WATER QUALITY TRADING PLAN

November 18, 2020

Village of Monticello
Wastewater Treatment Facility

WPDES Permit No. WI-0024830-09-0
731 East Lake Avenue
Monticello, Wisconsin 53570

Prepared by:

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DELTA 3
EVERY ANGLE COVERED

Project Number: D18-029

TABLE OF CONTENTS

Attachments:

I. Executive Summary -

This Water Quality Trading Plan summarizes the Village of Monticello's (Village) plan to utilize Water Quality Trading (WQT) for compliance with the final total phosphorus limit as provided in the Wisconsin Pollutant Discharge Elimination System (WPDES) Permit #WI 0024830-09-0. The Wastewater Treatment Facility (WWTF) treated 0.338 MGD in 2020. The WWTF had an average effluent Total Phosphorus (TP) concentration of 0.35 mg/L in 2020. The WWTF is required to offset 283 lbs of TP to meet the final annual six-month average limit of 0.075 mg/L and a monthly average limit of 0.225 mg/L, which will become effective March 31, 2022.

NRCS Streambank Erosion modeling methods were used to calculate the total phosphorus credits that would be generated based on the installation of best management practices (BMPs). These credits will be used to demonstrate compliance with the final total phosphorus limit as proposed in the WPDES Permit.

As demonstrated in modeling results from Table 1.1, the WWTF has the ability to register approximately 409 credits. The implementation of this WQT Plan will result in compliance with the final TP limits. The WWTF intends to monitor TP credit usage and intends to perform construction of additional BMPs as needed for future effluent TP to comply with WPDES Permits Limits. A new Water Quality Trading Plan will be submitted at that time for new BMP practices and credit production.

Table 1.1 – Modeling Results

Reach	Current Phosphorus Loading (lbs/yr)	Proposed Phosphorus Loading (lbs/yr)	Proposed Phosphorus Reductions (lbs/yr)	Trade Ratio[1]	Proposed Phosphorus Credits
A (Right)	99.4	0	99.4	2:1	49.7
A (Left	198.7	0	198.7	2:1	99.4
B (Right)	112.2	0	112.2	2:1	56.1
B (Left)	49.1	0	49.1	2:1	24.5
C (Right)	55.9	0	55.9	2:1	27.9
C (Left)	127.3	0	127.3	2:1	63.6
D (Right)	24.1	0	24.1	2:1	12.1
D (Left)	29.3	0	29.3	2:1	14.6
*D (Right)	66.4	0	66.4	2.4:1	27.7
*D (Left)	80.6	0	80.6	2.4:1	33.6
				Total	**409.2**

Comment: D – Reach D Upstream of Outfall 001
***D – Reach D Downstream of Outfall 001**

NOTE: Justification for Trade Ratio is provided below.

Trade Ratio = (Delivery + Downstream + Equivalency + Uncertainty – Habitat Adjustment):1

Delivery = 0 (Trading within same HUC-12 Watershed)

Downstream = 0 (For trades upstream of Outfall 001)

Downstream = 0.4 (For trades downstream of Outfall 001)

Equivalency = 0 (Not necessary of Total Phosphorus)

Uncertainty:

1. *Streambank Stabilization with Habitat Restoration* = 2

II. Background -

The purpose of this Water Quality Trading Plan (Plan) is to describe the Village's use of Water Quality Trading to comply with the total phosphorus limits as provided in the Village's WPDES Permit #WI-0024830-09-0. The Plan was developed following the Notice of Intent to Conduct Water Quality Trading, provided in Attachment #1, dated November 18, 2020. The Water Quality Trading Checklist Form 3400-208 is provided in Attachment #2.

The Village of Monticello is located in north central Green County along Wisconsin State Trunk Highway '69' in southwestern Wisconsin. The Village operates and maintains a Wastewater Treatment Facility (WWTF) which serves a population of approximately 1,217 residents.

The Village is comprised primarily of commercial and residential development and is situated on a flatter plain area located along State Trunk Highway '69' with the grade sloping throughout the area at normally two (2) percent or less. Elevations in the area range from approximately 835' ± at the south end of the Village to 850'± at the north end of the Village. The 100-year regional flood elevation for the Village of Monticello WWTF site is at USGS Elevation = 830.00'. The location and topography of the area is provided in Attachment #3.

The existing sanitary sewer collection consists of approximately 172 sanitary manholes; two (2) sanitary lift stations; and over 8.15 miles of gravity sanitary sewer main and sanitary force main. The gravity sewer varies from six-inch to 12-inch pipe. The gravity sanitary sewer main varies in composition between ABS, cast iron, clay, and PVC. The manholes vary in composition between rock, brick, block, and precast structures. Please refer to Attachment #4 – Sanitary Sewer Map for location of sanitary sewer collection system components.

The Village of Monticello owns and operates a WWTF that utilizes an activated sludge oxidation ditch treatment process. The WWTF currently serves a population of 1,170 persons with no significant industries entering the waste water system. The facility currently discharges approximately 300,000 gallons per day (GPD) and has a design flow of 421,000 GPD (0.421 MGD). Primary treatment of the wastewater at the headworks of the facility consists of fine screening and grit removal. Alum is added for phosphorus control and treated wastewater from the oxidation ditch enters two (2) final clarifiers. The facility effluent passes through an ultraviolet (UV) system for disinfection prior to effluent discharge to the West Branch of the Little Sugar River. The return activated sludge (RAS) from the clarifiers is returned to the headworks of the treatment facility for continued treatment, and the waste activated sludge (WAS) is pumped from the final clarifiers into a sludge digester for further sludge stabilization and on-site. Please see Attachment #5 for the WWTF flow schematic. The Village of Monticello's WWTF has one (1) receiving water and effluent discharge location, Outfall 001: West Branch Little Sugar River (SP14-Sugar-Pecatonica River Basin. The Village is currently planning to construct WWTF Improvements that will include Biological Phosphorus Removal in 2021.

The monthly average influent and effluent flows and loadings at the WWTF for 2018, 2019, and 2020 are provided in Table 2.1, Table 2.2, and Table 2.3, respectively.

Table 2.1 – 2018 Monthly Averages

Month	Flow	BOD_5		Suspended Solids		Total Phosphorus		Total Phosphorus
	(MGD)	(mg/L)		(mg/L)		(mg/L)		(lbs./day)
	Effluent	Influent	Effluent	Influent	Effluent	Influent	Effluent	Effluent
Jan. (’18)	0.192	132	5	138	8	1.83	0.58	0.93
Feb. (’18)	0.258	87	8	120	10		0.85	1.83
Mar. (’18)	0.185	131	11	134	10		0.54	0.83
Apr. (’18)	0.187	144	7	157	7		0.64	1.00
May (’18)	0.248	101	3	105	4		0.41	0.85
June (’18)	0.324	92	4	122	5		0.56	1.51
July (’18)	0.285	110	5	120	5		0.48	1.14
Aug. (’18)	0.274	109	5	130	5	1.03	1.97	4.50
Sept. (’18)	0.378	97	3	132	4		0.25	0.79
Oct. (’18)	0.463	75	4	103	6		0.33	1.28
Nov. (’18)	0.283	113	5	158	5		0.38	0.90
Dec. (’18)	0.257	96	3	107	4		0.27	0.58
Annual Average =	**0.278**	**107**	**5**	**127**	**6**	**1.43**	**0.61**	**1.34**

Table 2.2 – 2019 Monthly Averages

	Flow	BOD_5		Suspended Solids		Total Phosphorus		Total Phosphorus
	(MGD)	(mg/L)		(mg/L)		(mg/L)		(lbs./day)
	Effluent	Influent	Effluent	Influent	Effluent	Influent	Effluent	Effluent
Jan. (’19)	0.322	69	4	105	5	-	0.29	0.78
Feb. (’19)	0.467	67	4	80	4	-	0.33	1.29
Mar. (’19)	0.528	66	4	121	4	-	0.31	1.37
Apr. (’19)	0.421	124	4	133	5	-	0.38	1.33
May (’19)	0.487	120	2	175	3	-	0.49	1.99
June (’19)	0.391	142	4	176	5	-	0.51	1.67
July (’19)	0.406	156	4	186	3	-	0.31	1.05
Aug. (’19)	0.398	148	5	192	5	-	0.29	0.96
Sept. (’19)	0.496	150	7	134	5	-	0.32	1.32
Oct. (’19)	0.554	78	4	49	5	-	0.41	1.90
Nov. (’19)	0.494	393	16	155	15	-	0.58	2.39
Dec. (’19)	0.588	304	3	345	4	-	0.23	1.13
Annual Average =	**0.462**	**151**	**5**	**154**	**5**	**-**	**0.37**	**1.43**

Table 2.3 – 2020 Monthly Averages

	Flow	BOD_5		Suspended Solids		Total Phosphorus		Total Phosphorus
	(MGD)	(mg/L)		(mg/L)		(mg/L)		(lbs./day)
	Effluent	Influent	Effluent	Influent	Effluent	Influent	Effluent	Effluent
Jan. ('20)	0.389	415	3	470	4	-	0.24	0.78
Feb. ('20)	0.346	96	3	146	4	-	0.32	0.92
Mar. ('20)	0.395	61	3	85	5	-	0.28	0.92
Apr. ('20)	0.359	80	4	104	4	-	0.27	0.81
May ('20)	0.374	106	5	144	6	-	0.39	1.22
June ('20)	0.312	117	3	153	4	-	0.34	0.88
July ('20)	0.305	165	4	134	4	-	0.33	0.84
Aug. ('20)	0.259	142	4	183	4	-	0.34	0.73
Sept. ('20)	0.310	114	3	176	6	-	0.47	1.22
Oct. ('20)	0.331	124	4	154	6	-	0.50	1.38
Annual Average =	**0.338**	**142**	**4**	**175**	**5**	**-**	**0.35**	**0.97**

To reduce effluent TP, the Village has made efforts to optimize TP reduction at the WWTF. The Village has also implemented source reduction measures such as investigating potential TP contributors. The Village has checked with local businesses for Phosphorus contribution and will continue its investigation of Phosphorus contributors. During the initial evaluation of sanitary dischargers, it was determined that the businesses and schools were not major contributors of Phosphorus. Currently, the Village has been able to maintain an average Total Phosphorus effluent of 0.35 mg/L which is well within the WPDES interim limit of 0.75 mg/L.

Additionally, the Village has investigated watershed compliance alternatives such as Water Quality Trading (WQT) and Adaptive Management (AM). Utilizing the results from PRESTO, the watershed of the WWTF has a nonpoint source ratio of 4:96 and is considered to be nonpoint-source dominated. Stream monitoring in 2014 confirmed that the Little Sugar River was an impaired water with degraded habitat due to TSS. Following discussion with the County and initial investigation, the Village elected to move forward with WQT. The Village intends to perform WQT projects within the Village's Hydrological Unit Code – 12 (HUC-12) watershed #070900040401 as provided in Attachment #6.

Flow and loading data from 2020 was utilized to determine credits needed. Annual effluent TP was estimated at 360 lbs. The final limit would allow annual discharge of 77 lbs. The Village would be required to offset at least 283 lbs of effluent TP. Calculations for required WQT reductions are provided below.

1) The current annual Phosphorus loading discharged at the WWTF is calculated as follows:

Seasonal Average Daily Flow (Q) = 0.0.338 MGD
Average Phosphorus concentration = 0.35 mg/L

0.35 mg/L x 0.338 MGD x 8.34 x 365 days/yr. = **360 lbs./yr.**

2) The proposed allowable annual Phosphorus mass limit at the WWTF is calculated as follows:

Seasonal Average Daily Flow (Q) = 0.338 MGD
Proposed Seasonal Phosphorus Concentration Limit = 0.075 mg/L

0.075 mg/L x 0.338 MGD x 8.34 x 365 days/yr. = **77 lbs./yr.**

3) Reduction of Total Phosphorus required at WWTF -
360 lbs./yr. – 77 lbs./yr. = **283 lbs./yr.**

Utilizing a proposed 2:1 trade ratio, the required non-point source TP reduction would be 566 **lbs./yr**.

To generate the required 283 TP credits, the Village intends to perform streambank stabilization. Streambank stabilization will utilize grading, riprap, and large woody debris structures to prevent the erosion of sediment from the streambanks. Streambank stabilization will not only prevent sediment from entering the steam, but will also prevent phosphorus, nitrogen, and other pollutants from discharging to the West Branch Little Sugar River and Unnamed Tributary WBIC 881500. Reducing pollutant discharge will restore stream habitat and generate water quality trading credits.

III. Location and Description of Credit Generation Sites –

The Village discharges to the West Branch Little Sugar River (Little Sugar River Watershed, SP14 – Sugar-Pecatonica River Basin) at Outfall 001. As mentioned previously, the Village intends to perform WQT projects within the Village's HUC-12 #070900040401. The Village plans to implement BMPs to generate TP credits. Specifically, Streambank stabilization will occur along the banks of the West Branch Little Sugar River and Unnamed Tributary WBIC 881500. See Figure 3.1 for additional project location information.

Figure 3.1 – Streambank stabilization locations in relation to the Wastewater Treatment Facility.

IV. Methods for Nonpoint Source Load Reduction –

The Village would like to acquire at least 409 WQT trading credits to serve as insurance in the event that effluent credits are lost or the WWTF discharges additional mass of TP. The Plan identifies trading practices that will reduce TP runoff by more than 843 lbs and will utilize a 2:1 trade ratio for upstream trades and a 2.2:1 trade ratio for downstream trades. Downstream trade ratios were determined by Table 4.1 as provided by the Wisconsin DNR.

Table 4.1 – Downstream Trading Factor

Percent Difference Between Credit User's Load and Total Load at the Point of the Credit User's Point of Standards Application	Downstream Trading Factor
<25%	0.1
<50%	0.2
<75%	0.4
≥75%	0.8

Percent Difference = (1- (Qe x Ce) / (Qe x Ce + Qs x Cs)) x 100 = 72%
72% < 75%
Downstream Trading Factor = 0.4

Qs = Receiving water flow (7Q2) = 10 cfs
Qe = Effluent design flow = 0.421 MGD = 0.651 cfs
Cs = Background concentration of TP = 0.0797 mg/L
Ce = Effluent concentration interim limit of TP = 0.75 mg/L

The WQT practices identified for this Water Quality Trading Plan has the ability to generate approximately 409 TP credits/year indefinitely as long as trading practices are maintained.

A. Methods Used to Generate Load Reductions

For streambank stabilization, Village has the ability generate TP load reductions through streambank stabilization of approximately 7,103' which will entail grading and riprapping the streambank.

Streambank Stabilization will be performed as per NR 328 *Shore Erosion Control Structures in Navigable Waterways,* NRCS 580 *Streambank and Shoreline Protection,* and NRCS 395 *Stream Habitat Improvement and Management*. Streambank shaping and riprapping will eliminate the discharge of sediment to the stream. The streambank stabilization project will occur within HUC-12 #070900040401 in order to generate TP credits. Construction Plans and Specifications for the Project Sites will be provided by a Professional Engineer. The Village will also acquire all required permits and authorizations for the Projects.

To register credits, the Village has entered into trade agreements with Property Owners pursuant to *s. 283.84(1)(b), Wis. Stats*.

B. History of Project Site

The Project Sites are planned within the Little Sugar River Watershed. Reach A and Reach B are located along Unnamed Tributary WBIC 881500 while Reach C and Reach D are located along West Branch Little Sugar River.

Reach A consists of undeveloped wetland as provided in the Wetland Map as provided in Attachment #7. The vegetative cover is comprised primarily of tall grasses with a few trees scattered along the stream bank.

Reach B consists of residential development and filled wetlands. The vegetative cover is comprised primarily of manicured lawn with trees lining the streambank on the upper half of the Reach. The lower half of the Reach is within the Village Park and has very few trees along the streambank.

Reach C is residential development and Village Park. The vegetative cover is comprised primarily of manicured lawn with no trees along the streambank.

Reach D is undeveloped wetland. The vegetative cover is comprised primarily of tall grasses with a few trees scattered along the stream bank.

The streambanks within the West Branch Little Sugar River watershed have experienced significant erosion as the watershed has been developed and cleared for agricultural and urban use. The banks are predominately bare with slumps, rills, and vegetative overhang. Tree roots, fallen trees, and slumps are readily visible throughout the sites. The erosion indicators demonstrate the lateral recession rate is Severe (0.3-0.5 ft/yr) based on the NRCS Recession Rate Table. An average recession rate of 0.35 feet/year was utilized for modeling purposes.

C. Model Used to Derive Load Reductions

NRCS Streambank Erosion modeling methods were used to calculate the total phosphorus credits that would be generated based on the installation of BMPs. These credits will be used to demonstrate compliance with the final total phosphorus limit as proposed in the WPDES Permit. Modeling results are provided in Table 4.2. If the Plan or model inputs change during construction, the Village will submit to the DNR the revised models and calculations to more accurately reflect and number of credits generated.

Table 4.2 – Modeling Results

Reach	Current Phosphorus Loading (lbs/yr)	Proposed Phosphorus Loading (lbs/yr)	Proposed Phosphorus Reductions (lbs/yr)	Trade Ratio[1]	Proposed Phosphorus Credits
A (Right)	99.4	0	99.4	2:1	49.7
A (Left	198.7	0	198.7	2:1	99.4
B (Right)	112.2	0	112.2	2:1	56.1
B (Left)	49.1	0	49.1	2:1	24.5
C (Right)	55.9	0	55.9	2:1	27.9
C (Left)	127.3	0	127.3	2:1	63.6
D (Right)	24.1	0	24.1	2:1	12.1
D (Left)	29.3	0	29.3	2:1	14.6
*D (Right)	66.4	0	66.4	2.4:1	27.7
*D (Left)	80.6	0	80.6	2.4:1	33.6
				Total	**409.2**

Comment: D – Reach D Upstream of Outfall 001
***D – Reach D Downstream of Outfall 001**

NOTE: Justification for Trade Ratio is provided below.

Trade Ratio = (Delivery + Downstream + Equivalency + Uncertainty – Habitat Adjustment):1

Delivery = 0 (Trading within same HUC-12 Watershed)
Downstream = 0 (For trades upstream of Outfall 001)
Downstream = 0.4 (For trades downstream of Outfall 001)
Equivalency = 0 (Not necessary of Total Phosphorus)
Uncertainty:

1. *Streambank Stabilization with Habitat Restoration* = 2

Soil testing has been completed to determine TP concentrations within the soil. Soil sampling was performed every 100 feet and included the use of a soil sampler which pulled ¾" cores at 8" depth. Approximately six (6) cores were taken at each sampling location to provide a representative sample. Soils maps and soil testing data is provided in Attachment #8. An onsite evaluation has been conducted to estimate stream bank recession rate. The data, narrative, and photos documenting the current state of eroding stream banks are provided in Attachment #9.

With the collected data, the NRCS Streambank Erosion Estimator was used to calculate TP loss from each reach of the eroding streambank. The modeling data for the NRCS Streambank Erosion Estimator is available in Attachment #10. The streambank grading and riprap design will eliminate streambank recession thus eliminating TP inputs within the Project areas. For the Habitat Restoration portions of the WQT Plan, the Village has worked with Dan Oele (DNR Fisheries Biologist) to incorporate habitat improvements into the Project Plans.

Little Sugar River and Unnamed Tributary (WBIC 881500) have experienced urban and agricultural development within the watershed and has issues caused by sedimentation

which was included in Wisconsin DNR West Branch Sugar River Water Quality Monitoring Report, 2017. Both watersheds have also experienced reduction of large woody debris along the streambanks due to agricultural development which reduces available habitat and bank roughness. Streambank improvements will reduce sediment which was identified as the #1 reason for habitat degradation in the Little Sugar River. The Project will also implement in-stream habitat structures such as cross channel logs, single logs, and bed logs. These structures are intended to increase available cover for juvenile and adult fish. These structures will also influence stream hydrology by creating pools and riffles which are stream formations essential to macroinvertebrates, fish, and other aquatic life. The quantity and location of habitat structures is provided in Table 4.3 below.

Table 4.3 – Habitat Structures

Reach	Single Bank Log	Bed Log	Cross Channel Log
A			8
B			4
C		4	
D	5	3	
Total	**5**	**7**	**12**

D. Operation and Maintenance

An Operation and Maintenance (O&M) Plan is provided in Attachment #11. The O&M plan describes how the Stream Stabilization Practices will be operated and maintained. The O&M Plan also addresses response procedures for Practice Registration, Noncompliance Notification, and Notification of Trade Agreement Termination.

As previously mentioned, Village is planning to perform streambank stabilization by implementing BMPs along the West Branch Little Sugar River and Unnamed Tributary WBIC 881500. The stabilization practices will be installed and maintained per the Plans as provided in Attachment #12. BMPs are to follow NR 328 Shore Erosion Control Structures in Navigable Waterways, NRCS 580 Streambank and Shoreline Protection, and NRCS 395 Stream Habitat Improvement and Management. Restoration landscaping and seeding will be installed following construction and will be closely monitored for a minimum of two (2) growing seasons to ensure the new seeding grows and erosion is not prevalent. Weeds and invasive vegetation growth will be addressed if present. The riprap will be inspected following heavy rain events at a minimum. Inspection will be used to determine appropriate actions in order to maintain the riprap for continuous and ongoing streambank stabilization and TP credit generation.

The BMPs will be inspected annually by a licensed Professional Engineer to ensure that the BMPs are functioning as intended in order to meet the requirements of this WQT Plan.

V. Trade Timeline –

Schedule for Installation of the above mentioned trading practices for Total Phosphorus Credit Generation for TP compliance is provided in Table 5.1 below.

Table 5.1 – Trade Timeline

Item	Completion Timeline
Site Investigation	Fall 2019
Conceptual Design	Fall 2020
Final Design	Winter 2020 - 2021
Construction Permits	Winter 2020 - 2021
DNR Review of Final Design	Spring 2021
Construction of BMPs	Summer - Fall 2021
Phosphorus Credit Registration	Fall 2021
Use of Phosphorus Credits for Ongoing Permit Compliance	March 31, 2022

Credits will be used by the Village beginning March 31, 2022. Credits will continue as long as the trading practices are maintained as outlined in this WQT Plan.

VI. Inspection Reporting –

A. Tracking Procedures

The Village will track credits used monthly. The Village will report credit usage to the DNR on a monthly basis in the Discharge Monitoring Reports (DMRs). The annual report will summarize the 12 months of credit usage and credit generation. The Village will report to DNR any concern that they have that may result in a need to modify the trade agreement and/or this trade plan. For example, a need to generate additional credits based on discharge.

B. Inspection

Inspection of the BMPs shall occur during construction phase to ensure they are installed per the design and meet all applicable codes and permits. Once completed, inspections of the established BMPs shall occur each month at a minimum or following heavy rain events. A licensed professional engineer will perform an annual certification to ensure the practice is performing as designed and the Village remains in compliance.

The inspection reports will include:

i. Name and contact information of the inspector
ii. Inspection Date
iii. Relevant standards set forth in the Design Plan or Operation and Maintenance Plan
iv. Issues identified
v. When and how any issues identified were addressed
vi. When and how any issues identified will be addressed in the future

Inspection reports generated during each routine or after rain event inspection will be included with the Annual Water Quality Trading Report submitted by the Village to DNR. Annual inspections by a professional engineer will typically occur in April or May. This time of year is ideal for evaluating the condition of BMPs as it follows the freeze/thaw which poses the greatest potential for changes to the BMPs. Minimal vegetation cover will allow for adequate visual inspection.

C. Management Practice Registration Form

The Village will file a completed registration form 3400-207 for Water Quality Trading Management Practice Registration separately from this Plan.

D. Annual Water Quality Trading Report Submittal

The following shall be submitted to the DNR by January 31 of each year:

i. The number of pollutant reduction credits (lbs/month) used each month of the previous year to demonstrate compliance;
ii. A summary of the annual inspection of the practice that generated any of the pollutant reduction credits used during the previous year, this inspection shall be completed by a licensed Professional Engineer;
iii. All monthly inspection reports;

iv. Identification of noncompliance or failure to implement any terms or conditions of this permit with respect to water quality trading that have not been reported in discharge monitoring reports;
v. A list of all noncompliance and the correction measures and timing to address the issues throughout the year; and
vi. An updated WQT plan if management practices have or will change.

E. Monthly Certification of Management Practices

Each month, the Village will certify that the BMPs are maintained and operating in a manner consistent with this Water Quality Trading Plan or provide a statement noting noncompliance with this Plan. The monthly Discharge Monitoring Report (DMR) will include the following statement as a certification of compliance when the Credit Generating Practice is operating in a manner consistent with the Plan:

> "I certify that to the best of my knowledge that the management practices identified in the approved water quality trading plan as the source of phosphorus credits is installed, established and properly maintained."

F. Notification of Failure to Generate Credits

The Village will notify DNR by telephone call to DNR's regional wastewater compliance engineer within 24 hours or next business day of becoming aware that phosphorus credits used or intended for use by Village are not being generated as outlined in this Water Quality Trading Plan.

The Village will submit a written notification within five days after the Village recognizes that the phosphorus credits are not being generated as outlined in the Trading Plan. DNR may waive the requirement for submittal for a written notice within five days and instruct the Village to submit the written notice with the next regularly scheduled monitoring report required by Village's WPDES Permit.

The written notice will contain a description of how and why the TP credits are not being generated as outlined in the Water Quality Trading Plan, the steps taken or planned to prevent reoccurrence of the identified problems and the length of time anticipated it will take to address the issue.

The Village will work to rectify the problem as laid out in the Operation and Maintenance Plans.

G. Conditions under which Management Practices May Be Inspected

Any DNR authorized officer, employee, or representative has the right to access and inspect the credit generating practice so long as the Village's trade agreement with the property owner(s) and this Water Quality Trading Plan remain in effect.

VII. Certification –

The undersigned hereby certifies that this Water Quality Trading Plan is accurate and correct to the best of his knowledge.

Village of Monticello Wastewater Treatment Facility

By: Kevin Komprood

Kevin Komprood
Director of Public Works
Village of Monticello
731 East Lake Avenue
Monticello, WI 53570
Telephone: (608) 938-4383
Email: monticellowaterutil@tds.net

Attachment #1

State of Wisconsin
Department of Natural Resources
101 South Webster Street
Madison WI 53707-7921
dnr.wi.gov

Notice of Intent to Conduct Water Quality Trading

Form 3400-206 (1/14)

Notice: Pursuant to s. 283.84, Wis. Stats., and ch. NR 217 Wis. Adm. Code, this form must be completed by any WPDES permittee that is using water quality trading as a method of complying with a permit limitation. Failure to complete this form would not result in penalties. Personal information collected will be used for administrative purposes and may be provided to requesters to the extent required by Wisconsin's Open Records Law (ss. 19.31 - 19.39, Wis. Stats.).

Applicant Information

Permittee Name	Permit Number	Facility Site Number
Village of Monticello	WI- 0024830-09-0	

Facility Address	City	State	ZIP Code
731 East Lake Avenue	Monticello	WI	53570

Project Contact Name (if applicable)	Address	City	State	ZIP Code
Jordan Fure (Delta 3 Eng.)	875 South Chestnut Street	Platteville	WI	53818

Project Name
Monticello WWTF Phosphorus Improvements & Upgrade

Receiving Water Name	Parameter(s) being traded	HUC 12(s)
West Branch Little Sugar River	Total Phosphorus	070900040401

Is the permittee in a point or nonpoint source dominated watershed? (See PRESTO results - http://dnr.wi.gov/topic/surfacewater/presto.html)
- ◯ Point source dominated
- ◯ Nonpoint source dominated

Credit Generator Information

Credit generator type (select all that apply):
- ☐ Permitted Discharge (non-MS4/CAFO)
- ☐ Permitted MS4
- ☐ Permitted CAFO
- ☒ Urban nonpoint source discharge
- ☒ Agricultural nonpoint source discharge
- ☐ Other - Specify: _____

Are any of the credit generators in a different HUC 12 than the applicant?
- ◯ Yes; HUC 12: _____
- ◯ No
- ◯ Unsure

Are any of the credit generators downstream of the applicant?
- ◯ Yes
- ◯ No
- ◯ Unsure

Will a broker/exchange be used to facilitate trade?
- ◯ Yes; Name: _____
- ◯ No
- ◯ Unsure

Point to Point Trades (Traditional Municipal / Industrial Discharge, MS4, CAFO)

Discharge Type	Permit Number	Name	Contact Address	Is the point source credit generator currently in compliance with their permit requirements?
◯ Traditional ◯ MS4 ◯ CAFO				◯ Yes ◯ No ◯ Unsure
◯ Traditional ◯ MS4 ◯ CAFO				◯ Yes ◯ No ◯ Unsure
◯ Traditional ◯ MS4 ◯ CAFO				◯ Yes ◯ No ◯ Unsure
◯ Traditional ◯ MS4 ◯ CAFO				◯ Yes ◯ No ◯ Unsure
◯ Traditional ◯ MS4 ◯ CAFO				◯ Yes ◯ No ◯ Unsure

Point to Nonpoint Trades (Non-permitted Agricultural, Non-Permitted Urban, etc.)

List the practices that will be used to generate credits:

Tillage Practices, Riparian Filter Strips, Grassed Waterways, Cover Crops, Stream bank stabilization, Bioretention, infiltration basin/tranch, Storm Water Sedimentation, Vegetated Infiltration Swales, Wet Detention Ponds, etc.

The Village plans to implement site specific Best Management Practices (BMPs) in conjunction with SNAP-Plus, BARNY, and NRCS Erosion models to generate Phosphorus Trading Credits. The Village of Monticello has been in contact with four (3) local property owners within the Village's HUC-12 Watershed that have verbally agreed to participate in WQT with the Village The trade agreement will therefore be from a non-point source to point source.

The following is a list of non-point source property owners that have verbally agreed to participate in WQT with the Village:

1.) Karl Schultz

2.) Kevin Komprood

3.) Steven Dilley

Method for quantifying credits generated:
- ☐ Monitoring
- ☒ Modeling, Names: Snap-Plus; BARNY; NRCS Erosion
- ☐ Other: _____

Projected date credits will be available: 03/31/2022

The preparer certifies all of the following:

- I am familiar with the specifications submitted for this application, and I believe all applicable items in this checklist have been addressed.
- I have completed this document to the best of my knowledge and have not excluded pertinent information.

Signature of Preparer	Date Signed
Jordan Fine	11/18/2020

Authorized Representative Signature

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision. Based on my inquiry of those persons directly responsible for gathering and entering the information, the information is, to the best of my knowledge and belief, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature of Authorized Representative	Date Signed
Kevin Komprood	11/18/2020

Attachment #2

State of Wisconsin
Department of Natural Resources
101 South Webster Street
Madison WI 53707-7921
dnr.wi.gov

Water Quality Trading Checklist

Form 3400-208 (1/14)

Notice: Pursuant to s. 283.84, Wis. Stats., this form must be completed by any WPDES permittee that intends to pursue pollutant trading as a method of complying with a permit limitation. Failure to complete this form would not result in penalties. Personal information collected will be used for administrative purposes and may be provided to requesters to the extent required by Wisconsin's Open Records Law (ss. 19.31 - 19.39, Wis. Stats.).

Applicant Information

Permittee Name	Permit Number	Facility Site Number
Village of Monticello	WI- 0024830-09-0	

Facility Address	City	State	ZIP Code
731 East Lake Avenue	Monticello	WI	53570

Project Contact Name (if applicable)	Address	City	State	ZIP Code
Jordan Fure (Delta 3 Eng.)	875 South Chestnut Street	Platteville	WI	53818

Project Name
Monticello WWTF Phosphorus Improvements & Upgrade

Receiving Water Name	Parameter(s) being traded	HUC 12(s)
West Branch Little Sugar River	Total Phosphorus	070900040401

Credit Generator Information

Credit generator type (select all that apply):

- ☐ Permitted Discharge (non-MS4CAFO)
- ☐ Permitted MS4
- ☐ Permitted CAFO
- ☒ Urban nonpoint source discharge
- ☒ Agricultural nonpoint source discharge
- ☐ Other - Specify: _____

Are any of the credit generators in a different HUC 12 than the applicant?
- ○ Yes; HUC 12: _____
- ◉ No

Are any of the credit generators downstream of the applicant?
- ◉ Yes
- ○ No

Will a broker/exchange be used to facilitate trade?
- ○ Yes *(Include description and contact information in WQT plan)*
- ◉ No

Point to Point Trades (Traditional Municipal / Industrial, MS4, CAFO)

Are each of the point source credit generators identified in this section in compliance with their WDPES permit requirements?
- ○ Yes
- ○ No

Discharge Type	Permit Number	Name	Contact Information	Trade Agreement Number
○ Traditional ○ MS4 ○ CAFO				
○ Traditional ○ MS4 ○ CAFO				
○ Traditional ○ MS4 ○ CAFO				
○ Traditional ○ MS4 ○ CAFO				
○ Traditional ○ MS4 ○ CAFO				

Point to Point Trades (Traditional Municipal / Industrial, MS4, CAFO) *cont.*			
Does plan have a narrative that describes:			Plan Section
a. Summary of discharge and existing treatment including optimization	○ Yes	○ No	
b. Amount of credit being generated	○ Yes	○ No	
c. Timeline for credits and agreements	○ Yes	○ No	
d. Method for quantifying credits	○ Yes	○ No	
e. Tracking and verification procedures	○ Yes	○ No	
f. Location of credit generator in proximity to receiving water and credit user	○ Yes	○ No	
g. Other: ______________________	○ Yes	○ No	

Point to Nonpoint Trades (Non-Permitted Urban, Agricultural, Other)

Discharge Type	Practices Used to Generate Credits	Method of Quantification	Trade Agreement Number	Have the practice(s) been formally registered?
○ Urban NPS ◉ Agricultural NPS ○ Other	Streambank Stabilization	NRCS Streambank Erosion Estimator	N/A	○ Yes ◉ No ○ Only in part
○ Urban NPS ○ Agricultural NPS ○ Other				○ Yes ○ No ○ Only in part
○ Urban NPS ○ Agricultural NPS ○ Other				○ Yes ○ No ○ Only in part
○ Urban NPS ○ Agricultural NPS ○ Other				○ Yes ○ No ○ Only in part
○ Urban NPS ○ Agricultural NPS ○ Other				○ Yes ○ No ○ Only in part
○ Urban NPS ○ Agricultural NPS ○ Other				○ Yes ○ No ○ Only in part
○ Urban NPS ○ Agricultural NPS ○ Other				○ Yes ○ No ○ Only in part
○ Urban NPS ○ Agricultural NPS ○ Other				○ Yes ○ No ○ Only in part

Does plan have a narrative that describes:			Plan Section
a. Description of existing land uses	◉ Yes	○ No	Section IV
b. Management practices used to generate credits	◉ Yes	○ No	Section IV
c. Amount of credit being generated	◉ Yes	○ No	Section IV
d. Description of applicable trade ratio per agreement/management practice	◉ Yes	○ No	Section IV
e. Location where credits will be generated	◉ Yes	○ No	Section III
f. Timeline for credits and agreements	◉ Yes	○ No	Section V
g. Method for quantifying credits	◉ Yes	○ No	Section IV

Does plan have a narrative that describes:			Plan Section
h. Tracking procedures	◉ Yes	○ No	Section IV
i. Conditions under which the management practices may be inspected	◉ Yes	○ No	Section VI
j. Reporting requirements should the management practice fail	◉ Yes	○ No	Section VI
k. Operation and maintenance plan for each management practice	◉ Yes	○ No	Section IV
l. Location of credit generator in proximity to receiving water and credit user	◉ Yes	○ No	Section III
m. Practice registration documents, if available	○ Yes	◉ No	
n. History of project site(s)	◉ Yes	○ No	Section IV
o. Other: _____	○ Yes	○ No	

The preparer certifies all of the following:

- I am familiar with the specifications submitted for this application, and I believe all applicable items in this checklist have been addressed.
- I have completed this document to the best of my knowledge and have not excluded pertinent information.
- I certify that the information in this document is true to the best of my knowledge.

Signature of Preparer	Date Signed
Jordan Fine	11/30/2020

Authorized Representative Signature

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision. Based on my inquiry of those persons directly responsible for gathering and entering the information, the information is, to the best of my knowledge and belief, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature of Authorized Representative	Date Signed
Kevin Komprood	11/30/2020

Attachment #3

Monticello Location Map

Legend

- Municipality
- State Boundaries
- County Boundaries
- Major Roads
  - Interstate Highway
  - State Highway
  - US Highway
- County and Local Roads
  - County HWY
  - Local Road
- Railroads
- Tribal Lands
- Index to EN_Image_Basemap_Leaf_Off

Notes

0.5 0 0.25 0.5 Miles

NAD_1983_HARN_Wisconsin_TM

1: 15,840

Monticello Topographic Map

Legend

- Municipality
- State Boundaries
- County Boundaries
- Major Roads
  - Interstate Highway
  - State Highway
  - US Highway
- County and Local Roads
  - County HWY
  - Local Road
- Railroads
- Tribal Lands
- 24K USGS Quad Index - Level 7 - 16

Notes

0.5 0 0.25 0.5 Miles

NAD_1983_HARN_Wisconsin_TM

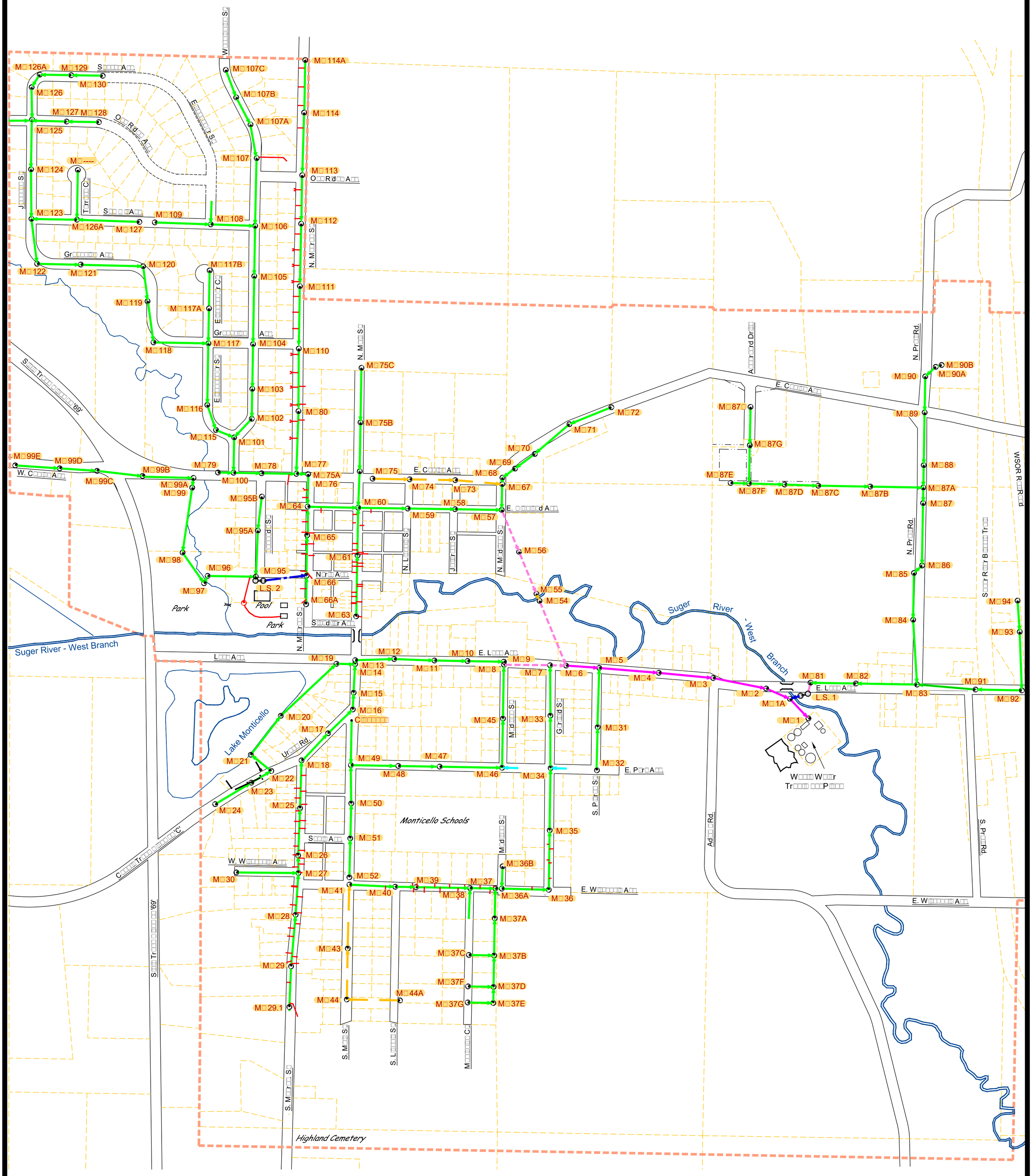
1: 15,840

Attachment #4

Sanitary Sewer System Map

V□□□□□ □□M□□□□□□□

Gr□□□ C□□□□, W□□□□□□□



L□□□□d

SCALE: 1"□600'

0 300' 600' 1200'

E□□□□□□ L□□r□□

E□□□□□□ 6" S□□□□r□S□□□r

E□□□□□□ 8" S□□□□r□S□□□r

E□□□□□□ 10" S□□□□r□S□□□r

E□□□□□□ 12" S□□□□r□S□□□r

E□□□□□□ 15" S□□□□r□S□□□r

E□□□□□□ S□□□□r□F□r□□ M□□□ (S□□□ L□□□□d)

E□□□□□□ F□□□ Dr□□□□□□

2008 C□r□□r□□□ L□□ □□□

L.S. 1

M□31

E□□□□□□ L□□S□□□□□

E□□□□□□ S□□□□r□M□□□□□

Dr□□ □ □□: C.C□□□r

D□□□: J□□ 21, 2010

R□□□□d □□: C.C□□□r

D□□□:A□□□□□, 2016

FIGURE 3-4

DELTA 3 ENGINEERING INC

PROFESSIONAL CIVIL-MUNICIPAL & STRUCTURAL ENGINEERING • ARCHITECTURE

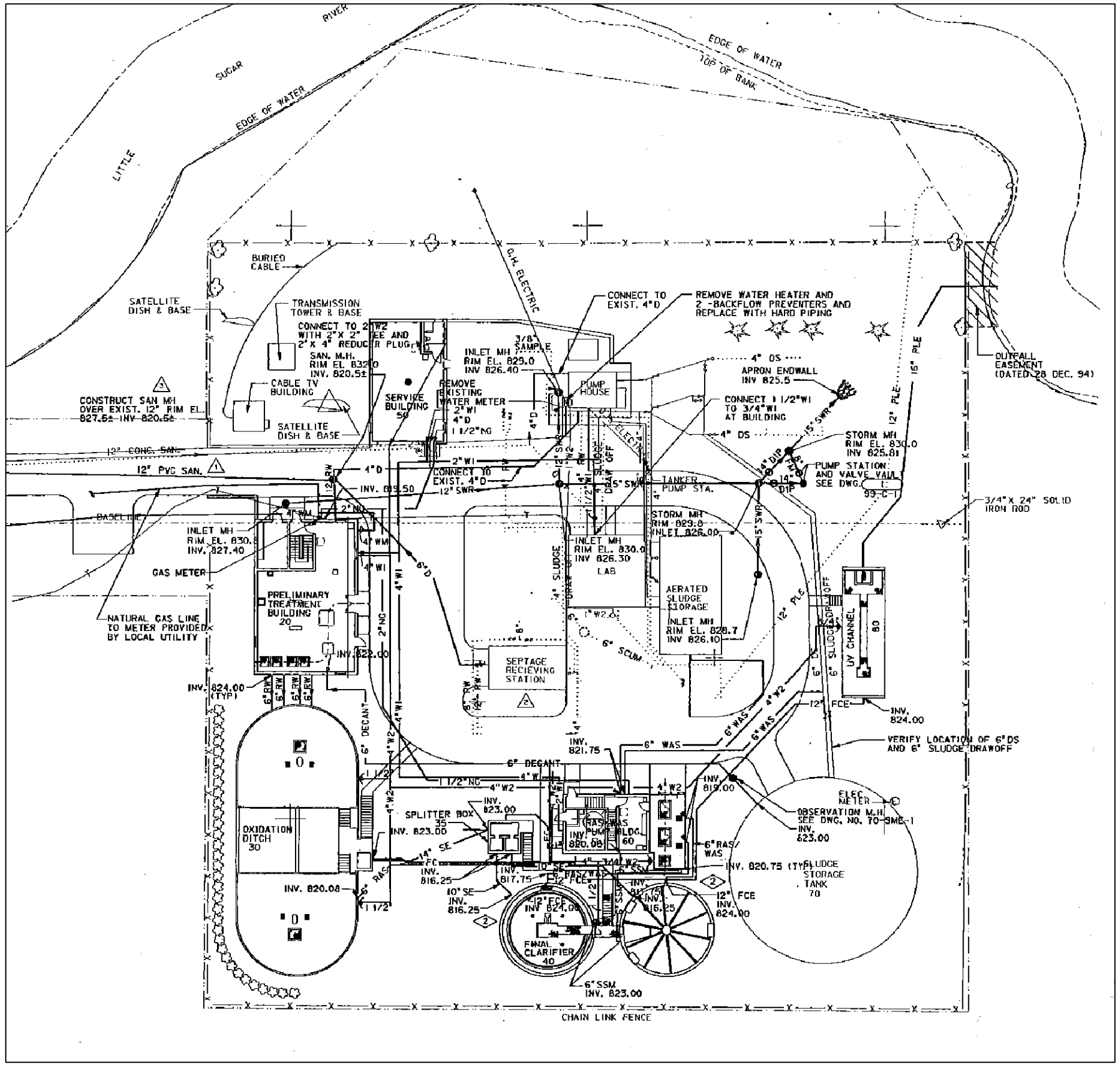
GRANT WRITING • LAND DEVELOPMENT • PLANNING & CADD SERVICES

875 SOUTH CHESTNUT STREET PHONE: (608) 348-5355

PLATTEVILLE, WISCONSIN 53818 FAX: (608) 348-5455

G:□PROJECTS□MONTICELLO□MAPS□UTILITIES.DWG

Attachment #5



DELTA 3 ENGINEERING INC

Professional Civil-Municipal & Structural Engineering
Grant Writing Land Development Planning & CADD Services
875 South Chestnut Street Phone: (608) 348-5355
Platteville, Wisconsin 53818 Fax: (608) 348-5455

Monticello Wastewater Treatment Facility
Monticello,Wisconsin

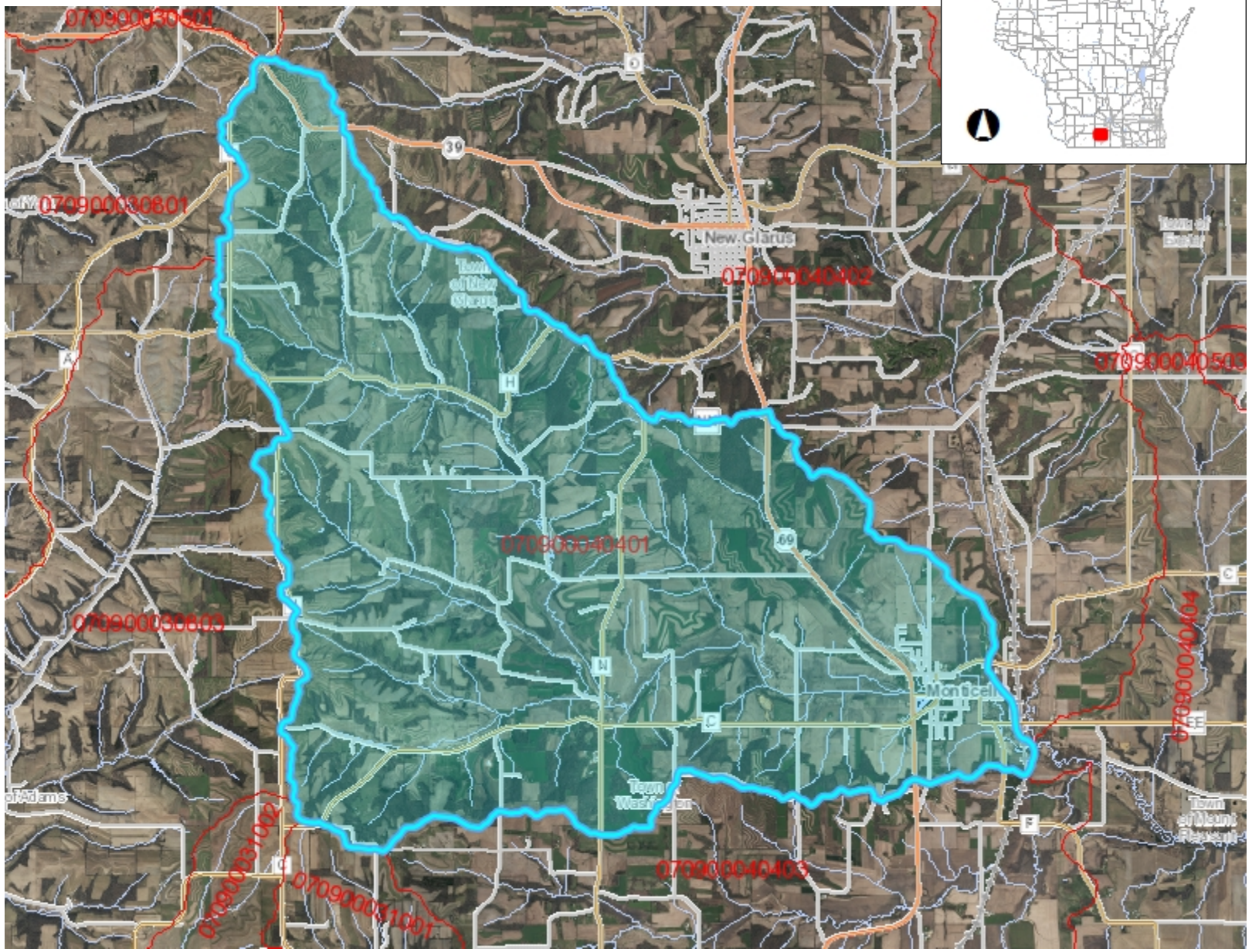
Project No. D16-006	Drawn By: J. Wagner
Date: March 15, 2016	Scale: N.T.S.

For Questions Regarding this Project, Please Contact:
Mr. Bart P. Nies, P.E.
Delta 3 Engineering, Inc.
Telephone: 608-348-5355

Exhibit #4

Attachment #6

HUC-12 Watershed Map



Legend

- 12-digit HUCs (Subwatersheds)
- Municipality
- State Boundaries
- County Boundaries
- Major Roads
  - Interstate Highway
  - State Highway
  - US Highway
- County and Local Roads
  - County HWY
  - Local Road
- Railroads
- Tribal Lands
- Rivers and Streams
- Intermittent Streams
- Lakes and Open water
- Index to EN_Image_Basemap_Leaf_Off

Notes

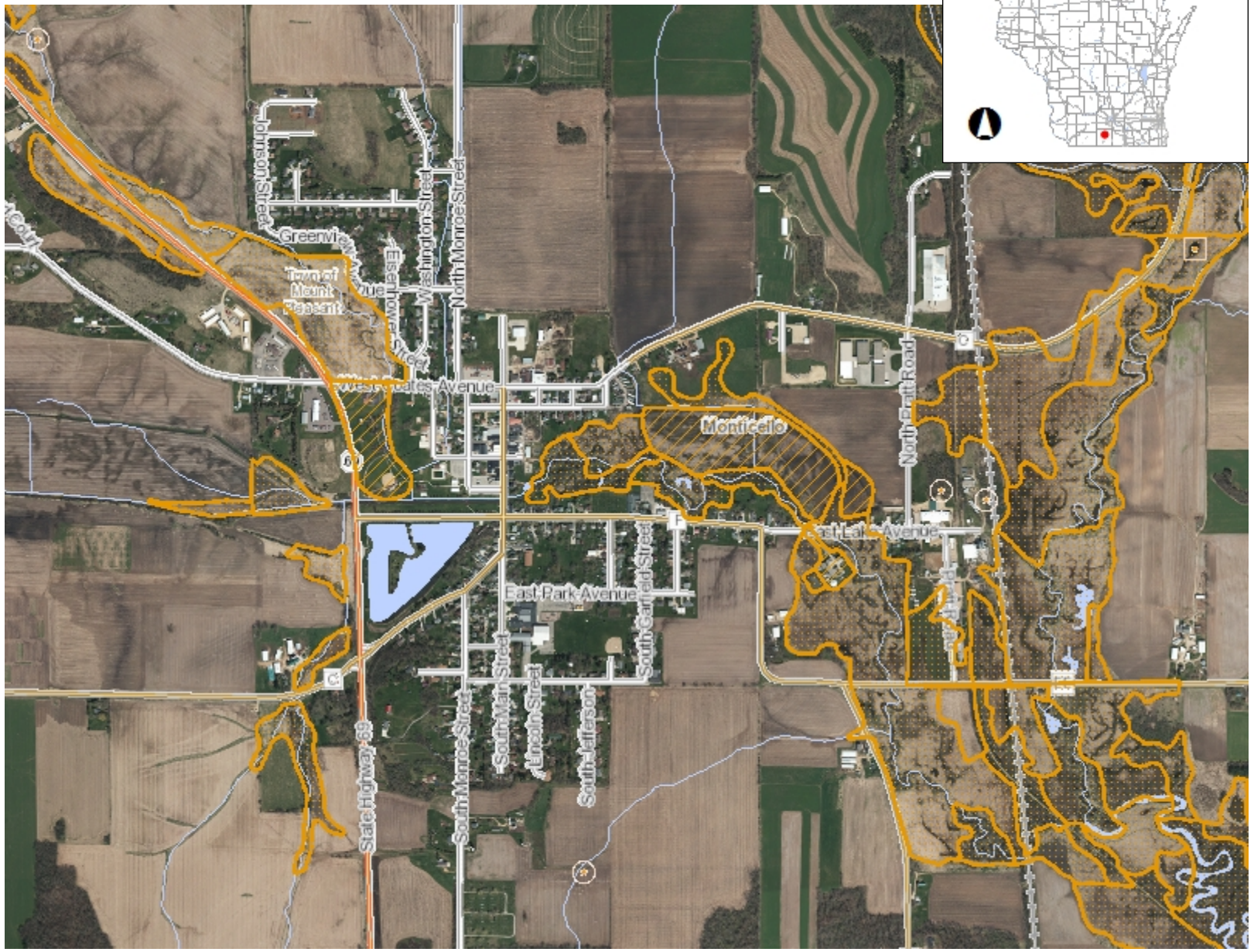
3.0 0 1.50 3.0 Miles

NAD_1983_HARN_Wisconsin_TM

1: 95,040

Attachment #7

Wetland Map



Legend

- Wetland Identifications and Confirmations
- Wetland Class Points
  - Dammed pond
  - Excavated pond
  - Filled excavated pond
  - Filled/drained wetland
  - Wetland too small to delineate
- Filled Points
- Wetland Class Areas
  - Wetland
  - Upland
- Filled Areas
- Wetland Class Points
  - Dammed pond
  - Excavated pond
  - Filled excavated pond
  - Filled/drained wetland
  - Wetland too small to delineate
- Filled Points
- Wetland Class Areas
  - Wetland
  - Upland
- Filled Areas
- Municipality
- State Boundaries
- County Boundaries
- Major Roads
  - Interstate Highway
  - State Highway
  - US Highway
- County and Local Roads
  - County HWY
  - Local Road
- Railroads

Notes

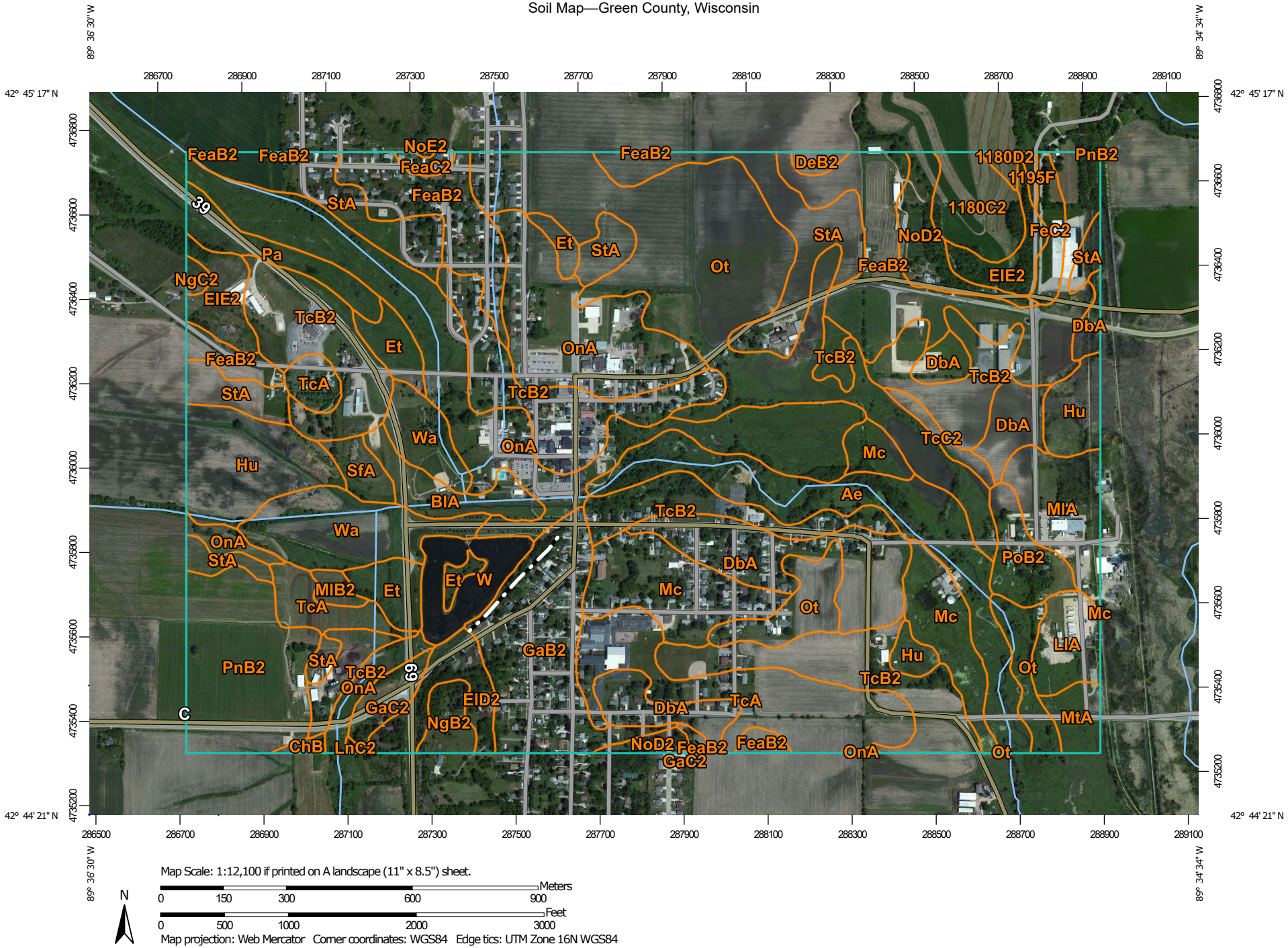
0.5 0 0.25 0.5 Miles

NAD_1983_HARN_Wisconsin_TM

1: 15,840

Attachment #8

Soil Map—Green County, Wisconsin



MAP LEGEND

Area of Interest (AOI)

- Area of Interest (AOI)

Soils

- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features

- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features

- Streams and Canals

Transportation

- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background

- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:12,000.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Green County, Wisconsin
Survey Area Data: Version 21, Jun 8, 2020

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Apr 29, 2011—Jun 13, 2011

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
1180C2	Newglarus-Dunbarton silt loams, 6 to 12 percent slopes, moderately eroded	10.7	1.4%
1180D2	Newglarus-Dunbarton silt loams, 12 to 20 percent slopes, moderately eroded	1.1	0.1%
1195F	Elkmound-Northfield complex, 30 to 60 percent slopes, very rocky	0.8	0.1%
Ae	Alluvial land, wet, frequently flooded	32.1	4.2%
BlA	Billett sandy loam, 0 to 2 percent slopes	8.5	1.1%
ChB	Chaseburg silt loam, moderately well drained, 2 to 6 percent slopes	0.8	0.1%
DbA	Dells silt loam, 0 to 3 percent slopes, rarely flooded	38.6	5.0%
DeB2	Dodge silt loam, 2 to 6 percent slopes, moderately eroded	1.4	0.2%
ElD2	Elkmound sandy loam, 12 to 20 percent slopes, moderately eroded	9.2	1.2%
ElE2	Elkmound sandy loam, 20 to 30 percent slopes, moderately eroded	12.8	1.7%
Et	Ettrick silt loam, 0 to 2 percent slopes, frequently flooded	13.1	1.7%
FeaB2	Festina silt loam, 1 to 6 percent slopes, moderately eroded	58.2	7.6%
FeaC2	Festina silt loam, 6 to 12 percent slopes, moderately eroded	1.5	0.2%
FeC2	Fayette silt loam, valleys, 6 to 12 percent slopes, moderately eroded	4.8	0.6%
GaB2	Gale silt loam, 2 to 6 percent slopes, moderately eroded	30.0	3.9%
GaC2	Gale silt loam, 6 to 12 percent slopes, moderately eroded	4.6	0.6%
Hu	Houghton mucky peat, 0 to 2 percent slopes	26.9	3.5%
LlA	Lawler silt loam, 0 to 3 percent slopes	8.2	1.1%

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
LnC2	Lindstrom sandy loam, 6 to 12 percent slopes, moderately eroded	0.3	0.0%
Mc	Marshan silt loam, rarely flooded	32.7	4.3%
MlA	Meridian loam, 0 to 2 percent slopes	13.4	1.7%
MlB2	Meridian loam, 2 to 6 percent slopes, moderately eroded	1.9	0.2%
MtA	Muscatine silt loam, benches, 0 to 3 percent slopes	4.5	0.6%
NgB2	Newglarus silt loam, moderately deep, 2 to 6 percent slopes, moderately eroded	4.4	0.6%
NgC2	Newglarus silt loam, moderately deep, 6 to 12 percent slopes, moderately eroded	1.0	0.1%
NoD2	Northfield loam, 12 to 20 percent slopes, moderately eroded	10.6	1.4%
NoE2	Northfield loam, 20 to 30 percent slopes, moderately eroded	0.1	0.0%
OnA	Orion silt loam, 0 to 3 percent slopes, occasionally flooded	87.3	11.3%
Ot	Ossian silt loam, occasionally flooded	86.6	11.3%
Pa	Palms muck, 0 to 2 percent slopes	8.4	1.1%
PnB2	Pecatonica silt loam, 2 to 6 percent slopes, moderately eroded	28.4	3.7%
PoB2	Pillot silt loam, 2 to 6 percent slopes, moderately eroded	8.2	1.1%
SfA	Shiffer loam, 0 to 3 percent slopes, rarely flooded	3.9	0.5%
StA	Stronghurst silt loam, benches, 0 to 3 percent slopes	46.7	6.1%
TcA	Tell silt loam, 0 to 2 percent slopes	37.0	4.8%
TcB2	Tell silt loam, 2 to 6 percent slopes, moderately eroded	93.1	12.1%
TcC2	Tell silt loam, 6 to 12 percent slopes, moderately eroded	2.5	0.3%
W	Water	9.8	1.3%
Wa	Wallkill silt loam, frequently flooded	24.8	3.2%

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
Totals for Area of Interest		**768.9**	**100.0%**

Preliminary WQT Plan (used for Soil TP Testing)

Legend

- Municipality
- State Boundaries
- County Boundaries
- Major Roads
  - Interstate Highway
  - State Highway
  - US Highway
- County and Local Roads
  - County HWY
  - Local Road
- Railroads
- Tribal Lands
- Rivers and Streams
- Intermittent Streams
- Lakes and Open water
- Index to EN_Image_Basemap_Leaf_Off

0.3 0 0.13 0.3 Miles

1:7,920

NAD_1983_HARN_Wisconsin_TM

Notes

X Possible location for stormwater treatment system

ROCK RIVER LABORATORY, INC.
AGRICULTURAL ANALYSIS

710 Commerce Drive
PO Box 169
Watertown, WI 53094

920-261-0446 phone
920-261-1365 fax
www.rockriverlab.com

Delta3 Engineering-Platteville Total Phosphorous Analysis

ROCK RIVER LABORATORY, INC.
AGRICULTURAL ANALYSIS

710 Commerce Drive
PO Box 169
Watertown, WI 53094

920-261-0446 phone
920-261-1365 fax
www.rockriverlab.com

Delta3 Engineering-Platteville Total Phosphorous Analysis

Field ID	Sample #	Total P (ppm)
MONT F	1	1005.0
MONT F	5	822.7
MONT F	9	927.9
MONT F	13	710.0
MONT F	17	828.0
MONT F	21	760.4
MONT F	25	772.2
MONT F	29	922.2
MONT F	33	725.2
MONT F	52	947.0
MONT F	56	919.3
MONT F	60	730.2
MONT F	64	705.8
MONT F	68	609.5
MONT F	72	840.0
MONT F	76	770.8
MONT F	80	939.0
MONT F	84	828.1

Field ID	Sample #	Total P (ppm)
MONT B	1	912.3
MONT B	5	613.5
MONT B	9	637.0
MONT B	13	817.6
MONT B	17	669.7
MONT B	21	860.3
MONT B	24	760.0
MONT B	28	698.8
MONT B	32	639.4
MONT B	36	598.4
MONT B	40	736.3
MONT B	44	645.4

Field ID	Sample #	Total P (ppm)
MONT A	47	695.7
MONT A	51	695.9
MONT A	55	551.3
MONT A	59	709.3
MONT A	63	769.7
MONT A	68	660.3
MONT A	72	660.1
MONT A	76	824.4
MONT A	80	747.2
MONT A	84	662.4
MONT A	87	739.1

ROCK RIVER LABORATORY, INC.
AGRICULTURAL ANALYSIS

710 Commerce Drive
PO Box 169
Watertown, WI 53094

920-261-0446 phone
920-261-1365 fax
www.rockriverlab.com

Delta3 Engineering-Platteville Total Phosphorous Analysis

Field ID	Sample #	Total P (ppm)
MONT LK	5	1367.0
MONT LK	7	869.3
MONT LK	9	832.8
MONT LK	11	747.6
MONT LK	13	681.0
MONT LK	15	648.8
MONT LK	17	668.5
MONT LK	19	492.2
MONT LK	21	451.8
MONT LK	23	780.5
MONT LK	25	478.9
MONT LK	27	519.2
MONT LK	29	616.2
MONT LK	31	494.3
MONT LK	33	606.5
MONT LK	35	532.6
MONT LK	37	684.3
MONT LK	39	579.2
MONT LK	40	642.0
MONT LK	42	1008.0
MONT LK	44	595.3
MONT LK	46	579.8
MONT LK	48	630.9
MONT LK	50	634.9
MONT LK	52	613.2
MONT LK	54	531.3
MONT LK	56	597.0
MONT LK	58	693.6
MONT LK	60	601.8
MONT LK	62	872.2
MONT LK	64	421.8

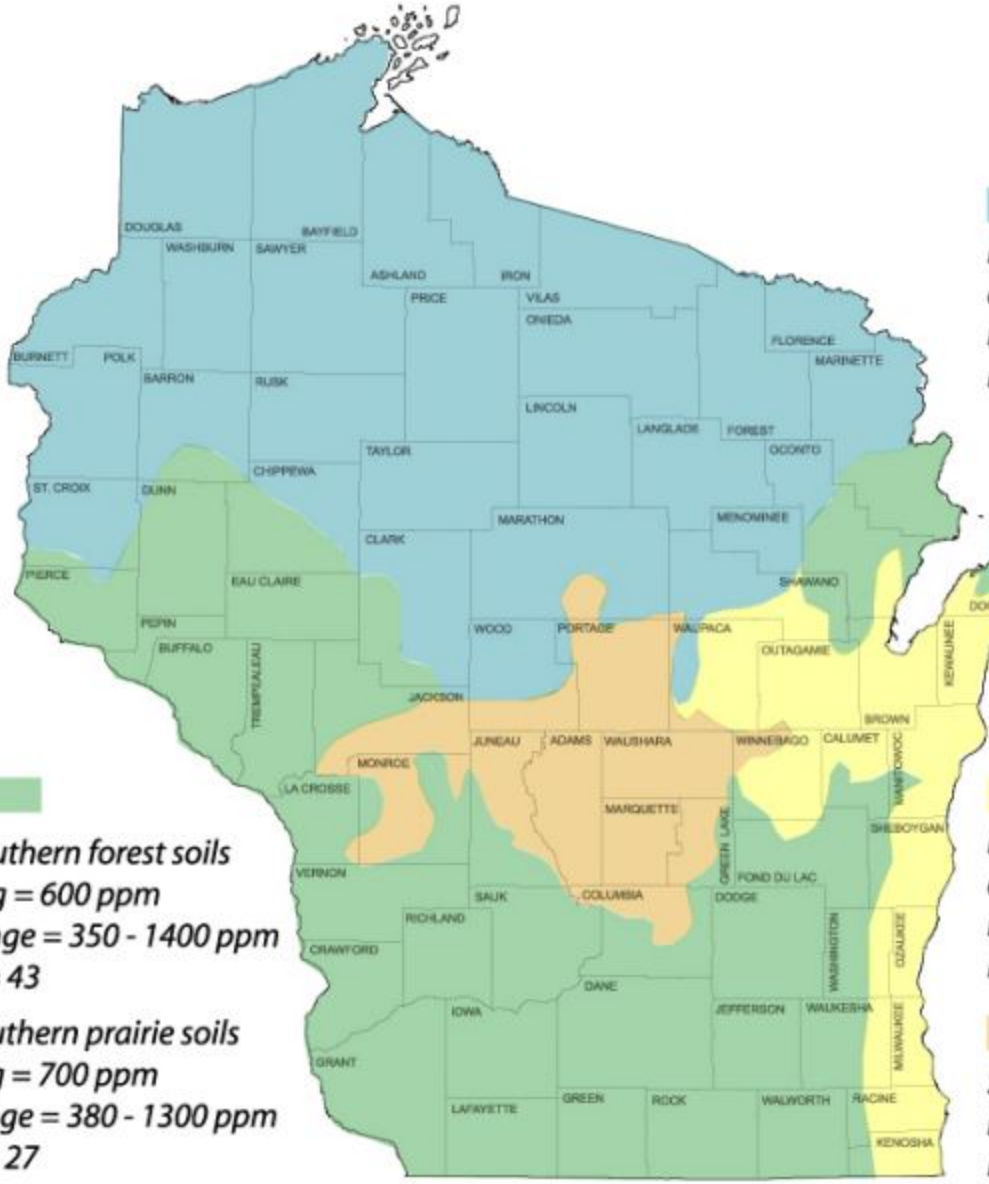
Field ID	Sample #	Total P (ppm)
MONTI	43	591.1

Field ID	Sample #	Total P (ppm)
MONT BOX	Unnamed	867.7

Field ID	Sample #	Total P (ppm)
MONT D	1	634.7
MONT	3	180.3
MONT	5	493.7
MONT	7	503.9
MONT	9	2762.0
MONT	13	818.8
MONT	14	559.1
MONT	18-1	720.4
MONT	18-2	675.8
MONT	22-1	595.2
MONT	22-2	713.7
MONT	23	835.4
MONT	25	678.6
MONT	26	636.8
MONT	27	906.3
MONT	30	494.2
MONT	31	691.8
MONT	35	670.1
MONT	38	883.0
MONT	39	439.1
MONT	42	739.6
MONT	46	181.0
MONT	50	575.1

Field ID	Sample #	Total P (ppm)
MONT E	37	828.5
MONT E	41	876.7
MONT E	45	892.1
MONT E	49	850.1
MONT E	88	812.0
MONT E	92	510.3
MONT E	96	709.6

Soil Total P



Northern loamy soils
avg = 540 ppm
range = 480-580 ppm
n = 4

Southern forest soils
avg = 600 ppm
range = 350 - 1400 ppm
n = 43

Southern prairie soils
avg = 700 ppm
range = 380 - 1300 ppm
n = 27

Eastern red soils
avg = 950 ppm
range = 430 - 2820 ppm
n = 12

Sandy soils
range = 250 - 400 ppm
n = 2

Organic soils: range = 1330 - 1350 ppm, n = 2

Attachment #9

ATTACHEMENT #9
TABLE OF CONTENTS

I. Introduction

The lateral recession rate of the eroding bank is a critical component for the NRCS Streambank Erosion Estimator. The following documentation provides the justification for the lateral recession rates used in the NRCS Streambank Erosin Estimator. Lateral recession rate was estimated based on the photos provided, description, and on site evaluation. The following includes representative photos of Project Reaches to be stabilized through installation of Best Management Practices (BMPs).

II. Reach A

Image 1 – Sever undercut with vegetative overhang.

Image 2 – Severe undercut with slump and vegetative overhang.

Image 3 – Severe undercut with slump, vegetative overhang, fallen tree, and exposed roots.

Image 4 – Severe undercut with slump and vegetative overhang.

Image 5 – Severe undercut with slump and vegetative overhang.

Image 6 – Severe undercut with vegetative overhang.

Image 7 – Severe undercut with vegetative overhang.

Image 8 – Severe undercut with vegetative overhang.

Image 9 – Severe undercut with slump, fallen trees, exposed tree roots, and vegetative overhang.

Image 10 – Severe undercut with vegetative overhang.

III. Reach B

Image 11 – Severe undercut with slump, fallen trees, exposed tree roots, and vegetative overhang.

Image 12 – Severe undercut with slump, fallen trees, exposed tree roots, and vegetative overhang.

Image 13 – Severe undercut, exposed tree roots, and vegetative overhang.

Image 14 – Severe undercut with slump and vegetative overhang.

Image 15 – Severe undercut with slump and vegetative overhang.

Image 16 – Severe undercut with slump and vegetative overhang.

IV. Reach C

Image 17 – Severe undercut with vegetative overhang.


Image 18 – Severe undercut with slump and vegetative overhang.

Image 19 – Severe undercut with slump and vegetative overhang.

Image 20 – Severe undercut with vegetative overhang.

Image 21 – Severe undercut with slump and vegetative overhang.

V. Reach D

Image 22 – Severe undercut with slump and vegetative overhang.

Image 23 – Severe undercut with slump, fallen trees, exposed tree roots, and vegetative overhang.

Image 24 – Severe undercut with fallen trees, exposed tree roots, and vegetative overhang.

Image 25 – Severe undercut with fallen trees, exposed tree roots, and vegetative overhang.

Image 26 – Severe undercut with fallen trees, and vegetative overhang.

Attachment #10

NRCS Excel Workbook Estimating 'Other' Erosion Types June 2006

Annual soil loss predictions for conservation planning purposes are made with current soil loss prediction technology (RUSLE2). RUSLE2 estimates sheet, rill and interrill erosion. Erosion that is seasonal in nature and caused by concentrated flow, however, is not predicted by RUSLE2.

This workbook provides conservation planners with simple tools and processes to help estimate the amount of erosion occurring in ephemeral gullies, classic gullies and on streambank erosion sites.

Definitions:

Rill Erosion: consists of the removal of soil by concentrated water running through little streamlets, or headcuts. Detachment in a rill occurs if the sediment in the flow is below the amount the load can transport and if the flow exceeds the soil's resistance to detachment. As detachment continues or flow increases, rills will become wider and deeper. Rills may be of any size but are usually less than four inches deep. Rills are:

<> generally parallel on the slope, but may converge,
<> generally of uniform spacing and dimension,
<> generally appear at different locations on the landscape from year to year,
<> generally shorter than ephemeral cropland gullies,
<> usually end at a concentrated flow channel, or an area where the slope flattens and deposition occurs,
<> are on the same portion of the slope that is used to determine the length of slope (L) for RUSLE2,
<> many small, but conspicuous channels running in the direction of slope gradient

Rill erosion is considered in the RUSLE2 calculations.

Ephemeral Gully Erosion: Small erosion channels formed on crop fields as a result of concentrated flow of runoff water. These channels are routinely eliminated by tillage of the field but return following subsequent runoff events. Ephemeral Gullies are small enough to be eliminated (temporarily) with the use of typical farm tillage equipment and they:

<> recur in the same area of concentrated flow each time they form,
<> frequently form in well-defined depressions in natural drainage ways,
<> are generally wider, deeper, and longer than the rills in the field,

Ephemeral Gullies are **not** calculated by the RUSLE2 program.

Gully Erosion: Permanent gullies are formed when channel development has progressed to the point where the gully is too wide and too deep to be tilled across. These channels carry large amounts of water after rains and deposit eroded material at the foot of the gully. They disfigure landscape and make the land unfit for growing crops. Gullies:

<> may grow or enlarge from year to year by head cutting and lateral enlarging,
<> often occur in depressions or natural drainage ways,
<> may begin as ephemeral gullies that were left in the field untreated,
<> may, over time, become partially stabilized by grass, weeds or woody vegetation,

Gully erosion is not calculated by the RUSLE2 program.

Streambank Erosion: The wearing away of streambanks by flowing water. The removal of soil from streambanks is typically caused by the direct action of stream flow and/or wind/wave action, typically occurring during periods of high flow. Streambank erosion:

<> is a natural process that generally increases when unprotected streambanks (e.g. no woody vegetation) are subject to the actions of flowing water and ice damage.

<> is a common occurrence on many Vermont river channels that are experiencing geomorphic adjustments

---

The soil loss from ephemeral gullies, gullies and streambank erosion areas can be estimated by calculating the volume of soil removed by erosion processes. The volume of soil loss can be multiplied by the typical unit weight of the soil (based on soil texture) which is eroded. Approximate soil unit weights are expressed below[1]:

Soil Texture	Estimated Dry Density lb/ft^3
Gravel	110
Sand	105
Loamy Sand	100
Sandy Loam	100
Fine Sandy Loam	100
Sandy Clay Loam	90
Silt Loam	85
Silty Clay Loam	85
Silty Clay	85
Clay Loam	85
Organic	22

Procedure for estimating Ephemeral Soil Erosion:

The following formula will be used to calculate annual estimated ephemeral gully erosion:

$$\frac{\text{Ephemeral Gully } \mathbf{Length} \times \text{Gully Average } \mathbf{Width} \times \text{Gully Average } \mathbf{Depth}}{2000} \times \text{Soil Weight (lbs/ft}^3\text{)} \times \text{Occurrences per Year} = \mathbf{Estimated} \text{ Soil Loss (Tons per Year)}$$

***** Ephemeral gully erosion may reform multiple times per year, and under certain conditions it may not form in a given year. The voided volume which would be calculated after a runoff event is not necessarily representative of an annual rate, but is representative of only the specific event. This erosion can be calculated for individual storms and can be summed for a yearly estimate.

1 Data from published soil surveys, laboratory data, and soil interpretation record are to be used where available. Parent materials, soil consistency, soil structure, pore space, soil texture, and coarse fragments all influence unit weight.

Procedure for estimating Gully Soil Erosion:

The following formula will be used to calculate annual estimated classic gully erosion:

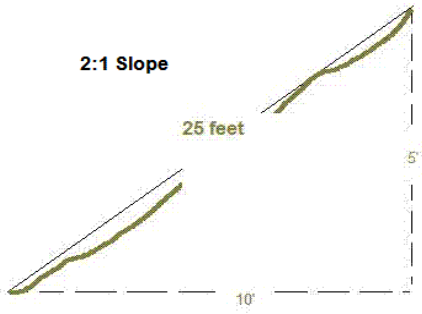
$$\frac{\text{Gully } \textbf{Length} \text{ X (Average } \textbf{Width} \text{ X Average } \textbf{Depth} \text{ X 0.5) X } \textbf{Soil Weight} \text{ (lbs/ft3)}}{2000} \; / \; \text{Formation Years} = \textbf{Estimated} \text{ Soil Loss Per Year (Tons)}$$

Procedure for estimating Streambank Soil Erosion (Direct Volume Method):

The following formula will be used to calculate annual estimated streambank erosion unless a field measurement procedure[2] is used:

$$\frac{\text{ing Bank } \textbf{Length} \text{ X Eroding Bank Height X Lateral Recession Rate (FT/YR) X Soil Weight (lb}}{2000} = \textbf{Estimated} \text{ Soil Loss Per Year (Tons)}$$

** Eroding bank height is measured along the bank, not the vertical height of bank. Example: if vertical height of an eroding streambank is 5 feet, and the bank is on a 2:1 slope, the total eroding bank distance is 25 feet -- 1/2 (Base X Height).



***The average annual recession rate is the thickness of soil eroded from a bank surface (perpendicular to the face) in an average year.

Stream bank erosion sometimes presents itself as a major occurance in a given year, whereas the same bank may not erode significantly for a period of years if no major runoff events occur. Recession rates need to be calculated as an average of years when erosion does and does not occur. Recession rate is not calculated as the erosion occurring after a single event.

Use available resources to assist in the estimation of recession rate: use past and present aerial photography, old survey records, and any other information that helps to determine the bank condition at known times in the past. When such information is lacking or insufficient, field observations and professional judgement are needed to estimate recession rates.
It is often not possible to directly measure recession rates in the field. Therefore, the following table has been included which relates recession rates to narrative descriptions of banks eroding at different rates (Table from NRCS Wisconsin guidance).

Lateral Recession Rate (ft/yr)	Category	Description
0.01-0.05	Slight	Some bare bank but active erosion not readily apparent. Some rills but no vegetative overhang. No exposed tree roots.
0.06-0.2	Moderate	Bank is predominantly bare with some rills and vegetative overhang. Some exposed tree roots but no slumps or slips.
0.3-0.5	Severe	Bank is bare with rills and severe vegetative overhang. Many exposed tree roots and some fallen trees and slumps or slips. Some changes in cultural features such as fence corners missing and realignment of roads or trails. Channel cross section becomes U-shaped as opposed to V-shaped.
0.5+	Very Severe	Bank is bare with gullies and severe vegetative overhang. Many fallen trees, drains and culverts eroding out and changes in cultural features as above. Massive slips or washouts common. Channel cross section is U-shaped and stream course may be meandering.

2 The best way to quantify streambank erosion is to measure it directly in the field. The basic procedure in measuring streambank erosion is to survey, flag, or in some way fix a “before" image of the channel you are evaluating in order to establish the baseline condition. Changes due to erosion can then be monitored over time by going back to the study area and re-measuring from the fixed reference points.
Channel cross-sections can be surveyed and plotted on a periodic basis to monitor change. Stakes or pins can be driven into channel banks flush with the surface. The amount of stake or pin exposed due to erosion is the amount of change at the streambank erosion site between your times of observation.
The time required to monitor a site often precludes this method of data collection. The Direct Volume Method can be used to estimate streambank erosion at your site.

Acknowledgements: This Excel workbook was created as a planning tool for use by conservation planners. The basic format and content of the tool is a compilation of various similar tools, processes and procedures employed by NRCS in several states including: Indiana, Iowa, Kansas, Maryland, Michigan, Missouri, Nebraska, Oklahoma, South Dakota and Wisconsin. Some of the terminology in the 'Definitions' section of this Readme document closely mirrors these sources.

NRCS Streambank and Irrigation Ditch Erosion Estimator (Direct Volume Method)

Farmer / Cooperator Name: Village of Monticello
Tract Number: Varies
Evaluated By: J. Fure
Evaluation Date: November 30, 2020

Field Number	*Eroding Strmbnk Reach #; or Ditch Side/Bottom*	*Eroding Bank or Ditch Length (Feet)*	*Eroding Bank Height; or Ditch Bottom Width* (Feet)*	*Area of Eroding Strmbank or Ditch (FT^2)*	*Lateral or Ditch Bottom Recession Rate (Estimated) (FT / Year)*	*Estimated Volume (FT^3) Eroded Annually*	*Soil Texture*	*Approximate Pounds of Soil per FT^3*	*Estimated Soil Loss (Tons/Year)*	*Soil Total Phosphorus (ppm)*	*Estimated Phosphorus Loss (Pounds/Year)*
Varies	A (Right)	2,456	1.9	4,666	0.35	1,633.2	Silt Loam	85	69.4	715.7	99.4
	A (Left)	2,456	3.8	9,333	0.35	3,266.5	Silt Loam	85	138.8	715.7	198.7
	B (Right)	1,120	4.8	5,376	0.35	1,881.6	Silt Loam	85	80.0	701.4	112.2
	B (Left)	1,120	2.1	2,352	0.35	823.2	Silt Loam	85	35.0	701.4	49.1
	C (Right)	1,245	1.8	2,241	0.35	784.4	Sandy Loam	100	39.2	712.5	55.9
	C (Left)	1,245	4.1	5,105	0.35	1,786.6	Sandy Loam	100	89.3	712.5	127.3
	D (Right)	608	1.4	851	0.35	297.9	Sandy Loam	100	14.9	809.7	24.1
	D (Left)	608	1.7	1,034	0.35	361.8	Sandy Loam	100	18.1	809.7	29.3
	*D (Right)	1,674	1.4	2,344	0.35	820.3	Sandy Loam	100	41.0	809.7	66.4
	*D (Left)	1,674	1.7	2,846	0.35	996.0	Sandy Loam	100	49.8	809.7	80.6
				TOTAL		12651.4			575.5		**843.0**

Attachment #11

Water Quality Trading
Operation and Maintenance Plan

Introduction:
The Water Quality Trading (WQT) Operation and Maintenance (O&M) Plan is meant to be a working document and should be updated as new trading practices are implemented. Currently, the Operation and Maintenance Plan revolves around the Best Management Practice (BMP) construction along the West Branch Little Sugar River and Montesian Lake. The attached *BMP Inspection Form* should be completed during annual inspections of BMPs and following major storm events. Inspection forms shall be retained for at least five (5) years to ensure compliance with the WQT Plan.

Publicly Owned BMP:
Village representative to complete inspection form annually and following major storm events. The form will then be provided to the Director of Public Works following inspection. The Village will address maintenance issues identified during inspection within 30 days. Substantial maintenance issues may require an extended timeframe for generation of plans, specifications, and a public bid process to perform the work. Inspections and O&M activities shall be reported in the annual WQT Report sent to the DNR.

Privately Owned BMP:
Village representative to complete inspection form annually and following major storm events. The form will then be provided to the Director of Public Works following inspection. The Village will address maintenance issues identified during inspection within 30 days. Substantial maintenance issues may require an extended timeframe for generation of plans, specifications, and a public bid process to perform the work. Maintenance expenses will be incurred by either by the Village or Private Property Owner depending on agreement with the Village. The Private Property Owner will be allowed to perform maintenance activities at the expense of the Private Property Owner. Inspections and O&M activities shall be reported in the annual WQT Report sent to the DNR.

Quality Assurance:
Riprap gradation and composition shall be provided for each source of material. Streambank shaping and riprap shall be installed per the Green County Land Conservation Department and NRCS Standards. Contractors to supply rock that is approved by the NRCS.

Installation:
- Construction staking provided by Engineer.
- Do not place riprap over frozen or spongy subgrade surfaces.
- Place riprap as indicated on Construction Plans. Do not dump rip-rap over the bank.
- Blend riprap with existing bank.
- Spread spoil out in a layer of less than 6” and seed down. Do not spread soil in wetlands.
- All disturbed areas and spoil must be seeded and mulched.
- In-Stream Habitat Improvement Structure installation per Plans and Specifications.

Practice Registration:
The purpose of the “Water Quality Trading Management Practice Registration” form is to report to WDNR that a management practice identified in the trading plan has been properly installed and is established and effective. This information will be used to track implementation progress, verify

compliance and perform audits, as necessary. A registration form should be submitted for every management practice that has been identified in the trading plan. If practices are established prior to trading plan submittal, registration forms may be submitted with the trading plan. Otherwise, registration forms should be submitted during the permit term as practices become effective or with the annual report. A blank *Water Quality Trading Management Practice Registration Form 3400-207* is attached and should be submitted following implementation of the trading practice.

Tracking Procedures:
The Village will track credits used monthly. The Village will report credit usage to the DNR on a monthly basis in the Discharge Monitoring Reports (DMRs). The annual report will summarize the 12 months of credit usage and credit generation. The Village will report to DNR any concern that they have that may result in a need to modify the trade agreement and/or this trade plan. For example, a need to generate additional credits based on discharge.

Inspections/Maintenance Considerations:

- A *BMP Inspection Form* is attached.
    - Site: As noted on Construction Plans
    - Condition of BMP: Excellent; Good; Fair; or Poor
    - Maintenance Estimate: Provide an estimate for how long the maintenance will take to complete or a dollar value for completion. This will help determine if the Village will perform the work or if the Village will hire another entity to perform the work.
    - Date Completed: Following completion of the required maintenance, input the date of completion.
    - Comments: Provide the required maintenance activity along with any other useful information. If the cell provided is not large enough for Comments, write "See Back of Sheet" and provide comments on the reverse side of the Form.
- Following installation, inspect the disturbed areas closely over the next few months to ensure that seeding grows.
- BMPs may settle or shift especially after flooding events or freeze/thaw.
- May need to control weed and brush growth.
- Inspect stabilized areas as needed.
- At a minimum, inspect after major storm events.
- If a BMP has been damaged, repair it promptly to prevent a progressive failure.
- If repairs are needed repeatedly at a location, evaluate the site to determine if the original design conditions have changed.

Routine Maintenance Items that can be performed by Village:

- Evaluate BMP condition
    - Reconstruct/replace BMPs that have settled, shifted, or washed out.
- Manage Vegetation
    - Remove invasive/noxious plants.
- Manage Garbage
    - Remove garbage and other debris that could otherwise impair the streambank stability.

Monthly Certification:
Each month, the Village will certify that the BMPs are maintained and operating in a manner consistent with this Water Quality Trading Plan or provide a statement noting noncompliance with this Plan. The monthly Discharge Monitoring Report (DMR) will include the following statement as a certification of compliance when the Credit Generating Practice is operating in a manner consistent with the Plan:

> "I certify that to the best of my knowledge that the management practices identified in the approved water quality trading plan as the source of phosphorus credits is installed, established and properly maintained."

Annual Inspection:
An annual inspection of the BMPs will be performed by a licensed Professional Engineer to ensure that the BMPs are functioning as intended in order to meet the requirements of the WQT Plan.

Noncompliance:
The Village will notify DNR by telephone call to DNR's regional wastewater compliance engineer within 24 hours or next business day of becoming aware that phosphorus credits used or intended for use by Village are not being generated as outlined in this Water Quality Trading Plan.

The Village will submit a written notification within five days after the Village recognizes that the phosphorus credits are not being generated as outlined in the Trading Plan. DNR may waive the requirement for submittal for a written notice within five days and instruct the Village to submit the written notice with the next regularly scheduled monitoring report required by Village's WPDES Permit.

The written notification should include:

- Description of noncompliance and cause.
- Period of noncompliance including dates and times.
- Schedule for attaining compliance including time and steps toward compliance.
- Plan to prevent reoccurrence of the noncompliance.

Notification of Trade Agreement Termination:
If a trade agreement or the trading plan needs to be terminated during the permit term, the permittee should submit a Notice of Termination to the wastewater engineer/specialist to inform WDNR of the termination. WDNR staff should use this information to determine if a permit modification is required due to the termination, the termination will result in non-compliance, or other permit actions are required due to the termination. When credits are reduced or eliminated for any reason, the permittee is still required to meet their WQBELs without any grace period. To prevent noncompliance with WQBELs, changes to trading plans must be addressed before credits are lost. Modifying the permit/trading plan will require at least 180 days. A blank *Notification of Water Trade Agreement Termination Form 3400-209* is attached and should be submitted to WDNR prior to practice termination, no later than the submittal date of the annual report.

BMP Inspection Form

Date_____

Inspector_____

Reason for Inspection _____

Reach	Station	Condition of Riprap	Required Maintenance	Maintenance Estimate (Time or Cost)	Date Completed	Comments

State of Wisconsin
Department of Natural Resources
101 South Webster Street
Madison WI 53707-7921
dnr.wi.gov

Water Quality Trading Management Practice Registration

Form 3400-207 (R 1/14)

Notice: Pursuant to s. 283.84, Wis. Stats., this form must be completed by any WPDES permittee that is using water quality trading as a method of complying with a permit limitation. Failure to complete this form would not result in penalties. Personal information collected will be used for administrative purposes and may be provided to requesters to the extent required by Wisconsin's Open Records Law (ss. 19.31 - 19.39, Wis. Stats.).

Applicant Information

Permittee Name	Permit Number WI-	Facility Site Number

Facility Address	City	State	ZIP Code

Project Contact Name (if applicable)	Address	City	State	ZIP Code

Project Name

Broker/Exchange Information (if applicable)

Was a broker/exchange be used to facilitate trade? ◯ Yes ◯ No

Broker/Exchange Organization Name	Contact Name

Address	Phone Number	Email

Trade Registration Information (Use a separate form for each trade agreement)

Type	Trade Agreement Number	Practices Used to Generate Credits	Anticipated Load Reduction	Trade Ratio	Method of Quantification
◯ Urban NPS ◯ Agricultural NPS ◯ Other					

County	Closest Receiving Water Name	Land Parcel ID(s)	Parameter(s) being traded

The preparer certifies all of the following:

- I have completed this document to the best of my knowledge and have not excluded pertinent information.
- I certify that the information in this document is true to the best of my knowledge.

Signature of Preparer	Date Signed

Authorized Representative Signature

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision. Based on my inquiry of those persons directly responsible for gathering and entering the information, the information is, to the best of my knowledge and belief, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature of Authorized Representative	Date Signed

Leave Blank – For Department Use Only

Date Received		Trade Docket Number
Entered in Tracking System ☐ Yes	Date Entered	Name of Department Reviewer

State of Wisconsin
Department of Natural Resources
101 South Webster Street
Madison WI 53707-7921
dnr.wi.gov

Notification of Water Trade Agreement Termination

Form 3400-209 (1/14)

Notice: Pursuant to s. 283.84, Wis. Stats., and ch. NR 217 Wis. Adm. Code, this form must be completed by any WPDES permittee that is using water quality trading as a method of complying with a permit limitation. Failure to complete this form would not result in penalties. Personal information collected will be used for administrative purposes and may be provided to requesters to the extent required by Wisconsin's Open Records Law (ss. 19.31 - 19.39, Wis. Stats.).

Applicant Information

Permittee Name	Permit Number WI-	Facility Site Number

Facility Address	City	State	ZIP Code

Project Contact Name (if applicable)	Address	City	State	ZIP Code

Project Name

Credit Generator Information

Credit generator type (select all that apply):

- ☐ Permitted Discharge (non-MS4/CAFO)
- ☐ Permitted MS4
- ☐ Permitted CAFO
- ☐ Urban nonpoint source discharge
- ☐ Agricultural nonpoint source discharge
- ☐ Other - Specify:

Trade Agreement number(s) to be terminated including affected land parcel ID(s):

Amount of trading credit being terminated	Effective date of termination

Reason for termination

Is this agreement being updated or replaced?

- ◯ Yes
- ◯ No
- ◯ Unsure

Will this termination result in non-compliance with the effective limit or other permit requirements?

- ◯ Yes; Name: _____
- ◯ No
- ◯ Unsure

The preparer certifies all of the following:

- I am familiar with the specifications submitted for this application, and I believe all applicable items in this checklist have been addressed.
- I have completed this document to the best of my knowledge and have not excluded pertinent information.

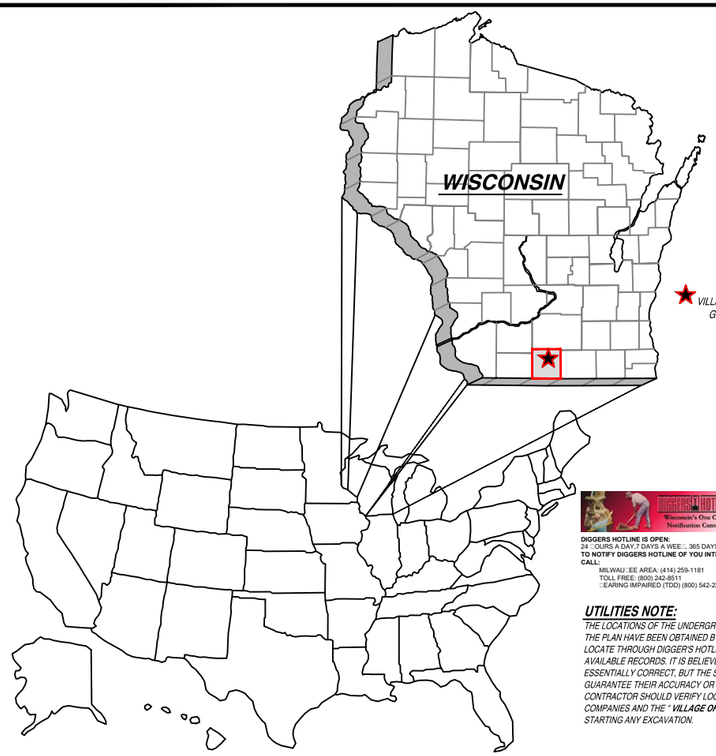
Signature of Preparer	Date Signed

Authorized Representative Signature

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision. Based on my inquiry of those persons directly responsible for gathering and entering the information, the information is, to the best of my knowledge and belief, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature of Authorized Representative	Date Signed

Attachment #12



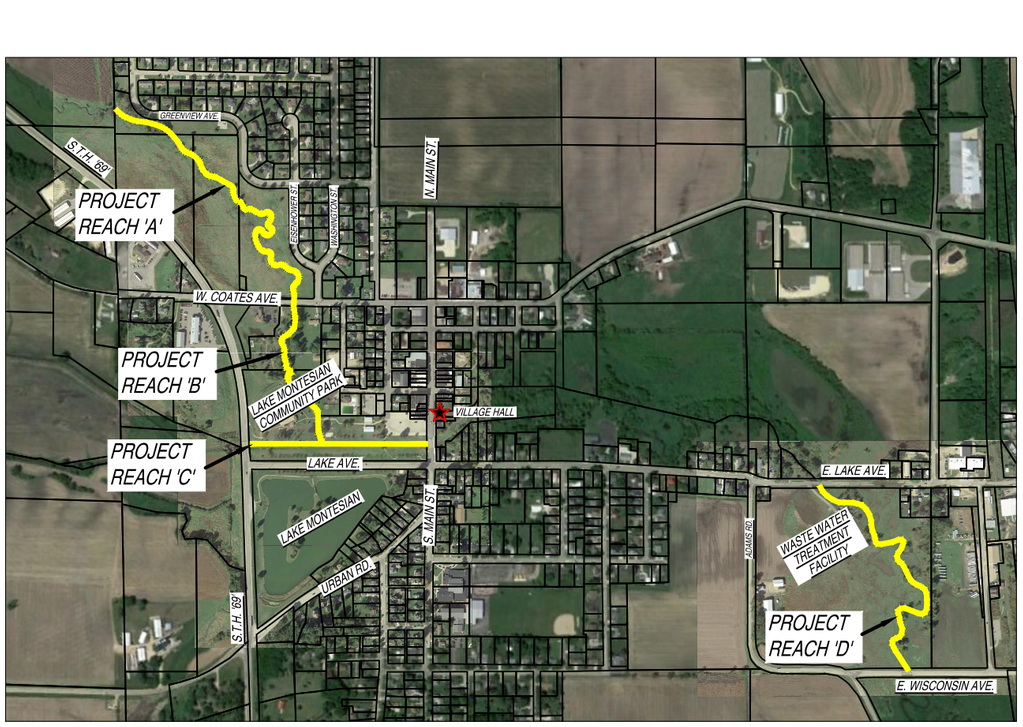
DIGGERS HOTLINE IS OPEN:
24 - OURS A DAY 7 DAYS A WEE:, 365 DAYS A YEAR::
TO NOTIFY DIGGERS HOTLINE OF YOU INTENT TO DIG CALL:
MILWAU EE AREA: (414) 259-1181
TOLL FREE: (800) 242-8511
EARING IMPAIRED (TDD) (800) 542-2289

UTILITIES NOTE:

THE LOCATIONS OF THE UNDERGROUND UTILITIES SHOWN ON THE PLAN HAVE BEEN OBTAINED BY FIELD CHECKS, A UTILITY LOCATE THROUGH DIGGER'S HOTLINE, AND SEARCHES OF AVAILABLE RECORDS. IT IS BELIEVED THAT THEY ARE ESSENTIALLY CORRECT, BUT THE SURVEYOR DOES NOT GUARANTEE THEIR ACCURACY OR COMPLETENESS. THE CONTRACTOR SHOULD VERIFY LOCATIONS W/ THE UTILITY COMPANIES AND THE " ***VILLAGE OF MONTICELLO*** *" PRIOR TO STARTING ANY EXCAVATION.*

PROPOSED 2021 STREAM IMPROVEMENTS - WEST BRANCH LITTLE SUGAR RIVER

OWNER:VILLAGE OF MONTICELLO MONTICELLO, WI



PROJECT LOCATION MAP

SCALE: N.T.S.

PROJECT INFORMATION:

OWNER:

VILLAGE OF MONTICELLO
CLERK-TREASURER
140 N. MAIN STREET
MONTICELLO, WI 53570
(608) 938-4383

PUBLIC WORKS DIRECTOR:

VILLAGE OF MONTICELLO
MR. KEVIN KOMPROOD
140 N. MAIN STREET
MONTICELLO, WI 53570
(608) 558-5461

PUBLIC WORKS SUPERVISOR:

VILLAGE OF MONTICELLO
MR. BRIAN GROSSEN
140 N. MAIN STREET
MONTICELLO, WI 53570
(608) 214-4034

NATURAL GAS UTILITIES:

WE ENERGIES
315 WILLIAM STREET
WATERTOWN, WI 53092
(608) 968-5735 (OFFICE)
(608) 214-6488 (CELL)

TELEPHONE UTILITY:

TDS TELECOM
MR. DAREN NEUENSCHWANDER
MANAGER FIELD SERVICES
827 16TH AVENUE
MONROE, WI 53566
(608) 328-1158 (OFFICE)
(608) 558-8563 (CELL)
(608) 328-1120 (FAX)

ELECTRIC UTILITY:

ALLIANT ENERGY
MS. BETSI BASS
1915 STATE HWY 69
MONROE, WI 53566
(608) 328-5323
OR MS. TAMMIE ISLEY
(608) 328-5349

CABLE TELEVISION UTILITY:

MEDIACOM
3033 ASBURY ROAD
DUBUQUE, IA 52001
(800) 874-2924

ENGINEER:

DELTA 3
EVERY ANGLE COVERED
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898 JACKSON STREET DUBUQUE, IOWA 52001 PHONE: (563) 542-9055

PROPOSED 2021 STREAM IMPROVEMENTS - WEST BRANCH LITTLE SUGAR RIVER

MONTICELLO, WI

PROJECT LOCATION: MONTICELLO WISCONSIN - VARIOUS LOCATIONS ALONG LITTLE SUGAR RIVER
OWNER: VILLAGE OF MONTICELLO: 140 N. MAIN ST. P.O. BOX 147 MONTICELLO, WI 53570

REVISIONS:		
NO.	DATE	DESCRIPTION
1	4/11/18	REBID
AS-BUILT:		BY:
--/--/----		-.----

PRELIMINARY	
PROJECT NUMBER	D18-029
SHEET SCALE	NOT TO SCALE
DRAWN BY	C. COYIER
DATE ISSUED	NOVEMBER 18, 2020
SHEET DESC.	TITLE SHEET & PROJECT LOCATION MAP

SHEET TITLE:

G000

SHEET NUMBER # **01 of ###**

LEGEND

EX. CON. MANHOLE
EX. ECC. MANHOLE
EX. LIFT STATION
EX. CLEAN OUT
EX. FIRE HYDRANT
EX. WATER SERVICE
EX. WATER VALVE
EX. YARD HYDRANT
EX. CATCH BASIN
EX. STORM INLET
EX. NATURAL GAS VALVE
EX. NATURAL GAS METER
EX. POWER POLE
EX. LIGHT POLE
EX. WARNING SIREN
EX. TEL. PEDESTAL
EX. MAILBOX
EX. LP TANK
EX. SATELLITE DISH
Ex. POST OR POLE
EX. STREET SIGN
EX. EVERGREEN TREE
EX. DECIDUOUS TREE
EX. TREE STUMP
EX. BUSH/SHRUB
EX. TREE/BRUSH LINE
EX. WINDMILL
EX. PARK BENCH
EX. BENCHMARK
SURVEY CONTROL POINT
EX. PROPERTY PIN
R/W — RIGHT-OF-WAY
P/L — PROPERTY LINE
EASEMENT
San. Lat. — EX. SAN. S. LATERAL
6" San. S. — EX. 6" SAN. S. MAIN
8" San. S. — EX. 8" SAN. S. MAIN
10" San. S. — EX. 10" SAN. S. MAIN
12" San. S. — EX. 12" SAN. S. MAIN
15" San. S. — EX. 15" SAN. S. MAIN
EX. FLOW DIRECTION
EX. CAPPED SERVICE
EX. WATER SERVICE
4" Water — EX. 4" WATER MAIN
6" Water — EX. 6" WATER MAIN
8" Water — EX. 8" WATER MAIN
10" Water — EX. 10" WATER MAIN
12" Water — EX. 12" WATER MAIN
12" St. Sewer — EX. <12" STORM SEWER
12" St. Sewer — EX. 12" STORM SEWER
15" St. Sewer — EX. 15" STORM SEWER
18" St. Sewer — EX. 18" STORM SEWER
24" St. Sewer — EX. 24" STORM SEWER
27" St. Sewer — EX. 27" STORM SEWER
30" St. Sewer — EX. 30" STORM SEWER
36" St. Sewer — EX. 36" STORM SEWER
42" St. Sewer — EX. 42" STORM SEWER
48" St. Sewer — EX. 48" STORM SEWER
EX. CURB AND GUTTER
GAS — EX. U.GRD N. GAS UTILITY
UGE — EX. U.GRD ELECTRIC UTILITY
UGC — EX. U.GRD CABLE TV UTILITY
TEL — EX. U.GRD TELEPHONE UTILITY
FO — EX. U.GRD FIBER OPTIC UTILITY
OHE — EX. OVERHEAD ELECTRIC
EX. FENCE
EX. RAILROAD TRACKS
99 — EX. CONTOUR
EX. DRAINAGE SWALE

PROP. SANITARY SEWER LATERAL
PROP. <6" SANITARY SEWER MAIN
PROP. 6" SANITARY SEWER MAIN
PROP. 8" SANITARY SEWER MAIN
PROP. 10" SANITARY SEWER MAIN
PROP. 12" SANITARY SEWER MAIN
PROP. 15" SANITARY SEWER MAIN
PROP. 18" SANITARY SEWER MAIN
PROP. CIPP LINER
PROP. FLOW DIRECTION
PROP. WATER SERVICE
PROP. <4" WATER MAIN
PROP. 4" WATER MAIN
PROP. 6" WATER MAIN
PROP. 8" WATER MAIN
PROP. 10" WATER MAIN
PROP. 12" WATER MAIN
PROP. 15" WATER MAIN
PROP. <12" STORM SEWER
PROP. 12" STORM SEWER
PROP. 15" STORM SEWER
PROP. 18" STORM SEWER
PROP. 24" STORM SEWER
PROP. 30" STORM SEWER
PROP. 36" STORM SEWER
PROP. 48" STORM SEWER
PROP. CURB AND GUTTER
PROP. CURB BACK OPENING
GAS — PROP. U.GRD GAS UTILITY
UGE — PROP. U.GRD ELECTRIC UTILITY
UGCTV — PROP. U.GRD CABLE TV UTILITY
UGT — PROP. U.GRD TELEPHONE UTILITY
FIBER — PROP. U.GRD FIBER OPTIC UTILITY
O::E — PROP. OVERHEAD ELECTRIC
CAUTION NATURAL GAS — PROP. CROSSING OF N. GAS UTILITY
PROP. UTILITY POLE
PROP. LIGHT POLE
PROP. FENCE
TEMPORARY EASEMENT
CONSTRUCTION EASEMENT
ESTIMATED DISTURBANCE LIMITS
99 — PROP. CONTOUR
PROP. DRAINAGE SWALE
PROP. SILT FENCE
PROP. EROSION CONTROL SEDIMENT LOG
PROP. PAVEMENT MARKING
PAINTED TRAFFIC ARROW
ADA PARKING DESIGNATION
10 — PARKING STALL COUNT
5'R / 0::00 — RADIUS POINT/SIZE STA. ON CENTERLINE
PROP. HANDICAP RAMP WITH DETECTABLE WARNING FIELD
SOIL BORING LOCATION
RIVER FLOW DIRECTION
PROP. 4' DIA. SANITARY MANHOLE
PROP. 5' DIA. SANITARY MANHOLE
PROP. MANHOLE CHIMNEY REHABILITATION / TOP ADJUSTMENT
PROP. SANITARY LIFT STATION

PROP. TYPE "X" CURB & GUTTER
PROP. REVERSE-PITCH CURB & GUTTER
PROP. HOT MIX ASPHALT PAVEMENT (DRIVEWAY)
PROP. 4" CONCRETE SIDEWALK
PROP. 6" CONCRETE PAVEMENT
PROP. 8" CONCRETE PAVEMENT
PROP. GRAVEL SHOULDER / DRIVEWAY
EROSION MATTING (MILD SLOPES)
EROSION MATTING (STEEP SLOPES)
PROP. REGRADING AND LANDSCAPING
PROP. RIP-RAP
PROP. STORM STRUCTURES - PROFILE
PROP. STORM PIPE(RCP) - PROFILE
PROP. STORM PIPE(CMP OR HDPE) - PROFILE
PROP. SANITARY STRUCTURE - PROFILE
PROP. WATER MAIN PIPE - PROFILE
PROP. CLAY LINER - PROFILE
PROP. SANITARY SEWER FORCE MAIN - PROFILE
PROP. SPOT REPAIR - PROFILE / PLAN VIEW
PROP. CASING PIPE - PROFILE
PROP. CLEARING AND GRUBBING
PROP. BUILDING REMOVAL
PROP. SIDEWALK REMOVAL
PROP. PRESSURE-REDUCING VALVE STATION
PROP. FIRE HYDRANT
PROP. WATER SERVICE
PROP. WATER SERVICE WITH VALVE BOX SLEEVE
PROP. WATER VALVE
PROP. WATER BEND - HORIZONTAL
PROP. WATER BEND - VERTICAL
PROP. WATER BEND <5°
PROP. WATER TEE
PROP. WATER CROSS
PROP. WATER REDUCER
PROP. MJ PLUG
PROP. 4' DIA. STORM MANHOLE
PROP. 5' DIA. STORM MANHOLE
PROP. INLET
PROP. 4' DIA. INLET
PROP. 6' DIA. INLET
PROP. 4' DIA. CATCH BASIN- W/ 2'X3' CASTING
PROP. 5' DIA. CATCH BASIN- W/ 2'X3' CASTING
PROP. 6' DIA. CATCH BASIN- W/ 2'X3' CASTING
PROP. 4'X6' CATCH BASIN W/2'X3' CASTING
PROP. CURB OPENING CASTING
PROP. 2'X3' CATCH BASIN
PROP. ADJUSTED CATCH BASIN TOP
PROP. WISDOT TYPE 8 INLET
PROP. WISDOT TYPE 9 INLET
PROP. CMP ENDWALL
PROP. RCP ENDWALL

KEY NOTES [100] :

100 PROPOSED SILT FENCE FOR EROSION CONTROL.
101 PROPOSED SEDIMENT LOG FOR EROSION CONTROL.
102 PROPOSED TRACKING PAD FOR EROSION CONTROL.
103 RE-GRADE YARD/DITCH LINE (MIN. SLOPE 1.0%).
104 PROPOSED EROSION MAT CLASS I, TYPE 'B'.
105 INSTALL TYPE 'D' INLET PROTECTION.
106 PROPOSED MAIL BOX RELOCATION.
107 ITEM TO REMAIN.
108 CONTRACTOR TO REMOVE ITEM.
200 PROPOSED SANITARY SEWER [SIZE].
201 NEW SANITARY SEWER LATERAL [SIZE].
202 REPLACE EXISTING SANITARY SEWER LATERAL.
203 RECONNECT EXISTING SANITARY SEWER LATERAL.
204 CONNECTION TO EXISTING SANITARY SEWER PIPE/STRUCTURE.
205 REMOVE EXISTING SANITARY SEWER PIPE /STRUCTURE.
206 REHABILITATE SANITARY MANHOLE; SEE TABLE 'B'.
207 ADJUST MANHOLE CASTING, NEW RINGS, & SEAL.
208 ABANDON AND CAP EXISTING SANITARY SEWER.
209 ABANDON EXISTING SANITARY SEWER LATERAL.
210 CONTRACTOR TO FIELD VERIFY SANITARY SEWER LATERAL LOCATION/ACTIVITY AND REPLACE ACCORDING TO ENGINEER.
211 SANITARY SEWER SPOT REPAIR [No].
212 PROPOSED CURED-IN-PLACE PIPE LINER FOR SANITARY SEWER REHABILITATION.
300 PROPOSED WATER MAIN [SIZE].
301 NEW WATER SERVICE [SIZE].
302 REPLACE EXISTING WATER SERVICE WITH 1" WATER SERVICE.
303 RECONNECT EXISTING WATER SERVICE.
304 DIRECTIONAL DRILL PROPOSED WATER SERVICE.
305 CONNECTION TO EXISTING WATER MAIN.
306 EXISTING HYDRANT TO BE REMOVED AND SALVAGED TO OWNER.
307 REMOVE EXISTING WATER MAIN VALVE BOX/STRUCTURE.
308 ADJUST EXISTING WATER MAIN VALVE BOX.
309 ABANDON, DRAIN, & CAP EXISTING WATER MAIN.
310 ABANDON EXISTING WATER SERVICE.
311 CONTRACTOR TO FIELD VERIFY WATER SERVICE LOCATION/ACTIVITY AND REPLACE ACCORDING TO ENGINEER.
400 PROPOSED STORM SEWER [SIZE].
401 PROPOSED 6" DRAIN TILE IN SUB BASE.
402 CONNECTION TO EXISTING STORM SEWER PIPE/STRUCTURE.
403 REMOVE EXISTING STORM SEWER PIPE/STRUCTURE.
404 ABANDON & CAP EXISTING STORM SEWER.
405 ADJUST EXISTING STORM STRUCTURE.
500 TREE & STUMP TO BE REMOVED.
501 SHRUB TO BE REMOVED.
502 CLEAR AND GRUB BRUSH LINE AS NECESSARY TO COMPLETE CONSTRUCTION. ALL CLEARING TO BE VERIFIED BY PROJECT ENGINEER.
503 REMOVE AND REINSTALL/REPLACE EXISTING LANDSCAPING, FENCE, RETAINING WALL, ETC. (IF NECESSARY).
504 REMOVE EXISTING LANDSCAPING, FENCE, RETAINING WALL, ETC.
505 POLE/PEDESTAL TO BE SECURED BY UTILITY COMPANY DURING CONSTRUCTION.
506 POLE TO BE RELOCATED BY UTILITY COMPANY.
507 GUY WIRE TO BE RELOCATED BY UTILITY COMPANY.
508 PEDESTAL TO BE RELOCATED BY UTILITY COMPANY.
509 UTILITY CONFLICT - TO BE RELOCATED/ADJUSTED BY UTILITY COMPANY.
510 POTENTIAL UTILITY CONFLICT - VERIFY WITH UTILITY COMPANY.
511 **CAUTION!** - UTILITY CROSSING.
512 CONNECTION TO EXISTING HAND HOLE.
513 2" DIAMETER INNER-DUCT.
514 CAP END OF INNER-DUCT.
600 REMOVE EXISTING CURB & GUTTER.
601 PROPOSED 24" CONCRETE CURB & GUTTER.
602 PROPOSED 30" CONCRETE CURB & GUTTER.
603 PROPOSED 36" CONCRETE CURB & GUTTER.
604 MATCH TO EXISTING CURB & GUTTER.
605 PROVIDE TYPE 'X' CURB.
606 PROVIDE REVERSE-PITCH CURB & GUTTER
607 PROVIDE CURB TAPER.
608 REMOVE ASPHALT/CONCRETE/WALL/STEPS.
609 PROPOSED 4" CONCRETE SIDEWALK.
610 PROPOSED 6" CONCRETE SIDEWALK/DRIVEWAY.
611 PROPOSED 6" CONCRETE PAVEMENT.
612 PROPOSED 8" CONCRETE PAVEMENT.
613 PROPOSED CONCRETE STEPS. STEP RISE HEIGHT AND STEP TREAD DEPTH SHALL MEET APPLICABLE BUILDING CODES. CONTRACTOR SHALL CONFIRM REQUIRED NUMBER OF STEPS WITH PROJECT ENGINEER PRIOR TO INSTALL.
614 PROPOSED 2' GRAVEL SHOULDER.
615 REGRADE EXISTING GRAVEL.
616 PROPOSED GRAVEL DRIVEWAY.
617 REMOVE & REPLACE GRAVEL DRIVEWAY.
618 REMOVE GRAVEL DRIVEWAY & REPLACE WITH BITUMINOUS DRIVEWAY/APRON.
619 REMOVE & REPLACE HMA PAVEMENT.
620 REMOVE & REPLACE HMA PAVEMENT DRIVEWAY.
621 PROPOSED HMA PAVEMENT.
622 MATCH TO EXISTING EDGE PAVEMENT.
623 PROPOSED RESIDENTIAL HMA PAVEMENT DRIVEWAY.
624 PROPOSED COMMERCIAL HMA PAVEMENT DRIVEWAY.
625 REMOVE & REPLACE 4" CONCRETE SIDEWALK
626 REMOVE & REPLACE 6" CONCRETE SIDEWALK/DRIVEWAY.
627 PROPOSED HANDICAP RAMP WITH - D. WARN. FIELD (4 S.F.)(1 -2'X2').
628 PROPOSED HANDICAP RAMP WITH - D. WARN. FIELD (8 S.F.)(2 -2'X2').
629 PROPOSED HANDICAP RAMP WITH - D. WARN. FIELD (12 S.F.)(3- 2'X2').
630 PROPOSED HANDICAP RAMP WITH - D. WARN. FIELD (16 S.F.)(4- 2'X2').
631 SAWCUT PCC PAVEMENT.
632 SAWCUT HMA PAVEMENT.
633 PROPOSED BITUMINOUS WEDGE CURB.

NOTES:

TRAFFIC CONTROL NOTE:
ALL CONTRACTORS MUST CONFORM TO THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) AND THE REQUIREMENTS OF THE WISCONSIN DEPARTMENT OF TRANSPORTATION. ONE LANE OF TRAFFIC MUST REMAIN OPEN DURING AND AFTER ALL CONSTRUCTION ACTIVITIES FOR EMERGENCY VEHICLE ACCESS.

STREET SIGN NOTE:
CONTRACTOR WILL BE RESPONSIBLE FOR REMOVING, STORING, AND RESETTING ALL PERMANENT SIGNS. CONTRACTOR IS RESPONSIBLE FOR PROTECTING ALL EXISTING SIGNS UNTIL REMOVED. CONTRACTOR IS RESPONSIBLE FOR ANY AND ALL TEMPORARY SIGNS THAT MAY BE REQUIRED.

TRAFFIC SIGN NOTE:
CONTRACTOR TO PROVIDE TEMPORARY TRAFFIC SIGNS FOR ANY TRAFFIC SIGNS DISTURBED DURING CONSTRUCTION. ALL DISTURBED TRAFFIC SIGNS MUST BE REPLACED AND INSTALLED AS PER LOCAL REGULATIONS AT THE COMPLETION OF THE PROJECT.

EROSION CONTROL NOTE:
CONTRACTOR TO INSTALL BACKFILL MATERIAL INTO THE EXCAVATED TRENCH AS SOON AS POSSIBLE TO IMPLEMENT EROSION CONTROL.

PROPERTY LINE AND RIGHT-OF-WAY NOTE:
ALL RIGHT-OF-WAYS AND PROPERTY LINES SHOWN ARE APPROXIMATE AND FOR ILLUSTRATIVE PURPOSES ONLY. A PROPERTY SURVEY PERFORMED BY A PROFESSIONAL LAND SURVEYOR SHOULD BE COMPLETED TO DETERMINE THE ACTUAL PROPERTY LINE AND RIGHT-OF-WAY LOCATIONS.

SAW CUT NOTE:
CONTRACTOR TO PROVIDE FULL DEPTH SAW CUTS AND REPLACE PAVEMENT.

UTILITIES' NOTE:
THE LOCATIONS OF THE UNDERGROUND UTILITIES SHOWN ON THE PLAN HAVE BEEN OBTAINED BY FIELD CHECKS, A UTILITY LOCATE THROUGH DIGGER'S HOTLINE , AND SEARCHES OF AVAILABLE RECORDS. IT IS BELIEVED THAT THEY ARE ESSENTIALLY CORRECT, BUT THE SURVEYOR DOES NOT GUARANTEE THEIR ACCURACY OR COMPLETENESS. THE CONTRACTOR SHOULD VERIFY LOCATIONS W/ THE UTILITY COMPANIES AND ***VILLAGE OF MONTICELLO*** PRIOR TO STARTING ANY EXCAVATION.

SANITARY SEWER LATERAL NOTE:
THE LOCATION OF EXISTING SANITARY SEWER LATERALS ARE APPROXIMATE. THE CONTRACTOR SHALL VERIFY THE LOCATION AND STATUS OF EACH SANITARY SEWER LATERAL ENCOUNTERED. ONLY ACTIVE SANITARY SEWER LATERALS SHALL BE CONNECTED TO THE NEW SANITARY SEWER MAIN.

CASTING NOTE:
ALL EXISTING MANHOLE CASTINGS AND STORM SEWER CASTINGS TO BE REMOVED AND/OR REPLACED SHALL BE SALVAGED TO THE ***VILLAGE OF MONTICELLO***.

WATER SERVICE NOTE:
CONTRACTOR TO VERIFY STATUS AND LOCATION OF EACH WATER SERVICE ENCOUNTERED. CONTRACTOR TO REPLACE ACCORDING TO ENGINEER. ONLY ACTIVE WATER SERVICES SHALL BE CONNECTED TO THE NEW WATER MAIN.

SITE RESTORATION NOTE:
CONTRACTOR WILL BE RESPONSIBLE FOR REPLACEMENT OF ALL DISTURBED PROJECT AREA COMPONENTS INCLUDING, BUT NOT LIMITED TO, EXISTING CONCRETE, BITUMINOUS PAVEMENT, GRAVEL, CULVERTS, WATER AND SANITARY SEWER SYSTEM COMPONENTS, STORM SEWER SYSTEM COMPONENTS, TREES, LAWN ORNAMENTS, FENCING, YARD LANDSCAPING, RETAINING WALLS, MAILBOXES, AND LANDSCAPE AREAS.

PROPERTY DAMAGES:
THE CONTRACTOR IS RESPONSIBLE FOR THE PRESERVATION OF ADJACENT PROPERTY AND FOR ANY DAMAGE TO THE SITE OR TO ADJACENT PROPERTY INCIDENTAL TO THE CONSTRUCTION ACTIVITIES. AFTER THE COMPLETION OF CONSTRUCTION, ANY AREAS ADJACENT TO THE CONSTRUCTION SITE DAMAGED BY THE CONTRACTOR DURING EXECUTION OF THE CONTRACT SHALL BE RESTORED TO MATCH THE PRECONSTRUCTION CONDITIONS.

ENGINEER:
DELTA 3
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898 JACKSON STREET DUBUQUE, IOWA 52001 PHONE: (563) 542-9005
Sub-Consultant:

PROPOSED 2021 STREAM IMPROVEMENTS - WEST BRANCH LITTLE SUGAR RIVER

MONTICELLO, WI

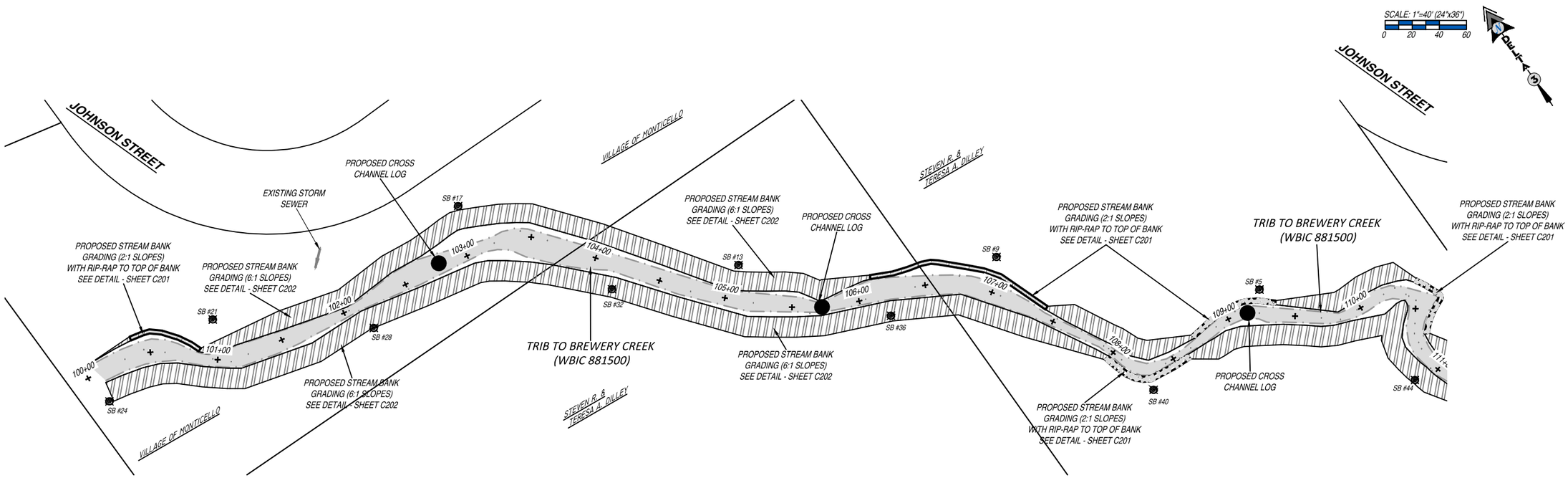
PROJECT LOCATION: MONTICELLO WISCONSIN - VARIOUS LOCATIONS ALONG LITTLE SUGAR RIVER
OWNER: VILLAGE OF MONTICELLO: 140 N. MAIN ST. P.O. BOX 147 MONTICELLO, WI 53570

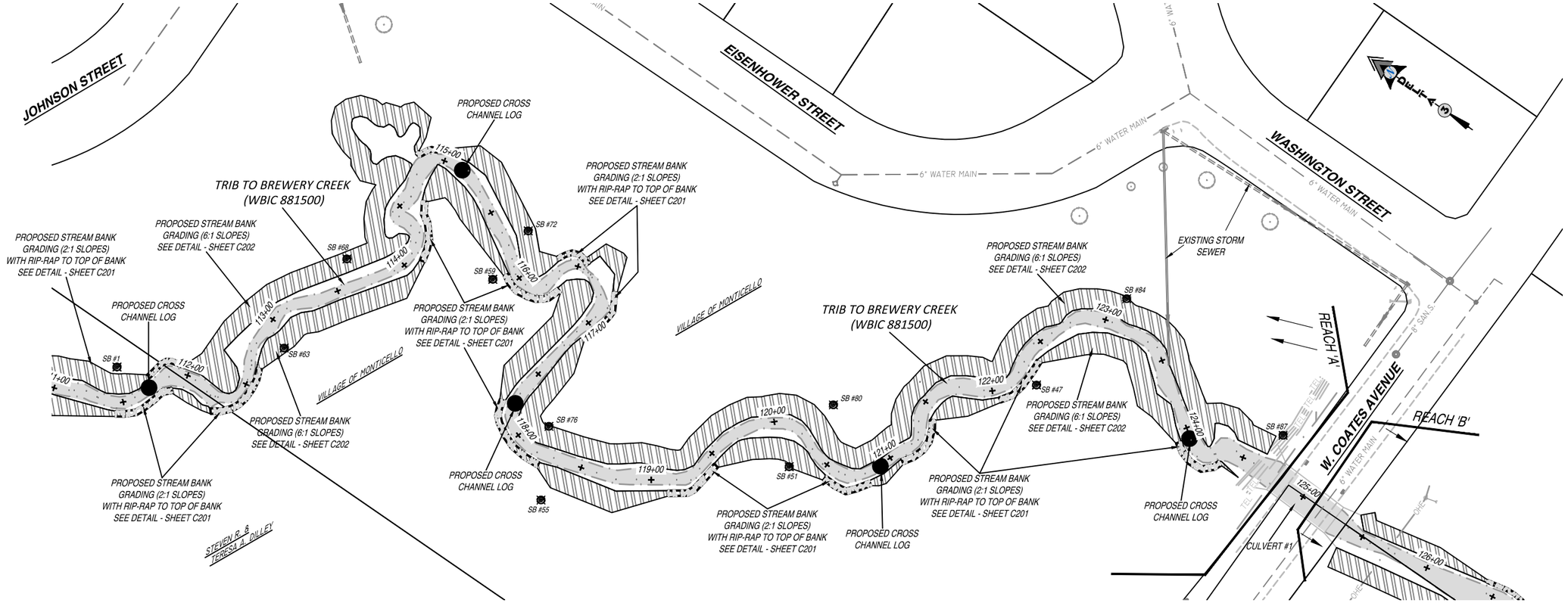
REVISIONS:		
NO.	DATE	DESCRIPTION
1	4/11/18	REBID
AS-BUILT:		BY:
--/--/----		------

PRELIMINARY	
PROJECT NUMBER	D18-029
SHEET SCALE	NOT TO SCALE
DRAWN BY	NAME
DATE ISSUED	NOVEMBER 18, 2020
SHEET DESC.	CIVIL SITE LEGEND & GENERAL NOTES

SHEET TITLE:
G002

SHEET NUMBER # 02 of ###





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898 JACKSON STREET, DUBUQUE, IOWA 52001 — PHONE: (563) 542-9005

FOR QUESTIONS REGARDING THIS PROJECT, PLEASE CONTACT:

MR. BART P. NIES, P.E.
DELTA 3 ENGINEERING, INC.
TELEPHONE: (608) 348-5355

PROPOSED 2021 STREAM IMPROVEMENTS - WEST BRANCH LITTLE SUGAR RIVER

MONTICELLO, WI

PROJECT LOCATION: MONTICELLO WISCONSIN - VARIOUS LOCATIONS ALONG LITTLE SUGAR RIVER
OWNER: VILLAGE OF MONTICELLO: 140 N. MAIN ST. P.O. BOX 147 MONTICELLO, WI 53570

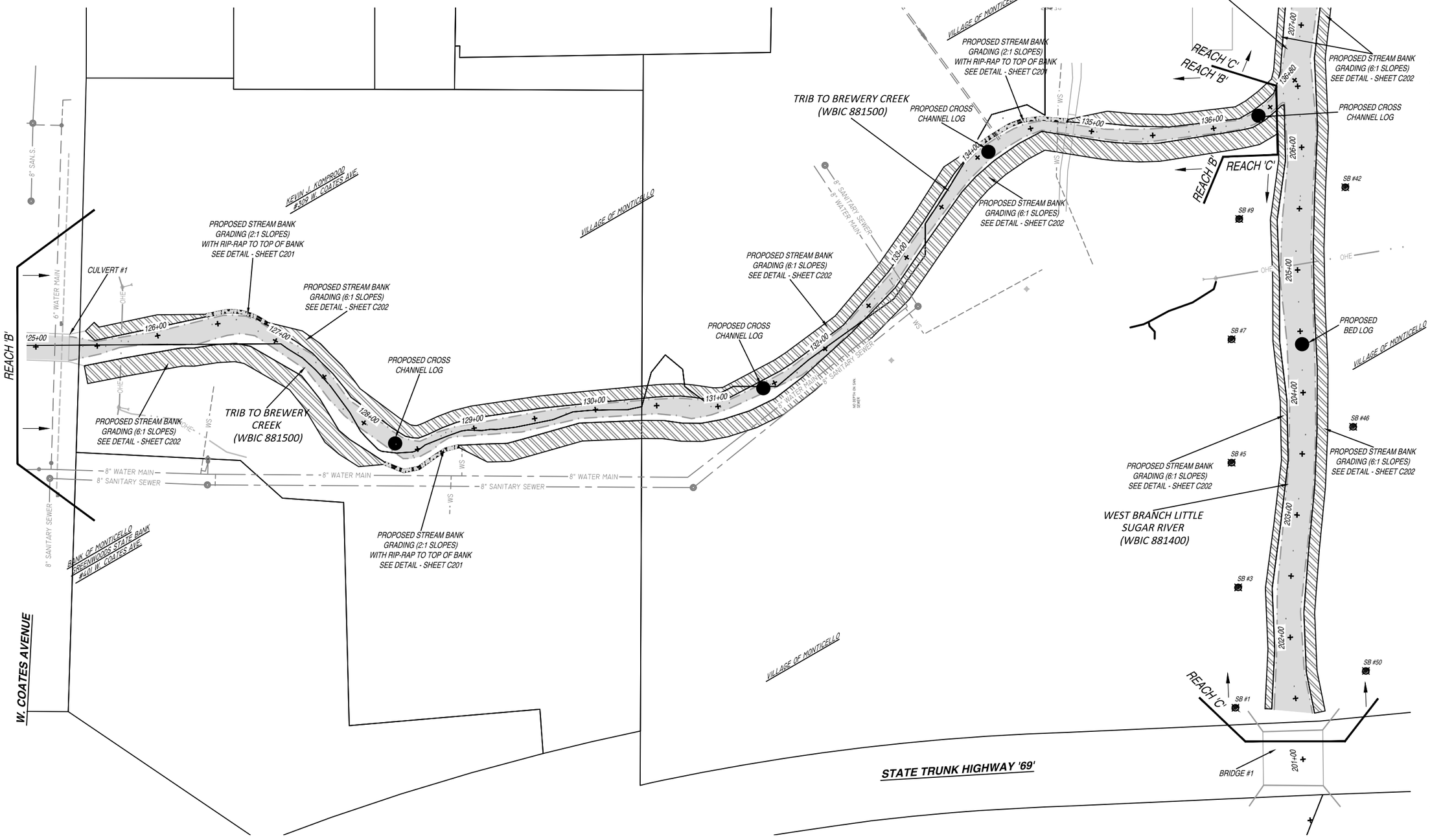
REVISIONS:		
NO.	DATE	DESCRIPTION
AS-BUILT:		BY:
--/--/----		----

PRELIMINARY	
PROJECT NUMBER	D18-029
SHEET SCALE	HORZ.-1" =40'
DRAWN BY	C.COYIER
DATE ISSUED	NOVEMBER 18, 2020
SHEET DESC.	PLAN VIEW - NORTH LEG

SHEET TITLE:

C101

SHEET NUMBER # **03 of ###**



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PROPOSED 2021 STREAM IMPROVEMENTS - WEST BRANCH LITTLE SUGAR RIVER

MONTICELLO, WI

PROJECT LOCATION: MONTICELLO WISCONSIN - VARIOUS LOCATIONS ALONG LITTLE SUGAR RIVER
OWNER: VILLAGE OF MONTICELLO; 140 N. MAIN ST. P.O. BOX 147 MONTICELLO, WI 53570

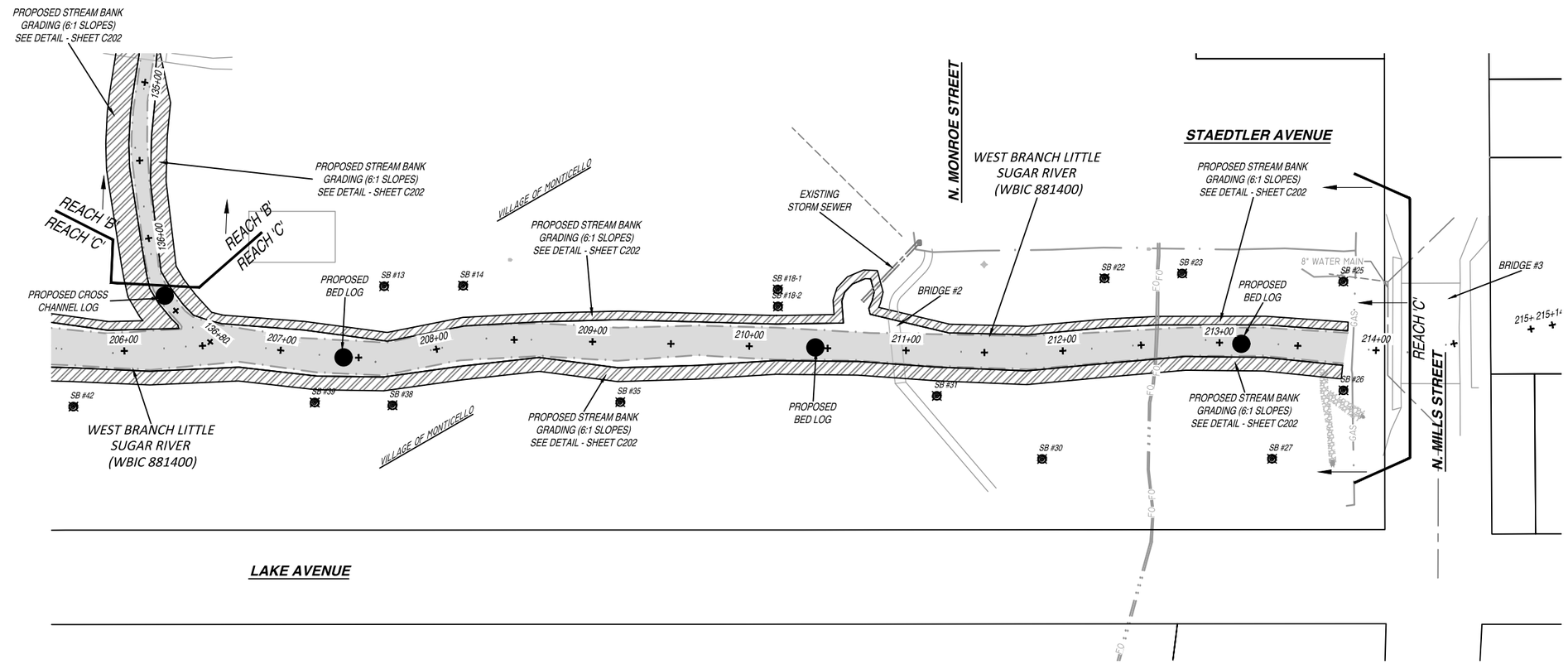
REVISIONS:		
NO	DATE	DESCRIPTION
AS-BUILT:		BY:
-/-/----		-,-----

PRELIMINARY	
PROJECT NUMBER	D18-029
SHEET SCALE	HORZ.-1" =40'
DRAWN BY	C.COYIER
DATE ISSUED	NOVEMBER 18, 2020
SHEET DESC.	PLAN VIEW - NORTH LEG

SHEET TITLE:

C102

SHEET NUMBER # 04 of ###



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898 JACKSON STREET, DUBUQUE, IOWA 52001 — PHONE: (563) 542-9005

FOR QUESTIONS REGARDING THIS PROJECT, PLEASE CONTACT:

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DELTA 3 ENGINEERING, INC.
TELEPHONE: (608) 348-5355

PROPOSED 2021 STREAM IMPROVEMENTS - WEST BRANCH LITTLE SUGAR RIVER

MONTICELLO, WI

PROJECT LOCATION: MONTICELLO WISCONSIN - VARIOUS LOCATIONS ALONG LITTLE SUGAR RIVER
OWNER: VILLAGE OF MONTICELLO; 140 N. MAIN ST; P.O. BOX 147 MONTICELLO, WI 53570

REVISIONS:		
NO.	DATE	DESCRIPTION
AS-BUILT:		BY:
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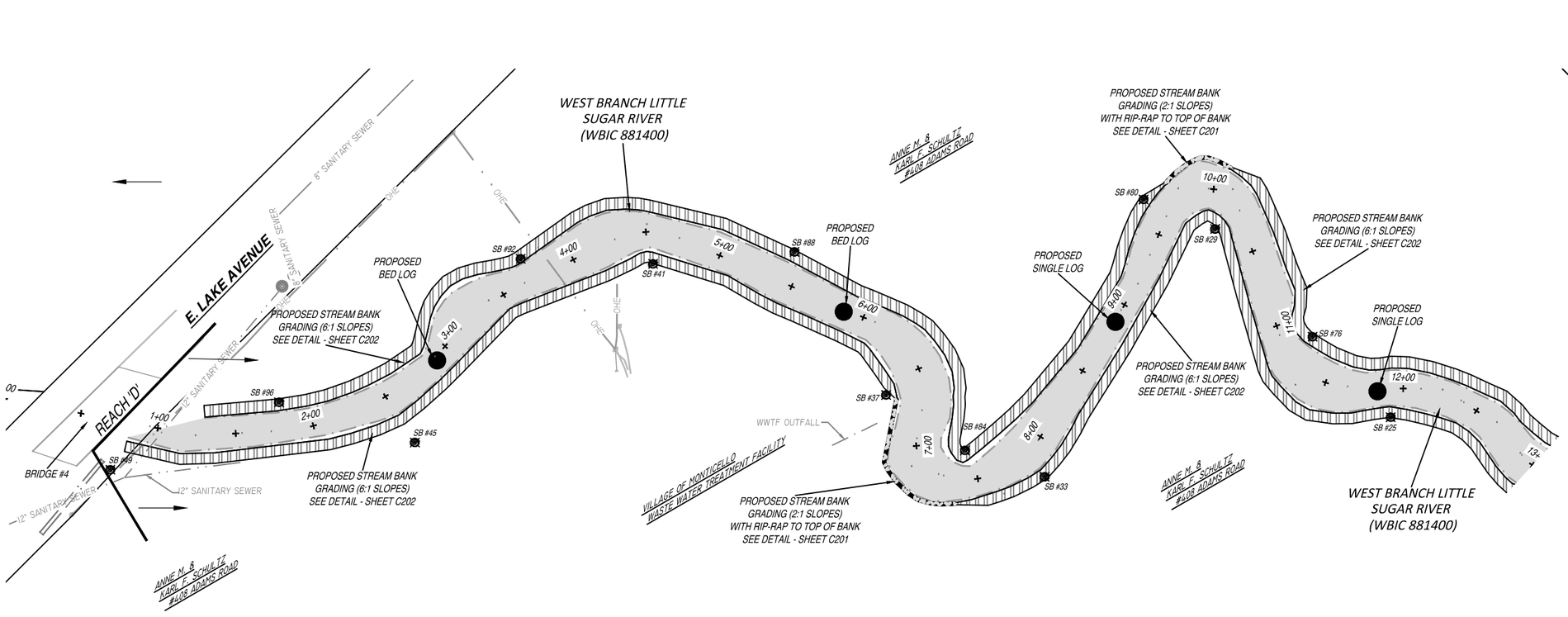
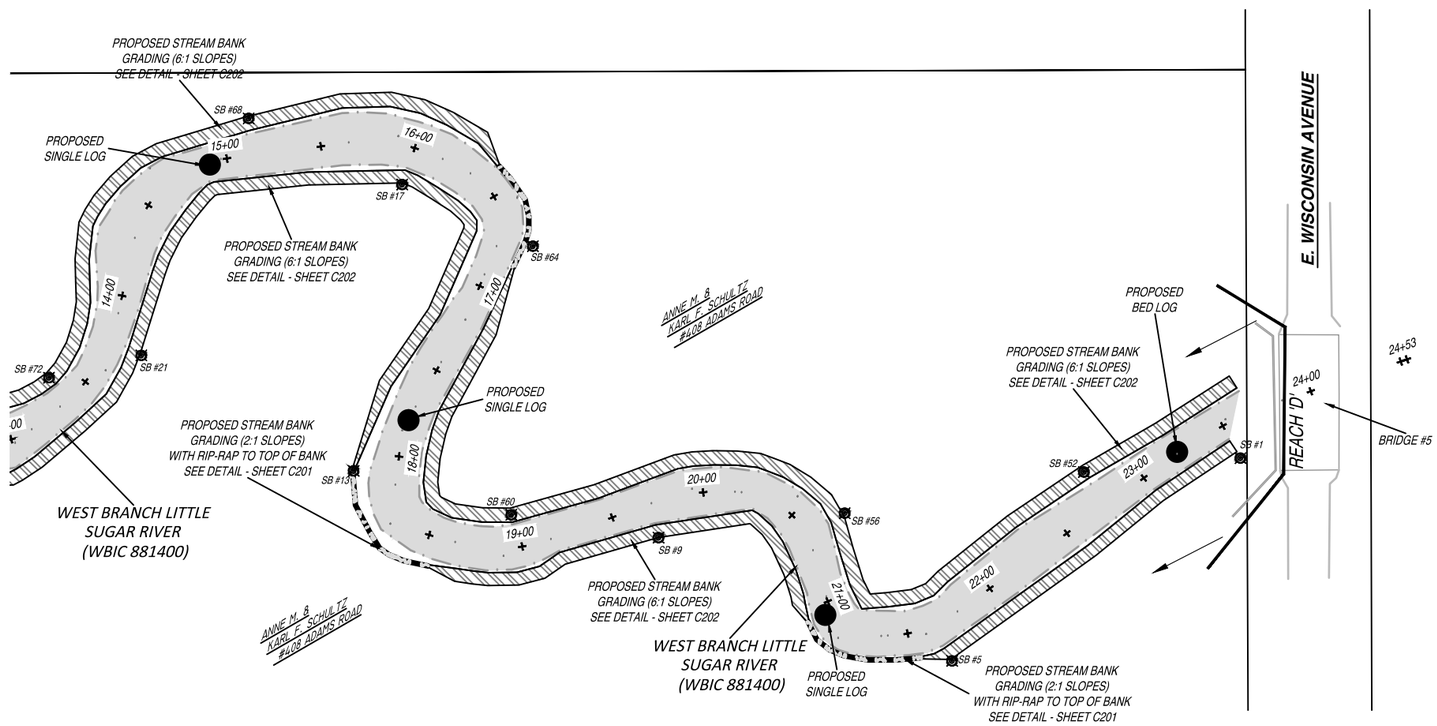
PRELIMINARY	
PROJECT NUMBER	D18-029
SHEET SCALE	HORZ.-1" =40'
DRAWN BY	C.COYIER
DATE ISSUED	NOVEMBER 18, 2020
SHEET DESC.	PLAN VIEW - WEST LEG

SHEET TITLE:

C103

SHEET NUMBER # **05 of ###**





ENGINEER:

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898 JACKSON STREET, DUBUQUE, IOWA 52001 — PHONE: (563) 542-9005

FOR QUESTIONS REGARDING THIS PROJECT, PLEASE CONTACT:

MR. BART P. NIES, P.E.
DELTA 3 ENGINEERING, INC.
TELEPHONE: (608) 348-5355

PROPOSED 2021 STREAM IMPROVEMENTS - WEST BRANCH LITTLE SUGAR RIVER

MONTICELLO, WI

PROJECT LOCATION: MONTICELLO WISCONSIN - VARIOUS LOCATIONS ALONG LITTLE SUGAR RIVER
OWNER: VILLAGE OF MONTICELLO: 140 N. MAIN ST. P.O. BOX 147 MONTICELLO, WI 53570

REVISIONS:		
NO.	DATE	DESCRIPTION
AS-BUILT:		BY:
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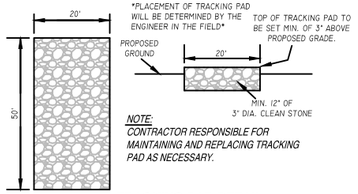
PRELIMINARY	
PROJECT NUMBER	D18-029
SHEET SCALE	HORZ.-1" =40'
DRAWN BY	C.COYIER
DATE ISSUED	NOVEMBER 18, 2020
SHEET DESC.	PLAN VIEW - SOUTH LEG

SHEET TITLE:

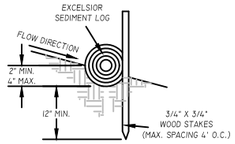
C104

SHEET NUMBER # 06 of ###

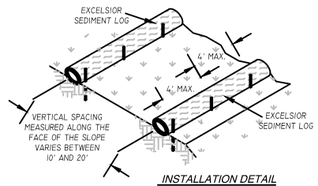


NOTE:
CONTRACTOR RESPONSIBLE FOR MAINTAINING AND REPLACING TRACKING PAD AS NECESSARY.

TRACKING PAD DETAIL
SCALE: N.T.S.



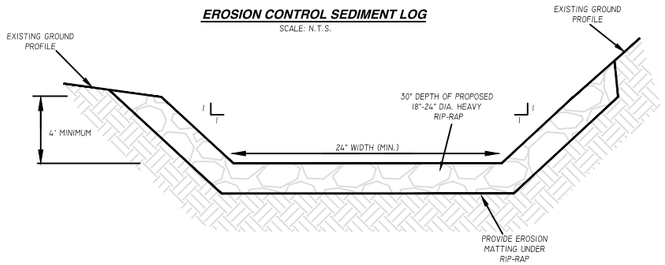
TRENCH DETAIL
SCALE: N.T.S.



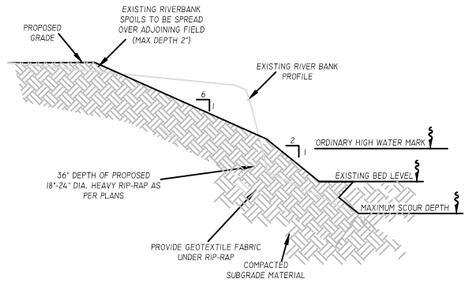
INSTALLATION DETAIL
SCALE: N.T.S.

TYPE 1 = 20" ROLL (HEAVY DUTY CONCENTRATED FLOW)
TYPE 2 = 12" ROLL (HEAVY CONCENTRATED FLOW)
TYPE 3 = 9" ROLL (MILD CONCENTRATED FLOW)
TYPE 4 = 6" ROLL (LOW CONCENTRATED FLOW)

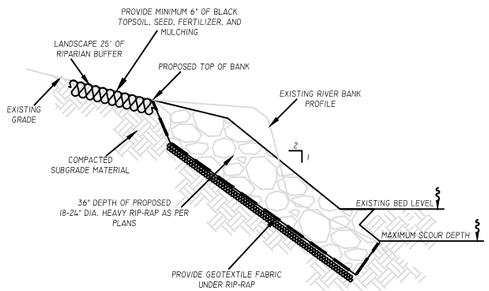
EROSION CONTROL SEDIMENT LOG
SCALE: N.T.S.



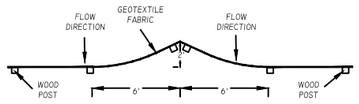
DRAINAGE DITCH DETAIL B-B
SCALE: N.T.S.



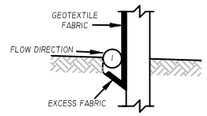
STREAM BANK GRADING DETAIL
SCALE: N.T.S.



STREAM BANK GRADING WITH RIP-RAP TO TOP OF BANK DETAIL
SCALE: N.T.S.



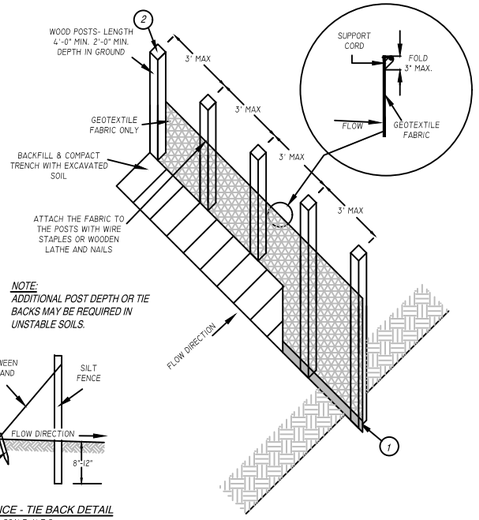
SILT FENCE - JOINING TWO LENGTHS DETAIL
SCALE: N.T.S.



SILT FENCE - TRENCH DETAIL
SCALE: N.T.S.

GENERAL NOTES- SILT FENCE:
DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE WISDOT STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION (MOST CURRENT EDITION) AND THE APPLICABLE SPECIAL PROVISIONS.

1. *TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.*
2. *WOOD POST SHALL BE A MINIMUM SIZE OF 1-1/8" X 1-1/8" OF OAK OR HICKORY.*

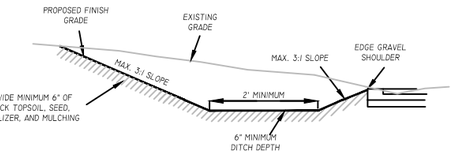


NOTE:
ADDITIONAL POST DEPTH OR TIE BACKS MAY BE REQUIRED IN UNSTABLE SOILS.

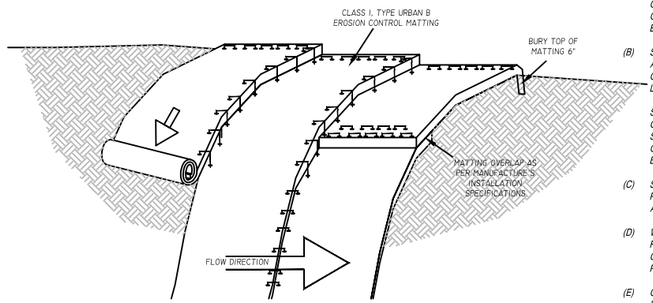
SILT FENCE - TIE BACK DETAIL
SCALE: N.T.S.

SILT FENCE INSTALLATION DETAIL
SCALE: N.T.S.

SILT FENCE DETAILS
SCALE: N.T.S.



REGRADED DITCH DETAIL
SCALE: N.T.S.



EROSION MATTING NOTES:

1. *PREPARE SOIL BEFORE INSTALLING BLANKETS, INCLUDING APPLICATION OF FERTILIZER AND MULCH AND SEED.*
2. *BEGIN AT THE TOP OF THE SHOULDER (OR CHANNEL) BY ANCHORING THE BLANKET IN A 6" DEEP X 6" WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.*
3. *ROLL THE BLANKETS DOWN (STARTING AT DOWNSTREAM PROCEEDING UPSTREAM) HORIZONTALLY ACROSS THE SLOPE.*
4. *THE EDGES OF PARALLEL BLANKETS MUST BE STAPLED WITH MANUFACTURE'S RECOMMENDED OVERLAP.*
5. *WHEN BLANKETS MUST BE SPLICED DOWN THE SLOPE, PLACE BLANKETS END OVER END (SHINGLE STYLE) WITH AN OVERLAP. USE A DOUBLE ROW OF STAGGERED STAPLES 4" APART TO SECURE BLANKETS.*
6. *IN HIGH CHANNEL APPLICATIONS, A STAPLE SLOT IS RECOMMENDED AT 30 TO 40 FOOT INTERVALS. USE A ROW OF STAPLES 4" APART OVER THE ENTIRE WIDTH OF THE CHANNEL. PLACE A SECOND ROW 4" BELOW THE FIRST ROW IN A STAGERED PATTERN.*
7. *THE TERMINAL END OF THE BLANKETS MUST BE ANCHORED IN A 6" DEEP X 6" WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.*

EROSION MATTING - SLOPE INSTALLATION DETAIL
SCALE: N.T.S.

EROSION CONTROL NOTES:

1. *GENERAL EROSION NOTES AND MAINTENANCE MEASURES ARE ILLUSTRATED ON THE PLAN SHEETS. AFTER AWARD OF THE CONTRACT, THE GENERAL CONTRACTOR SHALL INSTALL ALL BEST MANAGEMENT PRACTICES AS SHOWN ON THE PLAN SHEETS. ONCE INSTALLED, THE GENERAL CONTRACTOR SHALL CONTACT DELTA 3 ENGINEERING, INC. (608-348-5355). ONCE NOTIFIED DELTA 3 ENGINEERING INC. WILL VISIT THE SITE WITHIN 5 DAYS TO REVIEW THE SITE WITH THE GENERAL CONTRACTORS SUPERINTENDENT. UPON VISITING THE SITE, THE CONSULTING ENGINEER AND THE GENERAL CONTRACTORS SUPERINTENDENT WILL REVIEW THE SITE FOR COMPLIANCE WITH THE EROSION CONTROL MEASURES. IF AND WHEN ALL BEST MANAGEMENT PRACTICES REQUIRED TO COMMENCE SITE CONSTRUCTION ARE IN PLACE, THE CONSULTING ENGINEER AND PROJECT SUPERINTENDENT WILL SIGN AND CERTIFY THIS FACT. THIS REVIEW AND CERTIFICATION SHALL TAKE PLACE PRIOR TO THE REQUIRED PRE-CONSTRUCTION MEETING. THE SITE SUPERINTENDENT SHALL MAINTAIN AN AS-BUILT COPY OF THE EROSION CONTROL MEASURES ON SITE AT ALL TIMES. ANY ACTIVITIES INVOLVING INSTALLATION OF BEST MANAGEMENT PRACTICES SHALL BE INDICATED ON THE AS-BUILT PLAN WITH AN INSTALLED TIME AND DATE. RECORDED INFORMATION SHALL BE PERMANENTLY PLACED ON THE SITE MAP INCLUDING ANY CHANGES MADE TO THE BEST MANAGEMENT PRACTICES. IF THE SITE MAP BECOMES HARD TO READ, THE INITIAL DRAWING SHALL BE SAVED AND A CLEAN COPY SHALL BE ISSUED IN ORDER TO CONTINUE RECORDING ANY ON-SITE EROSION CONTROL ACTIVITY.*
2. *A COMPLETE COPY OF ALL INSPECTION REPORTS, PLAN REVISIONS, ETC., MUST BE RETAINED AT THE PROJECT SITE AT ALL TIMES DURING DURATION OF THE PROJECT AND KEPT IN THE PERMANENT PROJECT RECORDS FOR AT LEAST FIVE YEARS FOLLOWING SUBMISSION OF THE NOTICE OF TERMINATION (NOT).*
3. *THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR INSURING THAT ALL SUB-CONTRACTORS INVOLVED IN GROUND DISTURBING ACTIVITY COMPLY WITH THE EROSION CONTROL REQUIREMENTS.*
4. *DAILY INSPECTIONS BY THE PROJECT SUPERINTENDENT AND MONTHLY INSPECTIONS BY THE OWNER'S CONSTRUCTION MANAGER MUST BE MADE TO DETERMINE THE EFFECTIVENESS OF THE EROSION CONTROL MEASURES. THE GENERAL CONTRACTOR IS TO INSPECT EROSION AND SEDIMENT CONTROLS WITHIN 24 HOURS AFTER A RAINFALL EVENT OF 0.5 INCHES OR GREATER. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE TO REPAIR OR REPLACE EROSION AND SEDIMENT CONTROL BEST MANAGEMENT PRACTICES AS NECESSARY WITHIN 24 HOURS OF INSPECTION.*
5. *ONCE THE SITE REACHES FINAL STABILIZATION, ALL PERMANENT EROSION AND SEDIMENTATION CONTROLS ARE INSTALLED AND ALL TEMPORARY EROSION AND SEDIMENTATION CONTROLS ARE REMOVED, THE GENERAL CONTRACTOR AND OWNER MUST COMPLETE A FINAL SITE INSPECTION. UPON APPROVAL BY OWNER, THE OWNER AND GENERAL CONTRACTOR, AS APPLICABLE, MUST COMPLETE AND SUBMIT A NOTICE OF TERMINATION (NOT) FORM TO BE SUBMITTED TO THE WISCONSIN DEPARTMENT OF NATURAL RESOURCES.*
6. *A RECORD OF THE DATES WHEN MAJOR GROUND-DISTURBING ACTIVITIES OCCUR, WHEN CONSTRUCTION ACTIVITIES TEMPORARILY OR PERMANENTLY CEASE ON A PORTION OF THE SITE, AND WHEN STABILIZATION MEASURES ARE INITIATED MUST BE MAINTAINED UNTIL THE NOT IS FILED. CONTROLS MUST BE IN PLACE DOWN GRADIENT OF GROUND-DISTURBING ACTIVITIES PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.*
7. *A LOG OF ALL INSPECTIONS BY FEDERAL, STATE, OR LOCAL STORM WATER OR OTHER ENVIRONMENTAL AGENCIES SHALL BE KEPT BY THE GENERAL CONTRACTOR. THE LOG SHALL INCLUDE THE DATE AND TIME OF VISIT AND WHETHER A REPORT WAS ISSUED OR WILL BE ISSUED AS A RESULT OF THE INSPECTION. ANY REPORTS ISSUED SHALL BE FAXED TO THE DELTA 3 ENGINEERING INC. 608-348-5455 (FAX).*
8. *SOIL STABILIZATION - THE PURPOSE OF SOIL STABILIZATION IS TO PREVENT SOIL FROM LEAVING THE SITE. IN THE NATURAL CONDITION, SOIL IS STABILIZED BY NATIVE VEGETATION. THE PRIMARY TECHNIQUE TO BE USED AT THIS PROJECT FOR STABILIZING SITE SOIL WILL BE TO PROVIDE A PROTECTIVE COVER OF TURF GRASS OR PAVEMENT.*

   (A) TEMPORARY SEEDING OR STABILIZATION - AREAS MAY BE STABILIZED TEMPORARILY WITH THE USE OF FAST-GERMINATING ANNUAL SEED, STRAW MULCH, WOOD CELLULOSE FIBERS, TACKIFIERS, NETTING OR BLANKET. WHERE CONDITIONS ARE FAVORABLE, AREAS SHALL BE TEMPORARILY STABILIZED WITHIN 7 DAYS AFTER CONSTRUCTION ACTIVITY CEASES. ALL DISTURBED GROUND WHERE THERE WILL NOT BE CONSTRUCTION FOR LONGER THAN 14 DAYS MUST BE SEEDED OR OTHERWISE STABILIZED.

   (B) PERMANENT SEEDING OR SOD - ALL AREAS AT FINAL GRADE MUST BE SEEDED OR SODDED WITHIN 3 DAYS AFTER COMPLETION OF THE MAJOR CONSTRUCTION ACTIVITY. EXCEPT FOR SMALL LEVEL SPOTS, SEEDED AREAS SHOULD GENERALLY BE PROTECTED WITH MULCH. ALL AREAS TO BE SEEDED WILL ALSO HAVE TOPSOIL AND OTHER AMENDMENTS AS STATED IN WISDOT SPECIFICATION SECTION 02900-PLANTING.

   (C) MULCHING - ALL AREAS THAT ARE TEMPORARY OR PERMANENT SEEDED SHALL BE MULCHED ACCORDING TO SECTION 627 - MULCHING OF THE WISDOT STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION. ALL MULCH IS TO BE ANCHORED UTILIZING METHOD A, B, OR C.

   (D) EROSION CONTROL MATTING - FOR ANY SLOPES GREATER THAN 3:1, EROSION MATTING IS REQUIRED.
9. *STRUCTURAL CONTROLS - BEFORE ANY MAJOR GRADING ACTIVITIES, THE FOLLOWING BEST MANAGEMENT PRACTICES SHALL BE INSTALLED ON THE PROPOSED SITE - SILT FENCE, TEMPORARY TRACKING PAD, AND STORM SEWER INLET PROTECTION.*

   (A) SILT FENCE - SILT FENCE IS A SYNTHETIC PERMEABLE WOVEN OR NON-WOVEN FABRIC TYPICALLY INCORPORATING WOODEN OR METAL SUPPORT STAKES AT INTERVALS SUFFICIENT TO SUPPORT THE FENCE, WATER, AND SEDIMENT RETAINED BY THE FENCE. SILT FENCE CAN ALSO BE INSTALLED WITH A WIRE FENCE BACKING. THE FENCE IS DESIGNED TO RETAIN SEDIMENT-LADEN WATER AND ALLOW SETTLEMENT OF SUSPENDED SOILS BEFORE THE STORM WATER FLOWS THROUGH THE FABRIC FOR DISCHARGE DOWNSTREAM. SILT FENCE SHALL BE LOCATED AS SHOWN ON THE PLAN SHEETS. THE SILT FENCE TO BE INCLUDED FOR THIS PROJECT SHALL BE CONSTRUCTED PER WISCONSIN DNR TECHNICAL STANDARDS FOR SILT FENCE (CODE 1056).

   (B) TEMPORARY TRACKING PAD - ALL ACCESS POINTS FROM THE PUBLIC STREET INTO THE CONSTRUCTION SITE SHALL INCLUDE A TRACKING PAD COMPOSED OF COURSE STONE TO THE DIMENSIONS SHOWN ON DETAIL SHEET (C201). ANY SEDIMENT REACHING A PUBLIC OR PRIVATE ROAD SHALL BE REMOVED BY STREET CLEANING (NOT FLUSHING) BEFORE THE END OF EACH WORKDAY.

   (C) STORM SEWER INLET PROTECTION - CURB AND GRATED INLETS ARE PROTECTED FROM THE INTRUSION OF SILT AND SEDIMENT THROUGH A VARIETY OF SEDIMENT CONTROL PRACTICES TO ALLOW SETTLEMENT OF SUSPENDED SOILS BEFORE DISCHARGING INTO THE STORM SEWER. GRATED INLETS TYPICALLY INCLUDE A STURDY FRAME WRAPPED IN GEOTEXTILE FABRIC OR SEDIMENT LOG PERIMETER TO SLOW THE FLOW OF WATER AND ALLOW PONDING WHERE SEDIMENT MAY SETTLE OUT. CURB INLETS TYPICALLY INCLUDE SEDIMENT LOG BARRIERS HELD IN PLACE WITH GEOTEXTILE FABRIC. OTHER MANUFACTURED PRODUCTS ARE ALSO AVAILABLE. ALL STORM DRAINS SHALL BE PROTECTED BY USING STRAW BALES, SEDIMENT LOGS, FABRIC, OR EQUIVALENT BARRIER.

   FINAL SITE STABILIZATION IS ACHIEVED WHEN TURF GRASS COVER PROVIDES PERMANENT STABILIZATION FOR AT LEAST 70 PERCENT OF THE DISTURBED SOIL SURFACE, EXCLUSIVE OF AREAS THAT HAVE BEEN PAVED.
10. *OTHER POLLUTANT CONTROLS*

    (A) DUST CONTROL - CONSTRUCTION TRAFFIC MUST ENTER AND EXIT THE SITE AT THE STABILIZED CONSTRUCTION EXIT. THE PURPOSE IS TO TRAP DUST AND MUD THAT WOULD OTHERWISE BE CARRIED OFF-SITE BY CONSTRUCTION EQUIPMENT.

    WATER TRUCKS OR OTHER DUST CONTROL AGENTS WILL BE USED AS NEEDED DURING CONSTRUCTION TO REDUCE DUST GENERATED ON THE SITE. DUST CONTROL MUST BE PROVIDED BY THE GENERAL CONTRACTOR TO A DEGREE THAT IS ACCEPTABLE TO THE OWNER'S CONSTRUCTION MANAGER, AND IN COMPLIANCE WITH APPLICABLE LOCAL AND STATE DUST CONTROL REGULATIONS. AFTER CONSTRUCTION, THE SITE WILL BE STABILIZED (AS DESCRIBED ELSEWHERE), WHICH WILL REDUCE THE POTENTIAL FOR DUST GENERATION.

    (B) SOLID WASTE DISPOSAL: - NO SOLID MATERIALS, INCLUDING BUILDING MATERIALS, ARE ALLOWED TO BE DISCHARGED FROM THE SITE WITH STORM WATER. ALL SOLID WASTE, INCLUDING DISPOSABLE MATERIALS INCIDENTAL TO THE MAJOR CONSTRUCTION ACTIVITIES, MUST BE COLLECTED AND PLACED IN CONTAINERS. THE CONTAINERS WILL BE EMPTIED AS NECESSARY BY A CONTRACT TRASH DISPOSAL SERVICE AND HAULED AWAY FROM THE SITE. THE LOCATION OF SOLID WASTE RECEPTACLES SHALL BE SHOWN AND APPROVED BY THE OWNER.

    SUBSTANCES THAT HAVE THE POTENTIAL FOR POLLUTING SURFACE AND/OR GROUNDWATER MUST BE CONTROLLED BY WHATEVER MEANS NECESSARY IN ORDER TO ENSURE THAT THEY DO NOT DISCHARGE FROM THE SITE. FOR EXAMPLE, SPECIAL CARE MUST BE EXERCISED DURING EQUIPMENT FUELING AND SERVICING OPERATIONS. IF A SPILL OCCURS, IT MUST BE CONTAINED AND DISPOSED SO THAT IT WILL NOT FLOW FROM THE SITE OR ENTER GROUNDWATER, EVEN IF THIS REQUIRES REMOVAL, TREATMENT, AND DISPOSAL OF SOIL. IN THIS REGARD, POTENTIALLY POLLUTING SUBSTANCES SHOULD BE HANDLED IN A MANNER CONSISTENT WITH THE IMPACT THEY REPRESENT.

    (C) SANITARY FACILITIES - ALL PERSONNEL INVOLVED WITH CONSTRUCTION ACTIVITIES MUST COMPLY WITH STATE AND LOCAL SANITARY OR SEPTIC SYSTEM REGULATIONS. TEMPORARY SANITARY FACILITIES MUST BE PROVIDED AT THE SITE THROUGHOUT THE CONSTRUCTION PHASE. THEY MUST BE UTILIZED BY ALL CONSTRUCTION PERSONNEL AND MUST BE SERVICED BY A COMMERCIAL OPERATOR.

    (D) WATER SOURCE - NON-STORM WATER COMPONENTS OF SITE DISCHARGE MUST BE CLEAN WATER. WATER USED FOR CONSTRUCTION WHICH DISCHARGES FROM THE SITE MUST ORIGINATE FROM A PUBLIC WATER SUPPLIER, OR PRIVATE WELL APPROVED BY THE STATE HEALTH DEPARTMENT. WATER USED FOR CONSTRUCTION THAT DOES NOT ORIGINATE FROM AN APPROVED PUBLIC SUPPLY MUST NOT DISCHARGE FROM THE SITE. IT CAN BE RETAINED IN THE PONDS UNTIL IT INFILTRATES AND EVAPORATES.

    (E) CONCRETE WASTE FROM CONCRETE READY-MIX TRUCKS - DISCHARGE OF EXCESS OR WASTE CONCRETE AND/OR WASH WATER FROM CONCRETE TRUCKS WILL BE ALLOWED ON THE CONSTRUCTION SITE, BUT ONLY IN SPECIFICALLY DESIGNATED DIKED AREAS PREPARED TO PREVENT CONTACT BETWEEN THE CONCRETE AND/OR WASH WATER AND STORM WATER THAT WILL BE DISCHARGED FROM THE SITE. ALTERNATIVELY, WASTE CONCRETE CAN BE PLACED INTO FORMS TO MAKE RIP-RAP OR OTHER USEFUL CONCRETE PRODUCTS. THE CURED RESIDUE FROM THE CONCRETE WASHOUT DIKED AREAS SHALL BE DISPOSED IN ACCORDANCE WITH APPLICABLE STATE AND FEDERAL REGULATIONS. THE JOB SITE SUPERINTENDENT IS RESPONSIBLE FOR ASSURING THAT THESE PROCEDURES ARE FOLLOWED.

    (F) FUEL TANKS - TEMPORARY ON-SITE FUEL TANKS FOR CONSTRUCTION VEHICLES SHALL MEET ALL STATE AND FEDERAL REGULATIONS. TANKS SHALL HAVE APPROVED SPILL CONTAINMENT WITH THE CAPACITY REQUIRED BY THE APPLICABLE REGULATIONS. THE TANK SHALL BE IN SOUND CONDITION FREE OF RUST OR OTHER DAMAGE WHICH MIGHT COMPROMISE CONTAINMENT. HOSES, VALVES, FITTINGS, CAPS, FILLER NOZZLES, AND ASSOCIATED HARDWARE SHALL BE MAINTAINED IN PROPER WORKING CONDITION AT ALL TIMES.
11. *MINIMIZING EROSION AND RUNOFF DURING TRENCH OPERATIONS*

    (A) EXCAVATED TRENCH MATERIALS SHALL BE PLACED ON THE UPPER SIDE OF THE TRENCH WHILE THE TRENCH IS OPEN.

    (B) EXCAVATED TRENCH MATERIAL. UPON COMPLETING WORK IN TRENCH, SHALL BE PLACED BACK IN THE TRENCH OR HAULED AWAY TO A PROPER SPOIL SITE. THE TRENCH SHALL BE BACKFILLED AND STABILIZED AT THE END OF EACH WORKING DAY.

ENGINEER:
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PLATTEVILLE, WISCONSIN 53818
888 JACKSON STREET PHONE: (563) 542-9005
DUBUQUE, IOWA 52001

FOR QUESTIONS REGARDING THIS PROJECT, PLEASE CONTACT:
MR. BART P. NIES, P.E.
DELTA 3 ENGINEERING, INC.
TELEPHONE: (608) 348-5355

PROPOSED 2021 STREAM IMPROVEMENTS - WEST BRANCH LITTLE SUGAR RIVER

MONTICELLO, WI

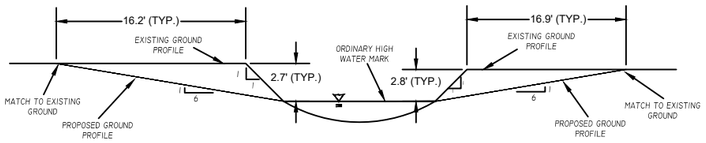
PROJECT LOCATION: MONTICELLO WISCONSIN - VARIOUS LOCATIONS ALONG LITTLE SUGAR RIVER
OWNER: VILLAGE OF MONTICELLO: 140 N. MAIN ST. P.O. BOX 147 MONTICELLO, WI 53570

REVISIONS:		
NO	DATE	DESCRIPTION
AS-BUILT:		BY:
	--/--/----	

PRELIMINARY	
PROJECT NUMBER	D18-029
SHEET SCALE	NOT TO SCALE
DRAWN BY	C.COYIER
DATE ISSUED	NOVEMBER 18, 2020
SHEET DESC.	DETAILS - EROSION CONTROL & NOTES

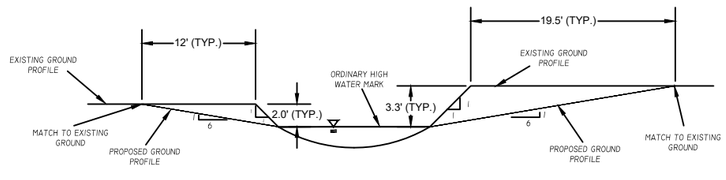
SHEET TITLE:
C201

SHEET NUMBER # **07 of ###**



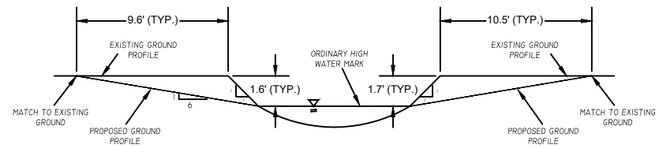
TYPICAL CROSS SECTION DETAIL - REACH A

SCALE: N.T.S.



DRAINAGE DITCH DETAIL: REACH B

SCALE: N.T.S.



DRAINAGE DITCH DETAIL: REACH C

SCALE: N.T.S.

DRAINAGE DITCH DETAIL: REACH D

SCALE: N.T.S.

ENGINEER:

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MONTICELLO, WI

PROJECT LOCATION: MONTICELLO WISCONSIN - VARIOUS LOCATIONS ALONG LITTLE SUGAR RIVER
OWNER: VILLAGE OF MONTICELLO: 140 N. MAIN ST. P.O. BOX 147 MONTICELLO, WI 53570

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SHEET SCALE	NOT TO SCALE
DRAWN BY	C.COYIER
DATE ISSUED	NOVEMBER 18, 2020
SHEET DESC.	DETAILS - EROSION CONTROL & NOTES

SHEET TITLE:

C202

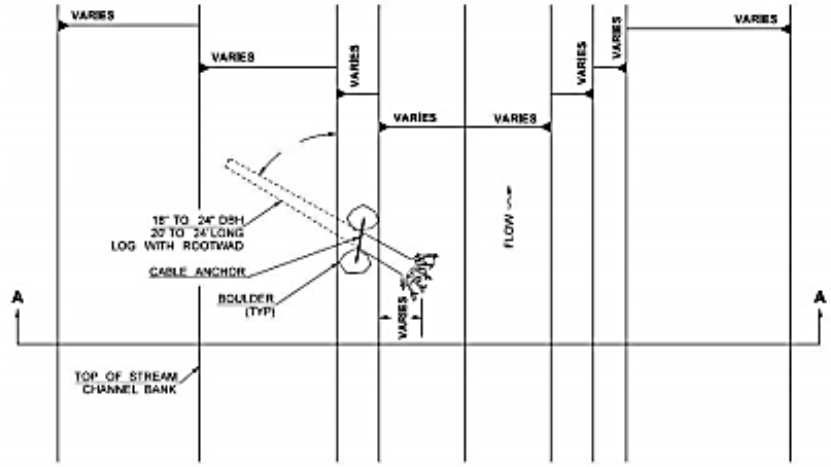
SHEET NUMBER # **08 of ###**

Typical In-Stream Habitat Improvement Details:

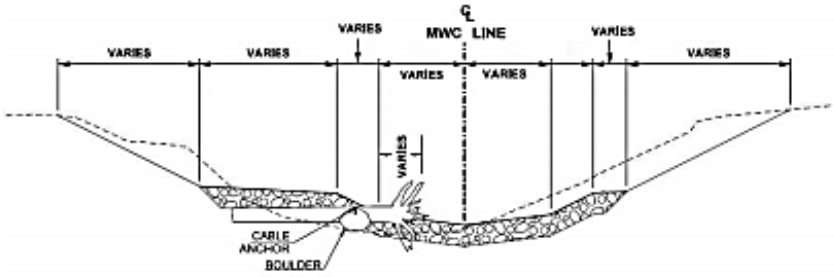
Single Bank Log

This is the simplest and generally most stable type of LWM placement, consisting of a single log with the stem buried in the bank and the root wad partially embedded in the streambed. This type of placement creates localized pool habitat, cover, and woody substrate on the margins of the channel while having minimal impacts on channel hydraulics and erosion. With sufficient overburden this type of placement may not require additional anchoring, but boulder anchors can be used to increase stability in situations with shallow burial depths.

Figure 10C-1 Single Bank Log



SINGLE BANK LOG



SINGLE BANK LOG

SECTION A-A

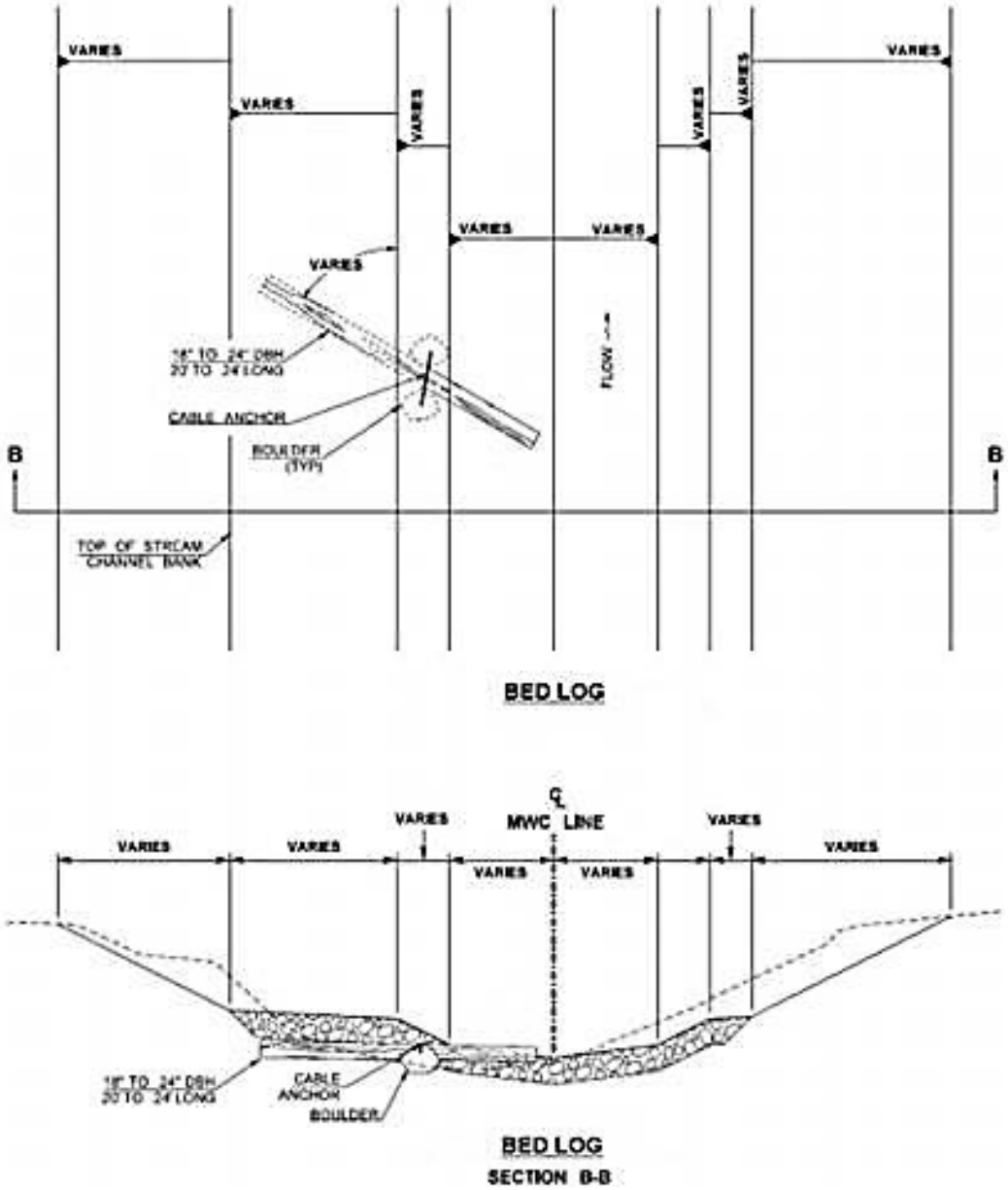
NOTES:

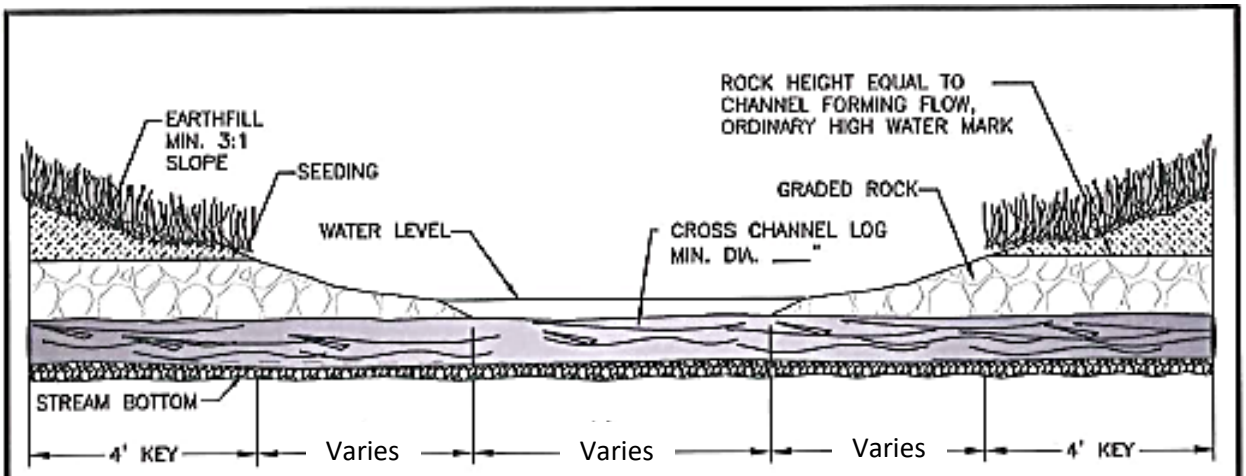
1. ROCK DIAMETER, CABLE SIZE/MATERIAL AND ANCHORAGE ATTACHMENT DETAILS TO BE DETERMINED.
2. LOCATIONS AND ORIENTATION OF LARGE WOODY MATERIAL (LWM) AS SHOWN ON THIS SHEET ARE APPROXIMATE. FINAL LOCATIONS TO BE DETERMINED ON SITE BY THE ENGINEER.

Bed Log

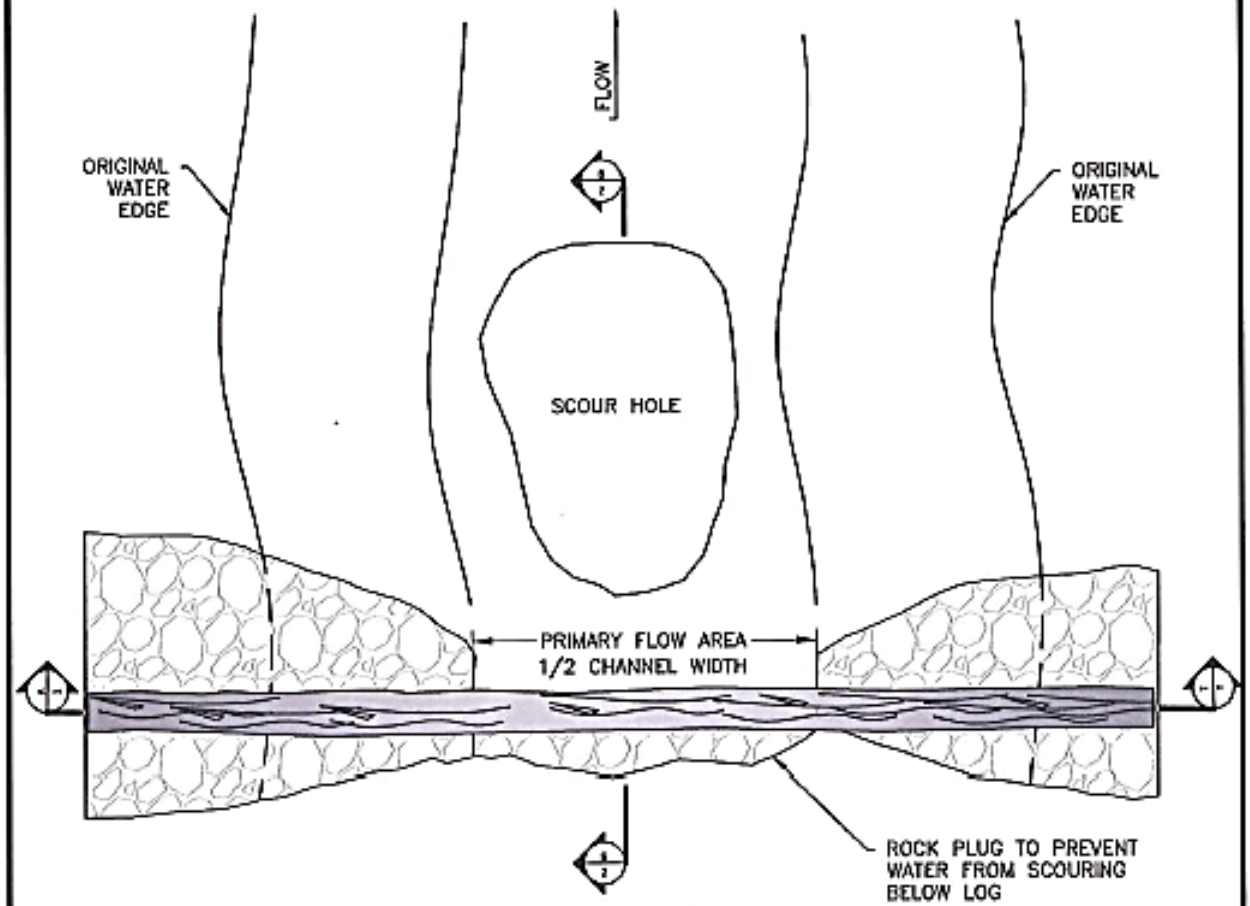
This type of placement consists of a log without roots partially buried in the bed and extending out to the center of the channel. This low-profile placement of logs mimics tip-first delivery of logs to the stream by windthrow. These logs have high contact with the streambed and enhance streambed stability by encouraging sediment accumulation on the upstream side and flow deflection towards the center of the channel. A localized plunge pool may form on the downstream side of the log. The bed log is anchored by stem burial and boulders as needed.

Figure 10C-3 Bed Log





CROSS SECTION A–A



PLAN VIEW