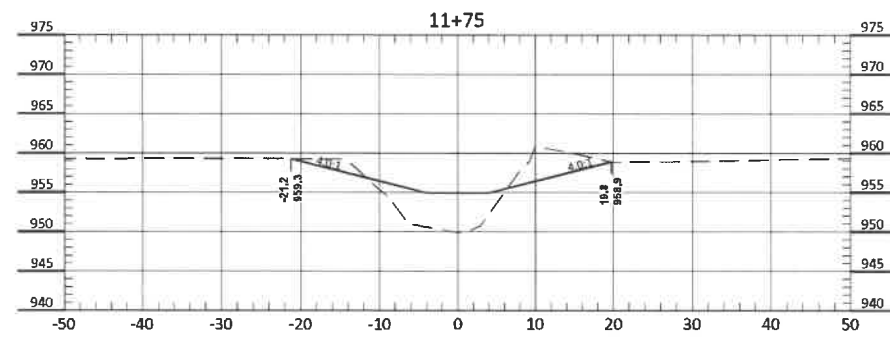
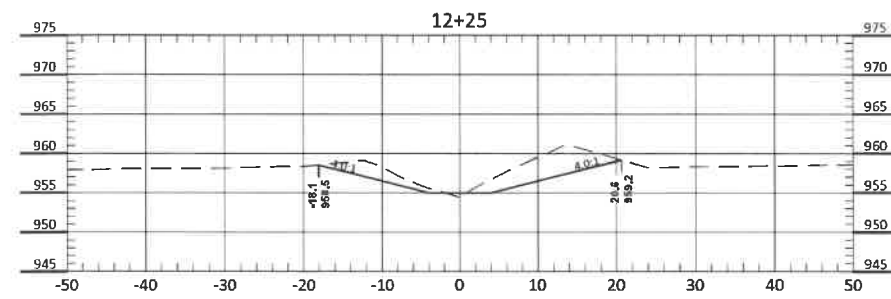
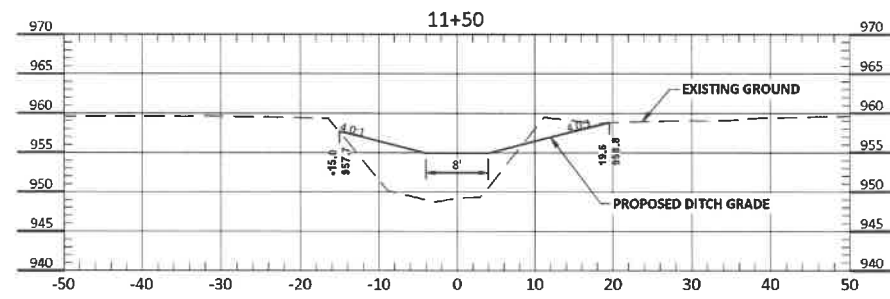
PLAN & PROFILE

NICK SEEGER - GRADE STABILIZATION PROJECT
 RED LAKE COUNTY SOIL & WATER CONSERVATION DISTRICT
 SEC. 17, RED LAKE FALLS TWP., RED LAKE COUNTY, MN

HOUSTON
engineering, inc.

Drawn By	TMN
Checked By	TAN
Date	3-7-23
Scale	As Shown
Project No.	10861-0017
SHEET	5

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Revision	No.	Date	By

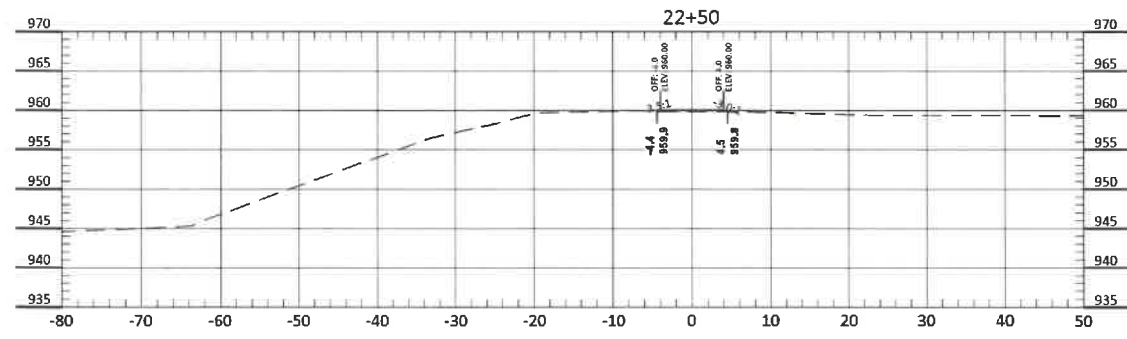
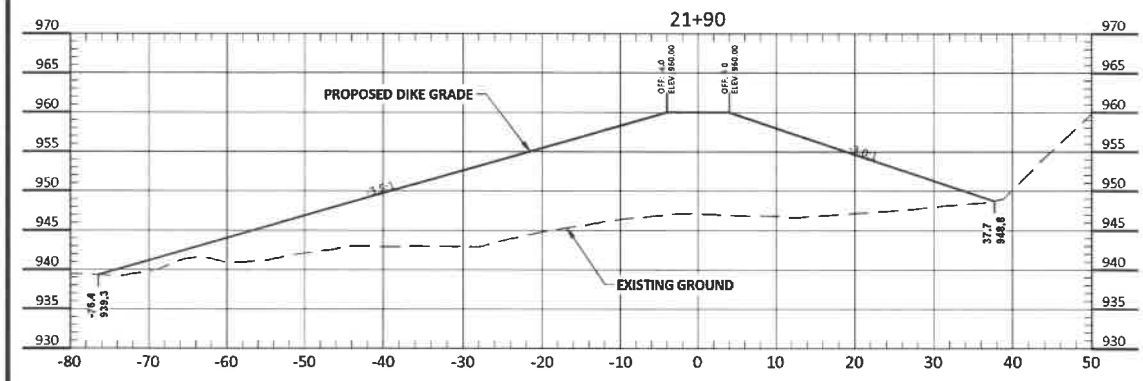
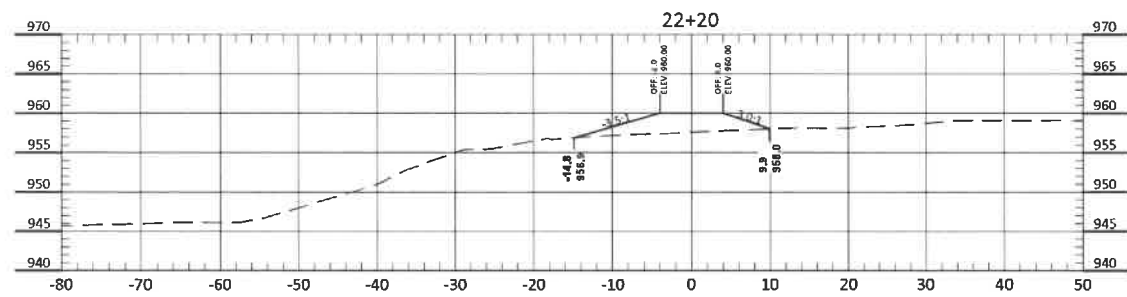
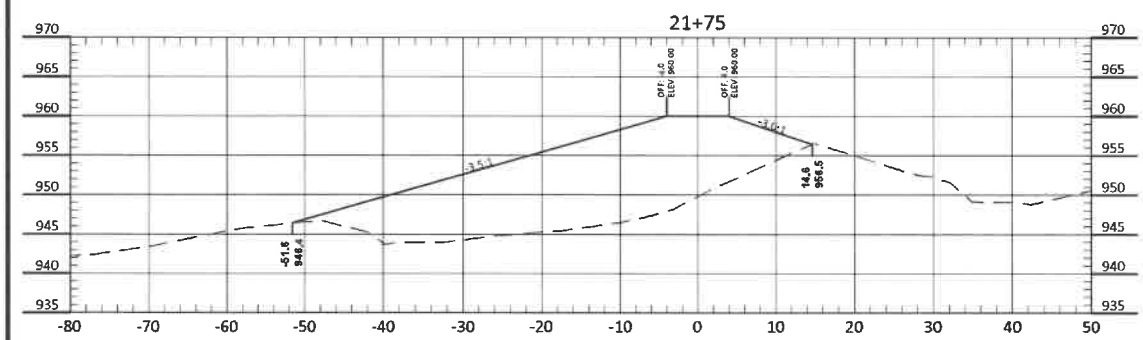
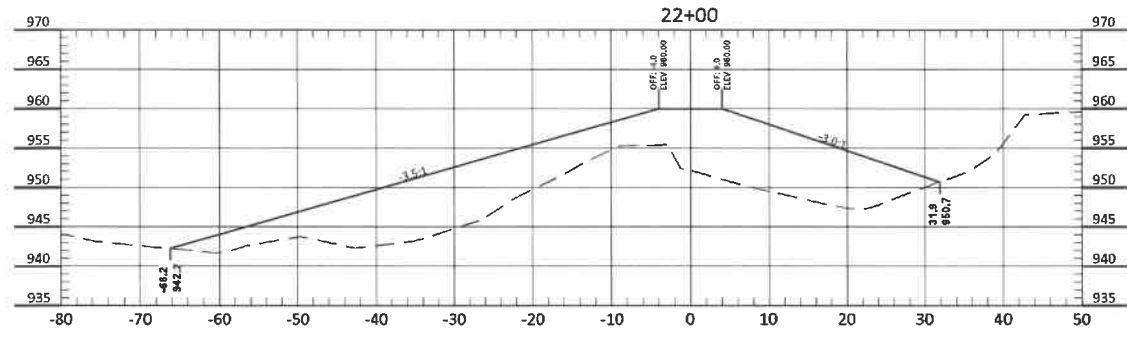
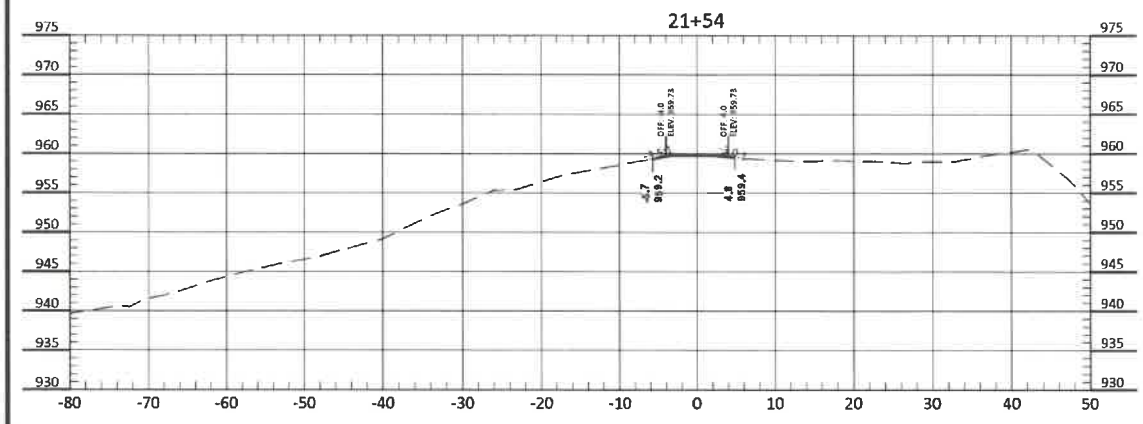
DITCH CROSS SECTIONS

NICK SEEGER - GRADE STABILIZATION PROJECT
RED LAKE COUNTY SOIL & WATER CONSERVATION DISTRICT
SEC. 17, RED LAKE FALLS TWP., RED LAKE COUNTY, MN



HOUSTON
engineering, inc.

Drawn By	TMN
Checked By	TAN
Date	3-7-23
Scale	As Shown
Project No.	10861-0017
SHEET	6



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No.	Revision	Date	By

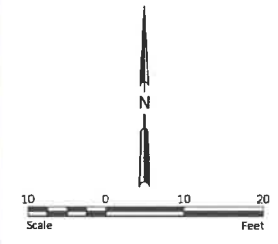
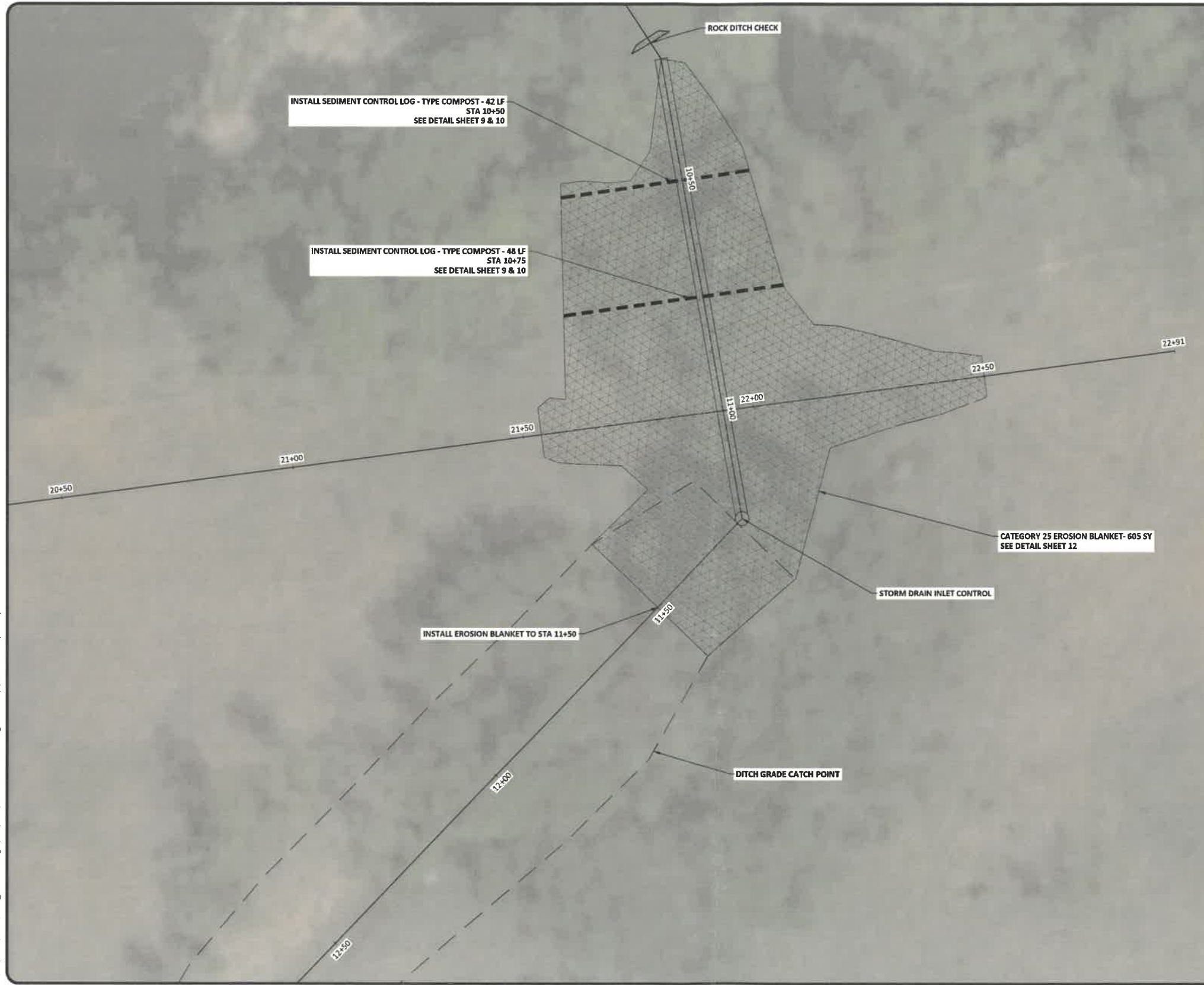
NICK SEGER - GRADE STABILIZATION PROJECT
 RED LAKE COUNTY SOIL & WATER CONSERVATION DISTRICT
 SEC. 17, RED LAKE FALLS TWP., RED LAKE COUNTY, MN



Drawn By
 TMN
 Checked By
 TAN
 Date
 3-7-23
 Scale
 As Shown
 Project No.
 10861-0017

SHEET
 7

H:\B\10861\10861-0017 Nick Seeger\CAD\Plan\10861-0017 EROS ON.dwg EROSION-3/8/2023 3:27 PM (m:ton)



- A. ROLLED EROSION CONTROL PREVENTION CATEGORY 25 = 605 S.Y.
- B. SEED MIXTURE 25-141 = 16 LB (59 LB/ACRE)
- C. FERTILIZER TYPE 3, NPK OF 10-10-10 = 68 LB (250 LB/ACRE)
- D. SEED MIXTURE 21-112 = 7 LB (25 LB/ACRE)
- E. ROCK DITCH CHECK = 12CY

NICK SEEGER - GRADE STABILIZATION PROJECT
 RED LAKE COUNTY SOIL & WATER CONSERVATION DISTRICT
 SEC. 17, RED LAKE FALLS TWP., RED LAKE COUNTY, MN
 EROSION AND SEDIMENT CONTROL PLAN



Drawn By	TMN
Checked By	TAN
Date	3-7-23
Scale	As Shown
Project No.	10861-0017
SHEET	8

I hereby certify that this plan, specification, or 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.

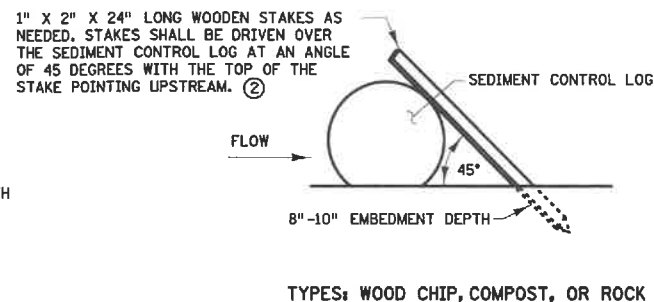
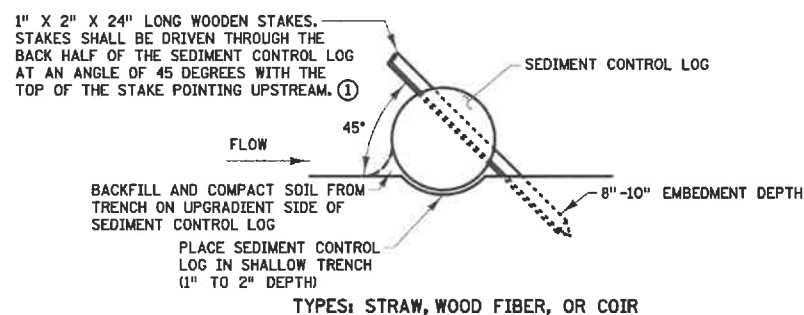
Tony A. Nordby
 Tony A. Nordby
 License No. 51392
 Date: 03-08-2023

By	
Date	

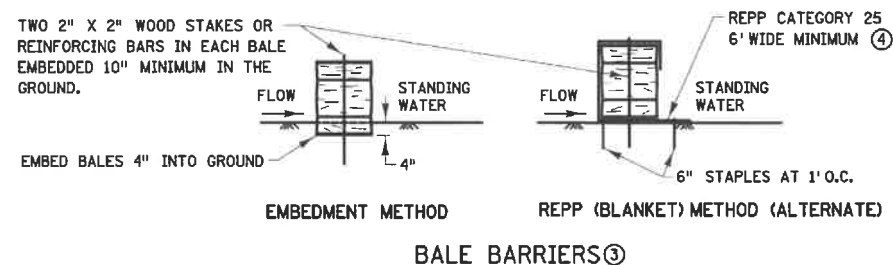
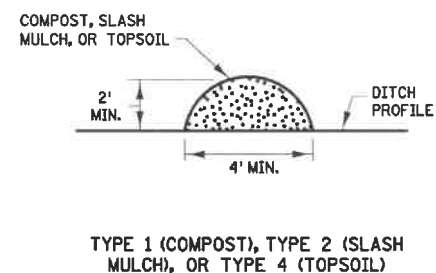
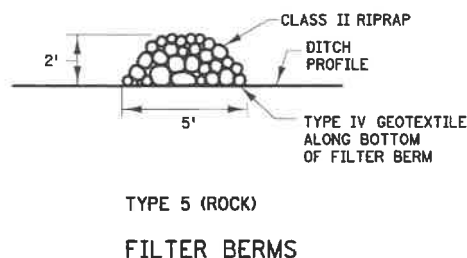
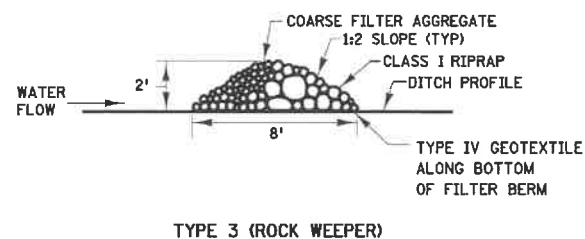
No.	
Revision	

PLOTTED/REVISED: 24-JAN-2020

IPLOT NAME: s405_2.spt
 PATH & FILENAME: OTS\DesignStandards\Development\Standards\Plans\DEV\400_Series\s405_2.spt.dgn



SEDIMENT CONTROL LOGS



NOTES:

- REPP = ROLLED EROSION PREVENTION PRODUCT.
 SEE SPECS. 2573, 3149, 3874, 3882, 3885, 3886, AND 3897.
- ① SPACE BETWEEN STAKES SHALL BE A MAXIMUM OF 1' FOR DITCH CHECKS OR 2' FOR OTHER APPLICATIONS.
 - ② PLACE STAKES AS NEEDED TO PREVENT MOVEMENT OF SEDIMENT CONTROL LOGS PLACED ON SLOPES OR AS NEEDED DUE TO OTHER FACTORS. STAKES SHALL BE INCIDENTAL.
 - ③ TO BE USED FOR CRITICAL PERIMETER CONTROL AREAS WHERE STANDING WATER OCCURS (6" MAXIMUM DEPTH). BALES SHALL CONSIST OF TYPE 1 MULCH OF APPROXIMATELY 14" X 18" X 36" LONG. BALES SHALL BE PLACED ON EDGE AND BUTTED TIGHT TO ADJACENT BALES.
 - ④ INSTEAD OF TRENCHING, PLACE BALE ON THE REPP (BLANKET) AND WRAP BLANKET AROUND THE BALE. PLACE STAKE THROUGH BALE AND BLANKET.

REVISION:
APPROVED: JANUARY 8, 2020
<i>Marc Karwowski</i>
MARC KARWOWSKI
CHIEF ENVIRONMENTAL OFFICER



STANDARD PLAN 5-297.405

2 OF 8

THOMAS J. TYBICKI
 STATE DESIGN ENGINEER

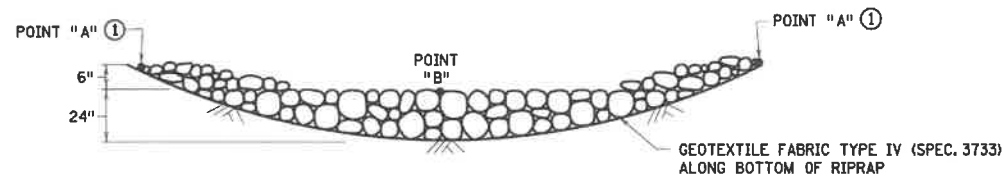
APPROVED: 1-8-2020
 REVISED:

STATE PROJ. NO.

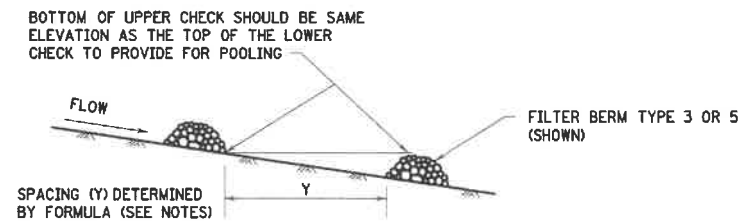
TEMPORARY SEDIMENT CONTROL
 FILTER BERMS, SEDIMENT CONTROL LOGS, AND BALE BARRIERS
 (T.H.) SHEET NO. 9 OF SHEETS

PLOTTED/REVISED: 24-JAN-2020

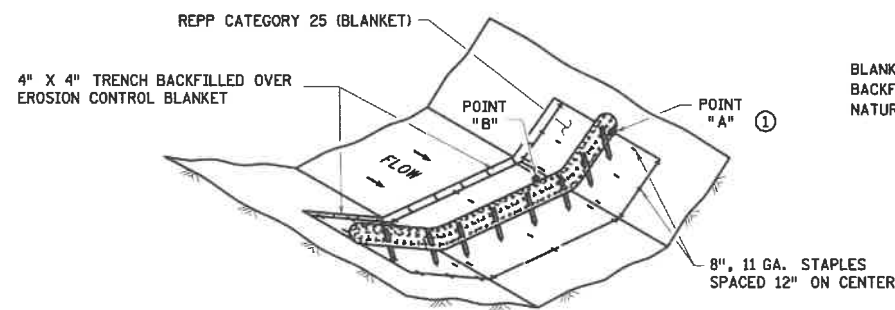
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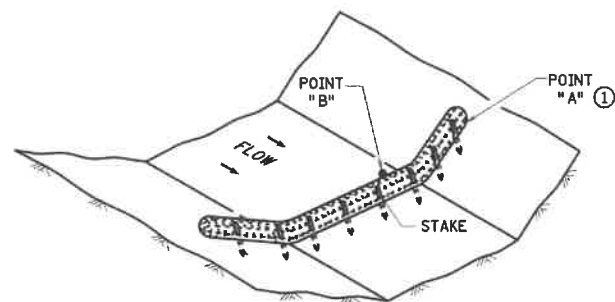
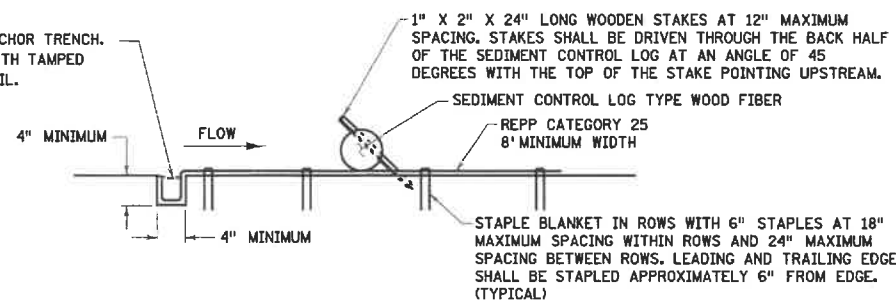
ROCK DITCH CHECKS
FILTER BERMS TYPE 3 (ROCK WEEPER) OR FILTER TYPE 5 (ROCK) ③
 FOR USE ON ROUGH-GRADED AREAS
 ONLY FOR USE OUTSIDE CLEAR ZONE ②



DITCH CHECK SPACING
 FOR ALL FILTER BERM TYPES



SEDIMENT CONTROL LOG TYPE REPP (BLANKET) SYSTEM ④



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

NOTES:

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

$$\text{APPROXIMATE SPACING OF DITCH CHECKS (FT.)} = Y = \frac{\text{DITCH CHECK HEIGHT (FT.)}}{\% \text{ CHANNEL SLOPE}} \times 100$$
- ① POINT "A" MUST BE A MINIMUM OF 6" HIGHER THAN POINT "B" TO ENSURE THAT WATER FLOWS OVER THE DIKE AND NOT AROUND THE ENDS.
- ② ROCK DITCH CHECKS PLACED WITHIN THE CLEAR ZONE ARE TO BE 18" OR LESS IN HEIGHT. A 1:6 APPROACH AND DEPARTURE SLOPE SHALL BE PROVIDED.
- ③ DITCH GRADE 3% - 5%, MAX. FLOW VELOCITY 12 FT./SEC.
- ④ DITCH GRADE 1.5% - 3%, MAX. FLOW VELOCITY 4.5 FT./SEC.
- ⑤ DITCH GRADE 1.5% - 3%, MAX. FLOW VELOCITY 1.5 FT./SEC.

REVISION:
 APPROVED: JANUARY 8, 2020
Mari Kasowski
 MARI KASOWSKI
 CHIEF ENVIRONMENTAL OFFICER

m
 MINNESOTA
 DEPARTMENT
 OF
 TRANSPORTATION

STANDARD PLAN 5-297.405

3 OF 8

Tom S...
 THOMAS STYBRICKI
 STATE DESIGN ENGINEER

APPROVED: 1-8-2020
 REVISED:

STATE PROJ. NO.

TEMPORARY SEDIMENT CONTROL

DITCH CHECK

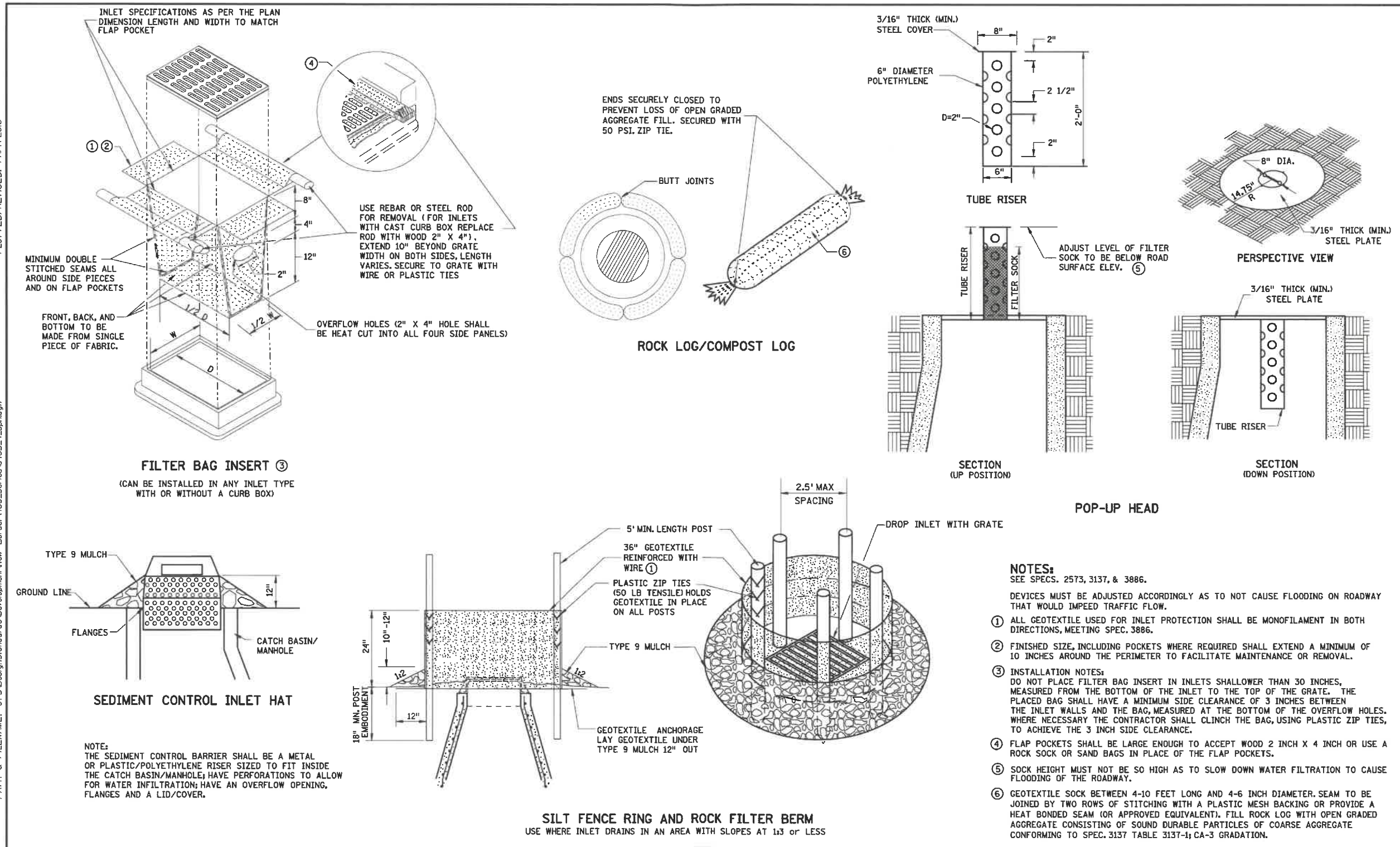
(T.H.)

SHEET NO. 10 OF

SHEETS

PLOTTED/REVISED: 4-APR-2018

PILOT NAME: s405_4_sprn
 PATH & FILENAME: OTS\DesignStandards\Development\New Border\400_Series\405_4_sprn.dgn



- NOTES:**
 SEE SPECS. 2573, 3137, & 3886.
- DEVICES MUST BE ADJUSTED ACCORDINGLY AS TO NOT CAUSE FLOODING ON ROADWAY THAT WOULD IMPEDE TRAFFIC FLOW.
- ALL GEOTEXTILE USED FOR INLET PROTECTION SHALL BE MONOFILAMENT IN BOTH DIRECTIONS, MEETING SPEC. 3886.
 - FINISHED SIZE, INCLUDING POCKETS WHERE REQUIRED SHALL EXTEND A MINIMUM OF 10 INCHES AROUND THE PERIMETER TO FACILITATE MAINTENANCE OR REMOVAL.
 - INSTALLATION NOTES:**
 DO NOT PLACE FILTER BAG INSERT IN INLETS SHALLOWER THAN 30 INCHES, MEASURED FROM THE BOTTOM OF THE INLET TO THE TOP OF THE GRATE. THE PLACED BAG SHALL HAVE A MINIMUM SIDE CLEARANCE OF 3 INCHES BETWEEN THE INLET WALLS AND THE BAG, MEASURED AT THE BOTTOM OF THE OVERFLOW HOLES. WHERE NECESSARY THE CONTRACTOR SHALL CLINCH THE BAG, USING PLASTIC ZIP TIES, TO ACHIEVE THE 3 INCH SIDE CLEARANCE.
 - FLAP POCKETS SHALL BE LARGE ENOUGH TO ACCEPT WOOD 2 INCH X 4 INCH OR USE A ROCK SOCK OR SAND BAGS IN PLACE OF THE FLAP POCKETS.
 - SOCK HEIGHT MUST NOT BE SO HIGH AS TO SLOW DOWN WATER FILTRATION TO CAUSE FLOODING OF THE ROADWAY.
 - GEOTEXTILE SOCK BETWEEN 4-10 FEET LONG AND 4-6 INCH DIAMETER. SEAM TO BE JOINED BY TWO ROWS OF STITCHING WITH A PLASTIC MESH BACKING OR PROVIDE A HEAT BONDED SEAM (OR APPROVED EQUIVALENT). FILL ROCK LOG WITH OPEN GRADED AGGREGATE CONSISTING OF SOUND DURABLE PARTICLES OF COARSE AGGREGATE CONFORMING TO SPEC. 3137 TABLE 3137-1, CA-3 GRADATION.

REVISIONS:
 APPROVED: 2-28-2017
 [Signature]
 CHIEF ENVIRONMENTAL OFFICER

MINNESOTA
 DEPARTMENT OF TRANSPORTATION

STANDARD PLAN 5-297.405 4 OF 8

APPROVED: 2-28-2017
 REVISOR:
 [Signature]
 STATE DESIGN ENGINEER

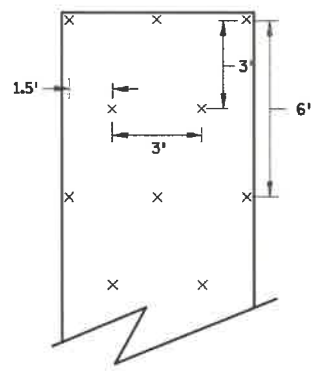
STATE PROJ. NO.

TEMPORARY SEDIMENT CONTROL
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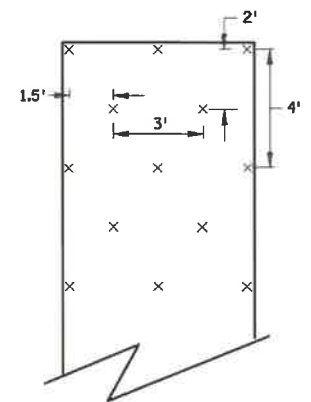
(T.H.) SHEET NO. 11 OF SHEETS

PLOTTED/REVISED: 24-JAN-2020

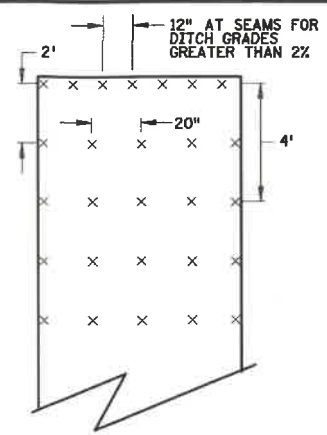
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SLOPES FLATTER THAN 1:2
 120 STAPLES PER 100 SQ YD

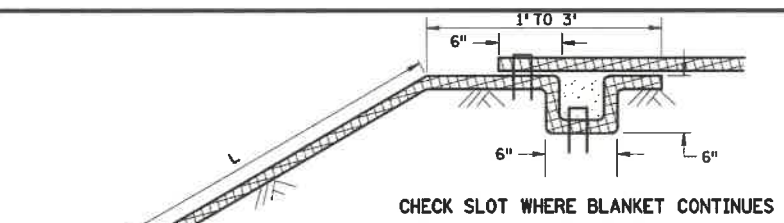


SLOPES 1:2 TO 1:1
 170 STAPLES PER 100 SQ YD

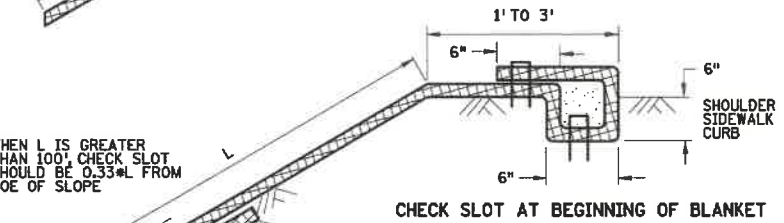


CHANNEL AND DITCH APPLICATIONS
 350 STAPLES PER 100 SQ YD

BLANKET STAPLE PATTERN

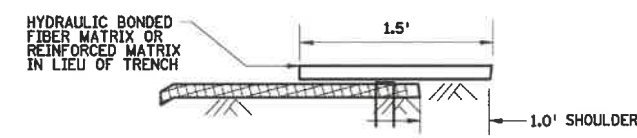


CHECK SLOT WHERE BLANKET CONTINUES



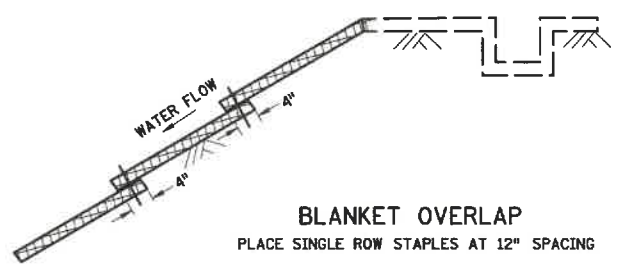
CHECK SLOT AT BEGINNING OF BLANKET

CHECK SLOT REQUIREMENTS
 DIG 6" BY 6" TRENCH.
 INSERT BLANKET INTO ENTIRE TRENCH PERIMETER.
 PLACE SINGLE ROW STAPLES AT 3' SPACING ALONG THE BOTTOM OF THE TRENCH.
 BACKFILL TRENCH WITH SOIL AND TAMP.
 PLACE SINGLE ROW STAPLES AT 3' SPACING ON OVERLAP.



CHECK SLOT ALTERNATIVE
 PLACE SINGLE ROW STAPLES AT 12" SPACING

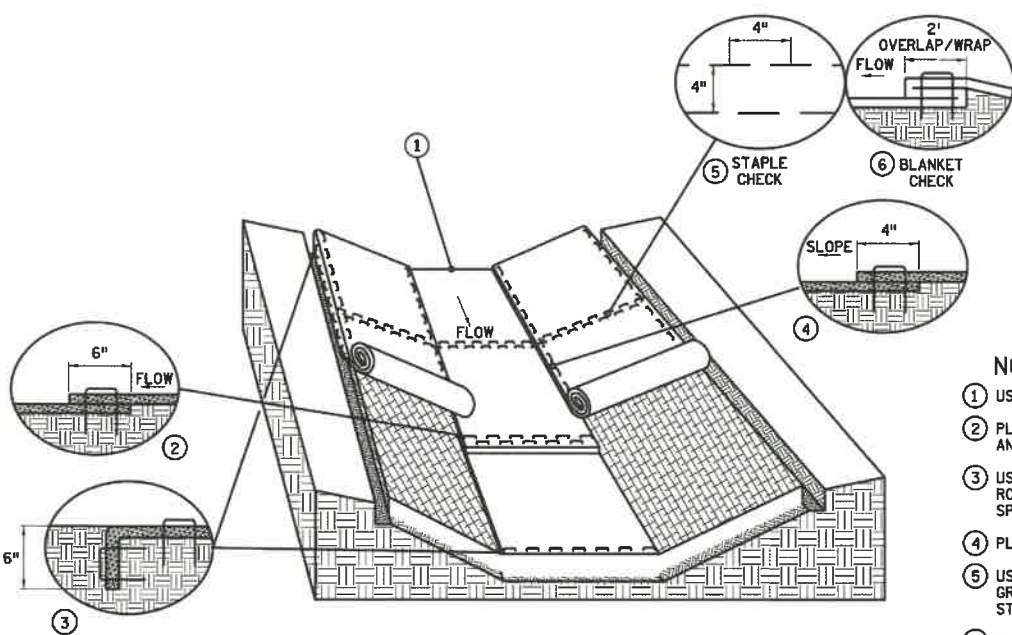
CHECK SLOT DETAILS



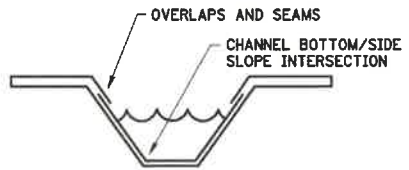
BLANKET OVERLAP

PLACE SINGLE ROW STAPLES AT 12" SPACING

GENERAL BLANKET INSTALLATION REQUIREMENTS
 REPP = ROLLED EROSION PREVENTION PRODUCT.
 PREPARE SOIL AS PER SPECIFICATION 2574.
 LAY PARALLEL OR PERPENDICULAR TO THE DIRECTION OF WATER FLOW.
 OVERLAP ADJACENT STRIP EDGES A MINIMUM OF 4".
 OVERLAP BLANKET 6" (MINIMUM) AT EACH END. OVERLAP BOTTOM END OF UPPER BLANKET OVER TOP END OF LOWER BLANKET. STAPLE ALONG OVERLAP EVERY 1.5'.
 THE UPPERMOST BLANKET OF ALL SLOPE APPLICATIONS MUST START IN A CHECK SLOT. IF SLOPE LENGTH (L) IS 100' OR GREATER, INSERT BLANKET INTO A CHECK SLOT 1/2 FROM THE BOTTOM OF THE SLOPE.



DITCH BLANKET STAPLE DETAIL



DITCH BLANKET CRITICAL POINTS ⑦

NOTES:

- ① USE CHECK SLOT DETAIL (NO ALTERNATES).
- ② PLACE DOUBLE ROW OF STAPLES STAGGERED 4" APART AND 4" ON CENTER.
- ③ USE 6" X 6" TRENCH TO PLACE BLANKET. PLACE SINGLE ROW OF STAPLES ON TOP AND TRENCH SIDES AT 12" SPACING. BACKFILL TRENCH WITH SOIL AND TAMP.
- ④ PLACE SINGLE ROW OF STAPLES AT 12" SPACING.
- ⑤ USE STAPLE CHECK FOR CHANNEL SLOPES LESS THAN 2.5%. GRADE AT 100' INTERVALS. PLACE DOUBLE ROW OF STAPLES STAGGERED 4" APART AND AT 4" SPACING.
- ⑥ USE BLANKET CHECKS FOR THE FOLLOWING SLOPES:
 2.5%-3% 100' INTERVALS
 3%-5% 50' INTERVALS
 5%-7% 25' INTERVALS
- ⑦ CRITICAL POINTS SHALL BE SECURED WITH PROPER STAPLE PATTERNS.

REVISION:
 APPROVED: JANUARY 6, 2020
W. Karowski
 WARMI KAROWSKI
 CHIEF ENVIRONMENTAL OFFICER

MINNESOTA
 DEPARTMENT OF TRANSPORTATION
 STANDARD PLAN 5-297.404 3 OF 3
 APPROVED: 1-8-2020
 REVISOR:
 STATE PROJ. NO. (T.H.)

PERMANENT EROSION CONTROL
 REPP (BLANKET) STAPLE PATTERN FOR SLOPES
 SHEET NO. 12 OF SHEETS

Clean Cut Maintenance
4796 S 42nd St
Grand Forks, ND 58201
David 218-791-8505

2/15/2023

RECEIVED

Invoice 3912

Red Lake Water Shed
Eric 218-686-9483
1000 Penning Avenue South
Thief River Falls, MN. 56701

MAR 06 2024

Initial: ja.

EH
Not PD

Re: 2021 Ditch mowing 2022 Mowing 2023 Mowing

Polk Co. Ditch 63 Impr./Proj. 134
JD 7230 20' mower
JD 6400 15' mower

23hrs. X \$120.00 per hour
5 hrs x \$100.00 per hour

\$2,760.00
\$500.00 **\$3260**

Polk Co. Ditch Impr./Proj. ¹¹⁹~~179~~
JD 7230 20' mower

54hrs. X \$120.00 per hour

\$6,480.00

Total

\$9740
~~\$9,740.00~~
\$6480

Invoice 3829

2022 Mowing
Check 40282 8/11/2022
PD Project # 53 JD 7230 20' mower

13 hrs. @ ¹²⁰~~\$150.00~~ per hour

~~\$1,950.00~~ **\$1560 pd.**

PD Project 135 Ditch 33 JD 7230 20' mower

12 hrs. @ ¹²⁰~~\$150.00~~ per hour

~~\$1,800.00~~ **\$1440 pd.**

PD Co. Ditch 63 Improv/ Project 134

15 hrs. @ ¹²⁰~~\$10.150.00~~ per hour

~~\$2250~~ **\$1800 pd.**

Polk Co. Ditch Improv/ Project 119

35 hrs. @ ¹²⁰~~\$150.00~~ per hour

~~\$5,250.00~~ **\$4200**

Total

~~\$11,250.00~~
~~\$5250~~
\$4200

2023 Mowing

Proj.169	Mowed hayed area per Eric's request	JD 7230 20' mower	32 hrs @ \$150.00 per hour	\$4,800.00
Proj. 134	Polk Co. Ditch 63 Improvement	JD 7230 20' mower	21 hrs. @ \$150.00 per hour	\$3,150.00
Proj. 119		JD 7230 20' mower	42 hrs. @ \$150.00 per hour	\$6,300.00
Proj. 43B	Burnam Creek	JD 7230 20' mower	27 hrs. @ \$150.00 per hour	\$4,050.00
		JD 6400 15' mower	20 hrs. @ \$135.00 per hour	\$2,700.00
Proj. 123		JD 7230 20' mower	2 hrs. @ \$150.00 per hour	\$ 300.00
Proj. 117		JD 74230 20' mower	2 hrs. @ \$150.00 per hour	\$ 300.00

Total : **\$21,600.00**

Sub total:

~~\$42,590.00~~ EH

~~\$33,330~~ EH

~~\$32,280~~ EH

\$35,540 EH

Total to pay
3/14/24

Thank you

David



Permit # 24-005

Status Report: **Withdrawn**

Applicant Information

Name	Organization	Address	Email	Phone Number(s)
BNSF Railroad Company		4515 Kansas Avenue Kansas City, KS 66106		tel:913-291-5514 mobile: fax:

General Information

(1) The proposed project is a:

Bridge Installation / Removal / Modification

(2) Legal Description

(3) County: **Polk** Township: **Angus** Range: **47** Section: **9 1/4**:

(4) Describe in detail the work to be performed. **replace bridge**

(5) Why is this work necessary? Explain water related issue/problem being solved. **to maintain a structure for the safe and efficient transportation of interstate freight.**

Status

Status	Notes	Date
Withdrawn	P.A. #24-005 – BNSF Railroad Company/Eli Ellis Polk County – Angus Township – Section 9 The Red Lake Watershed District (RLWD) “withdraws” this permit application due to the construction location not being in Red Lake Watershed jurisdiction. This permit does not exempt the permit applicant from local, state, or federal authority that might require their approval. Applicant is responsible for utility locates by calling Gopher 1. (1-800-252-1166) T.O.	March 7, 2024
Received	None	Feb. 13, 2024

Conditions

NOTE: This permit does not relieve the applicant of any requirements for other permits which may be necessary from Township, County, State, or Federal Government Agencies.



Permit # **24-008**

Status Report: **Tabled**

Applicant Information

Name	Organization	Address	Email	Phone Number(s)
Bruce Stromstad		27498 455th St SW Beltrami, MN 56517		tel:218-280-1306 mobile: fax:

General Information

(1) The proposed project is a:

Other

(2) Legal Description

(3) County: **Polk** Township: **Kertsonville** Range: **45** Section: **20** 1/4:

(4) Describe in detail the work to be performed. **Clean ditch**

(5) Why is this work necessary? Explain water related issue/problem being solved.

Status

Status	Notes	Date
Tabled	P.A. #24-00/8 – Bruce Stromstad Polk County – Kertsonville Township – Section 20 The Red Lake Watershed District (RLWD) Will table this permit due to needing to hear back from The Nature Conservancy as they are a neighboring land owner. T.O.	March 11, 2024
Received	None	Jan. 18, 2024

Conditions

NOTE: This permit does not relieve the applicant of any requirements for other permits which may be necessary from Township, County, State, or Federal Government Agencies.



Permit # 24-006

Status Report: **Approved**

Applicant Information

Name	Organization	Address	Email	Phone Number(s)
BNSF Railway Company		4515 Kansas Avenue Kansas City, KS 66106		tel:913-291-5514 mobile: fax:

General Information

(1) The proposed project is a:

Bridge Installation / Removal / Modification

(2) Legal Description

(3) County: **Polk** Township: **Fanny** Range: **47** Section: **24 1/4**:

(4) Describe in detail the work to be performed. **replace bridge**

(5) Why is this work necessary? Explain water related issue/problem being solved. **maintain a structure for the safe and efficient transportation of interstate freight.**

Status

Status	Notes	Date
Approved	P.A. #24-006 – BNSF Railway Company/Eli Ellis Polk County – Fanny Township – Section 24 The Red Lake Watershed District (RLWD) approves to install two 36” culverts as part of the proposed BNSF bridge replacement project. All excavation shall be consistent with the existing road and ditch slopes and there shall be no vertical excavation faces. Current flow patterns shall remain “as-is” and there shall be no additional drainage area or flows from the adjacent agriculture land routed to the ditch. Applicant shall ensure that all disturbed areas are seeded with appropriate seed mixture and that consideration for rock riprap with filter fabric is placed at the outlet end of the permitted culverts. If any work is within a public road and/or public ditch Right-of-Way, applicant shall contact the appropriate road/ditch authority for their approval and must meet their specs/conditions. Permit Holder shall contact the road authorities when cutting through roads when applicable. Directly downstream of the outlet, applicant shall ensure that adequate grade and drainage is provided. This permit does not exempt the permit applicant from local, state, or federal authority that might require their approval. Applicant is responsible for utility locates by calling Gopher 1. (1-800-252-1166) T.O.	March 7, 2024
Received	None	Feb. 13, 2024

Conditions

NOTE: This permit does not relieve the applicant of any requirements for other permits which may be necessary from Township, County, State, or Federal Government Agencies.



Permit # 24-007

Status Report: **Approved**

Applicant Information

Name	Organization	Address	Email	Phone Number(s)
Aaron Myhre		22223 165th Ave SE Red Lake Falls, MN 56750		tel:218-689-2697 mobile: fax:

General Information

(1) The proposed project is a:

Other

(2) Legal Description

(3) County: **Red Lake** Township: **Terrebonne** Range: **43** Section: **2 1/4**:

(4) Describe in detail the work to be performed. **water sediment control basin**

(5) Why is this work necessary? Explain water related issue/problem being solved. **river bank erosion control**

Status

Status	Notes	Date
Approved	P.A. #24-007 – Aaron Scott Myhre Red Lake County – Terrebonne Township – Section 2 The Red Lake Watershed District (RLWD) approves to install a WASCB & Pond project in Terrebonne Twp Section 2. (Plans Attached). This permit does not exempt the permit applicant from local, state, or federal authority that might require their approval. Applicant is responsible for utility locates by calling Gopher 1. (1-800-252-1166) T.O.	March 7, 2024
Received	None	Feb. 21, 2024

Conditions

NOTE: This permit does not relieve the applicant of any requirements for other permits which may be necessary from Township, County, State, or Federal Government Agencies.

Administrator's Report

March 14, 2024

MN Legislature: Included in the packet is the 2024 bill tracking updated as of March 11, 2024.

RRWMB: I plan to attend the RRWMB meeting next week in Moorhead, followed by the RRWMB/FDRWG conference.

District Audit: The RLWD Audit was completed last week. I felt that we were able to get our questions answered, which will be helpful in the future.

2024 BWSR Spring Training: Included in the packet is information on the 2024 BWSR Spring Training to be held on March 28th.

Red Lake County SWCD Landowner meeting: I presented at the Red Lake SWCD landowner meeting on March 13, 2024. Manager Page was also in attendance.

Thief River 1W1P: I participated in the March 22, 2024 Thief River 1W1P Policy Committee meeting at the District office.

2024 Bill Tracking		Current as of March 11, 2024				MN Legislative Session		
Bill Number	Companion Bill	Item	Primary Author	Category	Link	FHMP \$ Requested	Comments	Date Introduced
SF3444	None as of February 10, 2024.	A bill for an act relating to natural resources; establishing a nonlethal beaver management grant program; requiring a report; appropriating money.	Gustafson	Beaver Control	SF 3444 as introduced - 93rd Legislature (2023 - 2024) (mn.gov)			Introduced February 12, 2024
SF3457	None as of February 10, 2024.	A bill for an act relating to campaign finance; amending amounts reportable for certain items in principal reports; amending Minnesota Statutes 2023 Supplement, section 10A.04, subdivision 6.	Westlin	Campaign Finance	SF 3457 as introduced - 93rd Legislature (2023 - 2024) (mn.gov)			Introduced February 12, 2024
SF3480	None as of February 10, 2024.	A bill for an act relating to natural resources; requiring transfer of White Earth State Forest land to White Earth Band of Min	Kunesh	Tribal	SF 3480 as introduced - 93rd Legislature (2023 - 2024) (mn.gov)			Introduced February 12, 2024
SF3557	None as of February 10, 2024.	A bill for an act relating to state lands; requiring tax-forfeited land that includes land within the boundary of an Indian reservation to be offered to affected bands before being offered for sale to other parties; proposing coding for new law in Minnesota Statutes, chapter 282.	Kunesh	Tribal	SF 3557 as introduced - 93rd Legislature (2023 - 2024) (mn.gov)			Introduced February 12, 2024
SF3580	HF3701	A bill for an act relating to taxation; property; authorizing levy authority for Anoka County Soil and Water Conservation District; authorizing Anoka County Soil and Water Conservation District to establish natural resource stewardship areas; amending Minnesota Statutes 2022, sections 275.066; 444.075, by adding a subdivision; proposing coding for new law in Minnesota Statutes, chapter 103C.	Hoffman	SWCD Levy Authority	SF 3580 as introduced - 93rd Legislature (2023 - 2024) (mn.gov)			Introduced February 15, 2024
SF3590	None as of February 15 2024.	A bill for an act relating to capital investment; appropriating money for the West Central Regional Water District; authorizing the sale and issuance of state bonds.	Koupec	Water Supply	SF 3590 as introduced - 93rd Legislature (2023 - 2024) (mn.gov)			Introduced February 15, 2024

SF3684	None as of February 15 2024.	A bill for an act relating to environment; prohibiting unproductive conservation lands from being considered benefited property under state drainage laws; proposing coding for new law in Minnesota Statutes, chapter 103E.	Howe	Drainage - Benefitted Property	SF 3684 as introduced - 93rd Legislature (2023 - 2024) (mn.gov)			Introduced February 15, 2024
SF3730	HF3466	A bill for an act relating to natural resources; expanding opportunities to protect native prairie; amending Minnesota Statutes 2022, section 84.96, subdivisions 2, 3, 5	Kunesh	Prairie Protection	SF 3730 as introduced - 93rd Legislature (2023 - 2024) (mn.gov)			Introduced February 15, 2024
SF3782	HF3582	A bill for an act relating to capital investment; requiring local governments to establish a replacement fund to maintain and replace capital projects that receive state funding; proposing coding for new law in Minnesota Statutes, chapter 16A.	Pappas	LGU Capital Investment Fund	SF 3782 as introduced - 93rd Legislature (2023 - 2024) (mn.gov)			Introduced February 15, 2024
SF3784	HF3584	A bill for an act relating to capital investment; requiring the reporting of debt capacity by political subdivisions in capital budget submissions; amending Minnesota Statutes 2022, section 16A.86, subdivision 3a.	Pappas	Debt Capacity	SF 3784 as introduced - 93rd Legislature (2023 - 2024) (mn.gov)			Introduced February 15, 2024
SF3785	None as of February 15 2024.	A bill for an act relating to state government; establishing Race Based Equity and Inclusivity in Procurement and Contracting Act; proposing coding for new law in Minnesota Statutes, chapter 16C.	Hoffman	Contracting	SF 3785 as introduced - 93rd Legislature (2023 - 2024) (mn.gov)		Affect on LGUs?	Introduced February 15, 2024
SF3787	HF3882	A bill for an act relating to employees; modifying earned sick and safe time; authorizing rulemaking; amending Minnesota Statutes 2023 Supplement, sections 177.27, subdivision 4; 177.50, by adding subdivisions; 181.032; 181.9445, subdivisions 4, 5; 181.9446; 181.9447, subdivisions 1, 3, 5, 10, 11; 181.9448, subdivisions 1, 2.	Pappas	Earned Sick and Safe Time	SF 3787 as introduced - 93rd Legislature (2023 - 2024) (mn.gov)			Introduced February 15, 2024

SF3805	None as of February 19 2024.	A bill for an act relating to capital investment; appropriating money for flood hazard mitigation in the city of Moorhead; authorizing the sale and issuance of state bonds.	Koupec	Flood Hazard Mitigation Funding	SF 3805 as introduced - 93rd Legislature (2023 - 2024) (mn.gov)	\$ 14,715,000		Introduced February 19, 2024
SF3867	HF3874	A bill for an act relating to natural resources; modifying administrative penalty order authority for enforcing public water and drainage ditch buffer requirements; making certain lawns to legumes program data private; amending Minnesota Statutes 2022, sections 103B.101, subdivisions 12, 12a; 103F.48, subdivision 7; Minnesota Statutes 2023 Supplement, section 103B.104.	Morrison	Buffer Enforcement	SF 3867 as introduced - 93rd Legislature (2023 - 2024) (mn.gov)			Introduced February 19, 2024
SF3897	HF3727	A bill for an act relating to capital investment; appropriating money for the restoration of the Carver levee in the city of Carver.	Gruenhagen	Flood Hazard Mitigation Funding	SF 3897 as introduced - 93rd Legislature (2023 - 2024) (mn.gov)	\$ 3,350,000		Introduced February 19, 2024
SF3946	HF2796	A bill for an act relating to environment; appropriating money for River Watch program.	Kunesh	River Watch Program	SF 3946 as introduced - 93rd Legislature (2023 - 2024) (mn.gov)		\$100,000 in FY 2024. HF2796 introduced in 2023.	Introduced February 19, 2024
SF4060	HF4199	A bill for an act relating to capital investment; amending an earlier appropriation for flood hazard mitigation; amending Laws 2023, chapter 72, article 1, section 7, subdivision 8.	Koran and Housley	Flood Hazard Mitigation Funding	SF 4060 as introduced - 93rd Legislature (2023 - 2024) (mn.gov)	\$ 175,000	Chisago Lakes Improvement District.	Introduced February 22, 2024
SF4081	HF4416	A bill for an act relating to taxation; payment in lieu of taxes; establishing a new payment for exempt property; proposing coding for new law in Minnesota Statutes, chapter 477A.	Lucero	PILT	SF 4081 as introduced - 93rd Legislature (2023 - 2024) (mn.gov)		Appears to only affect cities?	Introduced February 22, 2024

SF4087	HF4337	A bill for an act relating to state lands; tax-forfeited land sales; requiring payment to former owner of any remaining balance after sale of tax-forfeited property and payment of canceled taxes; amending Minnesota Statutes 2022, sections 282.05; 282.08.	Howe	Tax-forfeited Land	SF 4087 as introduced - 93rd Legislature (2023 - 2024) (mn.gov)		Introduced February 22, 2024
SF4113	HF4398	A bill for an act relating to local government; establishing the Local Government Oversight Task Force; requiring reports.	Mitchell	LGU Oversight Taskforce	SF 4113 as introduced - 93rd Legislature (2023 - 2024) (mn.gov)		Introduced February 22, 2024
SF4116	None as of February 22, 2024.	A bill for an act relating to environment; creating resilient community assistance program; proposing coding for new law in Minnesota Statutes, chapter 116.	McEwen	Resilient Community Program	SF 4116 as introduced - 93rd Legislature (2023 - 2024) (mn.gov)		Introduced February 22, 2024
SF4132	HF4136	A bill for an act relating to open meeting law; strengthening sanctions for noncompliance with the open meeting law; providing a civil action; providing civil penalties; amending Minnesota Statutes 2022, sections 13D.05, subdivisions 1, 3; 13D.06, subdivisions 1, 3, 4.	Mirtchell and Marty	Open Meeting Law	SF 4132 as introduced - 93rd Legislature (2023 - 2024) (mn.gov)		Introduced February 22, 2024
SF4136	HF3389	A bill for an act relating to natural resources; requiring reporting of subsurface drain tile installation and modification; proposing coding for new law in Minnesota Statutes, chapter 103F.	Xiong	Drainage - Tiling	SF 4136 as introduced - 93rd Legislature (2023 - 2024) (mn.gov)		Introduced February 22, 2024
SF4143	HF4269	A bill for an act relating to water; appropriating money for a 50-year clean water plan.	Morrison	Water planning	SF 4143 as introduced - 93rd Legislature (2023 - 2024) (mn.gov)		Introduced February 22, 2024
SF 4165	HF3596	A bill for an act relating to natural resources; clarifying certain rulemaking authority; amending Minnesota Statutes 2022, sections 103F.211, subdivision 1; 103G.315, subdivision 15.	McEwen	Rulemaking	SF 4165 as introduced - 93rd Legislature (2023 - 2024) (mn.gov)		Introduced February 26, 2024

SF4215	HF1388	A bill for an act relating to natural resources; appropriating money for a sustainable water pilot program; requiring a report.	Putnam	Drinking Water	SF 4215 as introduced - 93rd Legislature (2023 - 2024) (mn.gov)		House bill introduced in February 2023.	Introduced February 26, 2024
SF4216	HF3963	A bill for an act relating to taxation; property; allowing an exemption for certain leased land; amending Minnesota Statutes 2022, section 272.01, subdivision 2.	Weber and Putnam	Taxation	SF 4216 Status in the Senate for the 93rd Legislature (2023 - 2024) (mn.gov)			Introduced February 26, 2024
SF4241	HF4044	A bill for an act relating to taxation; property; establishing a credit for certain acres certified under the Minnesota agricultural water quality certification program; appropriating money; amending Minnesota Statutes 2022, sections 273.1393; 276.04, subdivision 2; Minnesota Statutes 2023 Supplement, sections 273.1392; 275.065, subdivision 3; proposing coding for new law in Minnesota Statutes, chapter 273.	Drazkowski	Taxation	SF 4241 as introduced - 93rd Legislature (2023 - 2024) (mn.gov)			Introduced February 26, 2024

SF4246	HF4257	A bill for an act relating to emergency management; repealing governor's power to declare emergency; establishing a legislative emergency declaration and extension process; repealing governor's authority to adopt orders and expedited rules that have the effect of law during an emergency; protecting citizen rights; making technical corrections; amending Minnesota Statutes 2022, sections 12.03, subdivision 1e; 12.21, subdivisions 1, 3; 12.25, subdivision 3; 12.45; 12.61, subdivision 2; 14.03, subdivision 1; 34A.11, subdivision 6; 35.0661, subdivision 1; 41B.047, subdivision 1; 144.4197; 144E.266; 151.441, subdivisions 12, 13; 270C.34, subdivision 1; 295.50, subdivision 2b; Minnesota Statutes 2023 Supplement, section 12.36; proposing coding for new law in Minnesota Statutes, chapter 12; repealing Minnesota Statutes 2022, sections 4.035, subdivision 2; 12.31, subdivisions 1, 3; 12.32; Minnesota Statutes 2023 Supplement, section 12.31, subdivision 2.	Wesenberg	Emergency Powers	SF 4246 as introduced - 93rd Legislature (2023 - 2024) (mn.gov)		Introduced February 26, 2024
SF4247	HF3848	A bill for an act relating to taxation; aids to local governments; providing for an annual inflation and population adjustment to the appropriations for local government aid and county program aid; amending Minnesota Statutes 2022, section 477A.03, by adding a subdivision; Minnesota Statutes 2023 Supplement, section 477A.03, subdivisions 2a, 2b.	Hauschild	Taxation	SF 4247 as introduced - 93rd Legislature (2023 - 2024) (mn.gov)	Affect on local government aid allocation?	Introduced February 26, 2024
SF4255	HF4331	A bill for an act relating to local and state government; abolishing the Metropolitan Council.....	Koran	Metropolitan Council	SF 4255 as introduced - 93rd Legislature (2023 - 2024) (mn.gov)	Minor changes to 103D.401?	Introduced February 26, 2024

SF4295	HF4240	A bill for an act relating to climate change; establishing a local climate planning and action hub in the Pollution Control Agency; establishing an account; requiring a report; appropriating money; proposing coding for new law in Minnesota Statutes, chapter 216C.	McEwen	Climate	SF 4295 as introduced - 93rd Legislature (2023 - 2024) (mn.gov)			Introduced February 26, 2024
SF4297	HF4120	A bill for an act relating to open meetings; modifying the Open Meeting Law; amending Minnesota Statutes 2022, section 13D.01, by adding a subdivision; proposing coding for new law in Minnesota Statutes, chapter 13D.	Mitchell	Open Meeting Law	SF 4297 as introduced - 93rd Legislature (2023 - 2024) (mn.gov)			Introduced February 26, 2024
SF4327	HF4319	A bill for an act relating to clean water; appropriating money for nitrate monitoring.	Kupec et. al.	WQ Monitoring	SF 4327 as introduced - 93rd Legislature (2023 - 2024) (mn.gov)			Introduced February 29, 2024
SF4433	HF4410	A bill for an act relating to environment; modifying enforcement authority; appropriating money; amending Minnesota Statutes 2022, sections 115.071, subdivisions 1, 4, by adding subdivisions; 116.07, subdivision 9, by adding subdivisions; 116.11; Minnesota Statutes 2023 Supplement, section 115.03, subdivision 1.	Hawj	Enforcement	SF 4433 as introduced - 93rd Legislature (2023 - 2024) (mn.gov)			Introduced February 29, 2024
SF4337	None as of February 28, 2024.	A bill for an act relating to capital investment; appropriating money for the Rice Creek Watershed District.	Kunesh	Flood Hazard Mitigation Funding	SF 4337 as introduced - 93rd Legislature (2023 - 2024) (mn.gov)	\$ 7,000,000		Introduced February 29, 2024
SF4338	HF1391	A bill for an act relating to natural resources; appropriating money to study stormwater retention and infiltration; requiring a report.	Kupec et. al.	Stormwater	SF 4338 as introduced - 93rd Legislature (2023 - 2024) (mn.gov)		House bill introduced February 6, 2023.	Introduced February 29, 2024
SF4354	HF4184	A bill for an act relating to state government; requiring approval of certain standing committees of the legislature for adoption of rules; amending Minnesota Statutes 2022, sections 14.126; 14.18, subdivision 1; 14.19.	Howe	Rulemaking	SF 4354 as introduced - 93rd Legislature (2023 - 2024) (mn.gov)			Introduced February 29, 2024

SF4422	HF4179	A bill for an act relating to taxation; local government aids; increasing the appropriation for soil and water conservation district aid; amending Minnesota Statutes 2023 Supplement, section 477A.23, subdivision 6.	Hauschild and Kup	SWCD Funding	SF 4422 as introduced - 93rd Legislature (2023 - 2024) (mn.gov)		Introduced February 29, 2024
SF4433	None as of February 28, 2024.	A bill for an act relating to environment; modifying enforcement authority; appropriating money; amending Minnesota Statutes 2022, sections 115.071, subdivisions 1, 4, by adding subdivisions; 116.07, subdivision 9, by adding subdivisions; 116.11; Minnesota Statutes 2023 Supplement, section 115.03, subdivision 1.	Hawj	Enforcement	SF 4433 as introduced - 93rd Legislature (2023 - 2024) (mn.gov)		Introduced February 29, 2024
SF4456	None as of February 28, 2024.	A bill for an act relating to the Open Meeting Law; amending requirements for interactive technology use for advisory public bodies; amending Minnesota Statutes 2022, sections 13D.001, subdivision 1, by adding a subdivision; 13D.02, subdivision 4, by adding a subdivision; Minnesota Statutes 2023 Supplement, section 13D.02, subdivision 1.	Mann et. al.	Open Meeting Law	SF 4456 as introduced - 93rd Legislature (2023 - 2024) (mn.gov)		Introduced February 29, 2024
SF4461	HF4554	A bill for an act relating to local government; modifying the open meeting law to allow unlimited remote participation; amending Minnesota Statutes 2022, section 13D.02, subdivision 4; Minnesota Statutes 2023 Supplement, section 13D.02, subdivision 1.	Mann et. al.	Open Meeting Law	SF 4461 as introduced - 93rd Legislature (2023 - 2024) (mn.gov)		Introduced February 29, 2024
SF4469	None as of March 4, 2024.	A bill for an act relating to drainage; requiring counties to pay for reestablishing drainage system records in certain situations; amending Minnesota Statutes 2022, section 103E.101, subdivision 4a.	Farnsworth	Drainage	SF 4469 as introduced - 93rd Legislature (2023 - 2024) (mn.gov)		Introduced March 4, 2024
SF4476	None as of March 4, 2024.	A bill for an act relating to civil liability; prohibiting immunity for government employee torts; proposing coding for new law in Minnesota Statutes, chapter 3.	Verbeten	Civil Liability	SF 4476 as introduced - 93rd Legislature (2023 - 2024) (mn.gov)		Introduced March 4, 2024

SF4486	None as of March 4, 2024.	A bill for an act relating to taxation; property; establishing a property tax exemption for certain property owned by an Indian Tribe; amending Minnesota Statutes 2022, section 272.02, by adding a subdivision.	Hauschild	Tribal Taxation	SF 4486 as introduced - 93rd Legislature (2023 - 2024) (mn.gov)			Introduced March 4, 2024
SF4510	HF4436	A bill for an act relating to capital investment; appropriating money for flood hazard mitigation projects in the Red River Basin; authorizing the sale and issuance of state bonds.	Kupec and Rasmusson	Flood Hazard Mitigation Funding	SF 4510 as introduced - 93rd Legislature (2023 - 2024) (mn.gov)	\$ 57,338,000		Introduced March 4, 2024
SF4514	HF4154	A bill for an act relating to civil actions; reducing the limitation period for bringing certain actions; amending Minnesota Statutes 2022, section 541.05, subdivision 1.	Kreun	Civil Actions	SF 4514 as introduced - 93rd Legislature (2023 - 2024) (mn.gov)			Introduced March 4, 2024
SF4515	HF4191	A bill for an act relating to civil actions; limiting the amount of attorney fees awarded in certain actions; proposing coding for new law in Minnesota Statutes, chapter 549.	Kreun	Civil Actions	SF 4515 as introduced - 93rd Legislature (2023 - 2024) (mn.gov)			Introduced March 4, 2024
SF4535	None as of March 4, 2024.	A bill for an act relating to civil law; authorizing an owner to restrict access to an easement held by a government entity; proposing coding for new law in Minnesota Statutes, chapter 117.	Wesenberg et. al.	Easements	SF 4535 as introduced - 93rd Legislature (2023 - 2024) (mn.gov)			Introduced March 4, 2024
SF4536	None as of March 4, 2024.	A bill for an act relating to civil law; requiring actual notice for easements held by a government entity; proposing coding for new law in Minnesota Statutes, chapter 117.	Wesenberg et. al.	Easements	SF 4536 as introduced - 93rd Legislature (2023 - 2024) (mn.gov)			Introduced March 4, 2024
SF4605	HF4544	A bill for an act relating to employment; modifying definition of employee for purposes of earned sick and safe time; amending Minnesota Statutes 2023 Supplement, section 181.9445, subdivision 5.	Rasmusson	Earned Sick and Safe Time	SF 4605 as introduced - 93rd Legislature (2023 - 2024) (mn.gov)			Introduced March 7, 2024
SF4700	HF4679	A bill for an act relating to lobbyist registration; exempting certain activities from the definition of "lobbyist"; requiring the Campaign Finance and Public Disclosure Board to conduct a study; amending Minnesota Statutes 2023 Supplement, section 10A.01, subdivision 21.	Putnam	Lobbyist Registration	SF 4700 as introduced - 93rd Legislature (2023 - 2024) (mn.gov)			Introduced March 7, 2024

SF4706	SF3474	A bill for an act relating to capital investment; appropriating money for the Reinvest in Minnesota (RIM) reserve program; authorizing the sale and issuance of state bonds.	Frentz and Rasmusson	RIM	SF 4706 as introduced - 93rd Legislature (2023 - 2024) (mn.gov)		Introduced March 7, 2024
SF4822	None as of March 11, 2024	A bill for an act relating to data practices; defining correspondence in government record retention law; providing minimum three-year retention period for correspondence; amending Minnesota Statutes 2022, sections 15.17, subdivisions 1, 2; 138.17, subdivisions 1, 7.	Limmer et. al.	Data Practices	SF 4822 as introduced - 93rd Legislature (2023 - 2024) (mn.gov)		Introduced March 11, 2024
SF4848	HF4753	A bill for an act relating to disaster relief; requiring the allocation of general fund surplus dollars to the disaster assistance contingency account; amending Minnesota Statutes 2022, section 16A.152, subdivision 1b; Minnesota Statutes 2023 Supplement, section 16A.152, subdivision 2.	Putnam	Disaster Funding	SF 4848 as introduced - 93rd Legislature (2023 - 2024) (mn.gov)		Introduced March 11, 2024

2024 BWSR Spring Training

March 28, 2024

Track One: 8:30 AM – 10:00 AM

Concurrent Session Descriptions (may be modified)

What Do Landowners Want? District Managers Training Databases, Forestry Apps

There are over 200,000 private forest landowners in Minnesota. Each county has thousands of private landowners. Every workday, districts and DNR foresters are bombarded with questions and requests for service. So how do we track landowner interests to better serve them? How do we share knowledge and insights on landowners to efficiently serve them and avoid duplicating efforts or worse not serving them? Stearns SWCD has embarked on a multiyear major effort to track landowners and what they are interested in. Since 2008, DNR Forestry has been building their Private Forest Management Module (PFMM). This session will:

- Introduce to the landowner database developed by Stearns SWCDs and DNR Forestry's PFMM.
- Get you and your district on a path to consider database approaches to tracking landowner interests.
- Get you thinking on how to manage data for forestry applications.
- Better coordinate work with landowners, DNR and consultants

Trainers: John Carlson – DNR Forestry; Ben Ruley & Ryan Rothstein – Stearns SWCD

Planning for Environmental Review in Stream and Habitat Restoration Projects

This session will address how to determine if a project requires environmental review and how to incorporate that review into your planning process efficiently. Trainers will share case studies with examples of how certain project types require environmental review under state rules and connect you with resources and experts to help you through the review process.

Trainers: Kayla Walsh – Environmental Quality Board; Kate Fairman – MN DNR; Melissa King - BWSR

Private Wells: what to look for, drinking water testing, and use of available data to focus your efforts

During this time, we will discuss types of private well construction and testing recommendations from MDH. We will also showcase ways local government can work with private well owners in their area through use of available data and programs.

Trainers: Anne Nelson & Carrie Raber – MDH

Successful Outreach Strategies: Understanding Change

BWSR is piloting a new training initiative called Successful Outreach Strategies (SOS). This session "Understanding Change" will be the first in future online training offerings combined with occasional optional in-person events. Whether you call it conservation programming, natural resource programming or water quality programming, there is one thing they all have in common. This is the need for people to "buy into" the program to support its adoption/implementation. This often requires change in behavior. This session will introduce you to key concepts of change including individual preferences for change and reasons for resistance to change. Attendees of this session will learn key change concepts to inform future outreach efforts and more about the overall Successful Outreach Strategies training initiative.

Trainer: Barbara Radke – BWSR

2024 BWSR Spring Training

March 28, 2024

Track Two: 10:30 AM – 12:00 PM

Concurrent Session Descriptions (may be modified)

Intro to Pollinator Conservation – Attracting and Beneficial Insects with Native Plants

Provide an overview of the pollination process, introduce the different types of pollinators present in our environment, and discuss the habitat requirements that support healthy pollinator communities.

Trainers: Erin Loeffler – BWSR; Lauren Agnew – University of MN; Brett Stolpestad – Washington Conservation District

Brome Conversion and Long-Term Grassland Management

Learn step-by-step strategies for the best-management practices needed when converting restored grassland that has been overtaken with smooth brome back into diverse, native grassland vegetation. We will also be covering goal-based long-term grassland management techniques using prescribed fire, managed haying/grazing, and mowing.

Trainers: Sara Reagan & Kevin Roth – BWSR

SWCDs and SFIA: Roles and Opportunities, The Sustainable Forest Initiative Act

Enrolling land into the Sustainable Forest Incentives Act (SFIA) Program is one of the key land protection strategies in 1W1Ps and landscape stewardship plans. SWCD staff are playing key roles in assisting landowners in the enrollment lands into this program. The MN DNR Forestry Private Forest Management Program (PFM) is committed to working closely with districts, consulting foresters, and local partners to increase the delivery of services to private landowners including SFIA. This session will provide you with an update on roles that SWCDs are taking in SFIA and opportunities to grow private forest management in your district including the following:

- SFIA program requirements.
- Timing and sequencing of program enrollment.
- Key aspects of program enrollment.
- Relationship of SFIA to forest stewardship plans.
- Coordinating work with consulting foresters on SFIA and stewardship plans

Trainers: Jen Teegarden – DNR Forestry; James Aasen – Koochiching SWCD; Molly Clyne – Mille Lacs SWCD

MN CREP Updates and Training

BWSR staff will provide an update of MN CREP accomplishments and provide training specific to MN CREP. New staff within the MN CREP project area should consider attending this session. It will also serve as a refresher for staff who have worked on MN CREP in prior batching periods. There will be plenty of time for questions!

Trainer: Dusty Van Thuyne – BWSR

Successful Outreach Strategies: Understanding Change (Repeat)

BWSR is piloting a new training initiative called Successful Outreach Strategies (SOS). This session "Understanding Change" will be the first in future online training offerings combined with occasional optional in-person events. Whether you call it conservation programming, natural resource programming or water quality programming, there is one thing they all have in common. This is the need for people to “buy into” the program to support its adoption/implementation. This often requires change in behavior. This session will introduce you to key concepts of change including individual preferences for change and reasons for resistance to change. Attendees of this session will learn key change concepts to inform future outreach efforts and more about the overall Successful Outreach Strategies training initiative.

Trainer: Barbara Radke – BWSR