



AGENDA
OZAUKEE COUNTY BOARD
REGULAR MEETING
WEDNESDAY, APRIL 3, 2024 – 9:00 AM
ADMINISTRATION CENTER - ROOM A-204
121 W. MAIN STREET, PORT WASHINGTON, WI 53074

THE FOLLOWING BUSINESS WILL BE BEFORE THE COUNTY BOARD FOR INITIATION, DISCUSSION, CONSIDERATION, DELIBERATION AND POSSIBLE FORMAL ACTION:

The public can access the meeting by viewing the live stream at the link which will be opened five minutes before the call to order:

[County Board Live Stream](#)

The public can submit comments here: [Public Comment Form](#)

[Public Comment Policy & Instructions For Submitting Public Comments Online](#)

- 1. CALL TO ORDER**
- 2. PLEDGE OF ALLEGIANCE TO THE FLAG**
- 3. APPROVAL OF MINUTES**
 - a. March 6 & 20, 2024
- 4. PUBLIC COMMENT**
 - Legislative Update
 - Chairperson's Proclamation
- 5. COMMUNICATIONS**
- 6. CLAIMS**
- 7. REPORT OF COUNTY ADMINISTRATOR**
 - County Administrator's Report - April 2024
 - CBRF Update
 - County Board Orientation
- 8. RESOLUTIONS**
 - a. RES.23-59: Increase of Revenue 2023 - Planning & Parks
 - b. RES.23-60: Transfer 50% of 2023 General Fund Surplus to Capital Projects Fund
 - c. RES.23-61: WE Energies Underground Easement for Electrical Service at Hawthorne Hills County Park
 - d. RES.23-62: 2024 Executive Committee Project Fund Recommendation as Revised
- 9. ORDINANCES**
 - a. ORD.23-7: Shoreland & Floodplain Zoning Map Amendment - Town of Cedarburg, Section 21
 - b. ORD.23-8: Shoreland & Floodplain Zoning Map Amendment - Town of Grafton, Section 31
 - c. ORD.23-9: Revising Section 3.07 of the Ozaukee County Code of Ordinances Pertaining to All-Terrain Vehicle Links and Regulating the Operation of All-Terrain Vehicles
- 10. COMMITTEE APPOINTMENTS/REAPPOINTMENTS**
- 11. COMMITTEE REPORTS AND SUPERVISOR ANNOUNCEMENTS**
- 12. ADJOURNMENT**

Persons with disabilities requiring accommodations for attendance at this meeting should contact the County Clerk's Office at 262-284-8110, twenty-four (24) hours in advance of the meeting.

Updated 3/29/2024 2:53 PM

Ozaukee County Board**AGENDA INFORMATION SHEET**

AGENDA DATE:	April 3, 2024
DEPARTMENT:	County Clerk
DIRECTOR:	Karen Niemuth
PREPARER:	Karen Niemuth

Agenda Summary March 6 & 20, 2024

March 6, 2024

[<https://www.co.ozaukee.wi.us/AgendaCenter/ViewFile/Minutes/_03062024-3379>](https://www.co.ozaukee.wi.us/AgendaCenter/ViewFile/Minutes/_03062024-3379)

March 20, 2024

[<https://www.co.ozaukee.wi.us/AgendaCenter/ViewFile/Minutes/_03202024-3386>](https://www.co.ozaukee.wi.us/AgendaCenter/ViewFile/Minutes/_03202024-3386)

OZAUKEE COUNTY BOARD

Ozaukee County Board

AGENDA INFORMATION SHEET

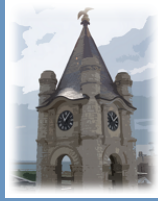
AGENDA DATE: April 3, 2024
DEPARTMENT: Administrator
DIRECTOR: Jason Dzwinel
PREPARER: Jason Dzwinel

Agenda Summary County Administrator's Report - April 2024

ATTACHMENTS:

- County Administrator's Report April 2024 (PDF)

OZAUKEE COUNTY BOARD



County Administrator's Report

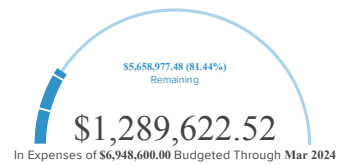
April 3, 2024

FINANCE

- Staff recommendation of placing \$440,000 of surplus into Project Fund

Finance Committee

Data Updated Mar 21, 2024, 2:58 PM | [Prorated Budget](#)



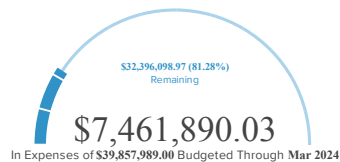
HUMAN SERVICES

- RFP for Lasata CBRF Construction Management reviewed recommendation approved

Health and Human Services Committee

Health and Human Services Committee

Data Updated Mar 21, 2024, 2:58 PM | [Prorated Budget](#)

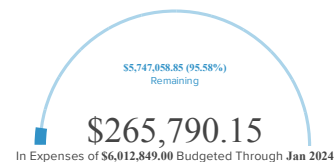


NATURAL RESOURCES

- Approved use of unexpended UWEX Contracts totaling \$8,000 for Marketing Specialist Contract

Natural Resources

Data Updated Mar 21, 2024, 2:58 PM | [Prorated Budget](#)

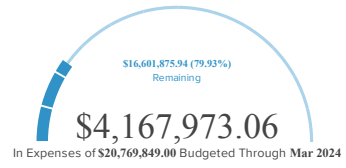


PUBLIC SAFETY

1. No March Meeting

Public Safety

Data Updated Mar 21, 2024, 2:58 PM | [Prorated Budget](#)

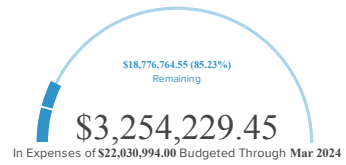


PUBLIC WORKS

1. New Taxi Routing Software implementaion successful

Public Works

Data Updated Mar 21, 2024, 2:58 PM | [Prorated Budget](#)



RESOLUTION NO. 23-59

INCREASE OF REVENUE 2023 - PLANNING & PARKS

RESOLVED, by the Ozaukee County Board of Supervisors, that budgets be increased in the accounts as follows:

Department / Program

	<u>Account Number</u>	<u>Account Name</u>	<u>AMOUNT</u>	<u>AMOUNT</u>
Planning & Parks				
Expense	222-1-01-55103-000	Highway - Grounds Maintenance/Construction	\$25,000	
Revenue	222-1-01-42310-000	State Aid - 2024 WDNR SWM SWR Tendick Creek		\$25,000
Expense	222-1-01-54106-000	Professional Services	\$10,000	
Revenue	222-1-01-42310-000	State Aid - 2024 WDNR SWP LMR, Mole, Ulao		\$10,000
Expense	222-1-01-51101-000	Regular Salaries & Wages	\$10,000	
Expense	222-1-01-55103-000	Highway - Grounds Maintenance/Construction	40,000	
Revenue	222-1-01-42310-000	State Aid - 2024 WDNR SWM MPI Tendick Wetlands		\$50,000

Dated at Port Washington, Wisconsin, this 3rd day of April 2024.

SUMMARY: Wisconsin Department of Natural Resources Surface Water Management - Surface Water Restoration Grant-\$25,000 for stream restoration activities in Tendick Nature Park; Wisconsin Department of Natural Resources Surface Water Planning Grant-\$10,000 for water quality monitoring at the Little Menomonee River and Creek, Mole Creek, and Ulao Creek; Wisconsin Department of Natural Resources Surface Water Management - Management Plan Implementation Grant-\$50,000 for wetland enhancement activities in Tendick Nature Park.

VOTE REQUIRED: Two-Thirds of Members Elect

03/28/24

Finance Committee APPROVED

RESULT: **APPROVED [UNANIMOUS]**
MOVER: D. Larson, Vice-Chairperson
SECONDER: E. Stelter, Supervisor District 18
AYES: Melotik, Larson, Winker, Stelter, Hagen

FINANCE COMMITTEE

Finance Committee
AGENDA INFORMATION SHEET

AGENDA DATE:	April 3, 2024
DEPARTMENT:	County Clerk
DIRECTOR:	Karen Niemuth
PREPARER:	Tyler Quaas

Agenda Summary Increase of Revenue 2023 - Planning & Parks

ATTACHMENTS:

- Planning & Parks (PDF)

Natural Resources Committee

AGENDA INFORMATION SHEET

AGENDA DATE: March 7, 2024
DEPARTMENT: Planning and Parks
DIRECTOR: Andrew Struck
PREPARER: Andrew Struck

Agenda Summary Increase of Revenue Budget Amendment for a Wisconsin Department of Natural Resources Surface Water Management – Surface Water Restoration Grant to Support Stream Restoration Activities in Tendick Nature Park

BACKGROUND INFORMATION: The Ozaukee County - Planning and Parks Department (Department) was awarded a grant from the Wisconsin Department of Natural Resources (WDNR) Surface Water Management (SWM) Surface Water Restoration (SWR) grant program to support County-sponsored fish and wildlife habitat restoration projects. Specifically, this grant will support County activities to conduct stream restoration activities on Tendick Creek in coordination with wetland enhancement activities in Tendick Nature Park in the Town of Saukville. Secured Fund for Lake Michigan (FFLM) grant funding has supported design and engineering and construction activities for five completed fish passage impediment removal or restoration projects on Tendick Creek. The Department has also worked with consultants to complete design and engineering plans for stream and wetland restoration and enhancement work on and adjacent to Tendick Creek as an essential next step in improving the overall ecological diversity and sustainability of the watershed. The WDNR SWM SWR grant will support Department activities to remediate and restore a reach of degraded stream channel on Tendick Creek in Tendick Nature Park upstream of County Trunk Highway O to provide in-stream diversity and a sustainable gradient in conjunction with wetland and floodplain reconnection and restoration.

ANALYSIS: The total WDNR SWM SWR grant award is \$25,000. The Ozaukee County Natural Resources Committee unanimously approved the submittal and acceptance of the WDNR SWM SWR grant at its September 7, 2023 meeting (Ayes: Holyoke, Jobs, Matera, Ross, Schoessow) and the Ozaukee County Board of Supervisors unanimously approved Resolution 23-26 at its October 4, 2023 meeting (Ayes - 21, Nays - 0, Absent - 5). The WDNR SWM SWR grants cover up to 75% of the total project cost with a funding cap of \$25,000. Project match will be provided by a secured FFLM grant (\$8,333) for a total project cost of \$33,333. There have been no changes to the budget or project scope since grant submittal; however, the original application for the stream restoration work was submitted under the WDNR SWM Management Plan Implementation category and WDNR staff indicated this project would be more compatible with the SWR category, as reflected in the grant award.

FISCAL IMPACT: Balance Current Year: NONE (Additional Program Revenue - \$25,000)

Next Year's Estimated Cost: NONE

FUNDING SOURCE: County Levy: Non-County Levy: X

Indicate source: Secured WDNR SWM SWR and FFLM grants.

RECOMMENDED MOTION: Approve and recommend to the Ozaukee County Board of Supervisors the budget amendment for the Wisconsin Department of Natural Resources Surface Water Management - Surface Water Restoration grant to support stream restoration activities in Tendick Nature County Park.

NATURAL RESOURCES COMMITTEE

RESULT: **APPROVED AND FORWARDED [UNANIMOUS]**Next: 3/28/2024 8:00 AM

MOVER: B. Ross, Supervisor District 19

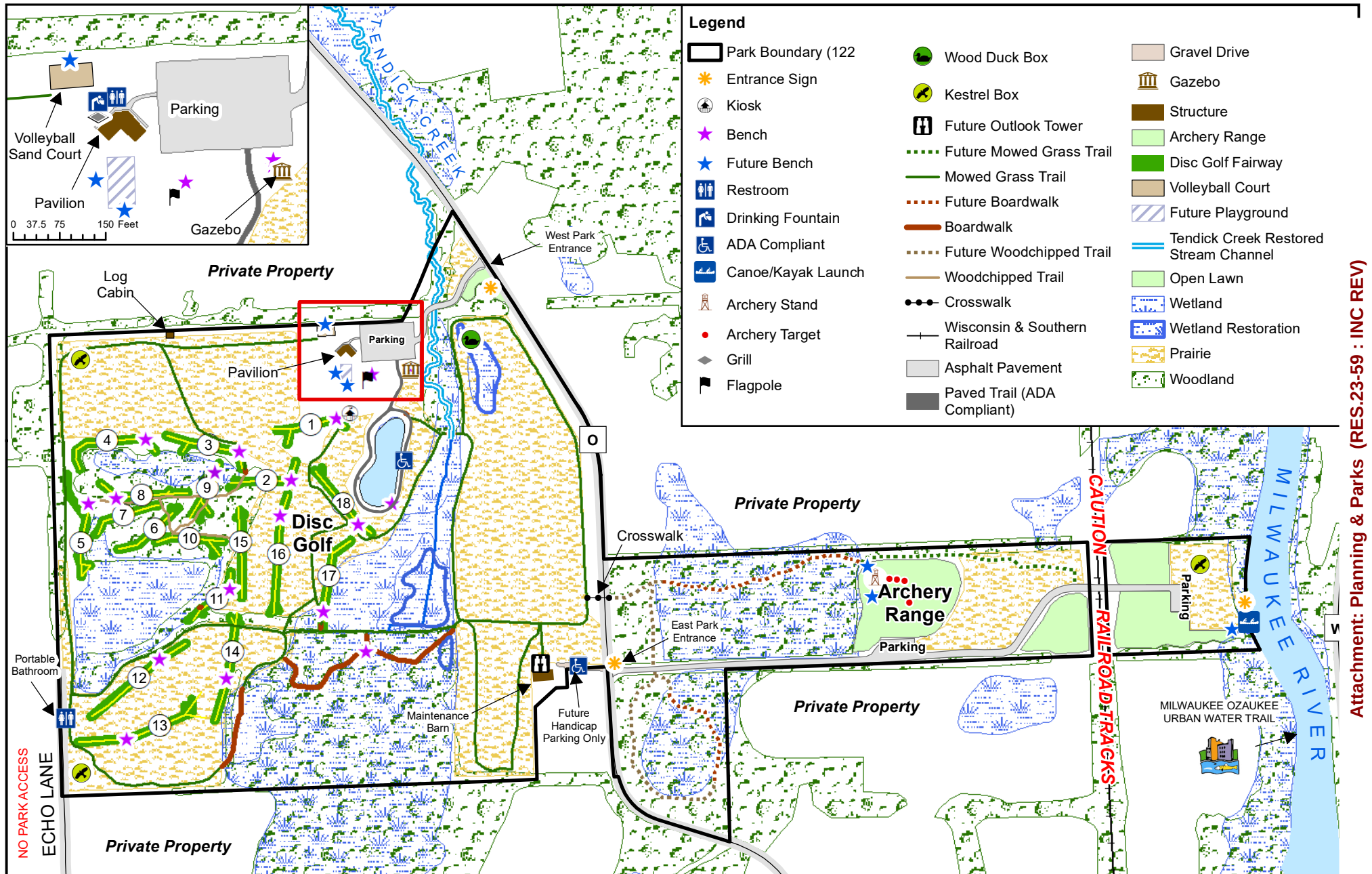
SECONDER: B. Jobs, Vice-Chairperson

AYES: Holyoke, Jobs, Ross, Matera, Schoessow

Tendick Nature County Park

3919 County Highway O, Saukville, WI 53080

8.a



Attachment: Planning & Parks (RES:23-59 : INC REV)



0 250 500 1,000 Feet



Ozaukee County
Parks Reservations:



Map Produced B
Ozaukee County Planning
and Parks Department

Packet Pg. 11

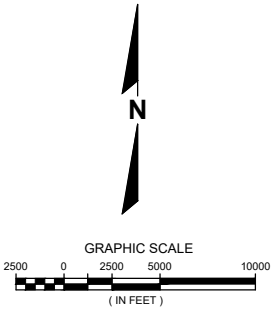
OZAUKEE COUNTY, WISCONSIN

FISH PASSAGE RESTORATION

TENDICK CREEK

AT: ~750' DOWNSTREAM & ~2,000' UPSTREAM OF CTH O

SEC 14, TOWNSHIP 11 NORTH, RANGE 21 EAST,
TOWN OF SAUKVILLE, OZAUKEE COUNTY, WISCONSIN



Project Quantity Table			
Item	Unit	Phase 1 Quantity	Phase 2 Quantity
6'x6' Box Culvert	LF	-	48
12' Box Culvert End Section	EA	-	2
Box Culvert Drop Wall	EA	-	1
72" Dia. Corrugated Metal Pipe	LF	-	54
Trackout Control Device	EA	1	3
Silt Fence	LF	1,453	593
Medium Riprap	CY	-	103
Channel Bed Material	CY	80	160
Culvert Bed Material	CY	-	50
Non-woven Coir Fabric (North American Green C125BN, Nedia C400B, or equivalent)	SY	2890	1,110

Project Earthwork Table			
Existing Stream Length	LF	494	1,417
Proposed Stream Length	LF	624	1,688
Disturbance Area	SF	211,676	126,544
South Wetland Scrape Earthwork	CY	182 (Cut)	-
North Wetland Scrape Earthwork	CY	1,434 (Cut)	-
Stream Earthwork (17+00-23+50)	CY	1,822 (Cut)	-
Stream Earthwork (10+00-17+00)	CY	-	1,285 (Cut)
Stream Earthwork (6+00-10+00)	CY	-	251 (Cut)
Stream Earthwork (0+00-6+00)	CY	-	292 (Cut)

Potential Fill Areas*			
East-West Path Between Wetland Scapes	CY	126 (Fill)	-
North-South Path Along North Wetland Scrape	CY	290 (Fill)	-
CTHO Embankment (West)	CY	1,260 (Fill)	-
CTHO Embankment Fill (East)/East Park Parcel	CY	2,271 (Fill)	-
Archery Range (East Park Parcel)	CY	-	2,433 (Fill)

*Fill areas to be used as needed. Any additional fill will be trucked to Hawthorne Hills County Park. All volumes assume 1:1 ratio. No shrink or swell factors are associated with volumes. Contractor to use discretion for fill locations and amount.



HORIZONTAL DATUM: NAD 1983 STATE PLANE
WISCONSIN SOUTH

VERTICAL DATUM: NAVD88
EXISTING CONTOURS SHOWN ON PLANS WERE
GENERATED FROM 2015 OZAUKEE COUNTY
LIDAR

OWNER:

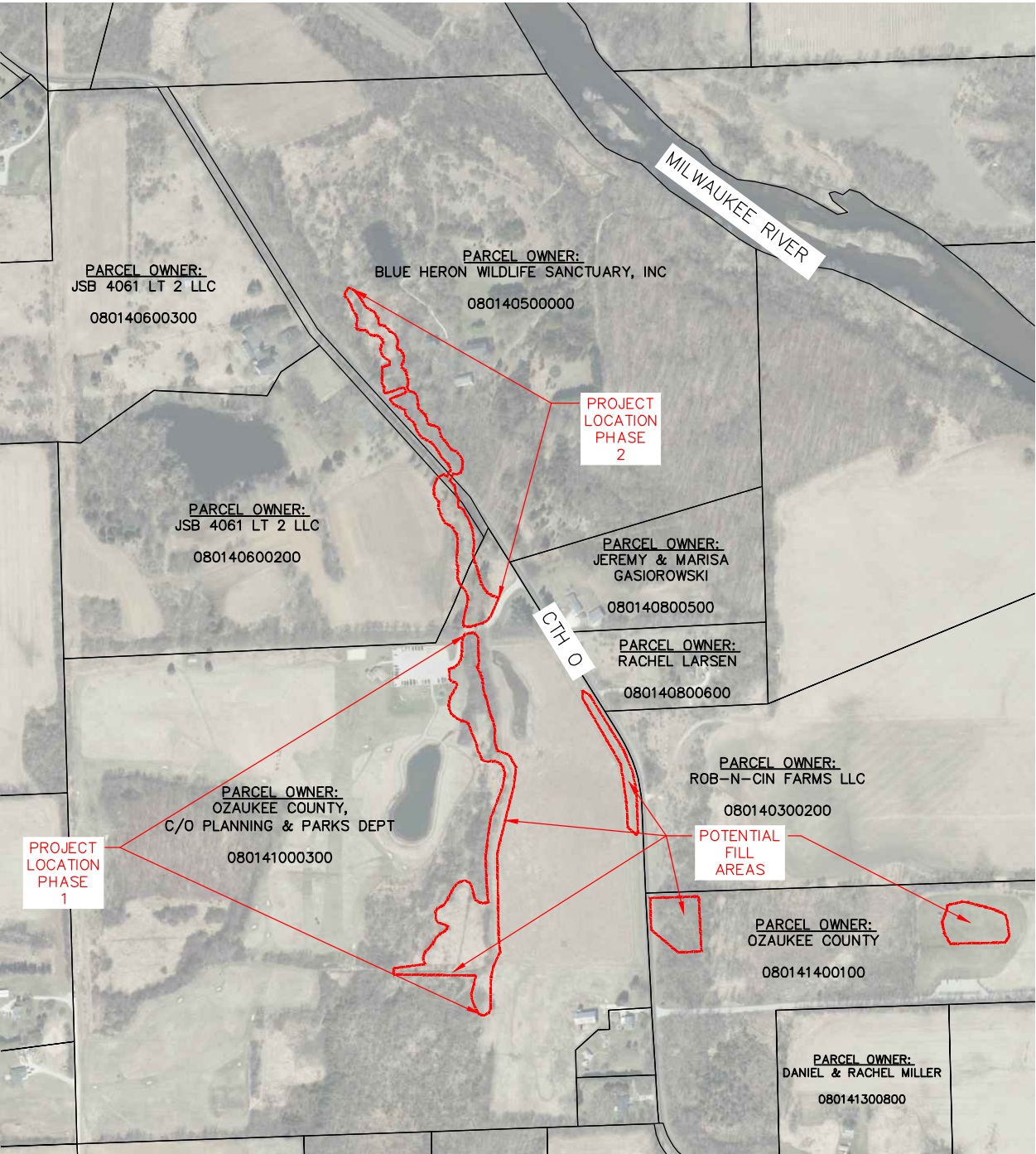
OZAUKEE COUNTY PLANNING
& PARKS DEPT.
121 W. MAIN STREET
PORT WASHINGTON, WI 53074
PH.: 262/238-8257



ENGINEERS:

R.A. SMITH, INC
16745 W BLUEMOUND RD
BROOKFIELD, WI 53005-5938
PH.: 262/781-1000
FAX: 262/781-8466

FISH CREEK RESTORATION LLC
PH.: 608/977-1856



PLAN INDEX

SHEET NO.	DESCRIPTION
COVER	COVER SHEET
01-03	OVERVIEW PLAN
04	TYPICAL STREAM PLAN, PROFILE, & SECTION
05-14	ROUGHENED CHANNEL PLAN & PROFILE
15	WETLAND SCRAPES
16-18	CROSS SECTIONS
19	BLUE HERON DRIVEWAY PLAN & PROFILE
20	CTH O CULVERT PLAN & PROFILE
21-22	DETAILS

BENCHMARK	NORTHING	EASTING	ELEVATION
6	524096.601	2511649.828	801.77
1001	525586.154	2511467.198	781.03
1002	523786.860	2511743.671	801.38
1003	524101.386	2511816.871	801.50
1004	524447.082	2511891.827	803.81
1005	524855.362	2511641.119	793.24
1006	525192.511	2511395.343	786.37
1007	525435.996	2511334.647	781.94
1008	525203.391	2511509.466	789.82
1009	523914.008	2511634.879	801.75
1010	523806.847	2511862.451	801.12
1011	524291.097	2511786.544	799.13
1012	524689.774	2511834.293	803.65
1059	525346.500	2511263.939	783.63



Know what's below.
Call before you dig.

R.A.SMITH, INC. ASSUMES NO RESPONSIBILITY FOR
DAMAGES, LIABILITY OR COSTS RESULTING FROM
CHANGES OR ALTERATIONS MADE TO THIS PLAN
WITHOUT THE EXPRESSED WRITTEN CONSENT OF
R.A.SMITH, INC.



DESCRIPTION	DATE

16745 W. Bluemound Road
Brookfield, WI 53005-5938
(262) 781-1000
raSmith.com



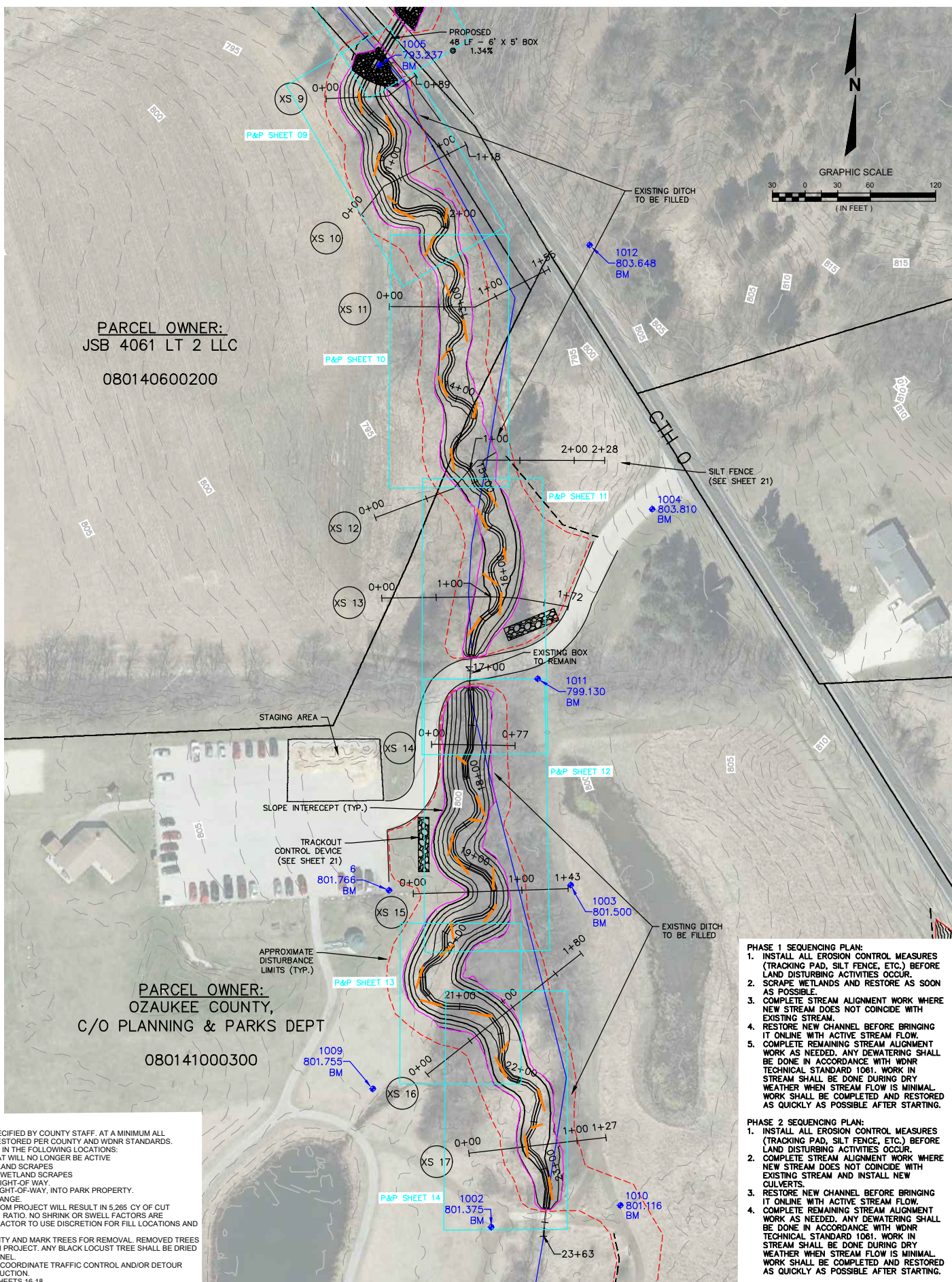
Brookfield, WI | Milwaukee, WI | Appleton, WI | Madison, WI
Cedarburg, WI | Naperville, IL | Irvine, CA

FISH PASSAGE RESTORATION
OZAUKEE COUNTY, WISCONSIN

TENDICK CREEK
COVER SHEET

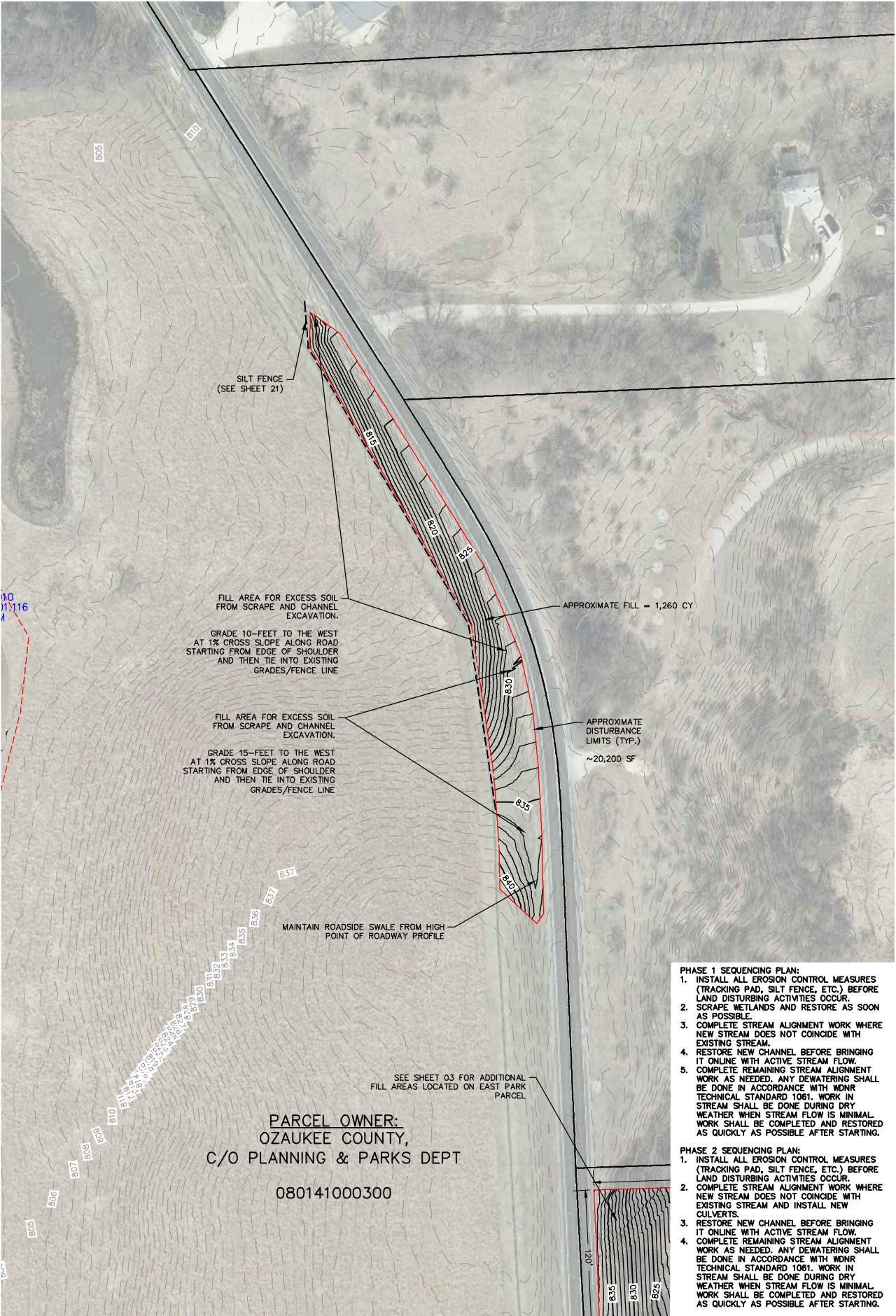
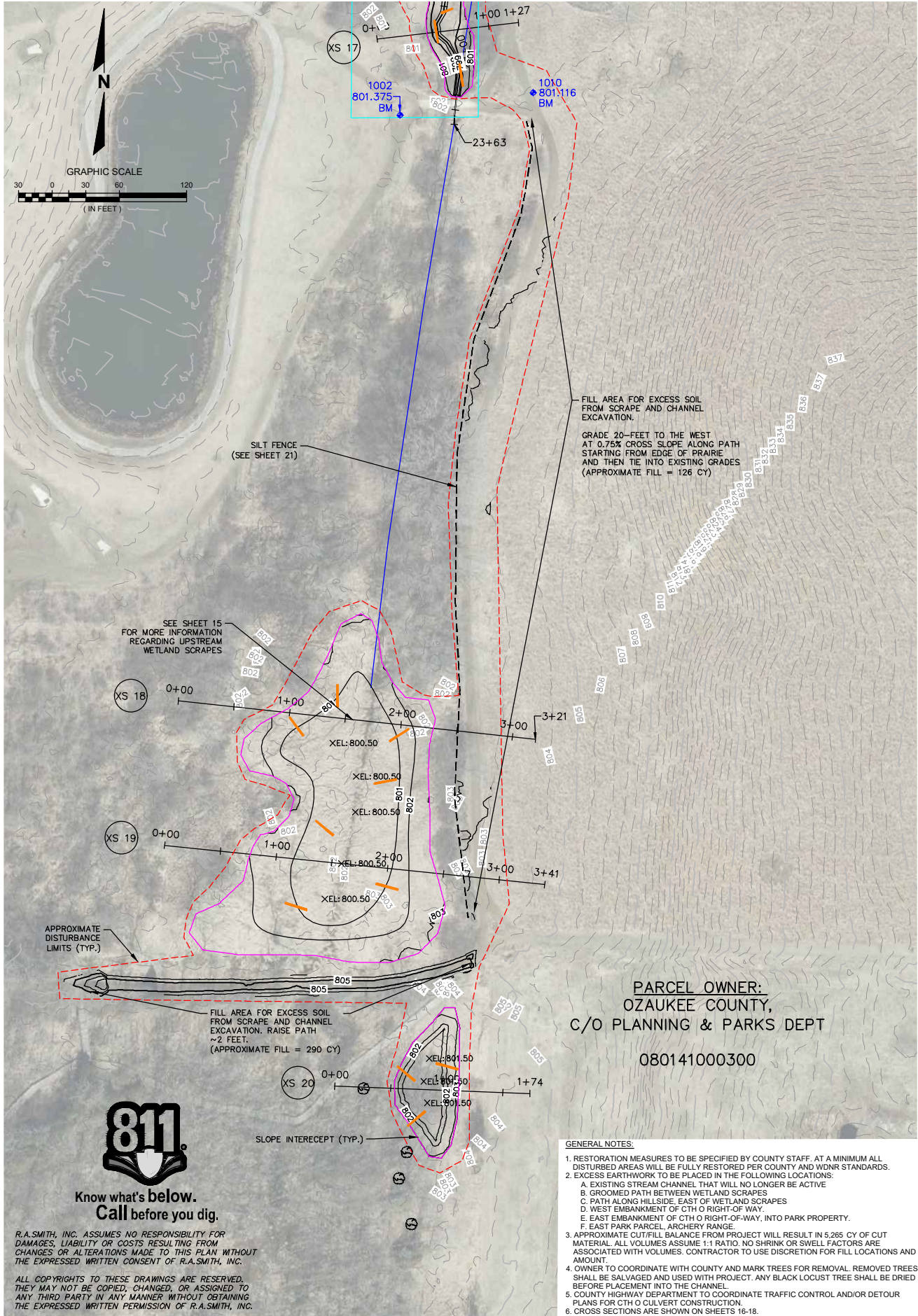


© COPYRIGHT 2024 R.A. Smith, Inc.
DATE: 02/12/2024
SCALE: 1" = 300'
JOB NO. 2210877
PROJECT MANAGER: RILEY R. STONE, P.E.
DESIGNED BY: RRS/BL
CHECKED BY: RRS/BL
SHEET NUMBER
COVER



FISH PASSAGE RESTORATION OZAUKEE COUNTY, WISCONSIN		 CREATIVITY BEYOND ENGINEERING	16745 W. Bluemound Road Brookfield, WI 53005-5938 (262) 781-1000 rasmith.com	DATE	DESCRIPTION
TENDICK CREEK OVERVIEW PLAN					
© COPYRIGHT 2024 R.A. Smith, Inc. DATE: 02/12/2024 SCALE: 1" = 60' JOB NO. 2210877 PROJECT MANAGER: RILEY R. STONE, P.E. DESIGNED BY: RRS/BL CHECKED BY: RRS/BL SHEET NUMBER 01					

H:\2210877\Drawings\Sheets\2210877-PP01.dwg, OVERVIEW-2, 2/12/2024 2:54:00 PM, rrs



FISH PASSAGE RESTORATION OZAUKEE COUNTY, WISCONSIN		TENDICK CREEK OVERVIEW PLAN	
DESCRIPTION		DATE	
16745 W. Bluemound Road Brookfield, WI 53005-5938 (262) 781-1000 rasmith.com		© COPYRIGHT 2024 R.A. Smith, Inc.	
CREATIVITY BEYOND ENGINEERING		DATE: 02/12/2024	
Brookfield, WI Milwaukee, WI Appleton, WI Madison, WI Cedarburg, WI Naperville, IL Irvine, CA		SCALE: 1" = 60'	
		JOB NO. 2210877	
		PROJECT MANAGER: RILEY R. STONE, P.E.	
		DESIGNED BY: RRS/BL	
		CHECKED BY: RRS/BL	
		SHEET NUMBER	
		02	

Natural Resources Committee

AGENDA INFORMATION SHEET

AGENDA DATE: March 7, 2024
DEPARTMENT: Planning and Parks
DIRECTOR: Andrew Struck
PREPARER: Andrew Struck

Agenda Summary Increase of Revenue Budget Amendment for a Wisconsin Department of Natural Resources Surface Water Planning Grant to Support Water Quality Monitoring Activities on the Little Menomonee River and Creek, Mole Creek and Ulao Creek in Ozaukee County

BACKGROUND INFORMATION: The Ozaukee County - Planning and Parks Department (Department) was awarded a grant from the Wisconsin Department of Natural Resources (WDNR) Surface Water Planning (SWP) Grant Program. Specifically, this grant will fund County activities to continue to monitor water quality conditions on the Little Menomonee River and Creek in the City of Mequon, Mole Creek in the Town of Saukville and Ulao Creek in the Town of Grafton and Village of Grafton. Water quality monitoring will provide data to establish pre and post construction conditions at the ongoing habitat restoration projects being implemented on all streams and allow for analysis of water quality impacts as a result of restoration activities. The habitat restoration projects include: stream re-meandering, restoration of hydrologically and biologically functional floodplains, bank and in-stream structure restoration, wetland enhancements, invasive vegetation management and control, and native vegetation planting and restoration. Specifically, this SWP grant will support continuous and grab sample water quality monitoring to determine the effectiveness of stream re-meandering and floodplain/wetland restoration as a best management practice to reduce pollutant loads (e.g., Total Maximum Daily Loads - TMDL's). County staff will complete continuous water quality monitoring activities (conductivity, water temperature, water depth, dissolved oxygen, and pH), and grab sample water quality monitoring (E. coli, total phosphorus, orthophosphate, chloride and total suspended solids) according to approved USEPA Quality Assurance Project Plan (QAPP) procedures and methodologies and consistent with Total Maximum Daily Load (TMDL) procedures. This project is a continuation of WDNR grants received by the Department from 2017-2022 for similar water quality monitoring and is consistent with other grant funded projects being implemented within the Fish Passage Program and overall Ecological Division.

ANALYSIS: The total WDNR SWP grant award is \$10,000. The Ozaukee County Natural Resources Committee unanimously approved the submittal and acceptance of the WDNR SWP grant at its August 3, 2023 meeting (Ayes: Holyoke, Jobs, Matera, Schoessow; Excused: Ross) and the Ozaukee County Board of Supervisors unanimously approved Resolution 23-21 at its September 6, 2023 meeting (Ayes - 19, Nays - 0, Absent - 7). WDNR SWP grants are awarded for up to 67% of the total project cost up to \$10,000. The remaining project match will be provided by in-kind staff time, travel and equipment for a total project cost of \$21,811. There have been no changes to the budget or project scope since grant submittal.

FISCAL IMPACT: Balance Current Year: NONE (Additional Program Revenue of \$10,000)

Next Year's Estimated Cost: NONE

8.a

FUNDING SOURCE: County Levy: Non-County Levy: X

Indicate source: WDNR SWP and in-kind Department staff time, travel and equipment.

RECOMMENDED MOTION: Approve and recommend to the Ozaukee County Board of Supervisors the budget amendment for the Wisconsin Department of Natural Resources - Surface Water Planning grant for water quality monitoring activities on Little Menomonee River and Creek and Mole Creek and Ulao Creek in Ozaukee County in conjunction with large-scale habitat restoration projects.

NATURAL RESOURCES COMMITTEE

RESULT: **APPROVED AND FORWARDED [UNANIMOUS]Next: 3/28/2024 8:00 AM**

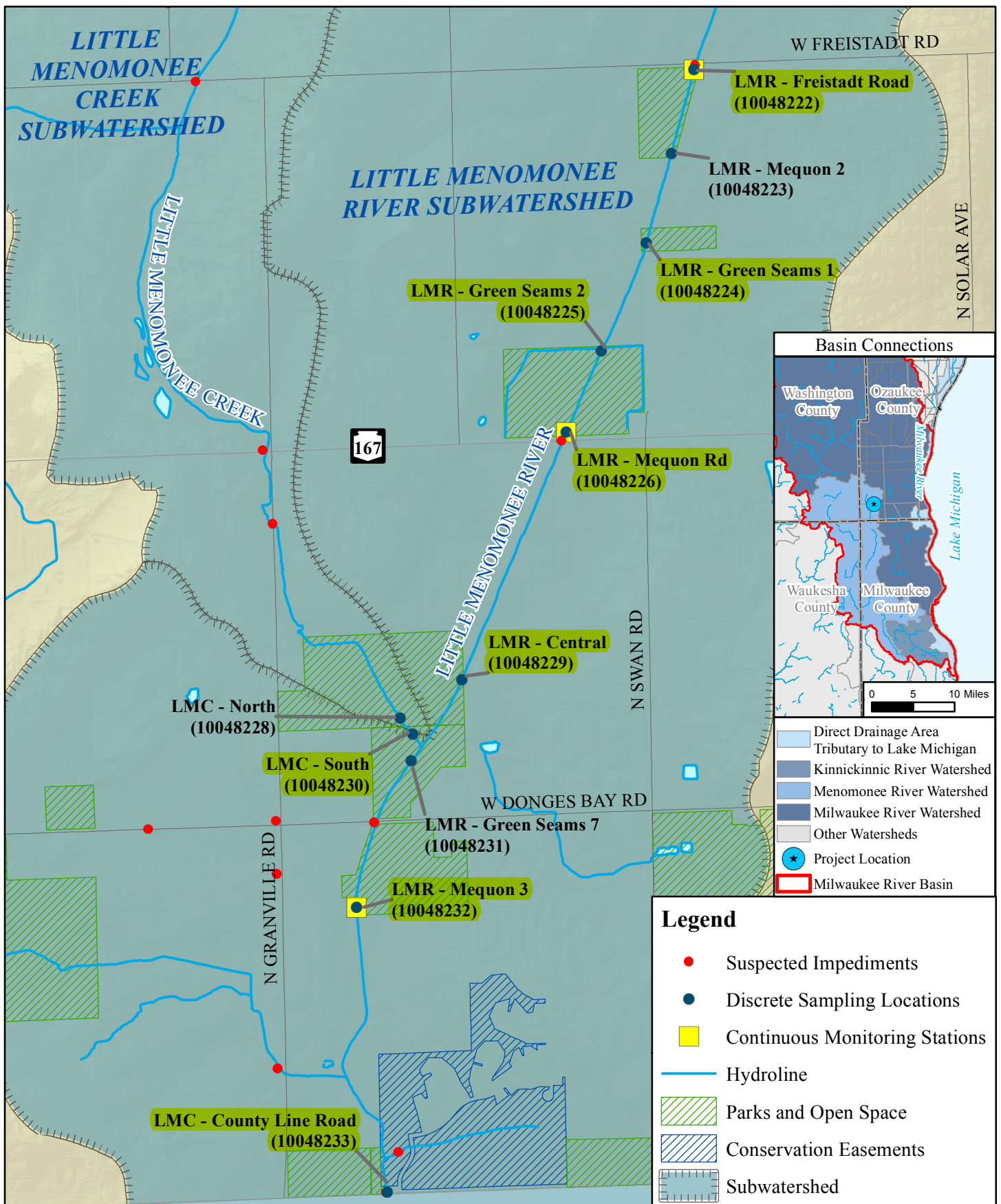
MOVER: B. Ross, Supervisor District 19

SECONDER: K. Schoessow, Supervisor District 23

AYES: Holyoke, Jobs, Ross, Matera, Schoessow

Attachment: Planning & Parks (RES.23-59 : INC REV)

Little Menomonee River and Creek Water Quality Sampling Locations



Attachment: Planning & Parks (RES.23-59 : INC REV)



0 1,250 2,500 5,000 Feet

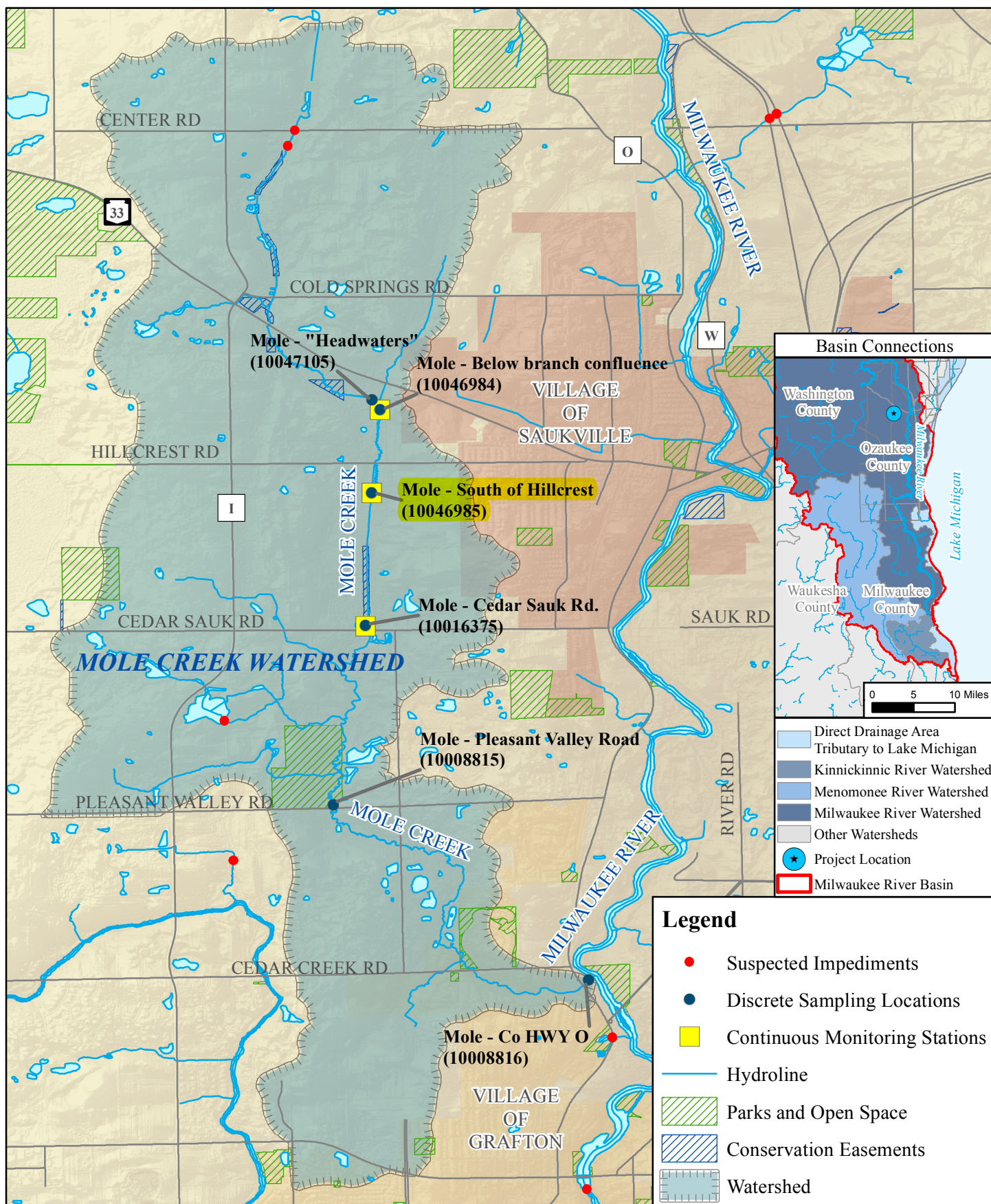


Map Produced By: Ozaukee County
Planning and Parks Department
9/4/2019

Highlighted sites proposed for monitoring in WDNR SWP FY24 Grant A

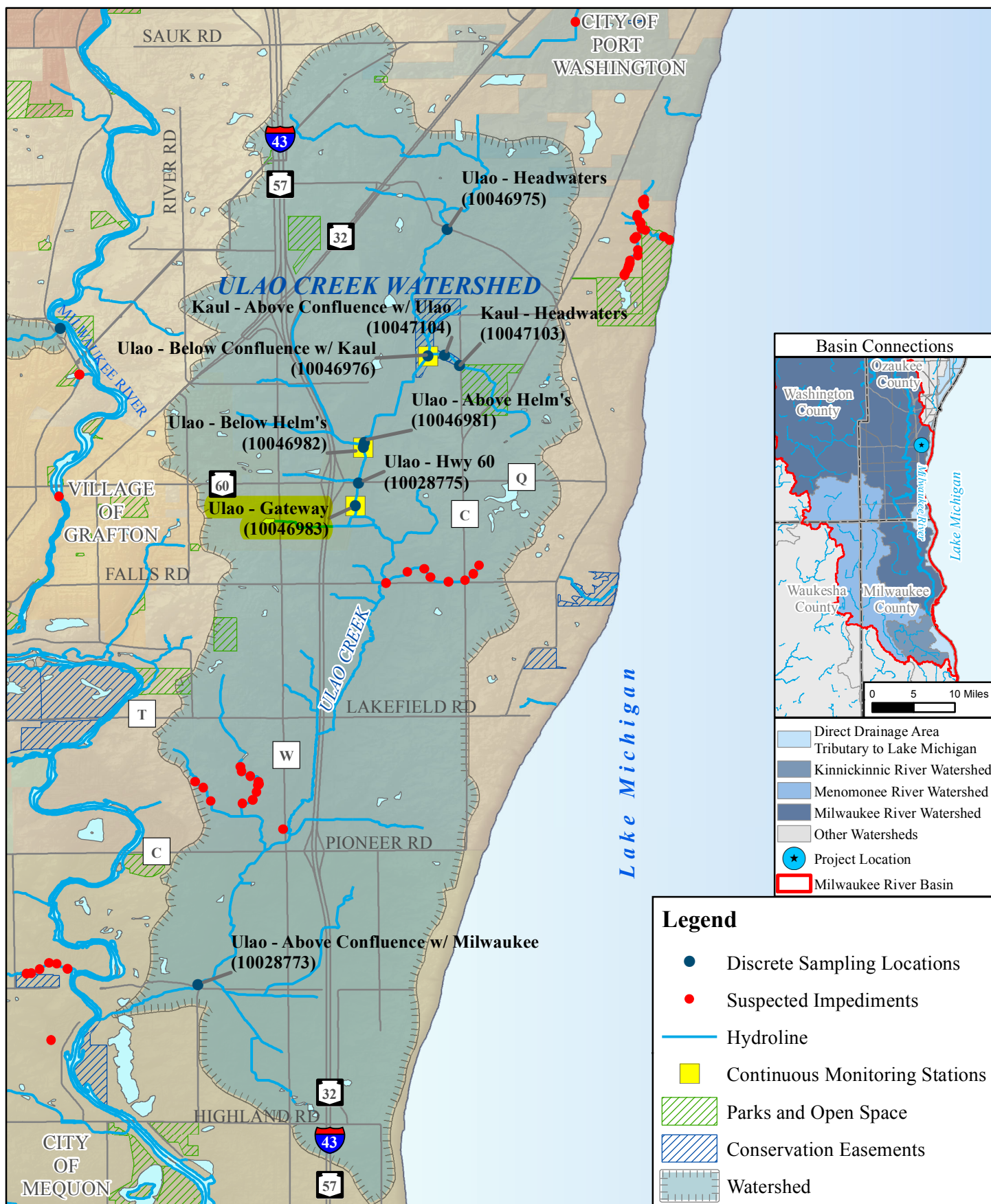
Packet Pg. 17

Mole Creek Water Quality Sampling Locations



Attachment: Planning & Parks (RES.23-59 : INC REV)

Ula Creek Water Quality Sampling Locations



Attachment: Planning & Parks (RES.23-59 : INC REV)



0 3,500 7,000 14,000 Feet



Map Produced By: Ozaukee County
Planning and Parks Department
9/4/2019

Highlighted sites proposed for monitoring in WDNR SWP FY24 Grant

Packet Pg. 19

Natural Resources Committee

AGENDA INFORMATION SHEET

AGENDA DATE: March 7, 2024
DEPARTMENT: Planning and Parks
DIRECTOR: Andrew Struck
PREPARER: Andrew Struck

Agenda Summary Increase of Revenue Budget Amendment for a Wisconsin Department of Natural Resources Surface Water Management – Management Plan Implementation Grant to Support Wetland Enhancement Activities in Tendick Nature Park

BACKGROUND INFORMATION: The Ozaukee County - Planning and Parks Department (Department) was awarded a grant from the Wisconsin Department of Natural Resources (WDNR) Surface Water Management (SWM) Management Plan Implementation (MPI) grant program to support County-sponsored fish and wildlife habitat restoration projects. Specifically, this grant will support County activities to conduct wetland enhancement activities adjacent to Tendick Creek in coordination with stream restoration activities in Tendick Nature Park in the Town of Saukville. Secured Fund for Lake Michigan (FFLM) grant funding has supported design and engineering and construction activities for five completed fish passage impediment removal or restoration projects on Tendick Creek. The Department has also worked with consultants to complete design and engineering plans for stream and wetland restoration and enhancement work on and adjacent to Tendick Creek as an essential next step in improving the overall ecological diversity and sustainability of the watershed. The WDNR SWM MPI grant will support Department activities to complete wetland enhancement activities adjacent to Tendick Creek in Tendick Nature Park in conjunction with stream remeandering and restoration activities.

ANALYSIS: The total WDNR SWM MPI grant award is \$50,000. The Ozaukee County Natural Resources Committee unanimously approved the submittal and acceptance of the WDNR SWM MPI grant at its September 7, 2023 meeting (Ayes: Holyoke, Jobs, Matera, Ross, Schoessow) and the Ozaukee County Board of Supervisors unanimously approved Resolution 23-25 at its October 4, 2023 meeting (Ayes - 21, Nays - 0, Absent - 5). The WDNR SWM MPI grants cover up to 75% of the total project cost with a funding cap of \$50,000. Project match will be provided by a secured FFLM grant (\$16,666) for a total project cost of \$66,666. There have been no changes to the budget or project scope since grant submittal; however, the original application for the wetland enhancement work was submitted under the WDNR SWM Surface Water Restoration category and WDNR staff indicated this project would be more compatible with the MPI category, as reflected in the grant award.

FISCAL IMPACT: Balance Current Year: NONE (Additional Program Revenue - \$50,000)

Next Year's Estimated Cost: NONE

FUNDING SOURCE: County Levy: Non-County Levy: X

Indicate source: Secured DNR SWM MPI and FFLM grants

Attachment: Planning & Parks (RES.23-59 : INC REV)

RECOMMENDED MOTION: Approve and recommend to the Ozaukee County Board of Supervisors the budget amendment for the Wisconsin Department of Natural Resources Surface Water Management - Management Plan Implementation grant to support wetland restoration and enhancement activities in Tendick Nature County Park.

NATURAL RESOURCES COMMITTEE

RESULT: **APPROVED AND FORWARDED [UNANIMOUS]**Next: 3/28/2024 8:00 AM

MOVER: T. Matera, Supervisor District 7

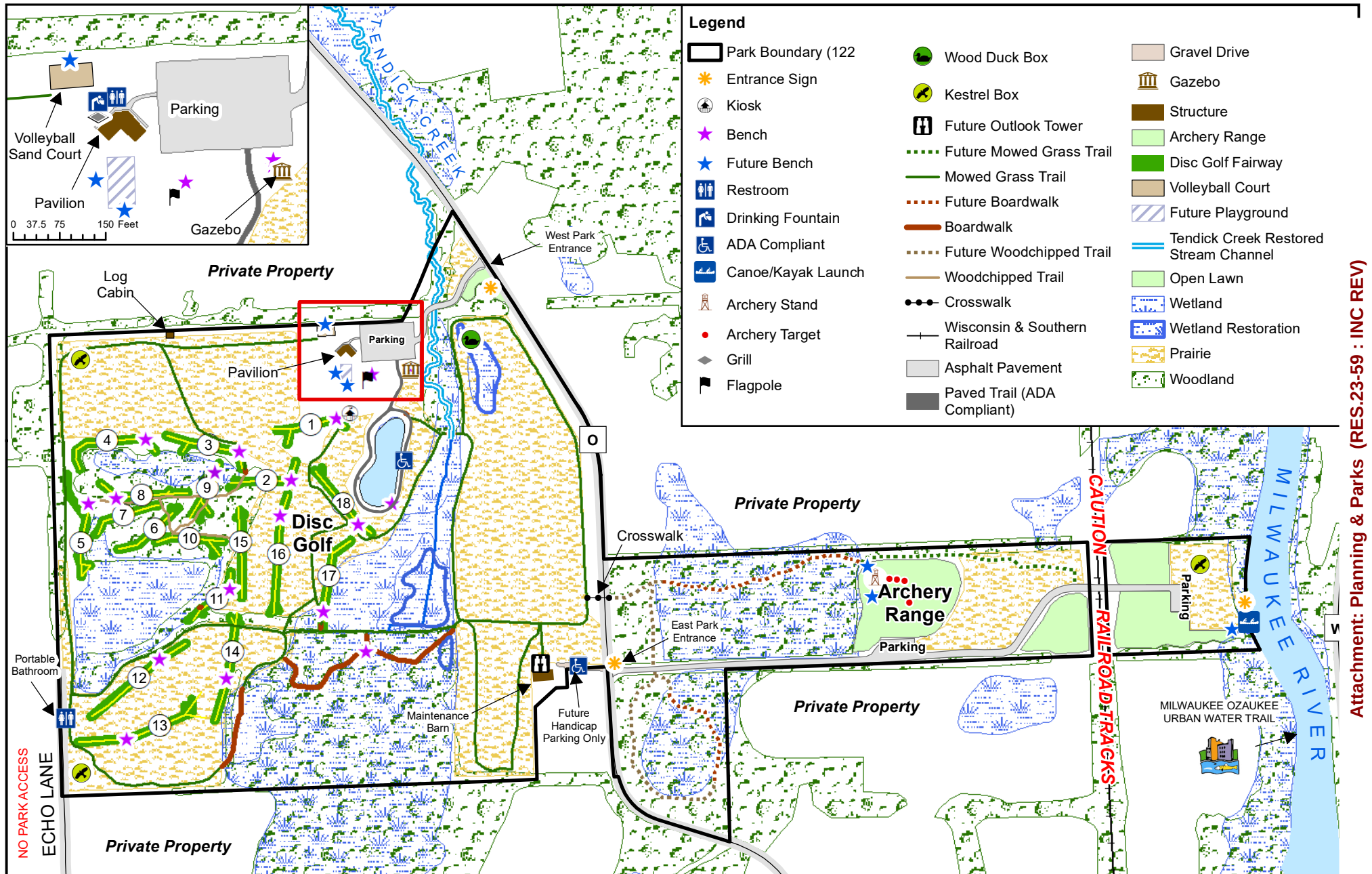
SECONDER: B. Ross, Supervisor District 19

AYES: Holyoke, Jobs, Ross, Matera, Schoessow

Tendick Nature County Park

3919 County Highway O, Saukville, WI 53080

8.a



0 250 500 1,000 Feet



Ozaukee County
Parks Reservations:



Map Produced By
Ozaukee County Planning
and Parks Department

Packet Pg. 22

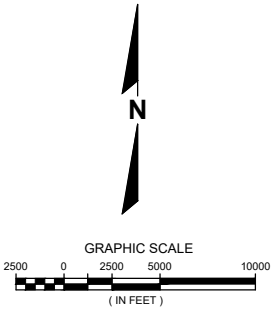
OZAUKEE COUNTY, WISCONSIN

FISH PASSAGE RESTORATION

TENDICK CREEK

AT: ~750' DOWNSTREAM & ~2,000' UPSTREAM OF CTH O

SEC 14, TOWNSHIP 11 NORTH, RANGE 21 EAST,
TOWN OF SAUKVILLE, OZAUKEE COUNTY, WISCONSIN



Project Quantity Table			
Item	Unit	Phase 1 Quantity	Phase 2 Quantity
6'x6' Box Culvert	LF	-	48
12' Box Culvert End Section	EA	-	2
Box Culvert Drop Wall	EA	-	1
72" Dia. Corrugated Metal Pipe	LF	-	54
Trackout Control Device	EA	1	3
Silt Fence	LF	1,453	593
Medium Riprap	CY	-	103
Channel Bed Material	CY	80	160
Culvert Bed Material	CY	-	50
Non-woven Coir Fabric (North American Green C125BN, Nedia C400B, or equivalent)	SY	2890	1,110

Project Earthwork Table			
Existing Stream Length	LF	494	1,417
Proposed Stream Length	LF	624	1,688
Disturbance Area	SF	211,676	126,544
South Wetland Scrape Earthwork	CY	182 (Cut)	-
North Wetland Scrape Earthwork	CY	1,434 (Cut)	-
Stream Earthwork (17+00-23+50)	CY	1,822 (Cut)	-
Stream Earthwork (10+00-17+00)	CY	-	1,285 (Cut)
Stream Earthwork (6+00-10+00)	CY	-	251 (Cut)
Stream Earthwork (0+00-6+00)	CY	-	292 (Cut)

Potential Fill Areas*			
East-West Path Between Wetland Scapes	CY	126 (Fill)	-
North-South Path Along North Wetland Scapes	CY	290 (Fill)	-
CTHO Embankment (West)	CY	1,260 (Fill)	-
CTHO Embankment Fill (East)/East Park Parcel	CY	2,271 (Fill)	-
Archery Range (East Park Parcel)	CY	-	2,433 (Fill)

*Fill areas to be used as needed. Any additional fill will be trucked to Hawthorne Hills County Park. All volumes assume 1:1 ratio. No shrink or swell factors are associated with volumes. Contractor to use discretion for fill locations and amount.



HORIZONTAL DATUM: NAD 1983 STATE PLANE
WISCONSIN SOUTH

VERTICAL DATUM: NAVD88
EXISTING CONTOURS SHOWN ON PLANS WERE
GENERATED FROM 2015 OZAUKEE COUNTY
LIDAR

OWNER:

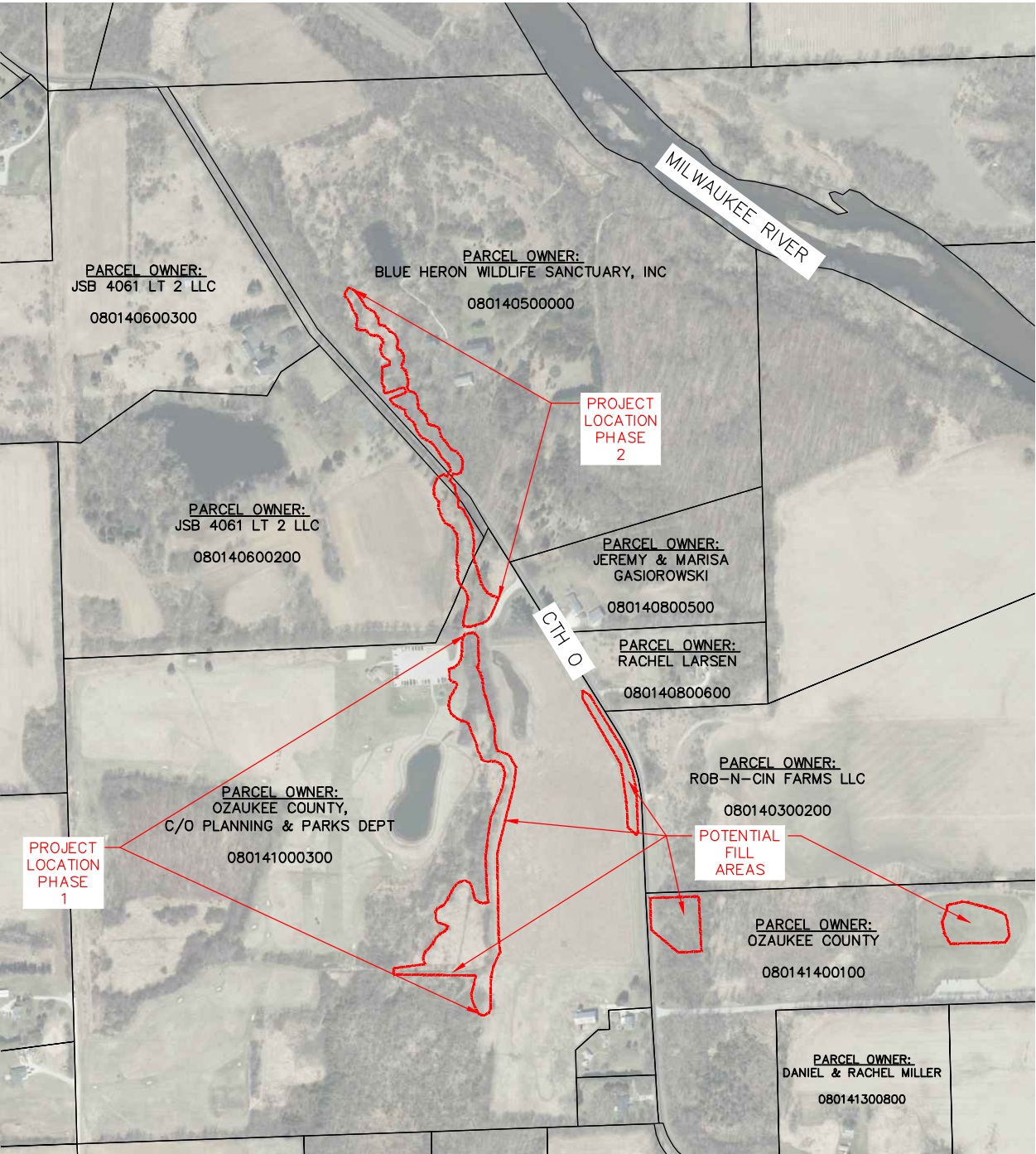
OZAUKEE COUNTY PLANNING
& PARKS DEPT.
121 W. MAIN STREET
PORT WASHINGTON, WI 53074
PH.: 262/238-8257



ENGINEERS:

R.A. SMITH, INC
16745 W BLUEMOUND RD
BROOKFIELD, WI 53005-5938
PH.: 262/781-1000
FAX: 262/781-8466

FISH CREEK RESTORATION LLC
PH.: 608/977-1856



PLAN INDEX

SHEET NO.	DESCRIPTION
COVER	COVER SHEET
01-03	OVERVIEW PLAN
04	TYPICAL STREAM PLAN, PROFILE, & SECTION
05-14	ROUGHENED CHANNEL PLAN & PROFILE
15	WETLAND SCRAPES
16-18	CROSS SECTIONS
19	BLUE HERON DRIVEWAY PLAN & PROFILE
20	CTH O CULVERT PLAN & PROFILE
21-22	DETAILS

BENCHMARK	NORTHING	EASTING	ELEVATION
6	524096.601	2511649.828	801.77
1001	525586.154	2511467.198	781.03
1002	523786.860	2511743.671	801.38
1003	524101.386	2511816.871	801.50
1004	524447.082	2511891.827	803.81
1005	524855.362	2511641.119	793.24
1006	525192.511	2511395.343	786.37
1007	525435.996	2511334.647	781.94
1008	525203.391	2511509.466	789.82
1009	523914.008	2511634.879	801.75
1010	523806.847	2511862.451	801.12
1011	524291.097	2511786.544	799.13
1012	524689.774	2511834.293	803.65
1059	525346.500	2511263.939	783.63



Know what's below.
Call before you dig.

R.A.SMITH, INC. ASSUMES NO RESPONSIBILITY FOR
DAMAGES, LIABILITY OR COSTS RESULTING FROM
CHANGES OR ALTERATIONS MADE TO THIS PLAN
WITHOUT THE EXPRESSED WRITTEN CONSENT OF
R.A.SMITH, INC.



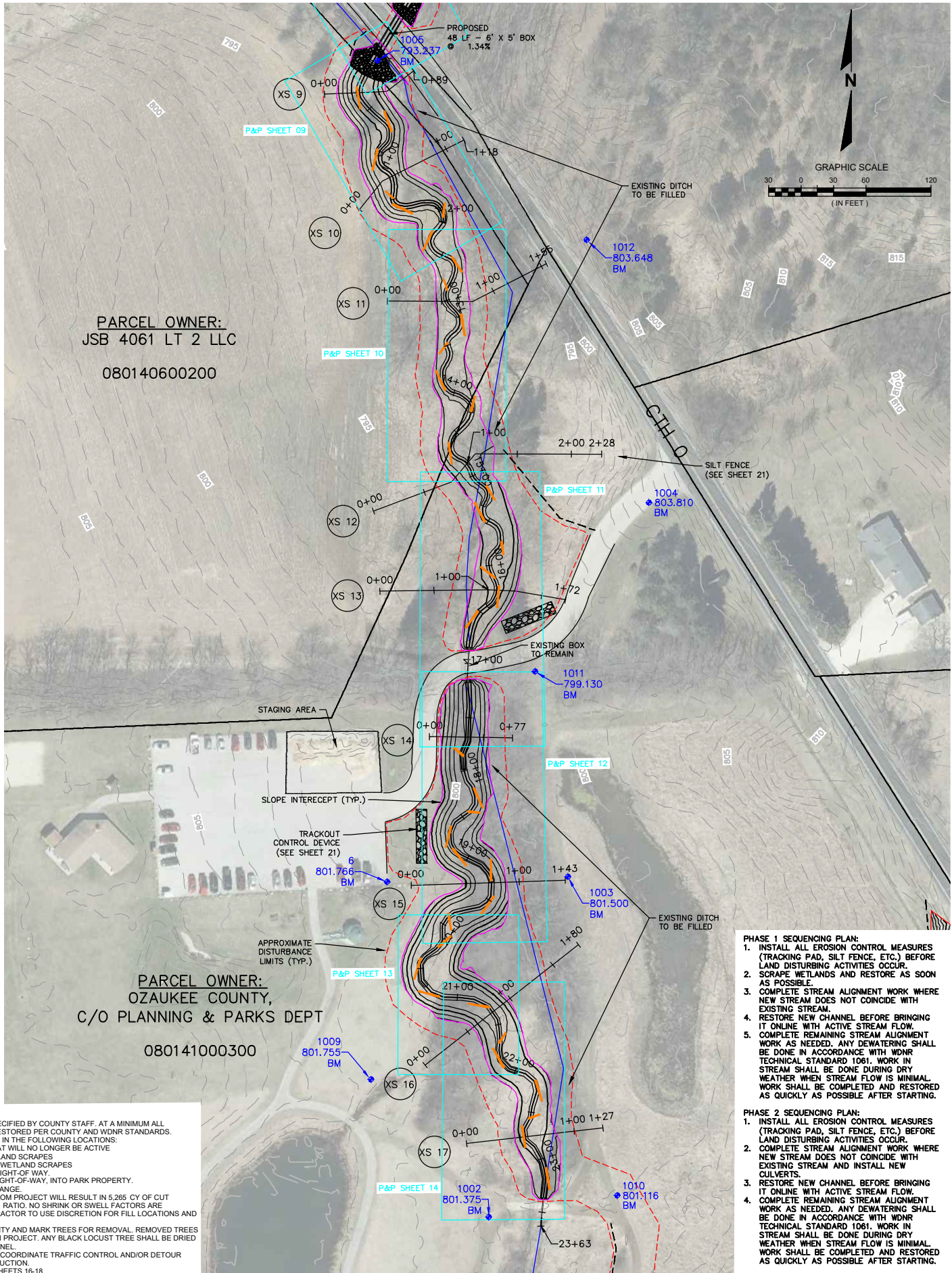
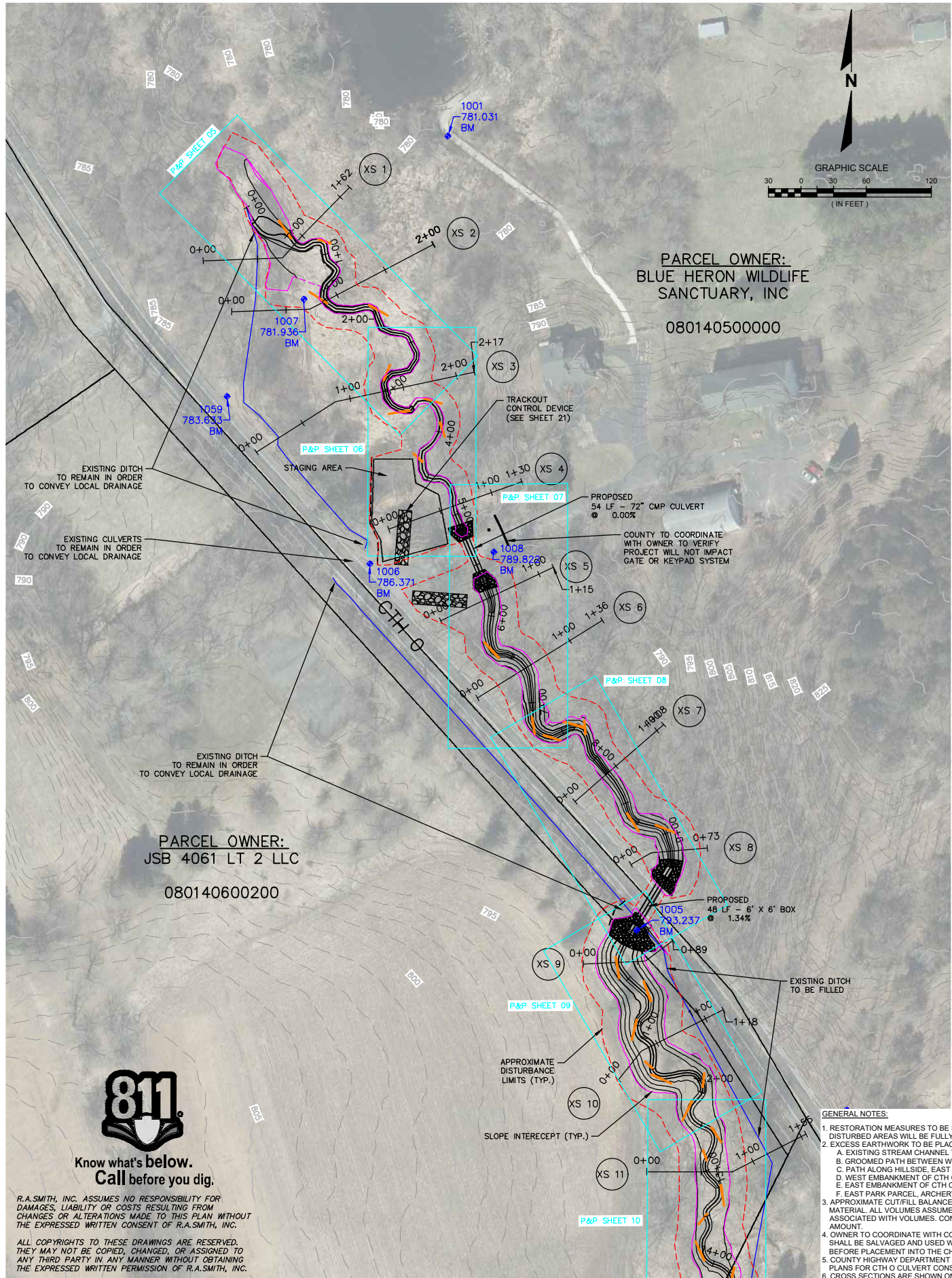
FISH PASSAGE RESTORATION
OZAUKEE COUNTY, WISCONSIN

TENDICK CREEK
COVER SHEET



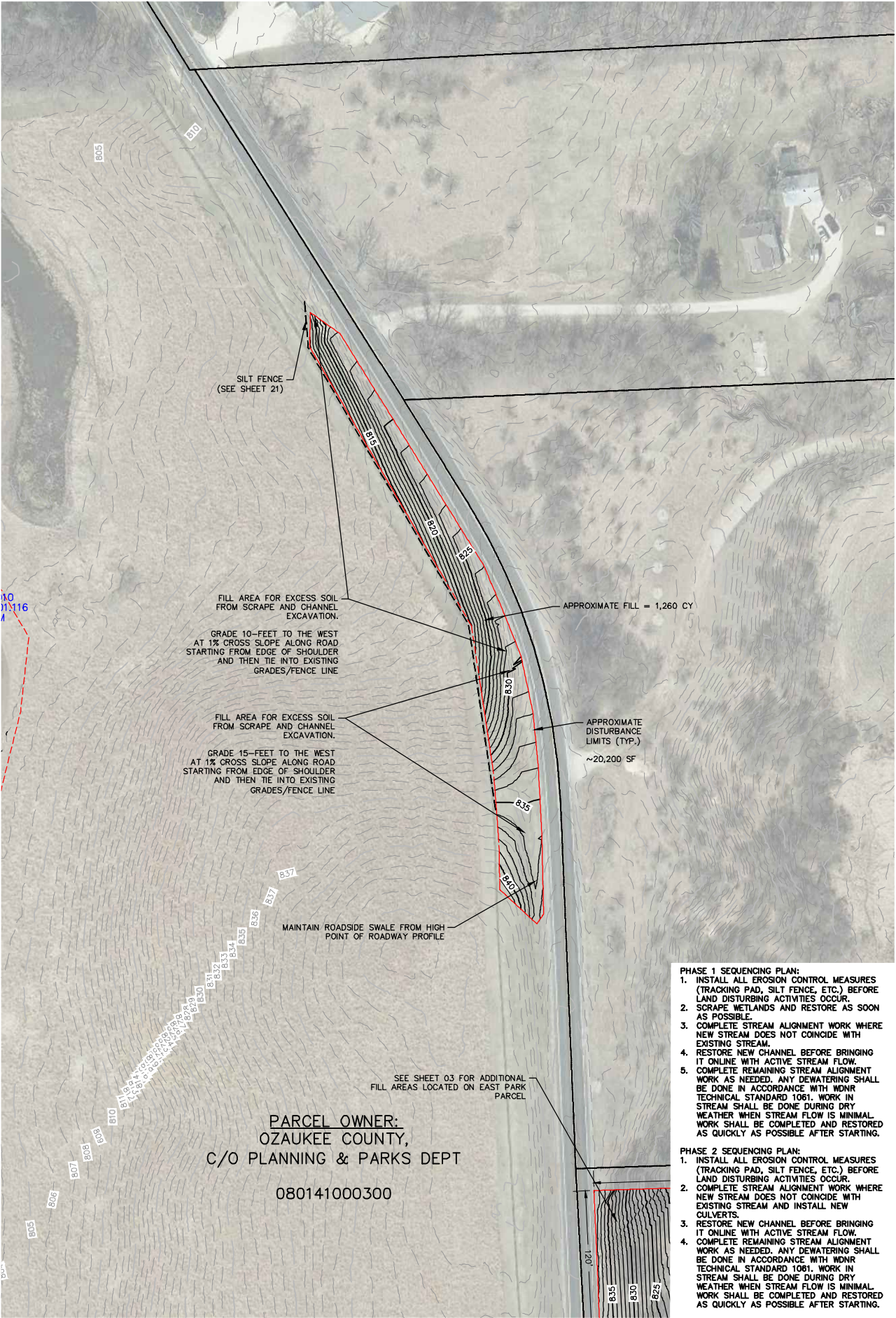
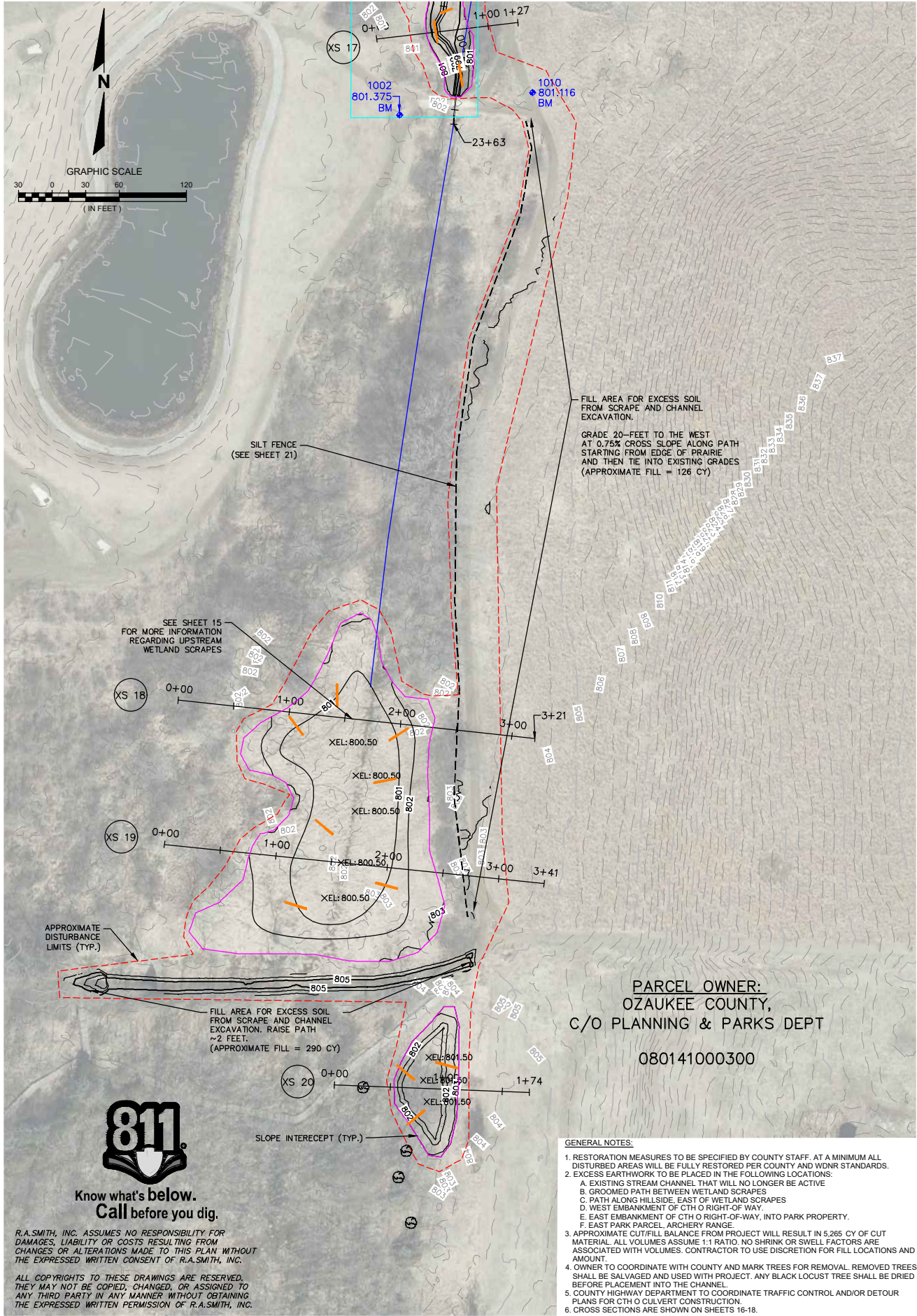
© COPYRIGHT 2024 R.A. Smith, Inc.
DATE: 02/12/2024
SCALE: 1" = 300'
JOB NO. 2210877
PROJECT MANAGER: RILEY R. STONE, P.E.
DESIGNED BY: RRS/BL
CHECKED BY: RRS/BL
SHEET NUMBER COVER

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DESCRIPTION	
DATE	
16745 W. Blumound Road Brookfield, WI 53005-5936 (262) 781-1000 rasmith.com	
raSmith CREATIVITY BEYOND ENGINEERING	
Brookfield, WI Milwaukee, WI Appleton, WI Madison, WI Cedarburg, WI Naperville, IL Irvine, CA	
FISH PASSAGE RESTORATION OZAUKEE COUNTY, WISCONSIN	TENDICK CREEK OVERVIEW PLAN
© COPYRIGHT 2024 R.A. Smith, Inc.	
DATE: 02/12/2024	
SCALE: 1" = 60'	
JOB NO. 2210877	
PROJECT MANAGER: RILEY R. STONE, P.E.	
DESIGNED BY: RRS/BL	
CHECKED BY: RRS/BL	
SHEET NUMBER	01

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FISH PASSAGE RESTORATION OZAUKEE COUNTY, WISCONSIN		TENDICK CREEK OVERVIEW PLAN	
DESCRIPTION		DATE	
16745 W. Bluemound Road Brookfield, WI 53005-5938 (262) 781-1000 rasmith.com		16745 W. Bluemound Road Brookfield, WI 53005-5938 (262) 781-1000 rasmith.com	
CREATIVITY BEYOND ENGINEERING		Brookfield, WI Milwaukee, WI Appleton, WI Madison, WI Cedarburg, WI Naperville, IL Irvine, CA	
© COPYRIGHT 2024 R.A. Smith, Inc.		DATE: 02/12/2024	
SCALE: 1" = 60'		JOB NO. 2210877	
PROJECT MANAGER: RILEY R. STONE, P.E.		DESIGNED BY: RRS/BL	
CHECKED BY: RRS/BL		SHEET NUMBER	
02		02	

RESOLUTION NO. 23-60

TRANSFER 50% OF 2023 GENERAL FUND SURPLUS TO CAPITAL PROJECTS FUND

RESOLVED, by the Ozaukee County Board of Supervisors, that budgets be increased in the accounts as follows:

Department / Program

	<u>Account Number</u>	<u>Account Name</u>	<u>AMOUNT</u>	<u>AMOUNT</u>
<i>Finance</i>				
Expense	101-0-00-81100-401	Operating Transfer from the General Fund	\$448,521	
Revenue	401-1-01-71100-101	Operating Transfer to Capital Projects Admin		\$448,521

Dated at Port Washington, Wisconsin, this 3rd day of April 2024.

SUMMARY: Transfer 50% of 2023 General Fund Surplus to Capital Projects Fund.

VOTE REQUIRED: Two-Thirds of Members Elect

03/28/24 **Finance Committee APPROVED**

RESULT: **APPROVED [UNANIMOUS]**
MOVER: E. Stelter, Supervisor District 18
SECONDER: D. Larson, Vice-Chairperson
AYES: Melotik, Larson, Winker, Stelter, Hagen

FINANCE COMMITTEE

Finance Committee
AGENDA INFORMATION SHEET

AGENDA DATE:	April 3, 2024
DEPARTMENT:	Finance
DIRECTOR:	Jay McMahon
PREPARER:	Tyler Quaas

Agenda Summary Transfer 50% of 2023 General Fund Surplus To Capital Projects Fund

BACKGROUND INFORMATION: Policy to fund Capital Projects - At year-end fifty percent of the General Fund's net increase shall be transferred to the Capital Projects Fund in the next fiscal year. This transfer is to support Capital Projects without increasing the Tax Levy or issuing long-term debt. This transfer is for 2023.

The 2023 General Fund Surplus is \$897,043 and 50% is \$448,521

RECOMMENDED MOTION: To approve a \$448,521 transfer from the General Fund to the Capital Projects Fund to support future capital improvement requests.

ATTACHMENTS:

- Budget Amendment Form - 2023 GF Surplus Transfer (PDF)
- Support for 2023 GF Transfer (PDF)



Budget Amendment Request Committee Approval Form

8.a

TO: Finance Committee

FROM: Finance

Department Name

Date of Request: 3/28/2024

Resolution No: _____

Period Transfer Recorded: _____

Type of Budget Amendment (check one)

Increase of Revenue: _____

Fund Transfer: X

Supplemental Appropriations: _____

Debit / Expense

Acct #	101-0-00-81100-401	\$	448,521
		/	-
	Pre-request Account's Budget	/	Changed To
Cost Ctr & A/C Desc	Operating Transfer to Fund 401		
Acct #		\$	-
		/	-
	Pre-request Account's Budget	/	Changed To
Cost Ctr & A/C Desc			
Acct #		\$	-
		/	-
	Pre-request Account's Budget	/	Changed To
Cost Ctr & A/C Desc			
Acct #		\$	-
		/	-
	Pre-request Account's Budget	/	Changed To
Cost Ctr & A/C Desc			
Acct #		\$	-
		/	-
	Pre-request Account's Budget	/	Changed To
Cost Ctr & A/C Desc			
Acct #		\$	-
		/	-
	Pre-request Account's Budget	/	Changed To
Cost Ctr & A/C Desc			
Acct #		\$	-
		/	-
	Pre-request Account's Budget	/	Changed To
Cost Ctr & A/C Desc			
Total Debits:			448,521

Credit / Revenue

A/C #	401-1-01-71100-101	\$	448,521
		/	-
	Pre-request Account's Budget	/	Changed To
Cost Ctr & A/C Desc	Poperating Transfer from General Fund		
A/C #		\$	-
		/	-
	Pre-request Account's Budget	/	Changed To
Cost Ctr & A/C Desc			
A/C #		\$	-
		/	-
	Pre-request Account's Budget	/	Changed To
Cost Ctr & A/C Desc			
A/C #		\$	-
		/	-
	Pre-request Account's Budget	/	Changed To
Cost Ctr & A/C Desc			
A/C #		\$	-
		/	-
	Pre-request Account's Budget	/	Changed To
Cost Ctr & A/C Desc			
A/C #		\$	-
		/	-
	Pre-request Account's Budget	/	Changed To
Cost Ctr & A/C Desc			
A/C #		\$	-
		/	-
	Pre-request Account's Budget	/	Changed To
Cost Ctr & A/C Desc			
Total Credits:			448,521

Reason for Request (Be Specific). Also fill out Support Document for County Board.

Chapter 5 of the Policies and Procedures Manual under 5.01 (10) (a) 3 states that up to 50% of the General Fund surplus can be transferred to the Capital Improvements Fund (401) with approval from the Finance Committee and County Board at the recommendation of the County Administrator. The 2023 General Fund surplus is \$897,043 and 50% of that is %448,521.

Department Head Signature

Oversight Committee Members

TYPE IN Oversight Committee Chairperson's Name

Finance Committee Members

Date of Meeting

Date of Meeting

Date Amended:

Budget Amended By:

Ozaukee County Committee Report

1-GENERAL FUND

For the Twelve Months Ending Sunday, December 31, 2023
Profit and Loss Statement ACTUAL TO AMENDED BUDGET

	Current Month Actual	2023 YTD Actual	2023 Amended Budget	Budget Balance	% Budget YTD
Revenues					
Taxes	\$3,281,205	\$23,114,376	\$22,551,637	(\$562,739)	102.50%
Intergovernmental Revenues	\$1,198,346	\$3,609,270	\$3,497,166	(\$112,104)	103.21%
Public Charges for Services	\$153,814	\$2,199,819	\$2,436,509	\$236,690	90.29%
Intergovernmental Charges	\$30,776	\$202,708	\$258,100	\$55,392	78.54%
Interdepartmental Charges	\$271,799	\$497,855	\$515,414	\$17,559	96.59%
Fines/Forfeitures/Penalties	\$13,005	\$184,855	\$220,000	\$35,145	84.03%
Licenses & Permits	\$21,840	\$165,482	\$126,650	(\$38,832)	130.66%
Interest Revenue	\$181,820	\$1,572,405	\$363,050	(\$1,209,355)	433.11%
Other Revenue	\$148,018	\$712,703	\$656,131	(\$56,572)	108.62%
Total Revenues	\$5,300,623	\$32,259,473	\$30,624,657	(\$1,634,816)	105.34%
Expenditures					
Salaries	\$1,929,233	\$16,182,070	\$15,852,060	(\$330,010)	102.08%
Fringe Benefits	\$301,706	\$5,775,126	\$6,006,712	\$231,586	96.14%
Travel/Training	\$11,650	\$134,360	\$212,632	\$78,272	63.19%
Supplies	\$158,175	\$1,270,842	\$1,578,129	\$307,287	80.53%
Purchased Services	\$526,370	\$3,718,510	\$3,680,873	(\$37,637)	101.02%
Interdepartment Charges	\$95,399	\$1,115,015	\$1,158,635	\$43,620	96.24%
Grants	\$315,805	\$1,514,473	\$1,413,021	(\$101,452)	107.18%
Other Expenses	\$271,128	\$1,412,109	\$939,908	(\$472,201)	150.24%
Total Operating Expenditures	\$3,609,466	\$31,122,505	\$30,841,970	(\$280,535)	100.91%
Capital Outlay					
Equipment & Furniture	\$127,408	\$400,925	\$431,150	\$30,225	92.99%
Total Capital Outlay	\$127,408	\$400,925	\$431,150	\$30,225	92.99%
Total Expenditures	\$3,736,874	\$31,523,430	\$31,273,120	(\$250,310)	100.80%
Other Finance (Sources)	(\$76,000)	(\$161,000)	(\$472,250)	(\$311,250)	34.09%
Net Other Financing Sources/Uses	(\$76,000)	(\$161,000)	(\$472,250)	(\$311,250)	34.09%
Net Increase (Decrease)	\$1,639,749	\$897,043	(\$176,213)	(\$1,073,256)	509.07%
Equity:					
Governmental Fund Balance	-	(\$12,259,366)	-	\$12,259,366	0.00%

12 = 448,521

Attachment: Support for 2023 GF Transfer (RES.23-60 : Transfer 50% of 2023 General Fund Surplus To Capital Projects Fund)

RESOLUTION NO. 23-61

WE ENERGIES UNDERGROUND EASEMENT FOR ELECTRICAL SERVICE AT
HAWTHORNE HILLS COUNTY PARK

WHEREAS, electrical service to the new campground and Sugar Maple Nature School area at Hawthorne Hills County Park is required; and

WHEREAS, the proposed electric work will include underground service to the area south of the new multi-purpose maintenance building; and

WHEREAS, the proposed underground electric service requires a We Energies easement across Hawthorne Hills County Park from the park road south into the campsite and Sugar Maple Nature School area;

WHEREAS, the easement area is described as strips of land 12 feet in width being a part of the Northwest ¼ of Section 3, Township 11 North, Range 21 East, Town of Saukville, Ozaukee County, Wisconsin; and

WHEREAS, the purpose of this easement is to construct, install, operate, maintain repair, replace and extend underground utility facilities, conduit and cables, electric pad-mounted transformers, concrete slabs, power pedestals, riser equipment, terminals and markers, together with all necessary and appurtenant equipment under and above ground, as deemed necessary by Grantee, for the transmission and distribution of electric energy, signals, television and telecommunications services. Trees, bushes, branches and roots may be trimmed or removed so as not to interfere with Grantee's use of the easement area; and

WHEREAS, the proposed easement and easement conditions will not interfere with any Hawthorne Hills County Park operations or maintenance and is consistent with the Master Plan for Hawthorne Hills County Park.

NOW, THEREFORE, BE IT RESOLVED, that the Ozaukee County Board of Supervisors grants and warrants to Wisconsin Electric Power Company, a Wisconsin corporation doing business as We Energies, a permanent easement upon, within, beneath, over, and across County-owned land at Hawthorne Hills County Park for electrical service and authorizes the Ozaukee County Clerk to sign and execute this easement.

Dated at Port Washington, Wisconsin, this 20th day of March 2024.

SUMMARY: Review and approval of a We Energies permanent easement at Hawthorne Hills County Park in the Town of Saukville for provision of electrical service.

VOTE REQUIRED: Majority

NATURAL RESOURCES COMMITTEE

03/07/24

Natural Resources Committee

APPROVED

RESULT: **APPROVED [UNANIMOUS]**
MOVER: B. Ross, Supervisor District 19
SECONDER: K. Schoessow, Supervisor District 23
AYES: Holyoke, Jobs, Ross, Matera, Schoessow

NATURAL RESOURCES COMMITTEE

Natural Resources Committee
AGENDA INFORMATION SHEET

AGENDA DATE:	April 3, 2024
DEPARTMENT:	Planning and Parks
DIRECTOR:	Andrew Struck
PREPARER:	Andrew Struck

Agenda Summary WE Energies Underground Easement for Electrical Service at Hawthorne Hills County Park

BACKGROUND INFORMATION: The Ozaukee County Planning and Parks Department is coordinating with We Energies on provision of electrical service at Hawthorne Hills County Park in conjunction with the construction of the new campgrounds and site development for Sugar Maple Nature School use. The proposed electric work will include underground service from the park road near the new multi-purpose maintenance building to the south into the campground and school use area. This proposed underground service will require a We Energies easement.

ANALYSIS: An underground easement is required for this service, which is attached. Department staff is working with We Energies to formalize a final legal exhibit to accompany the recorded easement. Execution of this easement is contingent upon Ozaukee County Corporation Counsel review and approval of form and content. The legal description of the easement will be finalized upon final land survey.

FISCAL IMPACT: NONE

FUNDING SOURCE:

Indicate source: N/A, Overall project funded by secured WDNR Stewardship grant

RECOMMENDED MOTION: Approve and recommend to the Ozaukee County Board of Supervisors the resolution for a We Energies underground easement at Hawthorne Hills County Park for required electric service for the new campground and Sugar Maple Nature School.

ATTACHMENTS:

- P&P_Dept_WeEnergies Easement_HHCP (PDF)
- P&P_Dept_Ozaukee County Hawthorne Hills Easement Map (PDF)
- Easement HH Park 3.18.24 (PDF)

DISTRIBUTION EASEMENT

Document Number

WR NO. 4920062

IO NO. 5478

For good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, **OZAUKEE COUNTY**, hereinafter referred to as "Grantor", owner of land, hereby grants and warrants to **WISCONSIN ELECTRIC POWER COMPANY, a Wisconsin corporation doing business as We Energies**, hereinafter referred to as "Grantee", a permanent easement upon, within, beneath, over and across a part of Grantor's land hereinafter referred to as "easement area".

The easement area is described as strips of land 12 feet in width being a part of the **Northwest ¼ of Section 3**, Township 11 North, Range 21 East, Town of Saukville, Ozaukee County, Wisconsin.

The location of the easement area with respect to Grantor's land is as shown on the attached drawing, marked Exhibit "A", and made a part of this document.

RETURN TO:
We Energies
PROPERTY RIGHTS & INFORMATION GROUP
231 W. MICHIGAN STREET, ROOM P129
PO BOX 2046
MILWAUKEE, WI 53201-2046

08-003-05-000.00
(Parcel Identification Number)

1. **Purpose:** The purpose of this easement is to construct, install, operate, maintain repair, replace and extend underground utility facilities, conduit and cables, electric pad-mounted transformers, concrete slabs, power pedestals, riser equipment, terminals and markers, together with all necessary and appurtenant equipment under and above ground, as deemed necessary by Grantee, for the transmission and distribution of electric energy, signals, television and telecommunications services. Trees, bushes, branches and roots may be trimmed or removed so as not to interfere with Grantee's use of the easement area.
2. **Access:** Grantee or its agents shall have the right to enter and use Grantor's land with full right of ingress and egress over and across the easement area and adjacent lands of Grantor from existing infrastructure (public roadway) for the purpose of exercising its rights in the easement area, contingent upon prior written Grantor approval, which shall not be unreasonably withheld.
3. **Buildings or Other Structures:** Grantor agrees that no structures will be erected in the easement area or in such close proximity to Grantee's facilities as to create a violation of all applicable State of Wisconsin electric and gas codes or any amendments thereto.
4. **Elevation:** Grantor agrees that the elevation of the ground surface existing as of the date of the initial installation of Grantee's facilities within the easement area will not be altered by more than 4 inches without the written consent of Grantee.
5. **Restoration:** Grantee agrees to restore or cause to have restored Grantor's land, as nearly as is reasonably possible, to the condition existing prior to such entry by Grantee or its agents. This restoration, however, does not apply to the initial installation of said facilities or any trees, bushes, branches or roots which may interfere with Grantee's use of the easement area.
6. **Exercise of Rights:** It is agreed that the complete exercise of the rights herein conveyed may be gradual and not fully exercised until some time in the future, and that none of the rights herein granted shall be lost by non-use.
7. **Binding on Future Parties:** This grant of easement shall be binding upon and inure to the benefit of the heirs, successors and assigns of all parties hereto.
8. **Easement Review:** Grantor acknowledges receipt of materials which describe Grantor's rights and options in the easement negotiation process and furthermore acknowledges that Grantor has had at least 5 days to review this easement document or voluntarily waives the five day review period.

Attachment: P&P_Dept_WeEnergies Easement_HHCP (RES.23-61 :

Grantor:**OZAUKEE COUNTY**

By: _____

(Print name and title): _____

By _____

(Print name and title): _____

Personally came before me in _____ County, Wisconsin on _____, 2024,
the above named _____, the _____
and _____, the _____
of OZAUKEE COUNTY pursuant to a Resolution adopted by the County Board on _____
as Resolution No. _____.

Notary Public Signature, State of Wisconsin_____
Notary Public Name (Typed or Printed)

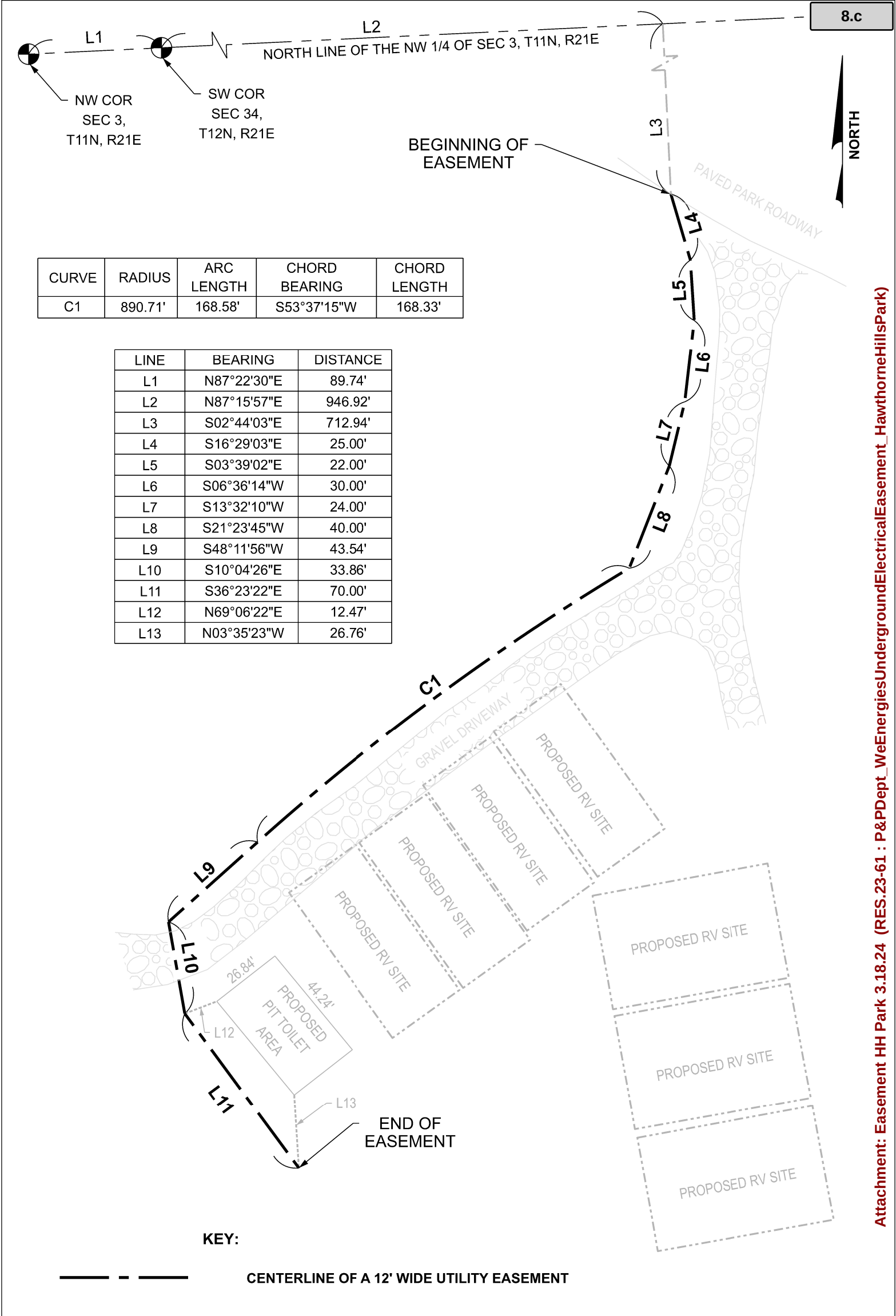
(NOTARY STAMP/SEAL)

My commission expires _____

Attachment: P&P_Dept_WeEnergies Easement_HHCP (RES.23-61 :

This instrument was drafted by Douglas J. Hartmann on behalf of Wisconsin Electric Power Company, PO Box 2046,
Milwaukee, Wisconsin 53201-2046.





Attachment: Easement HH Park 3.18.24 (RES.23-61 : P&PDept_WeEnergiesUndergroundElectricalEasement HawthorneHillsPark)

 EXHIBIT "A"

BEING A PART OF THE NW 1/4 OF THE NW 1/4 OF SECTION 3,
TOWNSHIP 11 NORTH, RANGE 21 EAST, TOWN OF SAUKVILLE,
OZAUKEE COUNTY, WISCONSIN

DRAWN BY: C.P. BEIHOFF

DATE: FEBRUARY 29, 2024

WR NUMBER: 4920062

REVISIONS: 03/08/2024 03/18/2024

SCALE =NONE

Packet Pg. 36

RESOLUTION NO. 23-62

2024 EXECUTIVE COMMITTEE PROJECT FUND RECOMMENDATION AS REVISED

WHEREAS, the Ozaukee County Board of Supervisors established a Project Fund to address deferred capital projects and other one-time operational proposals in county departments that will allow for the completion of essential projects in 2024; and

WHEREAS, county departments submitted proposals to the Department of Administration for evaluation and grading for the review and recommendation by the Standing Committees of the Ozaukee County Board; and

WHEREAS, the projects identified by the Standing Committees of the Ozaukee County Board were reviewed by the Executive Committee culminating in a final list of recommended projects for consideration by the County Board.

NOW, THEREFORE, BE IT RESOLVED, by the Ozaukee County Board of Supervisors that the following projects be approved and adopted for completion from the Project Fund in the line item accounts detailed below;

401-1-01-60000-032 Court Room Remodel: \$258,000

401-1-01-60000-033 Jail Division Door Relays & Intercom Controls: \$550,000

401-1-01-60000-034 Glock Firearm Replacement & Optic Upgrade: \$88,000

401-1-01-60000-035 Jail division Medical Electronic Health Record System: \$30,000

401-1-01-60000-036 Sheriff's Office Training Room: \$36,000

401-1-01-60000-037 Solar Electric PV Systems: \$400,000

401-1-01-60000-038 ERP Vendor Selection & Implementation Assistance: \$90,000

401-1-01-60000-039 Flag Day Parking Lot: \$50,000

401-1-01-60000-040 Countywide Radio System Upgrade: \$600,000

401-1-01-60000-041 Parks Division Security Cameras: \$58,000

401-1-01-60000-042 Virmond County Park Stormwater Wetland Restoration: \$75,000

401-1-01-60000-043 HH Park Campground & School Site Development: \$225,000

401-1-01-60000-044 Parks Security Gate & Cameras: \$163,000

401-1-01-60000-045 Human Services Electronic Health Records Database: \$300,000

FURTHER RESOLVED, that the **\$1,900,000** remaining in the project fund shall be reserved to finance future projects following a recommendation by the proper Standing Committee, Executive Committee and the approval of the Ozaukee County Board of Supervisors; and

FURTHER RESOLVED, that any change orders exceeding \$5,000 of the budget amounts detailed above shall require approval by the proper Standing Committee, Executive Committee and the Ozaukee County Board of Supervisors; and

FURTHER RESOLVED, that any change orders less than \$5,000 of the budget amounts

detailed above shall require approval by the County Administrator in consultation with the County Board Chairperson and the proper Standing Committee Chairperson.

Dated at Port Washington, Wisconsin, this 3rd day of April 2024.

SUMMARY: Executive Committee recommendation of projects funded by the 2024 Project Fund

VOTE REQUIRED: Majority

04/01/24

Executive Committee

APPROVED

RESULT:	APPROVED [UNANIMOUS]
MOVER:	M. Wolf, Supervisor District 11
SECONDER:	P. Melotik, Vice-Chairperson
AYES:	Schlenvogt, Melotik, Wolf, Nelson, Holyoke
ABSENT:	D. Irish

EXECUTIVE COMMITTEE

Executive Committee
AGENDA INFORMATION SHEET

AGENDA DATE:	April 3, 2024
DEPARTMENT:	County Clerk
DIRECTOR:	Karen Niemuth
PREPARER:	Tyler Quaas

Agenda Summary 2024 Executive Committee Project Fund Recommendation as Revised

ATTACHMENTS:

- Project (PDF)
- Approved Projects (PDF)
- Not Recommended Projects (PDF)

Executive Committee
AGENDA INFORMATION SHEET

AGENDA DATE: April 1, 2024
DEPARTMENT: County Clerk
DIRECTOR: Karen Niemuth
PREPARER: Tyler Quaas

Agenda Summary 2024 Executive Committee Project Fund Recommendation

BACKGROUND INFORMATION: Below the Committee will find information on the project fund applications from the Standing Committee review of the project proposals from the departments under their oversight. A memo explaining the process is included to aid in understanding. A project feasibility report is included for each submittal that summarizes the project and details the staff recommendation. Finally, all of the information submitted by the departments are included.

SUMMARY OF COMMITTEE RECOMMENDATIONS: Recommendations are not ranked. All oversight committee have made their recommendations as follows. If any recommendations change, Executive Committee will be updated.

PUBLIC SAFETY

1. Court Room Remodel	\$258,000
2. Jail Door Relays & Intercom Controls	\$550,000
3. Glock Firearm & Optic Replacement	\$88,179
4. Medical Electronic Health Record System	\$30,000
5. Sheriff's Office Training Room Upgrades	\$35,889

PUBLIC WORKS

1. Solar Electric PV System	\$400,000
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FINANCE COMMITTEE

1. ERP Vendor Selection & Implementation	\$90,000
2. Flag Day Parking Lot Repaving	\$50,000
3. Countywide Radio System Upgrade	\$600,000

HEALTH & HUMAN SERVICES COMMITTEE

NATURAL RESOURCES COMMITTEE

1. Parks Security Cameras	\$57,500
2. Virmond Park Stormwater Wetland Restoration	\$75,000
3. HH Park Campground and School Site Development	\$225,000
4. Park Security Gates & Cameras	\$163,000

Staff does recommend consideration of funding in 2024, for projects that did not make the \$3.5M project fund cutoff, but are nonetheless urgent or well-conceived project proposals. Staff recommends considering projects in the top half in scoring, which are an additional eight to ten projects.

SCORING SUMMARY (BLACK RECOMMENDED)

PUBLIC SAFETY COMMITTEE

<u>Project Name</u>	<u>Value & Efficiency</u>	<u>Modernization & Service</u>	<u>Cost</u>
Court Room Remodel	300	280	\$258,200
Jail Division Door Relays & Intercom Controls Replacement	290	300	\$550,000
Glock Firearm Replacement & Optic Upgrade			\$88,179
Jail division Medical Electronic Health Record System			\$30,000
Sheriff's Office Training Room - A/V, Furniture, Training Mats			\$35,889
Justice Center & Jail Division Camera Project			\$288,745
Behavioral Health Co- Responder Unit Office			\$110,000
Sheriff's Office Furniture Replacement			\$294,112

PUBLIC WORKS COMMITTEE

<u>Project Name</u>	<u>Value & Efficiency</u>	<u>Modernization & Service</u>	<u>Cost</u>
Solar Electric PV System	290	270	\$400,000
Court Security Improvement			\$33,900

FINANCE COMMITTEE

<u>Project Name</u>	<u>Value & Efficiency</u>	<u>Modernization & Service</u>	<u>Cost</u>
ERP Vendor Selection & Implementation Assistance	170	330	\$90,000

Flag Day Parking Lot	300	250	\$50,000
Countywide Radio System Upgrade	350	260	\$600,000
ERP Software Implementation	170	330	\$900,000

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NATURAL RESOURCES COMMITTEE

<u>Project Name</u>	<u>Value & Efficiency</u>	<u>Modernization & Service</u>	<u>Cost</u>
Parks Division Security Cameras	350	270	\$57,500
Virmond County Park Stormwater Wetland Restoration	300	310	\$75,000
HH Park Campground & School Site Development	260	320	\$225,000
Parks Security Gate & Cameras	310	270	\$163,000
HH Peters Youth Camp Furnace Replacement	280	220	\$25,000
Little Menomonee River Fish & Wildlife Preserve Public Access	220	200	\$25,000
Aluminum Trailers	300	170	\$35,000
Virmond Caretakers House Roof & Siding Replacement	330	250	\$70,000
Covered Bridge Public Access	300	240	\$52,500
HH County Park Paving	220	180	\$81,100

HEALTH AND HUMAN SERVICES COMMITTEE

<u>Project Name</u>	<u>Value & Efficiency</u>	<u>Modernization & Service</u>	<u>Cost</u>
Electronic Health Record Database Auditorium	190	290	\$300,051
Hybrid Meeting Renovation			\$33,500

RECOMMENDED MOTION: Staff respectfully requests that the committee consider the projects as proposed and make a ranked recommendation for consideration by the County Board.

ATTACHMENTS:

- Approved Projects (PDF)

Attachment: Project (RES.23-62 : 2024 Executive Committee Project Fund Recommendation)

PROJECT FEASIBILITY ANALYSIS

Project Name: Court Room Remodel

Project Manager: Connie Mueller

Project Budget Estimate:

Source	Amount	Grant Info
2024 Capital Project Fund	\$258,200	N/A
TOTAL	\$258,200	

Project Score: Value and Efficiency (300/400) Modernization and Service (280/400)

Project Purpose Summary (from department):

The furniture and carpeting in the court rooms is original to the construction of the Justice Center in 1991. The construction and upholstery of the furniture is worn, unrepairable (except for the pews) and becoming unfunctional. The new furniture will accommodate all individual sizes to be seated for extended periods of time. There are safety concerns regarding trip hazards on worn/split carpeting and injury due to chairs breaking and pews are splintering.

Proposal Considerations, Risks, and Identified Issues:

This project scored very high for percent of budget and budget impact. It scored relatively low for health and safety but high for urgency. As for modernization and project purpose, this project received relatively high scores, as the furniture and carpeting is worn, and unrepairable. For quality of life, it received an average score, but, in terms of customer satisfaction, it scored higher, as it directly relates to jurors and citizens using and visiting the Justice Center, as a very outward facing part of County government.

Staff Recommendation:

Staff recommends approval of the Court Room Remodel out of the 2024 project fund

PROJECT FEASIBILITY ANALYSIS

Project Name: Jail Division Door Relays & Intercom Controls Replacement

Project Manager: Sheriff Knowles

Project Budget Estimate:

Source	Amount	Grant Info
2024 Capital Project Fund	\$550,000	N/A
TOTAL	\$550,000	

Project Score: Value and Efficiency (290/400) Modernization and Service (300/400)

Project Purpose Summary (from department):

The existing relay devices and proprietary door and intercom relay boards are well beyond their normal useful life expectancy. As a result, this may lead to a catastrophic event and total failure of the door relay system in the Jail. The project involves designing, fabricating and programming new relay devices and intercom controls to ensure the system continues to operate as it should.

Proposal Considerations, Risks, and Identified Issues:

For Value and Efficiency this project scored relatively high in percent of budget, budget impact, health and safety as well as urgency. For modernization it scored high with a relatively high score for modernization, a very high score for project purpose, an average score for quality of life and a very high score for customer satisfaction. This project received a score of 590 making it the fourth highest scoring project of the 2024 proposals.

Staff Recommendation:

Staff recommends to follow through with this project and fund it through the 2024 capital project fund.

PROJECT FEASIBILITY ANALYSIS

Project Name: Glock Firearm Replacement and Optic Upgrade

Project Manager: Sheriff Knowles

Project Budget Estimate:

Source	Amount	Grant Info
2024 Capital Project Fund	\$88,179	N/A
TOTAL	\$88,179	

Project Score: Value and Efficiency (/400) Modernization and Service (/400)

Project Purpose Summary (from department):

The Ozaukee County Sheriff's Office Currently has 110 handguns issued with 80 of those firearms being 17 years old. These handguns were placed into service in 2007. These handguns are worn daily and are exposed to the every day elements. They are used regularly during live-fire firearms training multiple times a year. Glock manufacturer recommends the internal parts and magazines being replaced after 5 years and whole pistol replacement after 10 years.

Proposal Considerations, Risks, and Identified Issues:

Staff Recommendation:

Staff recommends to fund this project through the 2024 capital project fund

PROJECT FEASIBILITY ANALYSIS

Project Name: Jail Division Medical Electronic Health Record System

Project Manager: Sheriff Knowles

Project Budget Estimate:

Source	Amount	Grant Info
2024 Capital Project Fund	\$30,000	N/A
TOTAL	\$30,000	

Project Score: Value and Efficiency (/400) Modernization and Service (/400)

Project Purpose Summary (from department):

The Ozaukee County Jail Medical and Mental Health staff currently document using paper forms. This system is archaic and inefficient. The hand written documentation takes much longer than an Electronic Health Record system and ultimately increases wait times and decreases productivity. Medical records are unable to be shared electronically with the Advanced Correctional Healthcare (ACH) Medical Director as well as medical specialists. The Jail Medical documentation system is long overdue for an update.

Proposal Considerations, Risks, and Identified Issues:

Staff Recommendation:

Staff recommends to follow through with this project by funding it through the 2024 capital project fund.

PROJECT FEASIBILITY ANALYSIS

Project Name: Sheriff's Office Training Room - Audio/Video, Furniture and Training Mats

Project Manager: Sheriff Knowles

Project Budget Estimate:

Source	Amount	Grant Info
2024 Capital Project Fund	\$35,889	N/A
TOTAL	\$35,889	

Project Score: Value and Efficiency (/400) Modernization and Service (/400)

Project Purpose Summary (from department):

Replacement audio/video (AV) equipment is needed in the new Sheriff's Office training room. The current AV equipment is outdated and cannot be transferred to the new training room as it has reached its end of life. This is a multi-purpose training room used for in-house training as well as state wide training. The training space will be used for both classroom training and hands-on physical training.

Proposal Considerations, Risks, and Identified Issues:

Staff Recommendation:

Staff recommends following through with this project and funding it through the 2024 capital project fund.

PROJECT FEASIBILITY ANALYSIS

Project Name: Solar Electric PV System – Admin Center, Justice Center, Hwy Shop

Project Manager: Facilities MGT/DOA

Project Budget Estimate:

Source	Amount	Grant Information
2024 Capital Project Fund	\$400,000	N/A
30% Tax Credit -Inflation Reduction Act	\$213,000	Not Applied For
Focus on Energy	\$95,000	Not Applied For
<u>TOTAL</u>	<u>708,000</u>	

Project Score: Value and Efficiency (290/400) Modernization and Service (270/400)

Project Purpose Summary (from department):

The estimated cost to design-build three Solar PV Systems, on the flat roofs of the Admin Center (98 KW), Justice Center (166 KW), and Hwy Department (70 KW) is approximately \$708,000. \$400,000 is requested from the County project fund; \$213,000 will be applied for from the Inflation Reduction Act's "Elective Pay" provision, which allows municipalities to be eligible for a 30% tax credit; and \$95,000 will be obtained from Focus on Energy's (FOE) renewable energy incentive program. The \$308,000 in tax credit and FOE incentive funding would reimburse approximately 43% of the project, with approximately 57% coming from the County project fund. The County will accrue electrical cost savings of approximately \$40,000 annually. After ten years, the County will have recovered the \$400,000 investment through cost savings. Over the 25-year warrantied life of the system, the County will accrue \$1,000,000 in savings, a gain of \$600,000, and an ROI of 250%, an annualized rate of return of 3.75%.

Proposal Considerations, Risks, and Identified Issues:

Installation of a Solar PV System on our three main campus buildings is a unique opportunity, due to the 30% tax credit being offered to municipalities, through the Inflation Reduction Act (IRA). Municipalities would typically be ineligible for a tax credit, but under the IRA, they can receive a direct pay incentive through the program. The project also relies on Focus on Energy funding. The project would also further the renewable energy goals of the County's Energy & Sustainability Plan, offsetting approximately 397,000 kWh annually or 5.6% of the County's electrical use.

Staff Recommendation:

Staff recommends consideration of funding for Solar Electric PV Systems at the Administration Center, Justice Center and Highway Department, contingent on obtaining FOE incentives, and the 30% tax credit through the Inflation Reduction Act.

PROJECT FEASIBILITY ANALYSIS

Project Name: ERP Vendor Selection & Implementation Assistance

Project Manager: Chris McDonell

Project Budget Estimate:

Source	Amount	Grant Info
2024 Capital Project Fund	\$90,000	N/A
TOTAL	\$90,000	

Project Score: Value and Efficiency (170/400) Modernization and Service (330/400)

Project Purpose Summary (from department):

The proposal includes expenses to contract with a vendor to assist the County in selecting and implementing a new ERP software system. The proposed approach to this work includes: Engagement planning and kickoff, business process and software requirements review, develop functional requirements report, vendor request for proposal (RFP) development, develop demonstration scripts and manage demonstration process, vendor selection and contract negotiations, develop and maintain an internal implementation checklist, conduct internal project status calls with the county team, participate in vendor-led status calls, oversee task completion, serve as a point of escalation for any issue resolution.

Proposal Considerations, Risks, and Identified Issues:

This project scored moderate for percent of budget and high for urgency. It did not score well for budget impact or health & safety. This project did score high for modernization, project purpose and customer satisfaction but scored moderate for quality of life. This project accounts for the cost of hiring a vendor that would assist in providing us with a seamless transition from Great Plains come 2026 not to be confused with the actual cost of the software implementation. The cost dedicates a project manager who is familiar with software transitions and solely focused on transitioning us out of Great Plains to provide us with the seamless transition.

Staff Recommendation:

Staff recommends consideration of funding.

PROJECT FEASIBILITY ANALYSIS

Project Name: National Flag Day Foundation Parking Lot

Project Manager: County Administrator

Project Budget Estimate:

Source	Amount	Grant Info
2024 Capital Project Fund	\$50,000	N/A
TOTAL	\$50,000	

Project Score: Value and Efficiency (300/400) Modernization and Service (250/400)

Project Purpose Summary (from department):

The National Flag Day Foundation is the not-for-profit organization that honors the Congressionally recognized Birth Place of Flag Day at Stony Hill school in Waubeka in 1885. The National Flag Day foundation operates the Americanism Museum in Waubeka that honors the birthplace of Flag Day with a museum and operates as a civic center. The Americanism Center is seeking support of \$50,000 to assist with the replacement of the driveway to the building.

Proposal Considerations, Risks, and Identified Issues:

This project scored high on percent of budget and budget impact while scoring moderate for health & safety and urgency. It scored relatively high for modernization and project purpose but scored moderate for quality of life and customer satisfaction. The parking lot at National Flag Day Foundation is degrading and unsafe for pedestrian use. Its' renovation is overdue and necessary to maintain quality for the good of the National Flag Day Foundation and all they do.

Staff Recommendation:

PROJECT FEASIBILITY ANALYSIS

Project Name: Countywide Radio System – Microwave Upgrade & Equipment

Project Manager: Jason Dzwiniel

Project Budget Estimate:

Source	Amount	Grant Info
2024 Capital Project Fund	\$600,000	N/A
TOTAL	\$600,000	

Project Score: Value and Efficiency (350/400) Modernization and Service (260/400)

Project Purpose Summary (from department):

This project is the second phase of the Pinnacle Tower Upgrade to the countywide radio system. The microwave system is the backup connection between the radio towers so that in the event of an equipment failure of one of the radio towers the other towers in the system have the ability to continue to provide coverage. In addition, this upgrade will bring the Harrington Beach tower online in the countywide radio system. Under the current configuration, radio users need to switch channels when seeking radio coverage using the Harrington Beach tower and switch back to rejoin the 'normal' radio system.

Proposal Considerations, Risks, and Identified Issues:

This project scored high for percent of budget, budget impact, health & safety, and urgency. It also scored high for modernization and project purposes while receiving moderate scores for quality of life and customer satisfaction. Following through with this upgrade will bring on the newly built Harrington Beach radio tower while providing seamless use. If this project is not followed through with the Harrington Beach radio tower will remain effectively useless from this area of the county without the implementation of this upgrade.

Staff Recommendation:

Staff recommends consideration of funding.

PROJECT FEASIBILITY ANALYSIS

Project Name: Parks Division - Security Cameras

Project Manager: Andrew Struck

Project Budget Estimate:

Source	Amount	Grant Info
2024 Capital Project Fund	\$57,500	N/A
TOTAL	\$57,500	

Project Score: Value and Efficiency (350/400) Modernization and Service (270/400)

Project Purpose Summary (from department):

New security cameras are needed to deter damage and vandalism and increase park safety for visitors, especially with increased park visitor numbers due to the COVID-19 pandemic.

Proposal Considerations, Risks, and Identified Issues:

This project received high scores all across the board because of its' clear value to the parks system and the purpose it serves to deter vandalism. Receiving high scores across the board, this project ended up as the highest scoring project request submitted this year.

Staff Recommendation:

Staff recommendation to fund Parks Division security cameras through the Capital Project Fund.

PROJECT FEASIBILITY ANALYSIS

Project Name: Virmond County Park Stormwater Wetland Restoration

Project Manager: Andrew Struck

Project Budget Estimate:

Source	Amount	Grant Info
2024 Capital Project Fund	\$75,000	N/A
Grant	\$96,000	WCMP
Grant	\$134,000	FFLM
Grant	\$200,000	NFWF SOGL
TOTAL	\$505,000	

Project Score: Value and Efficiency (300/400) Modernization and Service (310/400)

Project Purpose Summary (from department):

Surface water runoff in Park has changed over the years causing some bluff instability along the eastern portion of the Park near depressional wetlands. Adjacent residential development on neighboring properties to the north have prevented the continued discharge of surface water from these wetlands and has caused ponding on Park property. Neighbors to the north of the Park have expressed concern over the ponded water and potential impacts to the residential and other structures on their properties. This project is a priority for 2024. Project costs are estimated from 2023 HWY Department estimates and recent similar projects.

Proposal Considerations, Risks, and Identified Issues:

This project was graded very highly in the percent of budget and budget impact categories as most of the funding for this project will be received from grants. For health & safety this project received a low grade, but received a relatively high grade for urgency, due to the impact on residential neighbors. This project did receive high grades for modernization, project purpose, quality of life and customer satisfaction. The total score of this project is 610 making it the second highest score of the 2024 projects.

Staff Recommendation:

Staff recommends funding the Virmond Park Stormwater Wetland Restoration through the capital project fund.

PROJECT FEASIBILITY ANALYSIS

Project Name: Hawthorne Hills Park Campground and School Site Development

Project Manager: Andrew Struck

Project Budget Estimate:

Source	Amount	Grant Info
2024 Capital Project Fund	\$225,000	N/A
Grant	\$100,000	WDNR Stewardship
TOTAL	\$325,000	

Project Score: Value and Efficiency (260/400) Modernization and Service (320/400)

Project Purpose Summary (from department):

Aside from Waubedonia County Park (17 campsites), no additional camping is available within the Ozaukee County Park System and the Waubedonia County Park camping locations, especially RV/Trailer camping, are routinely fully booked. Currently, this camping activity is not accommodated or permitted for at Hawthorne Hills County Park, although it has been used in this way by the OCHS events. Waubedonia County Park experienced its highest usage and reservations between 2020 - 2023 and this trend is expected to increase. Site development items are also required per the approved SMNS agreement.

Proposal Considerations, Risks, and Identified Issues:

This project received a high score for percent of budget and urgency but relatively low scores for budget impact as well as health & safety. This project also received high scores in modernization, project purpose, quality of life and customer satisfaction. The total score for this project was 580.

Staff Recommendation:

Staff recommends funding the HH Park Campground & School Site Development through the 2024 project fund

PROJECT FEASIBILITY ANALYSIS

Project Name: Parks Division - Parks Security Gates and Cameras

Project Manager: Andrew Struck

Project Budget Estimate:

Source	Amount	Grant Info
2024 Capital Project Fund	\$163,000	N/A
TOTAL	\$163,000	

Project Score: Value and Efficiency (310/400) Modernization and Service (270/400)

Project Purpose Summary (from department):

Parks staff manually open/close each gate & bathroom each day at each park (Mar - Nov) coinciding with park hours (closed 9 pm-6 am). Staff are required to travel to each location in the early morning and evening, resulting in difficult hours to staff, travel time and associated fuel costs. When staffing is limited due to staff shortages and/or vacations/sick, completing the task becomes a burden on other PT/FT employees. In addition, only staff that have gate keys can open the gates, which also becomes an issue when other staff are assisting with these duties, or when emergency vehicles need access to the parks outside posted hrs/weekends.

Proposal Considerations, Risks, and Identified Issues:

This project received high scores for percent of budget, budget impact, for its direct impact on lowering operational staff time and costs. For project purpose and customer satisfaction this project scored high but scored relatively average in modernization and quality of life giving it a total score of 580.

Staff Recommendation:

Staff recommends funding Parks Security Gates & Cameras through the 2024 capital project fund.

PROJECT FEASIBILITY ANALYSIS

Project Name: Justice Center and Jail Division Camera Project

Project Manager: Captain Lambrecht

Project Budget Estimate:

Source	Amount	Grant Info
2024 Capital Project Fund	\$288,745	N/A
TOTAL	\$288,745	

Project Score: Value and Efficiency (/400) Modernization and Service (/400)

Project Purpose Summary (from department):

The project involves a camera upgrade in the Justice Center and Jail Division. A total of (73) seventy-three analog cameras will be replaced. The project will include running Cat 6 cable to each camera. It also includes replacing (7) seven Bosch Video Management System workstations. This project will complete the camera system updates in the Justice system and Jail Division.

Proposal Considerations, Risks, and Identified Issues:

Staff Recommendation:

Staff does not recommend funding this project at this time.

PROJECT FEASIBILITY ANALYSIS

Project Name: Behavioral Health Co-Responder Unit Office

Project Manager: Sheriff Knowles

Project Budget Estimate:

Source	Amount	Grant Info
2024 Capital Project Fund	\$110,000	N/A
TOTAL	\$110,000	

Project Score: Value and Efficiency (/400) Modernization and Service (/400)

Project Purpose Summary (from department):

The costs associated with the project include remodeling of the old dispatch center into office space to be utilized by the Behavioral Health Co-Responder Unit. Costs for the project would include flooring (\$15,000 - \$20,000), cubicles for the Deputies and Mental Health Specialists (\$40,000), computers and infrastructure for the Behavioral Health Deputies and Mental Health Specialists (\$12,000) and the construction of a "soft interview room" including furniture (\$35,000).

Proposal Considerations, Risks, and Identified Issues:

Staff Recommendation:

Staff does not recommend funding this project through the 2024 capital project fund at this time.

PROJECT FEASIBILITY ANALYSIS

Project Name: Sheriff's Office Furniture Replacement

Project Manager: Sheriff Knowles

Project Budget Estimate:

Source	Amount	Grant Info
2024 Capital Project Fund	\$294,112	N/A
TOTAL	\$294,112	

Project Score: Value and Efficiency (/400) Modernization and Service (/400)

Project Purpose Summary (from department):

The Sheriff's Office has had the same office furniture (desks, cabinets, cubicles, workstations since moving into the Justice Center in 1991. The furniture is out-dated, over 20 years past its useful life, not designed for modern work environments, showing its age, non-ergonomic, and non-modular.

Proposal Considerations, Risks, and Identified Issues:

Staff Recommendation:

Staff does not recommend funding this project through the 2024 capital project fund at this time.

PROJECT FEASIBILITY ANALYSIS

Project Name: Court Security Improvement

Project Manager: Ryan Tackes

Project Budget Estimate:

Source	Amount	Grant Info
2024 Capital Project Fund	\$33,900	N/A
TOTAL	\$33,900	

Project Score: Value and Efficiency (/400) Modernization and Service (/400)

Project Purpose Summary (from department):

In 2012 and 2017, the United States Marshals Service (USMS) conducted a Court Security Survey and Assessment of the Ozaukee County Justice Center located at 1201 S. Spring St. in the city of Port Washington. Both assessments were conducted by USMS Senior Inspector Gary Enos. In both assessments, Inspector Enos suggested we close the small hallway to the public creating a two door employee entrance and exit located by the Child Support office. This would significantly upgrade the security to this employee entrance area in multiple ways.

Proposal Considerations, Risks, and Identified Issues:

Staff Recommendation:

Staff does not recommend funding this project through the 2024 capital project fund at this time.

PROJECT FEASIBILITY ANALYSIS

Project Name: ERP Software Implementation

Project Manager: Chris McDonell

Project Budget Estimate:

Source	Amount	Grant Info
2024 Capital Project Fund	\$900,000	N/A
TOTAL	\$900,000	

Project Score: Value and Efficiency (170/400) Modernization and Service (330/400)

Project Purpose Summary (from department):

The County relies on Microsoft Dynamics GP for financial management and payroll, but Microsoft has announced the end of support for GP by January 11, 2028. Additionally, Kronos, Lasata's timekeeping software, will no longer receive support after March 31, 2027. Replacing only Kronos without addressing GP would be impractical due to the intricate integrations between the two. Consequently, our goal is to implement a new ERP system by January 1, 2026, allowing seamless coexistence with the current system for one year to ensure accuracy, before fully transitioning.

Proposal Considerations, Risks, and Identified Issues:

This project scored moderate for percent of budget and high for urgency. It did not score well for budget impact or health & safety. This project did score high for modernization, project purpose and customer satisfaction but scored moderate for quality of life. The project accounts for the implementation of new software to replace Great Plains which will no longer receive support beginning 2028. This project is being considered now in anticipation of a timely process to perform this software transition.

Staff Recommendation:

Staff does not recommend consideration of funding at this time.

PROJECT FEASIBILITY ANALYSIS

Project Name: Human Services Electronic Health Record Database

Project Manager: Liza Drake

Project Budget Estimate: \$300,051.79

Source	Amount	Grant Info
2024 Capital Project Fund	\$300,051.79	N/A
TOTAL	\$300,051.79	

Project Score: Value and Efficiency (190/400) Modernization and Service (290/400)

Project Purpose Summary (from department):

Human Service's current Electronic Health Record (EHR) database, WebHarmony, is no longer supported by the vendor, WellSky starting in January 2024. WebHarmony lacks several critical features that the new proposed program would include such as intuitive billing and insurance verification; a patient portal with integrated telehealth, scheduling and health records release capabilities; and the ability for clients to electronically sign forms. The features associated with a new EHR database would drastically improve the overall customer experience, increase security and cut down on the time employees would need to spend updating records.

Proposal Considerations, Risks, and Identified Issues:

This project scored lower in relative terms due to its impact on budget, and low impact on health and safety. Revisit at a later date.

Staff Recommendation:

Not recommended at this time.

PROJECT FEASIBILITY ANALYSIS

Project Name: Admin Center Auditorium Hybrid Meeting Renovation

Project Manager: Liza Drake / Mike Cosgrove

Project Budget Estimate: \$33,500

Source	Amount	Grant Info
2024 Capital Project Fund	\$33,500	N/A
TOTAL	\$33,500	

Project Score: Value and Efficiency (/400) Modernization and Service (/400)

Project Purpose Summary (from department):

Upgrading the hybrid meeting capabilities of the auditorium would allow for more productive and transparent hybrid meetings. Citizens, board and committee members or employees wishing to attend or view a meeting remotely would have a more immersive experience, being able to more clearly see and hear and interact with those in attendance in-person, and in-person participants would likewise be able to more clearly hear, see and interact with people attending the meeting remotely.

Proposal Considerations, Risks, and Identified Issues:

Project to be revisited at a later date. Potential to fund it in future from IT budget as it has a countywide impact.

Staff Recommendation:

Not recommended at this time.

PROJECT FEASIBILITY ANALYSIS

Project Name: Parks Division - HH Peters Youth Camp Furnace Replacement

Project Manager: Andrew Struck

Project Budget Estimate:

Source	Amount	Grant Info
2024 Capital Project Fund	\$25,000	N/A
TOTAL	\$25,000	

Project Score: Value and Efficiency (280/400) Modernization and Service (220/400)

Project Purpose Summary (from department):

The furnace at HH Peters Youth Camp is over 30 years old and is no longer functioning adequately to fully heat the building. The furnace has been inspected by HVAC companies the costs of repair and ongoing maintenance are likely greater than the cost of a new furnace. Multiple repairs have occurred since 2021. HH Peters Youth Camp is routinely rented/reserved for large events including weddings and scout group gatherings (including during fall through spring where heat is required), and provides lodging for youth conservation corps groups assisting with Department activities.

Proposal Considerations, Risks, and Identified Issues:

This project scored high on its' budget impact and percent of budget scores due to its' \$25,000 cost. This project did not score well in health and safety but did score well on urgency. For modernization, purpose and quality of life this project scored average. As for customer satisfaction it scored slightly higher giving this project a total score of 500.

Staff Recommendation:

Staff does not recommend funding the HH Peters Youth Camp Furnace Replacement through the capital project fund at this time.

PROJECT FEASIBILITY ANALYSIS

Project Name: Little Menomonee River Fish and Wildlife Preserve Public Access

Project Manager: Andrew Struck

Project Budget Estimate:

Source	Amount	Grant Info
2024 Capital Project Fund	\$25,000	N/A
Grant	\$40,000	WDNR Stewardship
TOTAL	\$65,000	

Project Score: Value and Efficiency (220/400) Modernization and Service (200/400)

Project Purpose Summary (from department):

Little Menomonee River Fish and Wildlife Preserve was acquired by the County in 2019 from MMSD, and has undergone extensive river corridor restoration, wetland restoration, and invasive species management. The site is currently undeveloped. The next phase of development needs involves public access amenities. To foster future public enjoyment and education, passive-use recreational amenities are needed and currently represent a gap in service.

Proposal Considerations, Risks, and Identified Issues:

This project scored very high in percentage of budget and budget impact due to the project being primarily funded through the WDNR stewardship grant. On the other hand, this project did not score well for urgency or health & safety. For modernization, quality of life, project purpose and customer satisfaction, all four categories were scored as average giving this project a total score of 420.

Staff Recommendation:

Staff does not recommend funding the Little Menomonee River Fish and Wildlife Preserve Public Access parcel through the capital project fund at this time.

PROJECT FEASIBILITY ANALYSIS

Project Name: Parks Division - Aluminum Trailers

Project Manager: Andrew Struck

Project Budget Estimate:

Source	Amount	Grant Info
2024 Capital Project Fund	\$35,000	N/A
TOTAL	\$35,000	

Project Score: Value and Efficiency (300/400) Modernization and Service (170/400)

Project Purpose Summary (from department):

The Parks Division currently has 2 steel frame wood deck utility trailers that need significant repairs due to rusting of the frame, wheel wells, and rotting of the wood decking. Each trailer can only hold one utility golf cart, which is not efficient. This project would include purchase of 3 new aluminum trailers that can haul multiple utility carts. In addition, aluminum trailers have a much longer usable life span and less need for ongoing maintenance. The new trailers would include all aluminum rails, decks, and ramps. This project is a priority for 2024.

Proposal Considerations, Risks, and Identified Issues:

This project received high scores for budget impact, percent of budget, and urgency but was not scored well in the health and safety scoring section. As for the modernization, project purpose and customer satisfaction it was scored relatively average while also receiving a low quality of life score. This project received a total score of 470.

Staff Recommendation:

Staff does not recommend funding Aluminum trailers through the capital project fund at this time

PROJECT FEASIBILITY ANALYSIS

Project Name: Virmond County Park Caretakers House Roof & Siding Replacement

Project Manager: Andrew Struck

Project Budget Estimate:

Source	Amount	Grant Info
2024 Capital Project Fund	\$70,000	N/A
TOTAL	\$70,000	

Project Score: Value and Efficiency (330/400) Modernization and Service (250/400)

Project Purpose Summary (from department):

The Virmond County Park Caretaker's house roof and siding needs a full replacement. The aging materials have potential for leaks, potentially damaging County (including new housing upgrades) and private property (Caretaker personal property). This project is a priority for 2024. The Department anticipates initiating this project in 2024 and successful completion meeting timelines and budgets per prior completed Capital Project Fund grants

Proposal Considerations, Risks, and Identified Issues:

This project received high scores for budget impact, percent of budget and urgency but scored average for health & safety. For Modernization, project purpose and customer satisfaction this project was graded highly and received a relatively low grade for quality of life. This project received a total score of 580 making it the 5th highest graded project of 2024.

Staff Recommendation:

Staff does not recommend funding the Virmond County Park Caretakers House Roof & Siding Replacement through the capital project fund at this time.

PROJECT FEASIBILITY ANALYSIS

Project Name: Covered Bridge Park – West Parcel Public Access

Project Manager: Andrew Struck

Project Budget Estimate:

Source	Amount	Grant Info
2024 Capital Project Fund	\$52,500	N/A
Grant	\$10,000	Greater Cedarburg Foundation
TOTAL	\$62,500	

Project Score: Value and Efficiency (300/400) Modernization and Service (240/400)

Project Purpose Summary (from department):

There is no parking access on the new 4.84 acre parcel. To reach this area, staff and visitors need to park in the existing lots on the east side of Covered Bridge Road and cross the road, which is dangerous due to high vehicular speeds and limited visibility on the road. Parking on the west side of Covered Bridge Road was envisioned when the County added this parcel to Covered Bridge County Park. In addition, there is no formal public access within the new parcel or to Cedar Creek. Project activities would be initiated in 2024.

Proposal Considerations, Risks, and Identified Issues:

This project received high scores for the percentage of budget and budget impact but received average scores for health & safety and urgency. This project received average scores for all modernization categories of project purpose, quality of life, customer satisfaction and modernization giving it a total score of 540.

Staff Recommendation:

Staff does not recommend funding Covered Bridge Park – West Parcel Public Access through the capital project fund at this time.

PROJECT FEASIBILITY ANALYSIS

Project Name: Parks Division - Hawthorne Hills County Park Paving

Project Manager: Andrew Struck

Project Budget Estimate:

Source	Amount	Grant Info
2024 Capital Project Fund	\$81,000	N/A
TOTAL	\$81,000	

Project Score: Value and Efficiency (220/400) Modernization and Service (180/400)

Project Purpose Summary (from department):

This project would pave the remaining park road and parking areas below the crest of the hill and also patch areas on the driveway / parking at HH Peters Youth Camp. The current roadway cannot be plowed in the winter due to the steep hill. Paving this portion would allow for winter plowing and year-round park access. The Highway Department will be contracted to do the work. In addition, paving is required to ensure safe access to the new parking lot within the project area for Sugar Maple Nature School (SMNS) use per the approved SMNS agreement.

Proposal Considerations, Risks, and Identified Issues:

This project received relatively high scores for budget impact and percent of budget but received low scores for health & safety as well as urgency. For modernization, project purpose, quality of life and customer satisfaction this project received below average grades giving it a total score of 400.

Staff Recommendation:

Staff does not recommend funding the Hawthorne Hills county park paving through the capital project fund at this time.

ORDINANCE NO. 23-7

SHORELAND & FLOODPLAIN ZONING MAP AMENDMENT - TOWN OF CEDARBURG,
SECTION 21

The Ozaukee County Board of Supervisors does ordain that the County Shoreland and Floodplain Zoning Map be amended in accordance with Section 7.1300 of the Ozaukee County Code of Ordinances to indicate a Zoning Classification Change from Shoreland-Wetland to Shoreland.

Affecting the following described real estate: **Town of Cedarburg**, T10N, R21E in part of the NW ¼ and the NE ¼ of the NW ¼ of Section 21, Lot 1 CSM #3997 Doc. 1050182.

Tax Key #03-021-05-006.00, Property address: 8611 State Road 60, Cedarburg WI 53012

This Ordinance shall take effect upon enactment and publication.

Dated at Port Washington, Wisconsin, this 3rd day of April 2024.

SUMMARY: Shoreland and Floodplain Zoning Map Amendment, Town of Cedarburg - Section 21.

VOTE REQUIRED: Majority

NATURAL RESOURCES COMMITTEE

03/07/24

Natural Resources Committee

APPROVED

RESULT: **APPROVED [4 TO 1]**
MOVER: K. Schoessow, Supervisor District 23
SECONDER: T. Matera, Supervisor District 7
AYES: R. Holyoke, B. Jobs, T. Matera, K. Schoessow
NAYS: B. Ross

NATURAL RESOURCES COMMITTEE

Natural Resources Committee
AGENDA INFORMATION SHEET

AGENDA DATE:	April 3, 2024
DEPARTMENT:	Land and Water Management
DIRECTOR:	Katie Vogeler
PREPARER:	Geoff Schramm

Agenda Summary Shoreland & Floodplain Zoning Map Amendment - Town of Cedarburg, Section 21

BACKGROUND INFORMATION: 1) Request by Sports Project LLC, to petition the Natural Resources Committee for a Zoning Classification change Shoreland-Wetland to Shoreland in the Shoreland District, per Section 7.1300 of the Ozaukee County Shoreland & Floodplain Zoning Ordinance, to reflect the results of a wetland delineation report and survey; and to allow the rezoning of the proposed road crossings thru the wetland areas.

The affected wetland is located in the **Town of Cedarburg**, T10N, R21E in part of the NW 1/4 and the NE 1/4 of the NW 1/4 of Section 21, Lot 1 CSM #3997 Doc. 1050182, Parcel Key # 03-021-05-006.00, 8611 State Road 60.

Background: The Sports Project LLC is planning on developing the property into an athletic performance facility with parking area. The area was farmed until the Town of Cedarburg had purchase the property in June of 2022.

A wetland delineation was completed by Wetland & Waterway Consulting, LLC. on June 25, 2023. The Town of Cedarburg had applied for the Change In Zoning Classification with Ozaukee County to recognize the wetland delineation on June 14, 2023. The Natural Resources Committee approved the recognition of the wetland delineation report on August 3, 2023.

The Town of Cedarburg had sold the property to Sports Project LLC in November of 2023.

The Sports Project LLC is petitioning to change the six (6) wetland areas that were delineated from Shoreland-Wetland to Shoreland to allow the filling, grading, and excavating to occur as part of the development of the property. The DNR has issued a permit dated September 29, 2023, to allow these wetland areas to be disturbed.

Per Section 7.0704 of the County Shoreland & Floodplain Zoning Ordinance, any use not listed in Section 7.0703 is prohibited, unless the wetland or portion of the wetland has been rezoned in accordance with Section 7.1300 of this ordinance and Section 59.69(5)(e), Wis. Stats.

Per email from *Dale Rezabek, DNR Water Management Specialist - Shoreland Specialist*, dated January 31, 2024 - Mr. Rezabek requested that “the committee that when they review the rezone case, that they should only rezone the project area from the shoreland-wetland district to uplands if the applicant can demonstrate to the satisfaction of the committee that there will be no

significant adverse effects on wetlands, according to the ordinance elements in Section 7.1305 B. 1. Thru 7.” (of the Ozaukee County Shoreland and Floodplain Zoning Ordinance).

1. Section 7.1305 B. A wetland, or a portion thereof, in the shoreland-wetland district shall not be rezoned if the proposed rezoning may result in a significant adverse impact upon any of the following:
 - a. Storm and flood water storage capacity
 - b. Preservation of dry season stream flow, the discharge of groundwater to a wetland, the recharge of groundwater from a wetland to another area, or the flow of groundwater through a wetland.
 - c. Filtering or storage of the sediments, nutrients, heavy metals, or organic compounds that would otherwise drain into navigable streams.
 - d. Shoreline protection against soil erosion.
 - e. Fish spawning, breeding, nursery or feeding grounds.
 - f. Wildlife habitat.
 - g. Areas of special recreational, scenic, or scientific interest, including scarce wetland types.

Per Section 7.1302 F. of the County Shoreland and Floodplain Zoning Ordinance, any change to a shoreland-wetland boundary shown on a Shoreland and Floodplain Zoning District Map requires County Board approval.

FISCAL IMPACT: N/A FUNDING SOURCE: N/A

RECOMMENDED MOTION: Approval to amend the Shoreland & Floodplain Zoning Map to reflect the change in the wetland boundary as a result of the survey completed by CJ engineering, dated August 29, 2023.

ATTACHMENTS:

- Staff Report - Project Sports LLC (PDF)
- Support Documents (PDF)



LAND & WATER MANAGEMENT DEPARTMENT

Katie Vogeler, Director
Edward J. Pfister, Sanitation & Zoning Coordinator
Geoff Schramm, Land & Water Coordinator
www.co.ozaukee.wi.us

Staff Report – Natural Resources Committee Hearing – March 7, 2024

Request by **Sports Project LLC** to petition the committee for a Zoning Classification change from Shoreland-Wetland District to Shoreland District to allow the filling of six (6) wetland areas (a total of 1.47 acres) in order to construct a proposed athletic training facility and parking area.

Affecting the following described real estate:

The affected wetland is located in the **Town of Cedarburg**, T10N, R21E in part of the NW 1/4 and the NE 1/4 of the NW 1/4 of Section 21, Lot 1 CSM #3997 Doc. 1050182, Parcel Key # 03-021-05-006.00, 8611 State Road 60.

Background: The Sports Project LLC is planning on developing the property into an athletic performance facility with parking area. The area was farmed until the Town of Cedarburg had purchase the property in June of 2022.

1. A wetland delineation was completed by Wetland & Waterway Consulting, LLC. on June 25, 2023. The Town of Cedarburg had applied for the Change In Zoning Classification with Ozaukee County to recognize the wetland delineation on June 14, 2023. The Natural Resources Committee approved the recognition of the wetland delineation report on August 3, 2023.
2. The Town of Cedarburg had sold the property to Sports Project LLC in November of 2023.
3. The Sports Project LLC is petitioning to change the classification district of six (6) wetland areas that were delineated from Shoreland-Wetland to Shoreland to allow the filling, grading, and excavating to occur as part of the development of the property. The DNR has issued a permit dated September 29, 2023, to allow these wetland areas to be disturbed.
4. Per Section 7.0704 of the County Shoreland & Floodplain Zoning Ordinance, any use not listed in Section 7.0703 is prohibited, unless the wetland or portion of the wetland has been rezoned in accordance with Section 7.1300 of this ordinance and Section 59.69(5)(e), Wis. Stats.
5. Per the email from Dale Rezabek, DNR Water Management Specialist – Shoreland Specialist, dated January 31, 2024 – Mr. Rezabek informed the department to remind “the committee that when they review the rezone case, that they should only rezone the project area from the shoreland-wetland district to uplands (shoreland) if the applicant can demonstrate to the satisfaction of the committee that there will be no significant adverse effects on wetlands, according to the ordinance elements in Section 7.1305 B. 1. Thru 7.” (of the Ozaukee County Shoreland and Floodplain Zoning Ordinance) as stated below.
 - a. Section 7.1305 B. A wetland, or a portion thereof, in the shoreland-wetland district shall not be rezoned if the proposed rezoning may result in a significant adverse impact upon any of the following:
 - i. Storm and flood water storage capacity

- ii. Preservation of dry season stream flow, the discharge of groundwater to a wetland recharge of groundwater from a wetland to another area, or the flow of groundwater through a wetland.
 - iii. Filtering or storage of the sediments, nutrients, heavy metals, or organic compounds that would otherwise drain into navigable streams.
 - iv. Shoreline protection against soil erosion.
 - v. Fish spawning, breeding, nursery or feeding grounds.
 - vi. Wildlife habitat.
 - vii. Areas of special recreational, scenic, or scientific interest, including scarce wetland types.
6. Per Section 7.1302 F. of the County Shoreland and Floodplain Zoning Ordinance, any change to a shoreland-wetland boundary shown on a Shoreland and Floodplain Zoning District Map requires County Board approval.

END/BAS
(2/14/24)

State of Wisconsin
DEPARTMENT OF NATURAL RESOURCES
 1027 W St. Paul Ave.
 Milwaukee, WI 53233

Tony Evers, Governor
Adam N. Payne, Secretary
 Telephone 608-266-2621
 Toll Free 1-888-936-7463
 TTY Access via relay - 711



September 29th, 2023

GP-SE-2023-46-02958

Steve Becker
 9636 North Crestwood Court
 Mequon, WI 53092
 [sent electronically]

RE: Coverage under the wetland statewide general permit to impact wetlands from residential, commercial, and industrial activities, located in the Town of Cedarburg, Ozaukee County

Dear Mr. Becker:

Thank you for submitting an application for a General Permit to impact wetlands from residential, commercial and industrial activities located in the NW 1/4 of NW 1/4, Section 21, Township 10 N, Range 21 E, Town of Cedarburg, Ozaukee County. You have certified that your project meets the eligibility criteria for this activity. Based upon your signed certification you may proceed with your project. **The discharge(s) from the proposed activity will comply with water quality requirements.**

Please re-read the permit eligibility standards and conditions. The eligibility standards can be found on the GP1 application checklist or in the GP1 statewide general permit. The permit conditions are attached to this letter. You are responsible for meeting all general permit eligibility standards and permit conditions. This includes notifying the Department before starting the project and submitting photographs within one week of project completion. Please note your coverage is valid for 5 years from the date of the department's determination or until the activity is completed, whichever occurs first.

The Department conducts routine and annual compliance monitoring inspections. Our staff may follow up and inspect your project to verify compliance with state statutes and codes. If you need to modify your project, please contact me, your local Water Management Specialist, at (414) 430-7129 or at michelle.soderling@wisconsin.gov to discuss your proposed modifications.

The Department of Natural Resources appreciates your willingness to comply with wetland regulations, which help to protect the water quality, fish and wildlife habitat, recreational value, and other functions and values wetlands provide to current and future generations. You are responsible for obtaining any other local, state, or federal permits that are required before starting your project.

Sincerely,

Michelle Soderling
 Water Management Specialist

Email CC: Morgan Wirth-Murray, USACE Project Manager
 Jack Johnston, Cedarburg Town Clerk
 Tony Young, Conservation Warden
 Christopher Jackson, CJ Engineering

RECEIVED

DEC 12 2023
 OZAUKEE COUNTY
 LAND & WATER
 MANAGEMENT DEPT

You agree to comply with the following conditions:

1. **Application.** You shall submit a complete application package to the Department as outlined in the application requirements (section 2) section of this permit. If requested, within a reasonable timeframe you shall furnish the Department any information it needs to verify compliance with the terms and conditions of this permit.
2. **Certification.** Acceptance of coverage under general permit WDNR-GP1-2023 and efforts to begin work on the activities authorized by this general permit signifies that you have certified the project meets all eligibility standards outlined above and that you have read, understood, and agreed to follow all terms and conditions of this general permit.
3. **Reliance on Applicant's Data.** The determination by this office that a confirmation of authorization is not contrary to wetland water quality standards will be based upon the information provided by the applicant and any other information required by the Department.
4. **Project Plans.** This permit does not authorize any work other than what is specifically described in the notification package and plans submitted to the Department and is certified by you to comply with the terms and conditions of WDNR-GP1-2023.
5. **Expiration.** The time limit for completing an activity authorized by the provisions of WDNR-GP1-2023 ends 5 years after the date on which the activity is considered to be authorized under WDNR-GP1-2023 or until the activity is completed, whichever occurs first. The Department's use of general permit WDNR-GP1-2022 established under s. 281.36(3g) Wis. Stats. expires on June 30, 2028.
6. **Written authorization for modification of scope.** Any modification to the wetland impacts authorized under this general permit must be approved by the Department in writing to ensure that the project continues to meet the general permit eligibility in section 1. Separate permitting is necessary if the modified project scope no longer meets general permit eligibility.
7. **Authorization Distribution.** You must supply a copy of the permit coverage authorization to every contractor working on the project.
8. **Project Start.** You shall notify the Department using the information provided on the confirmation of coverage letter you receive before starting any activity and again not more than 5 days after each activity is completed.
9. **Project Completion.** Within one week after completing the regulated activity, you shall submit to the Department a statement certifying the project complies with all the terms and conditions of this permit, and photographs of the activities authorized by this permit. This statement must reference the Department-issued docket number and be submitted to the Department staff member that authorized coverage.
10. **Permit Posting.** You must post a copy of this permit coverage letter at a conspicuous location on the project site before beginning the permitted activity. The copy of the permit coverage letter must remain posted at that location until at least five days after the area where the activity took place is stabilized. You must also keep a copy of the permit coverage letter and the approved plan available at the project site at all times until the project is complete.
11. **Permit Compliance.** The department may revoke coverage of this permit if it is not constructed in compliance with the terms and conditions of this permit. Any act of noncompliance with this permit constitutes a permit violation and is grounds for enforcement action.
12. **Construction Timing.** Once wetland work begins, all construction activities in those wetlands must be continuous to the extent practicable. During periods of inactivity in wetlands, the site must be stabilized until the work is resumed and completed.
13. **Construction.** No other portion of the wetland may be disturbed beyond the area designated in the submitted plans.

14. **Proper Maintenance.** You must maintain the activity authorized by WDNR-GP1-2023 in good condition and in conformance with the terms and conditions of this permit using best management practices. Any structure or fill authorized shall be properly maintained to ensure no additional impacts to the remaining wetlands and waterways.
15. **Site Access.** Upon reasonable notice, you shall allow access to the site to any Department employee who is investigating the project's construction, operation, maintenance or permit compliance with the terms and conditions of WDNR-GP1-2023 and applicable laws.
16. **Erosion and siltation controls.** The project site shall implement erosion and sediment control measures that adequately control or prevent erosion and prevent damage to wetlands as outlined in s. NR 151.11(6m), Wis. Admin. Code. These standards can be found at the following website: <https://dnr.wisconsin.gov/>, keyword "stormwater technical standards". Any area where topsoil is exposed during the project should be immediately seeded and mulched to stabilize disturbed areas and prevent soils from being eroded and washed into the waterway.
17. **Equipment use.** The equipment used in the wetlands must be low ground weight equipment as specified by the manufacturer specifications.
18. **Wetland Protection.** You shall not store any vegetation, material, or equipment in wetlands unless authorized to do so through an approved project design. The project will be constructed in a manner that will maintain wetland hydrology in the remaining wetland complex, if applicable.
19. **Invasive Species.** All project equipment shall be decontaminated for removal of invasive species prior to and after each use on the project site by using best management practices to avoid the spread of invasive species as outlined in NR 40, Wis. Adm. Code. These protocols and practices can be found on the Department website at <http://dnr.wi.gov/topic/Invasives/bmp.html> Keyword: "equipment operator" and at <http://dnr.wi.gov/topic/Invasives/documents/EquipOper.pdf>.
20. **Federal and State Threatened and Endangered Species.** WDNR-GP1-2023 does not affect the Department's responsibility to ensure that all authorizations comply with Section 7 of the Federal Endangered Species Act, s. 29.604, Wis. Stats., and applicable state laws. No Department authorization under this permit will be granted for projects found not to comply with these acts/laws. No activity is authorized which is likely to jeopardize the continued existence of a threatened or endangered species or a species proposed for such designation, as identified under the Federal Endangered Species Act and/or state law or which is likely to destroy or adversely modify the critical habitat of a species as identified under the Federal Endangered Species Act.
21. **Special Concern Species.** If the Wisconsin National Heritage Inventory lists a known special concern species to be present in the project area you will take reasonable action to prevent significant adverse impacts or to enhance the habitat for the species of concern.
22. **Historic Properties and Cultural Resources.** WDNR-GP1-2023 does not affect the Department's responsibility to ensure that all authorizations comply with Section 106 of the National Historic Preservation Act and s. 44.40, Wis. Stats. No Department authorization under this permit will be granted for projects found not to comply with these acts/laws. Information on the location and existence of historic resources can be obtained from the State Historic Preservation Office and the National Register of Historic Places. If cultural, archaeological, or historical resources are unearthed during activities authorized by this permit, work must be stopped immediately, and the State Historic Preservation Officer must be contacted for further instruction
23. **Preventive Measures.** Measures must be adopted to prevent potential pollutants from entering a wetland or waterbody. Construction materials and debris, including fuels, oil, and other liquid substances, will not be stored in the construction area in a manner that would allow them to enter a wetland or waterbody as a result of spillage, natural runoff, or flooding. **If a spill of any potential pollutant should occur, it is the responsibility of the permittee to remove such material, to minimize any contamination resulting from this spill, and to immediately notify the State Duty Officer at 1-800-943-0003.**
24. **Suitable fill material.** All fill authorized under this permit must consist of clean suitable soil, as defined by s. NR 500.03(214), Wis. Adm. Code, free from hazardous substances as defined by s. 289.01(11), Wis. Stats., and free from solid waste as defined by s. 289.01(33), Wis. Stats.

25. **Standard for Coverage.** Wetland impacts from the project will cause only minimal adverse environmental impacts as determined by the Department.
26. **Transfers.** Coverage under this permit is transferable to any person upon prior written approval of the transfer by the Department.
27. **Reevaluation of Decision.** The Department may suspend or revoke authorization of any previously authorized activity and may take enforcement action if the following occur:
- a. The applicant fails to comply with the terms and conditions of WDNR-GP1-2023.
 - b. The information provided by the applicant in support of the permit application proves to have been false, incomplete, or inaccurate.

Barry Sullivan

From: Rezabek, Dale H - DNR <Dale.Rezabek@wisconsin.gov>
Sent: Wednesday, January 31, 2024 4:38 PM
To: Barry Sullivan
Subject: RE: Public Notice

CAUTION: This email originated from outside of the organization. Do not click links, open attachments, or reply unless you recognize the sender and know the content is safe.

Hi Barry,

I would like you to tell the committee that when they review the rezone case, that they should only rezone the project area from the shoreland-wetland district to uplands if the applicant can demonstrate to the satisfaction of the committee that there will be no significant adverse effects on wetlands, according to the ordinance elements in Section 7.1305 B. 1. Thru 7.

Thanks, Dale

We are committed to service excellence.

Visit our survey at <http://dnr.wi.gov/customersurvey> to evaluate how I did.

Dale Rezabek, PG (He/Him/His)

Water Management Specialist - Shoreland Specialist

WDNR Waterways Program

Phone: (920) 267-1739

Dale.Rezabek@wisconsin.gov

From: Barry Sullivan <bsullivan@ozaukeecounty.gov>

Sent: Friday, January 26, 2024 2:01 PM

To: Rezabek, Dale H - DNR <Dale.Rezabek@wisconsin.gov>; Stern, Andrea K - DNR <Andrea.Stern@wisconsin.gov>

Subject: Public Notice

Dale and Andrea –

Attached is a public notice. I had sent you this previous but when we started to set up the document share to go to the Natural Resources Committee, we noticed that I had the wrong meeting date. So, we had to pull it off and re-notice it for the March hearing date.

Regards,

Barry

Barry A. Sullivan

Sanitation and Zoning Specialist

Ozaukee County Land and Water Management Department

121 W. Main Street

Port Washington WI 53074

(262)284-8318



9205 W. Center St., Suite 214
Milwaukee, WI 53222
Ph: (414) 443-1312

To: Wisconsin Department of Natural Resources

Date: August 29th, 2023

Purpose: General Permit Application – Wetland Disturbance

Project Name: Cedarburg Sports: – 8611 State Road 60, Cedarburg, WI

Ozaukee County Parcel Number: 030210500500

Owner:

Project Narrative & Wetland alternative Analysis:

The proposed Cedarburg Sports project, located in the Town of Cedarburg, Ozaukee County, will include the development of a proposed building, paved access drives, as well as paved parking areas. The project is located on the south side state trunk highway 60 at 8611 State Road 60 in the Town of Cedarburg. The existing wetlands were identified on site by Kristi Sherfinski of Helianthus LLC and Wetland & Waterway Consulting LLC, on May 17th, 2023 and located on May 24th, 2023. Based on the location of said wetlands and the configuration of the proposed project, a portion of the wetlands will need to be filled to allow for the construction of the proposed building, construction of paved access and circulation drives to the building. The building placement on site has been determined by the necessity to provide a septic area and restricted by the zoning code setbacks for this property. The wetland filling required for this project will improve the overall safety by providing a fire access route to the building and allow for the necessary space for safe vehicular circulation while also allowing the facility to efficiently operate and effectively utilize the majority of the eastern portion of their property, all while meeting the Stormwater requirements of the town.

The preferred design alternative, Alternative 1, will disturb 16,040 S.F. of wetlands. The existing wetlands can be designated into three areas. The north wetland area contains a drainage swale along the Highway 60 right-of-way which routes water to the 18” culvert running under said Highway 60. The disturbance of the north area of wetlands is necessary in order to build a 24’ wide fire lane and access drive, and circulation drives.

Fill material will be placed over the wetlands to reach the design elevations which are critical to construction of the paved areas. The second wetland fill area is located on the southeast position of the site and can be designated at the southeast pocketed wetlands. Similar to wetland area one, these wetlands will require filling to provide safe and efficient circulation drives and desired patron parking. The third area which will require wetlands to be filled is located on the south portion of the site. These wetlands can be designated as the southern pocketed wetlands. Said wetlands will need to be filled to construct the proposed building and accessible pedestrian walkways to all of the building access points. This preferred method will allow for the construction of the proposed building, fire lane, and circulation drives. This configuration will also allow for the construction of one singular stormwater basin. Silt fence shall surround the areas of disturbance adjacent to the wetlands to provide habitat protection. Once the drive, parking and proposed building is constructed, the disturbed areas will be restored with seeding and erosion matting. Equipment including workers will be prohibited from entering or crossing the wetland areas not approved by the WDNR at all times during the above-described activities without abiding to WDNR wetland impact guidelines. The preferred design will permanently disturb 16,040 S.F. of wetlands.

The second alternative method, Alternative 2, would reconfigure the site to minimize the wetland fill area by reducing the circulation drive areas, shifting the building and creating two separate, smaller stormwater basins. This alternative would still, pedestrian accessible paths to all building access points and the necessary fire access and circulation drives. With this alternative the wetland filling area one, along Highway 60, would be minimized but still require a portion of the wetlands to be filled in order to construct the building. However, the northeast portion of wetlands 1 along Highway 60 will remain undisturbed as a result of the redesign of the stormwater basin and reconfiguration of the patron parking. The second wetland area designated as the pocketed wetlands on the southeast portion of the site would be left undisturbed by this alternative as a portion of the circulation drive has been eliminated to accommodate the wetlands. The third wetland area designated as the south pocketed wetlands would still require to be completely filled in order to construct the building, fire access drive, circulation drive, and accessible pedestrian walks. In order to achieve this alternative configuration, a portion of the wetlands will need to be filled based on the need to grade back to the existing elevation and the development of the site for pedestrian and vehicular use. By decreasing the circulation drive areas, shifting the building location, reconfiguring the access/fire lanes, and creating two separate smaller stormwater basins, the wetland fill area will be reduced by 7,957 square feet. This option maintains the safe circulation drives, the fire lane, and the proposed building size. Once the proposed site improvements are constructed the disturbed areas will be restored with seeding and erosion matting in a similar fashion as listed above in the preferred method. These activities will result in a disturbance of 8,083 s.f. of wetlands.

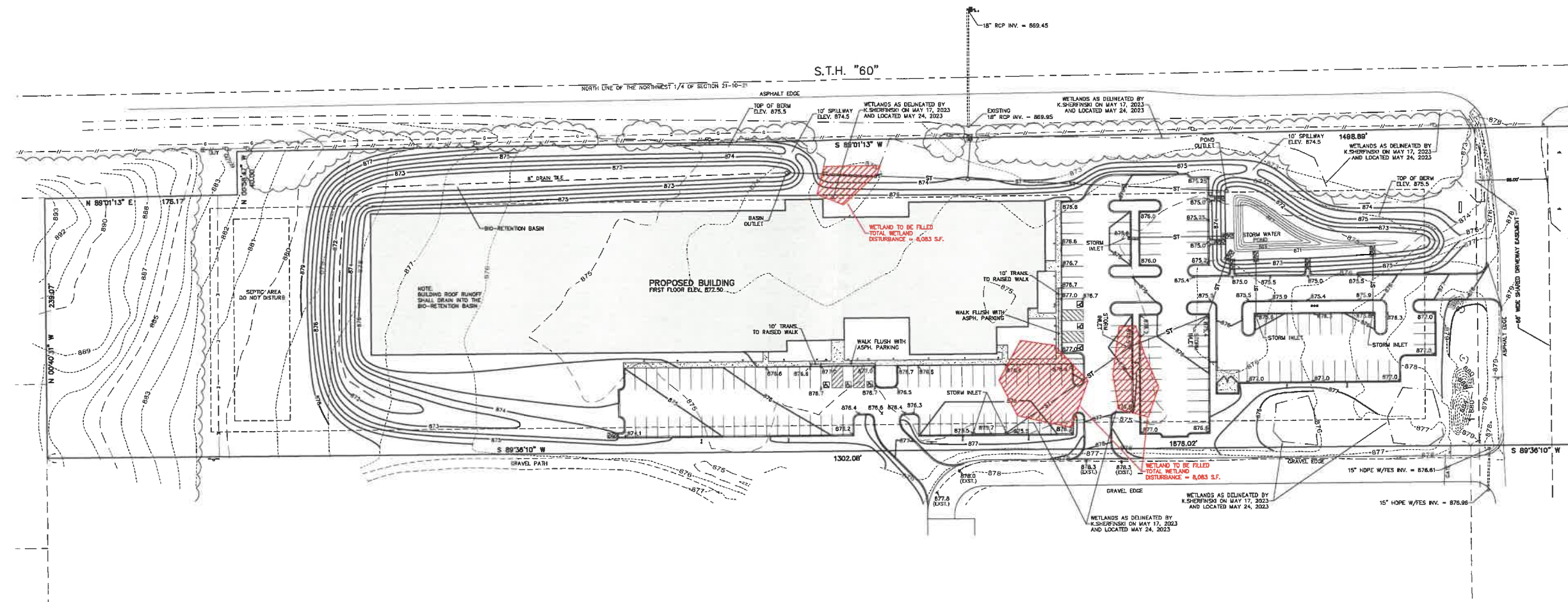
The third and final alternative to the preferred method is a no build scenario, in this alternative the construction of a sports recreation building, fire access lanes, circulation drives and parking area which meets the needs of the patrons and community, while also meeting the safety and stormwater requirements is not feasible without disturbing a

portion of the wetlands. Therefore, the third alternative of not developing this site is not the preferred option.

Based on the provided alternative analysis, the second alternative option, Alternative 2, has been chosen as the proposed method of wetland disturbance by filling activities. The second alternative limits the wetland disturbance as much as possible, while still providing necessary circulation which promotes efficiency from both a safety and feasibility perspective. This option also provides the necessary pedestrian accessible walkways, fire access lane and the ability to build the proposed building, which is imperative to the functionality of this development.



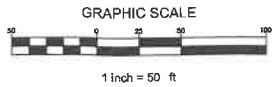
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DIAL 811 OR (800) 242-8511

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---	EXISTING CONTOUR
---	PROPOSED CONTOUR
x 95.5	PROPOSED ELEVATION
ST	PROPOSED STORM SEWER



CJE NO.: 2263R0
AUGUST 29, 2023

**WETLAND FILL EXHIBIT
ALTERNATIVE 2**

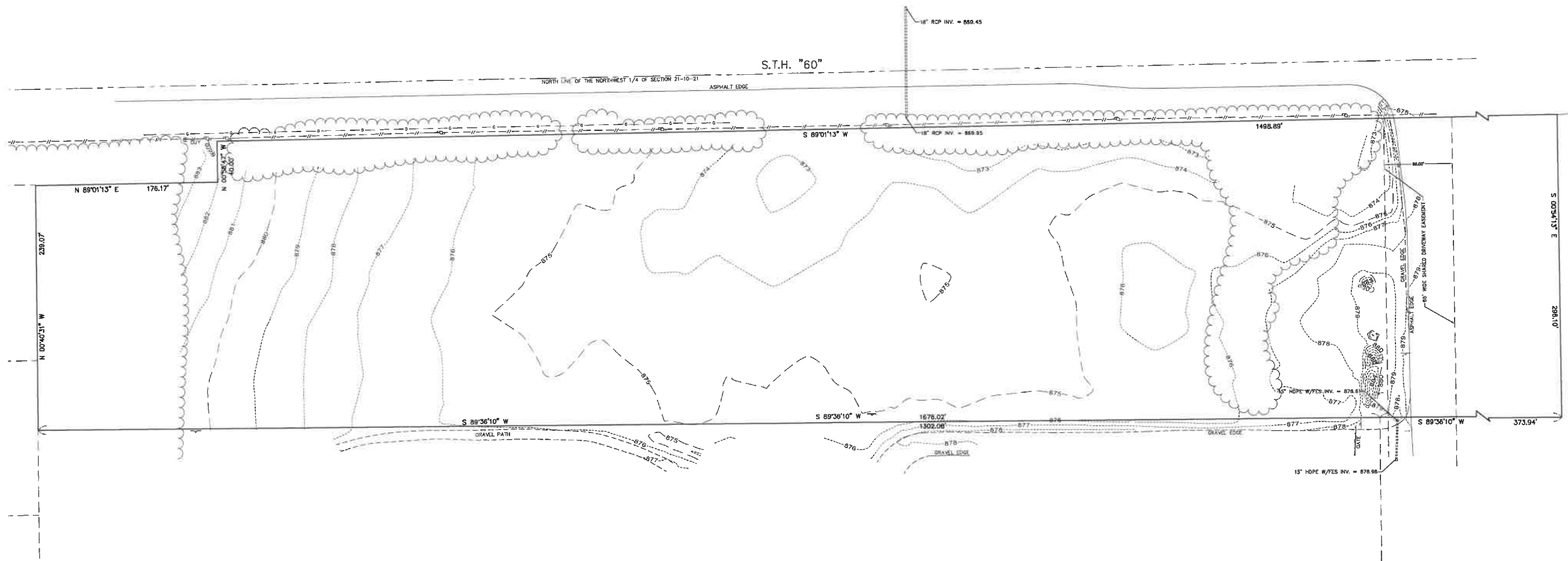
LEGAL DESCRIPTION:
LOT 1, CERTIFIED SURVEY MAP NO. 3997, BEING A PART OF THE NORTHWEST 1/4 OF SECTION 21, TOWNSHIP 10 NORTH, RANGE 21 EAST, IN THE TOWN OF CEDARBURG, OZAUKEE COUNTY, WISCONSIN.
CONTAINING 10.900 ACRES/ 474,784 SQUARE FEET



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PH: (262) 786-6600
FAX: (414) 786-6608
WWW.CAPITOLSURVEY.COM



- NOTES
- SUBJECT PROPERTY ZONED: M-2, PLANNED INDUSTRIAL DISTRICT.
 - SETBACKS BASED ON THE TOWN OF CEDARBURG OF OZAUKEE COUNTY ZONING CODE AND ARE AS FOLLOWS:
(A) BUILDING HEIGHT:
(1) PRINCIPAL STRUCTURE: MAXIMUM TWO STORIES OR 35 FEET FOR RESIDENTIAL, ALL OTHER TYPES OF DEVELOPMENT MAXIMUM THREE STORIES OR 45 FEET.
(2) ACCESSORY STRUCTURE: MAXIMUM ONE STORY OR 25 FEET.
(3) YARD SETBACKS:
(A) STREET: MINIMUM 25 FEET.
(B) REAR: MINIMUM 30 FEET.
(C) SIDE: MINIMUM 15 FEET.
 - LEGAL DESCRIPTION BASED ON CERTIFIED SURVEY MAP NO. 3997.
 - THE UNDERGROUND UTILITY INFORMATION AS SHOWN HEREON IS BASED, IN PART, ON INFORMATION FURNISHED BY THE UTILITY COMPANIES, DIGGERS HOTLINE AND THE LOCAL MUNICIPALITY. WHILE THIS INFORMATION IS BELIEVED TO BE RELIABLE, ITS ACCURACY AND COMPLETENESS CANNOT BE GUARANTEED NOR CERTIFIED TO.
 - SUBJECT PROPERTY IS [ARE] LOCATED WITHIN AN AREA HAVING A ZONE DESIGNATION & AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOOD PLAIN, PER INFORMATION FROM THE FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA), ON FLOOD INSURANCE RATE MAP NO. 55080C0159P, WITH A DATE OF DEMONSTRATION OF 12/4/2007, IN COMMUNITY NO. 550310, OZAUKEE COUNTY, WHICH IS THE COMMUNITY IN WHICH THE SUBJECT PROPERTY IS SITUATED.
 - PROJECT BENCHMARK/STATE BENCHMARK - THE NORTHWEST CORNER OF THE NORTHWEST 1/4 OF SECTION 21-10-21 FOUND CONCRETE MONUMENT WITH CAP WITH AN ELEVATION OF 875.75.
 - ELEVATIONS BASED ON INFORMATION FROM S.M.R.P.C. N.A.V.D. OF 1988(12)
 - DUE TO SNOW AND ICE CONDITIONS AT TIME OF SURVEY, NOT ALL IMPROVEMENTS AND/OR PHYSICAL FEATURES MAY BE SHOWN.
 - SURVEY DATUM:
COORDINATES ARE BASED ON THE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS), OZAUKEE COUNTY, NORTH AMERICAN DATUM OF 1983, 2011 ADJUSTMENT (NAD83(2011)).



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SHEET INDEX		
	1 OF 5	COVER SHEET
C1.0	2 OF 5	SITE PLAN
C2.0	3 OF 5	GRADING PLAN
C3.0	4 OF 5	SITE UTILITY PLAN
C4.0	5 OF 5	EROSION CONTROL PLAN

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10725 EXECUTIVE COURT
MEQUON, WI 53092
REPRESENTATIVE/OWNER: STEVE BECKER
EMAIL: STEVE@TRAINAP.COM
PHONE: (262) 388-6262

SURVEYOR/ENGINEER:
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N173W21010 NORTHWEST PASSAGE
JACKSON, WI 53037
EMAIL: MHERTZFELDT@DESIGN2CONSTRUCT.COM
PHONE: (262) 677-9933

ATHLETE PERFORMANCE DEVELOPMENT
8611 HWY 60 CEDARBURG, WISCONSIN



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LAND & WATER
MANAGEMENT DEPT



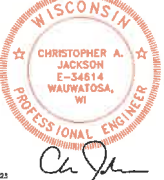
LEGAL DESCRIPTION:
LOT 1, CERTIFIED SURVEY MAP NO. 4243, BEING A PART OF THE NORTHWEST 1/4 OF SECTION 21, TOWNSHIP 10 NORTH, RANGE 21 EAST, IN THE TOWN OF CEDARBURG, OZAUKEE COUNTY, WISCONSIN.
CONTAINING: 10,900 ACRES/ 474,784 SQUARE FEET.

- NOTES
1. LEGAL DESCRIPTION BASED ON CERTIFIED SURVEY MAP NO. 4243.
 2. PROJECT BENCHMARK/SITE BENCHMARK - THE NORTHWEST CORNER OF THE NORTHWEST 1/4 OF SECTION 21-10-21 FOUND CONCRETE MONUMENT WITH CAP WITH AN ELEVATION OF 875.75.
 3. ELEVATIONS BASED ON INFORMATION FROM S.W.R.P.C. N.A.V.D. OF 1988(12)
 4. SURVEY DATUM: COORDINATES ARE BASED ON THE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS), OZAUKEE COUNTY, NORTH AMERICAN DATUM OF 1983, 2011 ADJUSTMENT (NAD83(2011)).



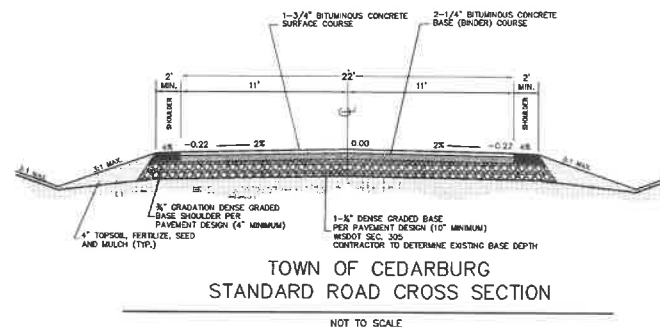
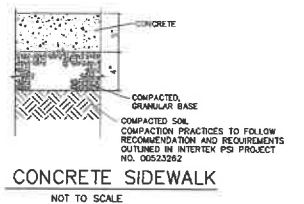
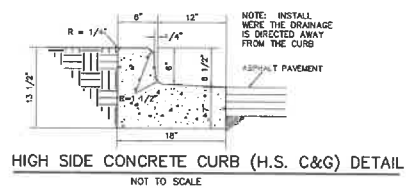
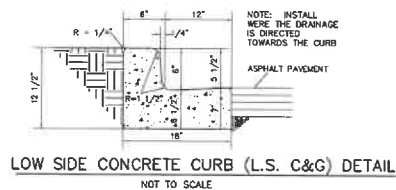
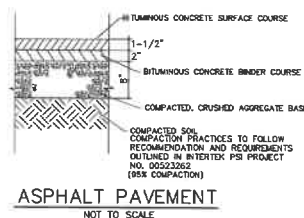
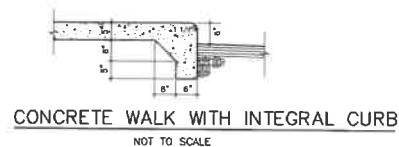
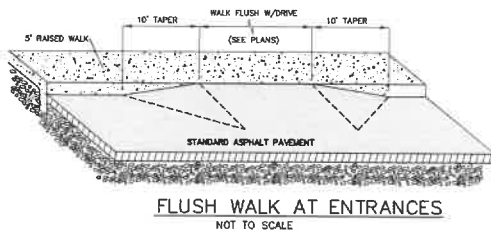
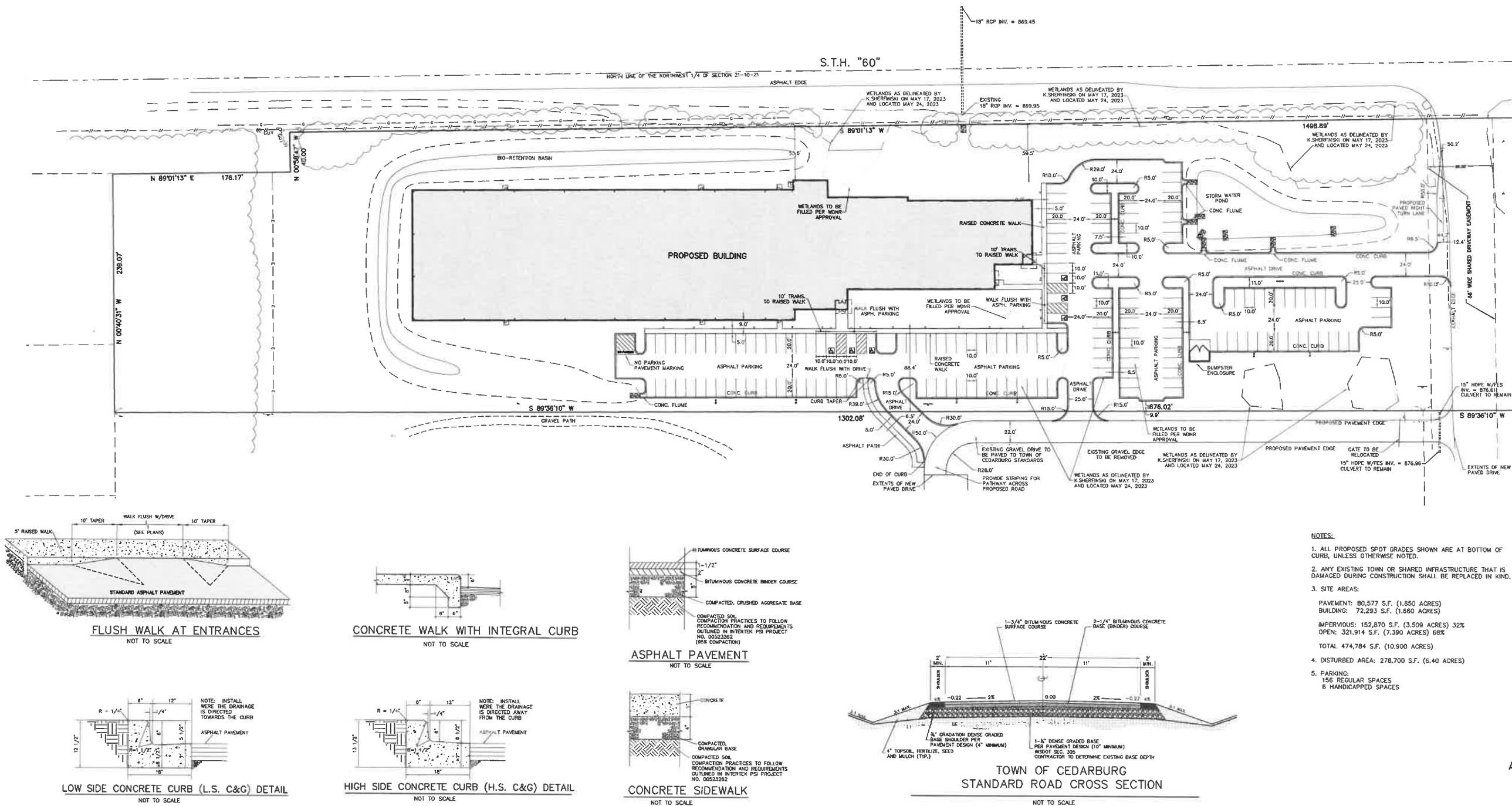
CJE NO.: 2263R2
AUGUST 09, 2023
REV. 10/23/23
REV. 11/15/23

ORIGINAL PLANS PREPARED BY
CJ
engineering
8205 W. Center Street
Suite 214
Milwaukee, WI 53222
PH: (414) 443-1312
www.cj-engineering.com



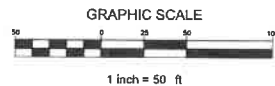
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ATHLETE PERFORMANCE DEVELOPMENT
8611 HWY 60 CEDARBURG, WISCONSIN

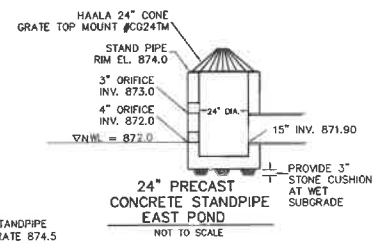
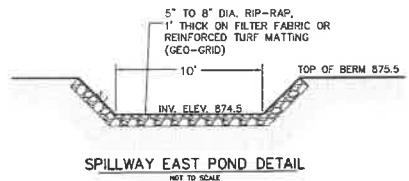
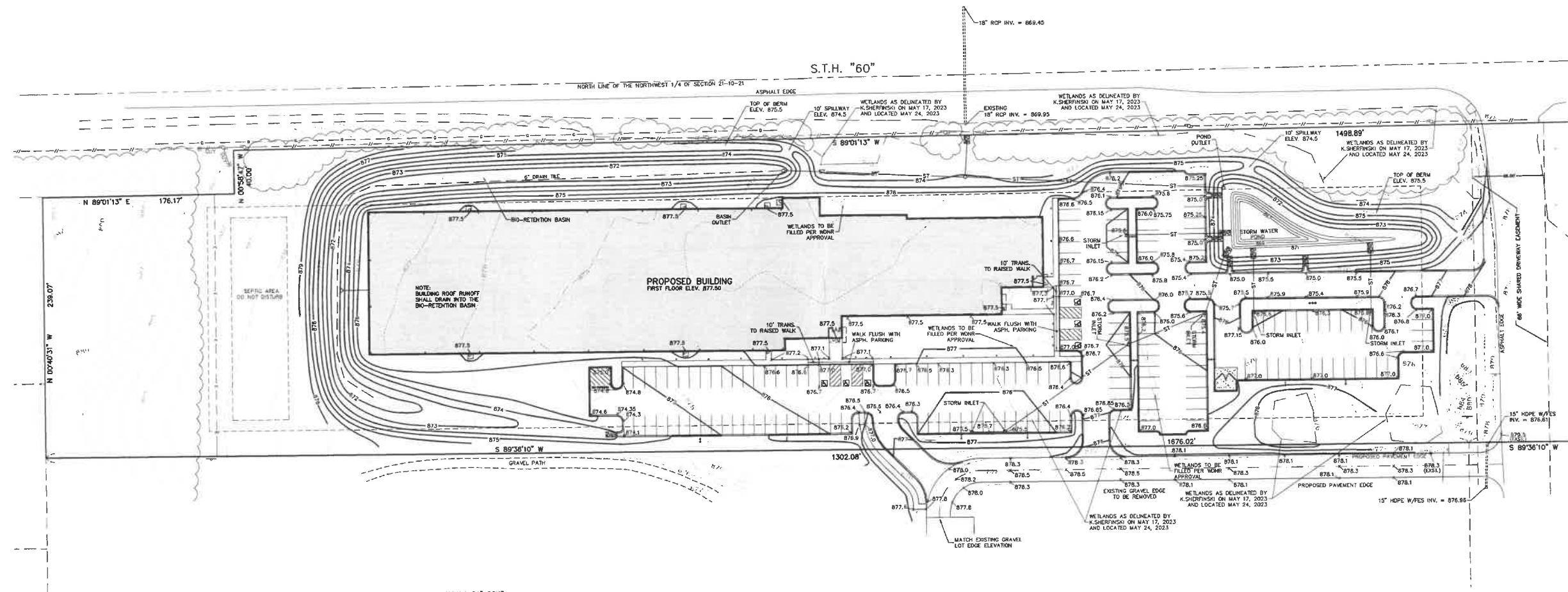


- NOTES:**
1. ALL PROPOSED SPOT GRADES SHOWN ARE AT BOTTOM OF CURB, UNLESS OTHERWISE NOTED.
 2. ANY EXISTING TOWN OR SHARED INFRASTRUCTURE THAT IS DAMAGED DURING CONSTRUCTION SHALL BE REPLACED IN KIND.
 3. SITE AREAS:
PAVEMENT: 80,577 S.F. (1.850 ACRES)
BUILDING: 72,293 S.F. (1.660 ACRES)
IMPERVIOUS: 152,870 S.F. (3.509 ACRES) 32%
OPEN: 321,914 S.F. (7.390 ACRES) 68%
TOTAL 474,784 S.F. (10.900 ACRES)
 4. DISTURBED AREA: 278,700 S.F. (6.40 ACRES)
 5. PARKING:
156 REGULAR SPACES
6 HANDICAPPED SPACES

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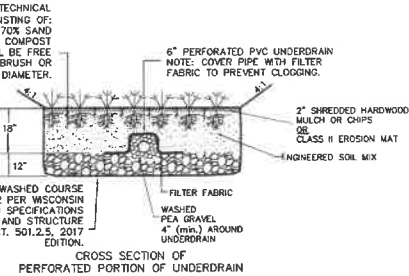
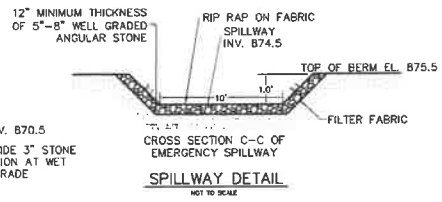
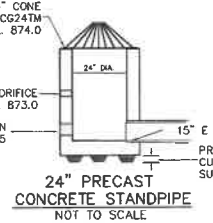
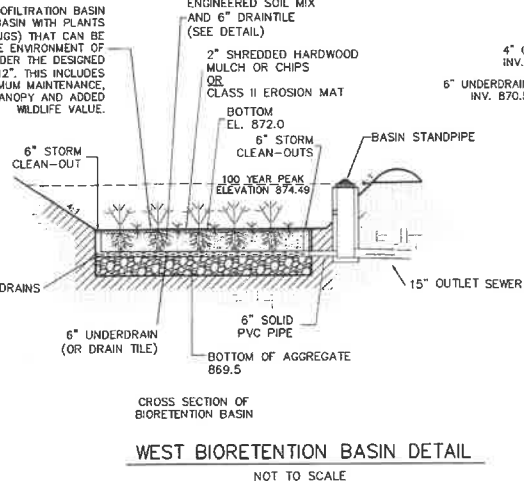


ATHLETE PERFORMANCE DEVELOPMENT
CEDARBURG, WISCONSIN
8611 HWY 60



PLANT BOTTOM OF BIOFILTRATION BASIN AND INFILTRATION BASIN WITH PLANTS (ROOTSTOCK OR PLUGS) THAT CAN BE SUSTAINED IN THE ENVIRONMENT OF THESE DEVICES. CONSIDER THE DESIGNED PONDING DEPTH OF 12". THIS INCLUDES PLANTS OF MINIMUM MAINTENANCE, COMPLETE FOLIAGE CANOPY AND ADDED WILDLIFE VALUE.

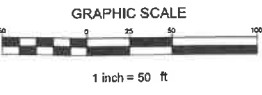
NOTE:
1. PROVIDE 6" SOLID PVC UNDERDRAIN CLEANOUTS W/WATERTIGHT CAP & FLUSH WITH GROUND ELEVATION AT THE START, CENTER AND END OF EACH UNDERDRAIN OR AS SHOWN.



LEGEND

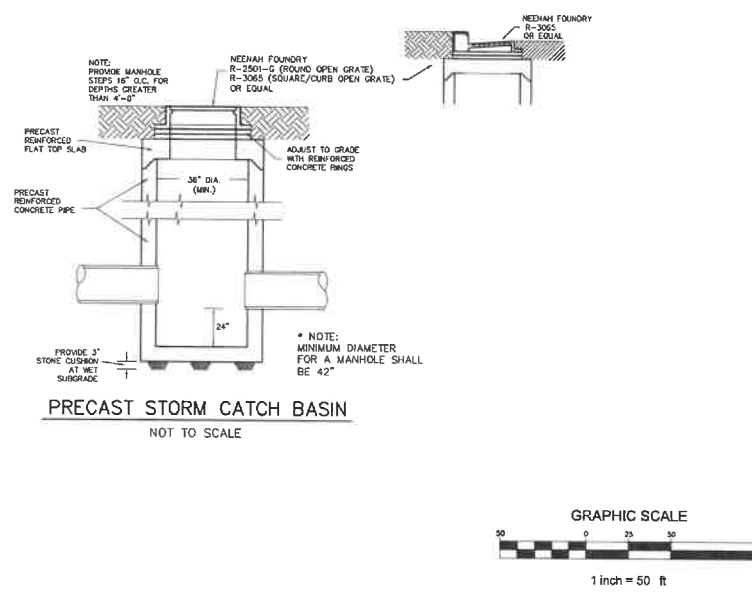
- EXISTING CONTOUR
- PROPOSED CONTOUR
- PROPOSED ELEVATION
- PROPOSED STORM SEWER

- NOTES:
1. SPOT GRADES ALONG THE CURB ARE AT THE FLANGE LINE OF THE CURB OR BOTTOM OF WALK UNLESS OTHERWISE SPECIFIED.
 2. DISTURBED AREA: 278,700 S.F. (6.40 ACRES)
 3. WETLAND FILL AREAS PER WI DNR APPROVAL AND PERMITTING: GP-SE-2023-46-02958



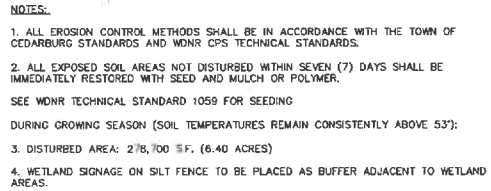
SITE GRADING PLAN C2.0

CJE NO.: 2263R2
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REV. 11/15/23



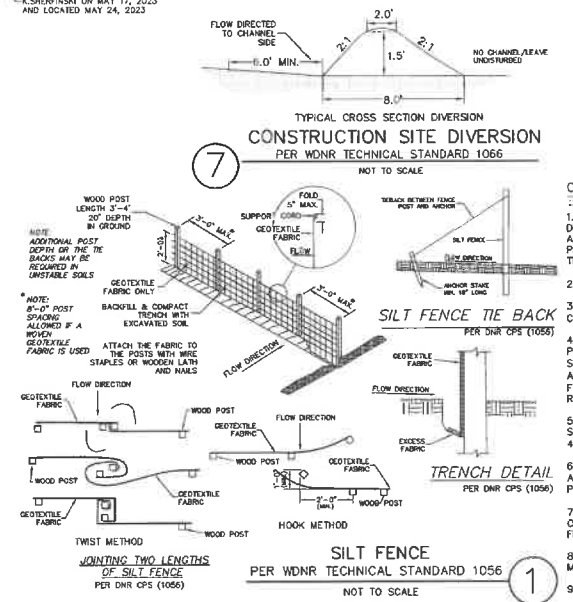
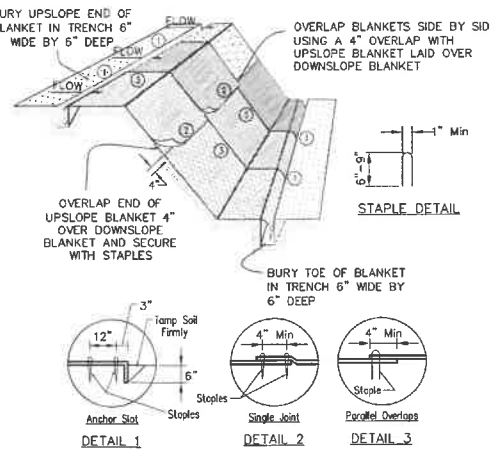
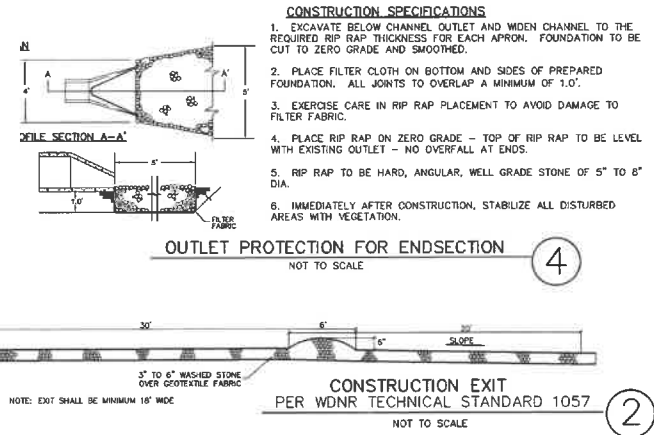
ATHLETE PERFORMANCE DEVELOPMENT

8611 HWY 60 CEDARBURG, WISCONSIN



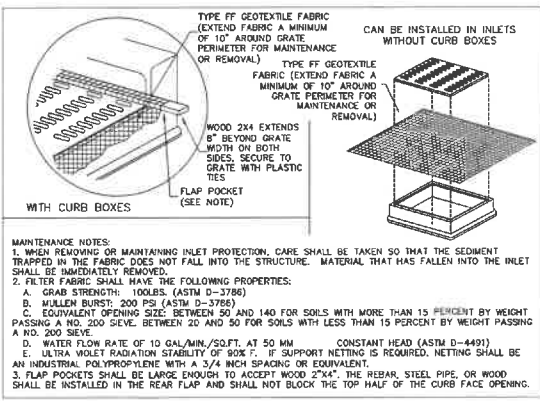
- ① SILT FENCE
- ② CONSTRUCTION EXIT
- ③ INLET PROTECTION
- ④ OUTLET PROTECTION
- ⑤ EROSION MATTING
- ⑥ SEDIMENT BASIN

FOR FINAL ST
PROVIDE CLAS
EROSION MAT
'WISDOT EROS
CONTROL PAL
EQUAL) IN AL
DITCHES, DEFI
SWALES, SIDE
OUTLOT BERM
OTHER SLOPE
GREATER. IN
MANUFACTURE
SPECIFICATION



CONSTRUCTION SPECIFICATIONS

1. CONSTRUCTION SPLIT FENCE AROUND THE DISTURBED AREAS
AS SHOWN ON EROSION CONTROL PLAN, TO PREVENT EROSION FROM BEING WASHED INTO THE DRAINAGE SYSTEM
2. LOCATE POSTS PER DNR CPS (1056)
3. WHEN JOINTS ARE NECESSARY REFER, TO DNR CPS (1056)
4. FILTER FABRIC TO BE OF NYLON, POLYESTER, POLYPROPYLENE OR ETHYLENE YARN WITH EXTRA STRENGTH - 50 LB./LIN. IN (M²) - AND WITH A FLOW RATE OF AT LEAST 0.3 GAL./SQ. FT./MIN. FABRIC SHOULD CONTAIN ULTRAVIOLET RAY INHIBITORS AND STABILIZERS.
5. THE FILTER FABRIC SHALL BE ANCHORED BY SPREADING AT LEAST 8 INCHES OF FABRIC IN A 4' X 6' TRENCH
6. THE FILTER FABRIC SHALL BE STAPLED AND/OR NAILED TO THE UPSLOPE SIDE OF THE POSTS.
7. POST TO BE 1 1/8" X 1 1/8" HICKORY OR OAK, 3 FEET LONG, SPACED A MAXIMUM OF 3 FEET APART.
8. USE WIRE REINFORCEMENT IN UNSTABILIZED MINOR SCALES, DITCHES AND DIVERSIONS.
9. USE WISDOT APPROVED SPLIT FENCE



3 INLET PROTECTION
PER WDNR TECHNICAL STANDARD 1060
NOT TO SCALE

DURING WINTER CONSTRUCTION (NOVEMBER 1 TO MAY 1), CONTRACTOR TO PROVIDE TYPE B SOIL STABILIZER, POLYACRYLAMIDE (PAM) PER LATEST WDOT PAL (UPDATED 11/2/2017) ON ALL DISTURBED AREAS THAT ARE NOT TO BE DISTURBED BEYOND 7 DAYS. CONTRACTOR TO INSTALL PAM PER WDN TECHNICAL STANDARD 1050 AND THE MANUFACTURERS SPECIFICATIONS.

SLOPE AREA DRAINS TO SEDIMENT BASIN OR SEDIMENT TRAP	MAXIMUM PERIOD OF BARE SOIL EXPOSURE (CALENDER DAYS)	
	LAND DISTURBANCE BETWEEN SEPT. 16TH AND MAY 1ST	LAND DISTURBANCE BETWEEN MAY 2ND AND SEPT. 15TH

Species	Lbs/Acre	Percent Purity
Oats	131	98
Cereal Rye	131*	97
Winter Wheat	131*	95
Annual Ryegrass	80*	97

STABILIZATION SHOULD BE COMPLETED WITHIN 7 DAYS OF
ESTABLISHING FINAL GRADE OR THAT WILL OTHERWISE EXIST FOR
MORE THAN 14 DAYS.

1. OBTAIN PLAN APPROVAL AND OTHER APPLICABLE PERMITS.
2. INSTALL CONSTRUCTION EXIT.
3. INSTALL SILT FENCE AND CONSTRUCTION FENCE
4. STRIP AND STOCK PILE TOP SOIL, SURROUND TOP SOIL STOCK PILE WITH SILT FENCE AND TEMP. STABILIZE. LOCATION OF STOCK PILE TO BE DETERMINED BY CONTRACTOR.

A. THE AREA OF THE BIO-RETENTION BASIN WILL BE USED AS A SEDIMENTATION BASIN DURING CONSTRUCTION. DO NOT INSTALL DRAIN TILE, AGGREGATE OR ENGINEERED SOIL AT THIS STAGE.

7. UTILIZE DEWATERING BAG AS NECESSARY DURING EXCAVATION OR BUILDING CONSTRUCTION.
DIRECT RUNOFF FROM BAG TO EXISTING STORM WATER FACILITIES.

8. INSTALL PROPOSED UTILITIES.

11. INSTALL BIORETENTION BASIN: INSTALL AGGREGATE, 6" DRAIN TILE, ENGINEERED SOIL AND PLANTINGS. PROVIDE FINAL STABILIZATION OF BASIN SIDE SLOPES THAT INCLUDE SEEDING AND

12. FINAL GRADE SLOPES AND TOPSOIL CRITICAL SLOPES; VEGETATE AND MAT ALL DISTURBED AREAS.

14. AFTER SITE IS STABILIZED, REMOVE ALL TEMPORARY MEASURES AND VEGETATE THE DISTURBED AREAS.

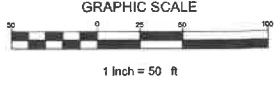
1. ALL EROSION AND SEDIMENT CONTROL PRACTICES WILL BE CHECKED FOR STABILITY AND OPERATION FOLLOWING EVERY 1/2" RUNOFF--PRODUCTION RAINFALL BUT IN NO CASE LESS THAN ONCE EVERY WEEK. ANY NEEDED REPAIRS WILL BE MADE IMMEDIATELY TO MAINTAIN ALL PRACTICES AS DESIGNED.

2. SEDIMENT WILL BE REMOVED FROM BEHIND THE SILT FENCE WHEN IT BECOMES ABOUT 0.5 FT. DEEP AT THE FENCE. THE SILT FENCE WILL BE REPAIRED AS NECESSARY TO MAINTAIN A BARRIER.

3. ALL SEEDING AREAS WILL BE WATERED, FERTILIZED, RESEEDING AS NECESSARY, AND MULCHED TO MAINTAIN A VIGOROUS, DENSE VEGETATIVE COVER.

4. ANY SEDIMENT REACHING A PUBLIC OR PRIVATE ROAD SHALL BE REMOVED BY STREET CLEANING BEFORE THE END OF EACH DAY.

CJE NO.: 2263R2
AUGUST 09, 2023
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SITE EROSION CONTROL PLAN C4.0

(February 22, 2024 and February 29, 2024)

**OZAUKEE COUNTY NATURAL RESOURCES COMMITTEE
PUBLIC HEARING NOTICE**

NOTICE IS HEREBY GIVEN that a public hearing will be held at a meeting of the Ozaukee County Natural Resources Committee on March 7, 2024, at 9:00 A.M. in Board Room A-200 of the Ozaukee County Administration Center, 121 W. Main St., Port Washington, to consider the following item(s):

- 1) Request by Mark Hertzfeldt, Design 2 Construct, as Agent for Project Sports LLC, as owner, to petition the Natural Resources Committee for a Zoning Classification change Shoreland-Wetland to Shoreland in the Shoreland District, per Section 7.1300 of the Ozaukee County Shoreland & Floodplain Zoning Ordinance, to rezone those delineated wetland areas to allow filing, grading, and excavating per the DNR approval letter dated September 29, 2023.

Affecting the following described real estates: **Town of Cedarburg**, T10N-R21E in the NW ¼ and the NE ¼ of the NW ¼, Section 21 T10N-R21E, Lot 1 CSM #3997 Doc. 1050182.

Tax Key #03-021-05-006.00, Property address: 8611 State Road 60, Cedarburg WI 53012

- 2) Request by Robert Bach, as Agent for G3 Development and QTIP Trust A as owners, to petition the Natural Resources Committee for a Zoning Classification change Shoreland-Wetland to Shoreland in the Shoreland District, per Section 7.1300 of the Ozaukee County Shoreland & Floodplain Zoning Ordinance, to reflect the results of a wetland delineation report and survey; and to allow the rezoning of the proposed road crossings through the wetland areas.

Affecting the following described real estates: **Town of Grafton** –

- a) Proposed P2 Business Condos – Part of the NE ¼ of the NE ¼, Section 31 T10N-R22E, Lot 1 CSM #4120 Doc. 1105888; Tax Key #06-031-01-021.00; 391 Port Washington Road, Grafton WI 53024
- b) Proposed Winding Brook Subdivision – Part of the SE ¼ of the NE ¼, Section 31 T10N-22E, Lot 2 CSM #4120 Doc. 1105888, Tax Key #06-031-04-010.00; and Part of the NW ¼ and NE ¼ and SW ¼ and SE ¼ of the SE ¼ Section 31 T10N-R22E, Tax Key #06-031-13-002.00; 351 Port Washington Road, Grafton WI 53024.

Information regarding this item on file with the Ozaukee County Department of Land and Water Management, Room 223, Ozaukee County Administration Center, 121 W. Main St., Port Washington.

The public and all interested persons are invited to attend this meeting and comment as appropriate. Discussion and action by the Natural Resources Committee will follow the hearing.

Rob Holyoke, Chairman
Natural Resources Committee



LAND AND WATER MANAGEMENT

Katie Vogeler, Director
Edward J. Pfister, Sanitation & Zoning Coordinator
Geoff Schramm, Land & Water Coordinator
www.co.ozaukee.wi.us

January 26, 2024

Due to an error in the Public Notice regarding the public hearing date in the previous Public Notice dated January 8, 2024, which stated February 1, 2024, and should have been February 8, 2024. Therefore, the Public Hearing for this notice has been rescheduled to March 7, 2024 Public Hearing as noted below.

(February 22, 2024 and February 29, 2024)

OZAUKEE COUNTY NATURAL RESOURCES COMMITTEE PUBLIC HEARING NOTICE

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Rob Holyoke, Chairman
Natural Resources Committee

121 W. Main Street, P.O. Box 994, Port Washington, WI 53074
Phone: (262) 284-8313 Fax: (262) 284-8367



LAND AND WATER MANAGEMENT DEPARTMENT

Katie Vogeler, 9.c

Edward J. Pfister, Sanitation & Zoning Coordinator

Geoff Schramm, Land & Water Coordinator

www.co.ozaukee.wi.us

PETITION TO CHANGE ZONING CLASSIFICATION

TO THE OZAUKEE COUNTY NATURAL RESOURCES COMMITTEE:

Ladies & Gentleman:

The undersigned hereby petitions the Ozaukee County Natural Resource Committee to change the zoning classification of the following land in Ozaukee County, Wisconsin from:

Shoreland Wetland

to

Shoreland

(Existing Zoning District)

(Proposed Zoning District)

Owner:

Project sports LLC

Telephone Number:

262-573-9196

E-Mail Address:

steve@trainap.net

Mailing Address:

9636 N. Crestwood Ct.

City, State, Zip:

Mequon, WI 53092

Project Address (if different than mailing address):

8611 STH 60, Town of Cedarburg

Agent:

Design 2 Construct - Mark Hertzfeldt

Telephone Number:

262-677-9933

E-Mail Address:

mhertzfeldt@design2construct.com

Mailing Address:

N173W21010 Northwest Passage,

City, State, Zip:

Jackson, WI 53037

Tax Key Number:

030210500500

Legal Description (1/4, Section, Township-Range, Municipality):

See provided existing conditions survey

NE NW, 1/4, S21, T10, R21 Town of Cedarburg

Lot Number:

1

Block Number:

Subdivision Name or CSM #

3997 Dec. 1050182

Additional Information:

Required due to small wetland infill

NOTICE TO PETITIONERS:

The procedure to rezone / amend the Ozaukee County Shoreland and Floodplain Zoning Ordinance must comply with the statute and administrative rule provisions described in Sections 7.1300-7.1305. The criteria that the board must consider to reach a decision on the petition are stated in the ordinance [Sections 7.1300 (comprehensive), 7.1302 (floodplain), and 7.1305 (shoreland-wetland)].

This petition (original only) and any support documents must be filed with the Ozaukee County Land & Water Management Department one month in advance of the applicable Natural Resources Committee meeting date. Required support documents include:

- (1) A survey clearly showing the boundaries (wetland / floodplain) of any area to be rezoned, and
- (2) A written statement that addresses the criteria in ordinance Sections 7.1300-7.1305 as they relate to the proposed rezoning, if applicable (see descriptions on back page). **Application materials shall be limited to 8.50 x 11.50, 8.50 x 14.00, or 11.00 x 17.00 sheets. Petitions will be considered at the next available committee meeting.**

(continue on page 2)

NOTICE TO PETITIONERS (continued)

Notice of a public hearing on the petition will be published as a Class II notice under CH. 985, Wisconsin Statutes. The applicant will be notified of the date, time, and location of the hearing. It is advisable for the applicant or an agent for the applicant to attend the hearing.

A rezoning application fee of \$330.00, payable to Ozaukee County, is due at the time the petition is filed.

Comprehensive Rezoning

Section 7.1300 - Applies to all areas within the shoreland zoning jurisdictional area except floodplain and wetland areas. Rezoning of floodplain or wetland areas are regulated under Sections 7.1302 & 7.1305 (see below).

Floodplain Rezoning

Section 7.1302 - Floodplain management regulations may only be removed by rezoning the area to remove it from the floodplain provided the property:

- (a) is filled to an elevation 2 feet above the regional flood elevation and is contiguous to lands outside the floodplain, or
- (b) was above the regional flood elevation at the time of the effective date of the floodplain zoning map (mapped floodplain error).

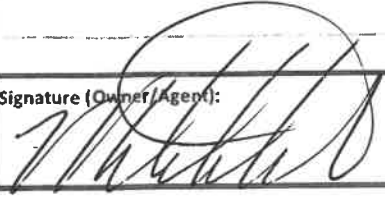
Shoreland-Wetland Rezoning

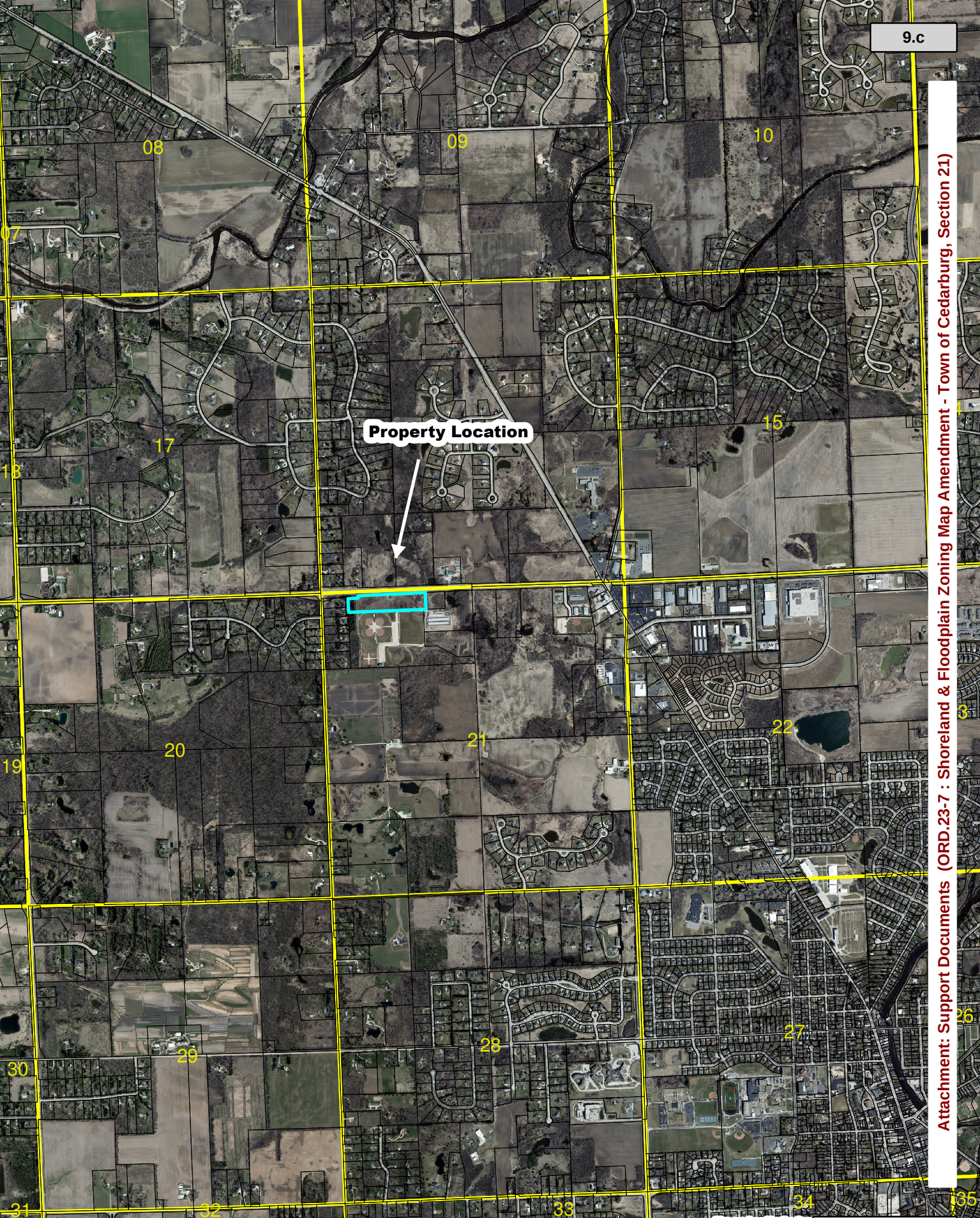
Section 7.1305 - A wetland, or portion thereof, in the shoreland-wetland district shall not be rezoned if the proposed rezoning may result in a significant adverse impact upon any of the following:

1. Storm and flood water storage capacity;
2. Preservation of dry season stream flow, the discharge of groundwater to a wetland, the recharge of groundwater from a wetland to another area, or the flow of groundwater through a wetland;
3. Filtering or storage of sediments, nutrients, heavy metals, or organic compounds that would otherwise drain into navigable waters;
4. Shoreline protection against soil erosion;
5. Fish spawning, breeding, nursery or feeding grounds;
6. Wildlife habitat;
7. Areas of special recreational, scenic, or scientific interest, including scarce wetland types.

Section 7.1305(C) - If the Wisconsin Department of Natural Resources notifies the natural resources committee or county board that a proposed text or map amendment to the shoreland-wetland provisions of this ordinance may have a significant adverse impact upon any of the criteria listed above, that amendment, if approved by the county board, shall contain the following provision:

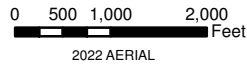
"This amendment shall not take effect until more than 30 days have elapsed after written notice of the county board approval of this amendment is mailed to the DNR. During that 30-day period the department may notify the county board that it will adopt a superseding shoreland ordinance for the county under Section 59.692 (6), Wis. Stats. If the department does so notify the county board, the effect of this amendment shall be stayed until the Section 59.692 (6) adoption procedure is completed or otherwise terminated."

Signature (Owner/Agent):  (AGENT)	Date: 12/07/2023	Petition Fee: \$330
		Petition Date:
(For Department use only)		Check / Receipt Number: 117462 / 17484
Date of NR Committee Approval:	Date of County Board Approval:	
Comments:		



Property Location

Attachment: Support Documents (ORD.23-7 : Shoreland & Floodplain Zoning Map Amendment - Town of Cedarburg, Section 21)



Map produced by the Ozaukee Water Management Dept.
The information on the aerial is based on the best available information at the time of its printing.

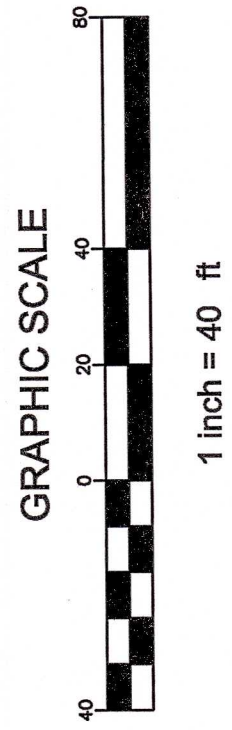
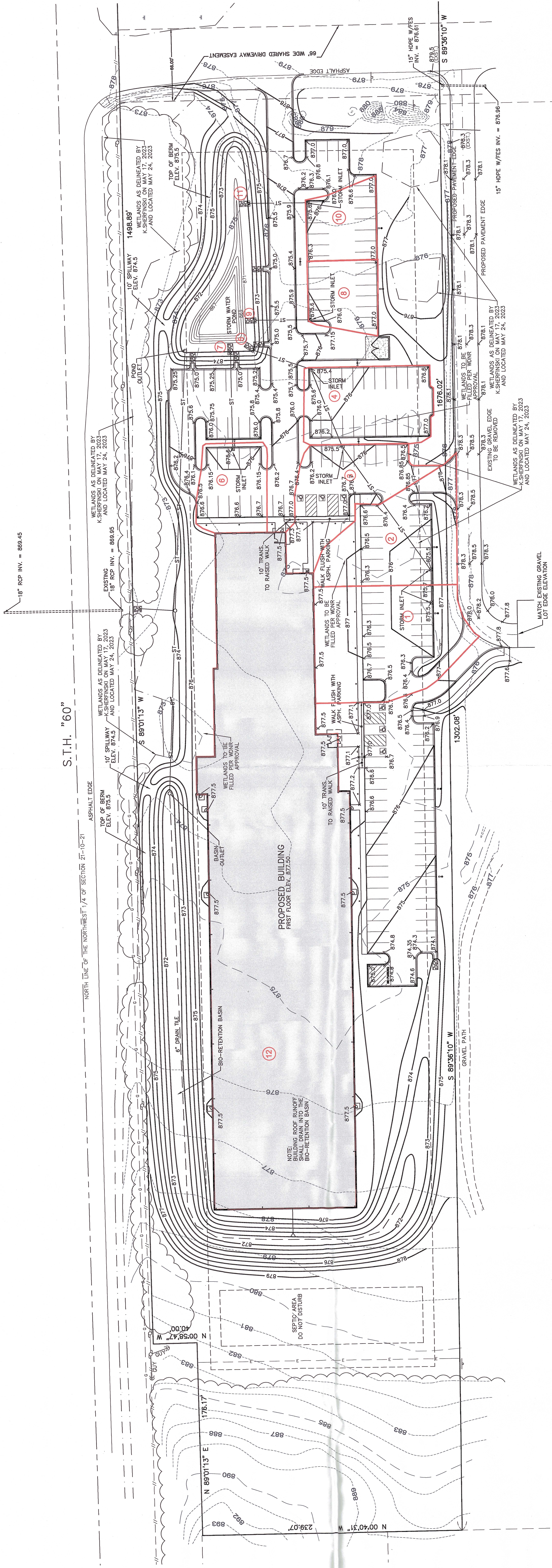
RECEIVED
DEC 13 2023
OSHAUSE COUNTY
LAND & WATER
MANAGEMENT DEPT



ATHLETE PERFORMANCE DEVELOPMENT

8611 HWY 60 CEDARBURG, WISCONSIN

CJE NO.: 2263R2
AUGUST 09, 2023
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STORM SEWER AREAS

STORM AREA	1					2					3					4				
	NAME	TYPE	SF	ACRE	GPM	INLET	SF	ACRE	GPM	INLET	SF	ACRE	GPM	INLET	SF	ACRE	GPM			
PAVED			7189	0.155	221	6394	0.147	197	6324	0.145	195	7400	0.170	228						
			0	0.000	0	0	0.000	0	0.000	0	0.000	0	0.000	0						
BUILDING			6297	0.145	61	3591	0.082	35	1884	0.043	18	819	0.019	8						
			0	0.000	0	0	0.000	0	0.000	0	0.000	0	0.000	0						
TOTAL			13486	0.310	282	9985	0.229	231	8208	0.188	213	8219	0.189	236						
CUMULATIVE									513			726		961						

6				12			
NAME	TYPE	SF	ACRE	GPM	NAME	TYPE	GPM
PAVED		4164	0.096	128	PAVED		0
		0	0.000	0			0
BUILDING		865	0.020	8	BUILDING		2780
		0	0.000	0			0
TOTAL		5029	0.115	136	TOTAL		2780

8				10			
NAME	TYPE	SF	ACRE	GPM	NAME	TYPE	GPM
PAVED		3988	0.092	123	PAVED		126
		0	0.000	0			0
BUILDING		77	0.002	1	BUILDING		0.000
		0	0.000	0			0
TOTAL		4065	0.093	123	TOTAL		127

10				127			
NAME	TYPE	SF	ACRE	GPM	NAME	TYPE	GPM
PAVED		4104	0.094	126	PAVED		126
		0	0.000	0			0
BUILDING		60	0.001	1	BUILDING		0.000
		0	0.000	0			0
TOTAL		4164	0.096	127	TOTAL		127

LEGEND			
---	96	EXISTING CONTOUR	
---	96	PROPOSED CONTOUR	
---	96.5	PROPOSED ELEVATION	
---	ST	PROPOSED STORM SEWER	

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STORM WATER MANAGEMENT PLAN

FOR

Athlete Performance Development

**8611 HWY 60
Cedarburg, Wisconsin**

August 9, 2023

Revised: November 15, 2023



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DEC 18 2023

**OZAUKEE COUNTY
LAND & WATER
MANAGEMENT DEPT**

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Introduction:

The proposed development will consist of a 72,293 s.f. proposed building with proposed surface parking and loading areas at the Cedarburg Sports site located on Highway 60 in the Town of Cedarburg. In order to meet the Town of Cedarburg and DNR storm water requirements, runoff from the proposed development will drain into 2 storm water basins that are to be located on the west end and in northeast of the property. The basin on the west end of the property will function as a bio retention basin and receive drainage from the roof, the west portion of the parking area and the adjacent open areas. The northeast basin will be a wet detention basin with a permanent water surface. This basin will receive runoff from the proposed parking area via a storm sewer conveyance system as well as sheet drainage via paved flumes. The two new basins will be installed with multi stage outlet structure which will then route the water to the existing drainage ditch along highway 60. Said discharge location will be located in the vicinity of an existing 18" drainage culvert and will allow for the drainage pattern to be maintained from existing conditions. The proposed basins have been designed to meet WDNR and the Town of Cedarburg storm water requirements so that post development storm water runoff is limited to the existing conditions runoff values during the 2-year and 10-year design storm events. The proposed storm water basins are designed to provide water quality, removing over 80% of total suspended sediment prior to discharge. The existing onsite solid are silt loam and demonstrate poor infiltrative soil properties such that this project is exempt for the infiltration requirements of NR 151.

Allowable runoff per the Town of Cedarburg & WDNR NR 151 requirements:

Per The Town of Cedarburg Ordinance Sec. 2.02(B)(1)

By design, BMPs shall be employed to maintain or reduce the peak runoff discharge rates, to the maximum extent practicable, as compared to pre-development conditions for the 2- through and 10 year – 24 hour design storm applicable to the development site

Per NR 151.12(5)b(1):

By design, BMPs shall be employed to maintain or reduce the peak runoff discharge rates, to the maximum extent practicable, as compared to pre-development conditions for the 2-year, 24-hour design storm applicable to the post-construction site.

Developed Site: (See the Proposed Conditions Plan: Appendix "B").

Soil Types: Silt Loam (See Soil Resource report)

Curve Numbers: Impervious Surface, CN = 98
Grass in Good Condition: H.S.G. "D", CN = 80
Woods in Good Condition: H.S.G. "D", CN = 77

24-Hour Rainfall Values:

1-Year Design Storm: 2.30"

2-Year Design Storm: 2.61"

10-Year Design Storm: 3.77"

100-Year Design Storm: 6.38"

All rainfall data is for 24-hour duration per the NOAA Atlas 14 rainfall values and the MSE3 distribution for Ozaukee County as recommended by WI DNR and SEWRPC

Method of Analysis:

The storm water runoff quantity was calculated using the methods outlines in TR-55 ("Urban Hydrology for Small Watersheds" by the U.S. Department of Agriculture's Soil Conservation Services). Calculations were performed with the "HydroCAD 7.10" computer software. Water quality calculations were done using SLAMM for Windows "Source Loading and Management Model" version 9.2.3.

Drainage Summary: (See Calculations in Appendix)

Area	1 Year Storm	2 Year Storm	10 Year Storm	100 Year Storm
Existing Conditions				
Existing Subcatchment 1:	5.57 cfs	7.36 cfs	14.83 cfs	33.67 cfs
Total Runoff	5.57 cfs	7.36 cfs	14.83 cfs	33.67 cfs
Proposed Conditions				
Subcatchment 1 (Into Pond 1)	4.81cfs	5.72 cfs	9.14 cfs	16.76 cfs
Pond 1 (out)	0.37 cfs	0.44 cfs	0.71 cfs	6.45 cfs
Subcatchment 2: To Bio-Retention Basin	6.23 cfs	7.65 cfs	13.14 cfs	25.78 cfs
Pond 2: Bio-Retention Basin (out)	0.38 cfs	0.41 cfs	0.79 cfs	8.01 cfs
Subcatchment 3: Undetained	1.70 cfs	2.20 cfs	4.24 cfs	9.20 cfs
Total Runoff (Proposed Reach)	1.93 cfs	2.45 cfs	4.92 cfs	13.21 cfs
Allowable Runoff		7.36 cfs	14.83 cfs	

Water Quality Calculations

Per NR 151.12(5)(a)1. For new development, by design, reduce to the maximum extent practicable, the total suspended solids load by 80%, based on an average annual rainfall, as compared to no runoff management controls. No person shall be required to exceed an 80% total suspended solids reduction to meet the requirements. The storm water basins will remove 80% of the total suspended solids (TSS) prior to discharge off site, as quantified using the WinSLAMM program (See appendix for calculation results and input data). The TSS out is as follows:

<u>Before Outfall Controls</u>	<u>After Outfall Controls</u>	<u>Percent Removed</u>
1782 lbs	353.7 lbs	80.15%

Infiltration Requirements

Per NR 151.12(5)(c)6.a. This project is exempt from infiltration requirement as the onsite soils have less than 0.6 inches/hour infiltration rates.

Conclusion:

The proposed peak runoff rates under post-development conditions do not exceed the Town of Cedarburg or NR151 peak runoff rate limits for the 2 and 10 -year rainfall events. The proposed storm water basins will also provide water quality prior to discharge to the existing discharge location, removing more than 80% TSS from the runoff. The proposed development meets and exceeds the storm water management requirements for the Town of Cedarburg and NR 151. Electronic copies of the HyrdoCad or WinSLAMM files will be provided to the Town for review if requested.

APPENDIX



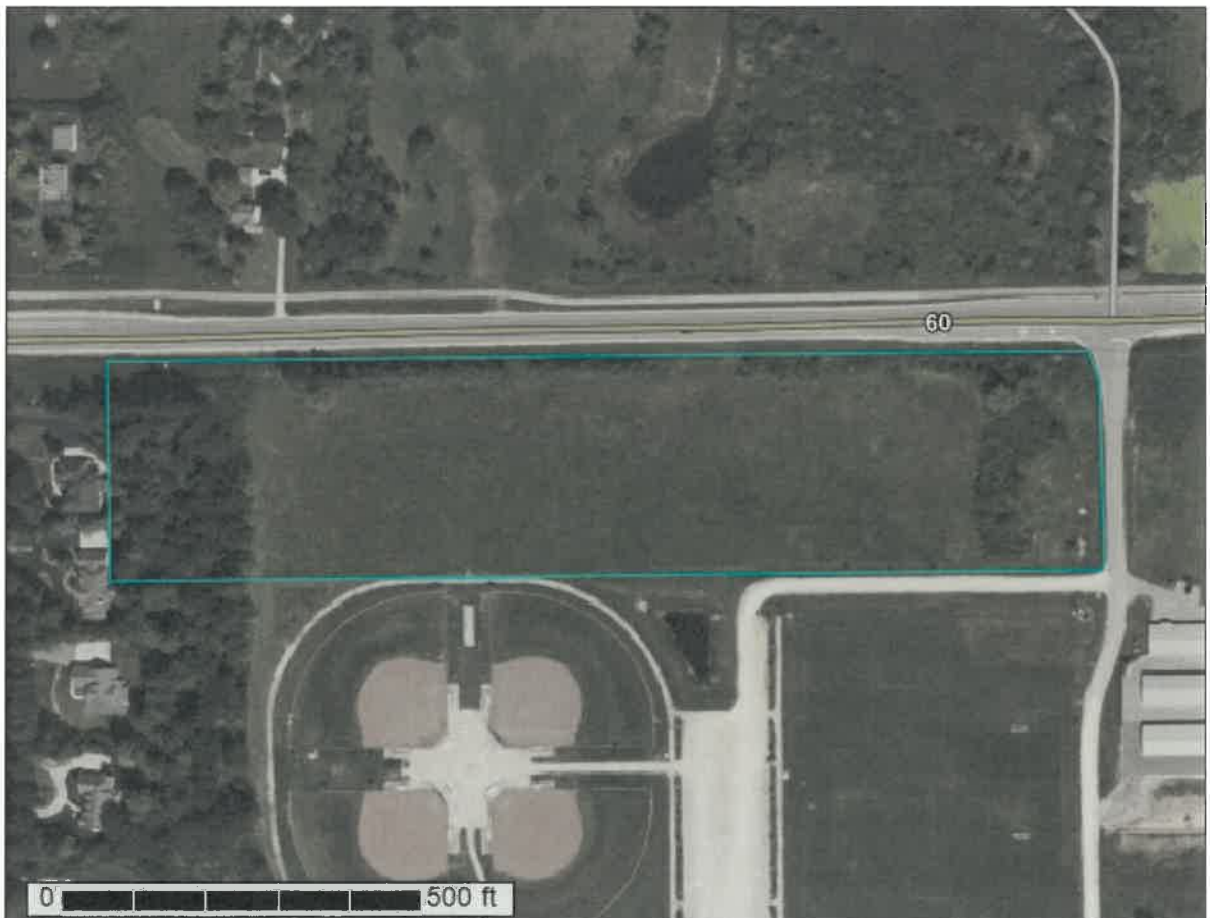
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NRCS

Natural
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A product of the National
Cooperative Soil Survey,
a joint effort of the United
States Department of
Agriculture and other
Federal agencies, State
agencies including the
Agricultural Experiment
Stations, and local
participants

Custom Soil Resource Report for Ozaukee County, Wisconsin



Attachment: Support Documents (ORD.23-7 : Shoreland & Floodplain Zoning Map Amendment - Town of Cedarburg, Section 21)

August 8, 2023

Packet Pg. 103

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (<http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/>) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (<https://offices.sc.egov.usda.gov/locator/app?agency=nrcs>) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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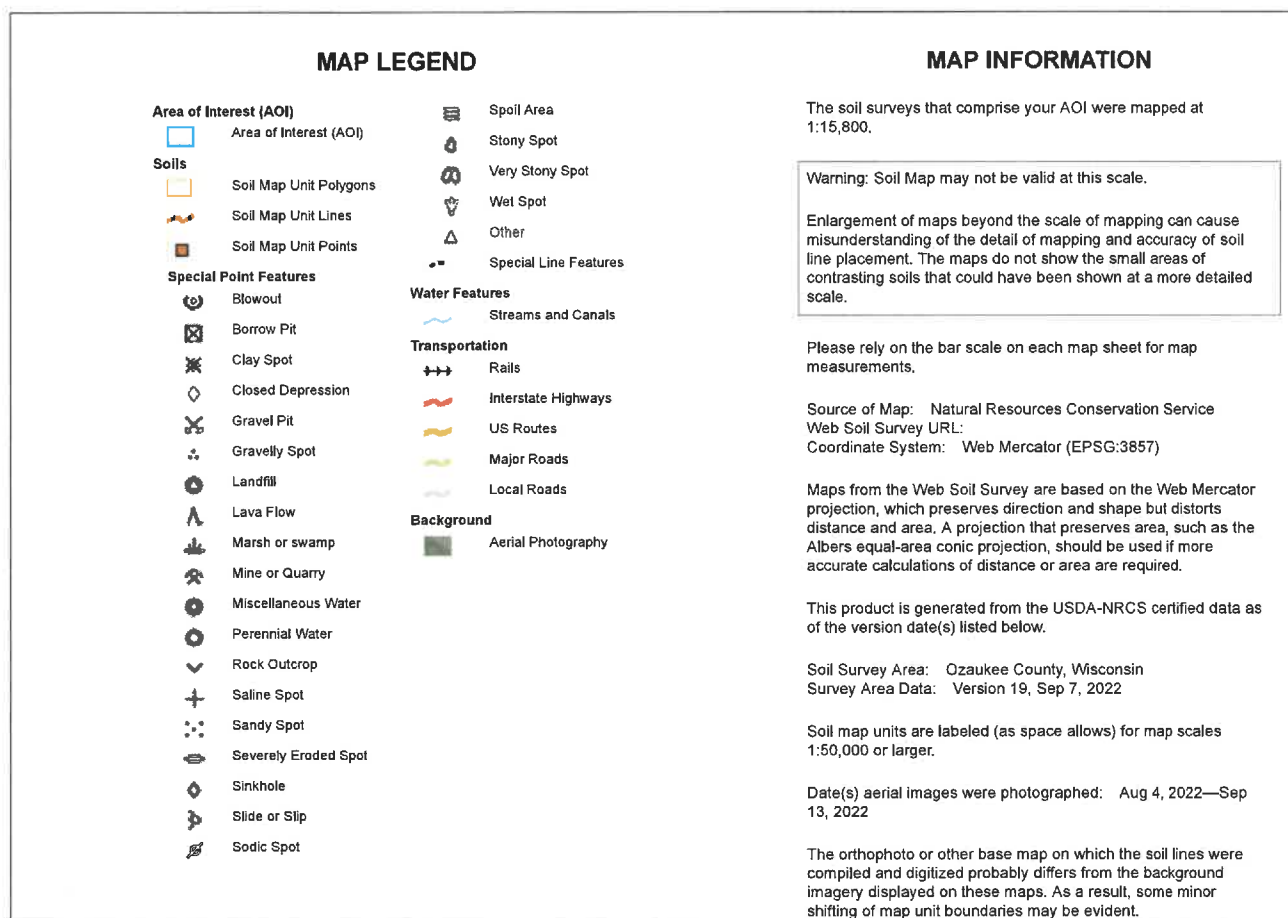
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Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.



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Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
HmD2	Hochheim loam, 12 to 20 percent slopes, eroded	1.0	10.0%
MgA	Martinton silt loam, 1 to 3 percent slopes	7.2	73.5%
OuB2	Ozaukee silt loam, high carbonate substratum, 2 to 6 percent slopes, eroded	0.4	4.3%
ZuB2	Zurich silt loam, 2 to 6 percent slopes, eroded	1.2	12.1%
Totals for Area of Interest		9.8	100.0%

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

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The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

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Ozaukee County, Wisconsin**HmD2—Hochheim loam, 12 to 20 percent slopes, eroded****Map Unit Setting**

National map unit symbol: 2t72w
Elevation: 820 to 1,330 feet
Mean annual precipitation: 28 to 36 inches
Mean annual air temperature: 45 to 48 degrees F
Frost-free period: 130 to 175 days
Farmland classification: Not prime farmland

Map Unit Composition

Hochheim, eroded, and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Hochheim, Eroded**Setting**

Landform: Drumlins
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Loamy till and/or calcareous, dense loamy till

Typical profile

Ap - 0 to 6 inches: loam
Bt - 6 to 16 inches: clay loam
C - 16 to 30 inches: gravelly loam
Cd - 30 to 79 inches: gravelly loam

Properties and qualities

Slope: 12 to 20 percent
Depth to restrictive feature: 20 to 36 inches to densic material
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 60 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 4.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: D
Ecological site: F095XB007WI - Loamy Upland with Carbonates
Forage suitability group: Mod AWC, adequately drained with limitations (G095BY006WI)
Other vegetative classification: Mod AWC, adequately drained with limitations (G095BY006WI)

Custom Soil Resource Report

Hydric soil rating: No

Minor Components**Theresa**

Percent of map unit: 10 percent

Landform: Drumlins

Landform position (two-dimensional): Summit

Landform position (three-dimensional): Crest

Down-slope shape: Convex

Across-slope shape: Convex

Ecological site: F095XB007WI - Loamy Upland with Carbonates

Hydric soil rating: No

Hochheim

Percent of map unit: 5 percent

Landform: Drumlins

Landform position (two-dimensional): Backslope

Landform position (three-dimensional): Side slope

Down-slope shape: Convex

Across-slope shape: Linear

Ecological site: F095XB006WI - Shallow Upland

Hydric soil rating: No

MgA—Martinton silt loam, 1 to 3 percent slopes**Map Unit Setting**

National map unit symbol: g98p

Elevation: 700 to 1,000 feet

Mean annual precipitation: 32 to 35 inches

Mean annual air temperature: 39 to 54 degrees F

Frost-free period: 150 to 175 days

Farmland classification: All areas are prime farmland

Map Unit Composition

Martinton and similar soils: 90 percent

Minor components: 10 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Martinton**Setting**

Landform: Glacial lakes (relict), drainageways

Landform position (two-dimensional): Footslope, toeslope

Landform position (three-dimensional): Base slope, dip

Down-slope shape: Concave

Across-slope shape: Linear

Parent material: Fine-silty loess over silty and clayey lacustrine deposits

Typical profile

Ap - 0 to 8 inches: silt loam

Custom Soil Resource Report

Btg - 8 to 24 inches: silty clay loam

Cg - 24 to 60 inches: stratified sandy loam to silty clay

Properties and qualities

Slope: 1 to 3 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Somewhat poorly drained

Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.14 to 0.57 in/hr)

Depth to water table: About 0 to 24 inches

Frequency of flooding: None

Frequency of ponding: Occasional

Calcium carbonate, maximum content: 30 percent

Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

Available water supply, 0 to 60 inches: High (about 10.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 2w

Hydrologic Soil Group: C/D

Ecological site: F095XB005WI - Moist Loamy or Clayey Lowland

Forage suitability group: High AWC, high water table (G095BY007WI)

Other vegetative classification: High AWC, high water table (G095BY007WI)

Hydric soil rating: No

Minor Components**Poygan**

Percent of map unit: 10 percent

Landform: Depressions

Landform position (two-dimensional): Toeslope

Landform position (three-dimensional): Dip

Down-slope shape: Concave

Across-slope shape: Concave

Ecological site: F095XB002WI - Wet Floodplain

Hydric soil rating: Yes

OuB2—Ozaukee silt loam, high carbonate substratum, 2 to 6 percent slopes, eroded**Map Unit Setting**

National map unit symbol: 2sn0c

Elevation: 650 to 1,010 feet

Mean annual precipitation: 31 to 39 inches

Mean annual air temperature: 44 to 49 degrees F

Frost-free period: 125 to 185 days

Farmland classification: All areas are prime farmland

Map Unit Composition

Ozaukee, high carbonate substratum, eroded, and similar soils: 96 percent

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Minor components: 4 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Ozaukee, High Carbonate Substratum, Eroded

Setting

Landform: Ground moraines, end moraines
Landform position (two-dimensional): Summit, shoulder
Landform position (three-dimensional): Interfluvium
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Thin mantle of loess over silty and clayey till

Typical profile

Ap - 0 to 7 inches: silt loam
Bt1 - 7 to 11 inches: silty clay loam
2Bt2 - 11 to 22 inches: silty clay
2Bt3 - 22 to 27 inches: silty clay loam
2Cd - 27 to 60 inches: silty clay loam

Properties and qualities

Slope: 2 to 6 percent
Depth to restrictive feature: 22 to 40 inches to densic material
Drainage class: Moderately well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 24 to 42 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 60 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 4.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: C
Ecological site: F110XY012IL - Moist Glacial Drift Upland Forest
Forage suitability group: Mod AWC, adequately drained with limitations (G095BY006WI)
Other vegetative classification: Mod AWC, adequately drained with limitations (G095BY006WI)
Hydric soil rating: No

Minor Components

Ashkum, drained

Percent of map unit: 2 percent
Landform: End moraines, ground moraines
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Linear
Across-slope shape: Concave
Ecological site: R110XY024IL - Ponded Depressional Sedge Meadow
Hydric soil rating: Yes

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Urban land

Percent of map unit: 1 percent
Landform: Ground moraines
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluvium
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Orthents, clayey

Percent of map unit: 1 percent
Landform: Ground moraines
Landform position (two-dimensional): Summit, backslope
Landform position (three-dimensional): Interfluvium
Down-slope shape: Convex
Across-slope shape: Convex
Ecological site: F095XB010WI - Loamy and Clayey Upland
Hydric soil rating: No

ZuB2—Zurich silt loam, 2 to 6 percent slopes, eroded**Map Unit Setting**

National map unit symbol: 2wsrt
Elevation: 660 to 1,050 feet
Mean annual precipitation: 31 to 33 inches
Mean annual air temperature: 45 to 48 degrees F
Frost-free period: 124 to 190 days
Farm land classification: All areas are prime farmland

Map Unit Composition

Zurich, eroded, and similar soils: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Zurich, Eroded**Setting**

Landform: Lakebeds (relict)
Landform position (two-dimensional): Shoulder
Landform position (three-dimensional): Interfluvium
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Loess over sandy and silty lacustrine deposits

Typical profile

Ap - 0 to 5 inches: silt loam
BE - 5 to 11 inches: silt loam
Bt - 11 to 23 inches: silty clay loam
2C - 23 to 79 inches: stratified very fine sand to silt loam

Custom Soil Resource Report

Properties and qualities

Slope: 2 to 6 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)
Depth to water table: About 20 to 40 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 30 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: High (about 11.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: B/D
Ecological site: F095XB007WI - Loamy Upland with Carbonates
Forage suitability group: High AWC, adequately drained (G095BY008WI)
Other vegetative classification: High AWC, adequately drained (G095BY008WI)
Hydric soil rating: No

Minor Components**Fox**

Percent of map unit: 5 percent
Landform: Lakebeds (relict)
Landform position (two-dimensional): Shoulder
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Linear
Ecological site: F095XB010WI - Loamy and Clayey Upland
Other vegetative classification: Mod AWC, adequately drained (G095BY005WI)
Hydric soil rating: No

Darroch

Percent of map unit: 5 percent
Landform: Lakebeds (relict)
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Linear
Ecological site: F095XB005WI - Moist Loamy or Clayey Lowland
Hydric soil rating: No

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Professional Service Industries, Inc.
821 Corporate Court, Waukesha, WI 53189
Phone: (262) 521-2125
Fax: (262) 521-2471

September 12, 2023

Design 2 Construct Development Corporation
N173 W21010 Northwest Passage
Jackson, WI 53037

Attn: Mr. Mark Hertzfeldt, AIA
Architect

Re: Subsurface Exploration and Foundation Evaluation
Proposed Cedarburg Athletic Performance Facility
8611 STH 60
Cedarburg, WI
PSI Project No. 00523262

Dear Mr. Hertzfeldt:

The subsurface exploration and foundation evaluation for the above referenced project has been completed. An electronic copy of the report is being provided via email. Hard copies can be issued upon request. After you have had the opportunity of reading the report, please call at any time with any questions or comments you may have. Professional Service Industries, Inc. (PSI) appreciates the opportunity to be of service on this project and looks forward to continuing as your geotechnical consultant during the design and construction phases, as well as your upcoming projects.

Sincerely,

PROFESSIONAL SERVICE INDUSTRIES, INC.

Emily M. Broback
Project Manager

James M. Becco, P.E.
Regional Vice President



Patrick J. Patterson, P.E., P.G.
Senior Engineer
Environmental Services



The above Professional Engineering Seal and signature is an electronic reproduction of the original seal and signature. Original hard copies can be provided upon request. This electronic reproduction shall not be construed as an original or certified document.

SUBSURFACE EXPLORATION AND FOUNDATION EVALUATION

For the:

Proposed Cedarburg Athletic Performance Facility
8611 STH 60
Cedarburg, WI

Prepared for

Design 2 Construct Development Corporation
N173 W21010 Northwest Passage
Jackson, WI 53037

Prepared by

Professional Service Industries, Inc.
821 Corporate Court
Waukesha, Wisconsin 53189

September 12, 2023

PSI Project No. 00523262



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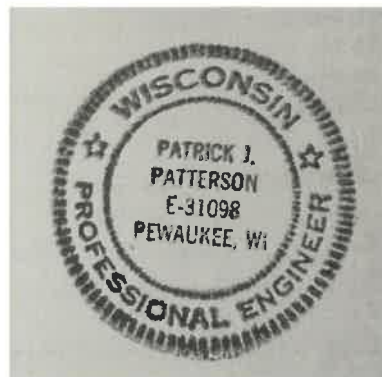


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INTRODUCTION

General

This report presents the results of the subsurface exploration and foundation evaluation for the proposed Cedarburg Athletic Performance Facility in Cedarburg, Wisconsin. The work was performed for Design 2 Construct Development Corporation, at the request of Mr. Mark Hertzfeldt.

Purpose

The purpose of this study was to evaluate the subsurface conditions at specific boring locations on the site, and to establish parameters for use by the design engineers and architects in preparing the foundation, floor slab, pavement, and stormwater basin designs for the proposed project.

Scope

The scope of services included site reconnaissance, the subsurface exploration, a determination of soil characteristics by field and laboratory testing, and an evaluation of the data obtained. The scope of the field exploration program, including the number, depth, and location of the borings, was determined by PSI in consultation with the client.

Authorization

The description of services and authorization to perform this subsurface exploration and foundation evaluation were in the form of a signed acceptance copy of PSI Proposal No. 403675, dated August 9, 2023. The general conditions for the performance of the work were referenced in the proposal. This report has been prepared on behalf of, and exclusively for the use of the Design 2 Construct Development Corporation. The information contained in this report may not be relied upon by any other parties without the express written consent of PSI, and acceptance by such parties of PSI's General Conditions.

SITE AND PROJECT DESCRIPTION

Site Features

The project site is located on the south side of STH 60, at the address of 8611 STH 60, approximately 1,800 feet east of Horns Corners Road, in Cedarburg, Wisconsin. At the time of the exploration, the site was a vacant field with trees along the north and east edges of the project site. The surrounding properties consist of the Korb Sports Complex to the south and east, residential properties to the west, and STH 60 and agricultural fields to the north. Aerial photos reviewed on Google Earth indicate that the site has



remained relatively similar in appearance to that described herein since at least March of 2018 when construction of the Korb Sports Complex to the south and east began. Prior to March of 2018, the entire site had been utilized as an agricultural field since at least March of 2000.

The topography of the general area slopes down to the northeast, with an elevation difference between the borings of about 5.5 feet (EL. 879.5 to EL. 874).

Project Description

Based on the information provided by the client, it is understood that the project will consist of the construction of a single story, slab-on-grade building that is planned to be approximately 80,000 square feet in size. No below grade levels are planned. The western portion of the building is understood to be a high bay sports court. Structural loads were not provided. For the purpose of this report, it is estimated that maximum column and wall loads will not exceed 100 kips and 10 kips per lineal foot respectively. When structural loads are determined, PSI must be informed so that any necessary re-evaluation or revisions to this report can be made.

According to information provided by the client, the planned finished first floor elevation is EL. 877.5. On the basis of the existing elevations at the borings, fills of about 2.5 to 3.5 feet are estimated to be required within the majority of the site, and cuts of about 2.5 feet are estimated to be required towards the northwest section of the site.

A stormwater management basin is planned at the northeast corner and west/northwest portions of the site. The planned bottom elevations are EL. 872 and EL. 867 for the west/northwest and northeast basins, respectively. The type and other design details have not been provided.

The planned pavements are understood to consist of flexible asphalt (HMAC) pavement or concrete. Traffic loading was not provided but is estimated to consist of light passenger vehicles, occasional delivery trucks, busses, garbage trucks, and snow removal equipment.

When information becomes available, or if any of the information discussed herein differs from current plans or changes as design progresses, PSI must be informed so that any necessary revisions to this report can be made.

EXPLORATION AND LABORATORY PROCEDURES

Scope Summary

The field and laboratory data utilized in the evaluation of the subsurface materials was obtained by drilling exploratory test borings, securing soil samples by the split-spoon sampling method, and subjecting the samples to laboratory testing.



Field Exploration

Twelve (12) soil test borings were performed for this project. B-1 through B-8 were performed within the proposed building area and drilled to a planned depth of about 20 feet below existing grade. B-9 and B-10 were performed within the planned pavement areas and drilled to a planned depth of about 5 feet below existing grade. B-11 and B-12 were performed within the planned northeast stormwater management basin and were drilled to a planned depth of about 15 feet below existing grade. B-1 and B-2 were drilled for the purpose of both the proposed building and the west/northwest stormwater management basin. B-12 was offset 80 feet southwest from its planned location due to dense trees and brush. The number, depth, and approximate location of the soil borings was determined by PSI in consultation with the client. The borings were located in the field by PSI utilizing a handheld consumer grade GPS device. The locations are estimated to be accurate to within several feet. The surface elevations shown on the logs were estimated by interpolation of a 1-foot contour map of the property, provided by the client. The elevations are estimated to be accurate to within about 1 foot.

The soil test borings were performed with an ATV mounted rotary drilling rig utilizing continuous flight hollow stem augers to advance the holes. Representative samples were obtained by the Standard Penetration Test (SPT) method using split-spoon sampling procedures in general accordance with ASTM D-1586 procedures. Samples were generally collected at 2.5-foot intervals to 10 feet, and then at 5-foot intervals thereafter to the end of the borings. The standard penetration value (N) is defined as the number of blows of a 140-pound hammer, falling thirty (30) inches, required to advance the split-spoon sampler one (1) foot into the soil. The sampler is lowered to the bottom of the drill hole and the number of blows recorded for each of the three (3) successive increments of six (6) inches penetration. The "N" value is obtained by adding the second and third incremental numbers. The SPT provides a means of estimating the relative density of granular soils and comparative consistency of cohesive soils, thereby providing a method of evaluating the relative strength and compressibility characteristics of the subsoils.

The SPT soil samples were transferred into clean glass jars immediately after retrieval and returned to the laboratory upon completion of the field operations. Samples will be discarded unless other instructions are received. The samples from B-1 through B-15 were visually classified in general accordance with the Unified Soil Classification System (ASTM D- 2488-75). The samples collected within the stormwater management area were visually classified by a certified soil tester in general accordance with USDA National Resources Conservation Service textural soil classification procedures. A description of the subsurface conditions encountered at each boring location is shown on the enclosed Soil Boring Logs. After completion of the borings, the auger holes were backfilled to the ground surface with bentonite chips.

A copy of the Soil Boring Logs, Boring Location Plan (Figure 1), and Soil Evaluation - Storms Forms are enclosed in the Appendix. The soil stratification shown on the logs represents the approximate soil conditions in the actual boring locations at the time of the



exploration. The terms and symbols used on the logs are described in the General Notes found in the Appendix.

Laboratory Physical Testing

Soil samples obtained from the exploration were visually classified in the laboratory, and subjected to testing, which included moisture content determinations. The laboratory testing was performed in general accordance with the respective ASTM methods, as applicable, and the results are shown on the boring logs in the Appendix.

DESCRIPTION OF SUBSURFACE CONDITIONS

General

A description of the subsurface conditions encountered at the test boring locations is shown on the Soil Boring Logs. The lines of demarcation shown on the logs represent approximate boundaries between the various soil classifications. It must be recognized that the soil descriptions are considered representative for the specific test hole locations, but that variations may occur between and beyond the sampling intervals and boring locations. Soil depths, topsoil and layer thicknesses, and demarcation lines utilized for preconstruction planning should not be expected to yield exact and final quantities. A summary of the major soil profile components is described in the following paragraphs.

Soil Conditions

USCS Classification – Soil Borings B-1 through B-8

The surface materials at the borings consisted of about 9 to 13 inches of topsoil comprised of dark brown to black lean clay, silty clay, sandy clay, silt, silty sand, and sand and gravel. Below the topsoil, natural granular and cohesive soils were encountered which generally consisted of gray to brown lean clay, silty clay, sandy clay, silt, silty sand, and sand and gravel to the termination depths of about 5 to 20 feet (EL. 879.5 to EL. 870) below existing grade. The natural cohesive soils were in a stiff to hard condition with unconfined compressive strengths ranging from 1.20 to 6.0 tons per square foot (tsf). The natural granular soils were in a loose to very dense condition with N-values ranging from about 5 to 51 blows per foot (bpf).

USDA Classification - Stormwater Management Area Borings B-1, B-2, B-11, and B-12

The soils encountered within the borings performed at the planned stormwater management areas generally consisted of 10 to 12 inches of topsoil comprised of dark brown to black silt loam. The topsoil was underlain by light brown to dark gray silt loam, very fine sandy loam, silty clay loam, loam, loamy sand, and sandy loam to the boring termination depths of 15 to 20 feet (EL. 832 to EL. 877.5) below existing grade.



The foregoing discussion of soil conditions on this site represents a generalized soil profile as determined at the test boring locations. A more detailed description and supporting data for each test location can be found on the individual soil boring logs.

Groundwater Observations

Groundwater observations were made during the drilling operations, and in the open boreholes upon completion of drilling and removal of the augers. Groundwater was encountered within B-2, B-3, B-5, B-6, and B-12 during auger advancement at depths of about 8 to 17 feet (EL. 858.5 to EL. 867.5) below existing grade. No water was observed upon completion of drilling and removal of the augers. No groundwater was encountered within the remaining borings during auger advancement or upon completion of drilling and removal of the augers.

It must be recognized that groundwater levels fluctuate with time due to variations in seasonal precipitation, lateral drainage conditions, and soil permeability characteristics. Longer term monitoring would be required to further evaluate groundwater levels on this site.

EVALUATION AND RECOMMENDATIONS

General Development Considerations

In view of the subsurface conditions encountered in the test borings, together with the structural loading criteria and development grades anticipated, conventional spread footings can be used for support of the proposed structure.

Some difficulty with groundwater control, and with subgrade and excavation instability may be experienced during construction.

The floor slab and pavements can be supported by the existing soils following proper preparation, which will include the removal of soft, unstable or unsuitable zones. A discussion of the foundation design parameters, as well as the support conditions for the floor slab and pavement areas, is included in the following sections.

Site Preparation

The presence of topsoil and vegetation in the subgrade can adversely affect the serviceability of structural fills, foundations, floor slabs, pavements, and other structures placed upon them. Approximately 9 to 13 inches of topsoil were present on the surface of the site at the boring locations. However, some variation should be expected, especially within former/existing agricultural fields, where tilling and other related operations can result in thicker pockets of topsoil, or topsoil having become intermixed within underlying soils. All topsoil, vegetation, trees, roots and other organic matter must be stripped from the areas of footings, floor slabs, pavements, sidewalks, and other structures.



The property had previously been utilized as a farm field. If any remnant drain tiles are encountered during construction, it is generally recommended that they be tied into new drainage structures or otherwise be properly drained to a suitable area (in accordance with any applicable regulatory requirements or restrictions), since they may still actively drain areas of the subject site or adjacent properties.

After stripping the topsoil and cutting high areas of the site to the planned finished grade, and prior to the placement of new fill which may be placed to raise grades, the exposed subgrade must be thoroughly proofrolled to detect unstable, yielding soils. This should consist of overlapping passes in a perpendicular grid pattern, with a fully-loaded tandem-axle dump truck, or other equipment of similar size and weight suitable for the surface conditions. Proofrolling should be performed in consultation with the geotechnical engineer at the time of construction. Substantial difficulty with subgrade preparation may be experienced, especially in wet or cold weather, or during thawing conditions. Additionally, instability can become more severe within silty and clayey soils such as were encountered within the borings. The clay soils are considered to be highly moisture sensitive. It is generally recommended that earthwork be carried out during relatively warm, dry weather. Any soft, wet, or otherwise unstable zones which cannot be improved by scarification and aeration, must be removed and replaced with compacted structural fill, such as clean crushed stone, possibly in conjunction with the use of a geotextile fabric. Lime, lime kiln dust, fly ash, or Portland cement modification are additional remedial measures which can be considered for clayey and some silty soils. However, this must only be performed at the direction and under the supervision of the geotechnical engineer. A proper mix design must be performed prior to the performance of any modification. Substantial construction delays and difficulty with subgrade stabilization may be experienced during periods of wet and/or cool weather. Consideration should be given to installing construction roads to reduce disturbance to the sensitive subgrade soils.

Every effort must be made to keep excavations dry. If construction proceeds during wet weather, some additional overexcavation may be necessary. If weather permits, the soil could be dried and recompacted. A crushed stone working mat, possibly in conjunction with a geotextile fabric may also be feasible to help stabilize subgrades. Site grading runoff should be directed to catch basins, so that the potential for the softening of the foundation and pavement subgrade soils is reduced.

Where the removal of unsuitable bearing material is performed beneath proposed footings, the excavation must extend laterally beyond the perimeter of the foundation for a distance at least equal to the thickness of the fill below the footing bottom. This general guideline also applies to instances where a raised structural fill pad is constructed to achieve a bearing elevation greater than existing grades. The influence zone of footing stresses can be represented as an imaginary 45° line extending downward and outward from the footing bottom. All fill placed within this zone after cutting to firm soil must be properly engineered, from the bottom of the cut, up to the floor slab subgrade elevation.



If site grades are raised in excess of 2 feet, the first lift of new fill must be placed so as to extend a minimum lateral distance of 5 feet beyond the planned top building pad dimension (for fills less than 5 feet in thickness), or for a distance equal to at least 1 foot laterally beyond the top pad dimension for every foot of fill thickness (for fills greater than 5 feet in depth). Subsequent lifts can then be placed on an approximate 1H:1V slope back up to the planned top perimeter dimension of the pad. Proper moisture control is essential to reduce the amount of compactive effort necessary to achieve the desired densities.

When a firm and stable subgrade is established, low areas may be raised to planned grades with properly compacted structural fill. Any new fill should be a clean granular soil, such as those materials meeting the gradations outlined in Section 209 or 305 of the State of Wisconsin Standard Specification for Highway and Structure Construction. If fine-grained soils, such as those with high silt or clay content are used, they should generally be placed over large open areas, where conditions are more favorable for the proper placement and compaction of such materials. It must be recognized that high silt or clay content materials are difficult to compact when placed at moisture contents beyond a few percent of the optimum moisture content. In addition, the near surface soils across the site are considered to be highly moisture sensitive; therefore, extreme difficulty with subgrade preparation should be expected, especially if they become wet during construction. Fill must be placed in layers of not more than nine (9) inches in thickness, at moisture contents at or near optimum, and be compacted to a minimum density of 95 percent of the maximum dry density as determined by ASTM designation D-698. Silt, clay, and wet granular soils are not suitable for reuse as compacted fill in trenches, or adjacent to foundation stem walls or retaining walls.

Proper moisture control is essential to reduce the amount of compactive effort necessary to achieve the desired densities. This is especially true of clayey soils, where scarification and aeration may be required to achieve near - optimum moisture levels prior to compaction. A sheepsfoot roller is generally required for compaction of clayey soils, whereas a vibratory smooth drum roller is preferred for granular material. Small hand-operated compactors should be used in confined areas; granular fills are generally more readily compacted to the required densities in such applications.

It is recommended that well-graded granular soils be utilized as backfill in new utility trenches and alongside below grade walls to reduce the potential for consolidation and settlement of the fill. All fill soils must be placed and compacted under engineering controlled conditions, to provide suitable support for overlaying structures and roadways. Additional guidance can be provided at the time of construction in the selection process for grade-raising fill and trench backfill.

The selection of fill materials for various applications should be done in consultation with the soils engineer. Similarly, the evaluation of the subgrade and placement and compaction of fill for structural applications should be monitored and tested by a qualified representative of the soils engineer.



Foundation Evaluation

The proposed structure may be supported by a conventional spread foundation system, bearing on suitable naturally occurring soils or within structural fill, prepared as discussed in a previous section. Based upon the planned finished floor elevation of EL. 877.5, interior and exterior footings will bear at about EL. 876 and EL. 873.5, respectively. Stiff to very stiff clay soils were generally encountered within the borings at these approximate elevations. Spread and continuous wall footings bearing upon suitable natural soils, or upon compacted structural fill, may be designed for a net allowable soil pressure of 3,000 psf. However, some undercutting of soft, unstable or otherwise unsuitable soils may be required, and may become extensive where wet materials are present.

The suitability of the existing soils for support of the proposed foundation must be determined by testing by a qualified geotechnical engineer during construction, utilizing static cone penetrometer tests or dynamic cone penetrometer tests for cohesive and granular soils, respectively. Soft, loose, or otherwise unsuitable materials not disclosed by the borings, may be encountered in the foundation excavations at the bearing elevation. If unsuitable existing soil is present, it must be removed throughout a zone extending one foot laterally for each two feet removed below the foundation, on either side of the planned footing. The over-excavated area must be backfilled with structural compacted fill.

In lieu of the use of compacted structural fill, lean concrete mix can be used to replace the unsuitable soils. The foundation excavations should be about 4 inches wider than the proposed footing width and must extend to suitable natural bearing soils. The concrete must be placed immediately after excavation to avoid intrusion of soil into the excavation. The concrete should contain sufficient aggregate and cement to attain a 28-day compressive strength of at least 1000 psi. Some sloughing or caving of the overlying soils may be experienced. Should this occur during concrete placement, the area must be removed and recast. Additionally, should caving become extensive, it may be necessary to substantially widen excavations to avoid soil intrusion into the concrete. This may result in the use of additional concrete quantities significantly in excess of preconstruction budget estimates.

All perimeter footings must be placed at a depth of at least 4 feet (or deeper if required by local code or in accordance with customary practice) below the finished grade for frost protection. Due to periodic severity of winters in this area, it is recommended that footings in poorly heated or unheated areas of the building also be placed at least 4 feet below the adjacent exterior grade. Interior footings not subject to frost action may be placed at a shallow depth of at least 18 inches below the floor slab, provided they bear on suitable natural soils or engineered fills. All footings must be protected from the effects of frost if construction is carried out during winter months.

It is recommended that the footings supporting individual columns have a minimum dimension of 24 inches, and continuous footings have a minimum width of 18 inches, even if the maximum recommended allowable bearing pressure is not fully utilized. In



order to minimize the effects of any slight differential movement that may occur due to variations in the character of the supporting soils and any variations in seasonal moisture contents, it is recommended that all foundations be suitably reinforced to make them as rigid as needed.

In general, the performance of the foundation system on this site is dependent on the various factors discussed herein. The excavation, preparation, and concreting of foundations should be monitored and tested by a representative of the soils engineer.

Floor Slab Subgrade

Prior to constructing the floor slabs or pavements, and prior to the placement of any fill used to raise grades, the exposed subgrade must be prepared utilizing the proofrolling procedures described previously. In areas that exhibit soft, yielding or unstable soil conditions, the following remedial measures are recommended to provide a stable subgrade. It is recommended that the proofrolling operations be monitored by a representative of the geotechnical engineer to ensure that a firm, suitable subgrade is present prior to placement of new fills, or to construction of floor slabs and pavements. Extensive removal and replacement of fill may be necessary.

Localized wet, soft or unstable areas can be undercut to such depths determined necessary in the field to reach stable material, and the area backfilled with imported crushed stone, such as the 1¼-inch gradation specified in Section 305 of the WisDOT Standard Specifications, placed and compacted as recommended in the Site Preparation section of this report. If relatively thick zones or areas of extensive yielding are observed, and they cannot be stabilized by normal discing, aeration and recompaction procedures, undercutting and replacement with crushed stone and geotextile fabric (if needed) may also be required in these areas.

The floor slab may be designed utilizing an estimated modulus of subgrade reaction of 125 pci based on the presence of a suitable and stable subgrade, prepared as discussed in this report. However, this is based on common range values obtained from 1 ft. x 1 ft. plate load tests on specific soil types. Depending on how the slab load is applied, the value may need to be modified for larger areas using the following:

Modulus of Subgrade Reaction $k_s = \left(\frac{k}{B}\right)$ for cohesive soil

$$k_s = k \left(\frac{B+1}{2B}\right)^2 \text{ for cohesionless soil}$$

where: k_s = coefficient of vertical subgrade reaction for loaded area

k = coefficient of vertical subgrade reaction for a 1x1 foot square area

B = width of area loaded, in feet

The final design and detailing should be performed by a qualified structural engineer based on the intended slab use, loading conditions and anticipated subgrade conditions.



A granular mat, which can be designed as a drainage layer, should be provided below the floor slab. This must be a minimum of six (6) inches in thickness and properly compacted. In moisture sensitive areas, a vapor retarder may be placed beneath the floor slab or base course, however, it is recommended that the architect be consulted in this regard. The proper use of a vapor retarder may not completely prevent moisture beneath or on top of slabs. If the base course contains sharp particles, a cushion layer of sand approximately 2 inches in thickness may be required to provide protection from puncture.

The floor slabs should be suitably reinforced to make them as rigid as necessary and proper joints provided at the junction of slabs and the foundation system so that a small amount of independent movement can occur without causing damage. Large floor areas must be provided with joints at frequent intervals (maximum spacing of 30 times the slab thickness, per ACI) to compensate for concrete volume changes (shrinkage). It is recommended that appropriate construction methods and curing procedures be used to minimize shrinkage and curling of the floor slabs.

Exterior/Unheated Area Slabs

Based on the borings, entry slabs, sidewalks, aprons, and other slabs in exterior or unheated areas will bear upon clay soils. Such materials are highly frost susceptible and poorly drained. Slabs placed directly upon clay soils are subject to heaving and subsequent settlement due to freeze/thaw cycles. This can result in cracking, misalignment, and other related effects (especially at joints). It is recommended that consideration be given to limited undercutting of the frost susceptible materials to a depth of 1 to 2 feet below the slab, and replacement with well graded, properly placed and compacted granular soils. A properly designed underdrain system connected to the municipal sewer (if permissible) or directed to on-site stormwater management areas should also be incorporated to reduce the potential effects of freeze/thaw cycles.

Utility Construction

In general, the on-site soils can be used for support of utility lines. Some difficulty with the stability of utility trenches should be expected due to the presence of granular soils across the site, especially in the presence of water. The use of shoring, bracing, or trench boxes will be required. Utility construction should be performed in accordance with "The Standard Specifications for Sewer and Water Line Construction" for the State of Wisconsin.

It is recommended that well graded granular soils such as those specified in Tables 37 and 39 of the Standard Specification for Sewer and Water Construction be utilized as backfill in utility trenches to reduce the potential for consolidation and settlement of the backfill. All fill soils must be properly placed and compacted under engineering controlled conditions to provide suitable support for overlaying structures and roadways. Silty and clayey soils, organic soils, and wet granular materials are not recommended for use as backfill within utility trenches due to the substantial difficulty of obtaining proper compaction in confined areas.



As with all excavation work, all open cut trenches must be properly shored and braced as required by applicable federal and state OSHA codes, and as necessary to protect life and property.

CONSTRUCTION CONSIDERATIONS

Groundwater Control

Groundwater observations were made during the drilling operations, and in the open boreholes upon completion of drilling and removal of the augers. Groundwater was encountered within B-2, B-3, B-5, B-6, and B-12 during auger advancement at depths of about 8 to 17 feet (EL. 858.5 to EL. 867.5) below existing grade. No water was observed upon completion of drilling and removal of the augers. No groundwater was encountered within the remaining borings during auger advancement or upon completion of drilling and removal of the augers.

On the basis of the observations, some difficulty with groundwater may be experienced during excavation work on this site. If excavations extend only a few inches or so below the groundwater or low volume perched zones, a filtered sump pump or other conventional means may suffice to control the groundwater. However, for deeper excavations, or for large volume perched zones, prolonged dewatering with a series of sumps, or other more comprehensive means may be necessary to facilitate construction.

It must be recognized that groundwater levels fluctuate with time due to variations in seasonal precipitation, lateral drainage conditions, and soil permeability characteristics. Longer term monitoring would be required to further evaluate groundwater levels on this site.

Since the foundation materials are subject to softening when exposed to free moisture, every effort should be made to keep excavations dry. Discharge water from roof drains should be directed away from the building, and the site grading direct runoff to catch basins, so that the potential for the softening of the foundation and pavement subgrade soils is reduced.

Excavations and Site Drainage

Sloping, shoring or bracing of the excavation sidewalls will be necessary to facilitate construction and to protect life and property. Substantial sloughing and caving should be expected within unprotected excavations. The degree of excavation instability problems is dependent upon the depth and length of time that excavations remain open, excavation bank slopes, water levels and the effectiveness of any dewatering systems. However, severe instability may occur within granular or soft clay soils, especially encroaching upon and extending below the groundwater or perched zones. All excavation work must be performed in accordance with OSHA and local building code requirements.



Where excavations encroach upon or extend below the groundwater or perched zones and into fine sand, silt, or soft clay, a substantially unstable subgrade may develop when the confining effect of the overburden is removed. Significant sloughing or caving of sidewalls may also occur; especially within undercut excavations. Some overexcavation of softened or loosened soils, in conjunction with the use of a crushed stone working mat, may be necessary to establish a stable bearing subgrade. Additionally, significantly widened excavations may result, or be required to maintain or achieve sidewall stability.

All excavations must be performed with caution and utilize methods which will prevent undermining or destabilization of existing buildings, utilities, pavements, sidewalks or other structures. The use of a properly designed shoring and bracing, sheet piling, or underpinning system must be utilized as necessary to adequately protect buildings, utilities, pavements, and other structures. This must be performed by an experienced specialty contractor. Additionally, extreme care must be used during the installation of any bracing system, especially those using driven or vibratory methods, in order to avoid damaging existing buildings, utilities, and other structures. Consideration should be given to the performance of video and/or photographic documentation of the condition of nearby buildings, utilities, and other structures prior to installation.

It is mandated that excavations, whether they be for utility trenches, basement excavations or footing excavations, be constructed in accordance with current Occupational Safety and Health Administration (OSHA) guidelines to protect workers and others during construction. PSI recommends that these regulations be strictly enforced; otherwise, workers could be in danger and the owner(s) and the contractor(s) could be liable for substantial penalties. The contractor is solely responsible for designing and constructing stable, temporary excavations and should shore, slope, or bench the sides of the excavations as required to maintain stability of both the excavation sides and bottom. The contractor's "responsible person", as defined in 29 CFR Part 1926, should evaluate the soil exposed in the excavations as part of the contractor's safety procedures. In no case should slope height, slope inclination, or excavation depth, including utility trench excavation depth, exceed those specified in local, state, and federal safety regulations. PSI is providing this information solely as a service to our client. PSI does not assume responsibility for construction site safety or the contractor's or other parties' compliance with local, state, and federal safety or other regulations.

Since the subgrade soils are generally sensitive to moisture, every effort should be made to provide adequate drainage across the site during construction, and to prevent ponding of runoff on the subgrade. These soils are also subject to erosion caused by runoff, and erosion control measures should be implemented where needed or required by local ordinances.



Seismic Design Considerations

The soils encountered in the borings are considered to meet the criteria for Site Class D in accordance with 1613.2.5.2 of the International Building Code-2018 (which directs to the simplified design procedure outlined in ASCE 7 – Minimum Design Loads and Associated Criteria for Buildings and Other Structures).

PAVEMENT DESIGN RECOMMENDATIONS

Pavements for this project are understood to consist of asphalt or concrete parking lots and driveways and are estimated to be subjected to passenger type vehicles and delivery truck traffic.

The near surface pavement subgrade soils encountered at the borings predominately consisted of clay with an estimated visual classification of A-6 by the AASHTO soil classification method. These soils are generally rated as poor for pavement subgrade support due to their high frost susceptibility, poor drainage characteristics, and higher susceptibility to strength loss when exposed to free water. Provided that the subgrade soils are prepared as outlined in the *Site Preparation* section of this report, the in-place subgrade soils and any new structural fill can be used for standard flexible or rigid pavement construction.

Analysis of the visual soil classification has been made in estimating pertinent subgrade design coefficients as described in the Wisconsin Soils Manual for Pavement Design. Based on the soils encountered, and with proper subgrade preparation and drainage, the following pavement subgrade design parameters are recommended for the pavement section design. However, if soils with support characteristics different from the estimated materials are encountered or are used to raise grades in new pavement areas, revised coefficients will need to be provided.

PAVEMENT SUBGRADE DESIGN COEFFICIENTS

AASHTO Soil Classification	A-6
Design Frost Index	F-3
Design Group Index	14
Soil Support Value	3.0
Estimated Subgrade Modulus (k)	100 pci

During construction, the surficial subgrade soils can become wet, softened and disturbed from rainfall and construction equipment. Therefore, prior to placing the pavement base materials, the subgrade must be proofrolled as outlined previously. Particular attention should be given to high traffic areas that have become rutted and areas of backfilled trenches. Localized wet, soft, or unstable areas can be undercut to such depths determined necessary in the field to reach stable materials. The granular base course should consist of well-graded crushed stone meeting the requirements from the State of



Wisconsin DOT Standard Specifications for construction for dense graded base. If relatively large or thick zones of extensive yielding are observed, and normal discing and recompaction procedures cannot stabilize them, undercutting and replacement with crushed stone and geotextile fabric (if needed) may be required in these areas. Preparation and evaluation of the pavement subgrade must be performed as outlined in the Site Preparation section of this report.

Periodic pavement maintenance is required to keep a pavement, under normal traffic and environmental conditions, as near as possible to its constructed condition. Maintenance is necessary to reduce the effects of pavement stress caused by changes in temperature and moisture, repetitive traffic loadings, and movement of the subgrade soils. As pavement distress is observed, it should be repaired as quickly as possible. Unrepaired areas will generally lead to more severe and widespread distress, and eventually, pavement disintegration. Therefore, periodic maintenance consisting of crack sealing, seal coating every 3 to 5 years, and other necessary repairs at least annually, will be required to obtain the design service life.

The subject site is located in an area that experiences annual freezing cycles and the subgrade soils encountered have been classified as highly susceptible to frost action when free water is present. In order to reduce the potential for frost action, it will be necessary to control surface runoff and water seepage, because complete removal and replacement of the frost susceptible subgrade soils is not considered economically feasible. It is recommended that underdrains be placed within the subgrade, just below the granular base, to help reduce the potential for trapping water within the aggregate base layer. Sufficient drain tiles extending radially outward an adequate distance from each interior catch basin must be installed. In addition, drain tiles should extend along curb lines, up the slope from curb inlets. The drain tile should be directly connected to the storm sewer manholes or catch basins (if permissible by local municipal or other applicable code). The drain tile should consist of perforated PVC pipe of adequate diameter placed beneath the base layer, extending a sufficient distance into the subgrade. The pipe should be surrounded by appropriately sized clean stone, with the pipe and stone being wrapped with a geotextile filter fabric to reduce the potential for soils to migrate into and obstruct the pipe.

STORMWATER MANAGEMENT AREA CONSIDERATIONS

As requested by the client, B-1, B-2, B-11, and B-12 were performed in the area of the proposed stormwater management. The subgrade soils encountered at these locations have been visually classified in general accordance with the USDA textural soil classification system. They consisted of 10 to 12 inches of topsoil comprised of dark brown to black silt loam. The topsoil was underlain by light brown to dark gray silt loam, very fine sandy loam, silty clay loam, loam, loamy sand, and sandy loam. Groundwater was not encountered.



With regard to the above soil and groundwater conditions encountered at the borings, NR 151.124(4)(c)1 and 2 – *Infiltration rate exemptions* indicates that infiltration practices located in an area where the infiltration rate of the soil measured at the proposed bottom of the infiltration system is less than 0.6 inches per hour using a scientifically credible field test method; or an area where the least permeable soil horizon to 5 feet below the proposed bottom of the infiltration system using the USDA method of soils analysis consists of sandy clay loam, clay loam, silty clay loam, sandy clay, silty clay or clay may be credited toward meeting the requirements, but the decision to infiltrate under these conditions is optional. In addition, NR 151.124(4)(b)1 – *Separation distances* indicates that infiltration practices shall be located so that the characteristics of the soil and the separation distance between the bottom of the infiltration system and the elevation of seasonal high groundwater or the top of bedrock are in accordance with the following Table (reproduced from NR 151.124):

Table 3. Separation Distances and Soil Characteristics		
Source Area	Separation Distance	Soil Characteristics
Industrial, Commercial, Institutional Parking Lots and Roads	5 feet or more	Filtering Layer*
Residential Arterial Roads	5 feet or more	Filtering Layer*
Roofs Draining to Surface Infiltration Practices	1 foot or more	Native or Engineered Soil with Particles Finer than Coarse Sand
Roofs Draining to Surface Infiltration Practices	Not Applicable	
All Other Impervious Source Areas	3 feet or more	Filtering Layer*

*Defined in NR 151.002(14r) as a "soil that has at least a 3-foot deep layer with at least 20 percent fines; or at least a 5-foot deep layer with at least 10 percent fines; or an engineered soil with an equivalent level of protection as determined by the regulatory authority for the site."

The information shown above is a selected excerpt from NR151 that is intended only as general guidance for considering stormwater management in conjunction with the encountered subsurface conditions at the borings. Basin design must be performed by a qualified and experienced firm. In addition, the entirety of Chapter NR151 of the Wisconsin Administrative Code, the Site Evaluation for Stormwater Infiltration (1002) document, and other applicable references; along with appropriate state, local or other municipal requirements must be consulted as part of site specific stormwater design.

It is recommended that stormwater management basins not be placed in close proximity to basements or other below grade structures. Proper and careful consideration of soils and subsurface conditions must be given during site and design planning, and extreme care must be exercised during construction. Lateral migration of water may result in substantially increased sump pump activity and can quickly overcome the ability of such pumps to maintain a desirable water level, resulting in significant flooding. The potential



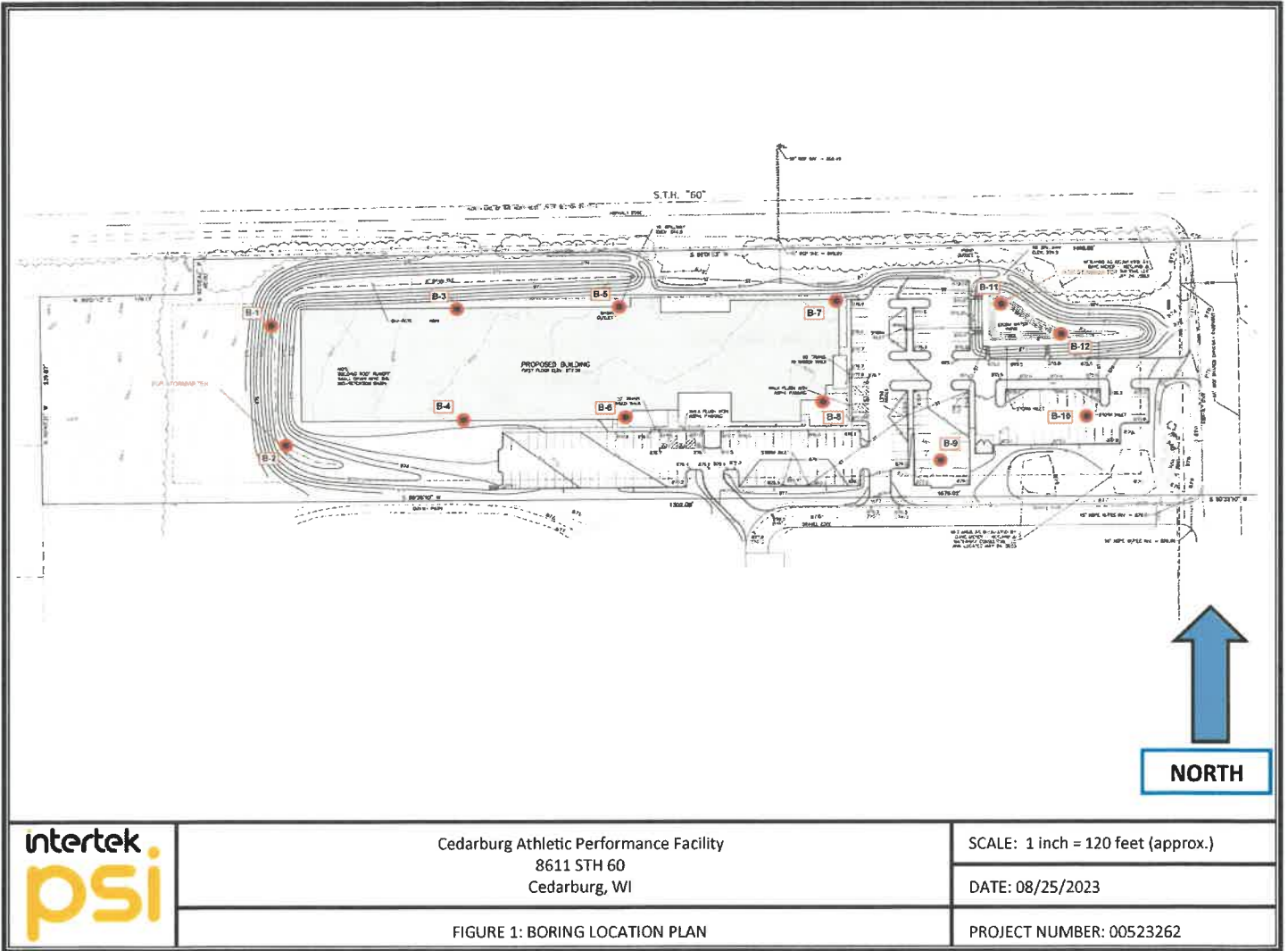
for such conditions to occur can greatly increase when below grade floor elevations encroach upon or are below the elevation of basin bottoms and/or when basins are placed in close proximity to structures (strongly not recommended). In addition, the presence of granular or other generally permeable soils, which is typically necessary in the areas of structures for utility backfill, alongside basement walls, or within other development excavations/trenches can act as extensive migration channels to rapidly carry large volumes of water from basins and into nearby below grade structures. Building codes or municipal regulations may require that floor elevations of below grade structures be a specified distance above the water level of nearby basins or other stormwater features. It is therefore recommended that the design engineer (or other appropriate representative) review applicable municipal or other regulatory requirements and verify the design normal and design high water elevations of stormwater basins/features with respect to planned or existing below grade slab elevations.

GENERAL COMMENTS

This geotechnical exploration and evaluation have been prepared to aid in the evaluation of the soil conditions on this site. The recommendations presented herein are based on the available soil information and the design information provided. Any changes in the design information or building locations should be brought to the attention of PSI to determine if modifications in the recommendations are required. The final design plans and specifications should also be reviewed by PSI to determine that the recommendations presented herein have been interpreted and implemented as intended.

This geotechnical study has been conducted in a manner consistent with that level of care ordinarily exercised by members of the profession currently practicing in the same locality under similar conditions. The findings, recommendations and opinions contained herein have been promulgated in accordance with generally accepted practice in the fields of foundation engineering, soils mechanics, and engineering geology. No other representations expressed or implied, and no warranty or guarantee is included or intended in this report.

It is recommended that the earthwork and foundation operations be monitored by a representative of PSI, to test and evaluate the bearing capacities, and the selection, placement and compaction of controlled fills.



DATE STARTED: 8/22/23		DRILL COMPANY: PSI, Inc.		BORING B-1	
DATE COMPLETED: 8/22/23		DRILLER: DT LOGGED BY: AW			
COMPLETION DEPTH: 20.0 ft		DRILL RIG: Marooka D-50 ATV - Rig #395		Water While Drilling Not Obsvd Upon Completion Not Obsvd Delay N/A	

The stratification lines represent approximate boundaries. The transition may be gradual.

Sheet 1 of 1

DATE STARTED: 8/22/23		DRILL COMPANY: PSI, Inc.		BORING B-2	
DATE COMPLETED: 8/22/23		DRILLER: DT LOGGED BY: AW			
COMPLETION DEPTH: 20.0 ft		DRILL RIG: Marooka D-50 ATV - Rig #395		Water ▽ While Drilling 10 feet ▽ Upon Completion Not Obsvd ▽ Delay N/A	
BENCHMARK: N/A		DRILLING METHOD: Hollow Stem Auger			
ELEVATION: 877.5 ft		SAMPLING METHOD: 2-in SS		BORING LOCATION:	
LATITUDE:		HAMMER TYPE: Automatic			
LONGITUDE:		EFFICIENCY: N/A			
STATION: N/A OFFSET: N/A		REVIEWED BY:			
REMARKS:					

Elevation (feet)	Depth (feet)	Graphic Log	Sample Type	Sample No.	Recovery (inches)	MATERIAL DESCRIPTION	USCS Classification	SPT Blows per 6-inch (SS)	Moisture, %	STANDARD PENETRATION TEST DATA		Additional Remarks	
										N in blows/ft @	Strength, tsf		
										Moisture	PL	LL	
										Qu	Qp		
877.5	0		1	8	Topsoil, Dark Brown Silty Lean Clay, Moist (10"± Thick)	TPSL	2-3-3-5 N=6	20	22	×	×		
				(Topsoil, Black Silty Loam)	CL								
				Brown Lean Clay, Trace Sand, Moist									
				(Reddish Brown Silty Clay Loam)									
				Brown Silty Lean Clay, Very Moist									
				(2' to 7' - Brown Silty Clay Loam)									
				(7' to 10' - Light Brown Silt Loam)									
875	2		2	14			2-3-5-8 N=8	18		×			
870	4		4	22			3-7-11-12 N=18	20		×	×		
	5		5	20			2-3-4-5 N=7	22		×			
	10		6	20			2-3-5-8 N=8	25		×			
865	10		6	20			4-5-9-18 N=14	24		×			
	15		7	22			3-8-17-12 N=25	10		×			
	15		8	12			5-8-11-19 N=19	9		×			
860	18		9	18			59/10"	11		×			
	20		10	12			8-11-11-11 N=22	10		×			
						End of Boring at 20'							
						Cave-In at 8'							
						(Classifications in parentheses are USDA classifications)							



Professional Service Industries, Inc.
 821 Corporate Court, Suite 100
 Waukesha, WI 53189
 Telephone: (262) 521-2125

PROJECT NO.: 00523262
PROJECT: Proposed Cedarburg Athletic
LOCATION: Performance Facility
 STH 60
 Cedarburg, WI

The stratification lines represent approximate boundaries. The transition may be gradual.

Sheet 1 of 1

DATE STARTED: 8/22/23 DATE COMPLETED: 8/22/23 COMPLETION DEPTH: 20.0 ft BENCHMARK: N/A ELEVATION: 875.5 ft LATITUDE: LONGITUDE: STATION: N/A OFFSET: N/A REMARKS:		DRILL COMPANY: PSI, Inc. DRILLER: DT LOGGED BY: AW DRILL RIG: Marooka D-50 ATV - Rig #395 DRILLING METHOD: Hollow Stem Auger SAMPLING METHOD: 2-in SS HAMMER TYPE: Automatic EFFICIENCY: N/A REVIEWED BY:		BORING B-3 Water While Drilling Upon Completion Delay 17 feet Not Obsvd N/A BORING LOCATION:	
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Elevation (feet)	Depth, (feet)	Graphic Log	Sample Type	Sample No.	Recovery (inches)	MATERIAL DESCRIPTION	USCS Classification	SPT Blows per 6-inch (SS)	Moisture, %	STANDARD PENETRATION TEST DATA N in blows/ft @	Additional Remarks
										X Moisture ▲ Qu PL LL * Qp	
875	0			1	12	Topsoil, Dark Brown Lean Clay, Trace Sand, Moist (12"± Thick) Brown Lean Clay With Silt Pockets and Seams, Moist to Very Moist	TPSL	8-11-12 N=23	18	X	
	2		12			CL	9-11-13 N=24	13	X	○	>>*
870	5		3	16		CL	4-5-7 N=12	14	○	X	>>* Q _r = 6.0 tsf
	10		4	18		CL	4-5-8 N=13	29	○	X	* Q _r = 1.8 tsf
865	15		5	18		CL	4-5-6 N=11	27	○	X	* Q _r = 2.7 tsf
860	20		6	18		SM	12-22-27 N=49	23		X	○
						End of Boring at 20'					
						Cave-In at 10'					

	Professional Service Industries, Inc. 821 Corporate Court, Suite 100 Waukesha, WI 53189 Telephone: (262) 521-2125	PROJECT NO.: 00523262 PROJECT: Proposed Cedarburg Athletic LOCATION: Performance Facility STH 60 Cedarburg, WI
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Sheet 1 of 1

DATE STARTED: 8/22/23 DATE COMPLETED: 8/22/23 COMPLETION DEPTH: 20.0 ft BENCHMARK: N/A ELEVATION: 875.0 ft LATITUDE: LONGITUDE: STATION: N/A OFFSET: N/A REMARKS:		DRILL COMPANY: PSI, Inc. DRILLER: DT LOGGED BY: AW DRILL RIG: Marooka D-50 ATV - Rig #395 DRILLING METHOD: Hollow Stem Auger SAMPLING METHOD: 2-in SS HAMMER TYPE: Automatic EFFICIENCY: N/A REVIEWED BY:		BORING B-4 <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td rowspan="3" style="text-align: center; vertical-align: middle;">Water</td> <td style="text-align: center;">▽</td> <td>While Drilling</td> <td>Not Obsvd</td> </tr> <tr> <td style="text-align: center;">▽</td> <td>Upon Completion</td> <td>Not Obsvd</td> </tr> <tr> <td style="text-align: center;">▽</td> <td>Delay</td> <td>N/A</td> </tr> </table> BORING LOCATION:		Water	▽	While Drilling	Not Obsvd	▽	Upon Completion	Not Obsvd	▽	Delay	N/A
Water	▽	While Drilling	Not Obsvd												
	▽	Upon Completion	Not Obsvd												
	▽	Delay	N/A												

Elevation (feet)	Depth, (feet)	Graphic Log	Sample Type	Sample No.	Recovery (inches)	MATERIAL DESCRIPTION	USCS Classification	SPT Blows per 6-inch (SS)	Moisture, %	STANDARD PENETRATION TEST DATA N in blows/ft @	Additional Remarks
0						Topsoil, Black Sandy Lean Clay, Moist (10"± Thick)	TPSL				
				1	12	Brown to Gray Lean Clay With Silt Seams, Very Moist		5-5-6 N=11			Q _t = 1.2 tsf
				2	10			2-2-4 N=6			
870	5			3	14		CL	5-6-6 N=12			Q _t = 2.9 tsf
				4	18			4-6-6 N=12			Q _t = 3.1 tsf
865	10					Tan Silty Sand and Gravel, Moist					
				5	12		SM	9-13-19 N=32			
860	15					Gray Lean Clay With Sand and Gravel, Moist					
				6	18		CL	12-17-16 N=33			
855	20					End of Boring at 20'					
						Cave-In at 8'					

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DATE STARTED: 8/22/23		DRILL COMPANY: PSI, Inc.		BORING B-5	
DATE COMPLETED: 8/22/23		DRILLER: DT LOGGED BY: AW			
COMPLETION DEPTH: 20.0 ft		DRILL RIG: Marooka D-50 ATV - Rig #395		Water ▽ While Drilling 8 feet ▽ Upon Completion Not Obsvd ▽ Delay N/A	
BENCHMARK: N/A		DRILLING METHOD: Hollow Stem Auger			
ELEVATION: 874.5 ft		SAMPLING METHOD: 2-in SS		BORING LOCATION:	
LATITUDE:		HAMMER TYPE: Automatic			
LONGITUDE:		EFFICIENCY: N/A			
STATION: N/A OFFSET: N/A		REVIEWED BY:			
REMARKS:					

Elevation (feet)	Depth (feet)	Graphic Log	Sample Type	Sample No.	Recovery (inches)	MATERIAL DESCRIPTION	USCS Classification	SPT Blows per 6-inch (SS)	STANDARD PENETRATION TEST DATA		Additional Remarks
									N in blows/ft @	Moisture, %	
0						Topsoil, Black Lean Clay, Trace Gravel, Very Moist (12"± Thick)	TPSL				
				1	8	Brown to Gray Lean Clay, With Silt Seams, Very Moist		3-4-5 N=9			
870	5			2	12		CL	3-3-3 N=6			
				3	16			3-4-5 N=9			
				4	16	Gray Medium to Coarse Sand and Gravel, Wet	SP	4-5-5 N=10			
865	10					Gray Silt With Sand and Gravel, Wet					
				5	10		ML	4-2-3 N=5			
860	15										
				6	14			22-19-18 N=37			
855	20					End of Boring at 20'					
						Cave-In at 7'					

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Packet Pg. 145

Packet Pg. 146

DATE STARTED: 8/22/23		DRILL COMPANY: PSI, Inc.		BORING B-8											
DATE COMPLETED: 8/22/23		DRILLER: DT LOGGED BY: AW													
COMPLETION DEPTH: 15.0 ft		DRILL RIG: Marooka D-50 ATV - Rig #395		<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td rowspan="3" style="width: 30px; text-align: center; vertical-align: middle;">Water</td> <td style="text-align: center;">▽</td> <td>While Drilling</td> <td>Not Obsvd</td> </tr> <tr> <td style="text-align: center;">▼</td> <td>Upon Completion</td> <td>Not Obsvd</td> </tr> <tr> <td style="text-align: center;">▽</td> <td>Delay</td> <td>N/A</td> </tr> </table>		Water	▽	While Drilling	Not Obsvd	▼	Upon Completion	Not Obsvd	▽	Delay	N/A
Water	▽	While Drilling	Not Obsvd												
	▼	Upon Completion	Not Obsvd												
	▽	Delay	N/A												
BENCHMARK: N/A		DRILLING METHOD: Hollow Stem Auger		BORING LOCATION:											
ELEVATION: 875 ft		SAMPLING METHOD: 2-in SS													
LATITUDE:		HAMMER TYPE: Automatic													
LONGITUDE:		EFFICIENCY: N/A													
STATION: N/A OFFSET: N/A		REVIEWED BY:													
REMARKS:															

Elevation (feet)	Depth, (feet)	Graphic Log	Sample No.	Recovery (inches)	MATERIAL DESCRIPTION	USCS Classification	SPT Blows per 6-inch (SS)	Moisture, %	STANDARD PENETRATION TEST DATA N in blows/ft @	Additional Remarks
0		●			Topsoil, Black Sand and Gravel, Damp (11"± Thick)	TPSL				
		X	1	14	Brown to Gray Lean Clay With Silt Seams, Very Moist	CL	4-5-7 N=12	23	X Moisture ▲ Qu PL LL 	
		X	2	16			6-5-7 N=12	24		
870	5	X	3	18			4-4-6 N=10	23		
		X	4	16			4-5-6 N=11	24		
865	10	X	5	18			6-6-7 N=13	22		
860	15	X			End of Boring at 15'					
					Cave-In at 9'					



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Sheet 1 of 1

DATE STARTED: 8/22/23		DRILL COMPANY: PSI, Inc.		BORING B-9			
DATE COMPLETED: 8/22/23		DRILLER: DT LOGGED BY: AW					
COMPLETION DEPTH: 5.0 ft		DRILL RIG: Marooka D-50 ATV - Rig #395		Water ☐ While Drilling ☐ Upon Completion ☐ Delay Not Obsvd Not Obsvd N/A			
BENCHMARK: N/A		DRILLING METHOD: Hollow Stem Auger					
ELEVATION: 875 ft		SAMPLING METHOD: 2-in SS		BORING LOCATION:			
LATITUDE:		HAMMER TYPE: Automatic					
LONGITUDE:		EFFICIENCY: N/A					
STATION: N/A OFFSET: N/A		REVIEWED BY:					
REMARKS:							

Elevation (feet)	Depth, (feet)	Graphic Log	Sample Type	Sample No.	Recovery (inches)	MATERIAL DESCRIPTION	USCS Classification	SPT Blows per 6-inch (SS)	Moisture, %	STANDARD PENETRATION TEST DATA N in blows/ft @				Additional Remarks
										0 25 50 0 2.0 4.0				
										0 25 50 0 2.0 4.0				
	0	[Graphic Log: Topsoil, Black Sand and Gravel, Damp (12"± Thick)]				Topsoil, Black Sand and Gravel, Damp (12"± Thick)	TPSL		22	X				
		[Graphic Log: Brown Lean Clay With Silt Seams, Very Moist]		1	10	Brown Lean Clay With Silt Seams, Very Moist	CL	3-4-5 N=9	29	X				
		[Graphic Log: Brown Lean Clay With Silt Seams, Very Moist]		2	14			4-4-4 N=8	22	X				
870	5					End of Boring at 5'								
						Cave-In at 3'								



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The stratification lines represent approximate boundaries. The transition may be gradual.

Sheet 1 of 1

DATE STARTED: 8/22/23 DATE COMPLETED: 8/22/23 COMPLETION DEPTH: 5.0 ft BENCHMARK: N/A ELEVATION: 877 ft LATITUDE: LONGITUDE: STATION: N/A OFFSET: N/A REMARKS:		DRILL COMPANY: PSI, Inc. DRILLER: DT LOGGED BY: AW DRILL RIG: Marooka D-50 ATV - Rig #395 DRILLING METHOD: Hollow Stem Auger SAMPLING METHOD: 2-in SS HAMMER TYPE: Automatic EFFICIENCY: N/A REVIEWED BY:		BORING B-10 Water While Drilling Upon Completion Delay Not Obsvd Not Obsvd N/A	
BORING LOCATION:					

Elevation (feet)	Depth, (feet)	Graphic Log	Sample Type	Sample No.	Recovery (inches)	MATERIAL DESCRIPTION	USCS Classification	SPT Blows per 6-inch (SS)	Moisture, %	STANDARD PENETRATION TEST DATA N in blows/ft @	Additional Remarks
										X Moisture ▲ Qu ■ PL ■ LL 	
0		[Graphic Log: Topsoil, Black Sand and Gravel, Damp (9"± Thick)]				Topsoil, Black Sand and Gravel, Damp (9"± Thick)	TPSL		16	X	
875		[Graphic Log: Brown Lean Clay, With Silt Seams, Very Moist to Moist]		1	12	Brown Lean Clay, With Silt Seams, Very Moist to Moist	CL	3-3-6 N=9	23	⊙ X	
5		[Graphic Log: End of Boring at 5']		2	14	End of Boring at 5'		4-5-8 N=13	16	⊙ X	*
		[Graphic Log: Cave-In at 3']				Cave-In at 3'					



Professional Service Industries, Inc.
821 Corporate Court, Suite 100
Waukesha, WI 53189
Telephone: (262) 521-2125

PROJECT NO.: 00523262
PROJECT: Proposed Cedarburg Athletic
LOCATION: Performance Facility
STH 60
Cedarburg, WI

The stratification lines represent approximate boundaries. The transition may be gradual.

Sheet 1 of 1

DATE STARTED: 8/22/23		DRILL COMPANY: PSI, Inc.		BORING B-11											
DATE COMPLETED: 8/22/23		DRILLER: DT LOGGED BY: AW													
COMPLETION DEPTH: 15.0 ft		DRILL RIG: Marooka D-50 ATV - Rig #395		<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td rowspan="3" style="text-align: center; vertical-align: middle;">Water</td> <td style="text-align: center;">▽</td> <td>While Drilling</td> <td>Not Obsvd</td> </tr> <tr> <td style="text-align: center;">▽</td> <td>Upon Completion</td> <td>Not Obsvd</td> </tr> <tr> <td style="text-align: center;">▽</td> <td>Delay</td> <td>N/A</td> </tr> </table>		Water	▽	While Drilling	Not Obsvd	▽	Upon Completion	Not Obsvd	▽	Delay	N/A
Water	▽	While Drilling	Not Obsvd												
	▽	Upon Completion	Not Obsvd												
	▽	Delay	N/A												
BENCHMARK: N/A		DRILLING METHOD: Hollow Stem Auger		BORING LOCATION:											
ELEVATION: 874 ft		SAMPLING METHOD: 2-in SS													
LATITUDE:		HAMMER TYPE: Automatic													
LONGITUDE:		EFFICIENCY: N/A													
STATION: N/A OFFSET: N/A		REVIEWED BY:													
REMARKS:															

Elevation (feet)	Depth, (feet)	Graphic Log	Sample Type	Sample No.	Recovery (inches)	MATERIAL DESCRIPTION	USCS Classification	SPT Blows per 6-inch (SS)	Moisture, %	STANDARD PENETRATION TEST DATA N in blows/ft ©	Additional Remarks
X Moisture ■ PL ■ LL STRENGTH, tsf ▲ Qu * Qp											
	0					Topsoil, Black Silt Loam, Very Moist					
				1	14	Dark Reddish Brown Silty Clay Loam, Very Moist		6-8-9-12 N=17	21		
				2	20			4-9-12-16 N=21	22		
870	5			3	19			15-20-22-21 N=42	25		
				4	24			6-8-11-13 N=19	19		
865	10			5	24	Brown Silty Clay Loam, Very Moist		4-7-8-11 N=15	30		
				6	22	Dark Gray Silty Clay Loam, Very Moist		3-4-6-6 N=10	25		
860	15			7	10			53/8"	27		
						End of Boring at 15'					
						Cave-In at 11'					

	Professional Service Industries, Inc. 821 Corporate Court, Suite 100 Waukesha, WI 53189 Telephone: (262) 521-2125	PROJECT NO.: 00523262 PROJECT: Proposed Cedarburg Athletic LOCATION: Performance Facility STH 60 Cedarburg, WI
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The stratification lines represent approximate boundaries. The transition may be gradual.

Sheet 1 of 1

DATE STARTED: 8/22/23		DRILL COMPANY: PSI, Inc.		BORING B-12	
DATE COMPLETED: 8/22/23		DRILLER: DT LOGGED BY: AW			
COMPLETION DEPTH: 15.0 ft		DRILL RIG: Marooka D-50 ATV - Rig #395		Water ▽ While Drilling 11 feet ▽ Upon Completion Not Obsvd ▽ Delay N/A	
BENCHMARK: N/A		DRILLING METHOD: Hollow Stem Auger			
ELEVATION: 874.5 ft		SAMPLING METHOD: 2-in SS		BORING LOCATION:	
LATITUDE:		HAMMER TYPE: Automatic			
LONGITUDE:		EFFICIENCY: N/A			
STATION: N/A OFFSET: N/A		REVIEWED BY:			
REMARKS:					

Elevation (feet)	Depth, (feet)	Graphic Log	Sample No.	Recovery (inches)	MATERIAL DESCRIPTION	USCS Classification	SPT Blows per 6-inch (SS)	Moisture, %	STANDARD PENETRATION TEST DATA N in blows/ft @	Additional Remarks
									× Moisture ■ PL ▲ Qu * Qp	
870	0				Topsoil, Black Silt Loam, Very Moist (11"± Thick)			21	×	
			1	15	Dark Reddish Brown Silty Clay Loam, Very Moist		4-4-7-11 N=11	22	○ ×	*
			2	16	Brown Silty Clay Loam, Very Moist		7-6-9-11 N=15	21	○ ×	*
	5		3	18			5-8-10-11 N=18	19	○ ×	*
			4	22			5-8-12-10 N=20	19	○ ×	*
865	10		5	24			4-6-7-9 N=13	28	○ × ×	
			6	20	Light Brown Gravelly Sandy Loam, Wet		2-3-17-8 N=20	31	○ ×	×
860	15		7	10			2-6-6-9 N=12	18	○ ×	
					End of Boring at 15'					
					Cave-In at 13'					
					Boring Offset 80' Southeast Due to Dense Overgrowth and Trees					



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 STH 60
 Cedarburg, WI

The stratification lines represent approximate boundaries. The transition may be gradual.

Sheet 1 of 1



GENERAL NOTES

SAMPLE IDENTIFICATION

The Unified Soil Classification System (USCS), AASHTO 1988 and ASTM designations D2487 and D-2488 are used to identify the encountered materials unless otherwise noted. Coarse-grained soils are defined as having more than 50% of their dry weight retained on a #200 sieve (0.075mm); they are described as: boulders, cobbles, gravel or sand. Fine-grained soils have less than 50% of their dry weight retained on a #200 sieve; they are defined as silts or clay depending on their Atterberg Limit attributes. Major constituents may be added as modifiers and minor constituents may be added according to the relative proportions based on grain size.

DRILLING AND SAMPLING SYMBOLS

SFA: Solid Flight Auger - typically 4" diameter flights, except where noted.	☒ SS: Split-Spoon - 1 3/8" I.D., 2" O.D., except where noted.
HSA: Hollow Stem Auger - typically 3 1/4" or 4 1/4" I.D. openings, except where noted.	■ ST: Shelby Tube - 3" O.D., except where noted.
M.R.: Mud Rotary - Uses a rotary head with Bentonite or Polymer Slurry	▮ RC: Rock Core
R.C.: Diamond Bit Core Sampler	⬇ TC: Texas Cone
H.A.: Hand Auger	☞ BS: Bulk Sample
P.A.: Power Auger - Handheld motorized auger	☒ PM: Pressuremeter
	CPT-U: Cone Penetrometer Testing with Pore-Pressure Readings

SOIL PROPERTY SYMBOLS

N: Standard "N" penetration: Blows per foot of a 140 pound hammer falling 30 inches on a 2-inch O.D. Split-Spoon.
N ₆₀ : A "N" penetration value corrected to an equivalent 60% hammer energy transfer efficiency (ETR)
Q _u : Unconfined compressive strength, TSF
Q _p : Pocket penetrometer value, unconfined compressive strength, TSF
w%: Moisture/water content, %
LL: Liquid Limit, %
PL: Plastic Limit, %
PI: Plasticity Index = (LL-PL), %
DD: Dry unit weight, pcf
▼, ▼, ▼ Apparent groundwater level at time noted

RELATIVE DENSITY OF COARSE-GRAINED SOILS

Relative Density	N - Blows/foot
Very Loose	0 - 4
Loose	4 - 10
Medium Dense	10 - 30
Dense	30 - 50
Very Dense	50 - 80
Extremely Dense	80+

ANGULARITY OF COARSE-GRAINED PARTICLES

Description	Criteria
Angular:	Particles have sharp edges and relatively plane sides with unpolished surfaces
Subangular:	Particles are similar to angular description, but have rounded edges
Subrounded:	Particles have nearly plane sides, but have well-rounded corners and edges
Rounded:	Particles have smoothly curved sides and no edges

GRAIN-SIZE TERMINOLOGY

Component	Size Range
Boulders:	Over 300 mm (>12 in.)
Cobbles:	75 mm to 300 mm (3 in. to 12 in.)
Coarse-Grained Gravel:	19 mm to 75 mm (3/4 in. to 3 in.)
Fine-Grained Gravel:	4.75 mm to 19 mm (No.4 to 3/4 in.)
Coarse-Grained Sand:	2 mm to 4.75 mm (No.10 to No.4)
Medium-Grained Sand:	0.42 mm to 2 mm (No.40 to No.10)
Fine-Grained Sand:	0.075 mm to 0.42 mm (No. 200 to No.40)
Silt:	0.005 mm to 0.075 mm
Clay:	<0.005 mm

PARTICLE SHAPE

Description	Criteria
Flat:	Particles with width/thickness ratio > 3
Elongated:	Particles with length/width ratio > 3
Flat & Elongated:	Particles meet criteria for both flat and elongated

RELATIVE PROPORTIONS OF FINES

Descriptive Term	% Dry Weight
Trace:	< 5%
With:	5% to 12%
Modifier:	>12%



GENERAL NOTES

(Continued)

CONSISTENCY OF FINE-GRAINED SOILS

<u>Q_u - TSF</u>	<u>N - Blows/foot</u>	<u>Consistency</u>
0 - 0.25	0 - 2	Very Soft
0.25 - 0.50	2 - 4	Soft
0.50 - 1.00	4 - 8	Firm (Medium Stiff)
1.00 - 2.00	8 - 15	Stiff
2.00 - 4.00	15 - 30	Very Stiff
4.00 - 8.00	30 - 50	Hard
8.00+	50+	Very Hard

MOISTURE CONDITION DESCRIPTION

<u>Description</u>	<u>Criteria</u>
Dry:	Absence of moisture, dusty, dry to the touch
Moist:	Damp but no visible water
Wet:	Visible free water, usually soil is below water table

RELATIVE PROPORTIONS OF SAND AND GRAVEL

<u>Descriptive Term</u>	<u>% Dry Weight</u>
Trace:	< 15%
With:	15% to 30%
Modifier:	>30%

STRUCTURE DESCRIPTION

<u>Description</u>	<u>Criteria</u>	<u>Description</u>	<u>Criteria</u>
Stratified:	Alternating layers of varying material or color with layers at least ¼-inch (6 mm) thick	Blocky:	Cohesive soil that can be broken down into small angular lumps which resist further breakdown
Laminated:	Alternating layers of varying material or color with layers less than ¼-inch (6 mm) thick	Lensed:	Inclusion of small pockets of different soils
Fissured:	Breaks along definite planes of fracture with little resistance to fracturing	Layer:	Inclusion greater than 3 inches thick (75 mm)
Slickensided:	Fracture planes appear polished or glossy, sometimes striated	Seam:	Inclusion 1/8-inch to 3 inches (3 to 75 mm) thick extending through the sample
		Parting:	Inclusion less than 1/8-inch (3 mm) thick

SCALE OF RELATIVE ROCK HARDNESS

<u>Q_u - TSF</u>	<u>Consistency</u>
2.5 - 10	Extremely Soft
10 - 50	Very Soft
50 - 250	Soft
250 - 525	Medium Hard
525 - 1,050	Moderately Hard
1,050 - 2,600	Hard
>2,600	Very Hard

ROCK BEDDING THICKNESSES

<u>Description</u>	<u>Criteria</u>
Very Thick Bedded	Greater than 3-foot (>1.0 m)
Thick Bedded	1-foot to 3-foot (0.3 m to 1.0 m)
Medium Bedded	4-inch to 1-foot (0.1 m to 0.3 m)
Thin Bedded	1¼-inch to 4-inch (30 mm to 100 mm)
Very Thin Bedded	½-inch to 1¼-inch (10 mm to 30 mm)
Thickly Laminated	1/8-inch to ½-inch (3 mm to 10 mm)
Thinly Laminated	1/8-inch or less "paper thin" (<3 mm)

ROCK VOIDS

<u>Voids</u>	<u>Void Diameter</u>
Pit	<6 mm (<0.25 in)
Vug	6 mm to 50 mm (0.25 in to 2 in)
Cavity	50 mm to 600 mm (2 in to 24 in)
Cave	>600 mm (>24 in)

GRAIN-SIZED TERMINOLOGY

(Typically Sedimentary Rock)	
<u>Component</u>	<u>Size Range</u>
Very Coarse Grained	>4.76 mm
Coarse Grained	2.0 mm - 4.76 mm
Medium Grained	0.42 mm - 2.0 mm
Fine Grained	0.075 mm - 0.42 mm
Very Fine Grained	<0.075 mm

ROCK QUALITY DESCRIPTION

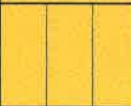
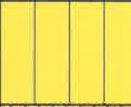
<u>Rock Mass Description</u>	<u>RQD Value</u>
Excellent	90 - 100
Good	75 - 90
Fair	50 - 75
Poor	25 - 50
Very Poor	Less than 25

DEGREE OF WEATHERING

Slightly Weathered:	Rock generally fresh, joints stained and discoloration extends into rock up to 25 mm (1 in), open joints may contain clay, core rings under hammer impact.
Weathered:	Rock mass is decomposed 50% or less, significant portions of the rock show discoloration and weathering effects, cores cannot be broken by hand or scraped by knife.
Highly Weathered:	Rock mass is more than 50% decomposed, complete discoloration of rock fabric, core may be extremely broken and gives clunk sound when struck by hammer, may be shaved with a knife.

SOIL CLASSIFICATION CHART

NOTE: DUAL SYMBOLS ARE USED TO INDICATE BORDERLINE SOIL CLASSIFICATIONS

MAJOR DIVISIONS			SYMBOLS		TYPICAL DESCRIPTIONS
			GRAPH	LETTER	
COARSE GRAINED SOILS MORE THAN 50% OF MATERIAL IS LARGER THAN NO. 200 SIEVE SIZE	GRAVEL AND GRAVELLY SOILS MORE THAN 50% OF COARSE FRACTION RETAINED ON NO. 4 SIEVE	CLEAN GRAVELS		GW	WELL-GRADED GRAVELS, GRAVEL - SAND MIXTURES, LITTLE OR NO FINES
		(LITTLE OR NO FINES)		GP	POORLY-GRADED GRAVELS, GRAVEL - SAND MIXTURES, LITTLE OR NO FINES
		GRAVELS WITH FINES		GM	SILTY GRAVELS, GRAVEL - SAND - SILT MIXTURES
		(APPRECIABLE AMOUNT OF FINES)		GC	CLAYEY GRAVELS, GRAVEL - SAND - CLAY MIXTURES
	SAND AND SANDY SOILS MORE THAN 50% OF COARSE FRACTION PASSING ON NO. 4 SIEVE	CLEAN SANDS		SW	WELL-GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES
		(LITTLE OR NO FINES)		SP	POORLY-GRADED SANDS, GRAVELLY SAND, LITTLE OR NO FINES
		SANDS WITH FINES		SM	SILTY SANDS, SAND - SILT MIXTURES
		(APPRECIABLE AMOUNT OF FINES)		SC	CLAYEY SANDS, SAND - CLAY MIXTURES
FINE GRAINED SOILS MORE THAN 50% OF MATERIAL IS SMALLER THAN NO. 200 SIEVE SIZE	SILTS AND CLAYS LIQUID LIMIT LESS THAN 50			ML	INORGANIC SILTS AND VERY FINE SANDS, ROCK FLOUR, SILTY OR CLAYEY FINE SANDS OR CLAYEY SILTS WITH SLIGHT PLASTICITY
				CL	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS
				OL	ORGANIC SILTS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY
	SILTS AND CLAYS LIQUID LIMIT GREATER THAN 50			MH	INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS FINE SAND OR SILTY SOILS
				CH	INORGANIC CLAYS OF HIGH PLASTICITY
				OH	ORGANIC CLAYS OF MEDIUM TO HIGH PLASTICITY, ORGANIC SILTS
	HIGHLY ORGANIC SOILS				PT

SOIL EVALUATION - STORM

Page 1 of 2

In accordance with SPS 382.365 & 385, Wis. Adm. Code and WDNR Standard 1002

Attach complete site plan on paper not less than 8 1/2 x 11 inches in size. Plan must include, but not limited to: vertical and horizontal reference point (BM), direction and percent slope, scale or dimensions, north arrow, and BM referenced to nearest road.

Please print all information.

Personal information you provide may be used for secondary purposes [Privacy Law, s. 15.04 (1) (m)].

Property Owner		Property Location: 8611 STH 60, Cedarburg, WI	
Property Owner's Mailing Address		Govt. Lot	
City	State	Zip Code	Phone Number
Cedarburg	WI	53005	(608) 441-1111
Drainage area _____ ☐ sq. ft. ☐ acres		Hydraulic Application Test Method:	
Optional:		☒ Morphological Evaluation	
Test Site Suitable for (check all that apply)		☐ Double Ring Infiltrometer	
☐ Irrigation ☐ Bioretention trench ☐ Trench(es)		☐ Other (specify)	
☐ Rain Garden ☐ Grassed swale ☐ Reuse			
☐ Infiltration trench ☐ SDS (> 15' wide) ☐ Other _____			
		Soil Moisture	
		Date of Test Pits: August 22, 2023	
		USDA-NRCS WETS Value: 12	
		☐ Dry = 1;	
		☒ Normal = 2;	
		☐ Wet = 3.	

1	Obs. #	☒ Boring ☐ Pit	B-1	Ground surface elevation ±			Elevation of limiting factor: 12'±			
Horizon	Depth in.	Dominant Color Munsell	Redox Description Qu. Sz. Cont. Color	Texture	Structure Gr. Sz. Sh.	Consistence	Boundary	% Rock Frag.	% Fines	Hydraulic App. Rate Inches/Hr.
1	0-11	10YR 2/1		sil	1 f sbk	mfr		<15		0.13
2	11-24	5YR 3/3		sicl	1 f sbk	mfr		<15		0.04
3	24-72	7.5YR 4/3		sicl	2 vy thin pl	mfi		<15		0.04
4	72-144	7.5YR 6/3		sil	2 thin pl	mfr		<15		0.13
5	144-168	7.5YR 6/3		gris	0 m	mfr		>15		1.63
6	168-240	7.5YR 6/3		grvsl	0 m	mfr		>15		0.5
Comment: wet soils at 12 feet										

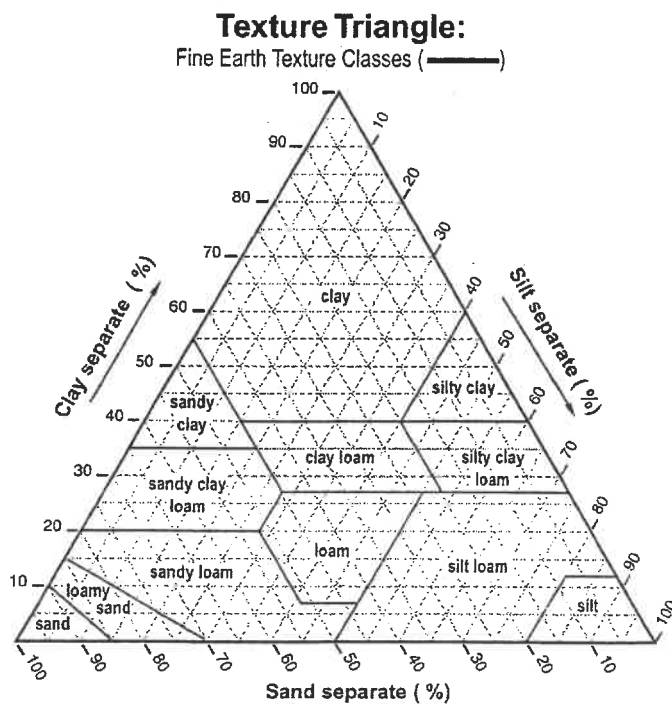
2	Obs. #	☒ Boring	B-2								
		☐ Pit	Ground surface elevation ±		Elevation of limiting factor: 10'±						
Horizon	Depth in.	Dominant Color Munsell	Redox Description Qu. Sz. Cont. Color	Texture	Structure Gr. Sz. Sh.	Consistence	Boundary	% Rock Frag.	% Fines	Hydraulic App. Rate Inches/Hr.	
1	0-10	10YR 2/1		sil	1 f sbk	mfr		<15		0.13	
2	10-48	5YR 3/3		sicl	1 f sbk	mfr		<15		0.04	
3	48-72	7.5YR 4/3		sicl	2 vy thin pl	mfi		<15		0.04	
4	72-120	7.5YR 6/3		sil	2 thin pl	mfr		<15		0.13	
5	120-144	7.5YR 5/3		l	0 m	mfi		<15		0.24	
6	144-192	7.5YR 5/3		grsl	0 m	mfi		>15		0.5	
7	192-240	7.5YR 6/1		sicl	1 f sbk	mfi		<15		0.04	
Comment: wet soils at 10 feet; gray soils at 16 feet											

CST/PSS Name (Please Print)	Signature	CST/PSS/Geologist Number
Patrick J. Patterson		G-229
Address	Date Evaluation Conducted	Telephone Number
821 Corporate Court, Waukesha, WI 53189	8/22/2023	262 521 2125

SBD-10793 (R.01/17)

3	Obs. #	☒ Boring B-11		Ground surface elevation ±		Elevation of limiting factor: 11'±				
		☐ Pit								
Horizon	Depth in.	Dominant Color Munsell	Redox Description Qu. Sz. Cont. Color	Texture	Structure Gr. Sz. Sh.	Consistence	Boundary	% Rock Frag.	% Fines	Hydraulic App. Rate Inches/Hr.
1	0-12	10YR 2/1		sil	1 f sbk	mfr		<15		0.13
2	12-108	5YR 3/3		sicl	1 f sbk	mfr		<15		0.04
3	108-132	7.5YR 4/3		sicl	2 vy thin pl	mfi		<15		0.04
4	132-180	7.5YR 4/1		sicl	1 f sbk	mfi		<15		0.04
Comment: gray soils at 11 feet										

4	Obs. #	☒ Boring B-12		Ground surface elevation ±		Elevation of limiting factor: 11'±				
		☐ Pit								
Horizon	Depth in.	Dominant Color Munsell	Redox Description Qu. Sz. Cont. Color	Texture	Structure Gr. Sz. Sh.	Consistence	Boundary	% Rock Frag.	% Fines	Hydraulic App. Rate Inches/Hr.
1	0-11	10YR 2/1		sil	1 f sbk	mfr		<15		0.13
2	11-36	5YR 3/3		sicl	1 f sbk	mfr		<15		0.04
3	36-144	7.5YR 5/3		sicl	2 thin pl	mfi		<15		0.04
4	144-180	7.5YR 6/3		grsl	0 m	mfr		>15		0.5
Comment: wet soils at 11 feet										



TEXTURE MODIFIERS - Conventions for using "Rock Fragment Texture Modifiers" and for using textural adjectives that convey the "% volume" ranges for Rock Fragments - Size and Quantity.

Fragment Content % By Volume	Rock Fragment Modifier Usage
< 15	No texture adjective is used (noun only; e.g., <i>loam</i>).
15 to < 35	Use adjective for appropriate size; e.g., <i>gravelly</i> .
35 to < 60	Use "very" with the appropriate size adjective; e.g., <i>very gravelly</i> .
60 to < 90	Use "extremely" with the appropriate size adjective; e.g., <i>extremely gravelly</i> .
≥ 90	No adjective or modifier. If ≤ 10% fine earth, use the appropriate noun for the dominant size class; e.g., <i>gravel</i> . Use Terms in Lieu of Texture.

(SOIL) TEXTURE

This is the numerical proportion (percent by weight) of sand, silt, and clay in a soil. Sand, silt, and clay content is estimated in the field by hand (or quantitatively measured in the office/lab by hydrometer or pipette) and then placed within the texture triangle to determine **Texture Class**. Estimate the **Texture Class**; e.g., *sandy loam*; or **Subclass**; e.g., *fine sandy loam* of the fine earth (≤ 2 mm) fraction, or choose a **Term in Lieu of Texture**; e.g., *gravel*. If appropriate, use a **Textural Class Modifier**; e.g., *gravelly silt loam*.

NOTE: Soil Texture encompasses only the fine earth fraction (≤ 2 mm).

Particle Size Distribution (PSD) encompasses the whole soil, including both the fine earth fraction (≤ 2 mm; weight %) and rock fragments (> 2 mm; volume %).

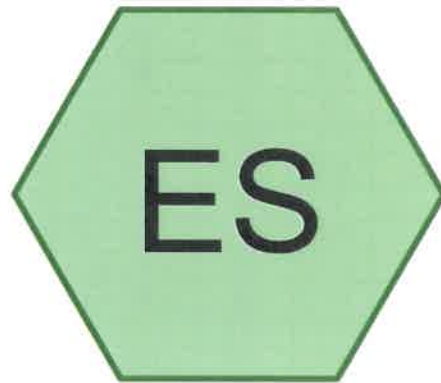
TEXTURE CLASS

Texture Class or Subclass	Code	
	Conv.	NASIS
Coarse Sand	cos	COS
Sand	s	S
Fine Sand	fs	FS
Very Fine Sand	vfs	VFS
Loamy Coarse Sand	lcos	LCOS
Loamy Sand	ls	LS
Loamy Fine Sand	lfs	LFS
Loamy Very Fine Sand	lvfs	LVFS
Coarse Sandy Loam	cosl	COSL
Sandy Loam	sl	SL
Fine Sandy Loam	fsl	FSL
Very Fine Sandy Loam	vfsl	VFSL
Loam	l	L
Silt Loam	sil	SIL
Silt	si	SI
Sandy Clay Loam	scl	SCL
Clay Loam	cl	CL
Silty Clay Loam	sicl	SICL
Sandy Clay	sc	SC
Silty Clay	sic	SIC
Clay	c	C

TEXTURE MODIFIERS - (adjectives)

ROCK FRAGMENTS: Size & Quantity ¹	Code		Criteria: Percent (By Volume) of Total Rock Fragments and Dominated By (<i>name size</i>): ¹
	Conv.	PDP/ NASIS	
ROCK FRAGMENTS (> 2 mm; ≥ Strongly Cemented)			
Gravelly	GR	GR	≥ 15% but < 35% gravel
Fine Gravelly	FGR	GRF	≥15% but < 35% fine gravel
Medium Gravelly	MGR	GRM	≥15% but < 35% med. gravel
Coarse Gravelly	CGR	GRC	≥ 15% but < 35% coarse gravel
Very Gravelly	VGR	GRV	≥ 35% but < 60% gravel
Extremely Gravelly	XGR	GRX	≥ 60% but < 90% gravel
Cobbly	CB	CB	≥ 15% but < 35% cobbles
Very Cobbly	VCB	CBV	≥ 35% but < 60% cobbles
Extremely Cobbly	XCB	CBX	≥ 60% but < 90% cobbles
Stony	ST	ST	≥ 15% but < 35% stones
Very Stony	VST	STV	≥ 35% but < 60% stones
Extremely Stony	XST	STX	≥ 60% but < 90% stones
Bouldery	BY	BY	≥ 15% but < 35% boulders
Very Bouldery	VBY	BYV	≥ 35% but < 60% boulders
Extremely Bouldery	XBY	BYX	≥ 60% but < 90% boulders
Channery	CN	CN	≥ 15% but < 35% channers
Very Channery	VCN	CNV	≥ 35% but < 60% channers
Extremely Channery	XCN	CNX	≥ 60% but < 90% channers
Flaggy	FL	FL	≥ 15% but < 35% flagstones
Very Flaggy	VFL	FLV	≥ 35% but < 60% flagstones
Extremely Flaggy	XFL	FLX	≥ 60% but < 90% flagstones
PARAROCK FRAGMENTS (> 2 mm; < Strongly Cemented) ^{2, 3}			
Parabouldery	PBY	PBY	(same criteria as bouldery)
Very Parabouldery	VPBY	PBYV	(same criteria as very bouldery)
Extr. Parabouldery	XPBY	PBYX	(same criteria as ext. bouldery)
etc.	etc.	etc.	(same criteria as non-para)

¹ The "Quantity" modifier (e.g., *very*) is based on the total rock fragment content. The "Size" modifier (e.g., *cobbly*) is independently based on the largest, dominant fragment size. For a mixture of sizes (e.g., *gravel and stones*), a smaller size-class is named only if its quantity (%) sufficiently exceeds that of a larger size-class. For field texture determination, a smaller size-class must exceed 2 times the quantity (vol. %) of a larger size class before it is named (e.g., 30% gravel and 14% stones = *very gravelly*, but 20% gravel and 14% stones = *stony*). For more explicit naming criteria see NSSH-Part 618, Exhibit 618.11 (Soil Survey Staff, 2001b).



Existing Site



Routing Diagram for CJE2263R2

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Area Listing (selected nodes)

Area (acres)	CN	Description (subcatchment-numbers)
8.557	79	Woods/grass comb., Good, HSG D (ES)
8.557	79	TOTAL AREA

CJE2263R2**MSE 24-hr 3 1-yr Rainfall=2.30"**

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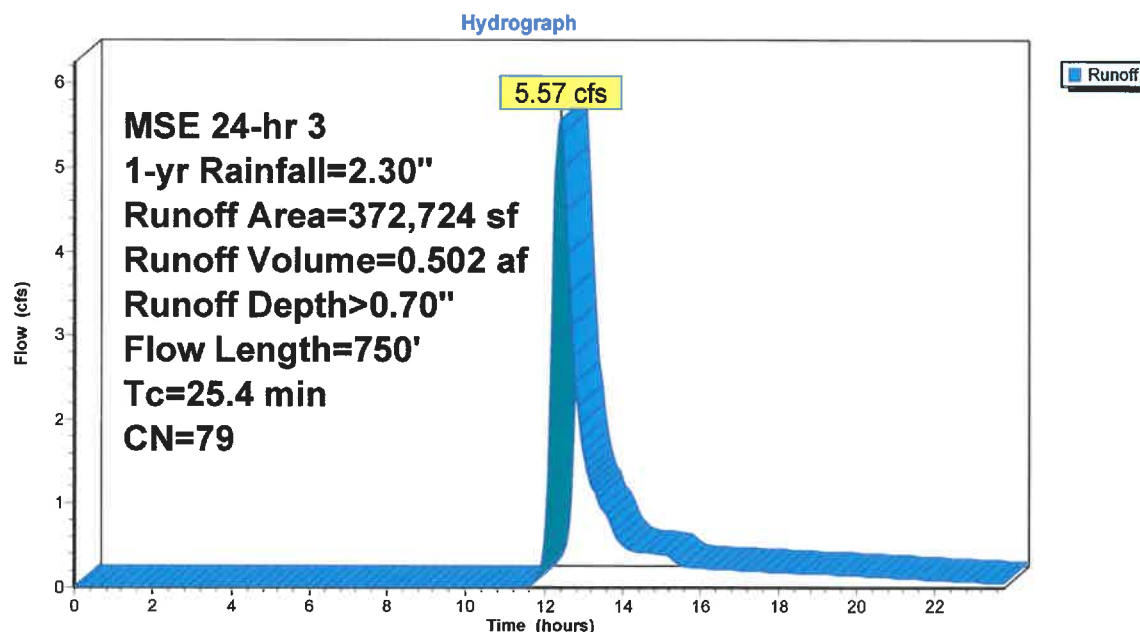
Summary for Subcatchment ES: Existing Site

Runoff = 5.57 cfs @ 12.40 hrs, Volume= 0.502 af, Depth> 0.70"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-23.75 hrs, dt= 0.05 hrs
MSE 24-hr 3 1-yr Rainfall=2.30"

Area (sf)	CN	Description
372,724	79	Woods/grass comb., Good, HSG D
372,724		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.3	150	0.0667	0.12		Sheet Flow, A-B Woods: Light underbrush n= 0.400 P2= 2.61"
5.1	600	0.0150	1.97		Shallow Concentrated Flow, B-C Unpaved Kv= 16.1 fps
25.4	750	Total			

Subcatchment ES: Existing Site

CJE2263R2

MSE 24-hr 3 2-yr Rainfall=2.61"

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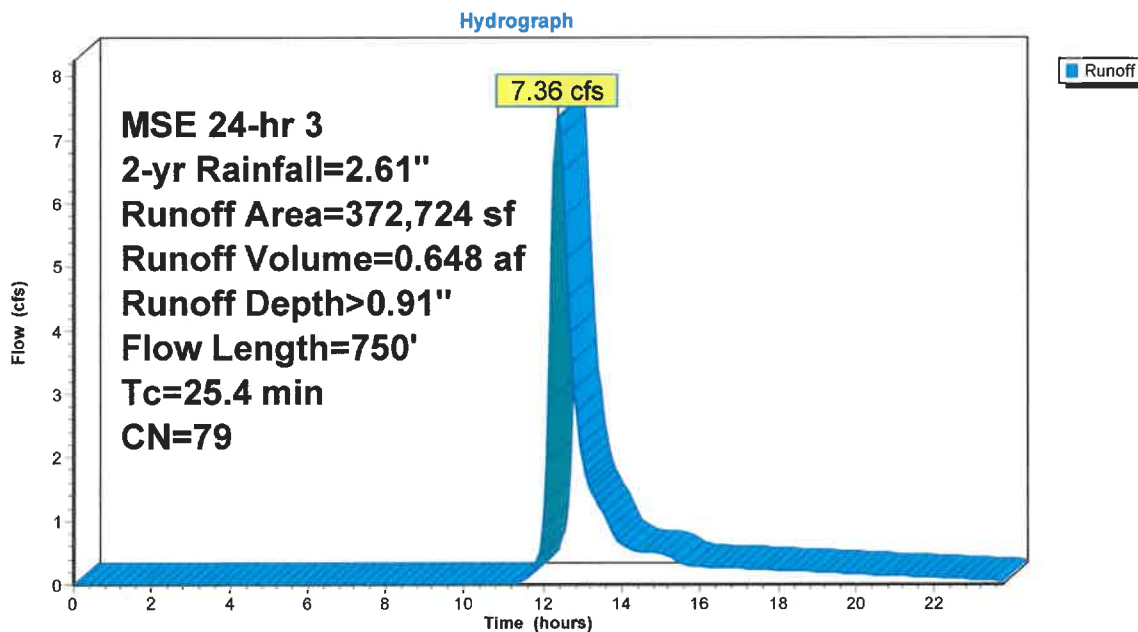
Summary for Subcatchment ES: Existing Site

Runoff = 7.36 cfs @ 12.39 hrs, Volume= 0.648 af, Depth> 0.91"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-23.75 hrs, dt= 0.05 hrs
MSE 24-hr 3 2-yr Rainfall=2.61"

Area (sf)	CN	Description
372,724	79	Woods/grass comb., Good, HSG D
372,724		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.3	150	0.0667	0.12		Sheet Flow, A-B
					Woods: Light underbrush n= 0.400 P2= 2.61"
5.1	600	0.0150	1.97		Shallow Concentrated Flow, B-C
					Unpaved Kv= 16.1 fps
25.4	750	Total			

Subcatchment ES: Existing Site

CJE2263R2**MSE 24-hr 3 10-yr Rainfall=3.77"**

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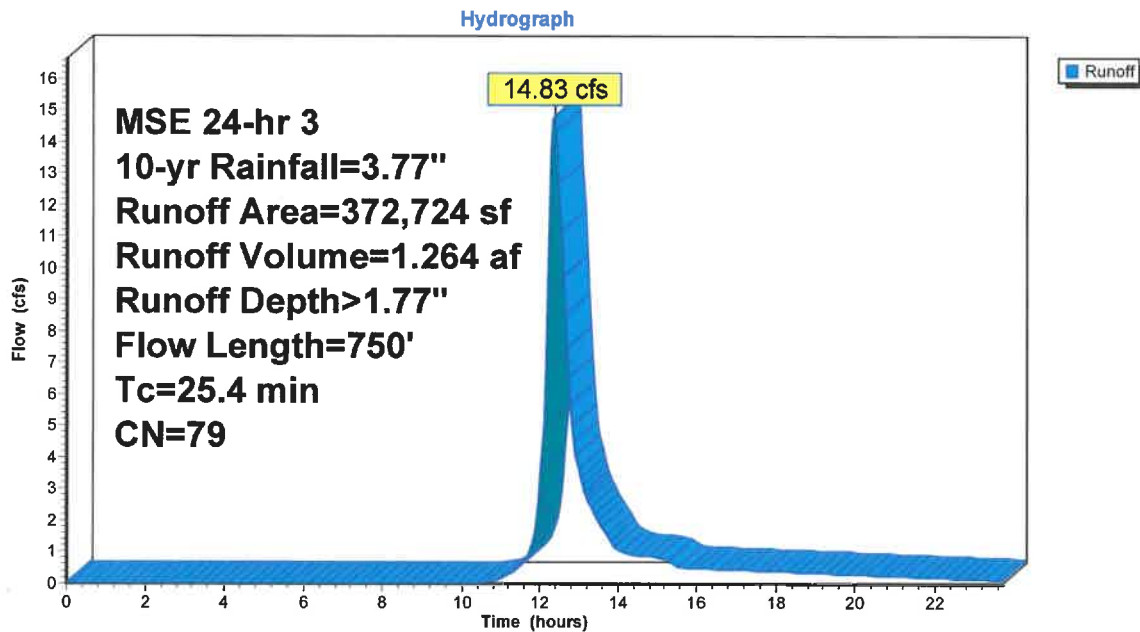
Summary for Subcatchment ES: Existing Site

Runoff = 14.83 cfs @ 12.38 hrs, Volume= 1.264 af, Depth> 1.77"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-23.75 hrs, dt= 0.05 hrs
MSE 24-hr 3 10-yr Rainfall=3.77"

Area (sf)	CN	Description
372,724	79	Woods/grass comb., Good, HSG D
372,724		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.3	150	0.0667	0.12		Sheet Flow, A-B
					Woods: Light underbrush n= 0.400 P2= 2.61"
5.1	600	0.0150	1.97		Shallow Concentrated Flow, B-C
					Unpaved Kv= 16.1 fps
25.4	750	Total			

Subcatchment ES: Existing Site

CJE2263R2**MSE 24-hr 3 100-yr Rainfall=6.38"**

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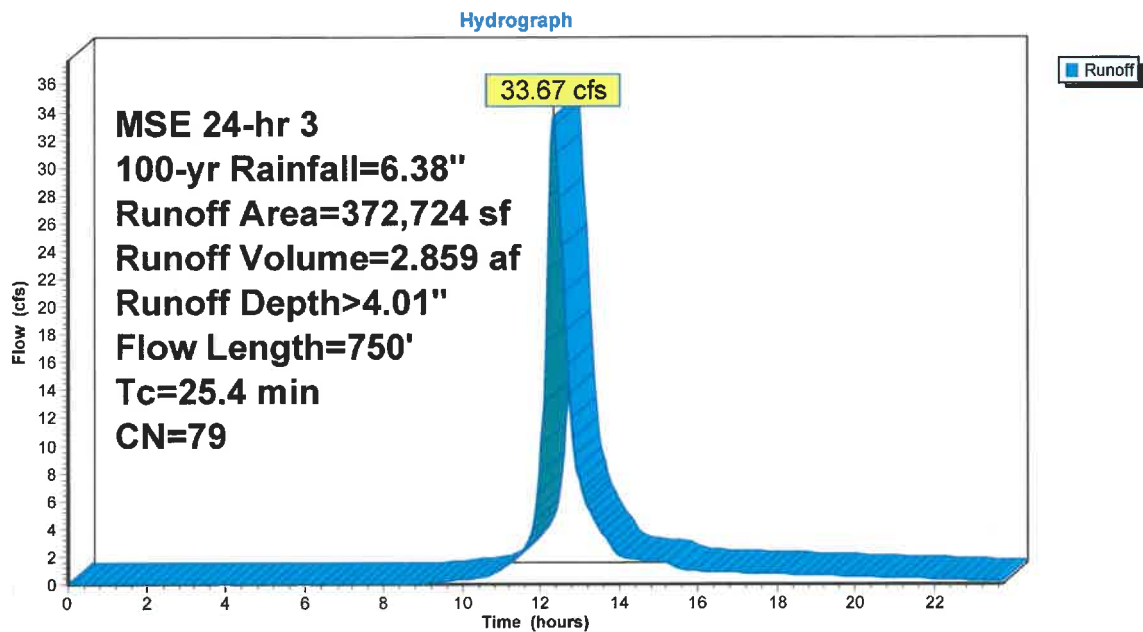
Summary for Subcatchment ES: Existing Site

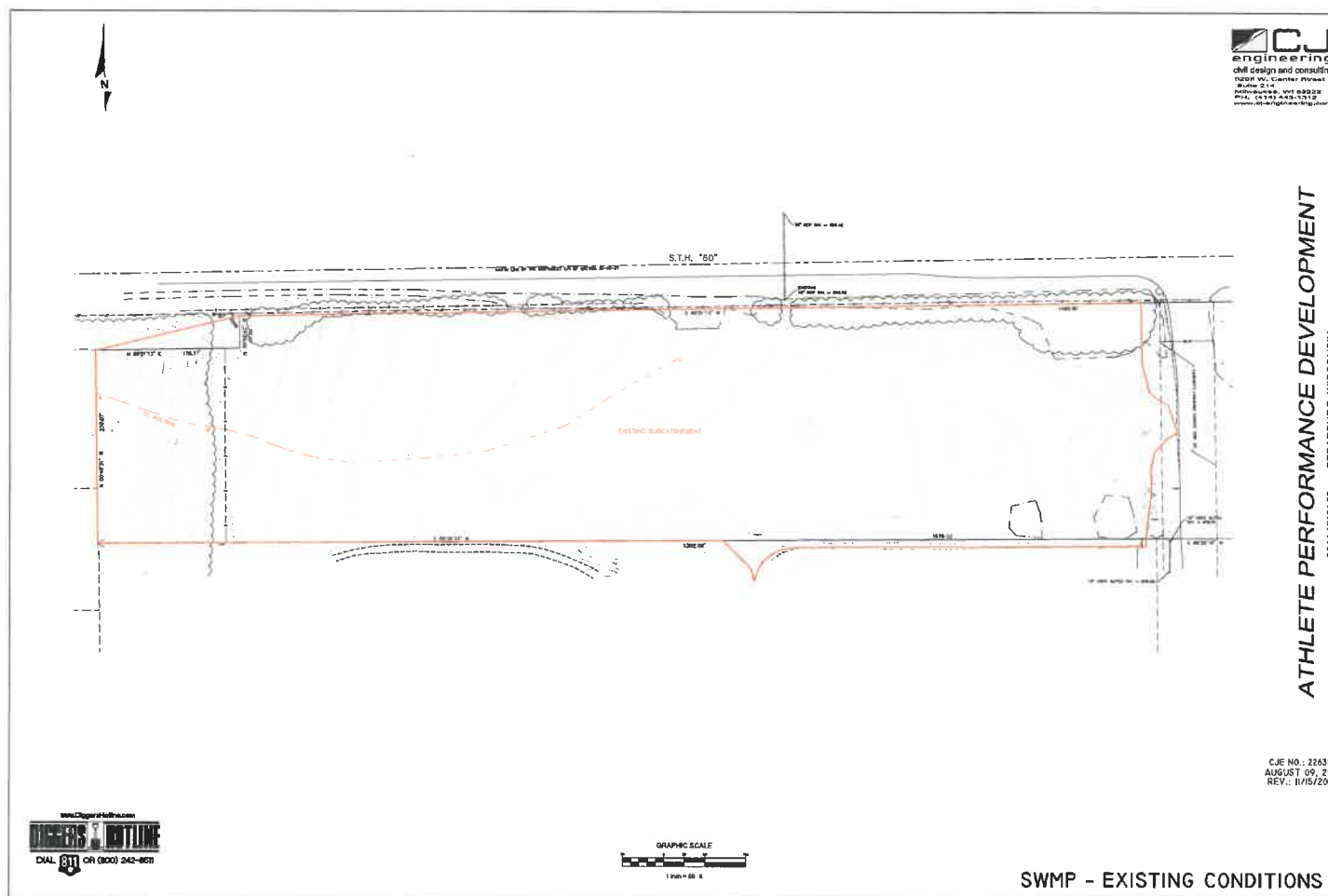
Runoff = 33.67 cfs @ 12.36 hrs, Volume= 2.859 af, Depth> 4.01"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-23.75 hrs, dt= 0.05 hrs
MSE 24-hr 3 100-yr Rainfall=6.38"

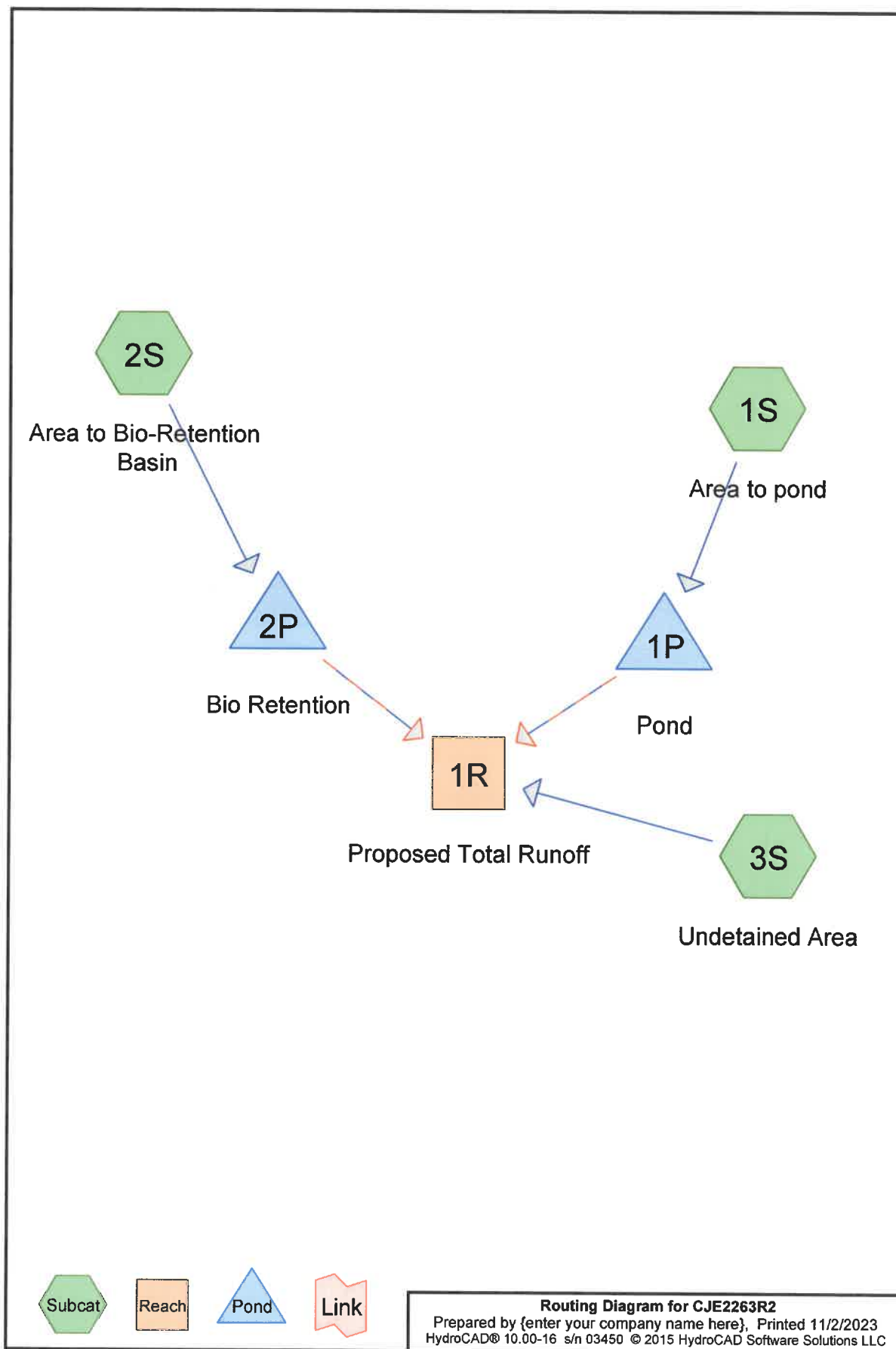
Area (sf)	CN	Description
372,724	79	Woods/grass comb., Good, HSG D
372,724		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.3	150	0.0667	0.12		Sheet Flow, A-B
					Woods: Light underbrush n= 0.400 P2= 2.61"
5.1	600	0.0150	1.97		Shallow Concentrated Flow, B-C
					Unpaved Kv= 16.1 fps
25.4	750	Total			

Subcatchment ES: Existing Site







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Area Listing (selected nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.711	74	>75% Grass cover, Good, HSG C (1S)
3.333	80	>75% Grass cover, Good, HSG D (2S, 3S)
1.850	98	Pavement (1S, 2S)
0.149	98	Pond - NWL (1S)
1.660	98	Proposed Building (2S)
0.854	77	Woods, Good, HSG D (2S)
8.557	87	TOTAL AREA

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Pipe Listing (selected nodes)

Line#	Node Number	In-Invert (feet)	Out-Invert (feet)	Length (feet)	Slope (ft/ft)	n	Diam/Width (inches)	Height (inches)	Inside-Fill (inches)
1	1S	0.00	0.00	300.0	0.0026	0.013	12.0	0.0	0.0
2	1P	871.90	870.50	235.0	0.0060	0.011	15.0	0.0	0.0
3	2P	870.50	870.25	165.0	0.0015	0.011	15.0	0.0	0.0
4	2P	871.20	870.50	600.0	0.0012	0.010	6.0	0.0	0.0

CJE2263R2**MSE 24-hr 3 1-yr Rainfall=2.30"**

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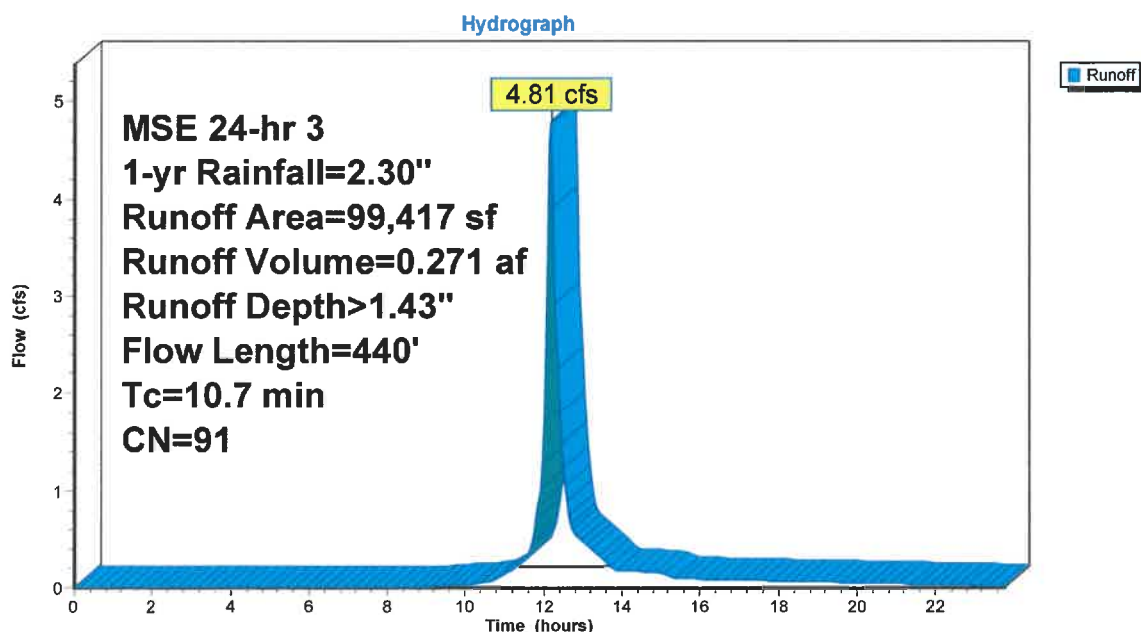
Summary for Subcatchment 1S: Area to pond

Runoff = 4.81 cfs @ 12.19 hrs, Volume= 0.271 af, Depth> 1.43"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-23.75 hrs, dt= 0.05 hrs
MSE 24-hr 3 1-yr Rainfall=2.30"

Area (sf)	CN	Description
30,965	74	>75% Grass cover, Good, HSG C
* 61,948	98	Pavement
* 6,504	98	Pond - NWL
99,417	91	Weighted Average
30,965		31.15% Pervious Area
68,452		68.85% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.9	40	0.0100	0.10		Sheet Flow, A-B Grass: Short n= 0.150 P2= 2.61"
1.6	100	0.0120	1.01		Sheet Flow, B-C Smooth surfaces n= 0.011 P2= 2.61"
2.2	300	0.0026	2.31	1.82	Pipe Channel, C-D 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.013
10.7	440	Total			

Subcatchment 1S: Area to pond

CJE2263R2

MSE 24-hr 3 1-yr Rainfall=2.30"

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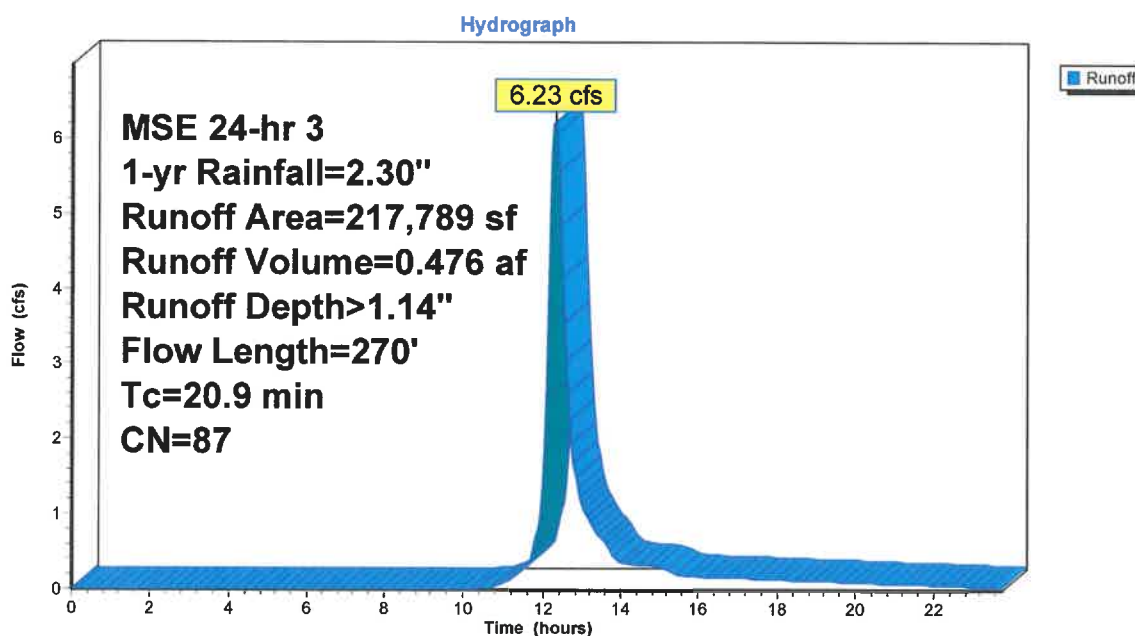
Summary for Subcatchment 2S: Area to Bio-Retention Basin

Runoff = 6.23 cfs @ 12.31 hrs, Volume= 0.476 af, Depth> 1.14"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-23.75 hrs, dt= 0.05 hrs
MSE 24-hr 3 1-yr Rainfall=2.30"

	Area (sf)	CN	Description
*	72,293	98	Proposed Building
	89,677	80	>75% Grass cover, Good, HSG D
*	18,629	98	Pavement
	37,190	77	Woods, Good, HSG D
	217,789	87	Weighted Average
	126,867		58.25% Pervious Area
	90,922		41.75% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.3	150	0.0667	0.12		Sheet Flow, E-F Woods: Light underbrush n= 0.400 P2= 2.61"
0.5	90	0.0330	2.92		Shallow Concentrated Flow, F-G Unpaved Kv= 16.1 fps
0.1	30	0.2333	7.78		Shallow Concentrated Flow, G-H Unpaved Kv= 16.1 fps
20.9	270	Total			

Subcatchment 2S: Area to Bio-Retention Basin

CJE2263R2*MSE 24-hr 3 1-yr Rainfall=2.30"*

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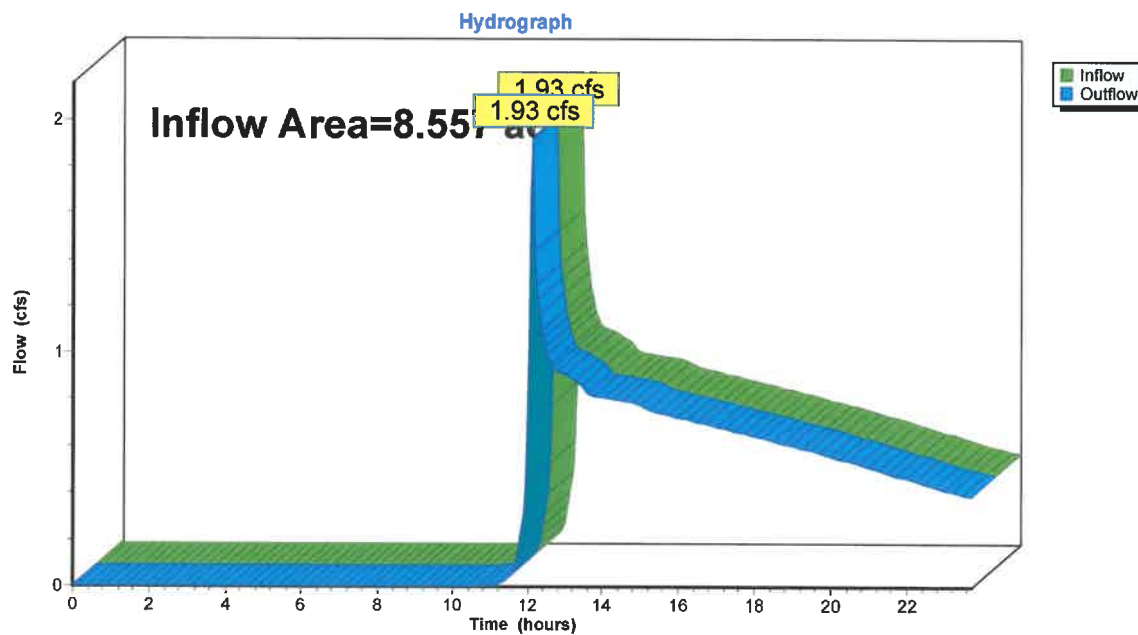
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Summary for Reach 1R: Proposed Total Runoff

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 8.557 ac, 42.76% Impervious, Inflow Depth > 0.93" for 1-yr event
 Inflow = 1.93 cfs @ 12.14 hrs, Volume= 0.661 af
 Outflow = 1.93 cfs @ 12.14 hrs, Volume= 0.661 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-23.75 hrs, dt= 0.05 hrs

Reach 1R: Proposed Total Runoff

CJE2263R2

MSE 24-hr 3 1-yr Rainfall=2.30"

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Summary for Pond 1P: Pond

Inflow Area = 2.282 ac, 68.85% Impervious, Inflow Depth > 1.43" for 1-yr event
 Inflow = 4.81 cfs @ 12.19 hrs, Volume= 0.271 af
 Outflow = 0.37 cfs @ 13.30 hrs, Volume= 0.242 af, Atten= 92%, Lag= 66.9 min
 Primary = 0.37 cfs @ 13.30 hrs, Volume= 0.242 af
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-23.75 hrs, dt= 0.05 hrs
 Peak Elev= 872.95' @ 13.30 hrs Surf.Area= 8,451 sf Storage= 7,114 cf

Plug-Flow detention time= 242.2 min calculated for 0.242 af (89% of inflow)
 Center-of-Mass det. time= 198.3 min (996.6 - 798.3)

Volume	Invert	Avail.Storage	Storage Description
#1	872.00'	35,790 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
872.00	6,504	0	0
873.00	8,550	7,527	7,527
874.00	10,550	9,550	17,077
875.00	12,750	11,650	28,727
875.50	15,500	7,063	35,790

Device	Routing	Invert	Outlet Devices
#1	Primary	871.90'	15.0" Round Culvert L= 235.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 871.90' / 870.50' S= 0.0060 '/ Cc= 0.900 n= 0.011, Flow Area= 1.23 sf
#2	Device 1	872.00'	4.0" Vert. Orifice/Grate C= 0.600
#3	Device 1	873.00'	3.0" Vert. Orifice/Grate C= 0.600
#4	Device 1	874.00'	24.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#5	Secondary	874.50'	10.0' long x 10.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=0.37 cfs @ 13.30 hrs HW=872.95' (Free Discharge)

1=Culvert (Passes 0.37 cfs of 3.85 cfs potential flow)
2=Orifice/Grate (Orifice Controls 0.37 cfs @ 4.27 fps)
3=Orifice/Grate (Controls 0.00 cfs)
4=Orifice/Grate (Controls 0.00 cfs)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=872.00' (Free Discharge)

5=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

CJE2263R2

MSE 24-hr 3 1-yr Rainfall=2.30"

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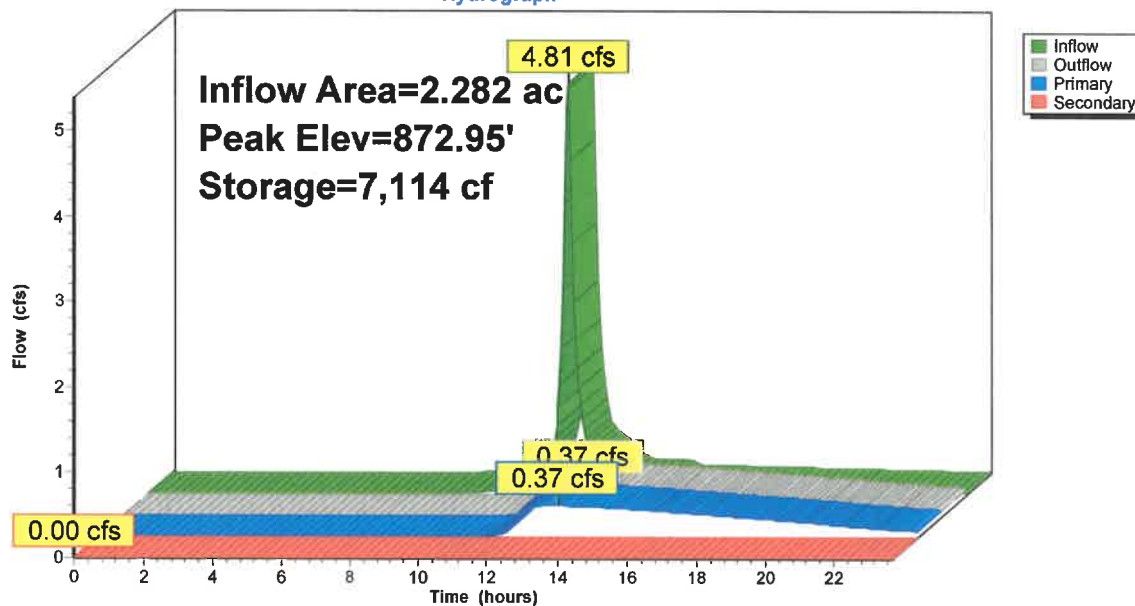
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Pond 1P: Pond

Hydrograph



CJE2263R2**MSE 24-hr 3 1-yr Rainfall=2.30"**

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Summary for Pond 2P: Bio Retention

Inflow Area = 5.000 ac, 41.75% Impervious, Inflow Depth > 1.14" for 1-yr event
 Inflow = 6.23 cfs @ 12.31 hrs, Volume= 0.476 af
 Outflow = 0.38 cfs @ 13.95 hrs, Volume= 0.339 af, Atten= 94%, Lag= 98.1 min
 Primary = 0.38 cfs @ 13.95 hrs, Volume= 0.339 af
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-23.75 hrs, dt= 0.05 hrs
 Peak Elev= 872.78' @ 13.95 hrs Surf.Area= 13,543 sf Storage= 13,482 cf

Plug-Flow detention time= 323.2 min calculated for 0.338 af (71% of inflow)
 Center-of-Mass det. time= 249.6 min (1,069.5 - 819.9)

Volume	Invert	Avail.Storage	Storage Description	
#1	869.50'	64,291 cf	Custom Stage Data (Prismatic) Listed below (Recalc)	
Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
869.50	7,000	0.0	0	0
869.51	7,000	33.0	23	23
870.00	7,000	33.0	1,132	1,155
870.01	7,000	27.0	19	1,174
872.00	7,800	27.0	3,976	5,150
872.01	7,800	100.0	78	5,228
873.00	15,150	100.0	11,360	16,588
874.00	23,000	100.0	19,075	35,663
875.00	34,255	100.0	28,628	64,291

Device	Routing	Invert	Outlet Devices
#1	Primary	870.50'	15.0" Round Culvert L= 165.0' CPP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 870.50' / 870.25' S= 0.0015 ' /' Cc= 0.900 n= 0.011 Concrete pipe, straight & clean, Flow Area= 1.23 sf
#2	Device 1	871.20'	6.0" Round Culvert L= 600.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 871.20' / 870.50' S= 0.0012 ' /' Cc= 0.900 n= 0.010, Flow Area= 0.20 sf
#3	Device 1	873.00'	4.0" Vert. Orifice/Grate C= 0.600
#4	Device 1	874.00'	24.0" Horiz. Orifice/Grate C= 0.600 in 36.0" Grate (44% open area) Limited to weir flow at low heads
#5	Secondary	874.50'	10.0' long x 10.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=0.38 cfs @ 13.95 hrs HW=872.78' (Free Discharge)

- 1=Culvert (Passes 0.38 cfs of 5.41 cfs potential flow)
- 2=Culvert (Barrel Controls 0.38 cfs @ 1.96 fps)
- 3=Orifice/Grate (Controls 0.00 cfs)
- 4=Orifice/Grate (Controls 0.00 cfs)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=869.50' (Free Discharge)

- 5=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

CJE2263R2

MSE 24-hr 3 1-yr Rainfall=2.30"

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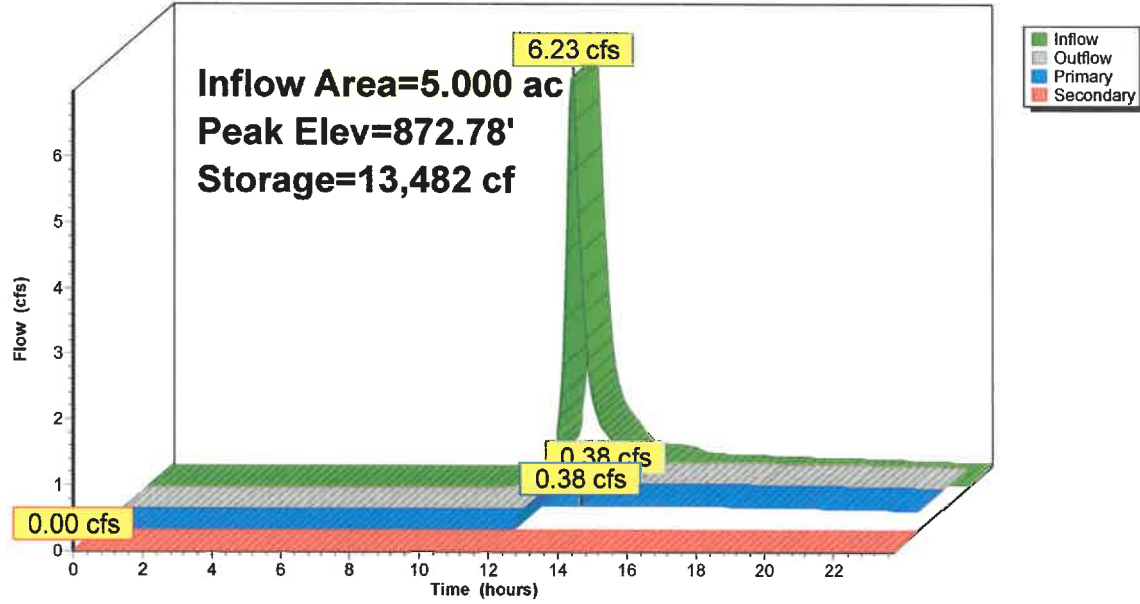
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Pond 2P: Bio Retention

Hydrograph



CJE2263R2**MSE 24-hr 3 2-yr Rainfall=2.61"**

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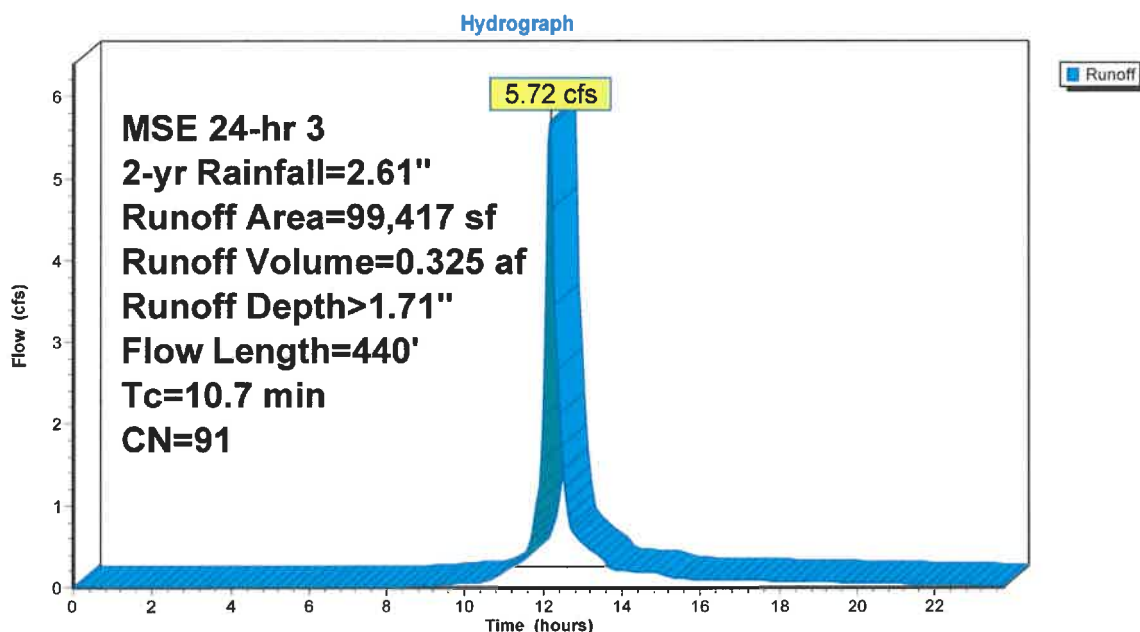
Summary for Subcatchment 1S: Area to pond

Runoff = 5.72 cfs @ 12.18 hrs, Volume= 0.325 af, Depth> 1.71"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-23.75 hrs, dt= 0.05 hrs
MSE 24-hr 3 2-yr Rainfall=2.61"

Area (sf)	CN	Description
30,965	74	>75% Grass cover, Good, HSG C
* 61,948	98	Pavement
* 6,504	98	Pond - NWL
99,417	91	Weighted Average
30,965		31.15% Pervious Area
68,452		68.85% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.9	40	0.0100	0.10		Sheet Flow, A-B Grass: Short n= 0.150 P2= 2.61"
1.6	100	0.0120	1.01		Sheet Flow, B-C Smooth surfaces n= 0.011 P2= 2.61"
2.2	300	0.0026	2.31	1.82	Pipe Channel, C-D 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.013
10.7	440	Total			

Subcatchment 1S: Area to pond

CJE2263R2

MSE 24-hr 3 2-yr Rainfall=2.61"

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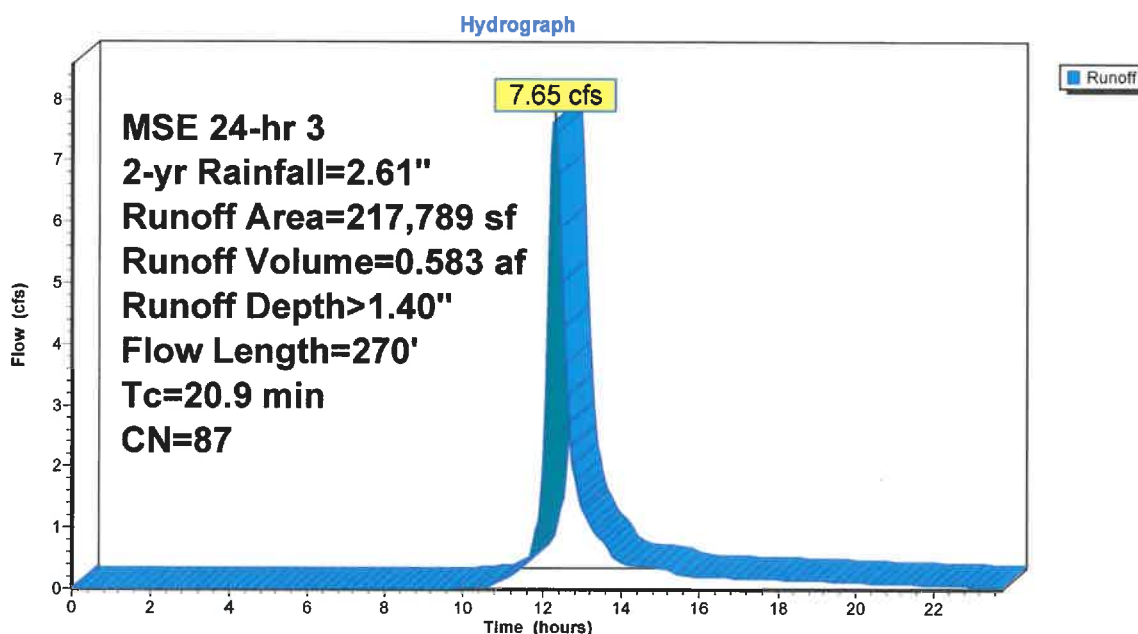
Summary for Subcatchment 2S: Area to Bio-Retention Basin

Runoff = 7.65 cfs @ 12.31 hrs, Volume= 0.583 af, Depth> 1.40"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-23.75 hrs, dt= 0.05 hrs
MSE 24-hr 3 2-yr Rainfall=2.61"

Area (sf)	CN	Description
* 72,293	98	Proposed Building
89,677	80	>75% Grass cover, Good, HSG D
* 18,629	98	Pavement
37,190	77	Woods, Good, HSG D
217,789	87	Weighted Average
126,867		58.25% Pervious Area
90,922		41.75% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.3	150	0.0667	0.12		Sheet Flow, E-F
					Woods: Light underbrush n= 0.400 P2= 2.61"
0.5	90	0.0330	2.92		Shallow Concentrated Flow, F-G
					Unpaved Kv= 16.1 fps
0.1	30	0.2333	7.78		Shallow Concentrated Flow, G-H
					Unpaved Kv= 16.1 fps
20.9	270	Total			

Subcatchment 2S: Area to Bio-Retention Basin

CJE2263R2**MSE 24-hr 3 2-yr Rainfall=2.61"**

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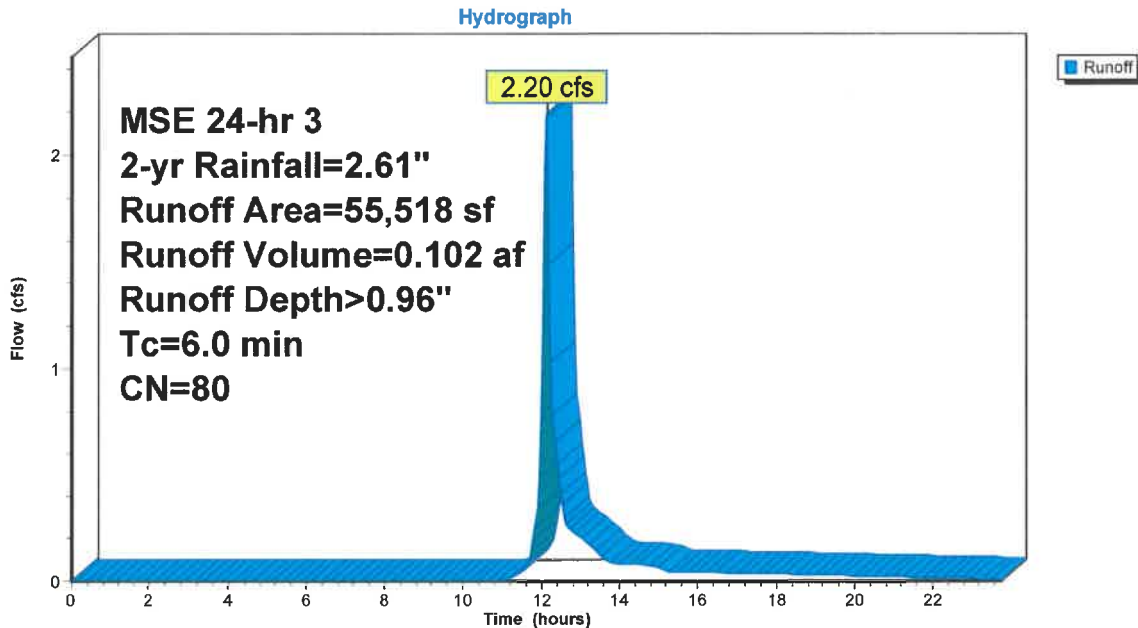
Summary for Subcatchment 3S: Undetained Area

Runoff = 2.20 cfs @ 12.14 hrs, Volume= 0.102 af, Depth> 0.96"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-23.75 hrs, dt= 0.05 hrs
MSE 24-hr 3 2-yr Rainfall=2.61"

Area (sf)	CN	Description
55,518	80	>75% Grass cover, Good, HSG D
55,518		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry, Min. Tc

Subcatchment 3S: Undetained Area

CJE2263R2*MSE 24-hr 3 2-yr Rainfall=2.61"*

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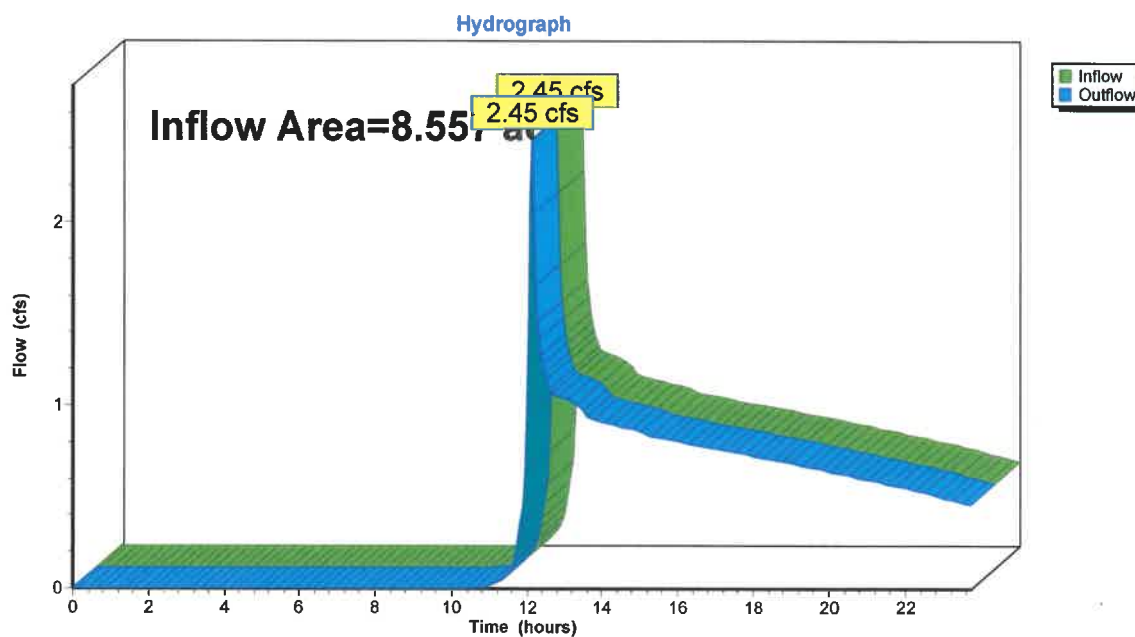
Page 15

Summary for Reach 1R: Proposed Total Runoff

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 8.557 ac, 42.76% Impervious, Inflow Depth > 1.07" for 2-yr event
 Inflow = 2.45 cfs @ 12.15 hrs, Volume= 0.761 af
 Outflow = 2.45 cfs @ 12.15 hrs, Volume= 0.761 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-23.75 hrs, dt= 0.05 hrs

Reach 1R: Proposed Total Runoff

CJE2263R2

MSE 24-hr 3 2-yr Rainfall=2.61"

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Summary for Pond 1P: Pond

Inflow Area = 2.282 ac, 68.85% Impervious, Inflow Depth > 1.71" for 2-yr event
 Inflow = 5.72 cfs @ 12.18 hrs, Volume= 0.325 af
 Outflow = 0.44 cfs @ 13.28 hrs, Volume= 0.289 af, Atten= 92%, Lag= 65.7 min
 Primary = 0.44 cfs @ 13.28 hrs, Volume= 0.289 af
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-23.75 hrs, dt= 0.05 hrs
 Peak Elev= 873.13' @ 13.28 hrs Surf.Area= 8,802 sf Storage= 8,620 cf

Plug-Flow detention time= 253.6 min calculated for 0.288 af (89% of inflow)
 Center-of-Mass det. time= 209.4 min (1,004.2 - 794.8)

Volume	Invert	Avail.Storage	Storage Description
#1	872.00'	35,790 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
872.00	6,504	0	0
873.00	8,550	7,527	7,527
874.00	10,550	9,550	17,077
875.00	12,750	11,650	28,727
875.50	15,500	7,063	35,790

Device	Routing	Invert	Outlet Devices
#1	Primary	871.90'	15.0" Round Culvert L= 235.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 871.90' / 870.50' S= 0.0060 ' /' Cc= 0.900 n= 0.011, Flow Area= 1.23 sf
#2	Device 1	872.00'	4.0" Vert. Orifice/Grate C= 0.600
#3	Device 1	873.00'	3.0" Vert. Orifice/Grate C= 0.600
#4	Device 1	874.00'	24.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#5	Secondary	874.50'	10.0' long x 10.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=0.44 cfs @ 13.28 hrs HW=873.13' (Free Discharge)

- 1=Culvert (Passes 0.44 cfs of 4.61 cfs potential flow)
 2=Orifice/Grate (Orifice Controls 0.41 cfs @ 4.72 fps)
 3=Orifice/Grate (Orifice Controls 0.03 cfs @ 1.21 fps)
 4=Orifice/Grate (Controls 0.00 cfs)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=872.00' (Free Discharge)

- 5=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

CJE2263R2

MSE 24-hr 3 2-yr Rainfall=2.61"

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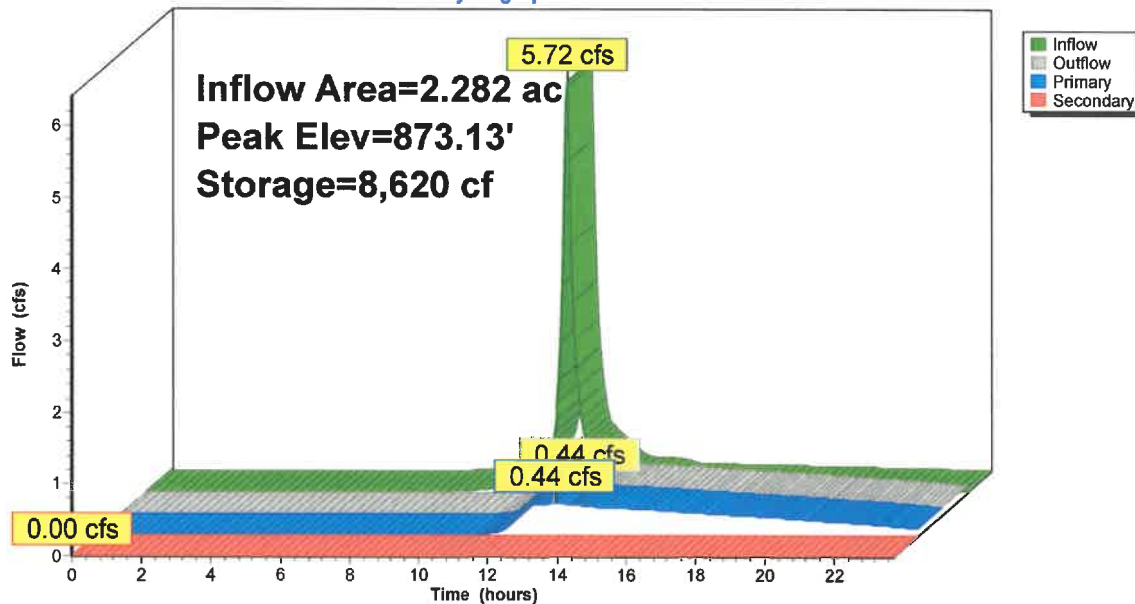
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Pond 1P: Pond

Hydrograph



CJE2263R2

MSE 24-hr 3 2-yr Rainfall=2.61"

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Summary for Pond 2P: Bio Retention

Inflow Area = 5.000 ac, 41.75% Impervious, Inflow Depth > 1.40" for 2-yr event
 Inflow = 7.65 cfs @ 12.31 hrs, Volume= 0.583 af
 Outflow = 0.41 cfs @ 14.13 hrs, Volume= 0.370 af, Atten= 95%, Lag= 108.8 min
 Primary = 0.41 cfs @ 14.13 hrs, Volume= 0.370 af
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-23.75 hrs, dt= 0.05 hrs
 Peak Elev= 873.03' @ 14.13 hrs Surf.Area= 15,387 sf Storage= 17,050 cf

Plug-Flow detention time= 333.7 min calculated for 0.370 af (64% of inflow)
 Center-of-Mass det. time= 255.7 min (1,071.5 - 815.8)

Volume	Invert	Avail.Storage	Storage Description	
#1	869.50'	64,291 cf	Custom Stage Data (Prismatic) Listed below (Recalc)	
Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
869.50	7,000	0.0	0	0
869.51	7,000	33.0	23	23
870.00	7,000	33.0	1,132	1,155
870.01	7,000	27.0	19	1,174
872.00	7,800	27.0	3,976	5,150
872.01	7,800	100.0	78	5,228
873.00	15,150	100.0	11,360	16,588
874.00	23,000	100.0	19,075	35,663
875.00	34,255	100.0	28,628	64,291

Device	Routing	Invert	Outlet Devices
#1	Primary	870.50'	15.0" Round Culvert L= 165.0' CPP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 870.50' / 870.25' S= 0.0015 ' /' Cc= 0.900 n= 0.011 Concrete pipe, straight & clean, Flow Area= 1.23 sf
#2	Device 1	871.20'	6.0" Round Culvert L= 600.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 871.20' / 870.50' S= 0.0012 ' /' Cc= 0.900 n= 0.010, Flow Area= 0.20 sf
#3	Device 1	873.00'	4.0" Vert. Orifice/Grate C= 0.600
#4	Device 1	874.00'	24.0" Horiz. Orifice/Grate C= 0.600 in 36.0" Grate (44% open area) Limited to weir flow at low heads
#5	Secondary	874.50'	10.0' long x 10.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=0.41 cfs @ 14.13 hrs HW=873.03' (Free Discharge)

- 1=Culvert (Passes 0.41 cfs of 5.91 cfs potential flow)
- 2=Culvert (Barrel Controls 0.41 cfs @ 2.09 fps)
- 3=Orifice/Grate (Orifice Controls 0.00 cfs @ 0.59 fps)
- 4=Orifice/Grate (Controls 0.00 cfs)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=869.50' (Free Discharge)

- 5=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

CJE2263R2

MSE 24-hr 3 2-yr Rainfall=2.61"

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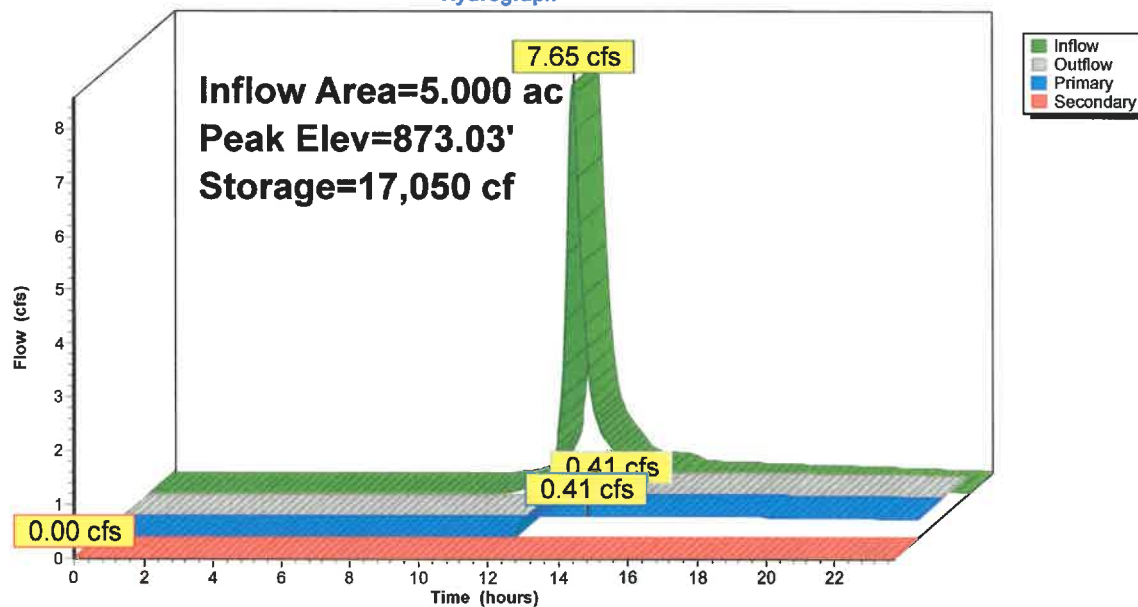
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Pond 2P: Bio Retention

Hydrograph



CJE2263R2**MSE 24-hr 3 10-yr Rainfall=3.77"**

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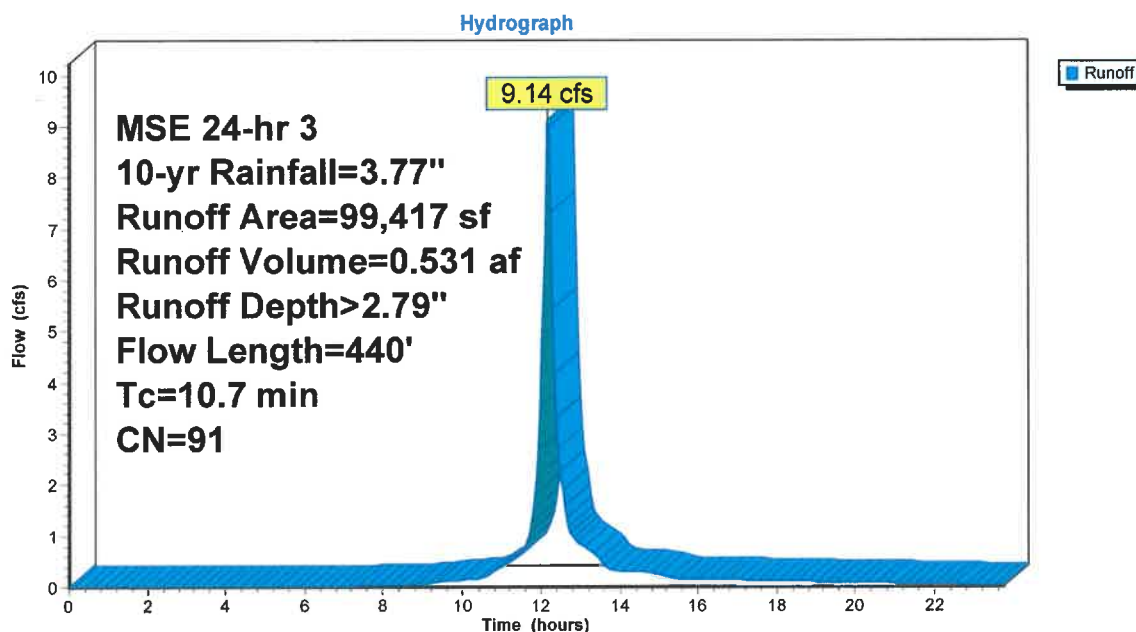
Summary for Subcatchment 1S: Area to pond

Runoff = 9.14 cfs @ 12.18 hrs, Volume= 0.531 af, Depth> 2.79"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-23.75 hrs, dt= 0.05 hrs
MSE 24-hr 3 10-yr Rainfall=3.77"

Area (sf)	CN	Description
30,965	74	>75% Grass cover, Good, HSG C
* 61,948	98	Pavement
* 6,504	98	Pond - NWL
99,417	91	Weighted Average
30,965		31.15% Pervious Area
68,452		68.85% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.9	40	0.0100	0.10		Sheet Flow, A-B Grass: Short n= 0.150 P2= 2.61"
1.6	100	0.0120	1.01		Sheet Flow, B-C Smooth surfaces n= 0.011 P2= 2.61"
2.2	300	0.0026	2.31	1.82	Pipe Channel, C-D 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.013
10.7	440	Total			

Subcatchment 1S: Area to pond

CJE2263R2**MSE 24-hr 3 10-yr Rainfall=3.77"**

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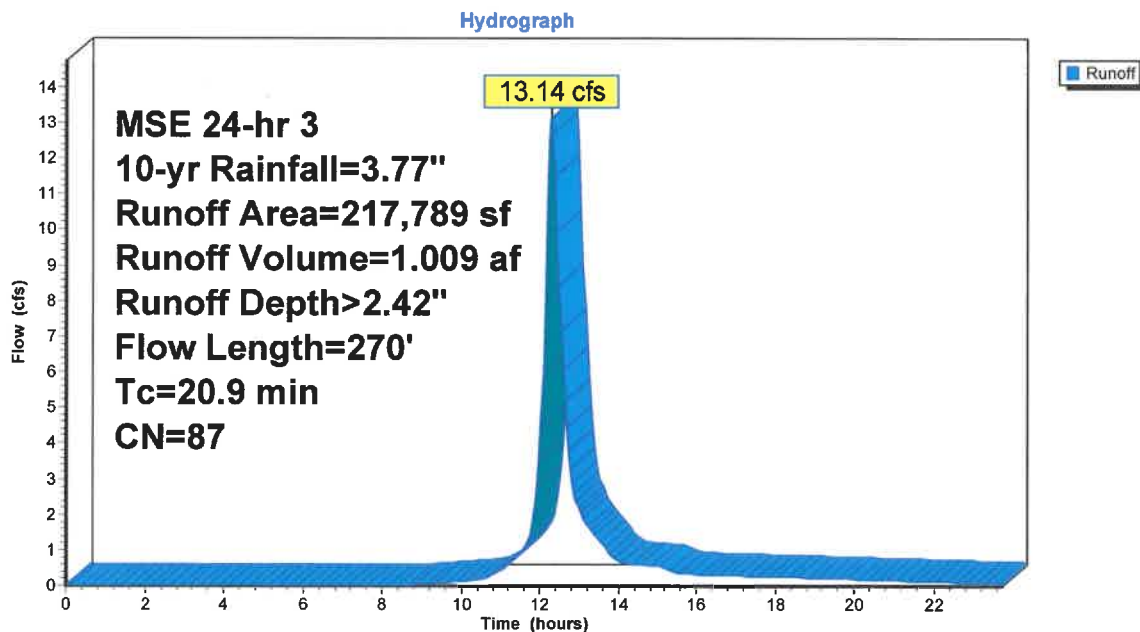
Summary for Subcatchment 2S: Area to Bio-Retention Basin

Runoff = 13.14 cfs @ 12.31 hrs, Volume= 1.009 af, Depth> 2.42"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-23.75 hrs, dt= 0.05 hrs
MSE 24-hr 3 10-yr Rainfall=3.77"

	Area (sf)	CN	Description
*	72,293	98	Proposed Building
	89,677	80	>75% Grass cover, Good, HSG D
*	18,629	98	Pavement
	37,190	77	Woods, Good, HSG D
	217,789	87	Weighted Average
	126,867		58.25% Pervious Area
	90,922		41.75% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.3	150	0.0667	0.12		Sheet Flow, E-F Woods: Light underbrush n= 0.400 P2= 2.61"
0.5	90	0.0330	2.92		Shallow Concentrated Flow, F-G Unpaved Kv= 16.1 fps
0.1	30	0.2333	7.78		Shallow Concentrated Flow, G-H Unpaved Kv= 16.1 fps
20.9	270	Total			

Subcatchment 2S: Area to Bio-Retention Basin

CJE2263R2**MSE 24-hr 3 10-yr Rainfall=3.77"**

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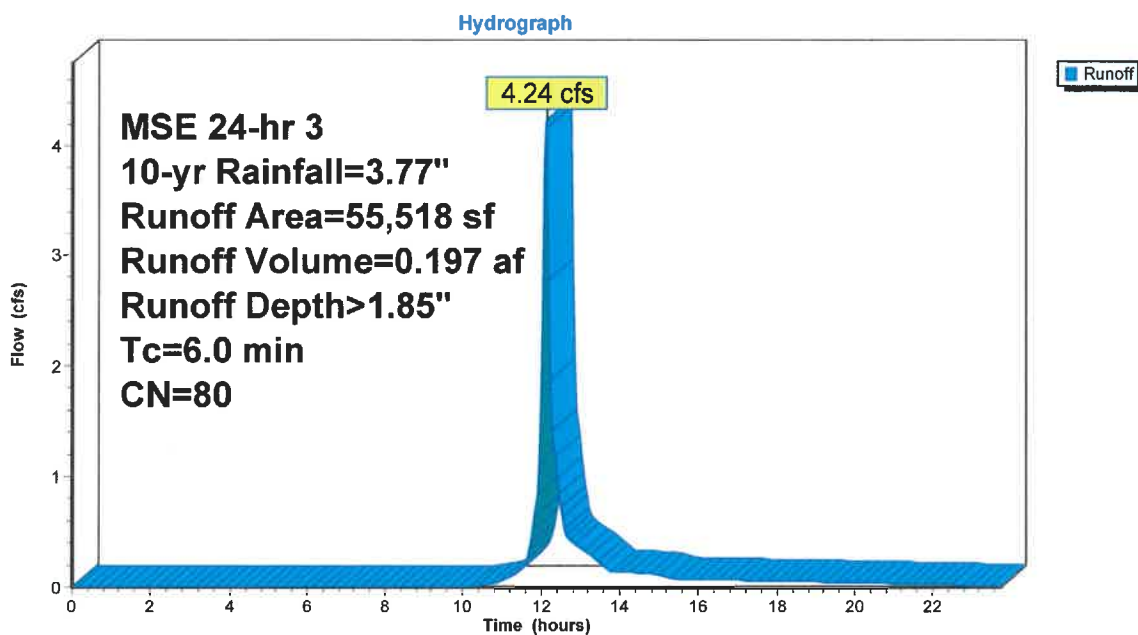
Summary for Subcatchment 3S: Undetained Area

Runoff = 4.24 cfs @ 12.13 hrs, Volume= 0.197 af, Depth> 1.85"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-23.75 hrs, dt= 0.05 hrs
MSE 24-hr 3 10-yr Rainfall=3.77"

Area (sf)	CN	Description
55,518	80	>75% Grass cover, Good, HSG D
55,518		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry, Min. Tc

Subcatchment 3S: Undetained Area

CJE2263R2

MSE 24-hr 3 10-yr Rainfall=3.77"

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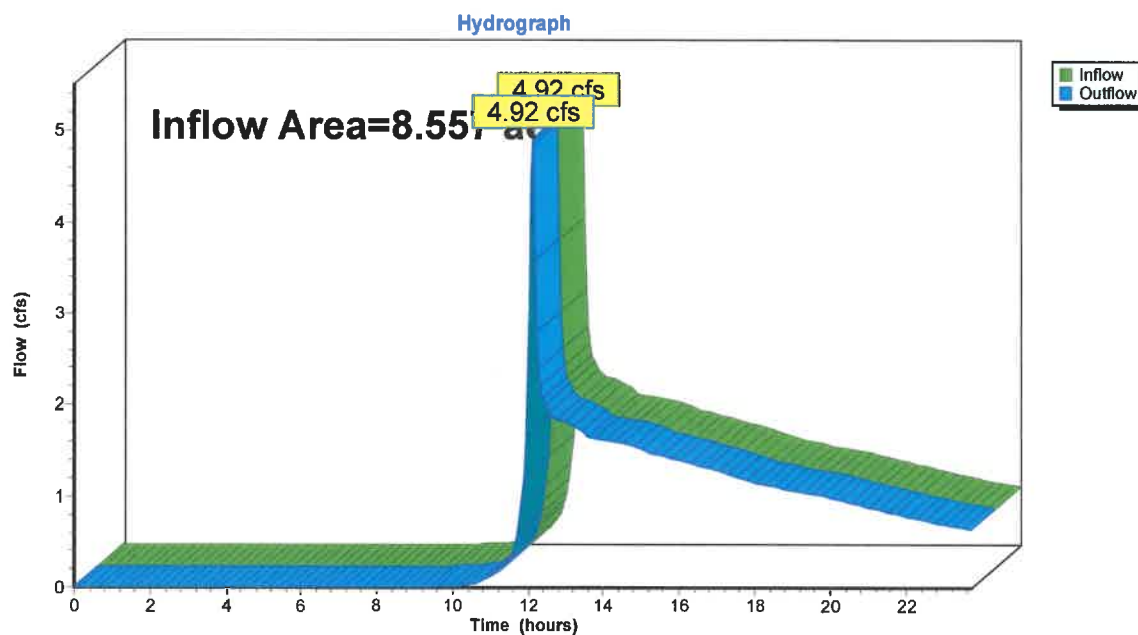
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Summary for Reach 1R: Proposed Total Runoff

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 8.557 ac, 42.76% Impervious, Inflow Depth > 1.79" for 10-yr event
 Inflow = 4.92 cfs @ 12.14 hrs, Volume= 1.278 af
 Outflow = 4.92 cfs @ 12.14 hrs, Volume= 1.278 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-23.75 hrs, dt= 0.05 hrs

Reach 1R: Proposed Total Runoff

CJE2263R2

MSE 24-hr 3 10-yr Rainfall=3.77"

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Summary for Pond 1P: Pond

Inflow Area = 2.282 ac, 68.85% Impervious, Inflow Depth > 2.79" for 10-yr event
 Inflow = 9.14 cfs @ 12.18 hrs, Volume= 0.531 af
 Outflow = 0.71 cfs @ 13.22 hrs, Volume= 0.460 af, Atten= 92%, Lag= 62.5 min
 Primary = 0.71 cfs @ 13.22 hrs, Volume= 0.460 af
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-23.75 hrs, dt= 0.05 hrs
 Peak Elev= 873.72' @ 13.22 hrs Surf.Area= 9,997 sf Storage= 14,237 cf

Plug-Flow detention time= 259.6 min calculated for 0.459 af (86% of inflow)
 Center-of-Mass det. time= 211.3 min (996.3 - 785.1)

Volume	Invert	Avail.Storage	Storage Description
#1	872.00'	35,790 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
872.00	6,504	0	0
873.00	8,550	7,527	7,527
874.00	10,550	9,550	17,077
875.00	12,750	11,650	28,727
875.50	15,500	7,063	35,790

Device	Routing	Invert	Outlet Devices
#1	Primary	871.90'	15.0" Round Culvert L= 235.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 871.90' / 870.50' S= 0.0060 ' S= 0.0060 ' Cc= 0.900 n= 0.011, Flow Area= 1.23 sf
#2	Device 1	872.00'	4.0" Vert. Orifice/Grate C= 0.600
#3	Device 1	873.00'	3.0" Vert. Orifice/Grate C= 0.600
#4	Device 1	874.00'	24.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#5	Secondary	874.50'	10.0' long x 10.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=0.71 cfs @ 13.22 hrs HW=873.72' (Free Discharge)

- 1=Culvert (Passes 0.71 cfs of 5.94 cfs potential flow)
- 2=Orifice/Grate (Orifice Controls 0.52 cfs @ 6.01 fps)
- 3=Orifice/Grate (Orifice Controls 0.18 cfs @ 3.72 fps)
- 4=Orifice/Grate (Controls 0.00 cfs)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=872.00' (Free Discharge)

- 5=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

CJE2263R2

MSE 24-hr 3 10-yr Rainfall=3.77"

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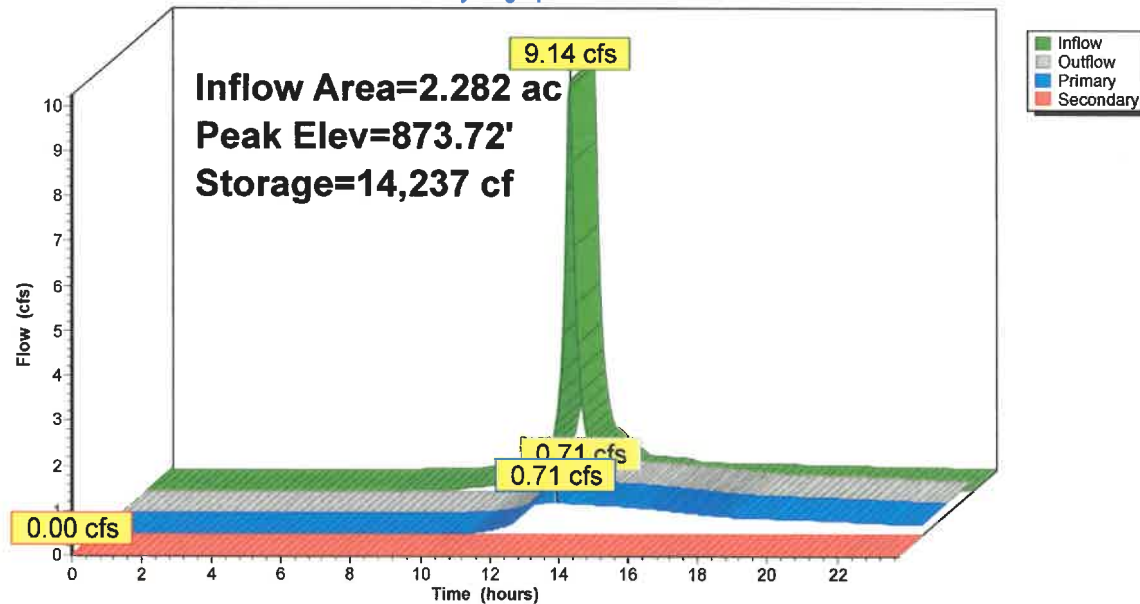
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Pond 1P: Pond

Hydrograph



CJE2263R2**MSE 24-hr 3 10-yr Rainfall=3.77"**

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Summary for Pond 2P: Bio Retention

Inflow Area = 5.000 ac, 41.75% Impervious, Inflow Depth > 2.42" for 10-yr event
 Inflow = 13.14 cfs @ 12.31 hrs, Volume= 1.009 af
 Outflow = 0.79 cfs @ 13.86 hrs, Volume= 0.622 af, Atten= 94%, Lag= 93.0 min
 Primary = 0.79 cfs @ 13.86 hrs, Volume= 0.622 af
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-23.75 hrs, dt= 0.05 hrs
 Peak Elev= 873.74' @ 13.86 hrs Surf.Area= 20,965 sf Storage= 29,965 cf

Plug-Flow detention time= 313.7 min calculated for 0.622 af (62% of inflow)
 Center-of-Mass det. time= 238.5 min (1,043.5 - 805.0)

Volume	Invert	Avail.Storage	Storage Description	
#1	869.50'	64,291 cf	Custom Stage Data (Prismatic) Listed below (Recalc)	
Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
869.50	7,000	0.0	0	0
869.51	7,000	33.0	23	23
870.00	7,000	33.0	1,132	1,155
870.01	7,000	27.0	19	1,174
872.00	7,800	27.0	3,976	5,150
872.01	7,800	100.0	78	5,228
873.00	15,150	100.0	11,360	16,588
874.00	23,000	100.0	19,075	35,663
875.00	34,255	100.0	28,628	64,291

Device	Routing	Invert	Outlet Devices
#1	Primary	870.50'	15.0" Round Culvert L= 165.0' CPP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 870.50' / 870.25' S= 0.0015 ' /' Cc= 0.900 n= 0.011 Concrete pipe, straight & clean, Flow Area= 1.23 sf
#2	Device 1	871.20'	6.0" Round Culvert L= 600.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 871.20' / 870.50' S= 0.0012 ' /' Cc= 0.900 n= 0.010, Flow Area= 0.20 sf
#3	Device 1	873.00'	4.0" Vert. Orifice/Grate C= 0.600
#4	Device 1	874.00'	24.0" Horiz. Orifice/Grate C= 0.600 in 36.0" Grate (44% open area) Limited to weir flow at low heads
#5	Secondary	874.50'	10.0' long x 10.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=0.79 cfs @ 13.86 hrs HW=873.74' (Free Discharge)

- 1=Culvert (Passes 0.79 cfs of 7.15 cfs potential flow)
- 2=Culvert (Barrel Controls 0.48 cfs @ 2.43 fps)
- 3=Orifice/Grate (Orifice Controls 0.32 cfs @ 3.65 fps)
- 4=Orifice/Grate (Controls 0.00 cfs)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=869.50' (Free Discharge)

- 5=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

CJE2263R2

MSE 24-hr 3 10-yr Rainfall=3.77"

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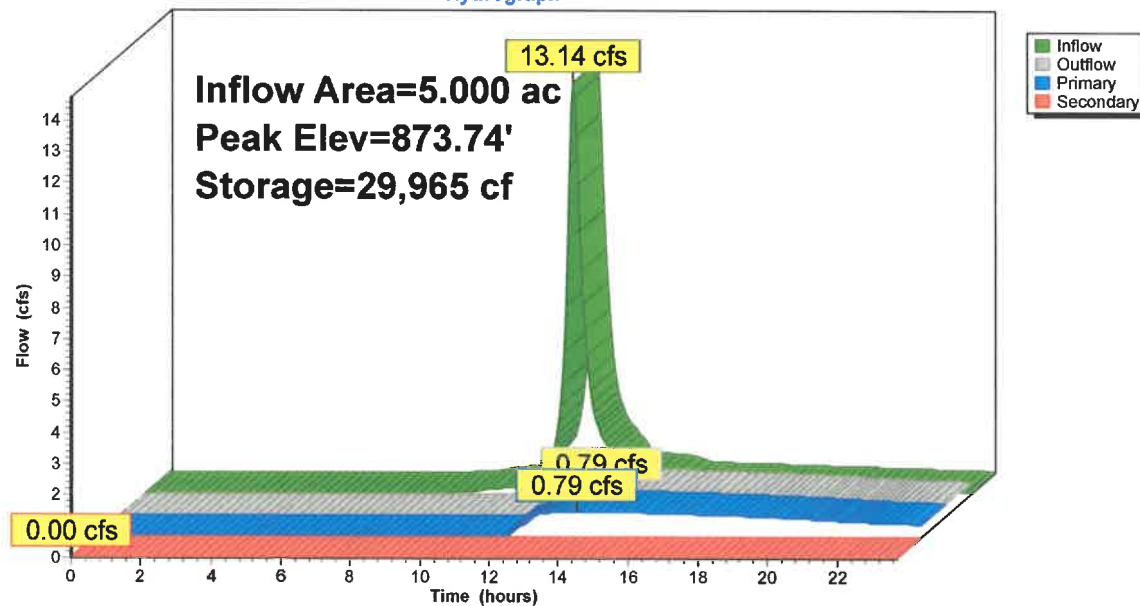
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Pond 2P: Bio Retention

Hydrograph



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MSE 24-hr 3 100-yr Rainfall=6.38"

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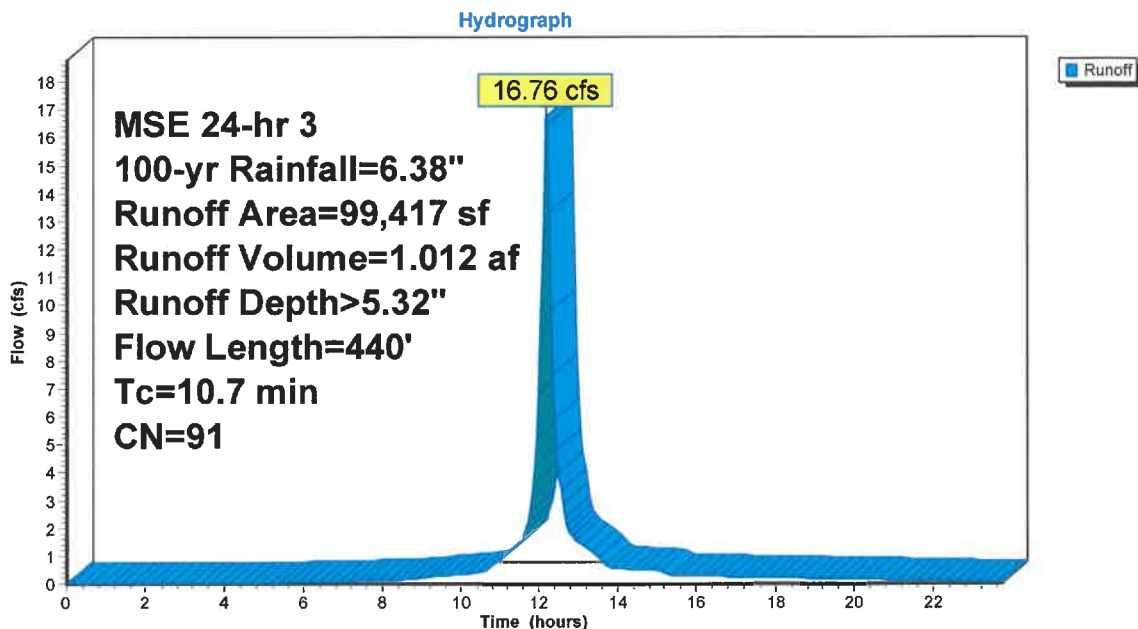
Summary for Subcatchment 1S: Area to pond

Runoff = 16.76 cfs @ 12.18 hrs, Volume= 1.012 af, Depth> 5.32"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-23.75 hrs, dt= 0.05 hrs
MSE 24-hr 3 100-yr Rainfall=6.38"

Area (sf)	CN	Description
30,965	74	>75% Grass cover, Good, HSG C
* 61,948	98	Pavement
* 6,504	98	Pond - NWL
99,417	91	Weighted Average
30,965		31.15% Pervious Area
68,452		68.85% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.9	40	0.0100	0.10		Sheet Flow, A-B Grass: Short n= 0.150 P2= 2.61"
1.6	100	0.0120	1.01		Sheet Flow, B-C Smooth surfaces n= 0.011 P2= 2.61"
2.2	300	0.0026	2.31	1.82	Pipe Channel, C-D 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.013
10.7	440	Total			

Subcatchment 1S: Area to pond

CJE2263R2**MSE 24-hr 3 100-yr Rainfall=6.38"**

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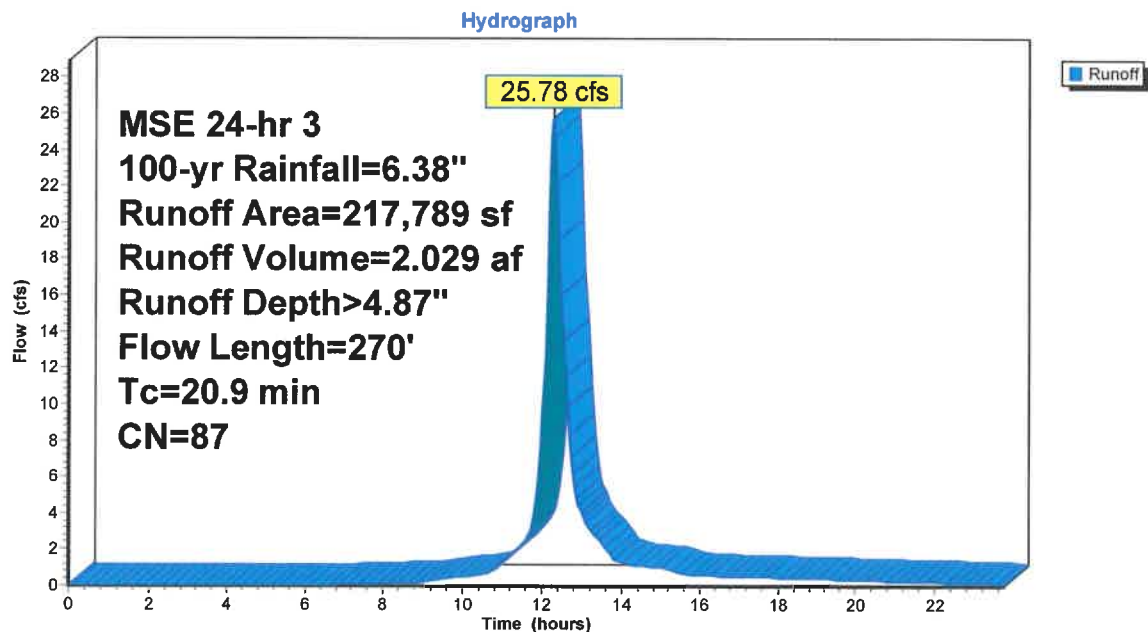
Summary for Subcatchment 2S: Area to Bio-Retention Basin

Runoff = 25.78 cfs @ 12.30 hrs, Volume= 2.029 af, Depth> 4.87"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-23.75 hrs, dt= 0.05 hrs
MSE 24-hr 3 100-yr Rainfall=6.38"

	Area (sf)	CN	Description
*	72,293	98	Proposed Building
	89,677	80	>75% Grass cover, Good, HSG D
*	18,629	98	Pavement
	37,190	77	Woods, Good, HSG D
	217,789	87	Weighted Average
	126,867		58.25% Pervious Area
	90,922		41.75% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.3	150	0.0667	0.12		Sheet Flow, E-F Woods: Light underbrush n= 0.400 P2= 2.61"
0.5	90	0.0330	2.92		Shallow Concentrated Flow, F-G Unpaved Kv= 16.1 fps
0.1	30	0.2333	7.78		Shallow Concentrated Flow, G-H Unpaved Kv= 16.1 fps
20.9	270	Total			

Subcatchment 2S: Area to Bio-Retention Basin

CJE2263R2**MSE 24-hr 3 100-yr Rainfall=6.38"**

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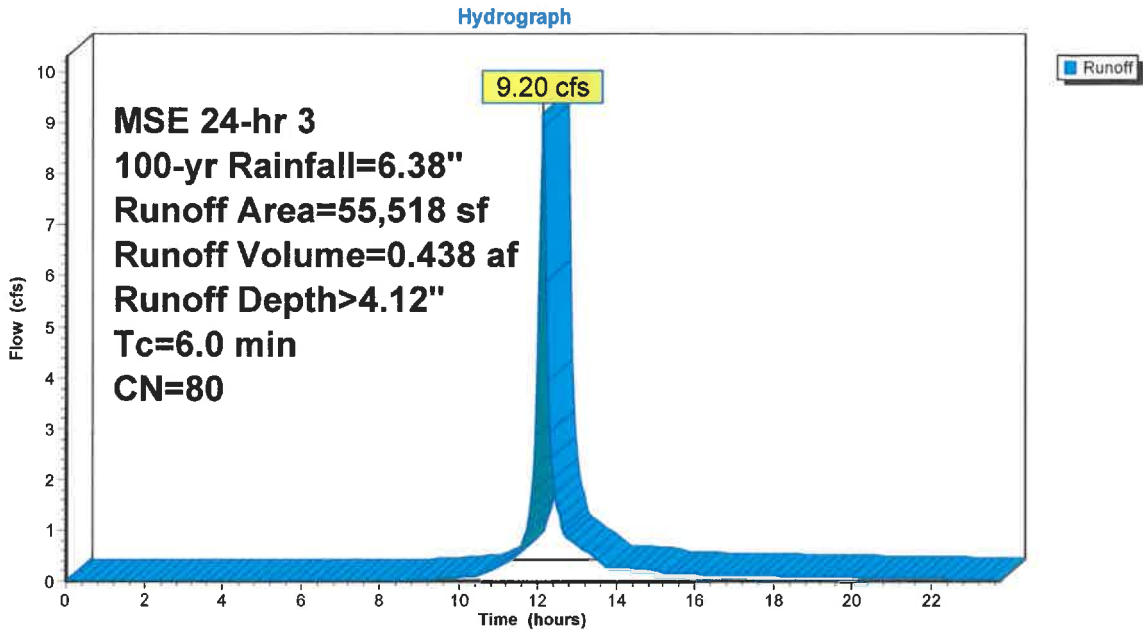
Summary for Subcatchment 3S: Undetained Area

Runoff = 9.20 cfs @ 12.13 hrs, Volume= 0.438 af, Depth> 4.12"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-23.75 hrs, dt= 0.05 hrs
MSE 24-hr 3 100-yr Rainfall=6.38"

Area (sf)	CN	Description
55,518	80	>75% Grass cover, Good, HSG D
55,518		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry, Min. Tc

Subcatchment 3S: Undetained Area

CJE2263R2*MSE 24-hr 3 100-yr Rainfall=6.38"*

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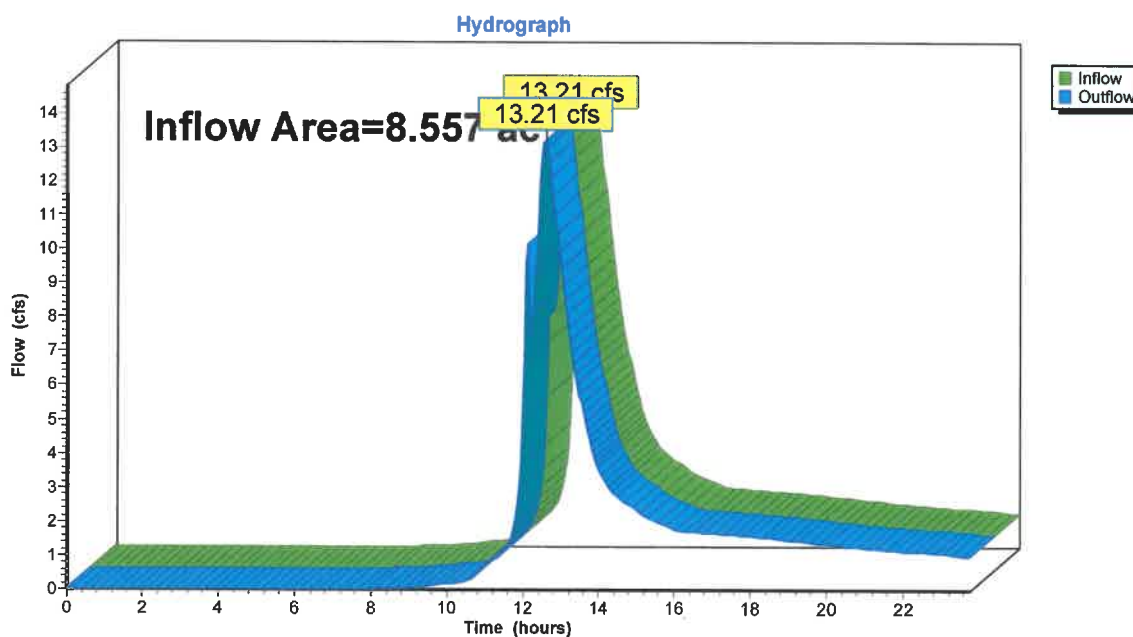
Page 31

Summary for Reach 1R: Proposed Total Runoff

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 8.557 ac, 42.76% Impervious, Inflow Depth > 3.95" for 100-yr event
 Inflow = 13.21 cfs @ 12.57 hrs, Volume= 2.819 af
 Outflow = 13.21 cfs @ 12.57 hrs, Volume= 2.819 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-23.75 hrs, dt= 0.05 hrs

Reach 1R: Proposed Total Runoff

CJE2263R2**MSE 24-hr 3 100-yr Rainfall=6.38"**

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Summary for Pond 1P: Pond

Inflow Area = 2.282 ac, 68.85% Impervious, Inflow Depth > 5.32" for 100-yr event
 Inflow = 16.76 cfs @ 12.18 hrs, Volume= 1.012 af
 Outflow = 6.45 cfs @ 12.39 hrs, Volume= 0.892 af, Atten= 62%, Lag= 12.4 min
 Primary = 6.45 cfs @ 12.39 hrs, Volume= 0.892 af
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-23.75 hrs, dt= 0.05 hrs
 Peak Elev= 874.42' @ 12.39 hrs Surf.Area= 11,470 sf Storage= 21,683 cf

Plug-Flow detention time= 190.8 min calculated for 0.890 af (88% of inflow)
 Center-of-Mass det. time= 146.3 min (918.9 - 772.6)

Volume	Invert	Avail.Storage	Storage Description
#1	872.00'	35,790 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
872.00	6,504	0	0
873.00	8,550	7,527	7,527
874.00	10,550	9,550	17,077
875.00	12,750	11,650	28,727
875.50	15,500	7,063	35,790

Device	Routing	Invert	Outlet Devices
#1	Primary	871.90'	15.0" Round Culvert L= 235.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 871.90' / 870.50' S= 0.0060 ' S= 0.0060 ' Cc= 0.900 n= 0.011, Flow Area= 1.23 sf
#2	Device 1	872.00'	4.0" Vert. Orifice/Grate C= 0.600
#3	Device 1	873.00'	3.0" Vert. Orifice/Grate C= 0.600
#4	Device 1	874.00'	24.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#5	Secondary	874.50'	10.0' long x 10.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=6.42 cfs @ 12.39 hrs HW=874.42' (Free Discharge)

- 1=Culvert (Passes 6.42 cfs of 6.91 cfs potential flow)
 2=Orifice/Grate (Orifice Controls 0.63 cfs @ 7.22 fps)
 3=Orifice/Grate (Orifice Controls 0.27 cfs @ 5.47 fps)
 4=Orifice/Grate (Weir Controls 5.52 cfs @ 2.11 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=872.00' (Free Discharge)

- 5=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

CJE2263R2

MSE 24-hr 3 100-yr Rainfall=6.38"

Prepared by {enter your company name here}

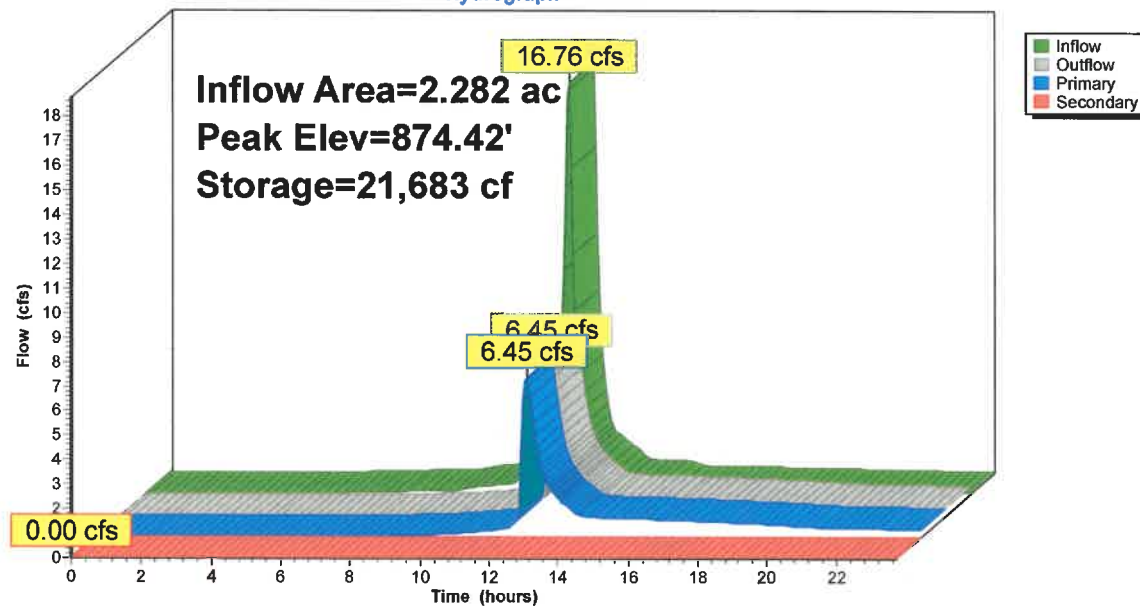
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Pond 1P: Pond

Hydrograph



CJE2263R2**MSE 24-hr 3 100-yr Rainfall=6.38"**

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Summary for Pond 2P: Bio Retention

Inflow Area = 5.000 ac, 41.75% Impervious, Inflow Depth > 4.87" for 100-yr event
 Inflow = 25.78 cfs @ 12.30 hrs, Volume= 2.029 af
 Outflow = 8.01 cfs @ 12.72 hrs, Volume= 1.489 af, Atten= 69%, Lag= 24.8 min
 Primary = 8.01 cfs @ 12.72 hrs, Volume= 1.489 af
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-23.75 hrs, dt= 0.05 hrs
 Peak Elev= 874.49' @ 12.72 hrs Surf.Area= 28,490 sf Storage= 48,222 cf

Plug-Flow detention time= 208.9 min calculated for 1.489 af (73% of inflow)
 Center-of-Mass det. time= 144.3 min (935.5 - 791.2)

Volume	Invert	Avail.Storage	Storage Description	
#1	869.50'	64,291 cf	Custom Stage Data (Prismatic) Listed below (Recalc)	
Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
869.50	7,000	0.0	0	0
869.51	7,000	33.0	23	23
870.00	7,000	33.0	1,132	1,155
870.01	7,000	27.0	19	1,174
872.00	7,800	27.0	3,976	5,150
872.01	7,800	100.0	78	5,228
873.00	15,150	100.0	11,360	16,588
874.00	23,000	100.0	19,075	35,663
875.00	34,255	100.0	28,628	64,291

Device	Routing	Invert	Outlet Devices
#1	Primary	870.50'	15.0" Round Culvert L= 165.0' CPP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 870.50' / 870.25' S= 0.0015 ' /' Cc= 0.900 n= 0.011 Concrete pipe, straight & clean, Flow Area= 1.23 sf
#2	Device 1	871.20'	6.0" Round Culvert L= 600.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 871.20' / 870.50' S= 0.0012 ' /' Cc= 0.900 n= 0.010, Flow Area= 0.20 sf
#3	Device 1	873.00'	4.0" Vert. Orifice/Grate C= 0.600
#4	Device 1	874.00'	24.0" Horiz. Orifice/Grate C= 0.600 in 36.0" Grate (44% open area) Limited to weir flow at low heads
#5	Secondary	874.50'	10.0' long x 10.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=8.00 cfs @ 12.72 hrs HW=874.49' (Free Discharge)

- 1=Culvert (Passes 8.00 cfs of 8.25 cfs potential flow)
- 2=Culvert (Barrel Controls 0.54 cfs @ 2.74 fps)
- 3=Orifice/Grate (Orifice Controls 0.48 cfs @ 5.53 fps)
- 4=Orifice/Grate (Weir Controls 6.98 cfs @ 2.28 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=869.50' (Free Discharge)

- 5=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

CJE2263R2

MSE 24-hr 3 100-yr Rainfall=6.38"

Prepared by {enter your company name here}

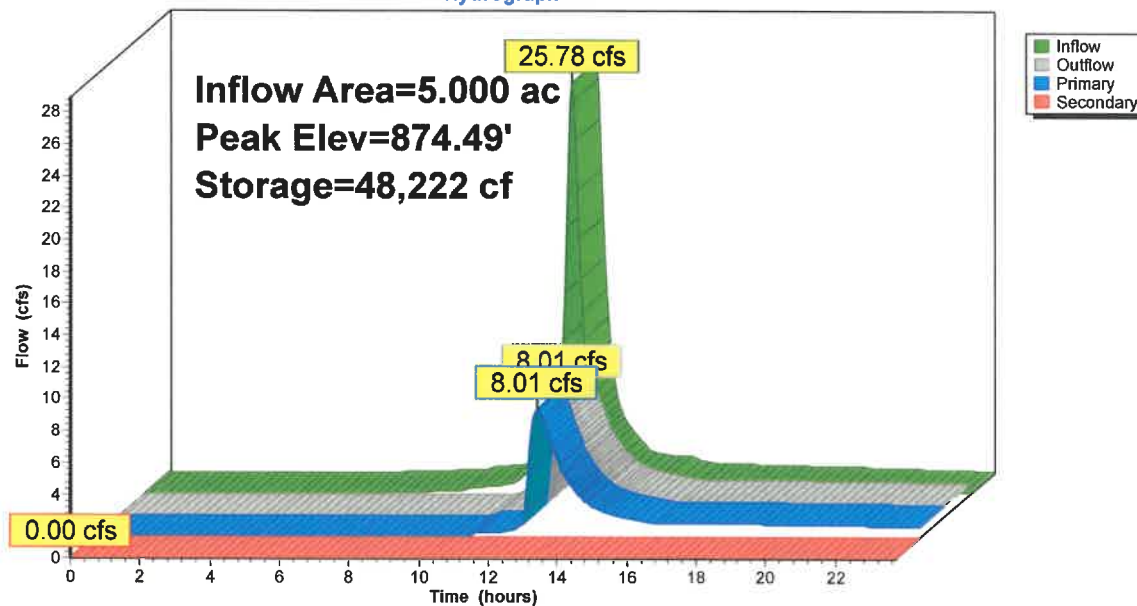
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Pond 2P: Bio Retention

Hydrograph



Data file name: \\192.168.25.46\Home\WinSLAMM\CJE2263R1.mdb
WinSLAMM Version 10.5.0
Rain file name: C:\WinSLAMM Files\Rain Files\WisReg - Milwaukee WI 1969.RAN
Particulate Solids Concentration file name: C:\WinSLAMM Files\W10.1 WI_AVG01.pscx
Runoff Coefficient file name: C:\WinSLAMM Files\W1_SL06 Dec06.rsvx
Residential Street Delivery file name: C:\WinSLAMM Files\W1_Res and Other Urban Dec06.std
Institutional Street Delivery file name: C:\WinSLAMM Files\W1_Com Inst Indust Dec06.std
Commercial Street Delivery file name: C:\WinSLAMM Files\W1_Com Inst Indust Dec06.std
Industrial Street Delivery file name: C:\WinSLAMM Files\W1_Com Inst Indust Dec06.std
Other Urban Street Delivery file name: C:\WinSLAMM Files\W1_Res and Other Urban Dec06.std
Freeway Street Delivery file name: C:\WinSLAMM Files\Freeway Dec06.std
Apply Street Delivery Files to Adjust the After Event Load Street Dirt Mass Balance: False
Pollutant Relative Concentration file name: C:\WinSLAMM Files\W1_GEO03.ppdx
Source Area PSD and Peak to Average Flow Ratio File: C:\WinSLAMM Files\NURP Source Area PSD Files.csv
Cost Data file name:
If Other Device Pollutant Load Reduction Values = 1, Off-site Pollutant Loads are Removed from Pollutant Load % Reduction calculations
Seed for random number generator: -42
Study period starting date: 01/05/69 Study period ending date: 12/31/69
Start of Winter Season: 12/02 End of Winter Season: 03/12
Date: 11-02-2023 Time: 10:32:19
Site information:

LU# 1 - Commercial: Subcatchment 1 Total area (ac): 2.282
13 - Paved Parking 1: 1.422 ac. Connected PSD File: C:\WinSLAMM Files\NURP.cpz Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
45 - Large Landscaped Areas 1: 0.711 ac. Normal Silty PSD File: C:\WinSLAMM Files\NURP.cpz Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
70 - Water Body Areas: 0.149 ac. PSD File: Source Area PSD File:

LU# 2 - Commercial: Subcatchment 2 Total area (ac): 5.000
1 - Roofs 1: 1.660 ac. Flat Connected PSD File: C:\WinSLAMM Files\NURP.cpz Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
13 - Paved Parking 1: 0.428 ac. Connected PSD File: C:\WinSLAMM Files\NURP.cpz Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
45 - Large Landscaped Areas 1: 2.059 ac. Normal Silty PSD File: C:\WinSLAMM Files\NURP.cpz Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
57 - Undeveloped Areas 1: 0.853 ac. Normal Silty PSD File: C:\WinSLAMM Files\NURP.cpz Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

LU# 3 - Commercial: Subcatchment 3 Total area (ac): 1.275
45 - Large Landscaped Areas 1: 1.275 ac. Normal Silty PSD File: C:\WinSLAMM Files\NURP.cpz Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

Control Practice 1: Wet Detention Pond CP# 1 (DS) - DS Wet Pond # 1

Particle Size Distribution file name: Not needed - calculated by program
Initial stage elevation (ft): 6
Peak to Average Flow Ratio: 3.8
Maximum flow allowed into pond (cfs): No maximum value entered
Outlet Characteristics:

Outlet type: Orifice 1

1. Orifice diameter (ft): 0.33
2. Number of orifices: 1
3. Invert elevation above datum (ft): 6

Outlet type: Orifice 2

1. Orifice diameter (ft): 0.25
2. Number of orifices: 1
3. Invert elevation above datum (ft): 7

Outlet type: Broad Crested Weir

1. Weir crest length (ft): 10
2. Weir crest width (ft): 10
3. Height from datum to bottom of weir opening: 8.5

Outlet type: Vertical Stand Pipe

1. Stand pipe diameter (ft): 24
2. Stand pipe height above datum (ft): 8

Pond stage and surface area

Entry Number	Stage (ft)	Pond Area (acres)	Natural Seepage (in/hr)	Other Outflow (cfs)
0	0.00	0.0000	0.00	0.00
1	1.00	0.0240	0.00	0.00
2	2.00	0.0310	0.00	0.00
3	3.00	0.0400	0.00	0.00
4	4.00	0.0530	0.00	0.00
5	5.00	0.0700	0.00	0.00
6	6.00	0.1490	0.00	0.00
7	7.00	0.1960	0.00	0.00
8	8.00	0.2420	0.00	0.00
9	9.00	0.2930	0.00	0.00
10	9.50	0.3560	0.00	0.00

Control Practice 2: Biofilter CP# 1 (DS) - DS Biofilters # 1

9.c

1. Top area (square feet) = 34255
2. Bottom area (square feet) = 7000
3. Depth (ft): 5.5
4. Biofilter width (ft) - for Cost Purposes Only: 30
5. Infiltration rate (in/hr) = 0.04
6. Random infiltration rate generation? No
7. Infiltration rate fraction (side): 0.01
8. Infiltration rate fraction (bottom): 1
9. Depth of biofilter that is rock filled (ft) 1
10. Porosity of rock filled volume = 0.33
11. Engineered soil infiltration rate: 3.6
12. Engineered soil depth (ft) = 1.5
13. Engineered soil porosity = 0.27
14. Percent solids reduction due to flow through engineered soil = 80
15. Biofilter peak to average flow ratio = 3.8
16. Number of biofiltration control devices = 1
17. Particle size distribution file: Not needed - calculated by program
18. Initial water surface elevation (ft): 0

Soil Data Soil Type Fraction in Eng. Soil

User-Defined Media Type 1.000

Biofilter Outlet/Discharge Characteristics:

Outlet type: Broad Crested Weir

1. Weir crest length (ft): 10
2. Weir crest width (ft): 10
3. Height of datum to bottom of weir opening: 5

Outlet type: Vertical Stand Pipe

1. Stand pipe diameter (ft): 2
2. Stand pipe height above datum (ft): 4.5

Outlet type: Surface Discharge Pipe

1. Surface discharge pipe outlet diameter (ft): 0.33
2. Pipe invert elevation above datum (ft): 3.5
3. Number of surface pipe outlets: 1

Outlet type: Drain Tile/Underdrain

1. Underdrain outlet diameter (ft): 0.5
2. Invert elevation above datum (ft): 1
3. Number of underdrain outlets: 1

SLAMM for Windows Version 10.5.0
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Data file name: \\192.168.25.46\Home\WinSLAMM\CJE2263R1.mdb
WinSLAMM Version 10.5.0
Rain file name: C:\WinSLAMM Files\Rain Files\WisReg - Milwaukee WI 1969.RAN
Particulate Solids Concentration file name: C:\WinSLAMM Files\w10.1 WI_AVG01.pscx
Runoff Coefficient file name: C:\WinSLAMM Files\WI_SL06 Dec06.rvx
Pollutant Relative Concentration file name: C:\WinSLAMM Files\WI_GEO03.ppdx
Residential Street Delivery file name: C:\WinSLAMM Files\WI_Res and Other Urban Dec06.std
Institutional Street Delivery file name: C:\WinSLAMM Files\WI_Com Inst Indust Dec06.std
Commercial Street Delivery file name: C:\WinSLAMM Files\WI_Com Inst Indust Dec06.std
Industrial Street Delivery file name: C:\WinSLAMM Files\WI_Com Inst Indust Dec06.std
Other Urban Street Delivery file name: C:\WinSLAMM Files\WI_Res and Other Urban Dec06.std
Freeway Street Delivery file name: C:\WinSLAMM Files\Freeway Dec06.std
Apply Street Delivery Files to Adjust the After Event Load Street Dirt Mass Balance: False
Source Area PSD and Peak to Average Flow Ratio File: C:\WinSLAMM Files\NURP Source Area PSD Files.csv
Cost Data file name:
If Other Device Pollutant Load Reduction Values = 1, Off-site Pollutant Loads are Removed from Pollutant Load % Reduction calculations
Seed for random number generator: -42
Study period starting date: 01/05/69 Study period ending date: 12/31/69
Start of Winter Season: 12/02 End of Winter Season: 03/12
Model Run Start Date: 01/05/69 Model Run End Date: 12/31/69
Date of run: 11-02-2023 Time of run: 10:28:52
Total Area Modeled (acres): 8.557
Years in Model Run: 0.99

	Runoff Volume (cu ft)	Percent Runoff Volume Reduction	Particulate Solids Conc. (mg/L)	Particulate Solids Yield (lbs)	Percent Particulate Solids Reduction
Total of all Land Uses without Controls:	327408	-	87.18	1782	-
Outfall Total with Controls:	253366	22.61%	22.36	353.7	80.15%
Annualized Total After Outfall Controls:	256884			358.6	

ORDINANCE NO. 23-8

SHORELAND & FLOODPLAIN ZONING MAP AMENDMENT - TOWN OF GRAFTON,
SECTION 31

The Ozaukee County Board of Supervisors does ordain that the County Shoreland and Floodplain Zoning Map be amended in accordance with Section 7.1300 of the Ozaukee County Code of Ordinances to indicate a Zoning Classification Change from Shoreland-Wetland to Shoreland.

Affecting the following described real estate: **Town of Grafton,**

- a) Part of the NE ¼ of the NE ¼, Section 31 T10N-R22E, Lot 1 CSM #4120 Doc. 1105888;
Tax Key #06-031-01-021.00; 391 Port Washington Road, Grafton Wisconsin.

This Ordinance shall take effect upon enactment and publication.

Dated at Port Washington, Wisconsin, this 3rd day of April 2024.

SUMMARY: Shoreland and Floodplain Zoning Map Amendment, Town of Grafton-Section 31.

VOTE REQUIRED: Majority

03/07/24

Natural Resources Committee

APPROVED

RESULT: **APPROVED [UNANIMOUS]**
MOVER: T. Matera, Supervisor District 7
SECONDER: K. Schoessow, Supervisor District 23
AYES: Holyoke, Jobs, Ross, Matera, Schoessow

NATURAL RESOURCES COMMITTEE

Natural Resources Committee
AGENDA INFORMATION SHEET

AGENDA DATE:	April 3, 2024
DEPARTMENT:	Land and Water Management
DIRECTOR:	Katie Vogeler
PREPARER:	Geoff Schramm

Agenda Summary Shoreland & Floodplain Zoning Map Amendment - Town of Grafton, Section 31

BACKGROUND INFORMATION: Request by Robert Bach, as Agent for G3 Development and QTIP Trust A as owners, to petition the Natural Resources Committee for a Zoning Classification change Shoreland-Wetland to Shoreland in the Shoreland District, per Section 7.1300 of the Ozaukee County Shoreland & Floodplain Zoning Ordinance, to reflect the results of a wetland delineation report and survey; and to allow the rezoning of the proposed road crossing thru the wetland areas.

Affecting the following described real estates: **Town of Grafton-**

- a) Proposed P2 Business Condos - Part of the NE ¼ of the NE ¼, Section 31 T10N-R22E, Lot 1 CSM #4120 Doc. 1105888; Tax Key #06-031-01-021.00; 391 Port Washington Road, Grafton Wisconsin.

FISCAL IMPACT: N/A FUNDING SOURCE: N/A

RECOMMENDED MOTION: Site a) Approval to amend the Shoreland & Floodplain Zoning Map to reflect the change in the wetland boundary as a result of the survey completed by Bates Soil & Water Testing Services LLC, dated June 23, 2020.

ATTACHMENTS:

- Ord T-Grft Sec 31 Sup Doc (PDF)



LAND AND WATER MANAGEMENT DEPARTMENT

Katie Vogeler, Director
 Edward J. Pfister, Sanitation & Zoning Coordinator
 Geoff Schramm, Land & Water Coordinator
www.co.ozaukee.wi.us

Staff Report – Natural Resources Committee Hearing – March 7, 2024

Rezoning Application by Robert Bach for G3 Development and QTIP Trust A – three (3) properties as follows –

- A) Proposed P2 Business Condos - Town of Grafton T10N-R22E, Part of the NE ¼ of the NE ¼ of Section 31, Lot 1 CSM #4120 Doc. 1105888, Parcel Key #06-031-01-021.00, located at 391 Port Washington Road.

~~B) Proposed Winding Brook Subdivision –~~

- ~~a. Town of Grafton T10N-R22E, Part of the SE ¼ of the NE ¼ Section 31, Lot 2 CSM #4120 doc. 1105888, Parcel Key #06-031-04-010.00, located at 351 Port Washington Road.~~
- ~~b. Town of Grafton T10N-R22E, Part of the NW ¼ and the NE ¼ and the SW ¼ and the SE ¼ of SE ¼ Section 31, Parcel Key #06-031-13-002.00, located south of 351 Port Washington Road.~~

Requests and findings:

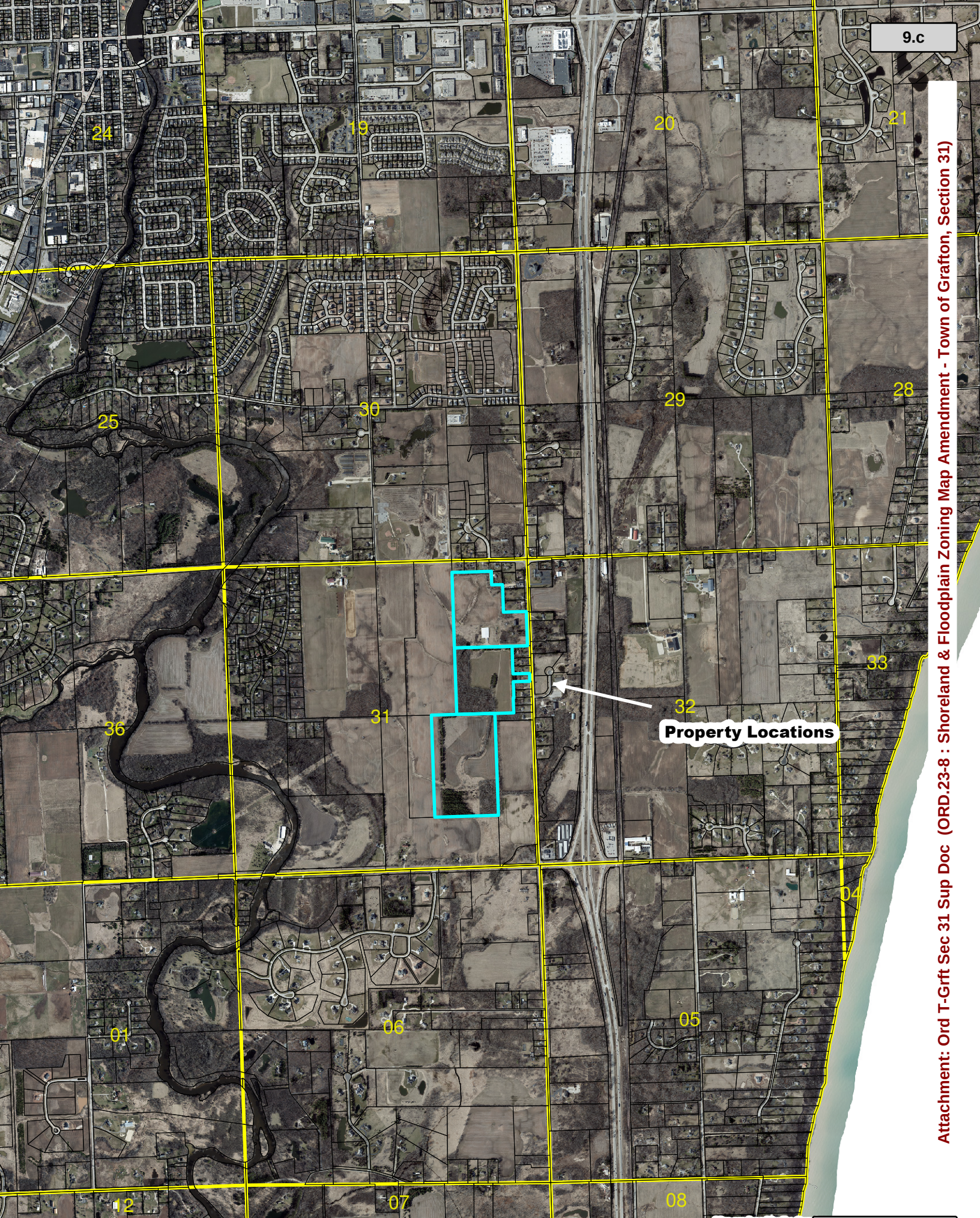
- 1) *To amend the wetland boundary on the Ozaukee County Zoning Map #44 based on the wetland delineation reports for the above referenced properties.*
 - a) Bates Soil & Water Testing Services LLC conducted the wetland delineation for the proposed P2 Business Condos parcel.
 - b) Heartland Ecological Group Inc. conducted the assured wetland delineation for the proposed Winding Brook Subdivision two parcels.
- 2) *To amend the Ozaukee County Zoning Map #44 to allow the filling of the wetlands areas to allow road crossings.*
- 3) *Erin Cox, DNR Water Management Specialist, issued the permit approval dated December 6, 2023, under the wetland statewide general permit to allow the wetland disturbance as described above to occur.*
- 4) *Michelle Soderling, DNR Water management Specialist, issued the permit approval dated January 19, 2024 under the wetland statewide general permit to allow the wetland disturbance as described above to occur.*
- 5) *Per email from Dale Rezabek, DNR Water Management Specialist – Shoreland Specialist, dated January 31, 2024 – Mr. Rezabek requested that “the committee that when they review the rezone case, that they should only rezone the project area from the shoreland-wetland district to uplands if the applicant can demonstrate to the satisfaction of the committee that there will be no significant adverse effects on wetlands, according to the ordinance elements in Section 7.1305 B. 1. Thru 7.” (of the Ozaukee County Shoreland and Floodplain Zoning Ordinance).*

- a. Section 7.1305 B. A wetland, or a portion thereof, in the shoreland-wetland district shall not be rezoned if the proposed rezoning may result in a significant adverse impact upon any of the following:
 - i. Storm and flood water storage capacity
 - ii. Preservation of dry season stream flow, the discharge of groundwater to a wetland, the recharge of groundwater from a wetland to another area, or the flow of groundwater through a wetland.
 - iii. Filtering or storage of the sediments, nutrients, heavy metals, or organic compounds that would otherwise drain into navigable streams.
 - iv. Shoreline protection against soil erosion.
 - v. Fish spawning, breeding, nursery or feeding grounds.
 - vi. Wildlife habitat.
 - vii. Areas of special recreational, scenic, or scientific interest, including scarce wetland types.

* Due to action taken at the March 7, 2024 Natural Resources Committee meeting, Ordinance 23-8 will not reflect

B) Proposed Winding Brook Subdivision -

- a. Town of Grafton T10N-R22E, Part of the SE ¼ of the NE ¼ Section 31, Lot 2 CSM #4120 doc. 1105888, Parcel Key #06-031-04-010.00, located at 351 Port Washington Road.
- b. Town of Grafton T10N-R22E, Part of the NW ¼ and the NE ¼ and the SW ¼ and the SE ¼ of SE ¼ Section 31, Parcel Key #06-031-13-002.00, located south of 351 Port Washington Road.



Barry Sullivan

From: Cox, Erin E - DNR <Erin.Cox@wisconsin.gov>
Sent: Wednesday, December 6, 2023 3:57 PM
To: robert3bach@gmail.com
Cc: Young, Anthony NMN Jr - DNR (Tony); USACE_Requests_WI@usace.army.mil; Barry Sullivan; Josh Bohn
Subject: Approved: P2 Storage Wetland fill General Permit, Ozaukee County (03803)
Attachments: Approved GP_Wetland Fill P2Storage Ozaukee County_03803.pdf

CAUTION: This email originated from outside of the organization. Do not click links, open attachments, or reply unless you recognize the sender and know the content is safe.

Robert,

Please see attached approved permit authorizing impacts to wetlands in the Town of Grafton, Ozaukee County. Please read over the permit and conditions that are in place to ensure that you understand what is expected of you moving forward with the project. Your next step is to notify me prior to starting work. If you have any questions for me, please don't hesitate to reach out!

Best,

We are committed to service excellence.

Visit our survey at <https://link.edgepilot.com/s/be65adc0/VtqzBZbhJ0yPAV6ao4M-mA?u=http://dnr.wi.gov/customersurvey> to evaluate how I did.

Erin Cox (she/her)

Water Management Specialist
 Wisconsin Department of Natural Resources
 141 NW Barstow St, Room 180
 Waukesha, WI 53188-3789
 Cell Phone: 262-282-2029
 Fax: 262-574-2117
Erin.Cox@wisconsin.gov



dnr.wi.gov



Attachment: Ord T-Grft Sec 31 Sup Doc (ORD.23-8 : Shoreland & Floodplain Zoning Map Amendment - Town of Grafton, Section 31)

State of Wisconsin
DEPARTMENT OF NATURAL RESOURCES
141 NW Barstow St.
Waukesha, WI, 53188

Tony Evers, Governor
Adam N. Payne, Secretary
Telephone 608-266-2621
Toll Free 1-888-936-7463
TTY Access via relay - 711



9.c

12/06/2023

GP-SE-2023-46-03803

Robert Bach
Russell I Bratt Trust
PO Box 460446
Fort Lauderdale, FL 33346
[sent electronically]

RE: Coverage under the wetland statewide general permit to impact wetlands from residential, commercial, and industrial activities, located in the Town of Grafton, Ozaukee County

Dear Mr. Bach:

Thank you for submitting an application for a General Permit to impact wetlands from residential, commercial and industrial activities located in the NE 1/4 of NE 1/4, Section 31, Township 10, Range 22E, Town of Grafton, Ozaukee County. You have certified that your project meets the eligibility criteria for this activity. Based upon your signed certification you may proceed with your project. **The discharge(s) from the proposed activity will comply with water quality requirements.**

Please re-read the permit eligibility standards and conditions. The eligibility standards can be found on the GP1 application checklist or in the GP1 statewide general permit. The permit conditions are attached to this letter. You are responsible for meeting all general permit eligibility standards and permit conditions. This includes notifying the Department before starting the project and submitting photographs within one week of project completion. Please note your coverage is valid for 5 years from the date of the department's determination or until the activity is completed, whichever occurs first.

The Department conducts routine and annual compliance monitoring inspections. Our staff may follow up and inspect your project to verify compliance with state statutes and codes. If you need to modify your project, please contact me, your local Water Management Specialist, at (262) 282-2029 or at Erin.Cox@wisconsin.gov to discuss your proposed modifications.

The Department of Natural Resources appreciates your willingness to comply with wetland regulations, which help to protect the water quality, fish and wildlife habitat, recreational value, and other functions and values wetlands provide to current and future generations. You are responsible for obtaining any other local, state, or federal permits that are required before starting your project.

Sincerely,

Erin Cox
Water Management Specialist

Email CC:

USACE General Inbox
Barry Sullivan, Ozaukee County
Tony Young, Conservation Warden
Josh Bohn, Parish Survey and Engineering
Waterway/Wetland File

Attachment: Ord T-Grft Sec 31 Sup Doc (ORD.23-8 : Shoreland & Floodplain Zoning Map Amendment - Town of Grafton, Section 31)

15. Site Access. Upon reasonable notice, you shall allow access to the site to any Department employee who is investigating the project's construction, operation, maintenance or permit compliance with the terms and conditions of WDNR-GP1-2023 and applicable laws.

16. Erosion and siltation controls. The project site shall implement erosion and sediment control measures that adequately control or prevent erosion and prevent damage to wetlands as outlined in s. NR 151.11(6m), Wis. Admin. Code. These standards can be found at the following website: <https://dnr.wisconsin.gov/>, keyword "stormwater technical standards". Any area where topsoil is exposed during the project should be immediately seeded and mulched to stabilize disturbed areas and prevent soils from being eroded and washed into the waterway.

17. Equipment use. The equipment used in the wetlands must be low ground weight equipment as specified by the manufacturer specifications.

18. Wetland Protection. You shall not store any vegetation, material, or equipment in wetlands unless authorized to do so through an approved project design. The project will be constructed in a manner that will maintain wetland hydrology in the remaining wetland complex, if applicable.

19. Invasive Species. All project equipment shall be decontaminated for removal of invasive species prior to and after each use on the project site by using best management practices to avoid the spread of invasive species as outlined in NR 40, Wis. Adm. Code. These protocols and practices can be found on the Department website at <http://dnr.wi.gov/topic/Invasives/bmp.html> Keyword: "equipment operator" and at <http://dnr.wi.gov/topic/Invasives/documents/EquipOper.pdf>.

20. Federal and State Threatened and Endangered Species. WDNR-GP1-2023 does not affect the Department's responsibility to ensure that all authorizations comply with Section 7 of the Federal Endangered Species Act, s. 29.604, Wis. Stats., and applicable state laws. No Department authorization under this permit will be granted for projects found not to comply with these acts/laws. No activity is authorized which is likely to jeopardize the continued existence of a threatened or endangered species or a species proposed for such designation, as identified under the Federal Endangered Species Act and/or state law or which is likely to destroy or adversely modify the critical habitat of a species as identified under the Federal Endangered Species Act.

21. Special Concern Species. If the Wisconsin National Heritage Inventory lists a known special concern species to be present in the project area you will take reasonable action to prevent significant adverse impacts or to enhance the habitat for the species of concern.

22. Historic Properties and Cultural Resources. WDNR-GP1-2023 does not affect the Department's responsibility to ensure that all authorizations comply with Section 106 of the National Historic Preservation Act and s. 44.40, Wis. Stats. No Department authorization under this permit will be granted for projects found not to comply with these acts/laws. Information on the location and existence of historic resources can be obtained from the State Historic Preservation Office and the National Register of Historic Places. If cultural, archaeological, or historical resources are unearthed during activities authorized by this permit, work must be stopped immediately, and the State Historic Preservation Officer must be contacted for further instruction.

23. Preventive Measures. Measures must be adopted to prevent potential pollutants from entering a wetland or waterbody. Construction materials and debris, including fuels, oil, and other liquid substances, will not be stored in the construction area in a manner that would allow them to enter a wetland or waterbody as a result of spillage, natural runoff, or flooding. **If a spill of any potential pollutant should occur, it is the responsibility of the permittee to remove such material, to minimize any contamination resulting from this spill, and to immediately notify the State Duty Officer at 1-800-943-0003.**

24. Suitable fill material. All fill authorized under this permit must consist of clean suitable soil, as defined by s. NR 500.03(214), Wis. Adm. Code, free from hazardous substances as defined by s. 289.01(11), Wis. Stats., and free from solid waste as defined by s. 289.01(33), Wis. Stats.

25. Standard for Coverage. Wetland impacts from the project will cause only minimal adverse environmental impacts as determined by the Department.



SOIL & WATER TESTING SERVICES, LLC.

WETLAND DELINEATION REPORT

BRATT PROPERTY

Town of Grafton
Ozaukee County

June 23, 2020

RECEIVED

DEC 19 2023

OZAUKEE COUNTY
LAND & WATER
MANAGEMENT DEPT



SOIL & WATER TESTING SERVICES, LLC.

June 23, 2020

Wisconsin Department of Natural Resources
101 S. Webster Street
Madison, WI 53707

RE: Wetland Delineation Report for the Bratt Property
Town of Grafton, Ozaukee County

Enclosed is a Wetland Delineation Report for the Bratt Property. If the Department has any questions or comments regarding this report or work performed, please call me at 920-779-0000 or 920-470-5313.

Respectfully submitted,

Bates Soil & Water Testing Services, LLC

Brian D. Bates, PSS, PWS, CST
WDNR Professionally Assured Wetland Delineator



cc: WDNR Electronic Portal Submittal

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Project Figures

Figure 1	Wetland Delineation Map
Figure 2	WDNR Wetland Inventory Map
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Appendices

Appendix A	Site Photographs
Appendix B	USACE Wetland Determination Data Forms
Appendix C	FSA Slide Review

QUALIFICATIONS

State of Wisconsin
DEPARTMENT OF NATURAL RESOURCES
 1300 W Clairmont Avenue
 Eau Claire, WI 54701

Tony Evers, Governor
 Preston D. Cole, Secretary
 Telephone 608-266-2621
 Toll Free 1-888-936-7463
 TTY Access via relay - 711



March 6, 2020

Brian Bates, PSS, PWS, CST
 Bates Soil & Water Testing Services, LLC
 N1237 Country Crest Circle
 Hortonville, WI 54944

Subject: 2020 Assured Wetland Delineator Confirmation

Dear Mr. Bates:

This letter provides Wisconsin Department of Natural Resources (WDNR) confirmation for the wetland delineations you conduct during the 2020 growing season. You and your clients will not need to wait for the WDNR to review your wetland delineations before moving forward with project planning. This will help expedite the review process for WDNR's wetland regulatory program. Your name and contact information will continue to be listed on our website at: <http://dnr.wi.gov/topic/wetlands/assurance.html>.

In the instance where a municipality may require a letter of confirmation for your work prior to moving forward in the local regulatory process, this letter shall serve as that confirmation. Although your wetland delineations do not require WDNR field review, inclusion of a Wetland Delineation Report is required for projects needing State authorized wetland, waterway and/or storm water permit approvals.

If you or any client has a question regarding your status in the Wetland Delineation Professional Assurance Program, contact me by email at kara.brooks@wisconsin.gov or phone at 414-308-6780. Thank you for all your hard work and best wishes for the upcoming field season.

Sincerely,

Kara Brooks
 Wetland Identification Coordinator
 Bureau of Watershed Management

ADDITIONAL QUALIFICATIONS DISCUSSION

Bates Soil & Water Testing Services, LLC was founded in 1996 by Brian Bates. Mr. Bates consults on multiple disciplines associated with the soils and waters of Wisconsin. Mr. Bates has over 22 years of wetland experience in the Northeast/Northcentral and Midwest Regions. Wetland related services include wetland determinations and delineations, wetland hydrology monitoring, wetland restoration, wetland restoration monitoring and invasive plant control.

Mr. Bates holds a Bachelor of Science Degree in Soil Science and a Master of Science Degree in Natural Resources - Hydrogeology emphasis, from the University of Wisconsin-Stevens Point. Mr. Bates is a Licensed Professional Soil Scientist, Professional Wetland Scientist, Hydrogeologist, Certified Soil Tester and a WDNR Professionally Assured Wetland Delineator. In 1991, Mr. Bates was recognized as one of the "Top Ten" Soil Profile Evaluators in the nation, recognized at a collegiate level, National Soil Judging Competition in California. Mr. Bates is also a member of the Wisconsin Society of Professional Soil Scientists. Additional continuing education training completed by Mr. Bates relating to wetland science includes:

- ✓ *Basic Wetland Delineation course offered by the Wisconsin Department of Administration, Coastal Management Program (1998)*
- ✓ *Training Workshop for Consultants: Understanding Wisconsin's Wetland Compensatory Mitigation Rules and Guidelines (2003)*
- ✓ *Advanced Wetland Delineation Training Workshop offered by the University of Wisconsin-La Crosse (2010, 2019)*
- ✓ *Critical Methods in Wetland Delineation seminar offered by the Wisconsin Department of Natural Resources (2010, 2013, 2014, 2015, 2018, 2020).*
- ✓ *Vegetation of Wisconsin Course offered by the University of Wisconsin-Milwaukee Field Station (2016)*

INTRODUCTION

On April 20, 2020 a Wetland Delineation was performed by Brian Bates and Tom Neitzel of Bates Soil & Water Testing Services, LLC. William Bratt ordered the Wetland Delineation to determine the wetland status of the Area of Interest (AOI) for proposed development. Mr. Bates was the lead investigator for the field investigation and is the principal author of this report. The weather was sunny and mild (+/- 55° Fahrenheit).

The AOI is 58.14 acres in size and consists of residential and agricultural areas. A complete legal description is provided on Figure 1. All detailed latitude, longitude and site datum coordinates for the investigation were obtained by J.E. Arthur and Associates, Inc., Fond du Lac, Wisconsin. Detailed numerical coordinates are not provided on the Wetland Determination Data Forms but can be obtained from J.E. Arthur and Associates, Inc., if desired.

METHODOLOGY

Investigation Review

Prior to beginning the field evaluation of the AOI, the following on-site or off-site reference reviews were conducted:

- Preliminary Field Reconnaissance
- NRCS Hydric Soil List
- Wisconsin Department of Natural Resources Wetland Inventory Map
- U.S. Fish & Wildlife Service National Wetland Inventory Map
- County Soil Survey Manual
- NRCS Web Soil Survey
- FSA Slide Review

The reviewed resources provided information on whether wetlands have been previously identified within the AOI or have a higher probability of wetlands occurring. Wetland area or areas with wetland potential within the AOI were then field investigated to make on-site determinations and where necessary, complete delineations of the uppermost wetland boundary.

The approximate boundaries of the Northcentral and Northeast Region and Midwest Region were reviewed prior to completing off-site data reviews and the field investigation. Based on map examination and project location, the Wetland Determination was completed using the criteria and methods outlined in the documents below. These documents use a three-criterion investigation method which examine for indicators of hydrophytic vegetation, hydric soils and wetland hydrology.

- ✓ *Basic Guide to Wisconsin's Wetlands and Their Boundaries (1995)*
- ✓ *Corps of Engineers Wetland Delineation Manual (1987)*
- ✓ *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region Version 2.0 (2012)*

Vegetation

Indicator Status of vegetation identified was based on the State of Wisconsin 2016 Wetland Plant List: (http://rsgisias.crrel.usace.army.mil/nwpl_static/data/DOC/lists/2016/States/pdf/WI_2016v1.pdf). Vegetation was evaluated using the Quadrant Sampling Method, which consisted of a 5' radius for the Herbaceous Layer, a 15' radius for the Sapling/Shrub Layer and a 30' radius for the Tree and Vine Layer. Vegetation abundance was based on the measurement of Percent Areal (Absolute) Cover. Vegetation observed during the investigation was identified to the Species Level and documented on the Northcentral and Northeast Region Wetland Determination Data Forms. The Rapid Test, "50/20" rule and/or Prevalence Index was used for determining major vegetation dominance unless problematic vegetation was observed. At least 80% of the areal cover was identified and documented, if observed.

Hydrology

Hydrology is the most variable of all three criteria and is the source for all wetlands. It is highly influenced by short and long-term precipitation, soil properties and the drainage catena of the small watersheds typically evaluated. Hydrology follows three pathways from the time it drops onto the soil surface to the time it becomes groundwater or stream flow. The first pathway is overland flow, where water flows on the soil surface. The second pathway is through flow, which is lateral flow through the soil-scape, generally parallel to the soil surface. The final flow path is groundwater flow, which is generally deep (except in most wetland areas), saturated, subsurface flow.

The Wisconsin Wetland Inventory Map (WWI), the U.S. Fish & Wildlife Service National Wetland Map (NWI), the United States Geological Survey (USGS) topographic map and FSA Slide reviews all provide information concerning wetland potential.

Unlike soils or vegetation, hydrology indicators are not always associated with a specific sample point or area. The time of year or year evaluated often determines if direct observations of inundation or saturation can be made. If a hydrology indicator is found near a sampling point, in an area that has similar landscape position, vegetation and soils, any evidence of hydrology will be noted on the Wetland Determination Data Forms.

Verification of Hydrology for this study was based on the 18 Primary or 11 Secondary hydrology indicators listed on the Northcentral and Northeast Region Wetland Determination Data Form, unless additional indicators from other regional supplements were determined to be applicable with appropriate documentation.

Soils

Soil morphology, the field observable attributes of the soil in various horizons or arrangements, based on vertical exposure at each sampling point to a minimum depth of 24" below grade (unless otherwise noted), were documented on the Northcentral and Northeast Region Wetland Determination Data Forms.

Soil profiles were evaluated through the construction of backhoe pits (unless otherwise noted on the data sheets). Backhoe pits are the preferred method of soil evaluation since they provide a clear picture of the soil profile over a large area, unlike small auger holes, push probes or hand dug holes. The use of a backhoe is the only option for deeply filled sites that contain large coarse fragments such as concrete, blacktop or bricks or sites that naturally contain large coarse fragments such as cobbles and boulders.

Each soil profile was compared to the Field Indicators of Hydric Soils in the United States - A guide for Identifying and Delineating Hydric Soils, Version 8.1, 2017. The Hue, Value and Chroma color patterns of the soil horizons, sub-horizons or redoximorphic features were evaluated and documented with the use of Munsell Soil Color Charts.

Many soils in northeastern Wisconsin are composed of red parent material soils. Red parent material soils are found in Wisconsin near Lake Superior and in the valley of the Fox River and surrounding areas near Lake Michigan. These soils were deposited by the Green Bay Lobe of glacial ice. The Green Bay Lobe dredged out the bay of Green Bay, formed Lake Winnebago, the Horicon Marsh and hills around Madison.

If Non-Problematic Hydric Soil Indicators are absent and indicators of hydrophytic vegetation and wetland hydrology are present (or are absent due to disturbance or other problem situations), the Problematic F21 Hydric Soil Indicator will be considered, as well as all other Problematic Hydric Soil Indicators within the Northcentral and Northeast Region. The F21 Hydric Soil Indicator is primarily used in the Northcentral and Northeast Region for problematic Red Parent Material Soils.

INVESTIGATION DISCUSSION

Wetland Determinations should be conducted during the growing season. It is important to conduct the work during the growing season in order to positively identify vegetation and so that some primary hydrology indicators can be properly applied. The Regional Supplements provide a field observation-based approach for determining the growing season. This approach uses the biological growth of non-evergreen plants as an indicator to the beginning or end of the growing season. The growing season can also be determined by measuring soil temperature, if required. The start of the growing season can also be approximated by evaluating the first and last 28° Fahrenheit day on County-Specific Wetness Evaluation (WETS) Tables (Appendix A). This determination was conducted during the growing season based on green up.

Since wetland hydrology is seasonal and affected by short and long-term changes in meteorological conditions, it may not always be possible to observe hydrology indicators such as surface water, saturation, high water table or a dry-season water table. For any wetland analysis, the lack of primary or secondary hydrology indicators of hydrology will not be considered evidence for a lack of hydrology, especially in disturbed agricultural lands. Wetland Hydrology will not be considered absent (under most conditions) if the AOI has hydric soils or hydrophytic vegetation or in some agricultural areas, only hydric soils. In some instances, hydric soils are the only feasible means of identifying wetlands.

United States Department of Agriculture (USDA) Farm Service Agency (FSA) slides should be reviewed for wetland signatures if the AOI has experienced agricultural activities within three years of the wetland evaluation. USDA-FSA slides are helpful for evaluating soil saturation signatures such as standing water, drowned out crops or evidence of stunted or stressed crops. USDA-FSA slides are also beneficial for evaluating the timing of historical disturbances that may have changed wetland hydrology.

WETLAND DELINEATION SPECIFICS

Hydrology

Field observations of hydrology and conclusions regarding hydrology must also consider antecedent precipitation. Generally speaking, an evaluation of antecedent precipitation is an evaluation of the amount of soil water or groundwater in storage, over time. To assess antecedent precipitation, the Natural Resources Conservation Service (NRCS) method of comparing local precipitation data to the local Wetness Evaluation Station was evaluated. For this study, precipitation data from the National Climatic Service in Milwaukee, Wisconsin (nearest climatic center) was compared to the nearest Wetness Evaluation Station (WETS) in Milwaukee, Wisconsin. Archived Climatic Data can be found at: <http://www.nws.noaa.gov/climate/index.php?wfo=mkx>.

	WETS 3 years in 10 less than	Normal	WETS 3 years in 10 more than	*2019 Rainfall	Condition Dry, Wet, Normal	Condition Value	Month Weight Value	Product of Previous 2 Columns
JANUARY	1.14"	1.74"	2.09"	2.06"	Normal	2	3	6
FEBRUARY	1.04"	1.71"	2.07"	0.91"	Dry	1	2	2
MARCH	1.55"	2.48"	2.99"	3.67"	Wet	3	1	3
								Sum 11

Note: If sum is

6-9 Prior period had been drier than normal
 10-14 Prior period has been normal
 15-18 Prior period has been wetter than normal

Condition Value:

Dry = 1
 Normal = 2
 Wet = 3

The NRCS Wetness Evaluation (WETS) Table provides the record of the 1971-2020 period of observation. This table is useful for comparing recent precipitation to relative normal precipitation. The greatest precipitation events observed were on 1/10/20 (0.47"), 2/17/20 (0.91") and 3/27/20 (1.33"). Based on the NRCS Antecedent Hydrologic Condition Evaluation Method, climatic conditions were Normal and primary indicators of hydrology were expected to be observed.

WETS Station: MILWAUKEE MITCHELL INTL AP, WI (WETS TABLE NOT AVAILABLE FOR OZAUKEE COUNTY) Requested years: 1971 - 2020

Month	Temperature (°F)				Precipitation (inches)			
	Avg daily max	Avg daily min	Avg daily mean	Avg	30% chance will have		Avg number of days with 0.10 inch or more	Average total snowfall
					less than	more than		
Jan	28.6	14.9	21.8	1.74	1.14	2.09	5	14.3
Feb	32.1	18.3	25.2	1.71	1.04	2.07	4	12.2
Mar	42.4	27.6	35.0	2.48	1.55	2.99	6	7.2
Apr	53.6	36.8	45.2	3.82	2.89	4.46	7	2.3
May	65.3	46.5	55.9	3.36	2.20	4.03	7	0.1
Jun	75.6	56.9	66.2	3.88	2.58	4.66	7	0.0
Jul	80.7	63.5	72.1	3.38	2.26	4.05	6	0.0
Aug	78.8	62.8	70.8	3.74	2.43	4.49	7	0.0
Sep	71.9	55.0	63.5	3.22	1.70	3.93	5	0.0
Oct	59.7	43.3	51.5	2.70	1.76	3.24	6	0.4
Nov	45.9	31.8	38.9	2.47	1.56	2.99	6	3.0
Dec	33.6	20.7	27.1	2.19	1.37	2.64	5	10.9
Annual:					31.56	37.28		
Average	55.7	39.9	47.8	-	-	-	-	-
Total	-	-	-	34.68			70	50.4

GROWING SEASON DATES

Requested years of data: 1971 - 2020
 Years with missing data: 24 deg = 1 28 deg = 1 32 deg = 1
 Years with no occurrence: 24 deg = 0 28 deg = 0 32 deg = 0
 Data years used: 24 deg = 49 28 deg = 49 32 deg = 49

Probability	Temperature		
	24 F or higher	28 F or higher	32 F or higher
	Beginning and Ending Dates Growing Season Length		
50 percent *	3/31 to 11/12 226 days	4/9 to 11/3 208 days	4/23 to 10/20 180 days
70 percent *	3/27 to 11/16 234 days	4/5 to 11/8 217 days	4/18 to 10/25 190 days

* Percent chance of the growing season occurring between the Beginning and Ending dates.

Soils

Soil types within the AOI were evaluated by researching the County Soil Survey, NRCS Web Soil Survey Hydric Soil List and the WDNR Wetland Inventory Map. The following soil types and associated classifications exist within the evaluated areas of the AOI:

Soil Name	Map Symbol	Family or Higher Taxonomic Class	Drainage Class	Hydric per County	Wetland Indicator Soil Per WDNR
Kewaunee Silt Loam	KnB	Fine, mixed, active, mesic Typic Hapludalfs	Well Drained	May have inclusions	No
Kewaunee Silty Clay Loam	KoB2	Fine, mixed, active, mesic Typic Hapludalfs	Well Drained	No	No
Kewaunee Silty Clay Loam	KoC2	Fine, mixed, active, mesic Typic Hapludalfs	Well Drained	No	No
Kewaunee Silty Clay	KrD3	Fine, mixed, active, mesic Typic Hapludalfs	Well Drained	No	No
Manawa Silt Loam	MaA	Fine, mixed, active, mesic Aquollic Hapludalfs	Somewhat Poorly Drained	May have inclusions	Yes

NRCS Web Soil Survey: (<http://websoilsurvey.nrcs.usda.gov/app/HomePage.htm>)

Wisconsin Wetland Inventory (<http://dnrm.wisconsin.gov/imf/imf.jsp?site=SurfaceWaterViewer.wetlands>)

Report — Hydric Soil List - All Components

Collapse WI089-Ozaukee County, Wisconsin

WI089-Ozaukee County, Wisconsin

Map symbol and map unit name	Component/Local Phase	Comp. pct.	Landform	Hydric status	Hydric criteria met (code)
KnB: Kewaunee silt loam, 2 to 6 percent slopes	Kewaunee	90-97	Ground moraines	No	—
	Manawa	2-5	Drainageways	No	—
	Poygan-Occasionally ponded	1-5	Depressions	Yes	2
KoB2: Kewaunee silty clay loam, 2 to 6 percent slopes, eroded	Kewaunee-Eroded	85-95	Moraines	No	—
	Kewaunee	2-7	Moraines	No	—
	Manawa	3-8	Drainageways	No	—
KoC2: Kewaunee silty clay loam, 6 to 12 percent slopes, eroded	Kewaunee-Eroded	85-95	Moraines	No	—
	Kewaunee	5-5	Moraines	No	—
	Sisson	0-5	Moraines	No	—
	Omro	0-5	Moraines	No	—
KrD3: Kewaunee silty clay, 12 to 20 percent slopes, severely eroded	Kewaunee-Severely eroded	93-98	Moraines	No	—
	Kewaunee-Eroded	2-7	Moraines	No	—
MaA: Manawa silt loam, 0 to 3 percent slopes	Manawa	80-91	Drainageways on ground moraines	No	—
	Kewaunee	6-11	Ground moraines	No	—
	Poygan-Occasionally ponded	3-9	Depressions	Yes	2

WETLAND DETERMINATION DISCUSSION

The AOI is 58.14 acres in size and consists of residential and agricultural areas. Wetlands were identified on the Wisconsin Wetland Inventory Map and the National Wetlands Inventory Map. Wetland Indicator soils were also identified within portions of the AOI on the Wisconsin Wetland Inventory Map.

The sampling point locations for the investigation were chosen based on the review of mapping resources or observed changes in topography and vegetation during the investigation. The wetlands were differentiated from the adjacent upland area based on the observation of all three wetland criteria. The wetland locations within the AOI are illustrated on Figure 1. Photographs of the AOI and sampling points are provided in Appendix A. The sampling points were marked with numbered, hard wood stakes. The United States Army Corps of Engineers (USACOE) Wetland Determination Data Form for the Northcentral and Northeast Region was completed for each sampling point (Appendix B).

Wetland A (9.164 acres), Wetland B (0.014 acres), Wetland C (0.046): Wetland A, B and C are the same wetland complex, separated by culverts. Primary Indicators of Hydrology observed included Saturation, Drift Deposits and Water-Stained Leaves. Secondary Indicators of Hydrology observed included Geomorphic Position and FAC-N Test. The wetland was dominated with *Phalaris arundinacea*, *Acer rubrum*, *Cornus alb*, *Cornus racemosa*, *Salix interior*, *Typha angustifolia*, *Rhamnus cathartica*, *Quercus bicolor* and *Fraxinus pennsylvanica*. The soils were determined to be hydric per the F6 and F21 Hydric Soil Indicators. The wetland area can best be described as a combination of Shallow Marsh Wetland, Forested Wetland and Wet Meadow Wetland.

Wetland D (0.005 acres): No Primary Indicators of Hydrology were observed. Secondary Indicators of Hydrology observed included Geomorphic Position and the FAC-N Test. The wetland was dominated with *Carex vulpinoidea*. The soils were determined to be hydric per the F6 Hydric Soil Indicator. The wetland area can best be described as Wet Meadow Wetland.

Wetland E (0.005 acres): Only one Primary Indicator of Hydrology, Water-Stained Leaves, was observed. Secondary Indicators of Hydrology observed included Geomorphic Position and the FAC-N Test. The wetland was dominated with *Carex vulpinoidea*. The soils were determined to be hydric per the F21 Hydric Soil Indicator. The wetland area can best be described as Wet Meadow Wetland.

Wetland G (0.047 acres), Wetland H (0.006 acres): Wetland G and H are the same wetland complex, separated by a culvert. Primary Indicators of Hydrology observed included High Water Table, Water-Stained Leaves and Saturation. Secondary Indicators of Hydrology observed included Geomorphic Position and the FAC-N Test. The wetland was dominated with *Typha angustifolia* and *Phalaris arundinacea*. The soils were determined to be hydric per the F6 Hydric Soil Indicator. The wetland area can best be described as Wet Meadow Wetland.

Wetland F (0.068 acres): Primary Indicators of Hydrology observed included High Water Table, Saturation and Water-Stained Leaves. Secondary Indicators of Hydrology observed included Geomorphic Position and the FAC-N Test. The wetland was dominated with *Fraxinus pennsylvanica*, *Typha angustifolia* and *Phalaris arundinacea*. The soils were determined to be hydric per the F6 Hydric Soil Indicator. The wetland area can best be described as Shallow Marsh Wetland.

CONCLUSIONS

On April 20, 2020 a Wetland Determination and Delineation was performed for the AOI. The objective of the wetland investigation was to determine the wetland status of the AOI for proposed development. The purpose of this work is to provide William Bratt, Town of Grafton, Ozaukee County, State and Federal Regulators crucial information for development planning and regulatory jurisdictional conclusions.

The sampling point locations and wetland boundary lines illustrated on Figure 1 are accurate and precisely represent the work performed by Bates Soil & Water Testing Services, LLC. The sampling point stakes are "in place" and are available for review by the Wisconsin Department of Natural Resources (WDNR) and the U.S. Army Corps of Engineers (USACE), if desired.

Brian Bates, the lead delineator and author of this report, is a WDNR Professionally Assured Wetland Delineator (<http://dnr.wi.gov/topic/wetlands/assurance.html>) and concurrence from the WDNR is not necessary for waterway and wetland permits or shoreland/wetland zoning permits. However,

"Assurance does not change the need for or decisions about wetland fill permits. Assurance can't guarantee accuracy or relieve landowner responsibility in the event an error occurs and wetlands are filled. While it is unlikely for professional whose work is assured, inadvertent wetland fill that may result from errors must be remedied"
(<http://dnr.wi.gov/topic/wetlands/assurance.html>)

Still, the wetland boundaries identified are an excellent assessment of current site conditions. Final wetland boundary line decisions always rest with the WDNR and USACE. Adjustments to wetland boundary lines are at times possible based on opinion differences, but highly unlikely. Bates Soil & Water Testing Services, LLC, will submit this report to the WDNR for review. If a jurisdictional determination is required from the USACE, a Request for Corps of Engineers Wetland Delineation Review form will need to be completed and submitted to the USACE by the owner or designated agent. If permits are required for this project, construction authorization shall be obtained from all required regulatory agencies (Federal, State and County) prior to any regulatory concurrence expiring.

Property Owner/Contact Information:

William Bratt
P.O. Box 460446
Fort Lauderdale, Florida 33346-0446
wbratt@gmail.com
414-659-9566

State of Wisconsin
DEPARTMENT OF NATURAL RESOURCES
 1027 W St. Paul Ave.
 Milwaukee, WI, 53233

Tony Evers, Governor
Adam N. Payne, Secretary
 Telephone 608-266-2621
 Toll Free 1-888-936-7463
 TTY Access via relay - 711



January 19th, 2024

GP-SE-2023-46-03794

Robert Bach
 PO Box 460446
 Fort Lauderdale, FL 33346
 [sent electronically]

RE: Coverage under the wetland statewide general permit to impact wetlands from residential, commercial, and industrial activities, located in the Town of Grafton, Ozaukee County

Dear Mr. Bach:

Thank you for submitting an application for a General Permit to impact 3,509SF of wetlands for residential activities located in the NE 1/4 of SE 1/4, Section 31, Township 10, Range 22E, Town of Grafton, Ozaukee County. You have certified that your project meets the eligibility criteria for this activity. Based upon your signed certification you may proceed with your project. **The discharge(s) from the proposed activity will comply with water quality requirements.**

Please re-read the permit eligibility standards and conditions. The eligibility standards can be found on the GP1 application checklist or in the GP1 statewide general permit. The permit conditions are attached to this letter. You are responsible for meeting all general permit eligibility standards and permit conditions. This includes notifying the Department before starting the project and submitting photographs within one week of project completion. Please note your coverage is valid for 5 years from the date of the department's determination or until the activity is completed, whichever occurs first.

The Department conducts routine and annual compliance monitoring inspections. Our staff may follow up and inspect your project to verify compliance with state statutes and codes. If you need to modify your project, please contact me, your local Water Management Specialist, at (414) 430-7129 or at michelle.soderling@wisconsin.gov to discuss your proposed modifications.

The Department of Natural Resources appreciates your willingness to comply with wetland regulations, which help to protect the water quality, fish and wildlife habitat, recreational value, and other functions and values wetlands provide to current and future generations. You are responsible for obtaining any other local, state, or federal permits that are required before starting your project.

Sincerely,

Michelle Soderling
 Water Management Specialist

Email CC: Amy Heffernan, USACE Project Manager
 Jessica Wolff, Grafton Zoning
 Josh Bohn, Parish Survey Engineering

You agree to comply with the following conditions:

1. **Application.** You shall submit a complete application package to the Department as outlined in the application requirements (section 2) section of this permit. If requested, within a reasonable timeframe you shall furnish the Department any information it needs to verify compliance with the terms and conditions of this permit.
2. **Certification.** Acceptance of coverage under general permit WDNR-GP1-2023 and efforts to begin work on the activities authorized by this general permit signifies that you have certified the project meets all eligibility standards outlined above and that you have read, understood, and agreed to follow all terms and conditions of this general permit.
3. **Reliance on Applicant's Data.** The determination by this office that a confirmation of authorization is not contrary to wetland water quality standards will be based upon the information provided by the applicant and any other information required by the Department.
4. **Project Plans.** This permit does not authorize any work other than what is specifically described in the notification package and plans submitted to the Department and is certified by you to comply with the terms and conditions of WDNR-GP1-2023.
5. **Expiration.** The time limit for completing an activity authorized by the provisions of WDNR-GP1-2023 ends 5 years after the date on which the activity is considered to be authorized under WDNR-GP1-2023 or until the activity is completed, whichever occurs first. The Department's use of general permit WDNR-GP1-2022 established under s. 281.36(3g) Wis. Stats. expires on June 30, 2028.
6. **Written authorization for modification of scope.** Any modification to the wetland impacts authorized under this general permit must be approved by the Department in writing to ensure that the project continues to meet the general permit eligibility in section 1. Separate permitting is necessary if the modified project scope no longer meets general permit eligibility.
7. **Authorization Distribution.** You must supply a copy of the permit coverage authorization to every contractor working on the project.
8. **Project Start.** You shall notify the Department using the information provided on the confirmation of coverage letter you receive before starting any activity and again not more than 5 days after each activity is completed.
9. **Project Completion.** Within one week after completing the regulated activity, you shall submit to the Department a statement certifying the project complies with all the terms and conditions of this permit, and photographs of the activities authorized by this permit. This statement must reference the Department-issued docket number and be submitted to the Department staff member that authorized coverage.
10. **Permit Posting.** You must post a copy of this permit coverage letter at a conspicuous location on the project site before beginning the permitted activity. The copy of the permit coverage letter must remain posted at that location until at least five days after the area where the activity took place is stabilized. You must also keep a copy of the permit coverage letter and the approved plan available at the project site at all times until the project is complete.
11. **Permit Compliance.** The department may revoke coverage of this permit if it is not constructed in compliance with the terms and conditions of this permit. Any act of noncompliance with this permit constitutes a permit violation and is grounds for enforcement action.
12. **Construction Timing.** Once wetland work begins, all construction activities in those wetlands must be continuous to the extent practicable. During periods of inactivity in wetlands, the site must be stabilized until the work is resumed and completed.
13. **Construction.** No other portion of the wetland may be disturbed beyond the area designated in the submitted plans.
14. **Proper Maintenance.** You must maintain the activity authorized by WDNR-GP1-2023 in good condition and in conformance with the terms and conditions of this permit using best management practices. Any structure or fill authorized shall be properly maintained to ensure no additional impacts to the remaining wetlands and waterways.

15. **Site Access.** Upon reasonable notice, you shall allow access to the site to any Department employee who is investigating the project's construction, operation, maintenance or permit compliance with the terms and conditions of WDNR-GP1-2023 and applicable laws.

16. **Erosion and siltation controls.** The project site shall implement erosion and sediment control measures that adequately control or prevent erosion and prevent damage to wetlands as outlined in s. NR 151.11(6m), Wis. Admin. Code. These standards can be found at the following website: <https://dnr.wisconsin.gov/>, keyword "stormwater technical standards". Any area where topsoil is exposed during the project should be immediately seeded and mulched to stabilize disturbed areas and prevent soils from being eroded and washed into the waterway.

17. **Equipment use.** The equipment used in the wetlands must be low ground weight equipment as specified by the manufacturer specifications.

18. **Wetland Protection.** You shall not store any vegetation, material, or equipment in wetlands unless authorized to do so through an approved project design. The project will be constructed in a manner that will maintain wetland hydrology in the remaining wetland complex, if applicable.

19. **Invasive Species.** All project equipment shall be decontaminated for removal of invasive species prior to and after each use on the project site by using best management practices to avoid the spread of invasive species as outlined in NR 40, Wis. Adm. Code. These protocols and practices can be found on the Department website at <http://dnr.wi.gov/topic/Invasives/bmp.html> Keyword: "equipment operator" and at <http://dnr.wi.gov/topic/Invasives/documents/EquipOper.pdf>.

20. **Federal and State Threatened and Endangered Species.** WDNR-GP1-2023 does not affect the Department's responsibility to ensure that all authorizations comply with Section 7 of the Federal Endangered Species Act, s. 29.604, Wis. Stats., and applicable state laws. No Department authorization under this permit will be granted for projects found not to comply with these acts/laws. No activity is authorized which is likely to jeopardize the continued existence of a threatened or endangered species or a species proposed for such designation, as identified under the Federal Endangered Species Act and/or state law or which is likely to destroy or adversely modify the critical habitat of a species as identified under the Federal Endangered Species Act.

21. **Special Concern Species.** If the Wisconsin National Heritage Inventory lists a known special concern species to be present in the project area you will take reasonable action to prevent significant adverse impacts or to enhance the habitat for the species of concern.

22. **Historic Properties and Cultural Resources.** WDNR-GP1-2023 does not affect the Department's responsibility to ensure that all authorizations comply with Section 106 of the National Historic Preservation Act and s. 44.40, Wis. Stats. No Department authorization under this permit will be granted for projects found not to comply with these acts/laws. Information on the location and existence of historic resources can be obtained from the State Historic Preservation Office and the National Register of Historic Places. If cultural, archaeological, or historical resources are unearthed during activities authorized by this permit, work must be stopped immediately, and the State Historic Preservation Officer must be contacted for further instruction.

23. **Preventive Measures.** Measures must be adopted to prevent potential pollutants from entering a wetland or waterbody. Construction materials and debris, including fuels, oil, and other liquid substances, will not be stored in the construction area in a manner that would allow them to enter a wetland or waterbody as a result of spillage, natural runoff, or flooding. **If a spill of any potential pollutant should occur, it is the responsibility of the permittee to remove such material, to minimize any contamination resulting from this spill, and to immediately notify the State Duty Officer at 1-800-943-0003.**

24. **Suitable fill material.** All fill authorized under this permit must consist of clean suitable soil, as defined by s. NR 500.03(214), Wis. Adm. Code, free from hazardous substances as defined by s. 289.01(11), Wis. Stats., and free from solid waste as defined by s. 289.01(33), Wis. Stats.

25. **Standard for Coverage.** Wetland impacts from the project will cause only minimal adverse environmental impacts as determined by the Department.

26. **Transfers.** Coverage under this permit is transferable to any person upon prior written approval of the transfer by the Department.

27. **Reevaluation of Decision.** The Department may suspend or revoke authorization of any previously authorized activity and may take enforcement action if the following occur:

- a. The applicant fails to comply with the terms and conditions of WDNR-GP1-2023.
- b. The information provided by the applicant in support of the permit application proves to have been false, incomplete, or inaccurate.



LAND AND WATER MANAGEMENT DEPARTMENT

RECEIVED

NOV 03 2023

OZAUKEE COUNTY
LAND & WATER
MANAGEMENT DEPT

9.c

Andy Holschbach, Director

Edward J. Pfister, Sanitation & Zoning Coordinator

Jeffrey P. Bell, Land & Water Coordinator

www.co.ozaukee.wi.us

PETITION TO CHANGE ZONING CLASSIFICATION

TO THE OZAUKEE COUNTY NATURAL RESOURCES COMMITTEE:

Ladies & Gentleman:

The undersigned hereby petitions the Ozaukee County Natural Resource Committee to change the zoning classification of the following land in Ozaukee County, Wisconsin, from:

Shoreland and Wetland District

(Existing Zoning District)

to Shoreland District

(Proposed Zoning District)

Owner: 63 Development & QIP Trust A Russell I Bratt Trust
Telephone Number: (262) 894-5466
E-Mail Address: ryan.bratt89@gmail.com
Mailing Address: PO Box 460446 4512 N 127th Street Port Washington WI 53007
City, State, Zip: Fort Lauderdale, FL 33346 2000 S Ocean Lane Unit 201 FL. Lauderdale FL
Project Address (if different than mailing address): 351 Port Washington Road 33716

Agent: Robert Bach
Telephone Number: 414-573-1147
E-Mail Address: robert3bach@gmail.com
Mailing Address: 524 Technology Way
City, State, Zip: Saukville, WI 53080

Tax Key Number (Lot 1) 06-031-13-002-00 060310102100 06-031-04-010-00 (Lot 2)

Legal Description (%/4, Section, Township-Range, Municipality): NE 1/4 & part of the SE 1/4 of the NE 1/4 of S 31, T 10, N-R 22 E, Town of Grafton		
Lot Number: 1 + Lot 2	Block Number: N14	Subdivision Name or CSM # 4120 Poculob 5888 06-021-01-04-010-00 (Lot 1) 06-021-01-021-00 (Lot 2)

Additional Information: Wetland Rezoning - Recognize Wetland Delineations & Rezone Proposed Road Crossing

NOTICE TO PETITIONERS

The procedure to rezone / amend the Ozaukee County Shoreland and Floodplain Zoning Ordinance must comply with the statute and administrative rule provisions described in Sections 7.1300-7.1305. The criteria that the board must consider to reach a decision on the petition are stated in the ordinance [Sections 7.1300 (comprehensive), 7.1302 (floodplain), and 7.1305 (shoreland-wetland)].

This petition (original only) and any support documents must be filed with the Ozaukee County Land & Water Management Department one month in advance of the applicable Natural Resources Committee meeting date. Required support documents include:

- (1) A survey clearly showing the boundaries (wetland / floodplain) of any area to be rezoned, and
- (2) A written statement that addresses the criteria in ordinance Sections 7.1300-7.1305 as they relate to the proposed rezoning, if applicable (see descriptions on back page). **Application materials shall be limited to 8.50 x 11.00, 8.50 x 14.00, or 11.00 x 17.00 sheets. Petitions will be considered at the next available committee meeting.**

(continued on page 2)

121 W. Main Street, P. O. Box 994, Port Washington, WI 53074

Phone: (262) 284-8313 Metro: (262) 238-8313 Fax: (262) 284-8367 Metro Fax: (262) 238-8367

Packet Pg. 235

Attachment: Ord T-Grft Sec 31 Sup Doc (ORD-23-8 : Shoreland & Floodplain Zoning Map Amendment - Town of Grafton, Section 31)

NOTICE TO PETITIONERS (continued)

Notice of a public hearing on the petition will be published as a Class II notice under CH. 985, Wisconsin Statutes. The applicant will be notified of the date, time, and location of the hearing. It is advisable for the applicant or an agent for the applicant to attend the hearing.

A rezoning application fee of \$330.00, **payable to Ozaukee County**, is due at the time the petition is filed.

Comprehensive Rezoning

Section 7.1300 - Applies to all areas within the shoreland zoning jurisdictional area except floodplain and wetland areas. Rezoning of floodplain or wetland areas are regulated under Sections 7.1302 & 7.1305 (see below).

Floodplain Rezoning

Section 7.1302 - Floodplain management regulations may only be removed by rezoning the area to remove it from the floodplain provided the property:

- (a) is filled to an elevation 2 feet above the regional flood elevation and is contiguous to lands outside the floodplain, or
- (b) was above the regional flood elevation at the time of the effective date of the floodplain zoning map (mapped floodplain error).

Shoreland-Wetland Rezoning

Section 7.1305 - A wetland, or portion thereof, in the shoreland-wetland district shall not be rezoned if the proposed rezoning may result in a significant adverse impact upon any of the following:

1. Storm and flood water storage capacity;
2. Preservation of dry season stream flow, the discharge of groundwater to a wetland, the recharge of groundwater from a wetland to another area, or the flow of groundwater through a wetland;
3. Filtering or storage of sediments, nutrients, heavy metals, or organic compounds that would otherwise drain into navigable waters;
4. Shoreline protection against soil erosion;
5. Fish spawning, breeding, nursery or feeding grounds;
6. Wildlife habitat;
7. Areas of special recreational, scenic, or scientific interest, including scarce wetland types.

Section 7.1305(C) - If the Wisconsin Department of Natural Resources notifies the natural resources committee or county board that a proposed text or map amendment to the shoreland-wetland provisions of this ordinance may have a significant adverse impact upon any of the criteria listed above, that amendment, if approved by the county board, shall contain the following provision:

"This amendment shall not take effect until more than 30 days have elapsed after written notice of the county board approval of this amendment is mailed to the DNR. During that 30-day period the department may notify the county board that it will adopt a superseding shoreland ordinance for the county under Section 59.692 (6), Wis. Stats. If the department does so notify the county board, the effect of this amendment shall be stayed until the Section 59.692 (6) adoption procedure is completed or otherwise terminated."

Signature (Owner/Agent): 		Date: 11-2-23	Petition Fee: 330.00
			Petition Date: 12-19-2023
(For Department use only)			Check / Receipt Number: 4952/17486
Date of NR Committee Approval:	Date of County Board Approval:		
Comments: 1/4/2024 - mailed out Neighbor Letters - RD 1/4/2024 - Sent Public Notice to Ozaukee Press by email - RD			

State of Wisconsin
DEPARTMENT OF NATURAL RESOURCES
1027 W St. Paul Ave.
Milwaukee, WI, 53233

Tony Evers, Governor
Adam N. Payne, Secretary
Telephone 608-266-2621
Toll Free 1-888-936-7463
TTY Access via relay - 711



January 19th, 2024

GP-SE-2023-46-03794

Robert Bach
PO Box 460446
Fort Lauderdale, FL 33346
[sent electronically]

Dear Mr. Bach,

The Wisconsin Department of Natural Resources received a water quality certification request pursuant to 40 CFR Part 121, requested by Robert Bach for a project located in the Town of Grafton, Ozaukee County, WI.

The Wisconsin Department of Natural Resources (DNR) has examined this certification request as it relates to Clean Water Act Section 401, Wis. Stat. Chs. 30, 281, and 283, and Wis. Adm. Code Ch. NR 299. The DNR has determined the certification request satisfies the requirements under 40 CFR § 121.5. The DNR has also determined that the discharge from the proposed project will comply with water quality requirements. Therefore, **DNR will grant water quality certification without the need for special conditions.**

Please be aware that 401 Water Quality Certification does not release the permittee from obtaining all other necessary federal, state, and local permits, licenses, certificates, approvals, registrations, charters, or similar forms of permission required by law. Specifically, if the DNR has issued coverage under a state general permit for the project, the permittee is required to follow all eligibility requirements and permit conditions. In addition, this 401 Water Quality Certification does not limit any other state permit, license, certificate, approval, registration, charter, or similar form of permission required by law that imposes more restrictive requirements.

Please reach out to me at michelle.soderling@wisconsin.gov or at (414) 430-7129 if you have any questions or concerns about this certification.

Sincerely,

Michelle Soderling
Water Management Specialist

CC: Amy Heffernan, USACE Project Manager

Attachment: Ord T-Grft Sec 31 Sup Doc (ORD.23-8 : Shoreland & Floodplain Zoning Map Amendment - Town of Grafton, Section 31)

ORDINANCE NO. 23-9

REVISING SECTION 3.07 OF THE OZAUKEE COUNTY CODE OF ORDINANCES PERTAINING TO ALL-TERRAIN VEHICLE LINKS AND REGULATING THE OPERATION OF ALL-TERRAIN VEHICLES

An Ordinance revising Section 3.07 of the Ozaukee County Code of Ordinances pertaining to designating all-terrain vehicle links and regulating the operation of all-terrain vehicles.

The County Board of Supervisors of the County of Ozaukee does ordain that Section 3.07 of the Ozaukee County Code of Ordinance be re-created as follows:

3.07 OZAUKEE COUNTY ALL-TERRAIN VEHICLE CODE

Purpose. This section is intended to regulate the operation of All-Terrain Vehicles ("ATV") as defined in § 23.33(1)(b), Wis. Stats., and Utility-Terrain Vehicles ("UTV") as defined in § 23.33(1)(ng) under Sections 23.33(8)(b) and (11), Wis. Stats.

1) Operation of ATV and UTV. Pursuant to § 23.33(4)(b), Wis. Stats., except as otherwise provided in § 23.33(4), Wis. Stats., no person may operate an ATV or UTV on any Ozaukee County highway except on those portions of County highways that as designated as ATV and UTV routes pursuant to the Code of Ozaukee County.

2) The operation of ATVs or UTVs on any portion of a County highway designated as an ATV and UTV route is authorized:

- (a)** In strict conformance with and subject to all applicable laws, orders, regulations, restrictions, and rules, including § 23.33, Wis. Stats., and Chapter NR 64 of the Wisconsin Administrative Code, as amended.
- (b)** On County highways signed in accordance with § 23.33(8), Wis. Stats., and any other applicable law by a local ATV/UTV Club or other designated entity.
- (c)** Only during periods of the year designated for such use pursuant to § 23.33(8)(d), Wis. Stats., and Chapter NR 64.12(4).
- (d)** Only during the hours of 5:00am to 11:00pm.
- (e)** With ATV/UTV Operators that hold liability insurance coverage.
- (f)** With no open intoxicants allowed in or upon any ATV/UTV while it is in operation.

3) Routes/connections. The following routes/connections are designated as ATV/UTV routes/connections:

- a) Town of Belgium & Village of Belgium
 - 1. CTH A: Six Mile Road to Holy Cross (East Side); 0.4-miles
 - 2. CTH B: Dixie Road to CTH A (Holy Cross); 1.0-miles

3. CTH B: CTH A (Holy Cross) to Willow Valley Rd; 0.9-miles
 4. CTH B: Jay Road to CTH K (Sheboygan County Line); 1.0-miles
 5. CTH K: CTH B to Six Mile Road; 1.0-miles
 6. CTH K: Krier Ct to CTH LL; 2.5-miles
 7. CTH KW: Cedar Beach Rd to Village of Belgium (South Limits); 0.5-miles
 8. CTH KW: Village of Belgium (North Limits) to Silver Beach Rd; 0.1-miles
- b) Town of Fredonia
1. CTH A: CTH Y to 0.3-miles east of CTH H; 0.8-miles
 2. CTH E: CTH H to Belgium-Kohler Rd; 0.1-miles
 3. CTH H: Little Kohler (East Limits) to Kohler Rd; 0.1-miles
 4. CTH H: Waubeka (North Limits) to Fredonia-Kohler Rd; 0.3 miles
 5. CTH I: Belgium-Kohler Rd (East) to Belgium-Kohler Rd (West); 0.5-miles
 6. CTH I (Jay Rd): CTH I (North) to CTH I (South); 0.3-miles
 7. CTH K: 0.2-miles east of STH 57 to Kay K Rd; 0.8-miles
 8. CTH Y: River Park Road (East) to CTH A; 1.2-miles
 9. CTH Y: River Park Road (West) to River Park Rd (East); 0.4-miles
- c) Town of Port Washington
1. CTH B: CTH LL to Willow Rd; 1.3-miles
 2. CTH H: Hawthorne Drive to Lovers Lane Rd; 0.7-miles
 3. CTH KW: Lake Drive to Dixie Rd; 1.0-miles
- d) Town of Saukville
1. CTH Y: River Park Rd (West) to River Park Rd (East); 0.4-miles
 2. CTH O: West Center Rd to Deerfield Rd; 1.3-miles

4) Administration. This section shall be administered by the Ozaukee County Highway Commissioner or their designee.

5) Enforcement. This section shall be enforced in accordance with § 23.33(12), Wis. Stats., including the issuance of a citation under § 66.0113, Wis. Stats.

6. Penalties. Penalties for a violation of this section shall be as set forth in § 23.33(13), Wis. Stats.

This Ordinance shall take effect upon enactment and publication.

Dated at Port Washington, Wisconsin, this 3rd day of April 2024.

SUMMARY: Revising Section 3.07 of the Ozaukee County Code of Ordinances pertaining to all-terrain vehicle links and regulating the operation of all-terrain vehicles.

VOTE REQUIRED: Majority

RESULT: **APPROVED [UNANIMOUS]**
MOVER: T. Richart, Supervisor District 12
SECONDER: T. Grabow, Vice-Chairperson
AYES: Wolf, Grabow, Richart, Strom, Godden

PUBLIC WORKS COMMITTEE

Public Works Committee
AGENDA INFORMATION SHEET

AGENDA DATE:	April 3, 2024
DEPARTMENT:	Highway
DIRECTOR:	Jon Edgren
PREPARER:	Jon Edgren

Agenda Summary Revising Section 3.07 of the Ozaukee County Code of Ordinances Pertaining to All-Terrain Vehicle Links and Regulating the Operation of All-Terrain Vehicles

BACKGROUND INFORMATION: In 2018, the State of Wisconsin authorized municipalities to establish All-Terrain Vehicle (ATV) and/or Utility-Terrain Vehicle (UTV) routes on roadways within their community. In addition, they were given authority to establish routes on State or County Highways with Speed Limits at 35 MPH or less without approval of the jurisdictional owner.

Over the last few years, the Towns of Belgium, Fredonia, Port Washington & Saukville have approved ATV/UTV routes within their communities. However, the Lakeshore ATV-UTV Club is interested in expanding the accessible routes onto some County Highways above 35 MPH to create “links” between routes.

At April, 2023’s Public Works Committee (PWC) meeting, the Lakeshore ATV-UTV Club brought forth a request to expand their accessibility to County Highways, and Ozaukee County Sheriff Christy Knowles voiced concerns over ATV and/or UTV’s being on some of the busier County Highways. Therefore, the Lakeshore ATV-UTV Club has been working with the Ozaukee County Sheriff’s Department (OCSD) to find acceptable highways to create their highway links.

At February, 2024’s PWC meeting, the Lakeshore ATV-UTV Club, with review by the OCSD, submitted a series of proposed roadways, and staff was directed to create an updated ordinance. The requested “links” are only within local municipalities that have already approved ATV/UTV access to their roadways.

ANALYSIS: Attached is a revised Ozaukee County Code of Ordinances 3.07 - Ozaukee County All-Terrain Vehicle Code.

FISCAL IMPACT: Balance Current Year: -- Next Year’s Estimated Cost: --

FUNDING SOURCE: County Levy: -- Non-County Levy: -- Indicate source: --

RECOMMENDED MOTION: Approve the Ordinance Revisions to Section 3.07 as submitted.