



**US Army Corps
of Engineers**
St Paul District

**APPLICANT: Minnehaha Creek
Watershed District**

Public Notice

**ISSUED: April 22, 2013
EXPIRES: May 22, 2013**

**REFER TO: 2012-05657-MMJ, Long
Lake Creek Corridor Project**

SECTION:404 - Clean Water Act

1. **APPLICATION FOR PERMIT TO:** Conduct water quality improvement projects at three separate locations within the Long Lake Creek Corridor, including two bank stabilization projects, and a wetland restoration project involving the hydrologic restoration of an approximately 330-acre shallow marsh type wetland. Project details are shown on the attached plans labeled as 2012-05657-MMJ, Figures 1-7.

2. SPECIFIC INFORMATION.

APPLICANT and ADDRESS:
Minnehaha Creek Watershed District
Attn: Ms. Becky Houdek
18202 Minnetonka Boulevard
Deephaven, Minnesota 55391

AGENT and ADDRESS:
Mr. Kevin Biehn
Emmons and Olivier Resources, Inc.
651 Hale Avenue North
Oakdale, Minnesota

PROJECT LOCATION: The Long Lake Creek Corridor Project would include work at three separate locations, described below.

Brown Road streambank stabilization: The project site is located in the city of Orono, Hennepin Co. MN, in the North ½ of Sec. 3, T. 117 N., R. 23 W., near the intersection of the Luce Line Trail with Brown Road South.

Wayzata Boulevard streambank stabilization: The project site is located in the city of Long Lake, Hennepin County, MN, in the Western ½ of the Sec. 35, T. 118 N., R. 23 W., just south of Wayzata Boulevard, to the west of Wolf Pointe Trail and to the north of Highway 12.

Wetland hydrology restoration site: The project site is located in the City of Orono, Hennepin County, MN, in the SE corner of Sec. 34, T. 118 N., R. 23 W., north half of Sec. 3, T. 117 N., R. 23 W., NW corner of Sec. 2, T. 117 N., R. 23 W., and the SW corner of Sec. 35, T. 118 N., R. 23 W. The existing wetland (Minnehaha Creek Watershed District unique ID: D-117-23-03-016) is located off of Orono Orchard Road and the Luce Line Trail, Orono, MN in the Minnehaha Creek Watershed District (MCWD.)

DESCRIPTION OF PROJECT: The project is comprised of three separate water resource improvements, all within the Long Lake Creek subwatershed of the MCWD, located at the abovementioned sites.

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The Brown Road and Wayzata streambank stabilization projects are both located downstream from undersized culvert crossings, which in part has caused unstable stream banks at both locations. The work proposed to stabilize these streambanks would include “soft-armor” techniques such as: rootwads, rock vanes, boulder toe, biodegradable erosion control blankets, native plantings and live cuttings.

The wetland restoration portion of the project involves restoring hydrology to a wetland basin that is artificially drained by a lateral, non-public ditch likely constructed for agricultural purposes. The proposed action would convert the existing degraded wet meadow type wetland into a shallow marsh type wetland. MCWD has completed hydrology and hydraulic modeling that shows the wetland can be restored to predevelopment conditions without adversely affecting the neighboring properties.

A single ditch plug created out of in situ soil, with erosion control and stabilization inputs, is proposed to block the artificial drainage. The wetland restoration would expand the existing wetland from 295.7 acres to 329.8 acres, for an increase of 34.1 wetland acres.

QUANTITY, TYPE, AND AREA OF FILL and/or DESCRIPTION OF DREDGING OR EXCAVATION: The Brown Road bank stabilization site would involve work along approximately 200 linear feet of Long Lake Creek, including the installation of approximately 100 linear feet of boulder toe with live cutting treatment, and the installation of approximately 100 linear feet of rock vane and root wad treatment.

The Wayzata Boulevard bank stabilization site would involve work along approximately 165 linear feet of Long Lake Creek, including the installation of approximately 75 linear feet of boulder toe with live cutting treatment and the installation of approximately 90 linear feet of rock vane.

Work at the wetland restoration site would result in temporary wetland impacts associated with the construction of a ditch plug, limited to an area of approximately 0.40 acre. No import of fill or rock is included in the proposed construction. Excavation activities in the wetland (excavating soil that would be used to build the ditch plug) would result in the conversion of approximately 2,000 square feet of wet meadow to shallow/deep marsh type wetland. The discharge of dredged material to block the ditch would result in the conversion of approximately 900 square feet of wet meadow to wet prairie type wetland.

VEGETATION IN AFFECTED AREA: The bank stabilization sites consist of eroding, sparsely vegetated stream banks including reed canary grass, buckthorn, box elder, etc. The proposed stabilization activities at these sites would incorporate native plantings and improve the vegetation in the area. The majority of the wetland restoration site is a wet meadow type wetland dominated by invasive reed canary grass.

SOURCE OF FILL MATERIAL: The small amount of material required for constructing the ditch plug would be excavated from the surrounding wetland area, resulting in the conversion of approximately 2,000 square feet of wet meadow to shallow/deep marsh type wetland.

SURROUNDING LAND USE: The Brown Road stabilization site is bordered by the Luce Line Trail to the north, Brown Road to the east, a larger residential lot to the south and a larger stream/wetland

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complex to the west. The Wayzata Boulevard stabilization site is bordered by Wayzata Boulevard and Long Lake to the north, residential developments to the east and west, and Highway 12 to the south. The wetland restoration site is surrounded by larger residential lots to the north, east and west, and is bordered by the Luce Line Trail and a larger wetland complex to the south.

DESCRIPTION OF WATER CONTROL STRUCTURE AND PROPOSED WATER ELEVATIONS:

The applicant has provided the following descriptions:

The wetland restoration portion of the project would require the installation of a ditch plug or weir structure at the wetland basin’s outlet, just north of the Luce Line Trail. The top of the weir/berm would be constructed to an elevation of 942.0’.

The wetland proposed for restoration was evaluated for high water impacts using flood hydrology and hydraulic modeling software (XP-SWMM model.) The normal water elevation would be raised by 1.5’ from 936.5’ (contained to isolated pockets within the bottom of the ditch) to 938.0’ to match the historic wetland elevation of the basin. The average delineated wetland elevation is 938.8’. To estimate the proposed wetland boundary, the increase in bounce for the 1.5-year design storm was added to 938.8’. Impacts from the 1.5 year event show an increase from peak water elevation of 0.9 feet within the basin, as shown on the chart below. There is no increase from events greater than the 10-year because the stream elevation dictates high water elevation within the basin for larger events. The nearest low floor elevation surveyed is 943.8’ on the 25 Orchard Road North property on the north side of the project, 2.9’ above the existing and proposed 100-year high water elevation. The extent of high water elevation impact stops in this basin and does not propagate to the basin on the east side of Orchard road. Of note, the existing and proposed 100-year high water elevation is 940.9 feet, well below the structure lowest floor elevations of the three adjacent home sites (982.9, 943.8, and 944.9.)

Existing and Proposed Water Elevations for Wetland D-117-23-03-016

	Key Wetland Elevations (feet)		
	Existing	Proposed	Increase
Normal Water Elevation	936.5	938.0	1.5
Approximate Wetland Boundary	938.8	939.7	0.9
	High Water Elevation (feet)		
	Existing	Proposed	Increase
1.5-year 24-hour Rainfall (2.6 in)	938.3	939.2	0.9
5-year 24-hour Rainfall (3.6 in)	939.1	939.4	0.3
10-year 24-hour Rainfall (4.2 in)	939.5	939.6	0.1
100-year 24-hour Rainfall (6.0 in)	940.9	940.9	0.0

THE FOLLOWING PRECAUTIONS TO PROTECT WATER QUALITY AND QUANTITY HAVE BEEN DESCRIBED BY THE APPLICANT: All of the work proposed within the Long Lake Creek corridor is estimated to reduce Phosphorus export into downstream systems by approximately 13.7 lbs

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per year. Phosphorus removal associated with the wetland restoration portion of the project is estimated at approximately 4.9 lbs/year, the Brown Road bank stabilization work is estimated to remove approximately 6.7 lbs of phosphorus per year, and the Wayzata Boulevard bank stabilization work is estimated to remove approximately 2.1 lbs of phosphorus per year.

MITIGATION: The Long Lake Creek Corridor Project is intended as a water resource improvement project. Compensatory mitigation has not been proposed by the applicant.

3. REPLIES/COMMENTS.

Interested parties are invited to submit to this office written facts, arguments, or objections within 30 days of the date of this notice. These statements should bear upon the suitability of the location and the adequacy of the project and should, if appropriate, suggest any changes believed to be desirable. Comments received may be forwarded to the applicant.

Replies may be addressed to Regulatory Branch, St. Paul District, Corps of Engineers, Attn: Melissa Jenny, 180 Fifth Street East, Suite 700, Saint Paul, MN 55101-1678.

Or, IF YOU HAVE QUESTIONS ABOUT THE PROJECT, call Melissa Jenny at the St. Paul office of the Corps, telephone number (651) 290 -5363.

To receive Public Notices by e-mail, go to: http://www2.mvp.usace.army.mil/list_server/ and add your information in the New Registration Box.

4. FEDERALLY-LISTED THREATENED OR ENDANGERED WILDLIFE OR PLANTS OR THEIR CRITICAL HABITAT.

None were identified by the applicant or are known to exist in the permit area. However, Hennepin County is within the known or historic range of the following Federally-listed threatened (T) and endangered (E) species:

<u>Species</u>	<u>Habitat</u>
Higgins' eye pearl mussel (E)	Mississippi and St. Croix Rivers

This application is being coordinated with the U.S. Fish and Wildlife Service. Any comments it may have concerning Federally-listed threatened or endangered wildlife or plants or their critical habitat will be considered in our final assessment of the described work.

5. JURISDICTION.

This application is being reviewed in accordance with the practices for documenting Corps jurisdiction under Sections 9 & 10 of the Rivers and Harbors Act of 1899 and Section 404 of the Clean Water Act identified in Regulatory Guidance Letter 08-02. We have made an initial determination that the aquatic resources that would be impacted by the proposed project are regulated by the Corps of Engineers under Section 404 of the Clean Water Act and/or Section(s) 9 & 10 of the Rivers and Harbors Act. The Corps will prepare an approved or preliminary jurisdictional determination prior to making a permit decision. Approved jurisdictional determinations are posted on the St. Paul District web page at <http://www.mvp.usace.army.mil/Missions/Regulatory.aspx>.

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THE APPLICANT HAS STATED THAT THE FOLLOWING STATE, COUNTY, AND/OR LOCAL PERMITS HAVE BEEN APPLIED FOR/ISSUED: Local grading and erosion control permits from the Cities of Orono and Long Lake.

6. STATE SECTION 401 WATER QUALITY CERTIFICATION.

Valid Section 404 permits cannot be issued for any activity unless state water quality certification for the activity is granted or waived pursuant to Section 401 of the Clean Water Act. The state Section 401 authority in Minnesota is the Minnesota Pollution Control Agency (MPCA). The St. Paul District has provided this public notice and a copy of the applicant's Section 404 permit application form to the MPCA. If MPCA needs any additional information in order for the Section 401 application to be considered complete by MPCA, the MPCA has indicated that it will request such information from the applicant. It is the permit applicant's responsibility to ensure that the MPCA has received a valid, complete application for state Section 401 certification and to obtain a final Section 401 action from the MPCA.

The MPCA has indicated that this public notice serves as its public notice of the application for Section 401 water quality certification under Minnesota Rules Part 7001. The MPCA has also indicated that the Section 401 process shall begin to commence upon the issuance date of this public notice unless the MPCA notifies both the St. Paul District and the permit applicant to the contrary, in writing, before the expiration date of this public notice.

Any comments relative to MPCA's Section 401 Certification for the activity proposed in this public notice may be sent to:

Minnesota Pollution Control Agency, Municipal Division,
Attention 401 Certification, 520 Lafayette Road North, St. Paul, Minnesota 55155-4194.

7. HISTORICAL/ARCHAEOLOGICAL.

The Corps will review information on known cultural resources and/or historic properties within and adjacent to the project area. The Corps will also consider the potential effects of the project on any properties that have yet to be identified. The results of this review and the Corps' determination of effect will be coordinated with the State Historic Preservation Officer independent of this public notice. Any adverse effects on historic properties will be resolved prior to the Corps authorization, or approval, of the work in connection with this project.

The latest version of the National Register of Historic Places has been consulted and no listed properties (known to be eligible for inclusion, or included in the Register) are located in the project area.

8. PUBLIC HEARING REQUESTS.

Any person may request, in writing, within the comment period specified in this notice, that a public hearing be held to consider this application. Requests for public hearings shall state, in detail, the reasons for holding a public hearing. A request may be denied if substantive reasons for holding a hearing are not provided or if there is otherwise no valid interest to be served.

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9. PUBLIC INTEREST REVIEW.

The decision whether to issue a permit will be based on an evaluation of the probable impact, including cumulative impacts, of the proposed activity on the public interest. That decision will reflect the national concern for both protection and utilization of important resources. The benefit which reasonably may be expected to accrue from the proposal must be balanced against its reasonably foreseeable detriments. All factors which may be relevant to the proposal will be considered, including the cumulative effects. Among those are conservation, economics, aesthetics, general environmental concerns, wetlands, cultural values, fish and wildlife values, flood hazards, floodplain values, land use, navigation, shoreline erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food and fiber production and, in general, the needs and welfare of the people. Environmental and other documents will be available for review in the St. Paul District Office.

The Corps of Engineers is soliciting comments from the public; Federal, State, and local agencies and officials; Indian tribes; and other interested parties in order to consider and evaluate the impacts of this proposed activity. Any comments received will be considered by the Corps of Engineers to determine whether to issue, modify, condition, or deny a permit for this proposal. To make this decision, comments are used to assess impacts on endangered species, historic properties, water quality, general environmental effects, and the other public interest factors listed above. Comments are used in the preparation of an Environmental Assessment and/or an Environmental Impact Statement pursuant to the National Environmental Policy Act. Comments are also used to determine the need for a public hearing and to determine the overall public interest of the proposed activity.

Chad Konickson
Chief, Southwest Section

Enclosures

NOTICE TO EDITORS: This public notice is provided as background information and is not a request or contract for publication.

MINNEHAHA CREEK WATERSHED DISTRICT

LONG LAKE CREEK CORRIDOR (09-LCC) PROJECT - PHASE 1

LONG LAKE, HENNEPIN COUNTY, MN

LEGEND		
FEATURE	EXISTING	PROPOSED
SILT FENCE		
CONSTRUCTION FENCE		
DELINEATED WETLAND		
WATERLINE/ShORELINE		
OVERHEAD ELECTRIC LINES	EO	
BURIED ELECTRIC LINES	EU	
FIBER OPTIC LINES	FO	
GAS LINES	G	
PIPELINE	PL	
OVERHEAD TELEPHONE	TO	
BURIED TELEPHONE	TU	
TELEPHONE MANHOLE	TU-M	
TELEPHONE CABLE PEDESTAL	TU-C	
OVERHEAD CABLE TV	TV-O	
BURIED CABLE TV	TV-U	
TV CABLE PEDESTAL	TV-U-C	
UTILITY POLE	U	
BARBED WIRE FENCE		
CHAIN LINK FENCE		
STOCKADE/WOOD FENCE		
GUARD RAIL		
CENTER LINE ROADWAY		
CENTER LINE RAILROAD		
SANITARY SEWER LINE	SS	SS
SANITARY SEWER FORCEMAIN	SS-F	SS-F
SANITARY SEWER MANHOLE	SS-M	SS-M
STORM SEWER LINE	SS-S	SS-S
STORM SEWER CULVERT	SS-C	SS-C
STORM SEWER FORCEMAIN	SS-F	SS-F
STORM SEWER MANHOLE	SS-M	SS-M
WATERMAIN	WM	WM
WATERMAIN MANHOLE	WM-M	WM-M
HYDRANT	H	H
WATER VALVE	WV	WV
ROCK VANE		
ROOTWAD		
BOULDER TOE		
HABITAT LOG		



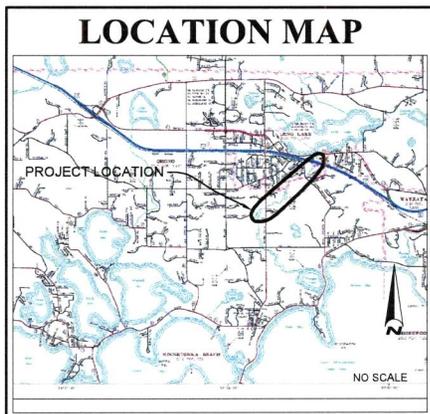
Sheet List Table	
Sheet Number	Sheet Title
01	TITLE SHEET
02	SWPPP
03	QUANTITIES & NOTES
04	OVERALL
05	WETLAND AREA
06	BROWNS ROAD
07	WAYZATA BLVD
08	DETAILS
09	DETAILS

GOVERNING SPECIFICATIONS
 THE 2005 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.

EXISTING UTILITIES
 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 CHS&E 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 (800) 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 800-CALL-4-1-1 OR (651) 454-2002, MONDAY THROUGH FRIDAY (EXCEPT HOLIDAYS) FROM 7 A.M. TO 5 P.M.



CLIENT
 MINNEHAHA CREEK WATERSHED DISTRICT
 18202 MINNETONKA BOULEVARD
 WAYZATA, MN 55391

ENGINEER
 EMMONS & OLIVIER RESOURCES, INC.
 651 HALE AVENUE NORTH
 OAKDALE, MINNESOTA 55128-7534
 TELEPHONE: (651) 770-8448
 FAX: (651) 770-2552
 eorinc.com

70% DRAFT PLANS

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.

NOT FOR CONSTRUCTION

JAY R. HILL
 DATE: 08/30/2012 LICENSE # 24552

SUBMISSION DATE: 08/30/2012
 DESIGN BY: KB
 DRAWN BY: JRH
 EOR PROJECT NO. 043-0060

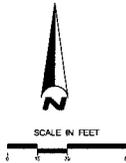
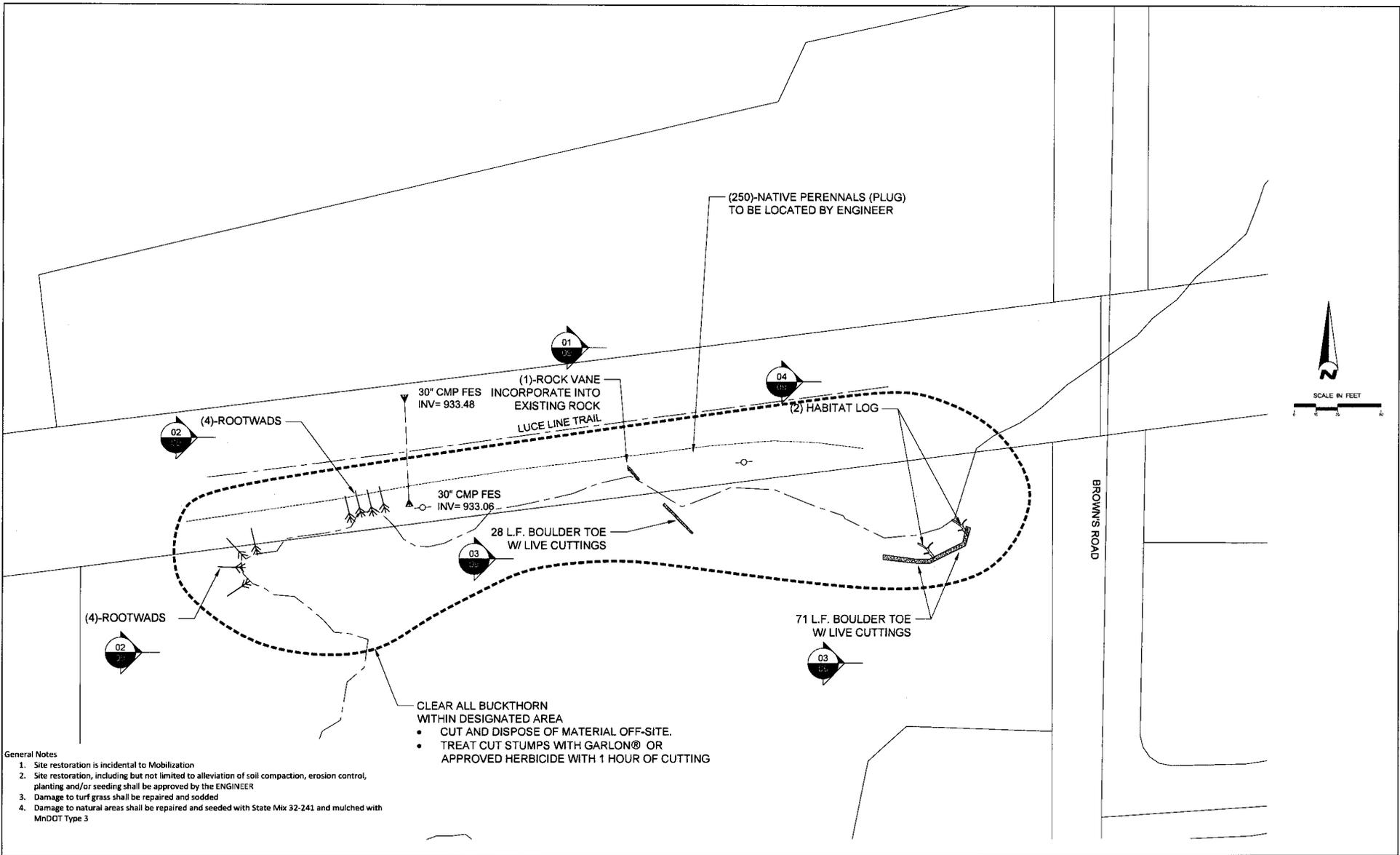
EOR Emmons & Olivier Resources, Inc.
 651 Hale Avenue North
 Oakdale, MN 55128
 Tel: 651.770.8448
 www.eorinc.com

MINNEHAHA CREEK WATERSHED DISTRICT
 18202 MINNETONKA BOULEVARD
 WAYZATA, MN 55391

LONG LAKE CREEK CORRIDOR (09-LCC) PROJECT - PHASE 1
 LONG LAKE, HENNEPIN COUNTY, MN

TITLE SHEET
 SHEET 01 OF 09 SHEETS

FILE NO: 09-0001-01
 DRAWN BY: JRH
 CHECKED BY: KB
 DATE: 08/30/2012

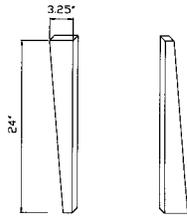


- General Notes**
1. Site restoration is incidental to Mobilization
 2. Site restoration, including but not limited to alleviation of soil compaction, erosion control, planting and/or seeding shall be approved by the ENGINEER
 3. Damage to turf grass shall be repaired and sodded
 4. Damage to natural areas shall be repaired and seeded with State Mix 32-241 and mulched with MndOT Type 3

- CLEAR ALL BUCKTHORN WITHIN DESIGNATED AREA**
- CUT AND DISPOSE OF MATERIAL OFF-SITE.
 - TREAT CUT STUMPS WITH GARLON® OR APPROVED HERBICIDE WITH 1 HOUR OF CUTTING

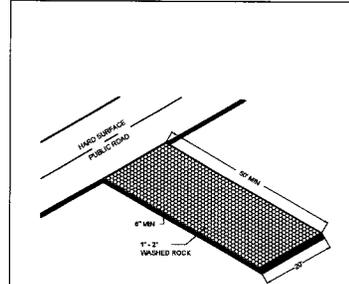
<p style="font-size: 2em; font-weight: bold; text-align: center;">70% DRAFT PLANS</p>			I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA. NOT FOR CONSTRUCTION		SUBMISSION DATE: 08/30/2012		MINNEHAHA CREEK WATERSHED DISTRICT 18202 MINNETONKA BOULEVARD WAYZATA, MN 55391	LONG LAKE CREEK CORRIDOR (09-LCC) PROJECT - PHASE 1 LONG LAKE, HENNEPIN COUNTY, MN	BROWNS ROAD SHEET 06 OF 09 SHEETS
			DESIGN BY: KB DRAWN BY: JRH	EOR PROJECT NO.: 043-0080	651 Hale Avenue North Oakdale, MN 55128 Phone: 651.770.8448 Fax: 651.770.8448 www.eorinc.com				
NO	DATE	BY	REVISION	JAY R. HILL DATE: 08/30/2012 LICENSE # 24552					

2012-05657-MMJ, Figure 4



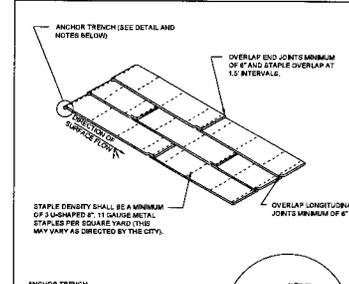
DEAD STOUT STAKES FOR USE AT ALL EROSION CONTROL BLANKET EDGES AND WHEREVER BLANKETS OVERLAP

1 DEAD STOUT STAKE
No Scale



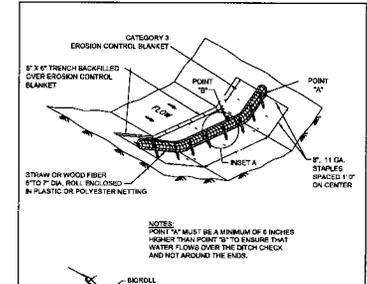
ROCK CONSTRUCTION ENTRANCE
Revision Date: 06/2008
Standard Drawing No. 3200

2 ROCK CONSTRUCTION ENTRANCE
No Scale



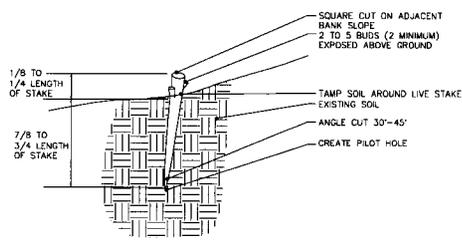
EROSION CONTROL BLANKET INSTALLATION
Revision Date: 06/2008
Standard Drawing No. 3450

3 EROSION CONTROL BLANKET
No Scale



BIOROLL BLANKET DITCH CHECK
Revision Date: 06/2008
Standard Drawing No. 3510

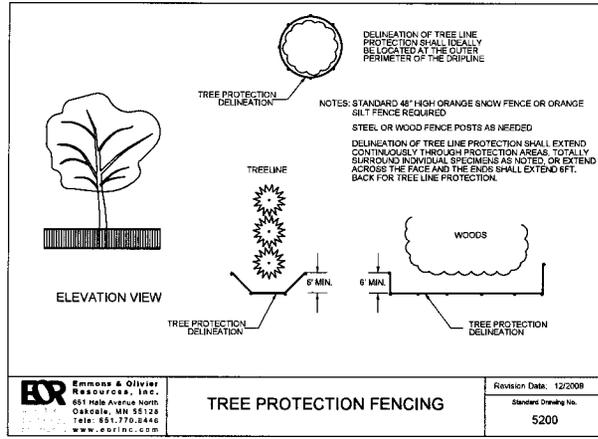
4 BIOROLL DITCH CHECK
No Scale



5 LIVE CUTTING
No Scale

Native Perennial (Plug) Palette		Location & Quantities		
Common	Scientific	Brown Road	Wayzata Blvd	Wetland
		Soft Rush	<i>Juncus effusus</i>	50
Blue Flag Iris	<i>Iris versicolor</i>	25	25	50
Fox Sedge	<i>Carex vulpinoidea</i>	75	75	150
Little Blue Stem	<i>Schizachyrium scoparium</i>	38	37	75
Bee Balm	<i>Monarda fistulosa</i>	13	12	25
Blue Joint Grass	<i>Calamagrostis Canadensis</i>	37	38	75
Black Eyed Susan	<i>Rudbeckia hirta</i>	12	13	25
Native perennials shall be planted 18" on center in groups of 5-10 like species.		250	250	500

6 NATIVE PERENNIAL PALETTE
No Scale



TREE PROTECTION FENCING
Revision Date: 12/2008
Standard Drawing No. 5200

7 TREE PROTECTION FENCING
No Scale

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NO	DATE	BY	REVISION

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.

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JAY R. HILL
DATE: 09/20/2012 LICENSE # 24552

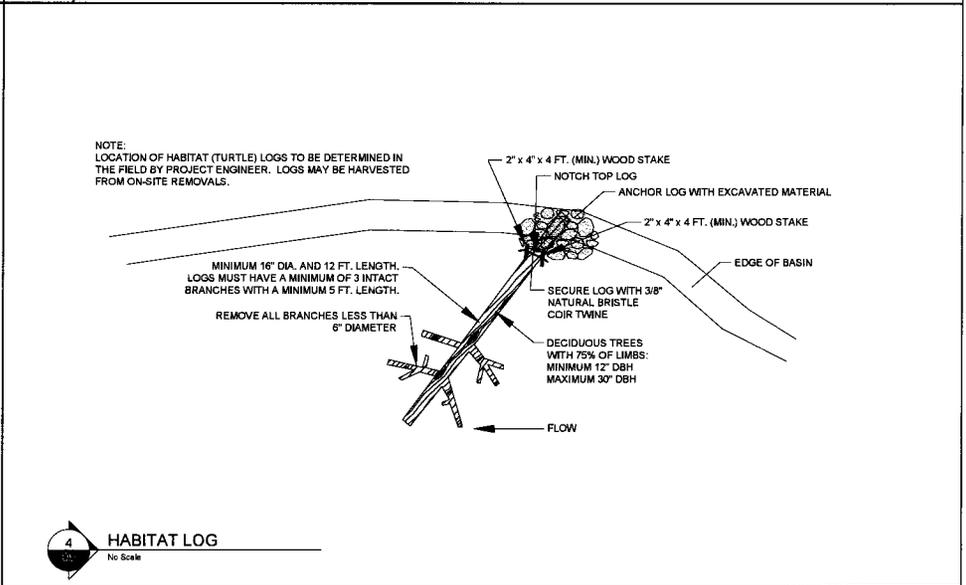
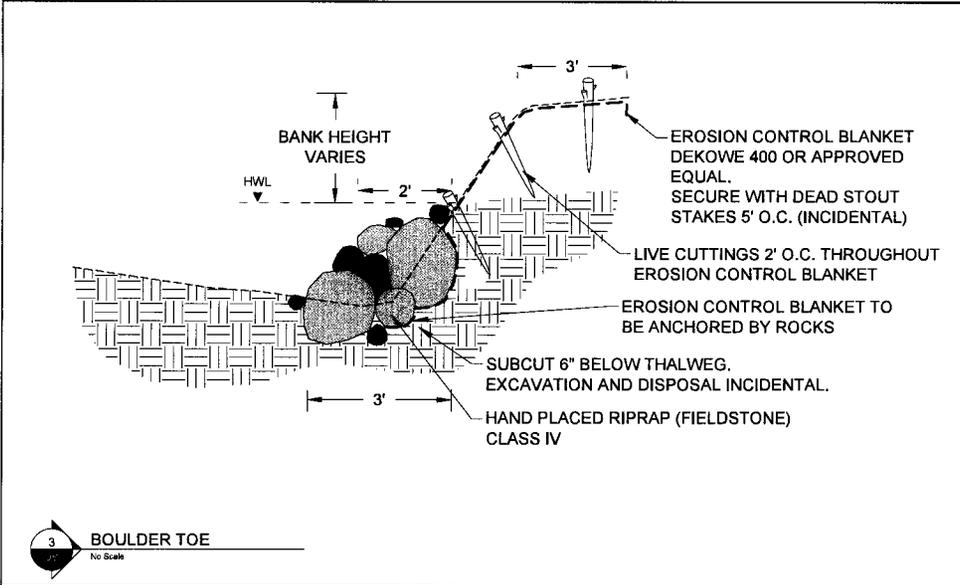
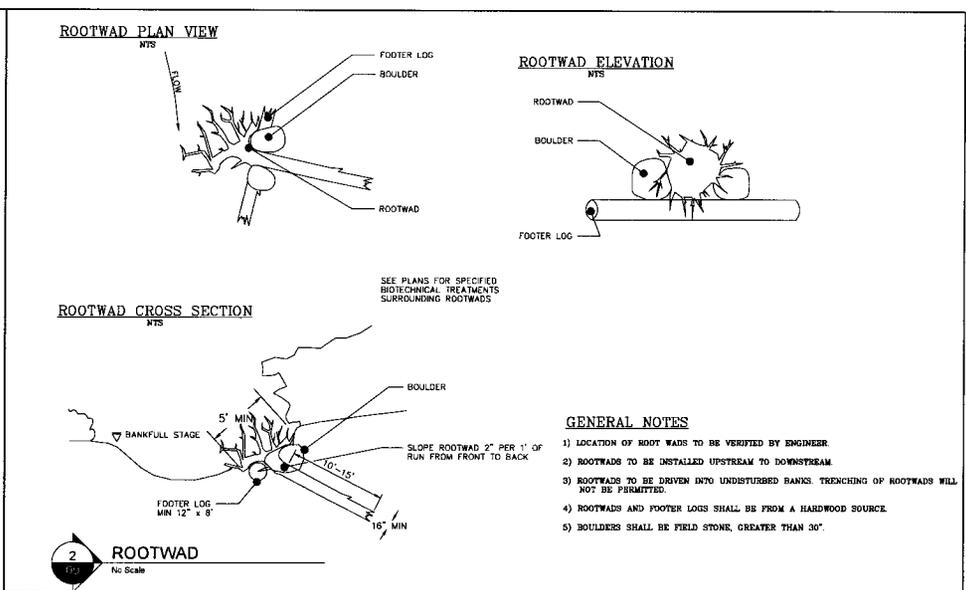
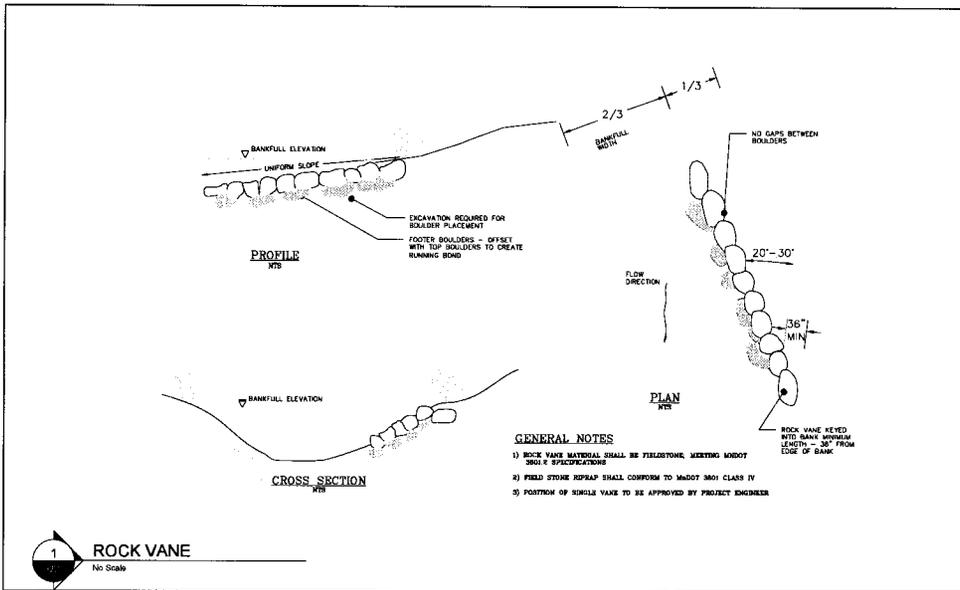
SUBMISSION DATE: 08/30/2012
DESIGN BY: KB
DRAWN BY: JRH
EOR PROJECT NO. 043-0060

Emmons & Olliver Resources, Inc.
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MINNEHAHA CREEK WATERSHED DISTRICT
18202 MINNETONKA BOULEVARD
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LONG LAKE CREEK CORRIDOR (09-LCC) PROJECT - PHASE 1
LONG LAKE, HENNEPIN COUNTY, MN

DETAILS
STATE PROJECT NO. QTY PROJECT NO.
SHEET 08 OF 09 SHEETS



70% DRAFT PLANS

NO.	DATE	BY	REVISION
6			
5			
4			
3			
2			
1			

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DATE: 08/30/2012 LICENSE # 24552

DESIGN DATE: 08/30/2012

DESIGN BY: KB DRAWN BY: JRH

ECR PROJECT NO: 043-0092

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Tele: 651.770.8448
www.eorinc.com

MINNEHAHA CREEK WATERSHED DISTRICT
18202 MINNETONKA BOULEVARD
WAYZATA, MN 55391

LONG LAKE CREEK CORRIDOR (09-LCC) PROJECT - PHASE 1
LONG LAKE, HENNEPIN COUNTY, MN

DETAILS

SHEET 09 OF 09 SHEETS