



2023 CCWMO Project Review

TIM SUNDBY

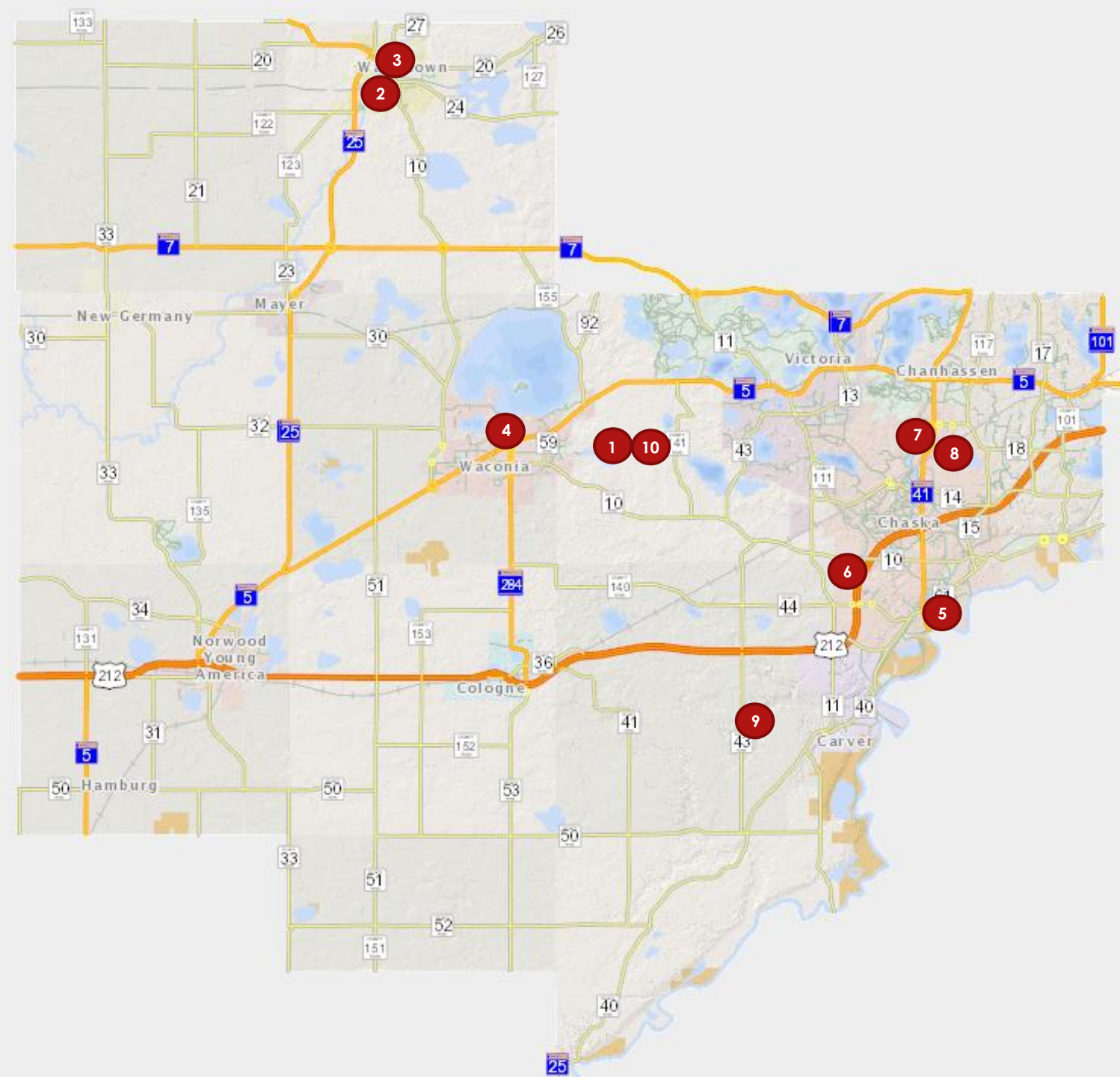
WATER RESOURCES SUPERVISOR

WMOAC MEETING

SEPTEMBER 26, 2023

Tonight's Presentation

- ▶ Review of 6 projects completed in 2023
- ▶ Review of 4 feasibility studies completed in 2023
- ▶ Review of total costs and funding amounts for each project
- ▶ Drone Flights



Legend

- ▶ 1 – Reitz Lake Ravine Project
- ▶ 2 – Watertown Streambank Project
- ▶ 3 – South Fork Crow River Turf to Native
- ▶ 4 – Lower Minn Turf to Native
- ▶ 5 – Courthouse Buffer Project
- ▶ 6 – Chaska Creek Remeander Phase 2
- ▶ 7 – Big Woods Goldfish Feasibility Study
- ▶ 8 – Big Woods Ravine Concept
- ▶ 9 – Carver Creek Bank Stabilization Feasibility Study
- ▶ 10 – Reitz Lake Ravine Concept

Reitz Lake Ravine Project

- ▶ Background

- ▶ A ravine formed through a private resident's property from Airport Road down to Reitz Lake Road. A plan set was developed in 2021 to stabilize the ravine.
- ▶ Received a \$40,000 BWSR Grant to construct the project. Total project costs was \$48,298.80

- ▶ Update

- ▶ This project was completed in July.





Watertown Streambank Project

- ▶ Background

- ▶ CCWMO completed a feasibility study for the South Fork Crow River through the City of Watertown to prioritize sites that have failing banks. Through this study, one location was targeted and completed in November, 2022.
- ▶ \$24,029.83 of the project was funded by a BWSR Grant. Total project costs were \$34,384.32

- ▶ Update

- ▶ Site inspections were completed in the spring and fall to assess how the site responded. Mortality rate of live stakes are roughly 40%, which is around what was estimated. The cedar revetments are still holding and have sediment deposition on them.



Watertown Turf to Native Sites

- ▶ Background

- ▶ Three sites, totaling 9.6 acres, have undergone native prairie restoration in Watertown. This is the final year of a three-year grant, with the City of Watertown taking over maintenance of the sites to ensure that these areas are fully established.
- ▶ Received a \$40,000 grant from BWSR to complete this project. Total costs are \$54,000

- ▶ Update

- ▶ Final year of the grant. This has been a tough three year stretch to establish a prairie through seeding and plugs.
- ▶ Work with the city to ensure that these sites become established



Waconia Turf to Native Sites

▶ Background

- ▶ Four sites, totaling 10.6 acres, have undergone a native prairie restoration in and around Waconia. Granted an extension due to staff turnover at management company, will end June 30th, 2024. The city will maintain three sites, and Carver County Parks will maintain the final site
- ▶ Received \$40,000 from a BWSR Grant. Total costs are estimated to be \$52,000.

▶ Update

- ▶ Each site had three visits from Prairie Restoration Inc to assess the status of the site, remove annual weeds, and decide if further work was necessary.
- ▶ These sites will be turned over to Carver County Parks and the City of Waconia at the end of June, 2024.



Courthouse Buffer Project

- ▶ Background

- ▶ 2.5 acres around Courthouse Lake were transitioned from maintained turf grass to native vegetation.
- ▶ Received \$12,430 from a DNR Grant. Total costs are \$13,211.27.

- ▶ Update

- ▶ Final plantings and seeding was completed in June, with a June 30th deadline for the grant.
- ▶ Currently, CCWMO and SWCD is maintaining these sites.



Chaska Creek Remeander Phase 2

▶ Background

- ▶ A 1,000 linear foot ditched section of West Chaska Creek was targeted to add 5 meanders and a floodplain. Phase 1 was the construction of a 100 foot wide floodplain and 5 offline meanders that was completed in 2020. Phase 2 is to finish the floodplain, including the addition of an oxbow pond, and connect the meanders to the main channel.
- ▶ CCWMO received a \$283,000 BWSR Grant and a \$50,000 Lower Minnesota Grant to finish the project. Total costs for Phase 2 are estimated to be \$325,000.

▶ Update

- ▶ Currently in construction, with the plan to be completed by the beginning of October. Past rain events may change that timeline.



MARK CONSTRUCTION
95-124-003/BA20 109-10-10
A - CF









Big Woods Lake Goldfish Feasibility Study

▶ Background

- ▶ In the spring of 2019, thousands of goldfish were identified in the inlet to Big Woods Lake. This kicked off a large public response to the presence to the goldfish in the lake and removal efforts by CCWMO Staff began.
- ▶ To help with focusing our efforts, a management feasibility study was undertaken with the help from a BWSR State Grant. The grant was for a 3-year feasibility study. The total cost of the project is \$88,000, the State Grant pays for \$80,000.

▶ Update

- ▶ A design concept was developed for this location that is ready to go out for grant funding
- ▶ Looking at the next round of Watershed Based Implementation Funding (WBIF) from BWSR to complete this project.

A large net full of goldfish is being lifted from a body of water. Two people wearing waders are visible, one on the left and one on the right, holding the net. The water is dark and the fish are densely packed in the net. The background shows some snow on the ground.

2020 Fall removal

During this removal in October of 2020, 30,000 and 50,000 goldfish were removed during a migration event.

Big Woods Lake Ravine Feasibility Study

- ▶ Background

- ▶ Ravine that has formed between Hwy 41 and Big Woods Lake, that over time would impact the highway
- ▶ Received a BWSR State Grant for a total of \$60,000, \$14,100 is dedicated for this project. Plan will be to work with the City of Chaska for other priority project sites.
- ▶ Total costs are \$16,508.95 with \$14,032.61 covered by grant dollars.

- ▶ Update

- ▶ Field work will be completed this fall, with the final report to be due in March from WSB Engineering.

NEW 36" ADS HDPE FLARED END SECTION AND TRASH GRATE.

CLASS I RIPRAP TOE
DETAIL 2, SHEET C-801

CLASS II RIPRAP AT OUTLET
DETAIL 3, SHEET C-801

CLASS V RIPRAP CROSS VANE
DETAIL X, SHEET C-802

CLASS I RIPRAP CROSS VANE
DETAIL 4, SHEET C-801

36" TO 48" FIELDSTONE BOULDER
GRADE CONTROL STRUCTURE
DETAIL X, SHEET C-802

CLASS V RIPRAP PLUNGE POOL
DETAIL X, SHEET C-802

CROSS SECTION 1, SHEET C-201

CROSS SECTION 2, SHEET C-201

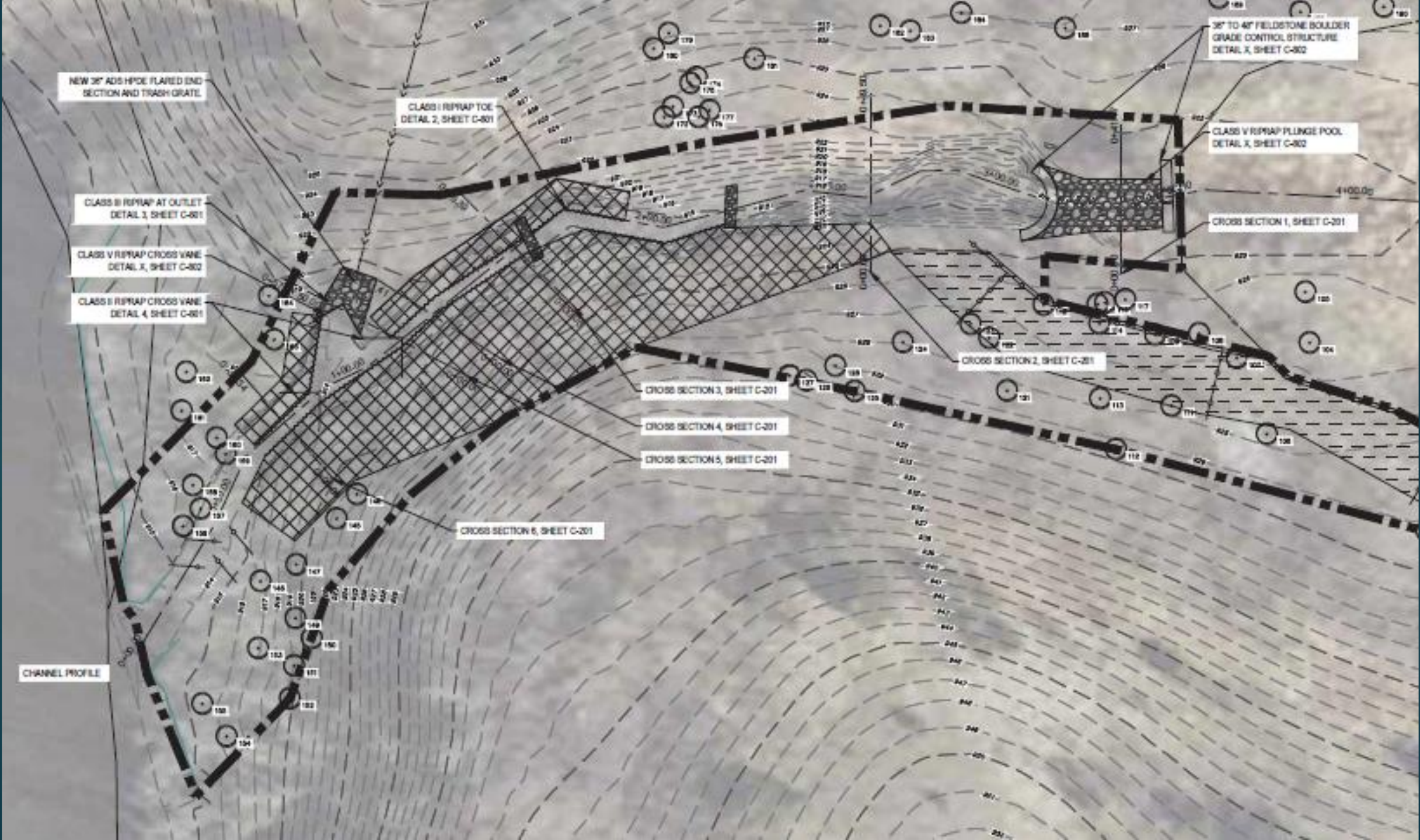
CROSS SECTION 3, SHEET C-201

CROSS SECTION 4, SHEET C-201

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CROSS SECTION 6, SHEET C-201

CHANNEL PROFILE



Carver Creek Feasibility Study

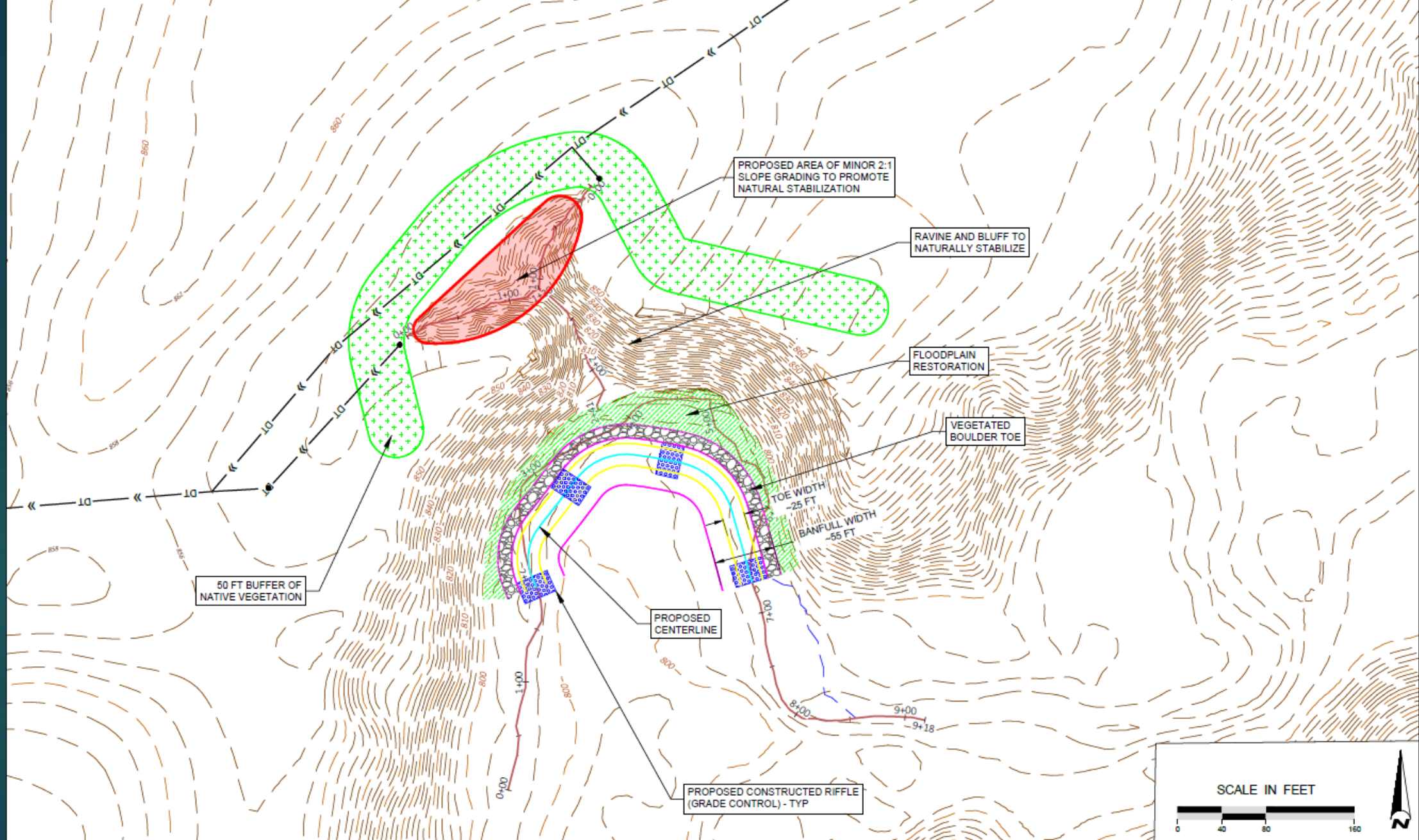
- ▶ Background
 - ▶ Site of a large bank failure in 2012
 - ▶ Received \$46,991 in state grants to fund a feasibility study
 - ▶ Contracted with EOR to complete the feasibility study that would include options and costs to address the erosional issues of the site.



Carver Creek Feasibility Study

- ▶ Update
 - ▶ Received draft study with four options to resolve the erosional issues
 - ▶ Looking to finalize the draft by the end of October with 5 different options.
 - ▶ Currently looking at two options as the best ones moving forward.
 - ▶ Current costs are \$31,332.41.





50 FT BUFFER OF NATIVE VEGETATION

PROPOSED AREA OF MINOR 2:1 SLOPE GRADING TO PROMOTE NATURAL STABILIZATION

RAVINE AND BLUFF TO NATURALLY STABILIZE

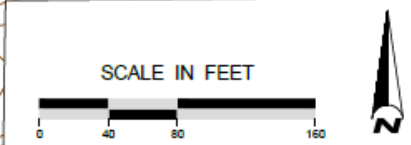
FLOODPLAIN RESTORATION

VEGETATED BOULDER TOE

TOE WIDTH ~25 FT
BANKFULL WIDTH ~55 FT

PROPOSED CENTERLINE

PROPOSED CONSTRUCTED RIFFLE (GRADE CONTROL) - TYP



NOT FOR CONSTRUCTION

| DATE | NO. | DESCRIPTION |
|----------|-----|-------------------|
| 07/28/23 | 1 | FEASIBILITY STUDY |
| | 2 | |
| | 3 | |
| | 4 | |
| | 5 | |
| | 6 | |

DESIGNED BY: EOR
 DRAWN BY: DEM
 CHECKED BY: EOR

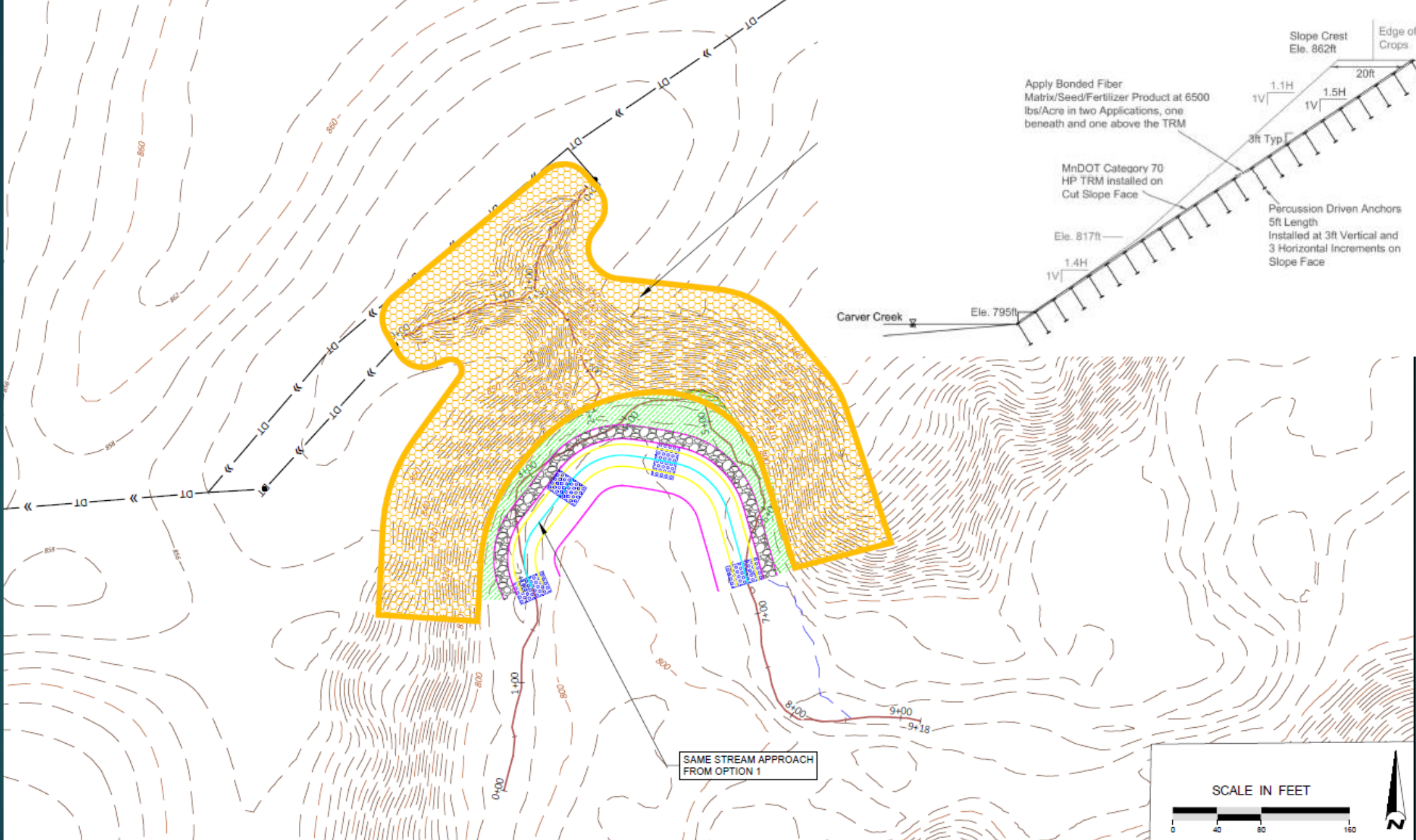


CARVER CREEK BANK FAILURE
 CARVER COUNTY, DAHLGREN TOWNSHIP, MN
 CARVER COUNTY WATER MANAGEMENT ORGANIZATION CHASKA, MN 55318

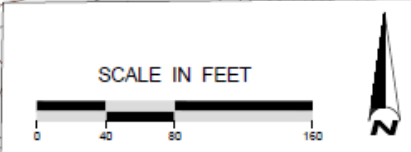
OPTION 1 - CHANNEL RE-ALIGNMENT AND RAVINE NATURAL STABILIZATION
 SHEET 03 OF 06

EOR JOB #0042-0043

CLIENT PROJECT #



SAME STREAM APPROACH FROM OPTION 1



NOT FOR CONSTRUCTION

| DATE | NO. | DESCRIPTION |
|----------|-----|-------------------|
| 07/26/23 | 1 | FEASIBILITY STUDY |
| | 2 | |
| | 3 | |
| | 4 | |
| | 5 | |
| | 6 | |

DESIGNED BY: EOR
 DRAWN BY: DEM
 CHECKED BY: EOR
 EOR JOB #0042-0043

Carver County Water Management Organization
 CLIENT PROJECT #

CARVER CREEK BANK FAILURE
 CARVER COUNTY, DAHLGREN TOWNSHIP, MN
 CARVER COUNTY WATER MANAGEMENT ORGANIZATION CHASKA, MN 55318

OPTION 4 - INTERNAL SOIL ANCHORS
 SHEET 06 OF 08

Reitz Lake Ravine Feasibility Study

▶ Background

- ▶ A large ravine system is eroding into Reitz Lake. Since 2000, this ravine has contributed to a 1,100 square foot delta within the lake.
- ▶ Received a \$25,000 grant through Watershed Based Implementation Funding (Board of Water and Soil Resources). Current costs are \$25,381.07

▶ Update

- ▶ Contracted with Stantec to complete a feasibility study to stabilize the ravine and reduce the amount of sediment discharging into Reitz Lake.
- ▶ The final study will be complete by the end of October.

Youtube Videos

- ▶ Drone flights
 - ▶ Carver County Public Works has done multiple flights for us on various projects.
 - ▶ All can be found on their Youtube Channel
 - ▶ Search 'Carver County Public Works'
- ▶ Chaska Creek Remeander (5 flights)
- ▶ Bevens Dam Removal (2 flights)
- ▶ Courthouse Shoreline (1 flight)
- ▶ Watertown Wetland Bank (2 flights)

Questions

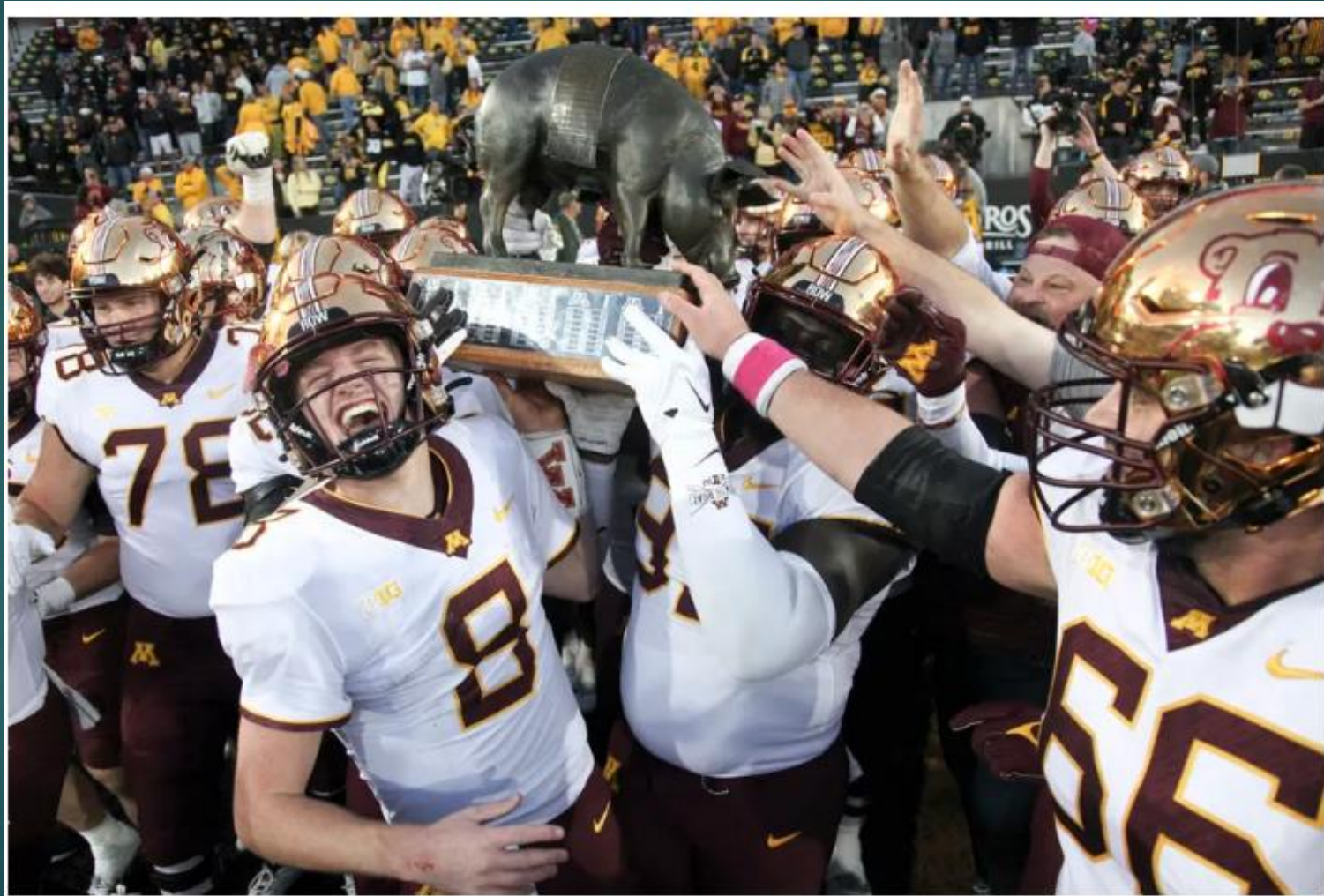


Photo by Matthew Holst/Getty Images