



## MEMORANDUM

Comfort Lake-Forest Lake Watershed District

**Date:** August 3, 2023  
**To:** CLFLWD Board of Managers  
**From:** Mike Kinney, District Administrator  
**Subject:** WJD-6 Wetland Restoration Authorization to Solicit Bids



Forest Lake  
Management District

### Background/Discussion

The Washington Judicial Ditch 6 (WJD-6) Wetland Restoration Project was ordered by the Board on February 23, 2023. Since that time, Emmons & Olivier Resources (EOR) completed the engineering plan sets to a 90% level which is typical at this stage of a project.

The wetland and US Army Corps of Engineers permitting is complete. The District is in the process of obtaining the grading permit from the City of Forest Lake and will ensure it has the permit in hand prior to construction. The landowner agreement has been executed.

The deadline for bids is planned to be September 6<sup>th</sup>. EOR and staff are planning to provide a Recommendation for Award at the September 14<sup>th</sup> regular board meeting.

### Recommended Action

Proposed Motion: Manager \_\_\_\_\_ moves to adopt resolution 23-08-01 Approving Plans and Directing Solicitation of Bids for the WJD-6 Wetland Restoration Project. Seconded by Manager \_\_\_\_\_. [Roll call vote]

### Attached:

Resolution 23-08-01, Engineer's Memo, 90% Project Plans

**COMFORT LAKE-FOREST LAKE WATERSHED DISTRICT  
BOARD OF MANAGERS**

**RESOLUTION 23-08-01**

**APPROVING PLANS and DIRECTING SOLICITATION OF BIDS for the  
WJD-6 WETLAND RESTORATION PROJECT**

Manager \_\_\_\_\_ offered the following resolution and moved its adoption, seconded by Manager \_\_\_\_\_:

**WHEREAS** the District has adopted a watershed management plan (WMP) in accordance with Minnesota Statutes §103B.231, which, in project 5-228-D, indicates the District will implement water quality protection measures as identified in the 2018 Washington Judicial Ditch 6 Assessment and Feasibility Study, one of which is a wetland restoration project (hereafter the "Project");

**WHEREAS** the Project will restore a wetland located on Scandia Trail North at the private western tributary of Washington Judicial Ditch (WJD) 6, by means of sediment excavation and vegetation rehabilitation;

**WHEREAS** a feasibility report prepared by the District engineer, dated February 16, 2023, finds that the Project will reduce phosphorus loading into Forest Lake by about 20 pounds per year;

**WHEREAS** the District has calculated appropriate excavation limits, based on a wetland soil core study and other available data and resources;

**WHEREAS** the District has investigated the WJD 6 system and confirmed that the western tributary, on which the Project is located, is not legally defined as a part of the WJD 6 public drainage system;

**WHEREAS** the District applied for and has been awarded a Clean Water Fund grant from the State of Minnesota, in the amount of \$386,000, for the Project;

**WHEREAS** on February 23, 2023, in accordance with Minnesota Statutes §103B.251, subdivision 3, and Minnesota Statutes §103E.227, the District Board of Managers ("Board"), after public notice and hearing, considered the feasibility

report prepared by the District engineer, found the Project to be sound and cost-effective, and adopted Resolution 23-02-02 establishing the Project;

**WHEREAS** the District engineer subsequently has prepared 90 percent construction plans consistent with the concept design and the grant work plan, which plans have been presented to the Board, and the engineer’s refined estimate for construction, in the judgment of the Board, indicates that the Project remains cost effective;

**WHEREAS** the Project and temporary construction staging will be located on private land, and the District and landowner have executed a project agreement;

**WHEREAS** the District has obtained all necessary permits and approvals for the work except for the grading permit, and it will obtain the grading permit prior to project construction;

**WHEREAS** District plans provide for Project construction to commence during Winter 2023/2024;

**THEREFORE BE IT RESOLVED** as follows:

- a. The 90 percent plans are approved and the engineer shall complete and proceed to solicitation and construction with final plans consistent with the approved plans;
- b. The District administrator shall solicit sealed bids for construction of the Project and present to the Board a recommendation for award of contract.

The question was on the adoption of the above resolution and there were \_\_\_\_ ayes and \_\_\_\_ nays as follows:

<b>Manager</b>	<b>Aye</b>	<b>Nay</b>	<b>Absent</b>	<b>Abstain</b>
Stephen Schmaltz				
Christopher Loth				
Dave Bakke				
Jackie Anderson				
Doug Toavs				

The President declared the resolution adopted.

Dated: August 10, 2023

\_\_\_\_\_  
Dave Bakke, Secretary

\* \* \* \* \*

I, Dave Bakke, Secretary of the Comfort Lake-Forest Lake Watershed District Board of Managers, do hereby certify that the above resolution is a true and correct transcription of an action of the Board taken on the date above indicated.

IN TESTIMONY WHEREOF, I have hereunto set my hand this \_\_\_\_\_ day of \_\_\_\_\_ 2023.

\_\_\_\_\_  
Dave Bakke, Secretary

<b>Project Name</b>	WJD-6 Western Tributary Wetland Restoration	<b>Date</b>	08/03/2023
<b>To / Contact info</b>	CLFLWD Board of Managers Mike Kinney, CLFLWD Administrator		
<b>Cc / Contact info</b>	Blayne Eineichner, CLFLWD Project Manager		
<b>From / Contact info</b>	Greg Graske, District Engineer - EOR Kyle Crawford, PE - EOR		
<b>Regarding</b>	Request for Authorization to Solicit Bids		

The purpose of this memorandum is to request authorization to solicit bids for construction of the WJD-6 Western Tributary Wetland Restoration Project.

## Background

The District has been actively seeking out and implementing projects to improve water quality in the Forest Lake watershed. Washington Judicial Ditch 6 (JD-6) was transferred to the District from Rice Creek Watershed in 2017 as part of watershed boundary updates. 2018 and 2020 water quality monitoring of the JD-6 system confirmed a significant phosphorus load entering Forest Lake, thus indicating that a phosphorus reduction project would greatly improve progress towards achieving the phosphorus reduction goals needed to meet the growing season average water quality goal of 30 µg TP/L for Forest Lake. On March 9, 2023, EOR presented the feasibility study for this project at which time the Board approved final design and implementation.

## Final Project Implementation

The proposed ditch diversion and wetland restoration will provide approximately 250,000 cubic feet of treatment volume and re-hydrated wetland for diverted flows from the western tributary of the Washington Judicial Ditch 6. The proposed project is expected to reduce 20 lb. TP/yr. to Forest Lake.

## Project Cost and Funding

The table below itemizes estimated WJD – 6 Western Tributary Wetland Restoration project costs for implementation. The estimated base construction cost based on the 90% plans, recent project bid results and supplier quotes is \$413,098. The construction estimate also includes a recommended 10% construction contingency for a total of \$454,407. The project also includes Add Alternates for plantings and salvaging onsite native vegetation. Combined these Add Alternates total \$27,787 and bring the total construction costs to \$482,194.

Phase	Description	Contractor (Base Bid)	Engineering	Legal/ Admin	Total	Grant	Match
1	Grant Administration			\$4,500	\$4,500		\$4,500
2	Feasibility Design		\$28,000	\$10,000	\$38,000		\$38,000
3	Final Design/ Construction	\$454,407	\$37,515	\$5,000	\$496,922	\$386,000	\$110,922
Subtotal		\$454,407	\$65,515	\$19,500	<b>\$539,422</b>	\$386,000	<b>\$153,422</b>

The Comfort Lake Forest Lake Watershed District (CLFLWD) was awarded a FY22 Clean Water Fund grant from BWSR to implement the WJD – 6 Western Tributary Wetland Restoration Project. The total grant amount is \$386,000 and the required match is \$96,500.

**Project Permitting**

The following permits are required for this project and status updates are provided below. All permit applications have been submitted and a number of approvals are pending. Due to the compressed timeline of this project and extremely long material lead times, it is recommended the Board approve solicitation of contractor bids without all permits approved and in-hand. Correspondence with permitting agencies have indicated that there are no anticipated issues with permits to be approved prior to winter construction occurring.

<b>Entity</b>	<b>Permit Required</b>	<b>Permit Update (08/03/2023)</b>
City of Forest Lake	Grading Permit	Submitted, approval pending
City of Forest Lake	Site Plan Review	Submitted, approval pending
WCA/USACE	Wetland Impacts	Submitted and Approved

**Summary**

Implementation of the WJD – 6 Western Tributary Wetland Restoration Project will improve water quality in Forest Lake. The project is expected to reduce phosphorus loading from the WJD-6 watershed entering Forest Lake by approximately 20 lb/yr. The total cost of the base bid project is estimated at \$539,422 (\$567,209 with all Alternates). Using an estimated lifespan of 25 years, the life cycle cost benefit is expected to be \$1,023 – \$1,119/ TP lb./yr. The project is being funded partially by Clean Water Fund grant dollars. The total expected cost to the CLFLWD for feasibility, final design and construction is \$153,422 (\$181,209 with all Alternates).

It is requested that the Board of Managers authorize the District Administrator and District Engineer to solicit bids for construction of the WJD – 6 Western Tributary Wetland Restoration Project.



ALL ELEVATIONS SHOWN ARE IN NAVD 88 VERTICAL DATUM.

# COMFORT LAKE FOREST LAKE WATERSHED DISTRICT

## WJD-6 WESTERN TRIBUTARY WETLAND RESTORATION

### FOREST LAKE, WASHINGTON COUNTY, MINNESOTA

FEATURE	LEGEND	
	EXISTING	PROPOSED
CONSTRUCTION LIMITS	---	---
SEDIMENT LOG	---	---
DELINEATED WETLAND	-----W/D-----	-----
APPROX. WETLAND BOUNDARY	.....	.....
GAS LINES	---G---	---
OVERHEAD ELECTRIC	---E-O---	---
UNDERGROUND ELECTRIC	---E-U---	---
UNDERGROUND TELEPHONE	---T-U---	---
FIBER OPTIC CABLE	---FO---	---
EDGE OF PAVEMENT	-----	-----
BUILDING	-----	-----
STORM SEWER LINE	-----	-----
MINOR CONTOUR	---984---	---984---
MAJOR CONTOUR	---985---	---985---
DRAINAGE FLOW ARROWS	---	---



Sheet List Table	
Sheet Number	Sheet Title
01	TITLE SHEET
02	SEQ & NOTES
03	EXISTING CONDITIONS AND REMOVALS
04	GRADING & DRAINAGE PLAN
05	EROSION & SEDIMENT CONTROL PLAN
06	RESTORATION PLAN
07	DETAILS SHEET 01
08	DETAILS SHEET 02

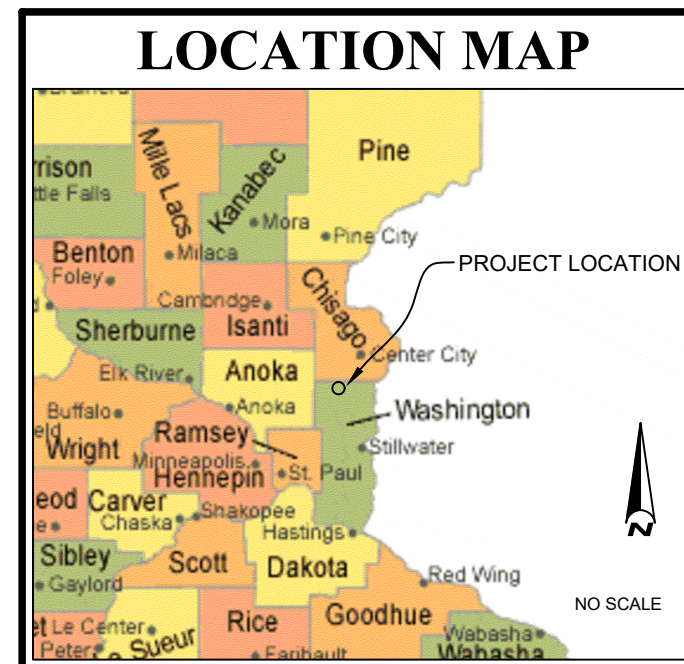
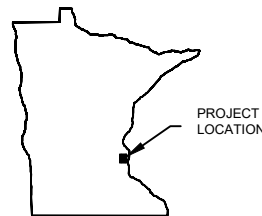
\*THIS PLAN SET CONTAINS 08 SHEETS



THE LOCATION OF UNDERGROUND FACILITIES AND/OR STRUCTURES AS SHOWN ON THE PLANS ARE BASED ON AVAILABLE RECORD AT THE TIME THE PLANS WERE PREPARED AND ARE NOT GUARANTEED TO BE COMPLETE OR CORRECT. THE SUBSURFACE UTILITY INFORMATION SHOWN IS UTILITY QUALITY LEVEL D, AS DETERMINED USING THE GUIDELINES OF "Q/ASCE 38-02 STANDARD GUIDELINES FOR THE COLLECTION AND DEPICTION OF EXISTING SUBSURFACE UTILITY DATA." THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING ALL UTILITIES 72 HOURS PRIOR TO CONSTRUCTION TO DETERMINE THE EXACT LOCATION OF ALL FACILITIES AND TO PROVIDE ADEQUATE PROTECTION OF SAID UTILITIES DURING THE COURSE OF WORK.

**CONSTRUCTION NOTE**  
CONTRACTOR SHALL TAKE ALL NECESSARY MEASURES TO MAINTAIN OPERATION OF EXISTING UTILITIES THROUGHOUT THE DURATION OF THE PROJECT. IN THE EVENT THAT AN INTERRUPTION OF SERVICE IS UNAVOIDABLE IN ORDER TO COMPLETE THE WORK, CONTRACTOR SHALL PROVIDE ADEQUATE NOTIFICATION TO ALL AFFECTED BUSINESSES A MINIMUM OF 3 WORKING DAYS IN ADVANCE OF ANY INTERRUPTION.

**GOPHER STATE ONE-CALL**  
IT IS THE LAW THAT ANYONE EXCAVATING AT ANY SITE MUST NOTIFY GOPHER STATE ONE CALL (GSOC) SO THAT UNDERGROUND ELECTRIC, NATURAL GAS, TELEPHONE OR OTHER UTILITY LINES CAN BE MARKED ON OR NEAR YOUR PROPERTY BEFORE ANY DIGGING BEGINS. A 48-HOUR NOTICE, NOT INCLUDING WEEKENDS, IS REQUIRED. CALLS CAN BE MADE TO GSOC AT 1-800-252-1166 OR (651)454-0002, MONDAY THROUGH FRIDAY (EXCEPT HOLIDAYS) FROM 7 A.M. TO 5 P.M.



**GOVERNING SPECIFICATIONS**  
THE 2020 EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR CONSTRUCTION" SHALL GOVERN  
ALL TRAFFIC CONTROL DEVICES AND SIGNING SHALL CONFORM TO MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, INCLUDING FIELD MANUAL FOR TEMPORARY CONTROL ZONE LAYOUTS.

**CLIENT**  
COMFORT LAKE FOREST LAKE WATERSHED DISTRICT  
44 LAKE STREET SOUTH  
FOREST LAKE, MN 55025

**ENGINEER**  
EMMONS & OLIVIER RESOURCES, INC.  
1919 UNIVERSITY AVENUE WEST SUITE 300  
ST. PAUL, MINNESOTA 55104  
TELEPHONE: (651) 770-8448  
FAX: (651) 770-2552  
eorinc.com

Plot Date: 08/02/2023  
Drawing name: X:\Clients\_WJD0376\_CLF\WJD0376\_Wetland\_Restoration\_GMS\dwg\0376-216\_Title.dwg

NO	DATE	BY	REVISION
6			
5			
4			
3			
2			
1	08/03/2023	ERK	DRAFT BID PLANS

SUBMISSION DATE: 08/03/2023		
DESIGN BY KDC	DRAWN BY ERK	CHECKED BY KDB
EOR PROJECT NO. 00376-0218		

**EOR** Emmons & Olivier Resources, Inc.  
1919 Univ. Ave W Ste. 300  
St. Paul, MN 55104  
Tele: 651.770.8448  
www.eorinc.com



WJD-6 WESTERN TRIBUTARY WETLAND RESTORATION  
FOREST LAKE, WASHINGTON COUNTY, MINNESOTA  
STATE PROJECT NO. - CITY PROJECT NO.

TITLE SHEET  
SHEET 01 OF 08 SHEETS



**GENERAL SITE WORK NOTES**

- VERIFY HORIZONTAL LOCATION AND ELEVATION WHERE A CONNECTION TO EXISTING PAVEMENT, STRUCTURE, PIPE OR OTHER SITE FEATURE IS TO BE MADE. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER OF ANY DISCREPANCIES OR VARIATIONS FROM THE PLANS.
- REFERENCE TO MNDOT SPECIFICATIONS SHALL MEAN DIVISIONS II AND III OF THE 2020 SPECIFICATIONS FOR CONSTRUCTION.
- SEE RESTORATION PLAN FOR VEGETATION RESTORATION REQUIREMENTS.
- ALL TRAFFIC CONTROL DEVICES AND SIGNING SHALL CONFORM TO THE MN MUTCD, INCLUDING FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS, JANUARY 2018.
- ALL CONSTRUCTION WORK SHALL BE COMPLETED WITHIN CITY APPROVED WORKING HOURS.
- PROPOSED WORK MUST BE IN COMPLIANCE WITH CITY OF FOREST LAKE, CLFLWD, MNDNR, AND WETLAND PERMITS. REFER TO PERMIT LIST BELOW.
- CONTRACTOR SHALL RESTORE ALL AREAS TO PRE-CONSTRUCTION CONDITIONS.

**GENERAL UTILITY NOTES**

- CONTRACTOR SHALL CONTACT 'GOPHER STATE ONE CALL' WITHIN TWO WORKING DAYS PRIOR TO EXCAVATION/CONSTRUCTION FOR UTILITY LOCATIONS. TWIN CITIES METRO AREA: 651-454-0002 OR TOLL-FREE: 1-800-252-1166.
- PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING UTILITY LOCATIONS AND INVERTS, SHOWN OR NOT SHOWN. ANY DISCREPANCY BETWEEN PLANS AND FIELD CONDITIONS SHALL BE REPORTED TO THE ENGINEER IMMEDIATELY.
- ALL UTILITY WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE CITY OF FOREST LAKE AND MINNESOTA DEPARTMENT OF TRANSPORTATION SPECIFICATIONS AND REQUIREMENTS.
- UTILITY TRENCHES SHALL BE COMPACTED TO 95% STANDARD PROCTOR MAXIMUM DRY DENSITY (ASTM D698.78 OR AASHTO T-99) FROM THE PIPE ZONE TO WITHIN THREE FEET OF THE GROUND SURFACE AND 100% STANDARD PROCTOR IN THE UPPER THREE FEET. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING AND CONDUCTING TESTING. COMPACTION IN GREEN SPACE AREAS SHALL BE AT LEAST 90% STANDARD PROCTOR OR AS DIRECTED BY THE ENGINEER.

**SITE DEMOLITION & REMOVAL NOTES**

- ALL VEGETATION REMOVAL INCLUDING CATTAILS, SOD, AND/OR BRUSH REMOVAL SHALL BE CONSIDERED INCIDENTAL TO COMMON EXCAVATION NECESSARY FOR REMOVALS.
- WINDFALL/DEADFALL, OUTSIDE OF TREE REMOVAL, SHALL BE CONSIDERED INCIDENTAL TO CLEARING AND GRUBBING.
- ALL EXCAVATED MATERIAL NOT SPECIFIED FOR REUSE ON SITE SHALL BE REMOVED FROM THE SITE AND BECOME THE PROPERTY OF THE CONTRACTOR. THIS SHALL INCLUDE ALL MATERIAL EXCAVATED FROM THE WETLAND, REGARDLESS OF THE ORIGIN (E.G. WOODY DEBRIS, TRASH, GARBAGE).

**GRADING & EROSION CONTROL NOTES**

- CONTRACTOR SHALL FIELD VERIFY THE LOCATIONS AND ELEVATIONS OF EXISTING UTILITIES AND TOPOGRAPHIC FEATURES PRIOR TO START OF SITE GRADING. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE PROJECT ENGINEER OF ANY DISCREPANCIES OR VARIATIONS.
- CONTRACTOR SHALL BE RESPONSIBLE FOR ALL HORIZONTAL AND VERTICAL SURVEY, BEYOND INITIAL BENCHMARKS BY EOR.
- INSTALL PERIMETER EROSION CONTROL MEASURES AND PERFORM TREE CLEAN ROOT CUTTING (IF NECESSARY) BEFORE BEGINNING SITE GRADING ACTIVITIES. SOME EROSION CONTROL MAY BE INSTALLED AS GRADING OCCURS IN THE SPECIFIC AREA. MAINTAIN EROSION CONTROLS THROUGHOUT THE GRADING PROCESS AND REMOVE WHEN APPROVED BY THE OWNER.
- CONTRACTOR TO ADHERE TO ALL CITY, WATERSHED, AND STATE PERMIT REQUIREMENTS, INCLUDING THE REQUIREMENT TO MINIMIZE THE AREA DISTURBED BY GRADING AT ANY GIVEN TIME AND TO COMPLETE RESTORATION WITHIN THE TIME INDICATED BELOW AFTER COMPLETION OF GRADING OF AN AREA.
- ALL EXPOSED SOIL AREAS MUST BE STABILIZED WITHIN 14 DAYS, EXCEPT FOR CONNECTIONS WITHIN 200 FEET OF A WATER OF THE STATE OR ANY STORMWATER CONVEYANCE SYSTEM WHICH IS CONNECTED TO A WATER OF THE STATE WHICH MUST BE STABILIZED WITHIN 24 HOURS.
- ALL CONSTRUCTION ENTRANCES SHALL BE SURFACED WITH CRUSHED ROCK OR APPROVED EQUAL ACROSS FULL WIDTH FROM ENTRANCE POINT TO A MINIMUM 100 FEET INTO THE CONSTRUCTION ZONE. SEE DETAIL.
- ALL EROSION CONTROL MEASURES SHALL BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH CITY OF FOREST LAKE, CLFLWD, MNDNR, AND WETLAND STANDARDS.
- THE CONTRACTOR SHALL MAINTAIN ALL EROSION CONTROL MEASURES, INCLUDING THE REMOVAL OF ACCUMULATED SILT IN FRONT OF SILT FENCES OR FILTER LOGS DURING THE DURATION OF THE CONSTRUCTION. THIS SHALL BE CONSIDERED INCIDENTAL TO THE RELEVANT BID ITEMS.
- CONTRACTOR SHALL PROVIDE ADDITIONAL TEMPORARY EROSION CONTROL MEASURES AS REQUIRED FOR CONSTRUCTION. THESE SHALL BE CONSIDERED INCIDENTAL UNLESS OTHERWISE SPECIFIED IN THE CONTRACT DOCUMENTS.
- ANY EXCESS SEDIMENT IN PROPOSED BASINS SHALL BE REMOVED BY THE CONTRACTOR. THIS SHALL BE CONSIDERED INCIDENTAL TO THE RELEVANT BID ITEMS.
- REMOVE ALL EROSION CONTROL MEASURES AFTER THE WORK HAS BEEN ACCEPTED BY THE ENGINEER. THIS SHALL BE CONSIDERED INCIDENTAL TO THE RELEVANT BID ITEMS.
- THE CONTRACTOR SHALL REMOVE ALL SOILS AND SEDIMENT TRACKED ONTO EXISTING STREETS AND PAVED AREAS WITHIN 24 HOURS OF INCIDENT. INCIDENTAL TO THE CONTRACT.

**PERMITS**

- CITY OF FOREST LAKE
  - GRADING PERMIT [ACQUIRED BY OWNER]
- MINNESOTA DEPARTMENT OF NATURAL RESOURCES
  - CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING A TEMPORARY WATER APPROPRIATIONS PERMIT AND PREPARE A DEWATERING PLAN
- UNITED STATES ARMY CORPS OF ENGINEERS (USACE)
  - REGIONAL GENERAL PERMIT (RGP) [ACQUIRED BY OWNER]
- WETLAND CONSERVATION ACT (WCA)
  - NO LOSS GENERAL PERMIT [ACQUIRED BY OWNER]

**GRADING & EROSION CONTROL NOTES (CONT)**

- IF BLOWING DUST BECOMES A NUISANCE, THE CONTRACTOR SHALL APPLY WATER FROM A TANK TRUCK TO ALL CONSTRUCTION AREAS. INCIDENTAL TO THE CONTRACT.
- SWEEP ADJACENT STREETS IN ACCORDANCE WITH CITY AND STATE REQUIREMENTS. INCIDENTAL TO THE CONTRACT.
- INSPECT EROSION CONTROL DEVICES AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. IMMEDIATELY REPAIR FAILED OR FAILING EROSION CONTROL DEVICES. THIS SHALL BE CONSIDERED INCIDENTAL TO THE SPECIFIC BID ITEM.
- SEDIMENT REMOVAL - SEDIMENT DEPOSITS SHALL BE REMOVED AFTER EACH STORM EVENT, AND WHENEVER 1/2 OF THE BMP CAPACITY OR DEPTH IS REACHED. THIS SHALL BE CONSIDERED INCIDENTAL TO THE INDIVIDUAL EROSION & SEDIMENT CONTROL PRACTICES AND EROSION CONTROL SUPERVISOR LINE ITEMS.
- ANY SEDIMENT REMAINING IN PLACE AFTER THE EROSION CONTROL DEVICE IS NO LONGER REQUIRED SHALL BE GRADED TO CONFORM WITH THE EXISTING GRADE, PREPARED, AND SEEDED WITH THE APPROPRIATE SEED MIX AS DIRECTED BY THE ENGINEER. THIS SHALL BE CONSIDERED INCIDENTAL TO THE SPECIFIC EROSION AND SEDIMENT CONTROL BID ITEMS.
- SUITABLE GRADING MATERIAL SHALL CONSIST OF ALL SOIL ENCOUNTERED ON THE SITE WITH EXCEPTION OF TOPSOIL, DEBRIS, ORGANIC MATERIAL AND OTHER UNSTABLE MATERIAL. STOCKPILE TOPSOIL AND GRANULAR FILL AT LOCATIONS DIRECTED BY CONTRACTOR.
- GRADES SHOWN ARE FINISHED GRADES, CONTRACTOR SHALL ROUGH GRADE TO SUBGRADE ELEVATION BEFORE RESPREADING TOPSOIL.
- COMPLETION OF SITE GRADING OPERATIONS SHALL RESULT IN ALL AREAS BEING GRADED TO 'PLAN GRADE ELEVATION'. EXCAVATION QUANTITIES SHALL BE PAID PER PLAN QUANTITY UNLESS OTHERWISE DISCUSSED AND AGREED TO WITH ENGINEER.
- FINAL TOLERANCES ARE ±0.05 FEET OF UTILITY GRADES AND ±0.10 FEET OF CRITICAL TOPOGRAPHY (BASIN OVERFLOWS).
- CONTRACTOR IS RESPONSIBLE FOR GRADING AND SLOPING THE FINISHED GROUND SURFACE TO PROVIDE SMOOTH & UNIFORM SLOPES. CONTACT ENGINEER IF FIELD ADJUSTMENTS TO GRADING PLANS ARE REQUIRED.
- SLOPES AT 3:1 OR STEEPER, AND/OR WHERE INDICATED ON THE PLANS SHALL BE SEEDED AND HAVE AN EROSION CONTROL BLANKET INSTALLED WHERE SPECIFIED.
- IF DEWATERING, CONTRACTOR SHALL PREPARE DEWATERING PLAN FOR APPROVAL BY ENGINEER AND OBTAIN ALL PERMITS REQUIRED FOR DEWATERING. COSTS FOR THIS SHALL BE INCLUDED WITHIN THE DEWATERING LINE ITEM.

**GENERAL LANDSCAPE NOTES**

- CONTRACTOR SHALL INSPECT THE SITE AND BECOME FAMILIAR WITH EXISTING CONDITIONS RELATING TO THE NATURE AND SCOPE OF WORK.
- CONTRACTOR SHALL VERIFY PLAN LAYOUT AND BRING TO THE ATTENTION OF THE LANDSCAPE ARCHITECT OR ENGINEER DISCREPANCIES WHICH MAY COMPROMISE THE DESIGN OR INTENT OF THE LAYOUT.
- CONTRACTOR SHALL ASSURE COMPLIANCE WITH APPLICABLE CODES AND REGULATIONS GOVERNING THE WORK AND MATERIALS SUPPLIED.
- CONTRACTOR SHALL PROTECT EXISTING ROADS, TREES, LAWNS AND SITE ELEMENTS OUTSIDE CONSTRUCTION LIMITS DURING CONSTRUCTION OPERATIONS. DAMAGE TO SAME SHALL BE REPAIRED AT NO ADDITIONAL COST TO THE OWNER.
- CONTRACTOR SHALL REVIEW THE SITE FOR DEFICIENCIES IN SITE CONDITIONS WHICH MIGHT NEGATIVELY AFFECT PLANT ESTABLISHMENT, SURVIVAL OR WARRANTY. UNDESIRABLE SITE CONDITIONS SHALL BE BROUGHT TO THE ATTENTION OF THE LANDSCAPE ARCHITECT OR ENGINEER PRIOR TO BEGINNING OF WORK.
- CONTRACTOR IS RESPONSIBLE FOR ONGOING MAINTENANCE OF NEWLY INSTALLED MATERIALS AND UNTIL TIME OF SUBSTANTIAL COMPLETION. REPAIR OF ACTS OF VANDALISM OR DAMAGE WHICH MAY OCCUR PRIOR TO SUBSTANTIAL COMPLETION SHALL BE THE RESPONSIBILITY OF THE LANDSCAPE CONTRACTOR. THIS SHALL BE CONSIDERED INCIDENTAL TO THE EXTENDED WARRANTY.
- EXISTING TREES OR SIGNIFICANT SHRUB MASSINGS FOUND ON SITE SHALL BE PROTECTED AND SAVED UNLESS NOTED TO BE REMOVED OR ARE LOCATED IN AN AREA TO BE GRADED. QUESTIONS REGARDING EXISTING PLANT MATERIAL SHALL BE BROUGHT TO THE ATTENTION OF THE LANDSCAPE ARCHITECT OR ENGINEER PRIOR TO REMOVAL.
- ALL DISTURBED AREAS SPECIFIED TO RECEIVE VEGETATION RESTORATION WILL ONLY BE APPROVED FOR FINAL ACCEPTANCE WHEN 70% VEGETATION DENSITY / COVERAGE OF SPECIFIED SPECIES HAS BEEN SATISFIED.
- CARE SHALL BE GIVEN TO PROTECT ALL TREES, SHRUBS, AND VEGETATION NOT SPECIFIED FOR REMOVAL.

**EXTENDED VEGETATION MANAGEMENT**

- THROUGHOUT THE PERIOD THE CONTRACTOR SHALL ACTIVELY REVIEW THE SITE AND CONTROL ANY AND ALL ESTABLISHMENT OF SPECIES ON MINNESOTA'S NOXIOUS WEEDS LISTS.
- ALL INSTALLED LIVE PLANT MATERIAL SHALL BE ASSESSED AT YEAR 1 AND YEAR 2 AND ALL DEAD OR DYING PLANTING SHALL BE REPLACED AT THESE INTERVALS.
- PRIOR TO THE END OF THE EXTENDED VEGETATION MANAGEMENT PERIOD ANY AND ALL AREAS WITHOUT >50% VEGETATIVE GROUND COVER COVERAGE SHALL BE PREPPED AND RESEEDED WITH PLAN SEED MIXES.

**SCHEDULE OF ESTIMATED QUANTITIES NOTES**

- LINE ITEM SHALL INCLUDE ALL MATERIALS AND LABOR TO FULLY RESTORE THE PRIVATE DRIVEWAY TO PRE-CONSTRUCTION CONDITION. THIS SHALL INCLUDE UP TO 14 CUBIC YARDS OF CLASS 5 MATERIAL.
- EXCAVATED MATERIAL DEEMED UNSUITABLE FOR REUSE ON SITE SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED FROM THE SITE. CONTRACTOR SHALL DEPOSIT A SMALL AMOUNT OF MATERIAL ONSITE PER SHEETS 04 & 05.
- CONTRACTOR SHALL BE RESPONSIBLE TO IMPORT SUITABLE CLEAN FILL AS NECESSARY BEYOND SUITABLE EXCAVATED ONSITE SOIL.
- CONTRACTOR SHALL PROVIDE ALL NECESSARY TRAFFIC CONTROL MEASURES TO SAFELY ALLOW ACCESS TO AND FROM HIGHWAY 97 AND TO AND FROM THE WORK ZONE FROM THE PRIVATE DRIVEWAY IN ACCORDANCE WITH THE LATEST EDITION OF MN MUTCD. TRAFFIC CONTROL PLAN TO BE SUBMITTED TO ENGINEER FOR APPROVAL.
- THIS ALLOWANCE IS ONLY INTENDED TO BE UTILIZED FOR ITEMS AND QUANTITIES BEYOND WHAT IS LISTED IN THE SEQ. PLEASE SEE SPECIAL PROVISIONS FOR A FULL BREAKDOWN ON THE ALLOWANCE.
- THIS QUANTITY REPRESENTS 2 TON/ACRE THROUGHOUT PER THE RESTORATION PLAN.

**SCHEDULE OF ESTIMATED QUANTITIES**

BASE BID					
Item No.	Item	MnDOT Reference#	Unit	Estimated	Notes
1	Mobilization	2021.501	LS	1	
2	Gravel Road Restoration	2051.501	LS	1.00	1
3	Clearing	2101.505	ACRE	0.56	
4	Grubbing	2101.505	ACRE	0.56	
5	Remove 15" CMP Culvert	2104.503	LF	23	
6	Remove 24" CMP Culvert	2104.503	LF	25	
7	Remove 30" RCP Culvert	2104.503	LF	33	
8	Common Excavation (Cut: 14066 CY, Fill: 113 CY)	2106.507	CY	14,066	2,3
9	Dewatering	2106.601	LS	1	
10	Storm Sewer, Class III RCAP, 36" x 23"	2501.502	LF	25	
11	RCAP Apron, 36" x 23"	2501.502	EA	2	
12	Footing for RCP Apron, 36" x 23"	2501.502	EA	2	
13	Pipe Guard for RCP Apron, 36" x 23"	2501.502	EA	2	
14	Traffic Control	2563.601	LS	1	4
15	Temporary Erosion and Sediment Control Allowance	2573.501	LS	1	5
16	Erosion Control Supervisor	2573.501	LS	1	
17	Stabilized Construction Exit	2573.501	LS	1	
18	Floatation Silt Curtain, Type TB	2573.503	LF	20	
19	Sediment Control Log Type Coir	2573.503	LF	352	
20	Rolled Erosion Prevention Product, Category 35	2575.504	SY	1,696	
21	Seeding	2575.505	ACRE	3.21	
22	Seed, Mixture 34-171 (5.3 lb/ac)	2575.508	LB	11	
23	Seed, Mixture 34-262 (14.5 lb/ac)	2575.508	LB	13	
24	Mulch Material, Blown Straw	2575.509	TON	7	6
25	Extended 2 Year Native Vegetation Warranty	2575.601	LS	1	

**ADD ALTERNATE 1**

Item No.	Item	MnDOT Reference#	Unit	Estimated	Notes
1	Transplant Sedge Meadow	2571.621	LS	1	

**ADD ALTERNATE 2**

Item No.	Item	MnDOT Reference#	Unit	Estimated	Notes
1	Deciduous tree (#2 Container)	2571.524	EA	20	
2	Perennial (Erosion Control Plantings)	2571.527	EA	1,052	


**ADD ALTERNATE 3**

Item No.	Item	MnDOT Reference#	Unit	Estimated	Notes
1	Deciduous shrub (#1 Container)	2571.525	EA	25	

Plot Date: 08/03/2023  
 Drawing name: X:\Clients\_WJD\0376\_CFLWD\021E\_WJDC\_Wetland\_Restor06\_GIS\MSDrawn\0376-21E\_SEQ & Notes.dwg  
 User:

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1	08/03/2023	ERK	DRAFT BID PLANS
NO	DATE	BY	REVISION

SUBMISSION DATE: 08/03/2023		
DESIGN BY KDC	DRAWN BY ERK	CHECKED BY KDB
EOR PROJECT NO. 00376-0218		


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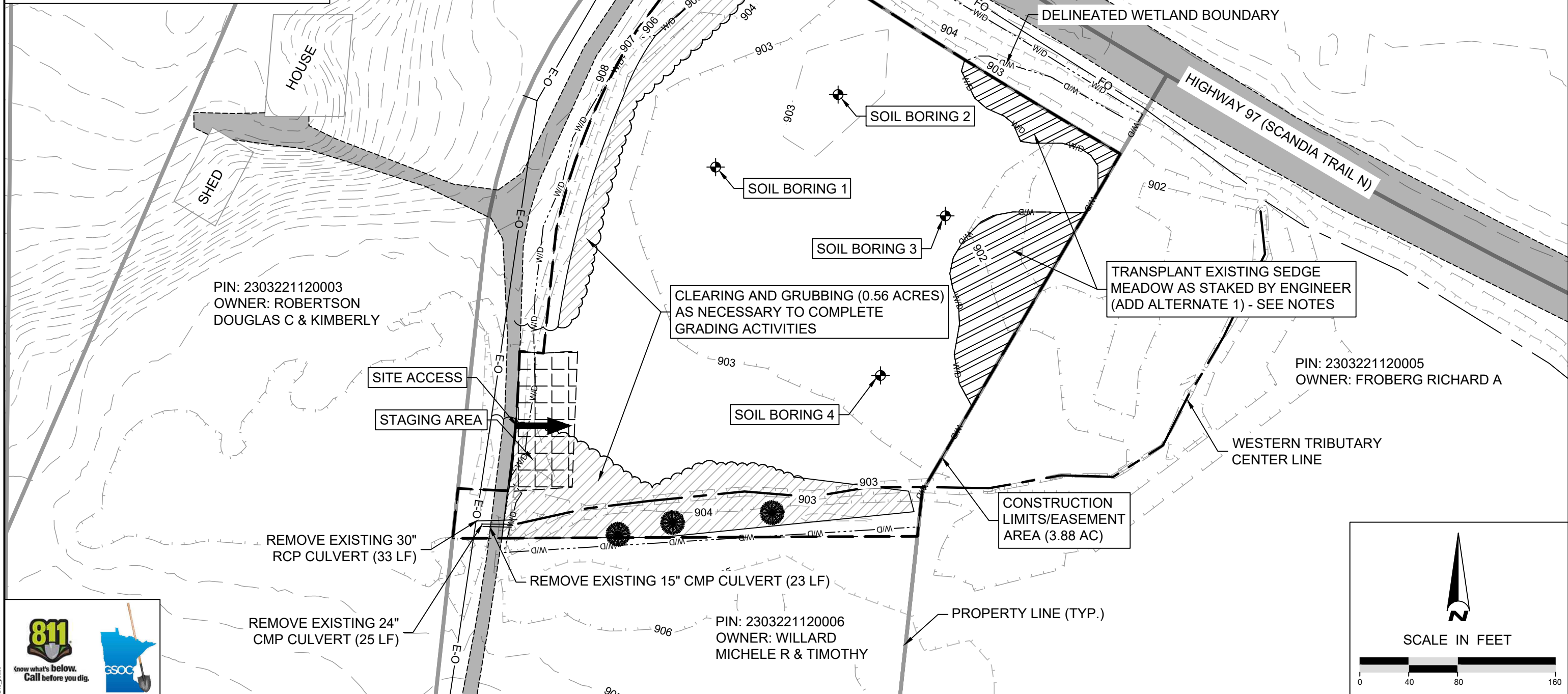
WJD-6 WESTERN TRIBUTARY WETLAND RESTORATION  
 FOREST LAKE, WASHINGTON COUNTY, MINNESOTA  
 STATE PROJECT NO. - CITY PROJECT NO.

SEQ & NOTES  
 SHEET 02 OF 08 SHEETS



**NOTES:**

1. CONTRACTOR SHALL SCHEDULE SITE WALKTHROUGH WITH ENGINEER AFTER STAKING CONSTRUCTION LIMITS, BUT BEFORE REMOVING TREES.
2. EXISTING SEDGE MEADOW SHALL BE SCRAPED PER DIRECTION OF ENGINEER. MATERIAL SHALL BE REMOVED WITH ROCK BUCKET ATTACHMENT ON SKID STEER TO A MAXIMUM DEPTH OF 12" AND MINIMUM DEPTH OF 4". SEDGE MEADOW SHALL BE IMMEDIATELY RESET ONTO AREA PER GRADING & DRAINAGE DRAWINGS (SHEET 05).

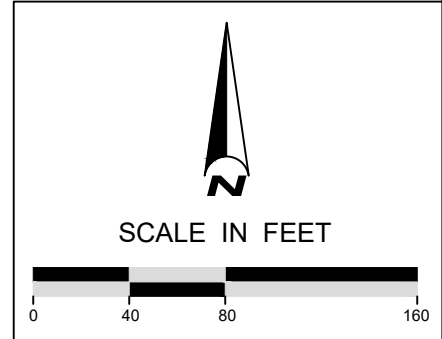


PIN: 2303221120003  
OWNER: ROBERTSON DOUGLAS C & KIMBERLY

PIN: 2303221120002  
OWNER: KENNEDY GARY D

PIN: 2303221120005  
OWNER: FROBERG RICHARD A

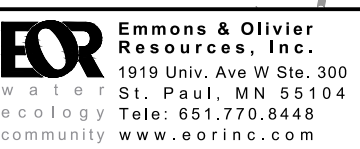
PIN: 2303221120006  
OWNER: WILLARD MICHELE R & TIMOTHY



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1	08/03/2023	ERK	DRAFT BID PLANS
NO	DATE	BY	REVISION

SUBMISSION DATE: 08/03/2023		
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EOR PROJECT NO. 00376-0218		

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WJD-6 WESTERN TRIBUTARY WETLAND RESTORATION  
FOREST LAKE, WASHINGTON COUNTY, MINNESOTA  
STATE PROJECT NO. - CITY PROJECT NO.

EXISTING CONDITIONS AND REMOVALS  
SHEET 03 OF 08 SHEETS

EXISTING CONDITIONS AND REMOVALS  
SHEET 03 OF 08 SHEETS

Plot Date: 08/02/2023  
 Drawing: WJD-6 Wetland Restorations - GMS.dwg  
 User: J. Williams  
 Path: C:\Users\jwilliams\OneDrive\Documents\Projects\WJD-6 Wetland Restorations - GMS.dwg

**NOTES:**

1. ALL RCP PIPE SECTIONS AND APRONS SHALL BE TIED.
2. CONTRACTOR SHALL DEPOSIT 30 CUBIC YARDS OF WETLAND SUBSTRATE MATERIAL AT A LOCATION APPROXIMATELY 400 FEET SOUTH OF THE PROJECT ACCESS LOCATION, IMMEDIATELY ADJACENT TO THE PRIVATE DRIVEWAY. THIS SHALL BE COORDINATED WITH THE OWNER. SEE RESTORATION AND EROSION CONTROL NOTES ON SHEET 05.



02  
08

25 LF 36" x 23" RCAP CULVERT @ 0.48%  
INV IN: 903.92  
INV OUT: 903.80

STABILIZED WETLAND OUTLET: 902.5



Plot Date: 08/02/2023  
 Drawing: WJD-6\_Wetland\_Restoration\_GMS.dwg  
 Project: WJD-6\_Wetland\_Restoration\_GMS.dwg  
 User: jk  
 Date: 08/02/2023

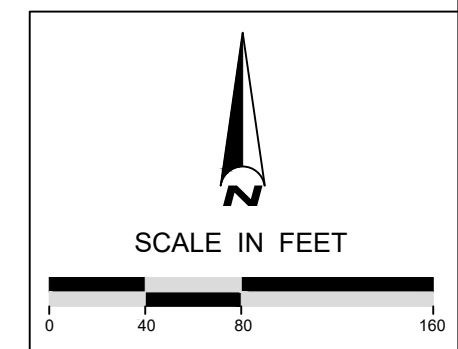
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1	08/03/2023	ERK	DRAFT BID PLANS
NO	DATE	BY	REVISION

SUBMISSION DATE: 08/03/2023		
DESIGN BY KDC	DRAWN BY ERK	CHECKED BY KDB
EOR PROJECT NO. 00376-0218		

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 FOREST LAKE

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 FOREST LAKE, WASHINGTON COUNTY, MINNESOTA  
 STATE PROJECT NO. - CITY PROJECT NO.

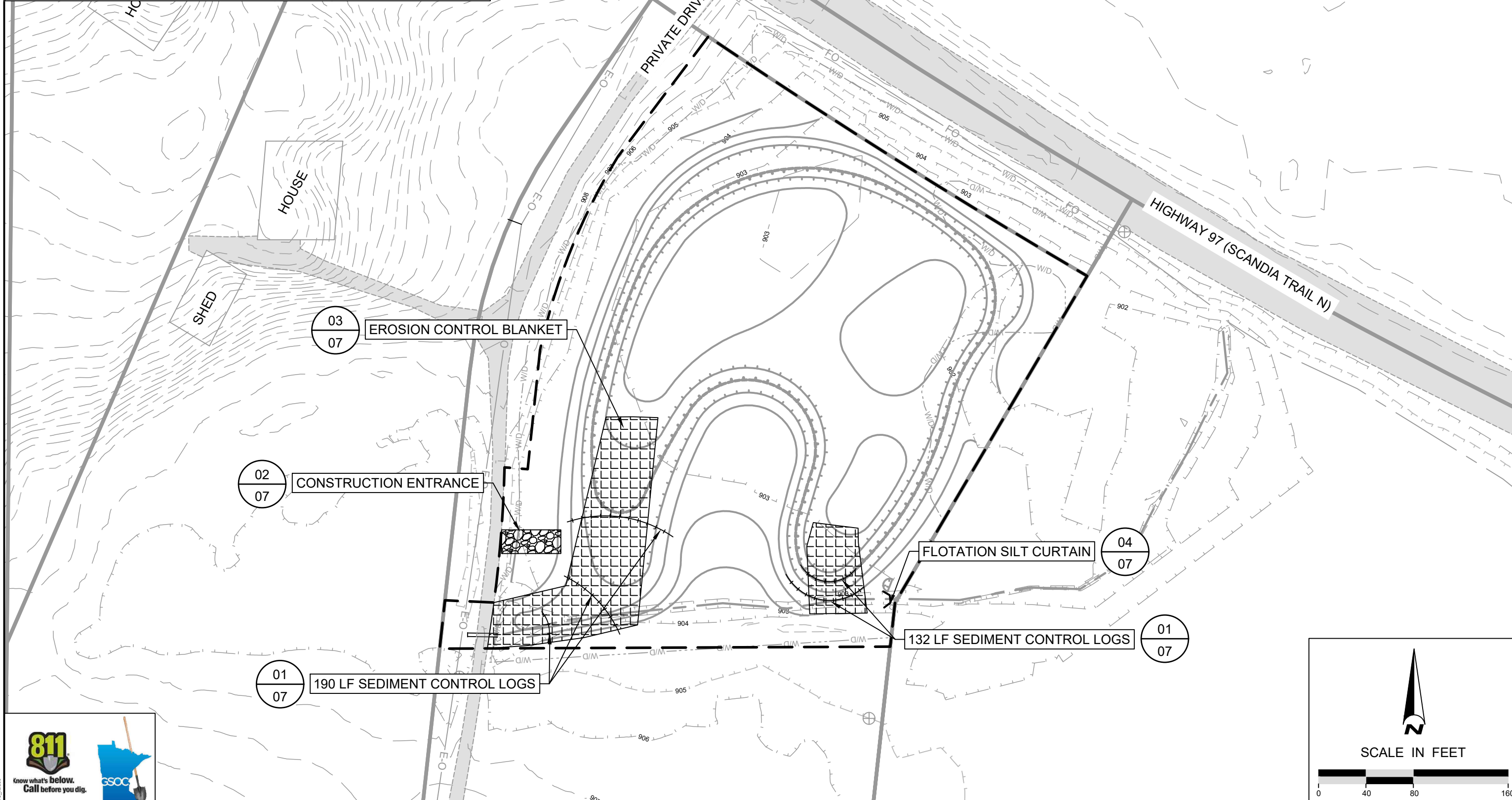


GRADING & DRAINAGE PLAN  
 SHEET 04 OF 08 SHEETS

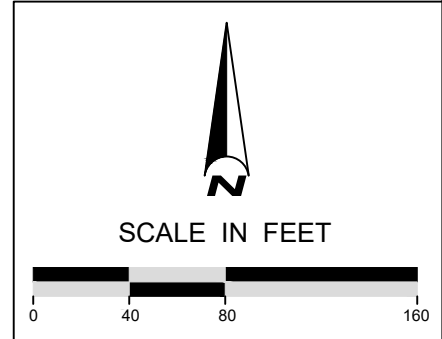


**NOTES:**

- CONTRACTOR SHALL INSTALL ON THE 30 CY STOCKPILE LOCATED SOUTH OF THE PROJECT SITE, MNDOT MIX 21-112 (WINTER WHEAT COVER CROP) ON THE STOCKPILE AND SEDIMENT CONTROL LOGS AROUND THE PERIMETER. THE COVER CROP SHALL BE CONSIDERED INCIDENTAL TO THE SEEDING AND 30 LF OF SEDIMENT CONTROL LOGS HAVE BEEN INCLUDED LINE ITEM 17.



FOREST LAKE



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1	08/03/2023	ERK	DRAFT BID PLANS
NO	DATE	BY	REVISION

SUBMISSION DATE: 08/03/2023		
DESIGN BY KDC	DRAWN BY ERK	CHECKED BY KDB
EOR PROJECT NO. 00376-0218		

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 FOREST LAKE, WASHINGTON COUNTY, MINNESOTA

STATE PROJECT NO. - CITY PROJECT NO.

EROSION & SEDIMENT CONTROL PLAN  
 SHEET 05 OF 08 SHEETS


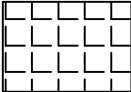
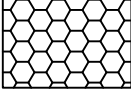
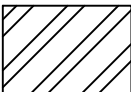
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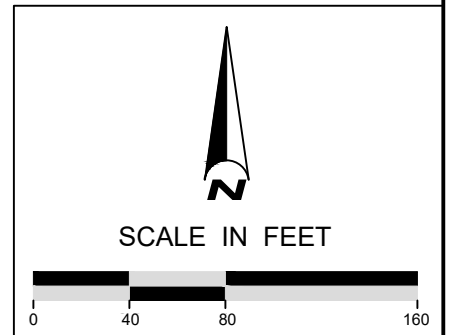
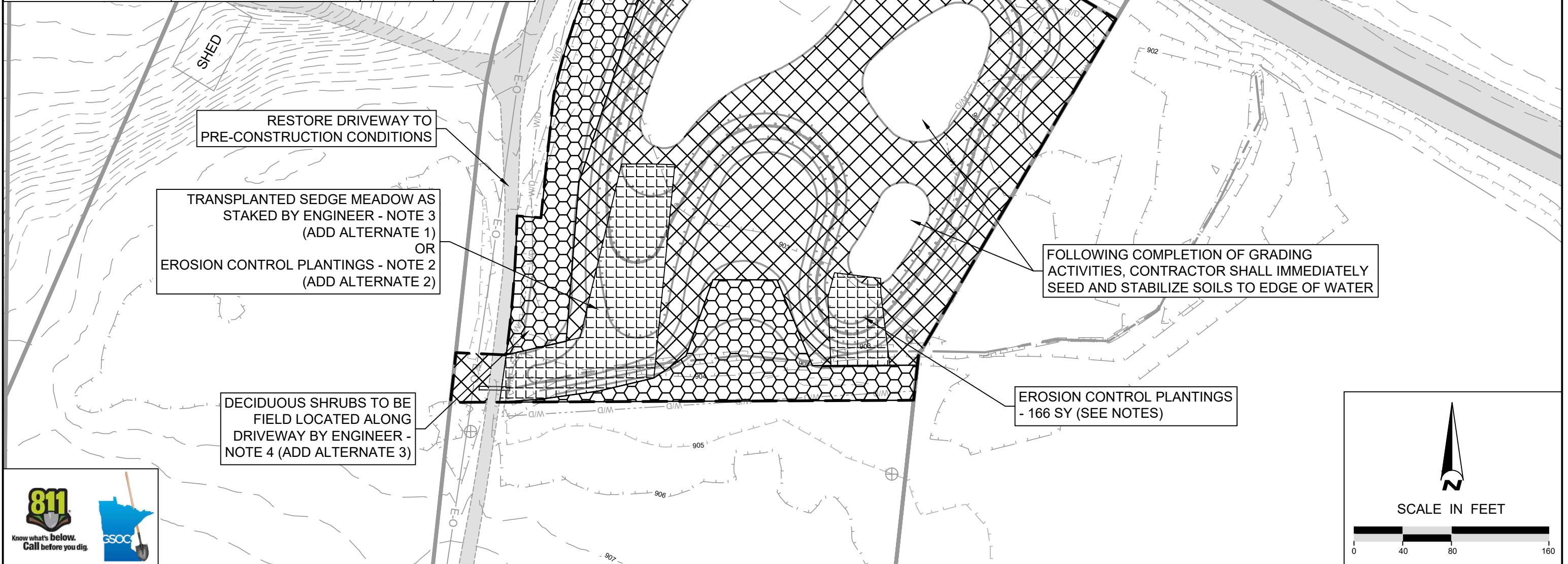
**NOTES:**

1. INSTALL PLUGS ACROSS EROSION CONTROL BLANKET AT A SPACING OF 42" ON TRIANGULAR GRID ABOVE ELEVATION 900.
- 1.1. SPECIES COMPOSITION SHOULD BE EQUAL PARTS OF THE FOLLOWING: BLUE JOINT GRASS (*CALAMAGROSTIS CANADENSIS*), FOX SEDGE (*CAREX VULPINOIDEA*), CORD GRASS (*SPARTINA PECTINATA*) PLANTING IN GROUPINGS OF 10 - 20 SPECIES.
2. TAMARACK TREES SHALL BE FIELD LOCATED BY ENGINEER PRIOR TO PLANTING.
3. CONTRACTOR SHALL GRADE FINAL SEDGE MEADOW LOCATION SUCH THAT AFTER INSTALLATION, SEDGE MEADOW MATCHES DESIGN FINISHED GRADES (ACCOUNT FOR FUTURE SETTLEMENT).
4. DECIDUOUS SHRUBS TO BE #1 CONTAINER AT 54" SPACING.
- 4.1. SPECIES COMPOSITION SHOULD BE EQUAL PARTS RED-TWIGGED DOGWOOD (*CORNUS SERICEA*), AMERICAN Highbush CRANBERRY (*VIBURNUM TRILOBUM*) [DRIER AREAS], SLENDER WILLOW (*SALIX PETIOLARIS*) [WETTER AREAS]
5. CONTRACTOR SHALL BE RESPONSIBLE TO PROTECT ALL PLANTINGS FROM WILDLIFE.

**CONIFEROUS TREE**

COMMON NAME	SCIENTIFIC NAME	SIZE	PROJECT QTY.
TAMARACK	<i>LARIX LARICINA</i>	#2 CONT.	20

-  MNDOT SEED MIXTURE 34-171 (WETLAND REHABILITATION) WITH BLOWN STRAW MULCH (APPLIED AT 2 TON PER ACRE)
  -  MNDOT SEED MIXTURE 34-171 (WETLAND REHABILITATION) WITH REP CATEGORY 35
  -  MNDOT SEED MIXTURE 34-262 (WET PRAIRIE) WITH BLOWN STRAW MULCH (APPLIED AT 2 TON PER ACRE)
  -  TRANSPLANTED SEDGE MEADOW (ADD ALTERNATE 1)
- ALL SEEDING SHALL INCLUDE MNDOT MIX 21-112 (WINTER WHEAT COVER CROP)



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1	08/03/2023	ERK	DRAFT BID PLANS
NO	DATE	BY	REVISION

SUBMISSION DATE: 08/03/2023		
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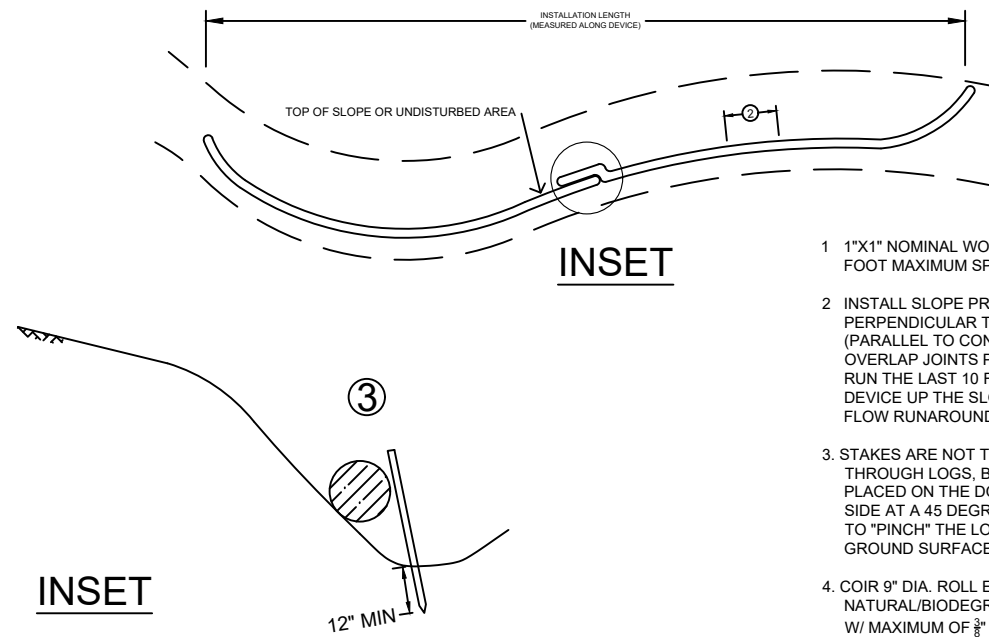
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WJD-6 WESTERN TRIBUTARY WETLAND RESTORATION  
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 STATE PROJECT NO. - CITY PROJECT NO.

RESTORATION PLAN  
 SHEET 06 OF 08 SHEETS

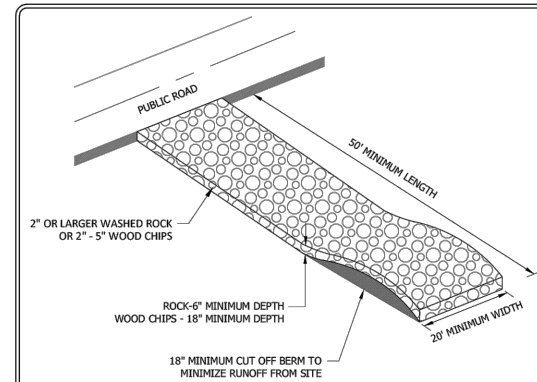
Plot Date: 08/03/2023  
 Drawing: WJD-6\_Wetland\_Restoration.dwg  
 User: JLD  
 Path: C:\Users\jld\OneDrive\Documents\Projects\WJD-6\_Wetland\_Restoration\WJD-6\_Wetland\_Restoration.dwg





- 1 1"x1" NOMINAL WOOD STAKES AT 8 FOOT MAXIMUM SPACING.
- 2 INSTALL SLOPE PROTECTION PERPENDICULAR TO SLOPE (PARALLEL TO CONTOURS). OVERLAP JOINTS PER DETAIL 'A'. RUN THE LAST 10 FEET OF EACH DEVICE UP THE SLOPE TO PREVENT FLOW RUNAROUND.
- 3 STAKES ARE NOT TO PROTRUDE THROUGH LOGS, BUT RATHER PLACED ON THE DOWNSTREAM SIDE AT A 45 DEGREE ANGLE SO AS TO "PINCH" THE LOG TIGHT TO THE GROUND SURFACE
- 4 COIR 9" DIA. ROLL ENCLOSED IN NATURAL/BIODEGRADABLE NETTING W/ MAXIMUM OF  $\frac{3}{8}$ " NET OPINING

01 SEDIMENT CONTROL LOGS  
07 (NO SCALE)



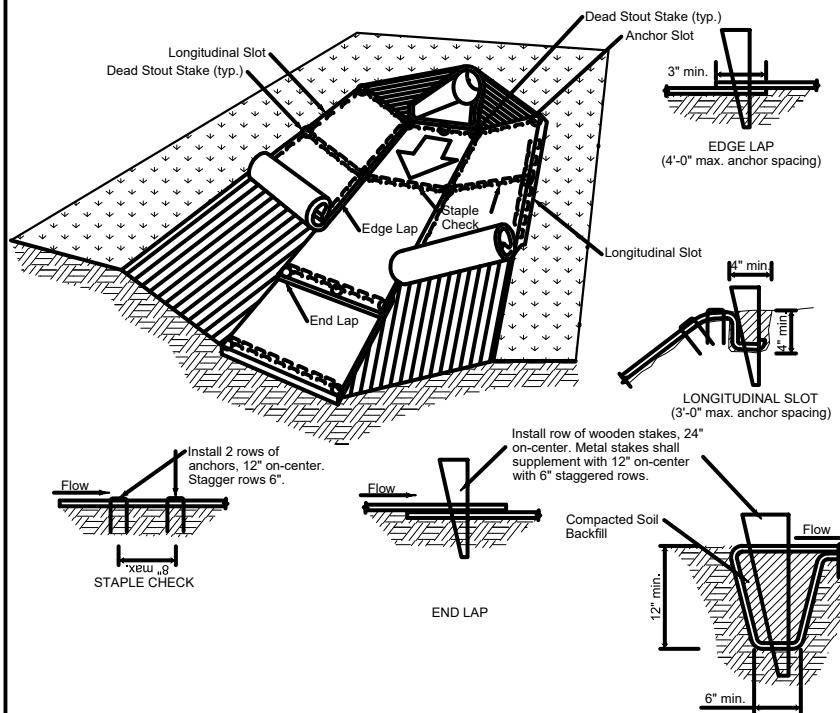
- NOTES:
1. FILTER FABRIC SHALL BE PLACED UNDER ROCK OR MULCH TO STOP MUD MIGRATION THROUGH ROCK. FILTER FABRIC IS NOT REQUIRED UNDER WOOD CHIPS.
  2. 80% OF WOOD CHIPS USED FOR CONSTRUCTION ENTRANCES MUST BE BETWEEN 2 INCHES AND 5 INCHES. NO CHIPPED-UP MANUFACTURED WOOD AND / OR CHEMICALLY TREATED WOOD IS ALLOWED.
  3. ENTRANCE MUST BE MAINTAINED REGULARLY TO PREVENT SEDIMENTATION ON PUBLIC ROADWAYS. FUGITIVE ROCK OR WOOD CHIPS WILL BE REMOVED FROM ADJACENT ROADWAYS DAILY OR MORE FREQUENTLY AS NECESSARY.



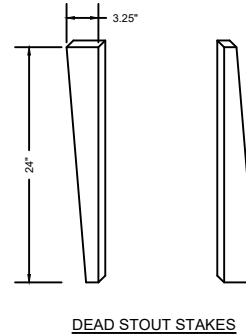
STANDARD DETAILS  
CONSTRUCTION ENTRANCE  
ROCK, WOOD CHIP  
FOREST LAKE, MINNESOTA

LAST REVISION:  
MAR 2022  
CITY PLATE NO.  
ERO-7

02 CONSTRUCTION ENTRANCE  
07 (NO SCALE)



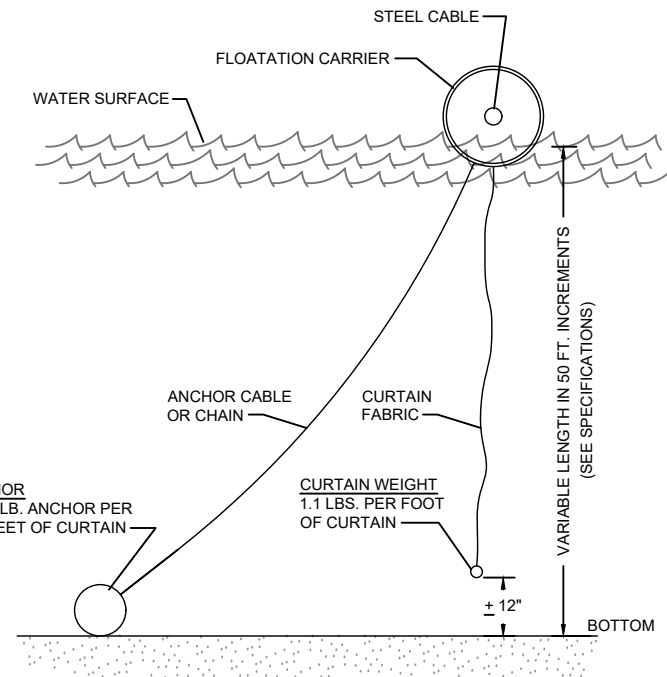
- NOTES:
- PROVIDE NECESSARY EXCAVATION AT LOCATION WHERE SITE CONDITIONS REQUIRE SHAPING OF A DITCH TO PROVIDE A PROPER TYPE OF AREA FOR INSTALLATION OF WOOD EXCELSIOR MAT FOR SPECIAL DITCH CONTROL.
- ENSURE GROUND SURFACE ADJACENT TO ANY CHANNELS IS SHAPED TO FACILITATE NATURAL DRAINAGE INTO THE PROTECTED AREA.
- USE ALL EXCAVATED MATERIAL TO FILL LOW AREAS, GULLIES, BACKSLOPE SCOURS, AND OTHERWISE FACILITATE THE FREE FLOW OF SURFACE WATER INTO THE CHANNEL AS DIRECTED BY THE ENGINEER. ALIGNMENT SHOULD BE SMOOTH AND AVOID ABRUPT CHANGES.
1. INSTALL ANCHOR SLOT AT THE BEGINNING (UPSTREAM END) OF ALL EROSION CONTROL MAT INSTALLATIONS.
  2. WOODEN "DEAD STOUT STAKES" SHALL BE PLACED AT 24" SPACING PERPENDICULAR TO FLOW AND 48" SPACING PARALLEL TO FLOW. STAPLES SHALL BE PLACED PER NOTE 3 AROUND WOODEN STAKES
  3. PLACE STAPLES ALTERNATELY IN ROWS APPROXIMATELY 24 INCHES APART. APPROXIMATELY 30 STAPLES REQUIRED PER SQUARE (100 SQ. FT.) OF EROSION CONTROL MAT.
  4. SPACE CHECK SLOTS IN DITCH CHANNEL SO THAT ONE OCCURS WITHIN 50 FEET OF SLOPES OF MORE THAN 4%.



DEAD STOUT STAKES

- NOTES:
- 1) SHALL BE DERIVED FROM HARDWOOD SPECIES OR APPROVED EQUAL.
  - 2) DRIVE TO 1" ABOVE GRADE OR REFUSAL, AS DETERMINED BY ENGINEER, AND CUT OFF STAKE AT 1" ABOVE GRADE.
  - 3) DEAD STOUT STAKES USED IN CONJUNCTION WITH ALL DeKoWe EROSION CONTROL BLANKET APPLICATIONS.

03 EROSION CONTROL BLANKET  
07 (NO SCALE)



NOTE:  
DOUBLE SILT CURTAINS SHOULD BE SPACED 10' APART.

04 FLOATATION SILT CURTAIN  
07 (NO SCALE)

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DETAILS SHEET 01

SHEET 07 OF 08 SHEETS



