State of Wisconsin
Department of Natural Resources
PO Box 7921, Madison WI 53707-7921
dnr.wi.gov

Development at Historic Fill Site or Licensed Landfill Exemption Application

Form 4400-226 (R 05/16)

Notice: Use of this form is required by the DNR for any application to develop at a historic fill site or licensed landfill pursuant to secs. NR 506.085 and NR 500.08(4), Wis. Adm. Code. The Department will not consider your application unless you provide complete information requested. Personally identifiable information collected will be used to process your application and will also be accessible by request under Wisconsin's Open Records law [ss.19.31 - 19.39, Wis. Stats.]

Instructions: See *Development at Historic Fill Sites and Licensed Landfills: What you need to know* (PUB-RR-683, November 2013) for detailed instructions.

- All Exemption Application materials should be sent to the region where the site is located, as listed on page 6.
- Include $700 fee payment with this application. If the site is a licensed landfill and the Waste and Materials Management program is doing the review, submit no fee now. You will be sent an invoice upon receipt of this application.
- Determine the appropriate exemption type for the site and check appropriate box below.
- Provide complete information requested for each type of exemption. Include the following attachments:
  Required: Summary of Existing and Potential Impacts described in Section V as an attachment, under the seal of a professional engineer or geologist registered to practice in Wisconsin.

  Optional: Site Visit Summary Comments (Section IX) including any photos, sketches or site visit notes.

Exemption Type

☒ **Remediation and Redevelopment Program NR 700 Rule Series Process Exemption:** Site with remedial actions conducted in accordance with NR 700 series
Required: Sections I - VI ***Optional:*** Sections VII - X

☐ **Case-by-Case Evaluation:** Sites with anticipated environmental impacts or wastes of special concerns
Required: Sections I - VI ***Optional:*** Sections VII - X

☐ **Expedited Exemption:** Site with no expected environmental impact
Required: Sections I - VI **and** Form 4400-226A Expedited Exemption Application ***Optional:*** Sections VII - X

I. Applicant Information

Owner - Last Name	First	MI	Phone Number (include area code)
C. Reiss Coal Company, LLC			(920) 436-7600

Contact Name (if different)
c/o Christian Zuidmulder, General Manager

Street Address	City	State	ZIP Code
111 West Mason Street	Green Bay	WI	54303

Developer - Last Name	First	MI	Phone Number (include area code)
C. Reiss Coal Company, LLC			

Street Address	City	State	ZIP Code
111 West Mason Street	Green Bay	WI	54303

II. Site Name and Location

Site Name	Location / Address
C. Reiss Coal Dock Property	E ½ NE ¼ of S16, and the E ½ SE ¼, S9, T49N, R14W
Is the site known by another name(s)? ◉ Yes ○ No ○ Unknown If yes, provide name: Murphy Marine Terminal	◉ City ○ Town ○ Village of Superior
Does the site have a license number? ○ Yes ◉ No ○ Unknown If yes, License Number:	State: WI; ZIP Code: 54880; County: Douglas

A. Attach a map with site location and limits of fill/waste disposal area.

B. Global Positioning System Coordinates

Latitude DEG	MIN	SEC		Longitude DEG	MIN	SEC	
46	43	57.3312	N	92	07	16.2192	W

Describe method for collecting GPS Coordinates
Obtained From WDNR BRRTS on the Web Activity Details

Program Lead, Fee Status and Regulatory ID Numbers *(This area for DNR use only)*

○ **Waste Management Bureau**
○ **Remediation and Redevelopment Bureau - Exemption is part of remedy under NR 700 program**
  ○ Fee already paid for review of remedial design report
  ○ Review of remedial design report not requested and payment is attached

☐ Payment Attached
Amount $

Hazardous Waste Facility License ID #:(5 digits)	DNR FID #: (9 digits)	USEPA ID #:(used for both RCRA & CERCLIS #s) (WI+Alpha+9 digits)

Region	Project Manager	Telephone Number

III. Site Ownership History

Previous Owner - Last Name	First	MI	Telephone Number
Reference attached Section V narrative			

Street Address	City	State	ZIP Code

Responsible Municipal / Private Operator - Last Name (if applicable)	First	MI	Telephone Number

Street Address	City	State	ZIP Code

IV. Evaluation of Existing and Potential Impacts. See Development at Historic Fill Sites and Licensed Landfill: Guidance for Investigation and Development at Historic Fill Sites and Licensed Landfill: Potential Problems and Considerations.

A. Analytical data for the following media have been collected and/or examined before completing this application:

1. Groundwater: ◉ Yes ○ No
2. Soil: ◉ Yes ○ No
3. Surface water / sediment: ◉ Yes ○ No
4. Air: ○ Yes ◉ No
5. Methane or other explosive gases: ○ Yes ◉ No

B. Based on known or suspected sources and wastes, their physical characteristics, containment and geologic environment, do you suspect a release of pollutants to the environment?

◉ Yes: ☒ Groundwater ☒ Soil ☒ Surface Water / Sediment ☐ Methane or Other Explosive Gases
○ No

C. If there is NOT a likelihood of a release of pollutants or evidence of a release, would the impact of the proposed development be likely to cause a release to the environment?

○ Yes: **If yes, be sure to summarize actions to be taken to prevent adverse environmental impacts in V. Part C below.**
◉ No

V. Summary of Existing and Potential Impacts. See Development at Historic Fill Sites and Licensed Landfill: Guidance for Investigation and Development at Historic Fill Sites and Licensed Landfill: Potential Problems and Considerations.

Describe the following in an attached narrative under the signature of a qualified professional. Organize, label and package as listed below.

A. Existing Site Conditions

1. existing site conditions including waste types,
2. potential for impacts, and
3. evaluation of existing impacts.

B. Proposed Development Summary. Include explanation for overall site decision.

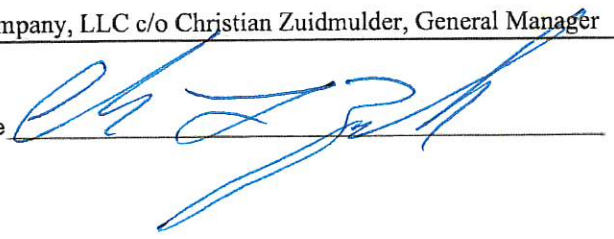
C. Summary of actions to be taken and engineering controls that will prevent or minimize adverse environmental impacts and potential threats to human health and welfare, including worker safety.

VI. Certification of Application Information

I certify that information in this application and all its attachments is true and correct and in conformity with applicable Wis. statutes.

Print / Type Name of Applicant

C. Reiss Coal Company, LLC c/o Christian Zuidmulder, General Manager

Applicant Signature  Date Signed 08/04/22

Sections VII - IX are optional for all Applicants.

VII. Current and Historic Type of Waste Disposal Site (Check all that apply)

- ☐ Licensed Landfill
- ☐ Non-approved {See s.289.01(3)}, Wis Stats.
- ☐ Approved
- ☐ One-time Disposal
- ☐ Construction / Demolition
- ☐ Historic Fill Site

Liner

- ☐ Unlined
- ☐ Lined
- ☐ Composite Liner
- ☐ Other Liner (Describe): _____
- ☐ Clay Liner
- ☐ Unengineered

Total Landfill Volume

- ◯ < 50,000 yd ³
- ◯ 50,000-500,000 yd
- ◯ > 500,000 yd ³

Does the landfill have a closure plan? ◯ Yes ◯ No ◯ Unknown

Does the landfill have a groundwater monitoring plan? ◯ Yes ◯ No ◯ Unknown

Have groundwater monitoring wells been installed? ◯ Yes ◯ No ◯ Unknown

Was a cover installed? ◯ Yes: ◯ No **If no, go to Past Land Uses.**

- ☐ Composite cap
- ☐ Layered soil cap with clay barrier
- ☐ Clay cap
- ☐ Soil cap - not recompacted clay
- ☐ Other cover
- ☐ Unknown

What is the thickness of the cover? ◯ < 6 in ◯ 6-12 in ◯ 12-24 in ◯ > 24 in ◯ Unknown

Past Land Uses. (Check all that apply)

- ☐ Agricultural co-op
- ☐ Brush pile
- ☐ Bulk plant
- ☐ Coal gas manufacturer
- ☐ Deer pit
- ☐ Dry cleaner
- ☐ Electroplater
- ☐ Lagoon
- ☐ Manufacturing Type: _____
- ☐ Old burn pit
- ☐ Pipeline
- ☐ RCRA generator
- ☐ Salvage yard
- ☐ Service Station
- ☐ Tannery
- ☐ Unknown
- ☐ Other: _____

Date(s) of Site Operation

From: _____ To: _____ No. of Years _____ ☐ Unknown

VIII. Waste Information & Geologic Environment. See Development at Historic Fill Sites and Licensed Landfills: Guidance for Investigation

A. Known or Suspected Sources/Wastes. (Check all that apply)

- ☐ Abandoned containers
- ☐ Above ground pipeline or tank
- ☐ Animal carcasses
- ☐ Buried drums
- ☐ Burning of materials
- ☐ Foundry sand
- ☐ Industrial accident
- ☐ Known or suspected hazardous materials
- ☐ Municipal waste
- ☐ Paper mill sludge
- ☐ Transformer
- ☐ Trees/brush
- ☐ Surface spills
- ☐ Fly ash
- ☐ Demolition/construction waste
- ☐ Surface impoundment/lagoons
- ☐ Underground pipeline or tank
- ☐ Exempted fill [NR 500.08(1) and (2)]
- ☐ Unknown
- ☐ Other: _____

B. Physical Characteristics of Sources/Wastes

◯ Liquid ◯ Solid ◯ Liquid & Solid ◯ Unknown

VIII. Waste Information & Geologic Environment *(continued)*

C. Waste Containment ◯ Liner ◯ Unknown ◯ Not applicable

☐ Engineered cover
◯ Maintained ◯ Not maintained

☐ Functioning leachate collection & removal system
☐ Functioning & maintained run-off management system
☐ Functioning groundwater monitoring system

D. Soil Type: Estimate distances or determinations based on regional or site specific information.

◯ Regional ◯ Site specific

Clay, silt or other fine grained soils present? (lacustrine, tills, etc.) ◯ Yes ◯ No

At surface? ◯ Yes ◯ No At depth? ◯ Yes ◯ No _____feet

Sand & gravel, coarse grained soils present? ◯ Yes ◯ No

At surface? ◯ Yes ◯ No At depth? ◯ Yes ◯ No _____feet

E. Depth to Groundwater

◯ Regional ◯ Site specific _____feet

F. Direction of Groundwater Flow

◯ Regional ◯ Site specific _____direction

G. Depth to Bedrock

◯ Regional ◯ Site specific _____direction

H. Bedrock Type

◯ Regional ◯ Site specific ☐ Sandstone ☐ Limestone/Dolomite ☐ Metamorphic/Igneous

IX. Site Visit

Conduct a site visit to complete site screening and determine general site conditions, on-site activities and adjacent land use encroachment issues. As appropriate to document the site, take photos, sketch the site and prepare a Site Visit Report.

On-site visit conducted? ◉ Yes ◯ No

General site conditions: Document any observed releases and note whether or not you were able to walk the site. Examples of things to be aware of include the following:

- leachate seeps or evidence of seeps such as stained soil/vegetation
- stressed vegetation as a sign of gas migration to the surface or of leachate seeps;
- quality and coverage of vegetation on the cap;
- odors which may indicate gas migration to the atmosphere;
- erosion of the cap;
- maintenance of positive drainage over the capped area;
- visual desiccation cracks in the cap.

Attach the following to your application:

☒ Photographs, regular or digital ☐ Site sketch ☐ Site Visit Report

Name(s) of Person(s) Conducting Site Visit	Date of Site Visit
Whitney Cull - Geological Engineer In Training with Stantec	05/05/2022

IX. Site Visit *(continued)*

A. Adjacent Land Uses. Indicate all directions. (Check all that apply)

☐ Agricultural	☐ N	☐ S	☐ E	☐ W	☐ NE	☐ NW	☐ SE	☐ SW
☐ Industrial	☐ N	☐ S	☐ E	☐ W	☐ NE	☐ NW	☐ SE	☐ SW
☐ Recreational	☐ N	☐ S	☐ E	☐ W	☐ NE	☐ NW	☐ SE	☐ SW
☐ Residential	☐ N	☐ S	☐ E	☐ W	☐ NE	☐ NW	☐ SE	☐ SW
☐ Undeveloped	☐ N	☐ S	☐ E	☐ W	☐ NE	☐ NW	☐ SE	☐ SW
☐ Commercial	☐ N	☐ S	☐ E	☐ W	☐ NE	☐ NW	☐ SE	☐ SW
☐ Other:	☐ N	☐ S	☐ E	☐ W	☐ NE	☐ NW	☐ SE	☐ SW

B. Potential Groundwater Receptors. Estimate distances. (1 mile = 5,280 ft)

Distance to and direction of nearest municipal well: _____ feet ☐ > ½ mile from the waste _____ direction

Distance to and direction of nearest other-than-municipal well: _____ feet ☐ > ½ mile from the waste _____ direction

Distance to and direction of nearest non-community well: _____ feet ☐ > ½ mile from the waste _____ direction

Distance to and direction of nearest private well: _____ feet ☐ > ½ mile from the waste _____ direction

Distance to and direction of nearest private well: _____ feet ☐ > ½ mile from the waste _____ direction

C. Potential For Gas Migration

_____ No. of homes within 300 feet of waste (gas migration potential)

_____ No. of homes between 300 & 1,000 ft to waste (gas migration potential)

Distance to and direction of nearest building: feet ☐ > ½ mile from the waste _____ direction

Type of building: ☐ On-site building ☐ Municipal ☐ Residential ☐ Commercial ☐ Industrial ☐ Unknown

D. Potential Surface Water Receptors. Estimate distances.

◯ Creek _____ feet ◯ Drainage ditch: _____ feet ◯ Intermittent stream: _____ feet

◯ River _____ feet ◯ Lake _____ feet ◯ Wetland: _____ feet

E. Based on the site visit, did you visually observe...

1. a release to a surface water body? ◯ Yes ◯ No ◯ Unknown
2. a leachate seep? ◯ Yes ◯ No ◯ Unknown
3. a release to soils? ◯ Yes ◯ No ◯ Unknown

X. Comments: Use this section to provide comments on any aspect of the site visit. Attach any information or explanations labeled with the appropriate section number to which the material applies.

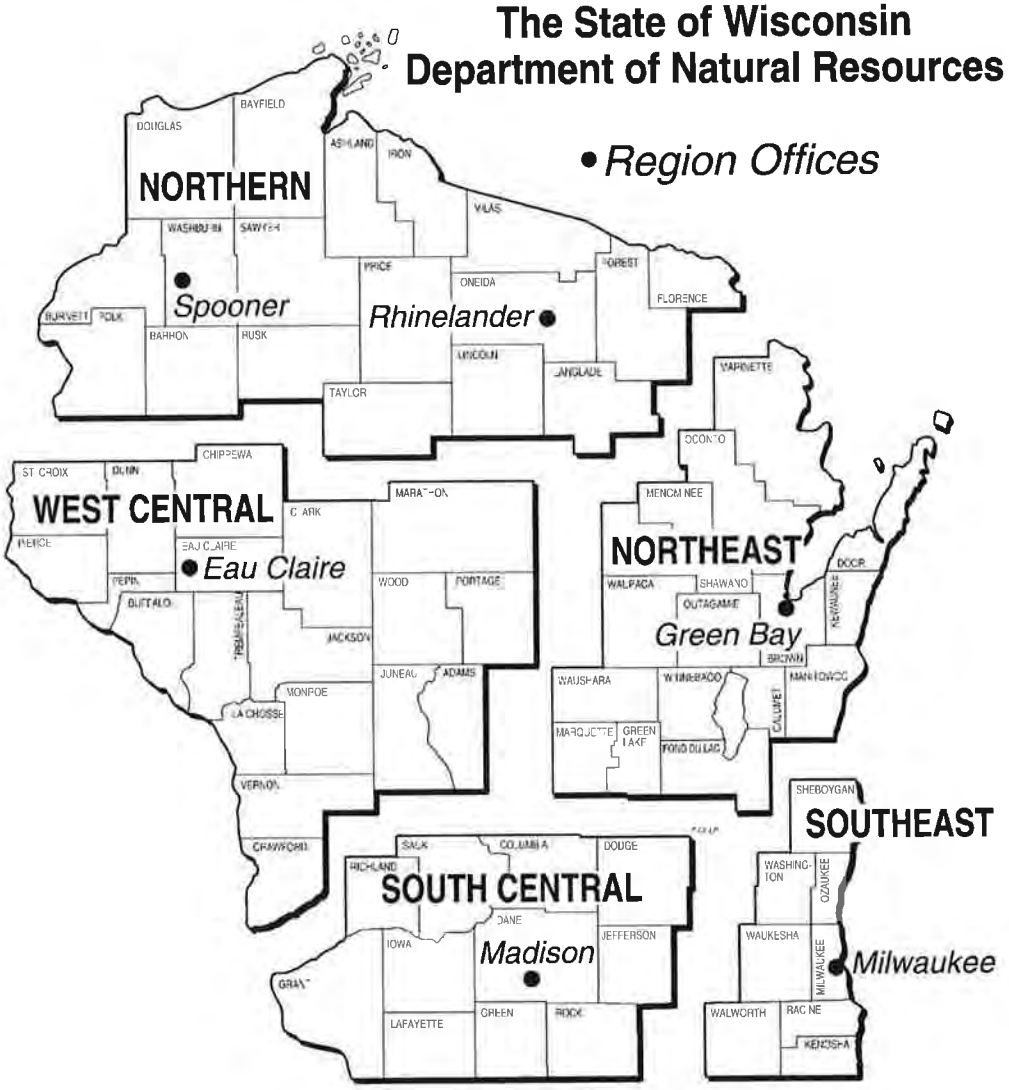
Region Map

NORTHERN REGION
Remediation & Redevelopment
Team Supervisor
Department of Natural Resources
107 Sutliff Avenue
Rhinelander, WI 54501
(715) 365-8976
OR
Regional Waste Program Manager
Department of Natural Resources
107 Sutliff Avenue
Rhinelander WI 54501
(715) 365-8946

NORTHEAST REGION
Remediation & Redevelopment
Team Supervisor
Department of Natural Resources
2984 Shawano Avenue
Green Bay, WI 54313-6727
(920) 662-5160
OR
Regional Waste Program Manager
Department of Natural Resources
2984 Shawano Avenue
Green Bay, WI 54313-6727
(920) 662-5120

SOUTHEAST REGION
Remediation & Redevelopment
Team Supervisor
Department of Natural Resources
2300 N. Martin Luther King Drive
Milwaukee, WI 53212
(414) 263-8561 or (414) 263-8714
OR
Regional Waste Program Manager
Department of Natural Resources
2300 N. Martin Luther King Drive
Milwaukee, WI 53212
(414) 263-8694 or (414) 263-8697

WEST CENTRAL REGION
Remediation & Redevelopment
Team Supervisor
Department of Natural Resources
1300 West Clairemont Avenue
Eau Claire, WI 54701
(715) 839-3710
OR
Regional Waste Program Manager
Department of Natural Resources
1300 West Clairemont Avenue
Eau Claire, WI 54701
(715) 839-3708



SOUTH CENTRAL REGION
Remediation & Redevelopment
Team Supervisor
Department of Natural Resources
3911 Fish Hatchery Road
Fitchburg, WI 53711
(608) 275-3241

OR Regional Waste Program Manager
Department of Natural Resources
3911 Fish Hatchery Road
Fitchburg, WI 53711
(608) 275-3466

Stantec

Photographic Log

Client:	**C. Reiss Coal Company, LLC**	**Project:**	**193707141**
Site Name:	**C. Reiss Coal Dock Property**	**Site Location:**	**Superior, Wisconsin**

Photograph ID: 1

Photo Location:
STN1

Direction:
Looking north

Survey Date:
5/5/2022

Comments:
Drilling STN1 in the southeast portion of the Property

Photograph ID: 2

Photo Location:
North of STN4

Direction:
Looking east

Survey Date:
5/5/2022

Comments:
Skimming system for product recovery in association with a release on the east-adjoining property

Client:	**C. Reiss Coal Company, LLC**	**Project:**	**193707141**
Site Name:	**C. Reiss Coal Dock Property**	**Site Location:**	**Superior, Wisconsin**

Photograph ID: 3 **Photo Location:** STN5 **Direction:** Looking north **Survey Date:** 5/5/2022 **Comments:** Drilling STN5 in the southwest portion of the Property	
Photograph ID: 4 **Photo Location:** STN5 **Direction:** - **Survey Date:** 5/5/2022 **Comments:** Soil cores taken from STN5; black granular fill was present to the maximum depth of exploration (12 feet below ground surface)	

Client:	**C. Reiss Coal Company, LLC**	**Project:**	**193707141**
Site Name:	**C. Reiss Coal Dock Property**	**Site Location:**	**Superior, Wisconsin**

Photograph ID: 5	
Photo Location: STN10	
Direction: -	
Survey Date: 5/4/2022	
Comments: Soil cores taken from STN10; native clays, silts and sands were present starting ~6 feet below ground surface	

Photograph ID: 6	
Photo Location: North of STN12	
Direction: Looking northwest	
Survey Date: 5/4/2022	
Comments: View of former ballast tank release area from STN12, which was performed on a hill and in the footprint of a future storm water pond	

Client:	**C. Reiss Coal Company, LLC**	**Project:**	**193707141**
Site Name:	**C. Reiss Coal Dock Property**	**Site Location:**	**Superior, Wisconsin**

Photograph ID: 7 **Photo Location:** STN16 **Direction:** Looking south **Survey Date:** 5/4/2022 **Comments:** View of STN16 (location noted by the orange bucket)	
Photograph ID: 8 **Photo Location:** West of STN19 **Direction:** Looking south **Survey Date:** 5/4/2022 **Comments:** View of the slip, as seen from the dock wall near STN19	

Client:	**C. Reiss Coal Company, LLC**	**Project:**	**193707141**
Site Name:	**C. Reiss Coal Dock Property**	**Site Location:**	**Superior, Wisconsin**

Photograph ID: 9 **Photo Location:** STN19 **Direction:** - **Survey Date:** 5/4/2022 **Comments:** Soil cores taken from STN19; red fill sands were generally present on the north half of the property until ~11. 5 feet below ground surface, where native silts/fine sands were encountered	
Photograph ID: 10 **Photo Location:** STN20 **Direction:** Looking north **Survey Date:** 5/4/2022 **Comments:** View of concrete panels covering the northern portion of the Property adjoining the dock slip.	

Client:	**C. Reiss Coal Company, LLC**	**Project:**	**193707141**
Site Name:	**C. Reiss Coal Dock Property**	**Site Location:**	**Superior, Wisconsin**

Photograph ID: 11 **Photo Location:** Southwestern portion of the Property **Direction:** Looking northeast **Survey Date:** 5/5/2022 **Comments:** View of an unpaved portion of the existing access road traversing the western portion of the Property.	
Photograph ID: 12 **Photo Location:** Western Property Boundary **Direction:** Looking north **Survey Date:** 5/5/2022 **Comments:** View of the western boundary of the Property and dock slip to the north.	

Section V, Summary of Existing and Potential Impacts: C Reiss Coal Dock Property, Superior, Wisconsin

Pursuant to the exemption requirements of Chapter NR 506.085 and NR500.08(4) Wisconsin Administrative Code (WAC), Stantec Consulting Services Inc. (Stantec) prepared this summary of existing and potential impacts from historical fill, including documentation of existing site conditions, a development summary, evaluation of potential for impacts, and proposed engineering controls as required by Section V of the Development at Historic Fill Site or Licensed Landfill Exemption Application Form 4400-226.

BACKGROUND INFORMATION

The C. Reiss Coal Dock property in Superior, Wisconsin (herein referred to as the "Property") is located in the east ½ of the northeast ¼ of Section 16 and the east ½ of the southeast ¼ of Section 09, Township 49 North, Range 14 West, Douglas County, Wisconsin. It is bordered by St. Louis Bay to the north, active industrial dock properties to the west and east, and the Burlington Northern Santa Fe Railway right-of-way to the south. Further surrounding land uses are primarily industrial in nature. The general location of the Property is illustrated on **Figure 1**.

The Property is currently associated with two open Bureau for Remediation and Redevelopment Tracking System (BRRTS) cases:

- 03-16-000320 MURPHY MARINE TERMINAL
- 02-16-589248 C REISS COAL DOCK PROPERTY

In addition, multiple BRRTS cases associated with the east-adjoining property have been documented as impacting soil and/or groundwater at the Property. These include:

- 02-16-297977 AMOCO OIL BARGE DOCK - FMR BARGE DOCK (closed),
- 02-16-297979 AMOCO BARGE DOCK - OW SEPARATOR & LOAD RACK (open), and
- 02-16-117873 AMOCO BARGE DOCK - MANIFOLD & AST AREA (open).

During December 2021 and May 2022 Stantec conducted site investigation activities to further evaluate previously identified soil and sediment quality proposed to be managed on the Property prior to planned development activities. During July 2022, Stantec submitted a Site Investigation Report (SIR) and Material Management Plan (MMP) to the Wisconsin Department of Natural Resources (WDNR) for review and approval to facilitate future material management activities during the redevelopment of the Property.

The planned development will reestablish industrial bulk material handling operations at the Property by installing infrastructure for shipments by truck and rail as well as dock wall rehabilitation and sediment dredging. Proposed development activities will result in contaminated materials being moved from their existing locations and relocated to other areas on the Property. Remediation will include sediment dredging, on-site management of sediment and soil, and relocation of contaminated and uncontaminated materials to designated areas. Excavated areas associated with development activities will be capped with building slabs, paved areas, railroad ballast, gravel access roads, and/or clean soil cap (including native grass seeding) to prevent direct human contact with contaminated soil and fill material and reduce migration of groundwater contamination.

Contact Information

Responsible Party: C. Reiss Coal Dock Property
111 West Mason Street
Green Bay, Wisconsin 54303
c/o Christian Zuidmulder, General Manager
Phone: (920) 436-7600
Email: Christian.Zuidmulder@Thecreiss.com

Form 4400-226 Section V, Summary of Existing and Potential Impacts: C Reiss Coal Dock Property, Superior, Wisconsin

Consultant: Stantec Consulting Services Inc.
12080 Corporate Parkway, Suite 200
Mequon, Wisconsin 53092
Stu Gross, P.G., Project Manager
Phone: (262) 643-9159
Email: Stu.Gross@stantec.com

A. EXISTING SITE CONDITIONS

A.1 Existing (and Current) Site Conditions and Waste Types

The Property, currently owned by C. Reiss, consists of a vacant, former industrial dock parcel (Parcel Identification Number 048040101400). No buildings currently exist on the Property. The northern portion of the Property serves as access to the west-adjoining dock slip and is primarily surfaced with concrete panels that are approximately four inches thick, eight feet long and eight feet wide. The metal remnants of a former aboveground oil-water separator tank enclosed within a chain link fence along with two, eight-inch buried/inactive petroleum pipelines are present east of the south end of the dock slip. The pipelines travel from this area to the east-adjoining property. The southern portion of the Property generally consists of wooded areas and wetlands, with a deteriorating access road along the western Property boundary. A summary of general history, current uses, and previous site investigation activities for the Property is provided in the SIR provided to WDNR in July 2022.

Fill containing sands, gravels, and/or black granular pieces of anthropogenic materials (i.e. coal pieces) was identified underlying surface materials (i.e. concrete/topsoil/gravel) across the Property. The thickness of this fill unit ranged from 0.25 to 12 feet thick with an average thickness of 2.5 feet. Beneath this fill unit on the northern portion of the Property was a red-brown, non-native uniform sand, which was presumably used as the base of the imported material to the Property to construct the dock in 1907. Apparent native silts/sands were encountered between eight feet below grade (fbg) on the southern end of the dock, to 12 fbg on the northern end of the dock. Native soils generally comprised of red-brown clay (and, to a lesser extent, silt and sand lenses) were identified beneath the black anthropogenic fill on the southern portion of the Property. The native clay soils were encountered near the surface on the southernmost end of the Property and graded to a depth of eight fbg to the north in the area of the original shoreline prior to 1907.

Approximately 0 to 4 feet of sandy fill containing coal pieces, wood, and organics was identified overlaying the sediment on the southern and eastern portions of the dock slip. Native sediment consisting of fine to coarse sand, silt, and clayey silt was observed underlying the fill from depths of three to eight feet (the maximum depth explored).

In addition to the presence of historical fill in the adjoining dock slip and on the Property, petroleum volatile organic compound (PVOC) impacted soil and groundwater not derived from historical fill were identified on the Property. PVOC impacted soil and groundwater are attributed to the past storage, transfer, and handling of petroleum products on the Property and east-adjoining property. Further details regarding waste types at the Property can be found in the 2022 SIR. Additional details of waste and material management are described in the **Proposed Development Summary** provided below.

A.2 Potential for Impacts

The proposed sediment/soil/historical fill management activities will prevent or minimize adverse environmental impacts and potential threats to human health and welfare. Potential exposures and migration pathways of concern are addressed below.

Public Health, Safety, Welfare or The Environment

The proposed soil handling and placement procedures meet environmental closure requirements of Chapter NR 726.13(b) WAC and do not pose an unacceptable threat to public health, safety, welfare, or the environment.

Methane Gas Generation
Waste encountered at the Property does not present a potential for methane gas generation. Site investigations did not encounter peat, buried topsoil, or other organic deposits that may generate methane gas.

Water Supply
Residents of the City of Superior receive potable water from Lake Superior. No known water supply wells are present at the Property. Stantec conducted a search for nearby groundwater wells using the WDNR Well Construction Information System and determined that there are no known public or private wells located within 1,200 feet of the Property. Based on the above information, the migration potential of contaminants associated with the Property to water supply wells appears to be very low.

Groundwater Quality
Historical groundwater sampling events identified light non-aqueous phase liquid (LNAPL) and PVOC impacted groundwater at concentrations exceeding the ch. NR 140 WAC enforcement standard (ES) extending onto the southern and/or central portions of the Property associated with the east adjoining Amoco BRRTS cases (02-16-297979, 02-16-117873 and 02-16-000331). Groundwater monitoring and remedial activities are ongoing to address the identified PVOC contaminated groundwater associated with the Amoco BRRTS cases. Groundwater samples collected beneath areas containing the black granular anthropogenic fill impacted with select polycyclic aromatic hydrocarbon (PAH) constituents exceeding their applicable ch. NR720 groundwater pathway protection (GW) and/or direct contact residual contaminant levels (RCLs) did not detect the PAH constituents at concentrations exceeding their applicable ch. NR 140 WAC preventive action limit (PAL) and/or ES. Therefore, it is not likely that the presence of black granular fill with elevated levels of PAH constituents significantly impacts groundwater quality at the Property.

The historic groundwater sampling results indicate that groundwater contamination at the Property exceeding ch. NR140 WAC standards is likely attributed to the former petroleum releases associated with the former Amoco BRRTS cases and not the presence of anthropogenic fill. Significantly impacted groundwater is not anticipated to be encountered during redevelopment due to the anticipated depth of the planned excavation and the historical depth of groundwater at the Property.

Management of the soil/fill onsite is not likely to create any further adverse impacts to groundwater quality. The excavated soil/fill to be managed onsite will be placed at a depth no greater than which it was excavated. The planned stormwater pond will have a clay liner installed on the bottom to prevent leaching of potentially contaminated stormwater/runoff collected in the pond to the underlying groundwater. Based on the above information, the migration potential of contaminants associated with the Property due to redevelopment activities to groundwater is not likely.

Utilities
Utilities are present in the rights-of-way adjoining the Property to the south and new utility infrastructure is proposed to be installed on the southern portion of the Property to service future buildings. Historical groundwater sampling results indicate that petroleum impacts (LNAPL and benzene concentrations greater than the ES) attributed to the former petroleum releases associated with the former Amoco BRRTS cases are present on the south end of the Property. However, impacted groundwater and/or LNAPL is not anticipated to be encountered as part of construction due to the depth of planned excavations and historical groundwater depths in this area (i.e., the depths of proposed cuts are shallower than the groundwater table).

Air Quality
Contamination will be capped with building slabs, paved areas, and/or an 18-inch clean soil cap, limiting volatilization of the low level of residual VOCs associated with the offsite contamination. Construction methods will include best management practices to limit particulate emissions. Contractors will be required to adequately wet soil during dry periods to prevent visible emissions.

Vapor Intrusion
Identified contamination associated with the black granular anthropogenic fill consists of Resource Conservation and Recovery Act (RCRA) metals and PAHs. RCRA metals and PAH constituents are not considered to pose a threat to human health or safety from a vapor migration standpoint in underlying soils. LNAPL and PVOC impacted groundwater exceeding the ch. NR140 WAC ES were identified on the southern and/or central portions of the Property associated with the historical releases of petroleum at the east-adjoining

property.

There are currently no structures on the Property; therefore, the vapor intrusion pathway is not currently a pathway of concern. However, a future building is planned to be constructed on the south-central portion of the Property as part of redevelopment. The vapor intrusion pathway will be assessed following the construction of any building on-site. Due to the nature and degree of identified soil/fill contamination, it is unlikely vapor intrusion would result from the movement of contaminated soil/fill within the confines of the Property.

Sediment/Surface Water

St. Louis Bay borders the Property to the north, and an adjoining dock slip accessed via St. Louis Bay borders the northern portion of the Property to the west. As summarized in the WDNR Beneficial Use Impairments Related to Sediment Contamination in the Hallett Dock No. 8 / C. Reiss Coal Slip, St Louis River Area of Concern (AOC), Superior, Wisconsin dated February 23, 2022, sediment samples collected from the eastern and southern portions of the slip were impacted with PAHs, toxic for benthic organisms, and contribute to beneficial use impairments (BUIs) for the slip.

Redevelopment is planned to improve sediment and surface water quality in the dock slip by dredging approximately 42,500 cubic yards (CY) of sediment (21,250 CY of which is estimated to be contributing to the dock slip BUIs), placing dredged material on the Property, and capping it with an impermeable surface.

Wetlands

The Property is located within a developed area of Superior, Wisconsin. As documented in the Stantec Assured Wetland Delineation Report dated October 28, 2019, seven wetlands (W1 through W7) were identified and delineated across the Property. Wetlands W4 and W5 encompass the majority of the northern portion of the Property and had formed on top of the concrete panels and/or filled area north of the previous shoreline; these wetlands were granted artificial wetland exemption by WDNR on November 20, 2019.

Portions of the delineated wetlands on the southern portion of the Property will be disturbed as part of proposed construction. A temporary diversion berm will be constructed concurrent with Property redevelopment to prevent the migration of contaminated runoff water to the existing wetlands on the southern portion of the Property. With the controls outlined and as discussed further in the Stantec 2022 MMP in place, no additional environmental risk to wetlands is anticipated.

A.3 Evaluation of Existing Impacts

The primary existing impacts at the Property consist of PAH and RCRA metal contaminated fill, PAH impacted sediment, and PVOC impacted soil and groundwater. The general layout of the Property and the sample locations are illustrated on **Figure 2**.

Identified Contaminants in Soil/Fill at the Property

Select RCRA metals and PAHs were detected at concentrations exceeding their respective ch. NR 720 WAC industrial direct contact (IDC) RCLs and select PVOCs were detected exceeding their respective ch. NR720 WAC GW RCLs at the Property during the Stantec 2021 and 2022 soil sampling events. These results are discussed in greater detail below.

PAHs

As summarized in *Table A* below, seven PAHs were detected at concentrations exceeding their respective ch. NR720 WAC GW RCLs, nine PAHs were detected at concentrations exceeding their respective ch. NR 720 WAC non-industrial direct contact (NIDC) RCLs, and six PAHs were detected at concentrations exceeding their respective ch. NR720 WAC IDC RCLs in near surface fill materials at the Property. Samples collected from the underlying native soils did not detect PAH constituents exceeding their respective RCLs. Therefore, the elevated PAH concentrations exceeding their RCLs are attributed to the black granular fill unit present across the Property and have not been identified to have leached into the underlying native soils.

***Table A**: PAH constituent detections exceeding exposure pathways in 2021 and/or 2022 sampling events.*

PAH Constituent	Exposure Pathway Exceeded in One or More Soil Samples?		
	Non-Industrial Direct Contact RCL	Industrial Direct Contact RCL	Groundwater Protection RCL
Benzo(a)anthracene	**Yes**	**Yes**	*Not Established*
Benzo(a)pyrene	**Yes**	**Yes**	**Yes**
Benzo(b)fluoranthene	**Yes**	**Yes**	**Yes**
Benzo(k)fluoranthene	**Yes**	No	*Not Established*
Chrysene	**Yes**	No	**Yes**
Dibenzo(a,h)anthracene	**Yes**	**Yes**	*Not Established*
Fluoranthene	No	No	**Yes**
Fluorene	No	No	**Yes**
Indeno(1,2,3-cd)pyrene	**Yes**	**Yes**	*Not Established*
Methylnaphthalene, 1-	**Yes**	No	*Not Established*
Naphthalene	**Yes**	**Yes**	**Yes**
Pyrene	No	No	**Yes**

These results are consistent with the soil information gathered from previous soil sampling events performed at the Property. Areas identified to have select PAH concentrations greater than IDC RCLs include the proposed access road (STN2, STN5, and STN11), railroad spur (STN13 and STN15), stormwater pond (STN9, STN10, and STN12), and southern portion of the existing concrete dock paneling (STN14).

RCRA Metals

As illustrated on *Table B* below, six RCRA metal constituents were detected at concentrations exceeding their background threshold value (BTV) and/or ch. NR720 WAC GW RCL. Arsenic and/or lead were the only RCRA metals detected at concentrations greater than their respective IDC RCLs. Each sample identified to have concentrations of arsenic and/or lead at concentrations exceeding their respective direct contact RCLs and BTV was obtained from the near surface black granular fill unit with the exception of STN14 and STN20. Samples obtained from STN14 and STN20 identified arsenic at concentrations exceeding its IDC RCL and BTV in the near surface non-native sand fill associated with the 1907 dock construction. Only one soil sample collected from the native clay soil (STN7 4 to 6 fbg) detected silver at a concentration exceeding the GW RCL. No other sample collected from the native clay soils detected metal constituents exceeding their RCL and/or BTV. Therefore, the elevated RCRA metal concentrations exceeding their RCLs are likely attributed to the black granular fill unit present across the Property and have not been identified to have significantly leached into the underlying native soils.

***Table B**: RCRA metal constituent detections in soil exceeding exposure pathways in 2021 and/or 2022 sampling events.*

Metal Constituent	Exposure Pathway Exceeded in One or More Soil Samples?		
	Non-Industrial Direct Contact RCL + BTV	Industrial Direct Contact RCL + BTV	Groundwater Protection RCL and/or BTV
Arsenic	**Yes**	**Yes**	**Yes**
Lead	**Yes**	**Yes**	**Yes**
Cadmium	No	No	**Yes**
Mercury	No	No	**Yes**
Selenium	No	No	**Yes**
Silver	No	No	**Yes**

These results are consistent with the soil information gathered from previous soil sampling events performed at the Property. Areas identified to have arsenic and/or lead at concentrations exceeding their IDC RCLs include the proposed access road (STN5 and STN8), railroad spur (STN18 and STN20), stormwater pond (STN10), and existing concrete dock paneling (STN14).

VOCs

No chlorinated VOCs were detected in soil samples collected by Stantec during the 2021 and 2022 sampling events. PVOC constituents were detected at concentrations greater than their respective ch. NR720 WAC GW RCLs in samples collected from STN2 and STN16 at the Property in May 2022. Benzene at concentrations exceeding the GW RCL was detected in the black, granular fill present in surficial soils at STN2 from 0 to 2.5 fbg and STN16 from 0 to 1.5 fbg. In addition, total trimethylbenzenes were detected in STN16 exceeding the GW RCL in a saturated soil sample with the highest photoionization detector measurement from 3.5 to 5 fbg. Underlying native soils at both locations were visually and/or olfactorily unimpacted. STN2 is located in an area of known petroleum impacts and LNAPL to groundwater in the southwest portion of the Property. STN16 is located in an area of a former product seep documented at the Property and removed in 2003. No other fill or native soils screened/sampled elsewhere on the Property were detected to have VOC impacts exceeding a RCL in May 2022. No VOC constituents were detected in fill or native soils as part of the December 2021 sampling event. The identified low level of PVOC contamination is attributed to historical petroleum releases associated with the east-adjoining property.

Identified Contaminants in Groundwater at the Property

No groundwater sampling was performed by Stantec during the 2021 and 2022 site investigation activities. However, historic groundwater sampling has been performed by others at the Property between 2002 and as recent as October 2021 in connection with the Amoco and/or Murphy Marine Terminal BRRTS cases. These historical groundwater investigation and sampling events have identified the following:

- Groundwater is generally encountered at approximately 15 fbg on the southern end of the Property and becomes shallower towards the dock slip on the northern portion of the Property;
- LNAPL extends onto the southern portion of the Property (as most recently detected in MW-32, RW-8, RW-9, MRW-5, MRW-6, MRW-7, MRW-8, MWM-3, LRMW-4, MRW-10, MWAST-4, MWM-6, and MWOW-1) and ranges in thickness from 0.02 to 7.27 feet;
- PVOCs (namely benzene) are present at concentrations exceeding the ch. NR140 WAC ES extending across the southern portion of the Property (near LNAPL impacts as most recently detected in MW-30D, MW-30S and MWT-2D) and central portions of the Property (near the Murphy Marine Terminal LUST as most recently detected in MWRR-1D and MWBD-1D);
- PVOCs and PAHs in the area of the Murphy Marine Terminal Investigation (temporary wells GP-1 and GP-4) and in the area of the former petroleum 500-gallon UST associated with the east adjoining

property (temporary well TWBD-2) were not detected at concentrations exceeding the ch. NR140 WAC PAL and/or ES indicating that groundwater was not significantly impacted by the former petroleum releases or presence of black granular fill with elevated levels of PAHs in these areas.

The historic groundwater sampling results indicate that groundwater contamination at the Property exceeding ch. NR140 WAC standards is likely attributed to the former petroleum releases associated with the east adjoining Amoco BRRTS cases (02-16-297979, 02-16-117873 and 02-16-000331). Impacted groundwater is not anticipated to be encountered during redevelopment due to the anticipated depth of the planned excavation and the historical depth of groundwater at the Property.

Identified Contaminants in Sediment to be Managed on the Property

Stantec completed three soil cores (SED1 through SED3) and collected nine sediment samples from the adjoining dock slip during December 2021 in accordance with the requirements detailed in the WDNR correspondence/memorandum titled "*NR 347 Sediment Sampling Requirements for C. Reiss Coal Dock, Superior, WI*" dated February 26, 2021.

Various PAHs at concentrations exceeding the threshold effect concentration (TEC) were detected in each of the three sediment cores between 0 and 6 feet. The concentration of 2-methylnaphthalene exceeded the midpoint effects concentration (MEC) in SED 2 (0-3 feet). The concentrations of 2-methylnaphthalene and acenaphthene exceeded the probable effects concentration (PEC) in SED3 (0-3 feet) and the concentration of 2-methylnaphthalne exceeded the PEC in SED (3-6 feet). Various other PAHs were detected at concentrations exceeding the TEC and/or MEC in samples collected from SED3 (0-3 feet) and SED3 (3-6 feet). In addition, benzo(a)pyrene was detected at a concentration exceeding the NIDC RCL in SED (3-6 feet). Various PAHs were identified to exceed the NR720 GW RCL for the PAL in SED3 (0-3 feet) and SED (3-6 feet).

The results are consistent with historical sediment sampling activities performed by others between 2015 and 2020. The recent and historical results indicate that sediment in the southern eastern dock slip between 0 and 6 feet is impacted with low to moderate levels of PAHs exceeding the TEC, MEC, and/or PEC and the ch. NR720 WAC GW RCL. Impacted sediment is likely attributed to former adjoining dock filling activities between the late 1800's and early 1900's and historic bulk handling activities of coal and/or petroleum associated with the adjoining dock operations. Further information related to the recent and historical sediment sampling is summarized in the Stantec 2022 MMP.

PFAS Contamination Potential

Per - and Polyfluoroalkyl substances (PFAS) have been used in a variety of commercial products since the 1940s, including stain and water repellents used in textile applications. Stain-resistance chemicals containing PFAS are known to have been used in the dry-cleaning industry. No evidence of historical operations using and/or handling of PFAS-containing compounds at the Property was documented.

B. PROPOSED DEVELOPMENT SUMMARY

The Developer plans to reestablish industrial bulk material handling operations at the Property by installing infrastructure for shipments by truck and rail as well as dock wall rehabilitation and sediment dredging. The redevelopment will consist of constructing an office, storage and maintenance building, parking lot, truck scale, railroad, rail yard, rail scale, access roads, soil berms, drainage swale, temporary diversion berm, stormwater retention pond, and a perimeter fence. The project is anticipated to start in September 2022 and be completed in July 2023. Property redevelopment plans are included as **Attachment A**.

RCRA metal and PAH-impacted fill above direct contact standards is anticipated to be excavated during construction activities across the entire Property. Excavation activities associated with redevelopment will include, but are not limited to, sitewide grading, building foundations, utility trenches, railroad corridors, a stormwater retention pond, and a drainage swale. A total of approximately 99,000 CY of soil/fill is anticipated to be excavated. Based on the identified extent of contamination, approximately 44,000 CY of PAH and/or RCRA metal impacted fill/soil is anticipated to be excavated and managed on the Property. The depth of excavation will generally range between one an eight fbg across the Property. The excavated depth will be deeper in specific locations to facilitate the construction and/or the installation of the utility trenches, proposed railroad, and stormwater retention pond. The maximum excavation depth is anticipated to be 20.9 fbg on the Property associated with the stormwater retention pond.

A total of approximately 42,500 CY of sediment is anticipated to be dredged form the adjoining dock slip. Based on the depth of contamination provided by the WDNR and identified by the sediment sampling activities (0 to 6 feet), the total amount of contaminated sediment contributing to BUIs proposed to be dredged from the dock slip is approximately 21,250 CY. The remaining 21,250 CY of sediment planned to be dredged is located deeper than the identified contaminated interval and is not considered to be contributing to the BUIs. Dredging the additional sediment is necessary to facilitate the development of the dock slip for industrial bulk material handling operations. Dredging activities will primarily take place along the entire length of the eastern portion of the dock slip. The depth of dredging will generally range between 0 and 12 feet beneath the current sediment surface, to achieve a navigational depth of 27 feet throughout the dock slip. A map illustrating the anticipated depth and extent of dredging is provided in **Attachment A**.

Excavations will generally be filled with soil currently on the Property. Soil beneficially reused as backfill will not be placed deeper than the depth of which it was excavated from. Gravel soils will be transported from an offsite source to meet the proposed road design specifications. Utility trenches underneath the proposed roadway will be filled with washed stone sourced from an offsite source per design specifications. Sub ballast and ballast stone will be transported from an offsite source as part of the proposed railroad construction.

Grading Plan

Dredged sediment and soil originating from excavation activities associated with installation of utilities, construction of the building foundation system, proposed railroad, stormwater pond, drainage swale, and overall Property cuts will be excavated and beneficially reused onsite. The grading plan present in **Attachment A** illustrates the redistribution of soil and sediment onsite.

Dredged sediment following the initial gravity dewatering process and fill material with identified RCRA metal and/or PAH contamination will be preferentially placed underneath the site cover system to be installed and maintained as part of redevelopment activities. Specifically, the contaminated sediment and soil/fill will preferentially be placed beneath a large soil berm located on the central portion of the Property (herein referred to as Material Management Unit 1 “MMU1”; refer to **Attachment A**) and contaminated fill associated with the railroad cut be placed within the proposed railroad line. Excavated material associated with the railroad cut may be reused within the proposed rail alignment but will not be placed deeper than the depth it was excavated from. Once MMU1 is at capacity, excess soil/fill will be placed within the three smaller soil berms on the southern portion of the Property.

Although not anticipated, excess contaminated soil/fill unable to be placed within MMU1, the railroad, or the three smaller soil berms may be placed beneath areas of the proposed buildings, parking lots, and other landscaped portions of the Property to ultimately be managed beneath the engineered barrier. Residual contaminated soil and dredged sediment on the Property will be capped by pavement/impermeable surfaces or a minimum 18-inch soil cap. Engineered barrier features are discussed further in Section C and illustrated on **Figure 3**. Positive drainage and storm water controls will minimize surface water infiltration and erosion, maintaining the integrity of the engineered barrier.

Sediment Dewatering and Controls

Dredged sediment from the west-adjoining dock slip will be offloaded onto the Property and staged in an area north of the planned stormwater pond and allowed to gravity dewater prior to being placed within MMU1 (refer to **Attachment A**). A temporary diversion berm will be constructed in accordance with WDNR technical standard 1066 around MMU1 to prevent the migration of contaminated runoff water to the existing wetlands onsite. The runoff water originating from MMU1 and the water generated from the gravity dewatering of the dredged sediment will be routed to the stormwater pond onsite via gravity and/or pumping. The grading plan, erosion control plan, and other pertinent redevelopment plans for the Property are provided in **Attachment A.**

Waste and Soil Management

Dredged sediments and excavated contaminated soils associated with the stormwater pond, building foundations, and utility trenches will generally be placed within MMU1. Excavated soils associated with the railroad cut are planned to be reused within the proposed railroad line and placed no deeper than the depth they were excavated from. Excess impacted soils associated with the redevelopment unable to be reused within the proposed railroad line or MMU1 are planned to be placed within the three smaller soil berms proposed on the southern portion of the Property.

Significant dewatering is not anticipated at this time. Excess water associated with the dredged sediment and the formation of MMU1 is planned to be dewatered via gravity and routed to the stormwater pond onsite through the construction of a temporary diversion berm and pumping if needed. Appropriate erosion control measures will be put in place and appropriate permits obtained prior to site activities. The current erosion control plan is included in **Attachment A**. As practicable, the weather forecast shall be used to schedule activities to minimize the potential for significant stormwater accumulation. However, potentially impacted groundwater and/or stormwater may accumulate in areas requiring removal. Removal and disposal requirements will be determined in the future but may include discharge to the sanitary sewer after approval from the City of Superior or removal via vacuum truck and offsite disposal at an approved treatment facility.

Although not anticipated, excess impacted soil not suitable for reuse will be disposed of offsite at a licensed landfill. Stantec collected two composited waste characterization samples in May 2022 to profile the material for potential offsite disposal. Laboratory analytical results indicate that the waste characterization samples did not have constituents at concentrations exceeding Environmental Protection Agency toxicity characteristic leaching procedure (TCLP) regulatory limits. No excavated soil will be transported on or across any roadways unless being transported under manifest to a licensed landfill or other WDNR-approved disposal facility. Although not anticipated to be encountered, LNAPL and/or PVOC impacted groundwater exceeding the ch. NR140 WAC ES will be pumped via vacuum truck and transported offsite for proper treatment, if encountered.

C. SUMMARY OF ACTIONS TO BE TAKEN/ENGINEERING CONTROLS

Cover/Cap System

Redevelopment of the Property will require permanent engineering controls in the form of building slabs, paved areas, railroad ballast, gravel access roads, and/or clean soil cap (including native grass seeding) on the southern portion of the Property that will remain in place following redevelopment. The proposed railroad will be capped with at least 12 inches of impermeable compacted sub-ballast stone topped by nine inches of ballast stone. The goal of the Property cover system is to prevent direct contact with contaminated soil and prevent migration of contaminants to groundwater via infiltration. Therefore, the cap will be placed on top of materials with residual contamination exceeding ch. NR720 RCLs WAC and will not extend onto the existing wetlands on the Property.

In landscaped areas on the southern portion of the Property including MMU1 and the three small soil berms, the cap will consist of a minimum of 15 inches of clay topped by at least three inches of imported topsoil for planting with a native grass seed mix. The clay will be sourced from the native clay soils on the Property encountered during excavation activities as part of redevelopment, which have been demonstrated to have no VOC, PAH or RCRA metal detections at concentrations exceeding ch. NR720 WAC RCLs. Topsoil will be seeded with a native tall grass prairie mix to reinforce and maintain the soil cap in these areas.

The anticipated use of the northern area is for industrial bulk material handling operations to be conducted by a minimal number of employees. Arsenic and/or benzo(a)pyrene were detected in select soil samples on the northern portion of the Property at concentrations exceeding their respective ch. NR720 WAC IDC RCLs. The extent of these contaminated soils is limited, and excavation activities are not currently planned to occur on the northern portion of the Property. The northern portion of the Property is currently covered with concrete panels that are approximately four inches thick, eight feet long and eight feet wide; these panels will remain in place during and after redevelopment. The existing concrete panels along with the proposed gravel access road will prevent direct contact with contaminated soils exceeding the IDC RCL. A gated fence is proposed to be installed spanning the perimeter of the Property to further restrict access to the Property with exception to the proposed railroad spur. Due to the limited extent of contamination exceeding the IDC RCL, minimal occupancy, restricted access, and current surface covering, additional engineered surface barriers are not proposed to be installed on the northern portion of the Property.

The components and extents of the proposed Property cover system are illustrated on **Figure 3**.

Vapor Migration Control

There are currently no structures on the Property; therefore, the vapor intrusion pathway is not currently a pathway of concern. However, a future building is planned to be constructed on the south-central portion of the Property as part of redevelopment. The vapor intrusion pathway will be assessed following the construction of

any building on-site. Due to the nature and degree of identified soil/fill contamination, it is unlikely vapor intrusion would result from the movement of contaminated soil/fill within the confines of the Property.

Direct Contact Exposure/Worker Safety

Construction and remediation worker exposure will be managed through enforcement and compliance with approved Occupational Health and Safety compliant health and safety protocols detailed in project health and safety plans. Each Contractor will be responsible for preparing and following their health and safety plan.

Documentation

During active excavation, a representative of the Developer will be onsite and monitor site activities. Stantec personnel may be present to monitor grading activities as they occur and would observe these activities to document that contaminated soil and dredged sediment are being handled and moved as proposed in the material management plan. Construction observation and documentation of approved onsite management of contaminated soil and dredged sediment, proper handling and disposal of solid wastes, and engineered surface barrier construction will be conducted. Excavated materials will be monitored for the presence of:

- Strong or unusual odors;
- Unusual soil discoloration not previously noted;
- Change in soil conditions not previously noted; and
- Other solid waste (e.g. debris, tires, etc.).

If any of the above or other suspect materials are unexpectedly identified during excavation operations, excavation in this area will be suspended until the materials encountered are evaluated for proper management methods. The Property representative or designee of the developer will evaluate unusual situations on a case-by-case basis to determine the appropriate alternative response required. In each situation, the Property representative or designee of the Developer will direct the contractor on proper disposal or relocation of the regulated material.

A ch. NR724 WAC construction documentation report will be submitted following the completion of construction and remedial actions at the Property. The report will document that the completed final remedial action meets or exceeds the design criteria and that the plans and specifications were developed in accordance with the requirements of ch. NR724.15 WAC.

Maintenance

Institutional controls will provide future control of the direct contact pathway and provide a mechanism to maintain the integrity of the engineered barrier. Following construction, Stantec will develop a Cover System Maintenance Plan(s) that outlines the responsibilities associated with inspecting, maintaining, or disturbing the caps for the Property and submit for WDNR approval prior to case closure. Cover maintenance will be conducted as necessary post-construction. The Property will be placed on the WDNR online GIS Registry for sites with residual soil and groundwater contamination and will have an approved cap maintenance plan which describes requirements for annual cap inspection and timely repair of any damaged/deteriorated areas.

Form 4400-226 Section V, Summary of Existing and Potential Impacts: C Reiss Coal Dock Property, Superior, Wisconsin

CERTIFICATION OF ENVIRONMENTAL PROFESSIONAL

I, Stu Gross, hereby certify that I am a Professional Geologist registered in accordance with the requirements of ch. GHSS 2, Wis. Adm. Code, and that, to the best of my knowledge, all of the information contained in this document is correct.

STANTEC CONSULTING SERVICES INC.

Stu Gross, PG
Senior Project Manager
Stu.Gross@stantec.com

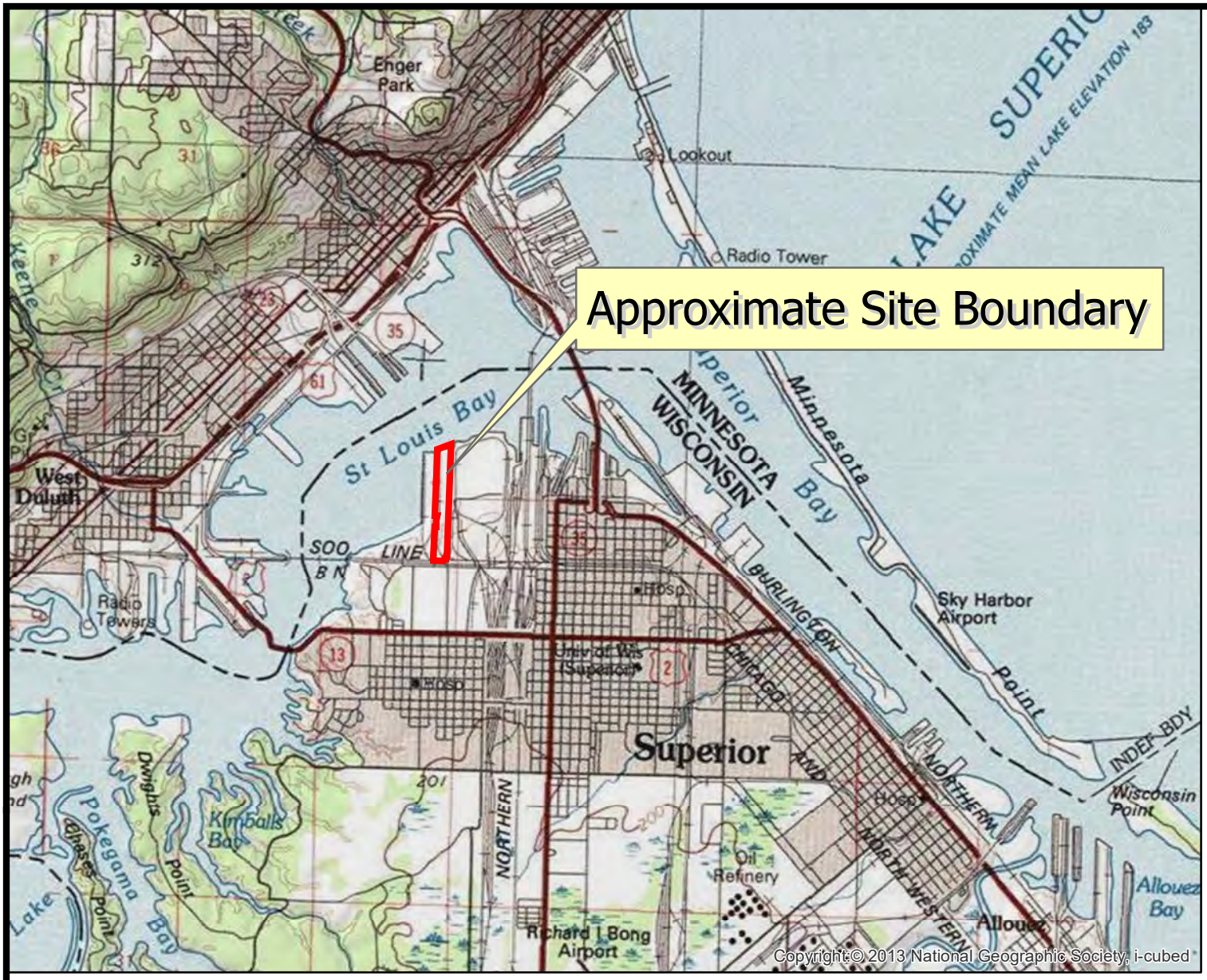
FIGURES

Figure 1: Property Location and Local Topography
Figure 2: Property Layout and Borehole Locations
Figure 3: Property Cover Extent

ATTACHMENTS

Attachment A: Property Redevelopment Plans

FIGURES



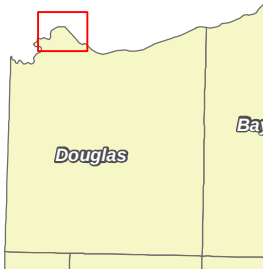
N

1 inch = 6,000 feet

Feet

0 6,000

The information on this map has been compiled by Stantec staff from a variety of sources and is subject to change without notice. Stantec makes no representations or warranties, express or implied, as to accuracy, completeness,timeliness, or rights to the use of such information.



County Location

State Location

AERIAL IMAGERY AND PARCEL DATA SOURCE:
ESRI Mapping Center World Imagery Layer - USGS TOPO QUAD

Property Location & Local Topography

C. REISS DOCK
ST. LOUIS BAY, SUPERIOR, WI

Stantec

DATE: 2022-06-06
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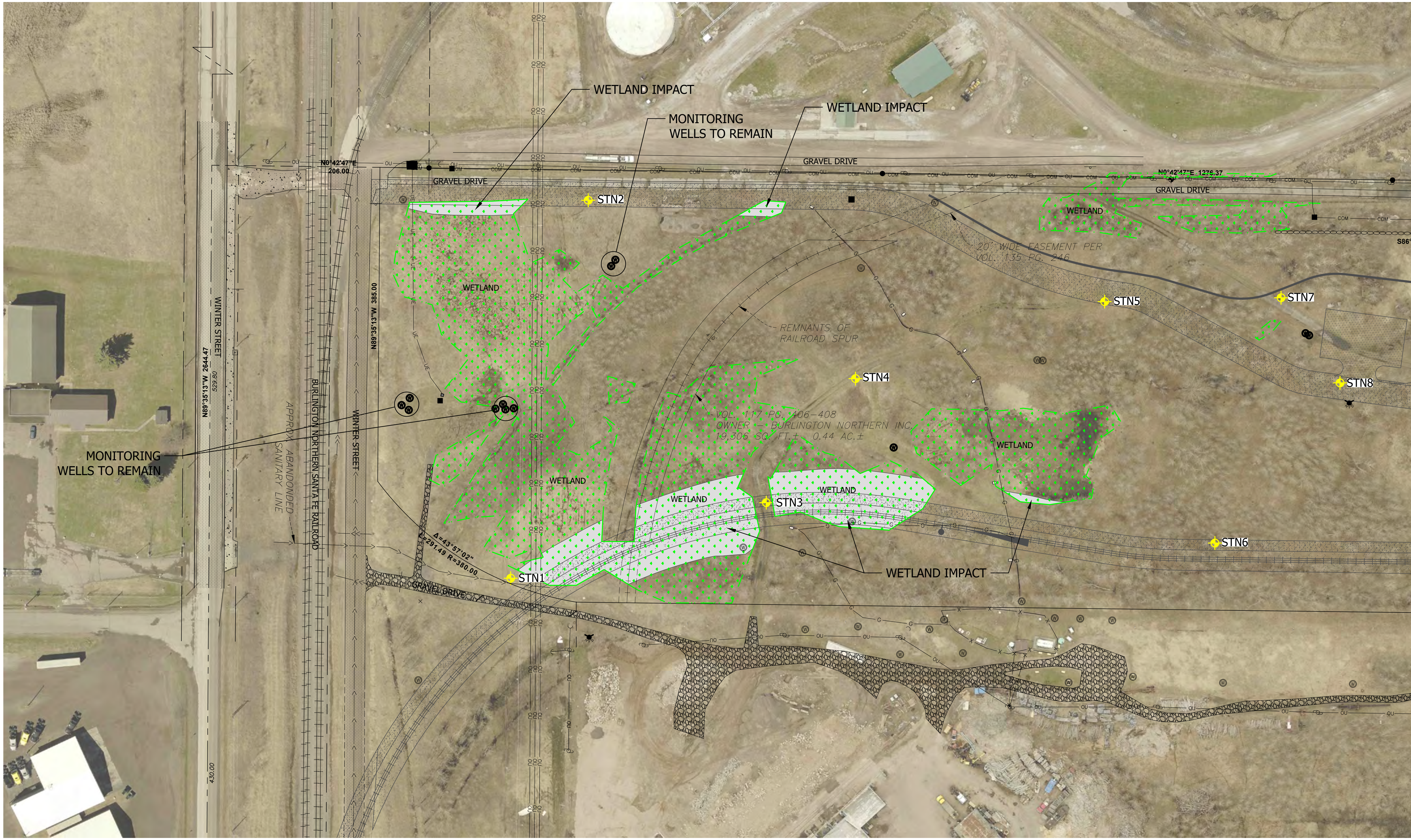

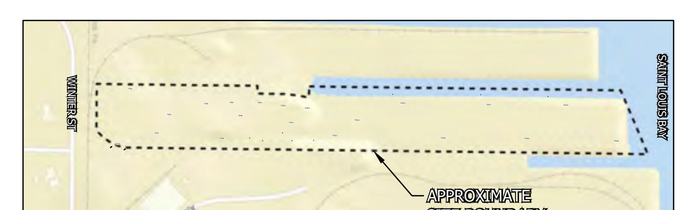

N

0 60' 120'

Stantec
12075 N. Corporate Parkway, Suite 200
Mequon, WI 53092
www.stantec.com

PROPERTY LAYOUT AND BORE HOLE LOCATIONS

C. REISS DOCK
C. REISS COMPANY, LLC
ST. LOUIS BAY, SURPERIOR, WI

DATE OF ISSUANCE
June 29, 2022

NO	REVISION	DATE

SURVEY	BURSE
DRAWN	AJR
DESIGNED	AJR
CHECKED	AJR
APPROVED	AJR
PROJ. NO.	193707141

SHEET NUMBER
FIG 2A

Plot Date: 06/29/2022 - 2:21pm
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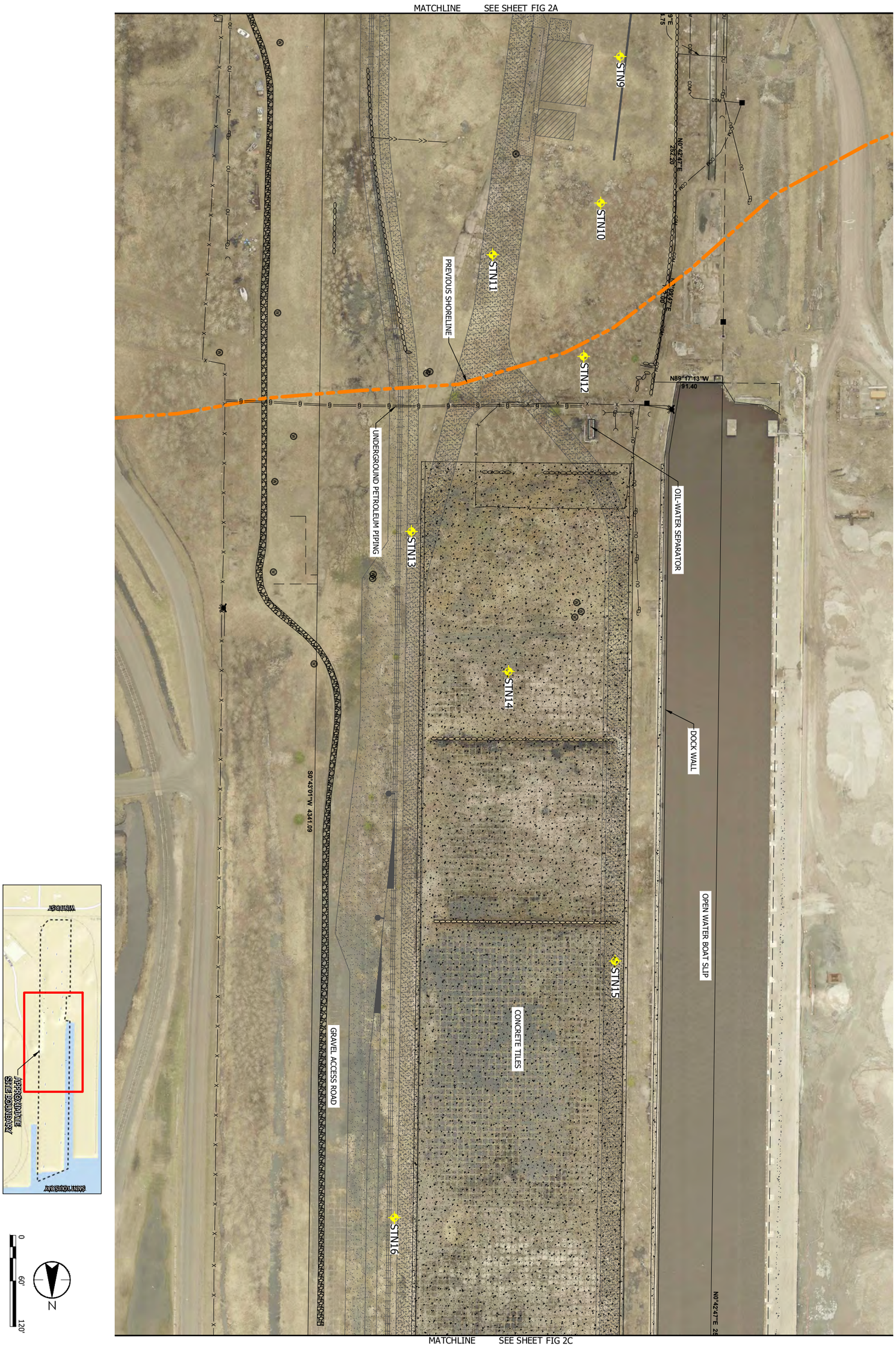


0 60' 120'

N

FIG 2B

SURVEY	BURSE
DRAWN	AJR
DESIGNED	AJR
CHECKED	AJR
APPROVED	AJR
PROJ. NO.	193707141
SHEET NUMBER	

NO.	REVISION	DATE

DATE OF ISSUANCE
June 29, 2022

PROPERTY LAYOUT AND BORE HOLE LOCATIONS

C. REISS DOCK
C. REISS COMPANY, LLC
ST. LOUIS BAY, SURPERIOR, WI

Stantec
12075 N. Corporate Parkway, Suite 200
Mequon, WI 53092
www.stantec.com

FIG 2C

PROPERTY LAYOUT AND BORE HOLE LOCATIONS

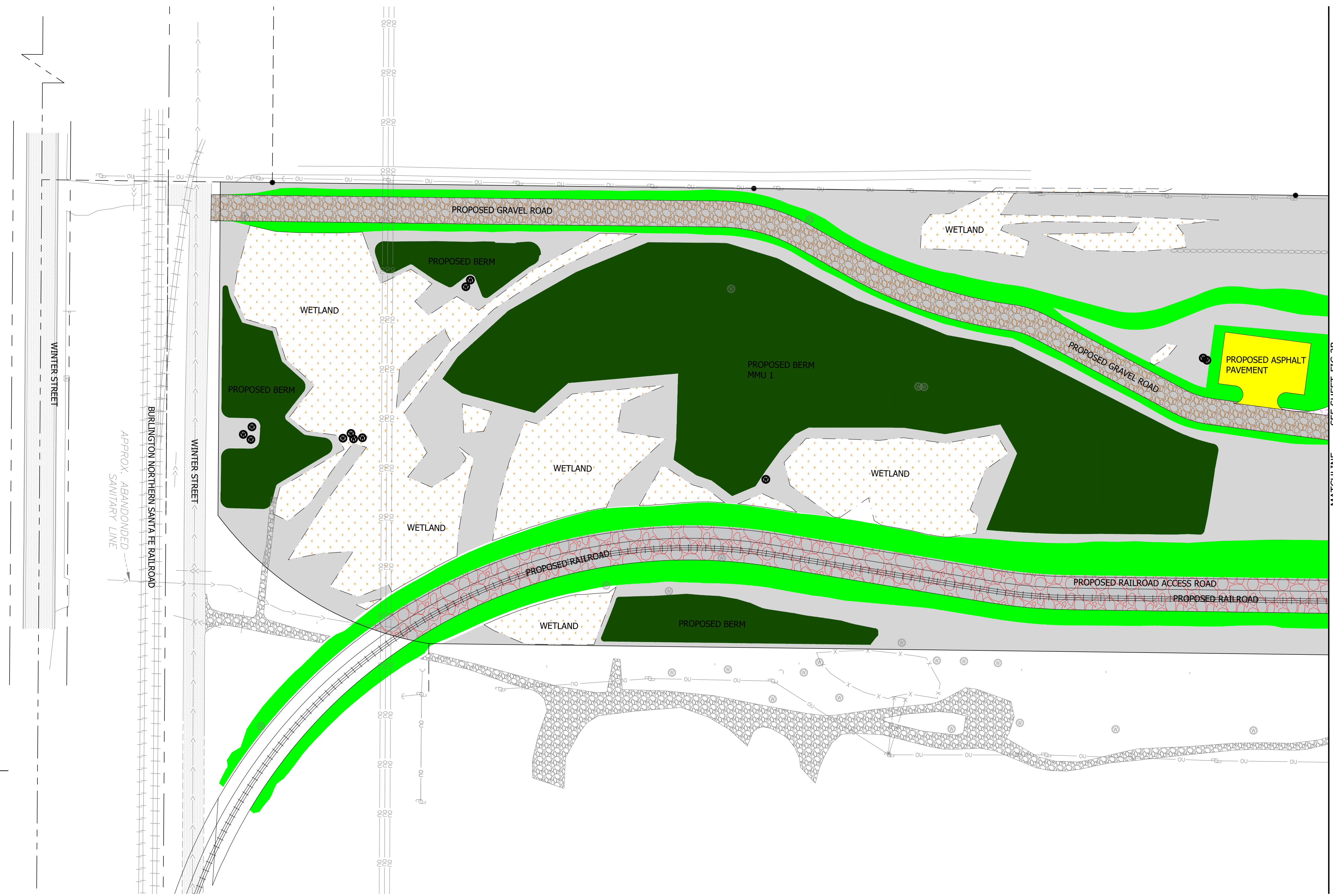
C. REISS DOCK
C. REISS COMPANY, LLC
ST. LOUIS BAY, SURPERIOR, WI

SURVEY	BURSE
DRAWN	AJR
DESIGNED	AJR
CHECKED	AJR
APPROVED	AJR
PROJ. NO.	193707141
SHEET NUMBER	

NO	REVISION	DATE

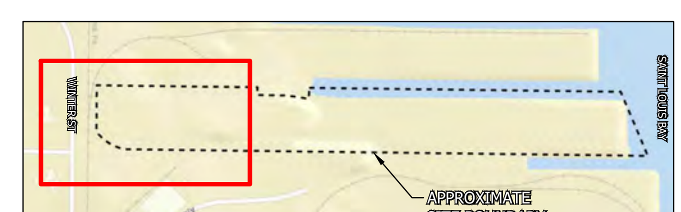
DATE OF ISSUANCE
June 29, 2022

Stantec
12075 N. Corporate Parkway, Suite 200
Mequon, WI 53092
www.stantec.com



LEGEND

- PROPOSED GRAVEL ROAD
- PROPOSED RAILROAD BALLIST
- PROPOSED CONCRETE PAVEMENT
- PROPOSED ASPHALT PAVEMENT
- PROPOSED BUILDINGS
- PROPOSED BERM W/ 18" CAP
- SEEDED AREA WITH 18" CAP
- POND W/ 12" LINER
- EXISTING CONCRETE DOCK TO REMAIN
- EXISTING WETLAND TO REMAIN
- NO DISTURBANCE



N

0 60' 120'

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PROPERTY COVER EXTENT

C. REISS DOCK
C. REISS COMPANY, LLC
ST. LOUIS BAY, SURPERIOR, WI

DATE OF ISSUANCE	
June 29, 2022	

NO	REVISION	DATE

SURVEY	BURSE
DRAWN	AJR
DESIGNED	AJR
CHECKED	AJR
APPROVED	AJR
PROJ. NO.	193707141

SHEET NUMBER
FIG 3A

Plot Date: 06/29/2022 - 12:45pm
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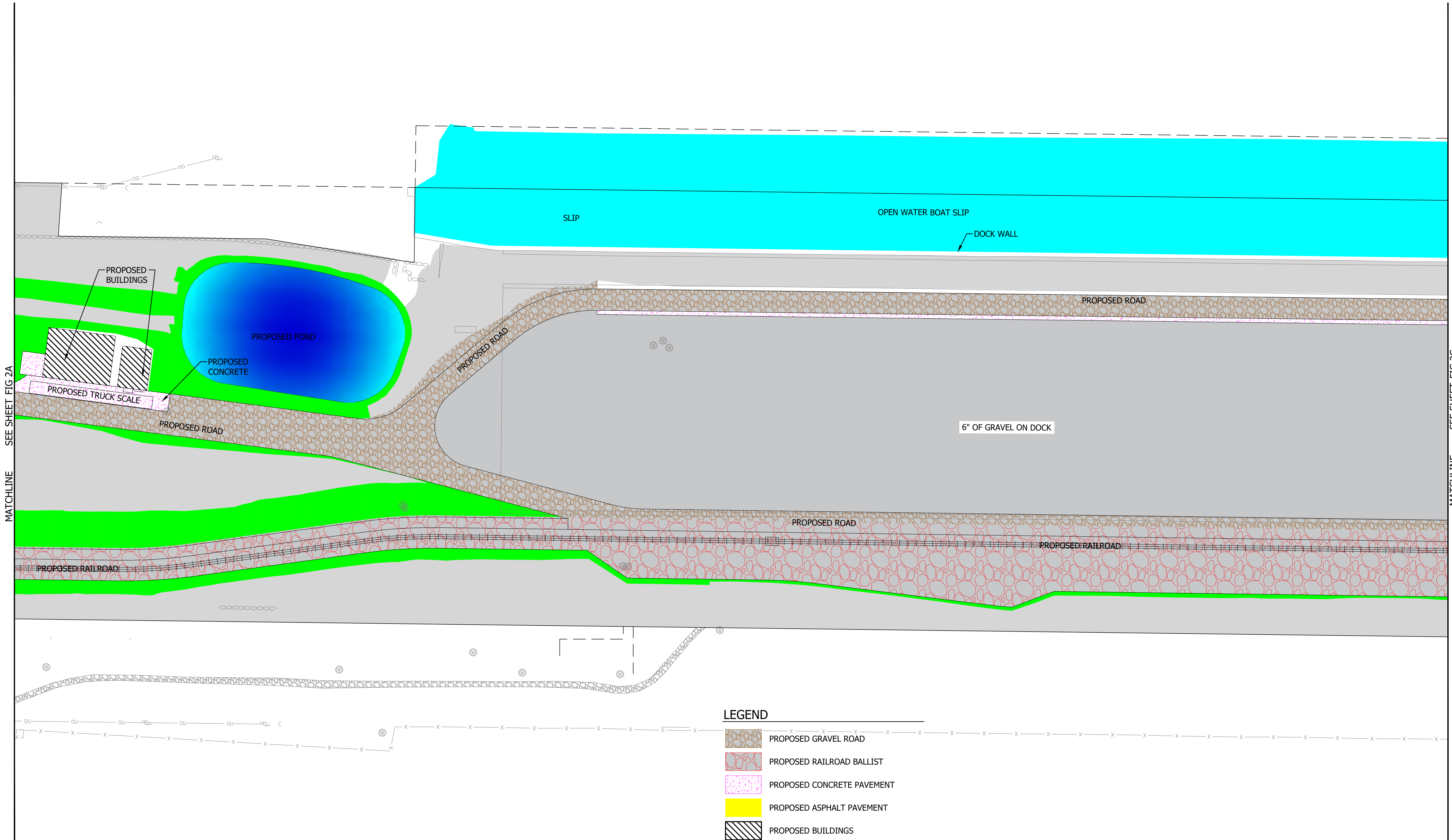
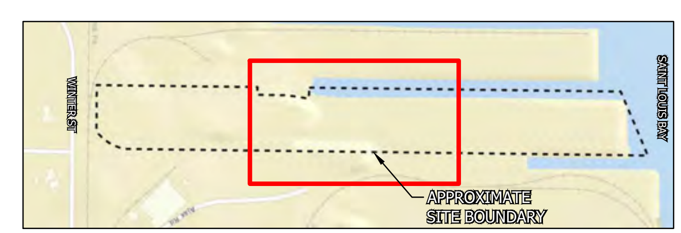


LEGEND

- PROPOSED GRAVEL ROAD
- PROPOSED RAILROAD BALLIST
- PROPOSED CONCRETE PAVEMENT
- PROPOSED ASPHALT PAVEMENT
- PROPOSED BUILDINGS
- PROPOSED BERM W/ 18" CAP
- SEEDED AREA WITH 18" CAP
- POND W/ 12" LINER
- EXISTING CONCRETE DOCK TO REMAIN
- EXISTING WETLAND TO REMAIN
- NO DISTURBANCE



N

0 60' 120'

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PROPERTY COVER EXTENT

C. REISS DOCK
C. REISS COMPANY, LLC
ST. LOUIS BAY, SURPERIOR, WI

DATE OF ISSUANCE
June 29, 2022

NO	REVISION	DATE

SURVEY	BURSE
DRAWN	AJR
DESIGNED	AJR
CHECKED	AJR
APPROVED	AJR
PROJ. NO.	193707141

SHEET NUMBER
FIG 3B

Plot Date: 06/29/2022 - 12:45pm
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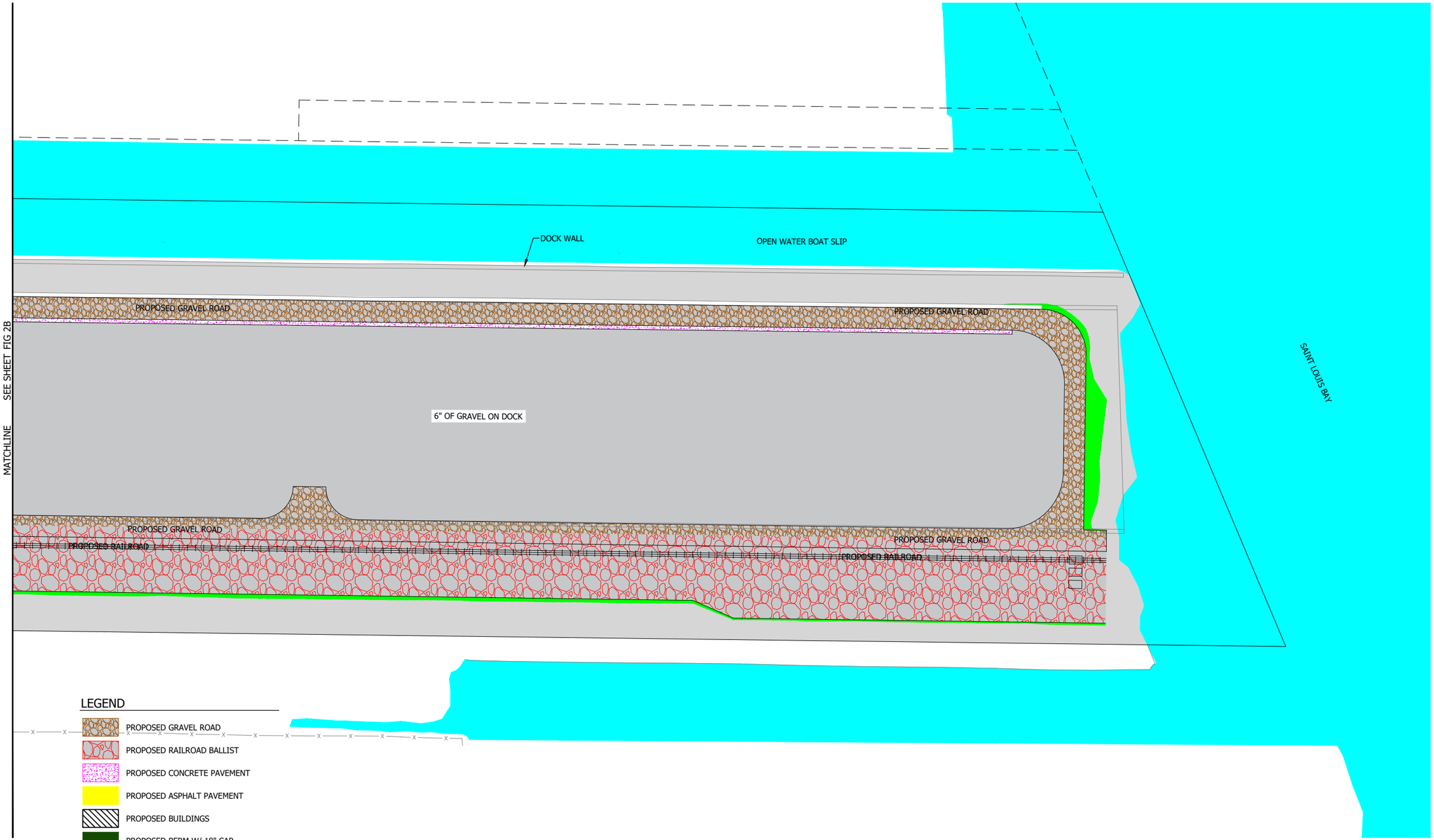

DOCK WALL

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DATE OF ISSUANCE
June 29, 2022

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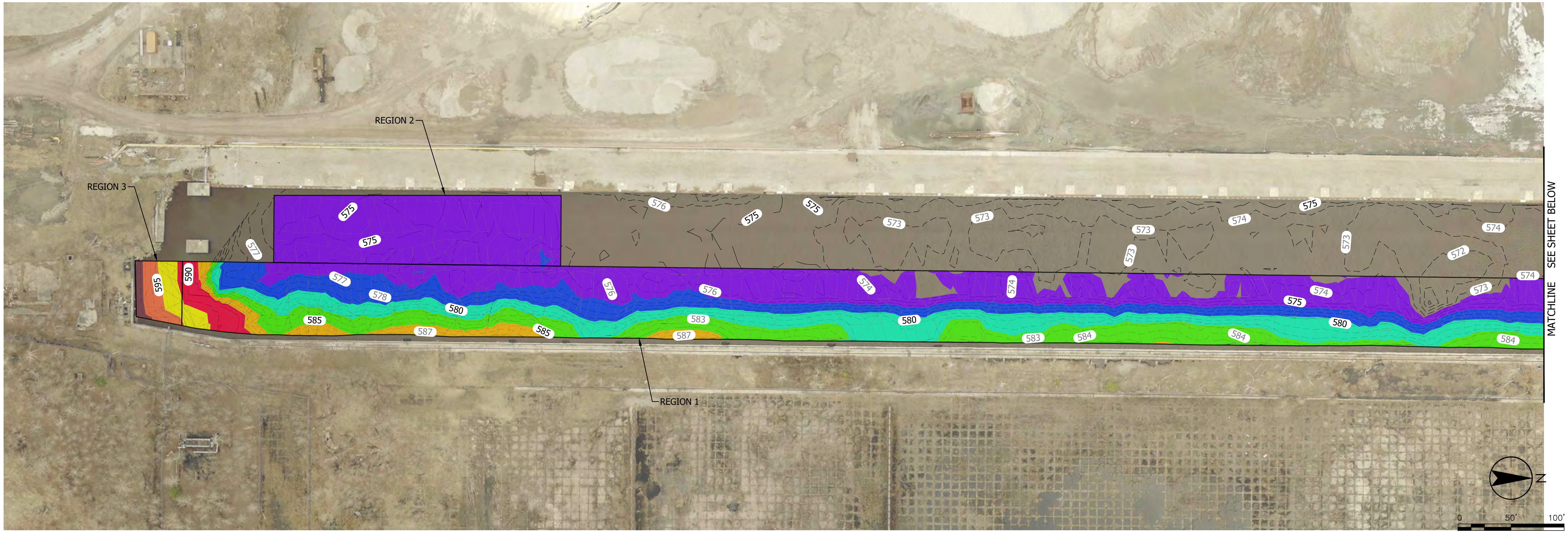
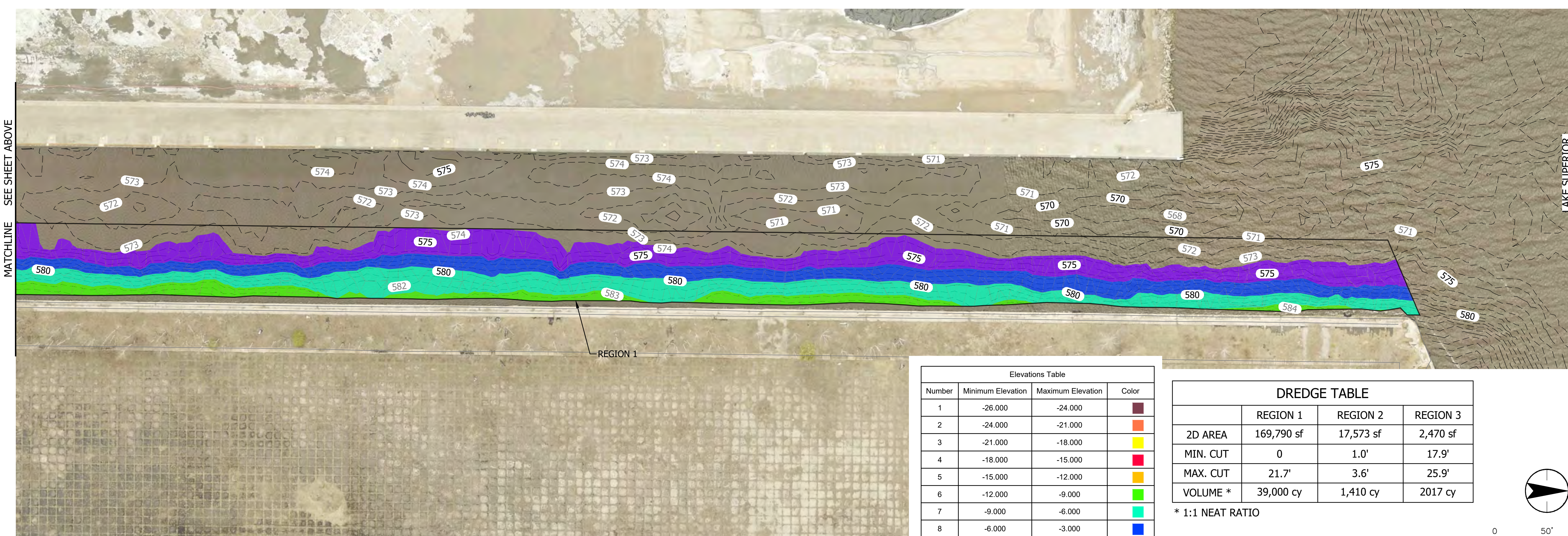
SURVEY	BURSE
DRAWN	AJR
DESIGNED	AJR
CHECKED	AJR
APPROVED	AJR
PROJ. NO.	193707141

SHEET NUMBER
FIG 3C

ATTACHMENT A

Property Redevelopment Plans





Elevations Table

Number	Minimum Elevation	Maximum Elevation	Color
1	-26.000	-24.000	
2	-24.000	-21.000	
3	-21.000	-18.000	
4	-18.000	-15.000	
5	-15.000	-12.000	
6	-12.000	-9.000	
7	-9.000	-6.000	
8	-6.000	-3.000	
9	-3.000	0.000	

DREDGE TABLE

	REGION 1	REGION 2	REGION 3
2D AREA	169,790 sf	17,573 sf	2,470 sf
MIN. CUT	0	1.0'	17.9'
MAX. CUT	21.7'	3.6'	25.9'
VOLUME *	39,000 cy	1,410 cy	2017 cy

* 1:1 NEAT RATIO

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DREDGE MAP

C. REISS DOCK
C. REISS COMPANY, LLC
ST. LOUIS BAY, SURPERIOR, WI

DATE OF ISSUANCE	
JUNE 13, 2022	

NO	REVISION	DATE

SURVEY	K & O
DRAWN	AJR
DESIGNED	AJR
CHECKED	BSL
APPROVED	BSL
PROJ. NO.	193707141
SHEET NUMBER	1

Plot Date: 06/14/2022 - 9:19am
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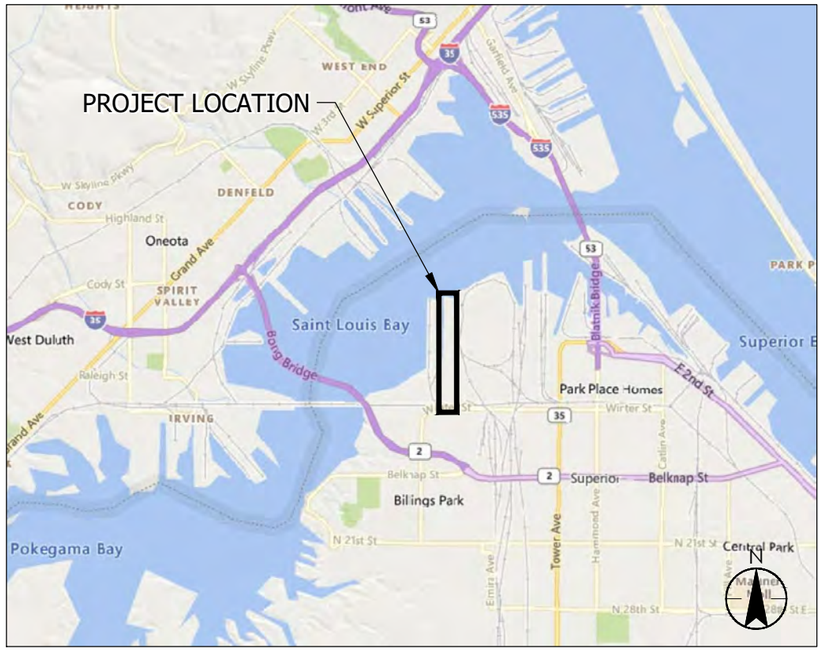
C. REISS DOCK

C. REISS COMPANY, LLC

ST. LOUIS BAY, SUPERIOR, WISCONSIN

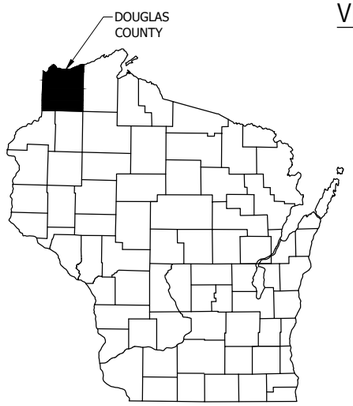


VICINITY MAP

NO SCALE

LOCATION MAP

NO SCALE



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Sheet List Table

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G0.02	LEGEND
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C0.02	EXISTING CONDITIONS AND DEMO
C0.03	EXISTING CONDITIONS AND DEMO
C0.04	EXISTING CONDITIONS AND DEMO
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C6.02	MAIN ROAD AND DOCK ROAD PLAN AND PROFILE
C6.03	MAIN ROAD AND DOCK ROAD PLAN AND PROFILE
C6.04	MAIN ROAD AND DOCK ROAD PLAN AND PROFILE
C6.05	DOCK ROAD PLAN AND PROFILE
C8.01	CONSTRUCTION DETAILS
C8.02	TYPICAL ROAD SECTIONS

ENGINEER P.E.
NO. ------

THE LOCATIONS OF EXISTING UTILITY INSTALLATIONS AS SHOWN ON THIS PLAN ARE APPROXIMATE. THERE MAY BE OTHER UNDERGROUND UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN.

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TITLE SHEET
C. REISS DOCK
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ST. LOUIS BAY, SUPERIOR, WI

DATE OF ISSUANCE
June 30, 2022

NO	REVISION	DATE

SURVEY	BURSE
DRAWN	AJR
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APPROVED	###
PROJ. NO.	193707141

SHEET NUMBER
G0.01

Plot Date: 06/30/2022 - 10:14am
Drawing Name: X:\Projects\193707141\03_data\gis_cad\cad\dwg\SHEETS\193707141G000.dwg
Xrefs: ltb-8x22-MEQ, 193707141_XSX

LEGEND

- INDICATES FOUND 1" IRON PIPE
- INDICATES SET 1" IRON PIPE
- INDICATES FOUND CHISELED CROSS
- SANITARY MANHOLE
- SANITARY CLEANOUT OR VENT
- M.I.S. MANHOLE
- UNKNOWN MANHOLE
- STORM MANHOLE
- INLET (ROUND)
- INLET (SQUARE)
- CURB INLET
- STORM SEWER END SECTION
- GAS VALVE
- GAS METER
- WATER VALVE
- HYDRANT
- WATER MANHOLE
- WATER SERVICE CURB STOP
- WELL HEAD
- STAND PIPE
- WALL INDICATOR VALVE
- POST INDICATOR VALVE
- LIGHT POLE
- SPOT/YARD LIGHT
- UTILITY POLE
- GUY POLE
- GUY WIRE
- ELECTRIC MANHOLE
- ELECTRIC PEDESTAL
- ELECTRIC METER
- TELEPHONE MANHOLE
- TELEPHONE PEDESTAL
- CABLE PEDESTAL
- CONTROL BOX
- FIBER OPTIC SIGN
- TRAFFIC LIGHT
- COMMUNICATION MANHOLE
- BOLLARD
- SOIL BORING/MONITORING WELL
- WATER SURFACE
- WETLANDS FLAG
- MARSH
- FLAGPOLE
- PARKING METER
- SIGN
- MAILBOX
- RAILROAD CROSSING SIGNAL
- HANDICAP SPACE
- CONIFEROUS TREE
- DECIDUOUS TREE

Line	Description
S	SANITARY SEWER
FM	FORCE MAIN
STO	STORM SEWER
W	WATERLINE
G	MARKED GAS MAIN
E	MARKED ELECTRIC
OHW	OVERHEAD WIRES
T	MARKED TELEPHONE
TV	MARKED CABLE TV LINE
FO	MARKED FIBER OPTIC
X	FENCE

NEW TOPOGRAPHIC SYMBOLS

- BOLLARD
- SANITARY CLEANOUT
- MANHOLE
- SANITARY OR STORM LIFT STATION
- STORM SEWER BEEHIVE CATCH BASIN
- STORM SEWER CATCH BASIN
- STORM SEWER FLARED END SECTION
- STORM SEWER OUTLET STRUCTURE
- STORM SEWER OVERFLOW STRUCTURE
- CURB BOX
- FIRE HYDRANT
- WATER REDUCER
- VALVE
- RIP RAP
- DRAINAGE FLOW
- PEDESTRIAN RAMP

EXISTING TOPOGRAPHIC LINES

- RETAINING WALL
- FENCE - BARBED WIRE
- FENCE - CHAIN LINK
- FENCE - DECORATIVE
- FENCE - STOCKADE
- FENCE - WOOD
- FENCE - ELECTRIC
- GUARD RAIL
- TREE LINE
- WETLAND

SURVEY LINES

- BOUNDARY
- NEW CENTERLINE
- EXISTING CENTERLINE
- EXISTING EASEMENT LINE
- NEW EASEMENT LINE
- FLOOD PLAIN BOUNDARY
- EXISTING LOT LINE
- NEW LOT LINE
- EXISTING RIGHT-OF-WAY
- NEW RIGHT-OF-WAY
- SETBACK LINE

NEW UTILITY LINES

- FORCE MAIN (FM)
- SANITARY SEWER
- SANITARY SERVICE
- STORM SEWER DRAINTILE
- STORM SEWER
- WATER MAIN
- WATER SERVICE
- PIPE CASING

FUTURE UTILITY LINES

- FORCE MAIN (FM)
- SANITARY SEWER
- SANITARY SERVICE
- STORM SEWER DRAINTILE
- STORM SEWER
- WATER MAIN
- WATER SERVICE
- PIPE CASING

CONCRETE CURB AND GUTTER

- EXISTING
- NEW
- FUTURE
- DEMOLITION

GRADING INFORMATION

Example	Description
952	EXISTING CONTOUR MINOR
950	EXISTING CONTOUR MAJOR
952	NEW CONTOUR MINOR
950	NEW CONTOUR MAJOR
	NEW GRADING LIMITS / SLOPE LIMITS
744.40 745.47 × STA:5+67.19 980.87	NEW SPOT ELEVATION
743.21 × 743.78	EXISTING SPOT ELEVATION
4:1	RUN:RISE (SLOPE)

ABBREVIATIONS

AD	ALGEBRAIC DIFFERENCE
BV	BUTTERFLY VALVE
BVCE	BEGIN VERTICAL CURVE ELEVATION
BVCS	BEGIN VERTICAL CURVE STATION
℄	CENTER LINE
CL.	CLASS
CMP	CORRUGATED METAL PIPE
CO	CLEAN-OUT
DIP	DUCTILE IRON PIPE
EL/ELEV	ELEVATION
EVCE	END VERTICAL CURVE ELEVATION
EVCS	END VERTICAL CURVE STATION
EX	EXISTING
FES	FLARED END SECTION
F/F	FACE TO FACE
FM	FORCE MAIN
F.O.	FIELD ORDER
GV	GATE VALVE
HP	HIGH POINT
HWL	HIGH WATER LEVEL
INV	INVERT
K	CURVE COEFFICIENT
LP	LOW POINT
MH	MANHOLE (SANITARY)
NTS	NOT TO SCALE
NWL	NORMAL WATER LEVEL
PC	POINT OF CURVE
PCC	COMPOUND CURVE
PI	POINT OF INTERSECTION
℘	PROPERTY LINE
PPVC	PERFORATED POLYVINYL CHLORIDE PIPE
PRC	POINT OF REVERSE CURVE
PT	POINT OF TANGENT
PVC	POLYVINYL CHLORIDE PIPE
PVI	POINT OF VERTICAL INTERSECTION
R	RADIUS
RCP	REINFORCED CONCRETE PIPE
R/W	RIGHT-OF-WAY
SS	STORM SEWER STRUCTURE
STA	STATION
TCE	TEMPORARY CONSTRUCTION EASEMENT
TNH	TOP NUT HYDRANT
TYP	TYPICAL
VC	VERTICAL CURVE
WM	WATER MAIN

HATCH PATTERNS

EXISTING	NEW	DEMOLITION	SECTION
CONCRETE	CONCRETE	CONCRETE DWY/WALK	EARTH
ASPHALT ROAD/DWY	ASPHALT ROAD/DWY	ASPHALT ROAD/DWY	ROCK
PAVERS	PAVERS	PAVERS	SAND
			GRAVEL

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June 30, 2022

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APPROVED
PROJ. NO. 193707141
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Plot Date: 06/30/2022 - 10:14am
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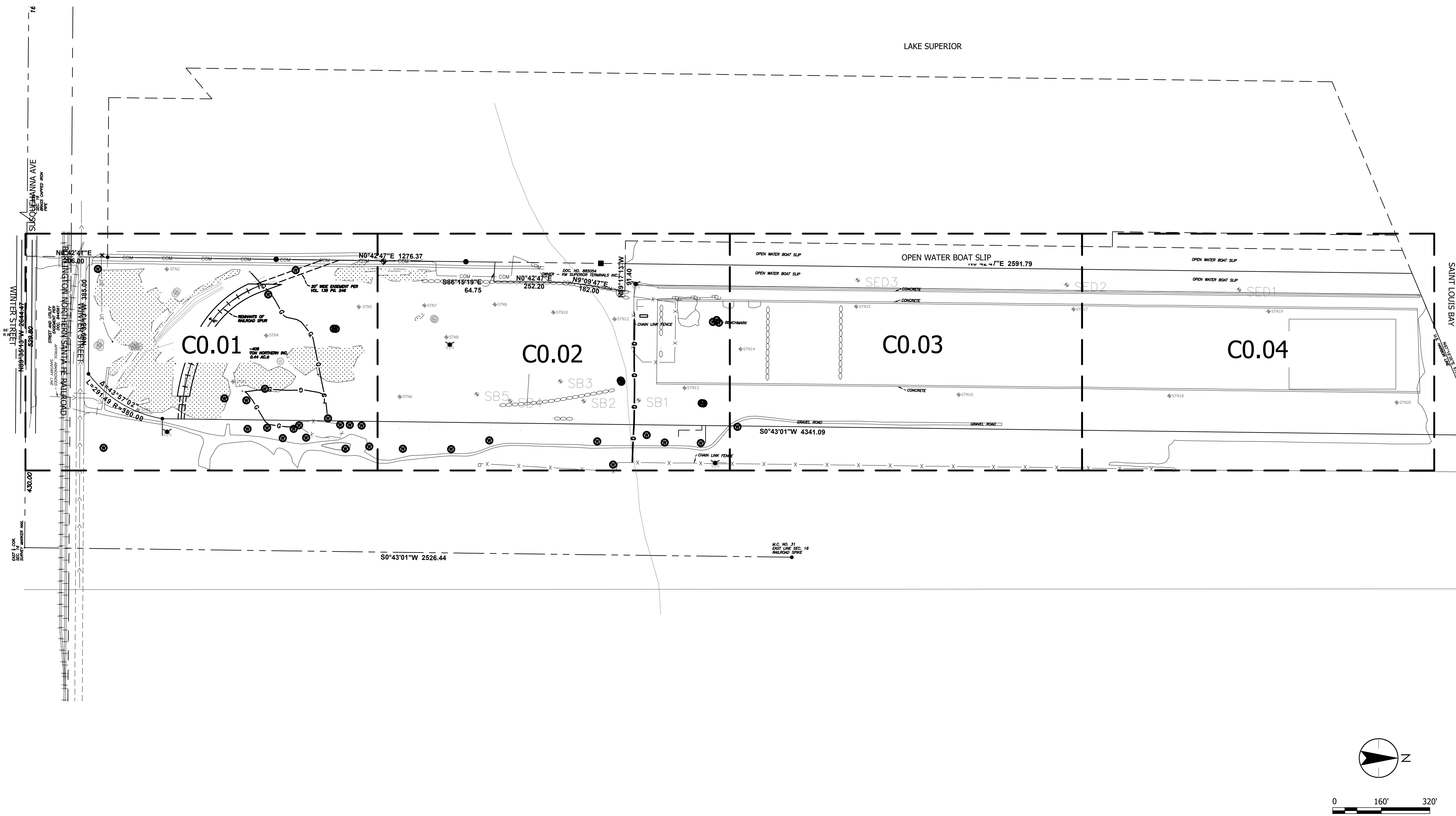

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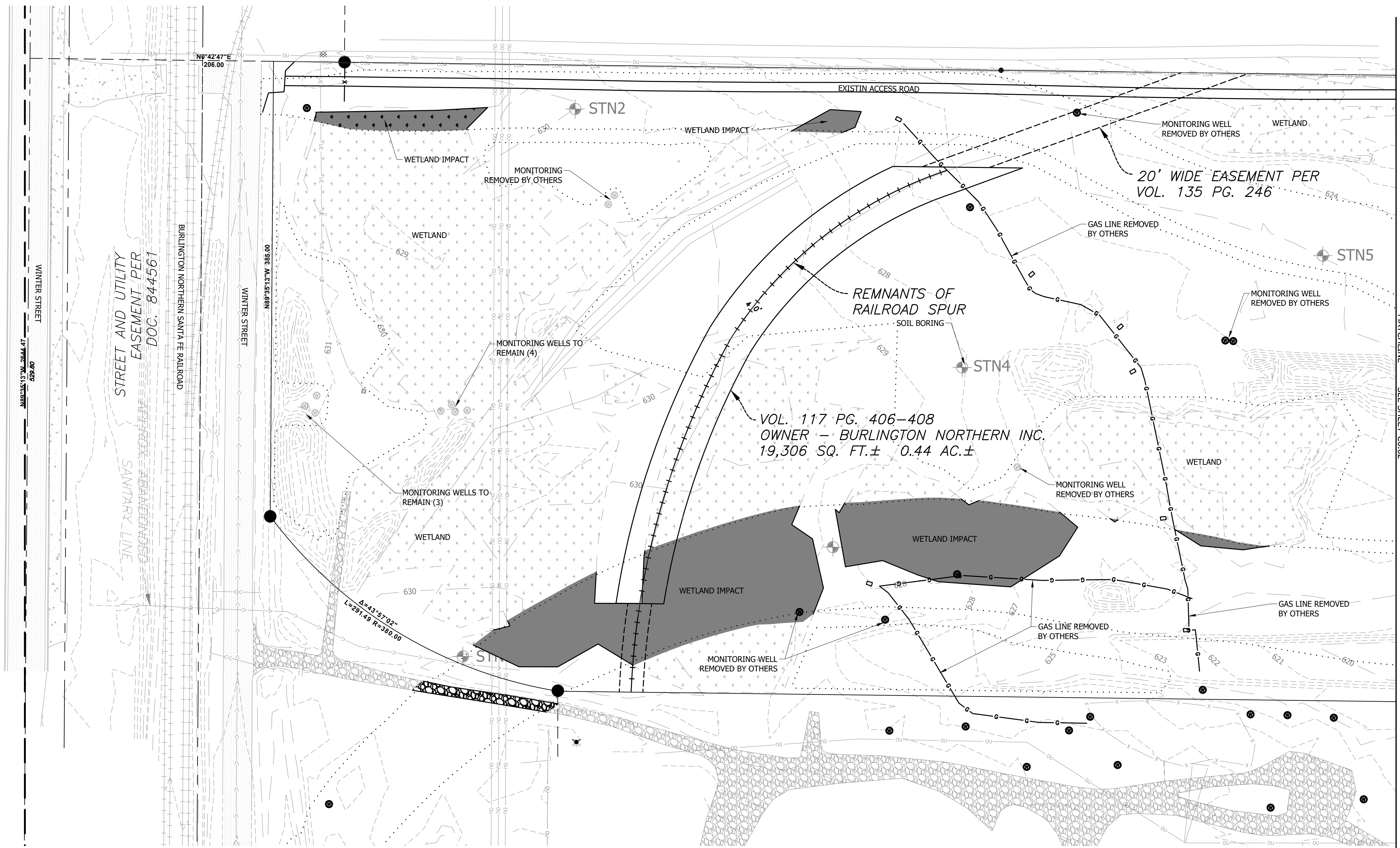
DRAWN	AJR
DESIGNED	AJR
CHECKED	AJR
APPROVED	AJR
PROJ. NO.	193707141

SHEET NUMBER
C0.00

PROPOSED ROAD



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CHECKED	AJR
APPROVED	AJR
PROJ. NO.	193707141

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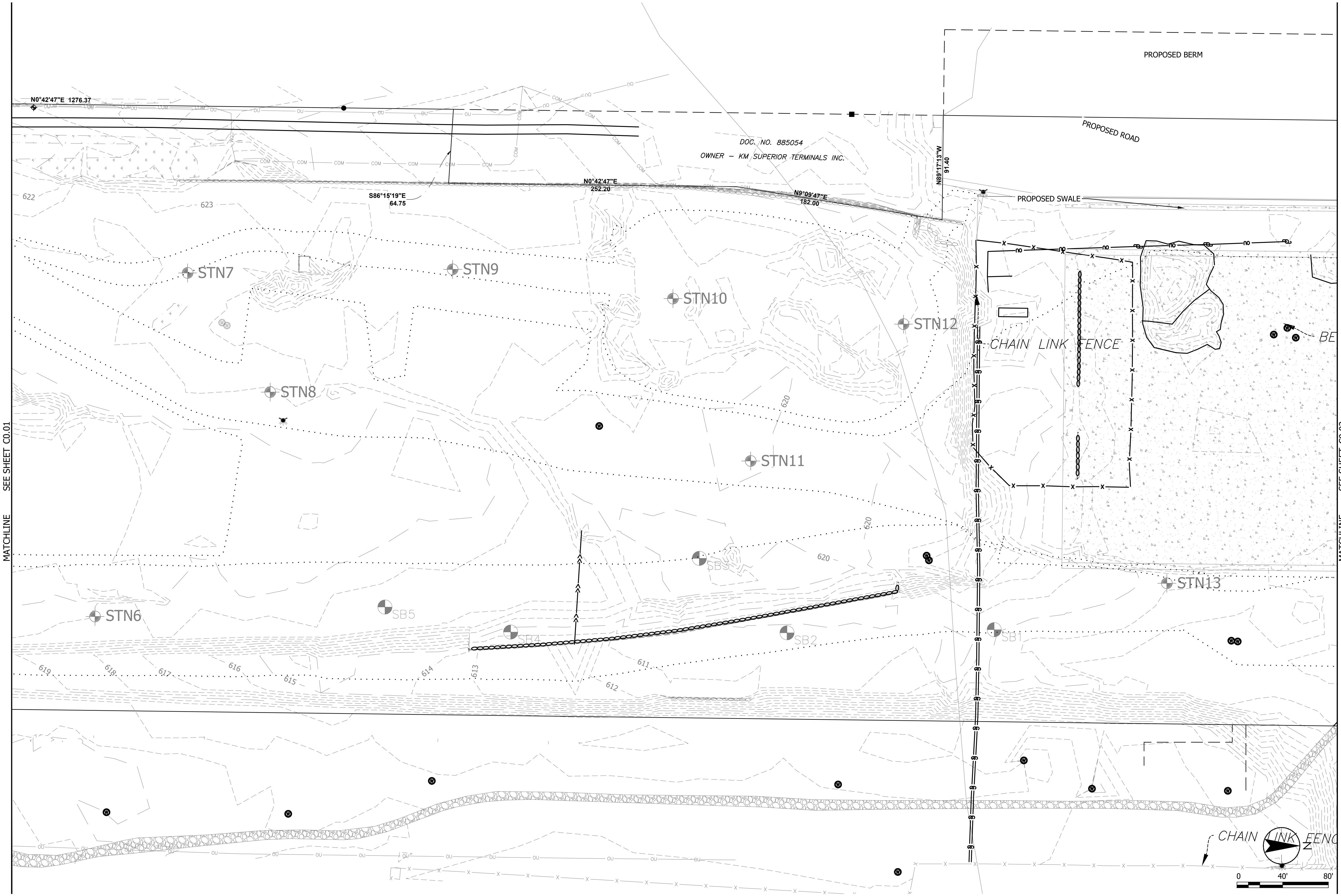
C0.01



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DESIGNED	AJR
CHECKED	AJR
APPROVED	AJR
PROJ. NO.	193707141

SHEET NUMBER
C0.02

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Plot Date: 06/30/2022 - 10:15am
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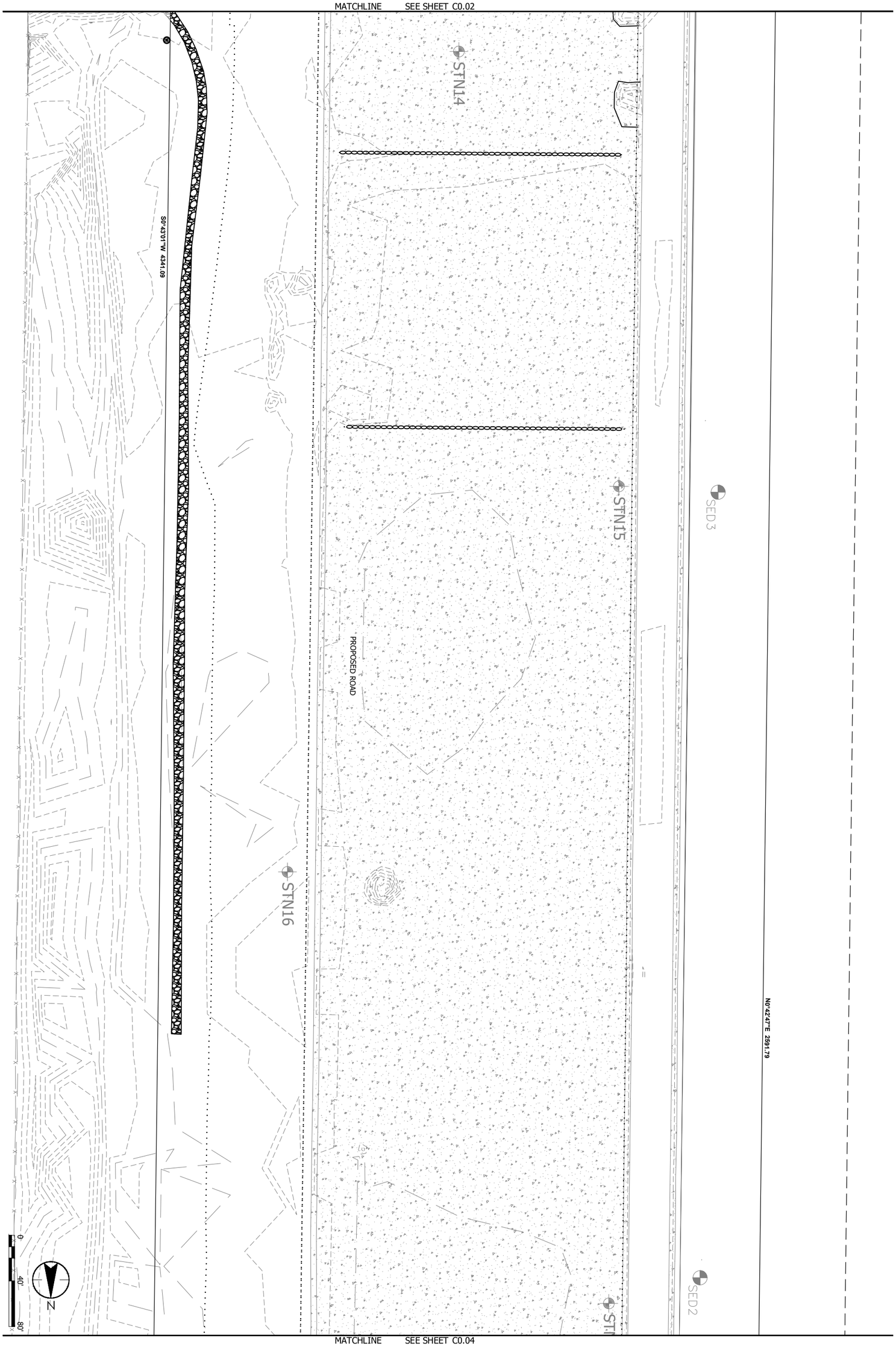
MATCHLINE SEE SHEET C0.02



MATCHLINE SEE SHEET C0.04

C0.03

SURVEY BURSE
DRAWN AJR
DESIGNED AJR
CHECKED AJR
APPROVED AJR
PROJ. NO. 193707141
SHEET NUMBER

NO	REVISION	DATE

DATE OF ISSUANCE
June 30, 2022

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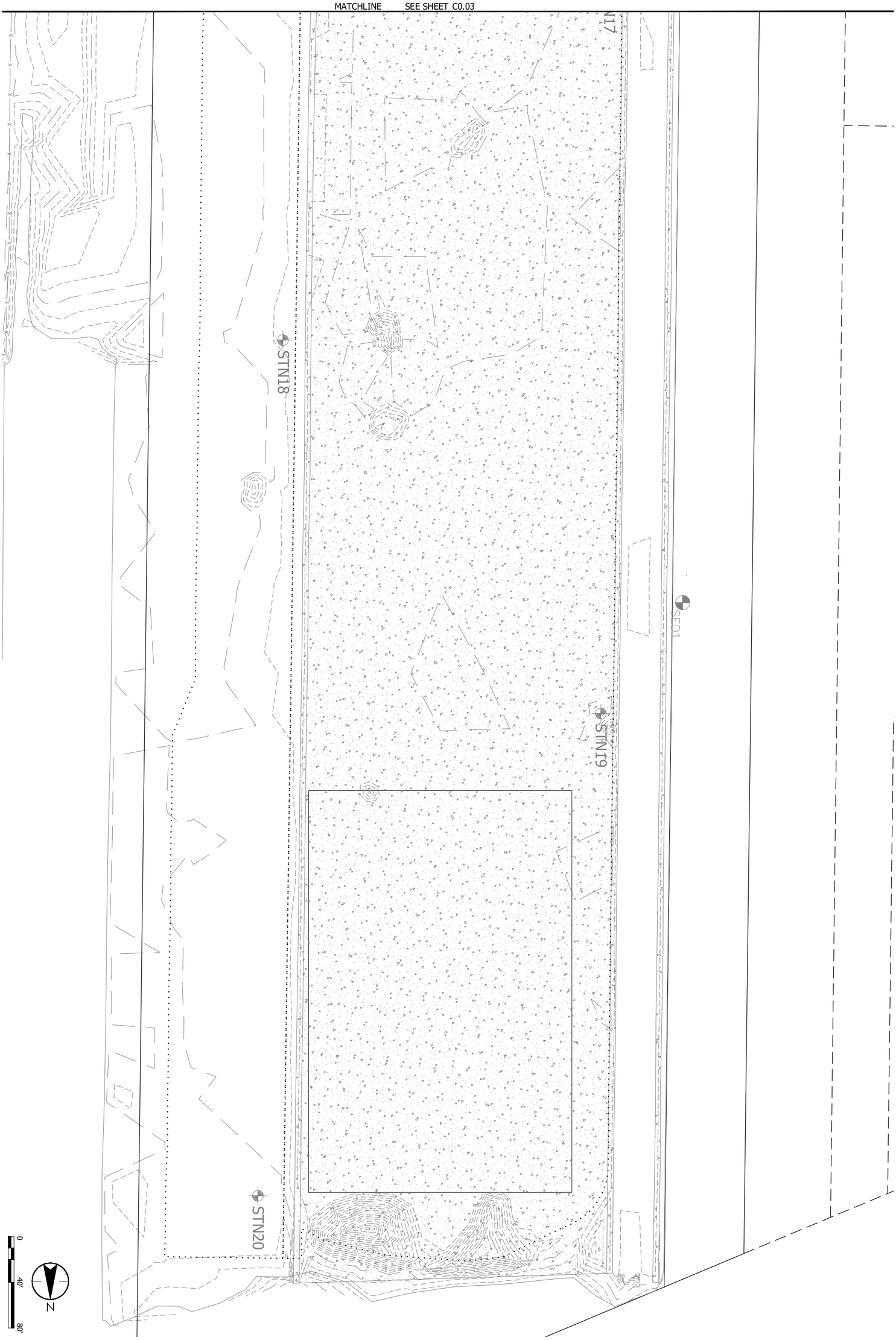

C0.04

SURVEY	BURSE
DRAWN	AJR
DESIGNED	AJR
CHECKED	AJR
APPROVED	AJR
PROJ. NO.	193707141
SHEET NUMBER	

NO	REVISION	DATE

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EXISTING CONDITIONS AND DEMO

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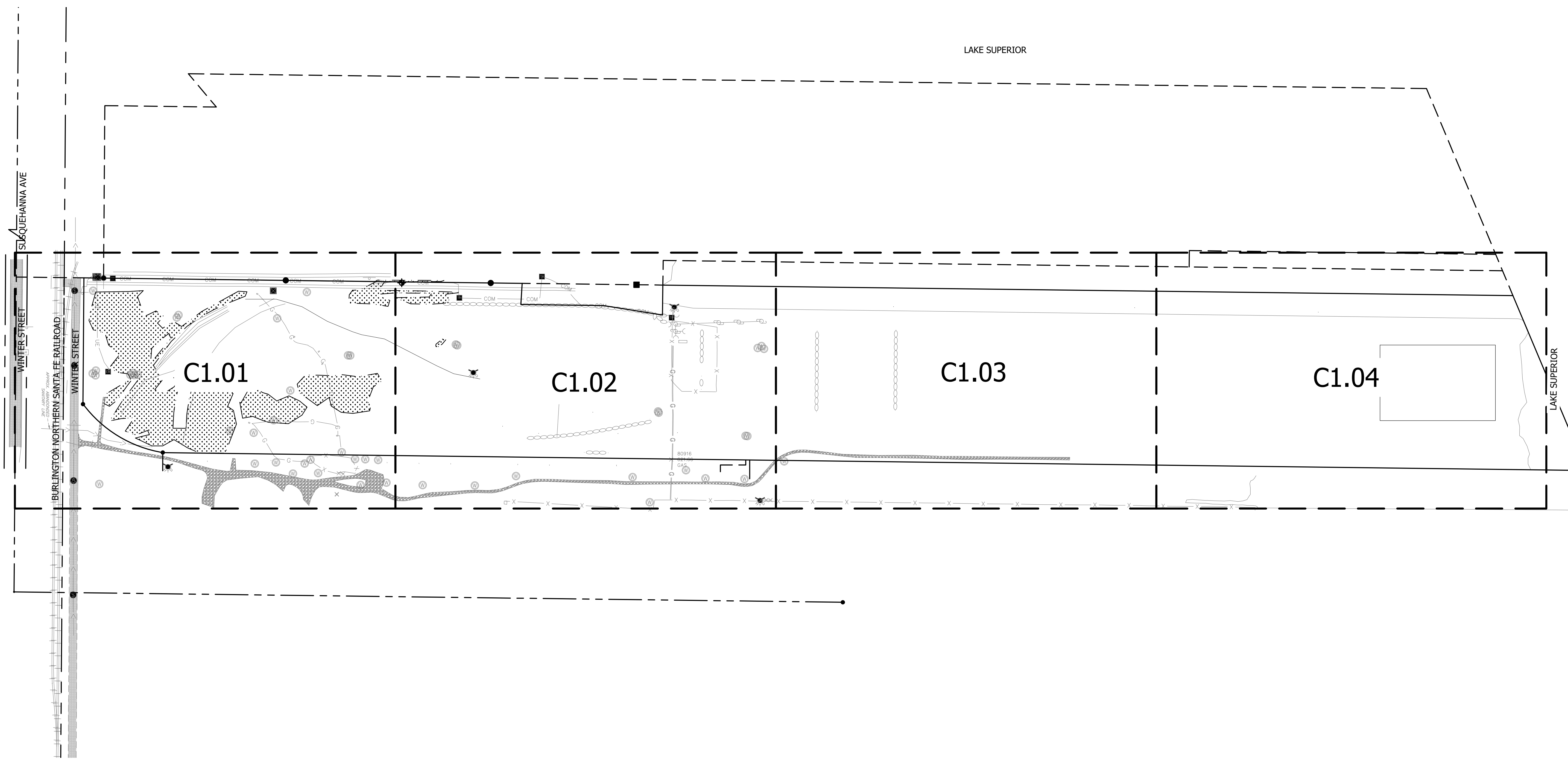

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EROSION CONTROL SHEET INDEX

C. REISS DOCK
C. REISS COMPANY, LLC
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DATE OF ISSUANCE
June 30, 2022

NO	REVISION	DATE

SURVEY	BURSE
DRAWN	AJR
DESIGNED	BSL
CHECKED	BSL
APPROVED	BSL
PROJ. NO.	193707141

SHEET NUMBER
C1.00

Plot Date: 06/30/2022 - 10:16am
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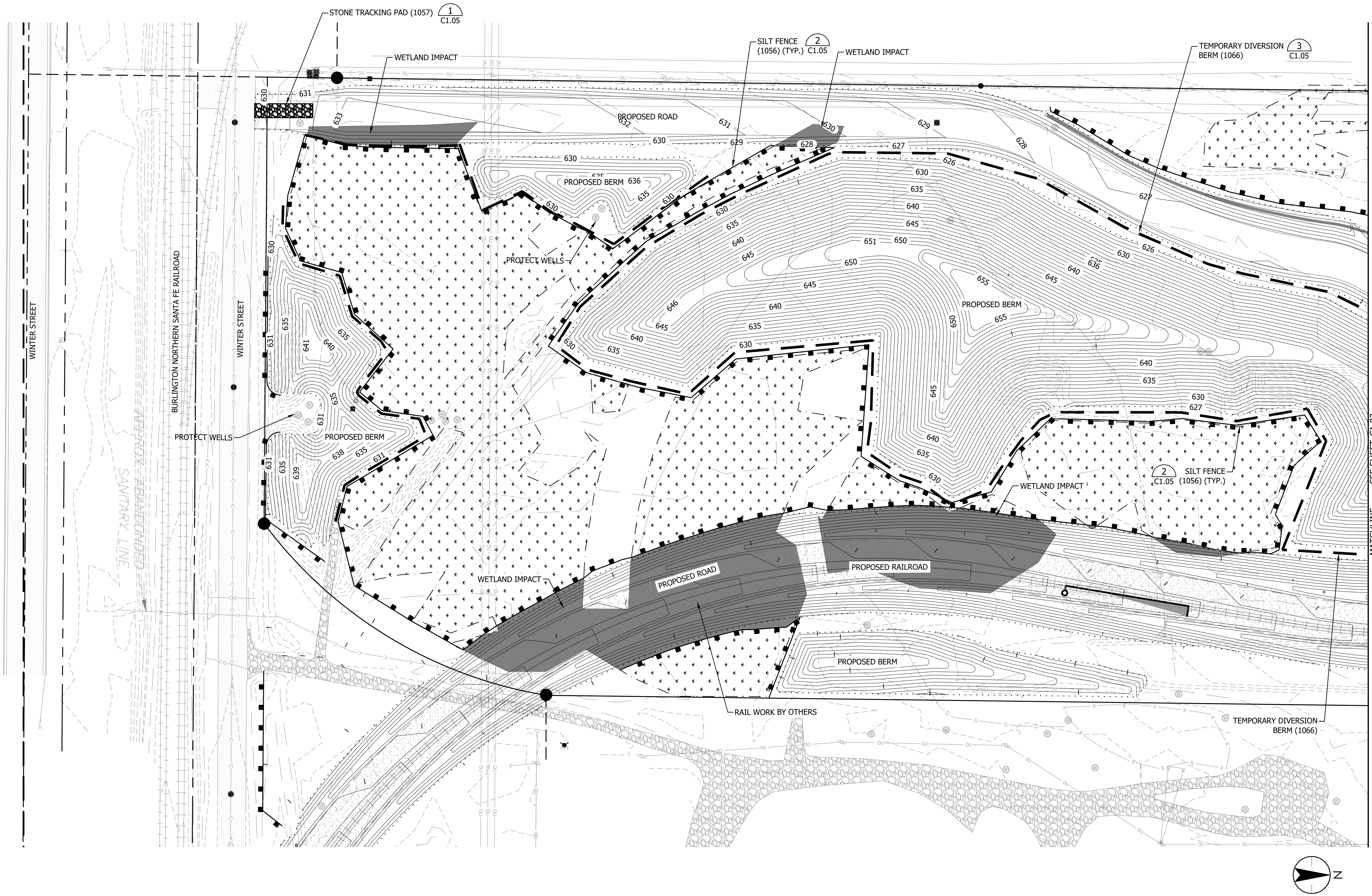

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EROSION CONTROL PLAN

C. REISS DOCK
C. REISS COMPANY, LLC
ST. LOUIS BAY, SURPERIOR, WI

DATE OF ISSUANCE
June 30, 2022

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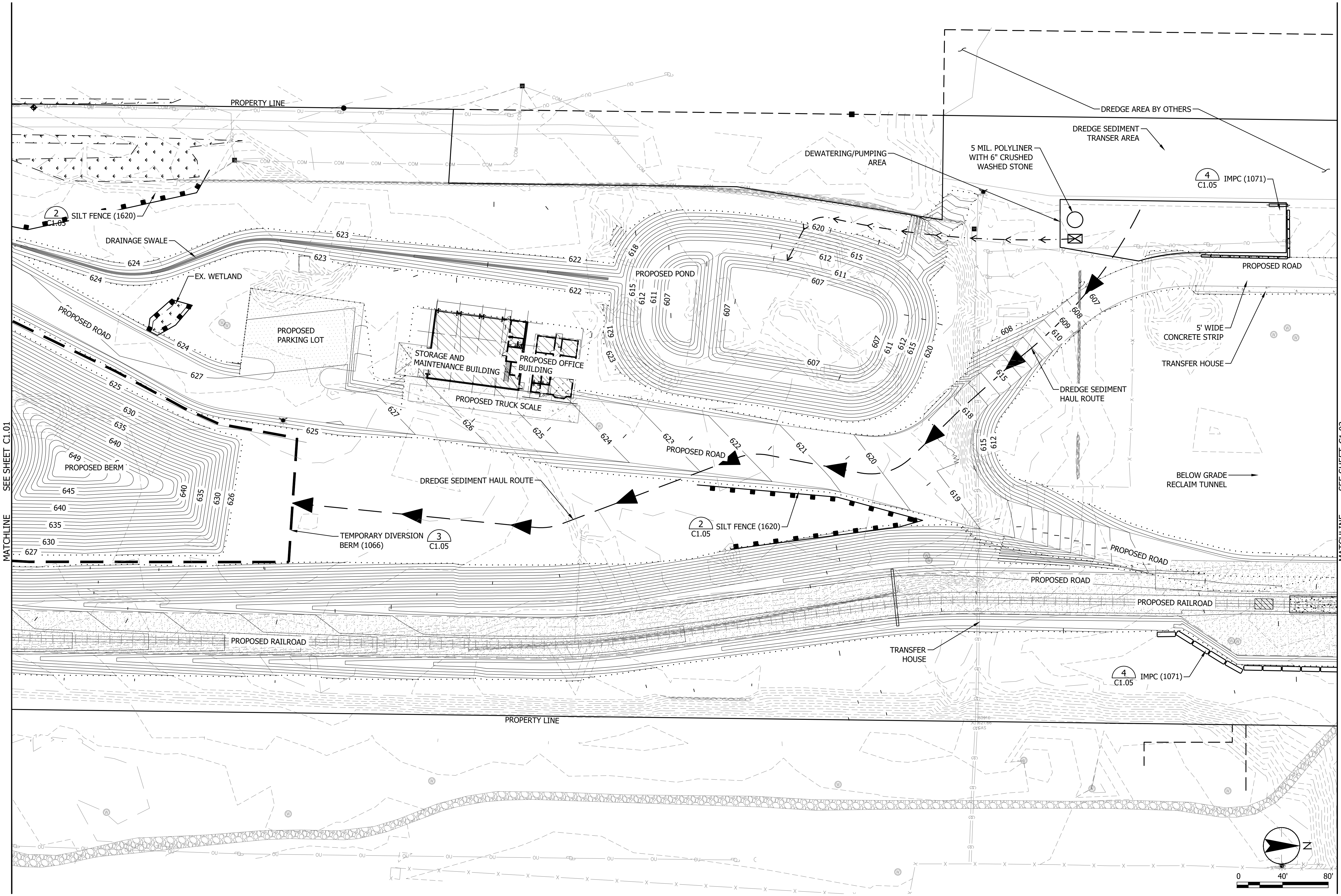
SURVEY	BURSE
DRAWN	AJR
DESIGNED	AJR
CHECKED	AJR
APPROVED	AJR
PROJ. NO.	193707141

SHEET NUMBER
C1.01

Plot Date: 06/30/2022 - 10:16am

Plot Date: 06/30/2022 - 10:16am



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EROSION CONTROL PLAN

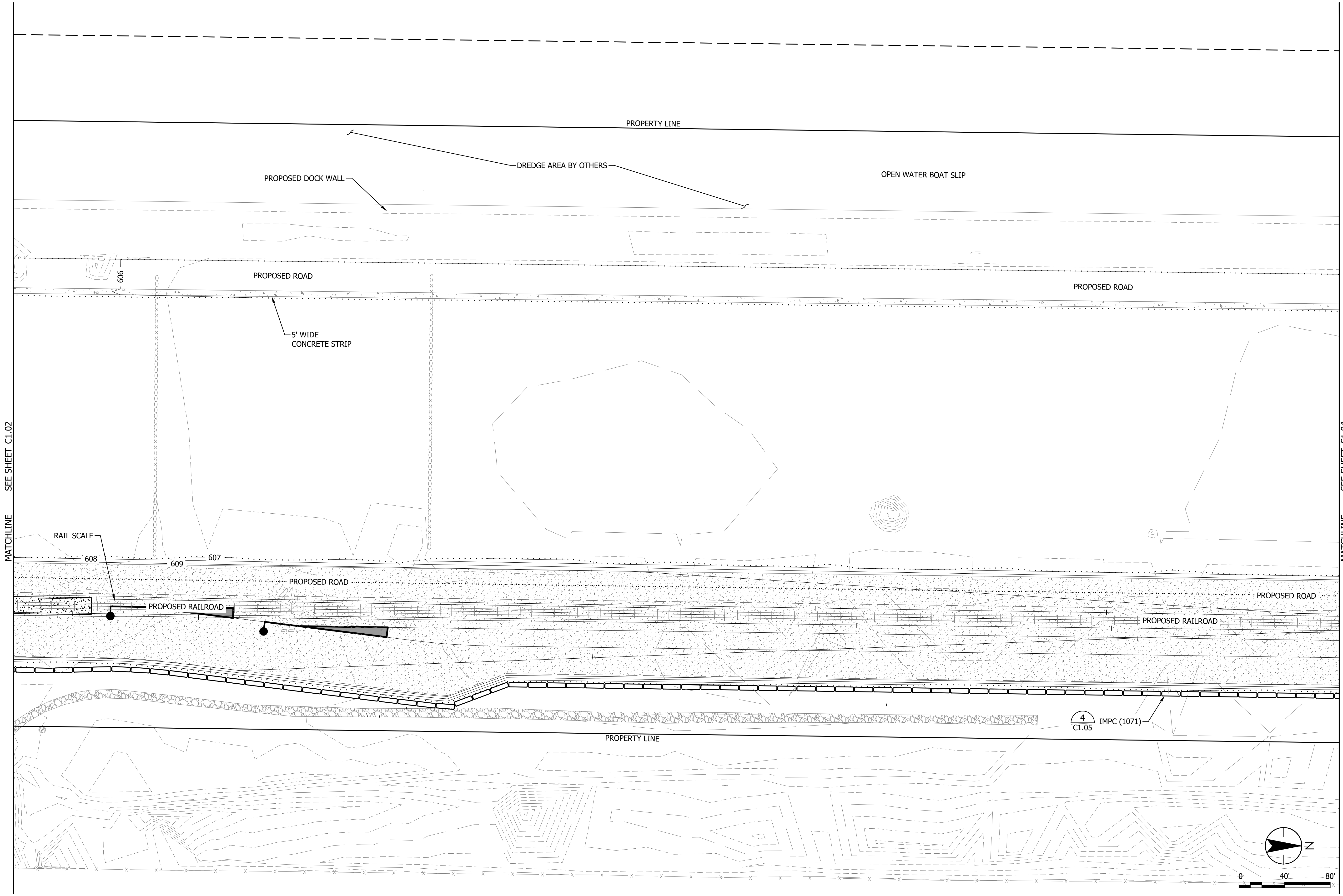
C. REISS DOCK
C. REISS COMPANY, LLC
ST. LOUIS BAY, SURPERIOR, WI

DATE OF ISSUANCE	
June 30, 2022	

NO	REVISION	DATE

SURVEY	BURSE
DRAWN	AJR
DESIGNED	AJR
CHECKED	AJR
APPROVED	AJR
PROJ. NO.	193707141

SHEET NUMBER
C1.02



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SHEET NUMBER
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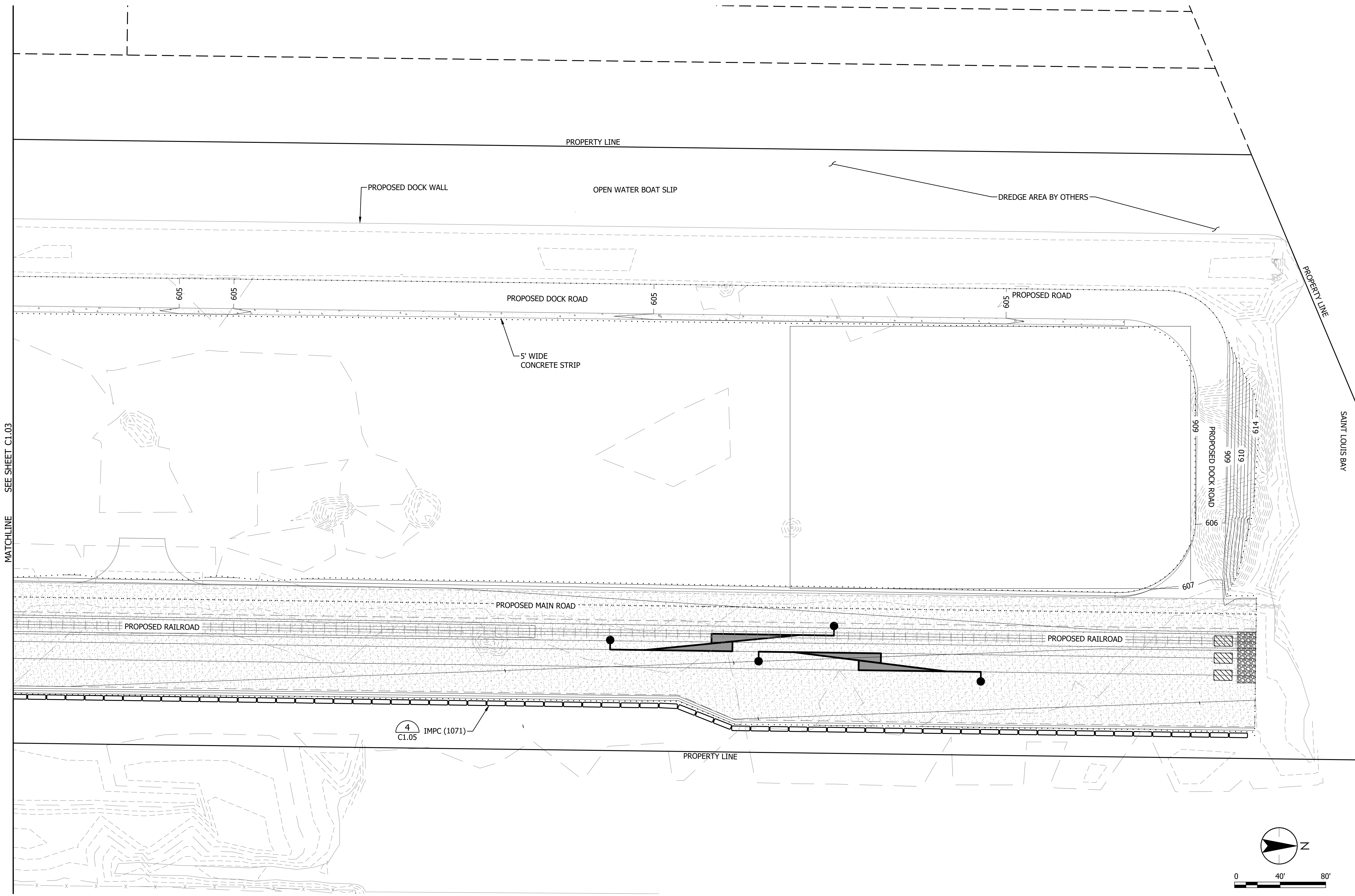

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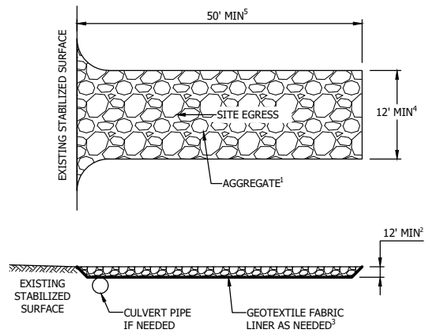


NOTES

1. USE HARD, DURABLE, ANGULAR STONE OR RECYCLED CONCRETE MEETING THE GRADATION IN TABLE 1. WHERE THIS GRADATION IS NOT AVAILABLE, MEET THE GRADATION IN WISCONSIN DEPARTMENT OF TRANSPORTATION (DOT) 2018 STANDARD SPECIFICATIONS, SECTION 312, SELECT CRUSHED MATERIAL.
2. SLOPE THE STONE TRACKING PAD IN A MANNER TO DIRECT RUNOFF TO AN APPROVED TREATMENT PRACTICE.
3. SELECT FABRIC TYPE BASED ON SOIL CONDITIONS AND VEHICLES LOADING.
4. INSTALL TRACKING PAD ACROSS FULL WIDTH OF THE ACCESS POINT, OR RESTRICT EXISTING TRAFFIC TO A DEDICATED EGRESS LAND A LEAST 12 FEET WIDE ACROSS THE TOP OF THE PAD.
5. IF A 50' PAD LENGTH IS NOT POSSIBLE DUE TO SITE GEOMETRY, INSTALL THE MAXIMUM LENGTH PRACTICABLE AND SUPPLEMENT WITH ADDITIONAL PRACTICES AS NEEDED.

Table 1. Gradation for stone tracking pads

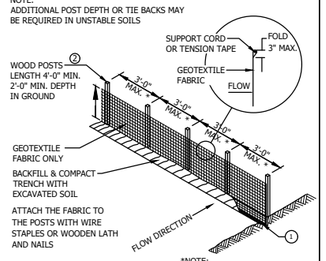
Sieve Size	Percent by weight passing
3"	100
2-1/2"	90-100
1-1/2"	25-60
3/4"	0-20
3/8"	0-5

1 / 1 STONE TRACKING PAD
NTS

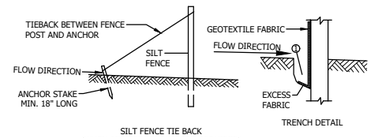
GENERAL NOTES

1. TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL
2. WOOD POSTS SHALL BE MINIMUM SIZE OF 1¼" X 1¼" OF OAK OR HICKORY.
3. CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS: A) TWIST METHOD -- OVERLAP THE END POSTS AND TWIST, OR ROTATE AT LEAST 180 DEGREES, B) HOOK METHOD -- HOOK THE END OF EACH SILT FENCE LENGTH.

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

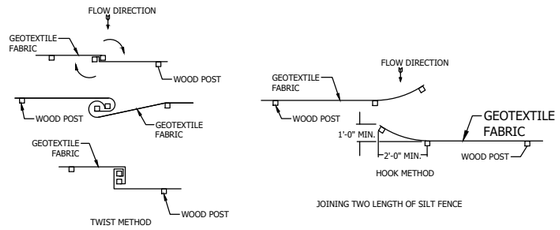


*NOTE:
8'-0" POST SPACING ALLOWED IF A WOVEN GEOTEXTILE FABRIC IS USED.



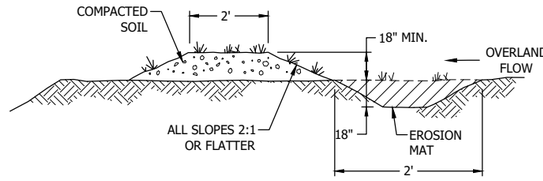
SILT FENCE TIE BACK
(WHEN ADDITIONAL SUPPORT REQUIRED)

TRENCH DETAIL



JOINING TWO LENGTH OF SILT FENCE

2 / 1 SILT FENCE
NTS

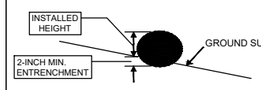


NOTES

1. THE CHANNEL BEHIND THE DIVERSION BERM SHOULD HAVE POSITIVE GRADE TO A STABILIZED OUTLET.
2. THE DIVERSION BERM SHALL BE ADEQUATELY COMPACTED TO PREVENT FAILURE.
3. THE DIVERSION BERM SHOULD BE STABILIZED WITH TEMPORARY SEEDING.

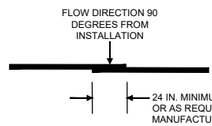
CONSTRUCTION SITE DIVERSION BERM

3 TEMPORARY DIVERSION BERM
NTS

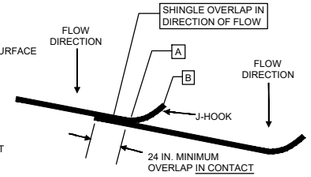


NOTE:
INSTALLED HEIGHT IS MEASURED FROM THE UPSLOPE GROUND SURFACE TO THE TOP OF THE PRODUCT. DUE TO SETTLEMENT AND/OR DEFORMATION, THE INSTALLED HEIGHT MAY NOT BE EQUIVALENT TO THE NOMINAL DIAMETER OF THE PRODUCT.

CROSS SECTION



TYPICAL INSTALLATION
(Plan View)



NOTES:
1. J-HOOKS SHALL BE INSTALLED SO THAT THE GROUND-PRODUCT INTERFACE ELEVATION AT LOCATION B IS HIGHER THAN THE TOP OF PRODUCT ELEVATION AT LOCATION A TO CREATE A WEIR AT POINT A.
2. J-HOOKS SHALL BE INSTALLED EVERY 2 VERTICAL FEET OF DROP ALONG THE LENGTH OF THE INSTALLATION.
3. STAKE OVERLAP AS REQUIRED BY MANUFACTURER.

SLOPING INSTALLATION
(Plan View)

LOG-TYPE PRODUCT INSTALLATION ILLUSTRATION

4 INTERIM MANUFACTURED PERIMETER CONTROL
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EROSION CONTROL DETAILS

C. REISS DOCK
C. REISS COMPANY, LLC
ST. LOUIS BAY, SURPERIOR, WI

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SHEET NUMBER
C1.05

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GENERAL NOTES

1. Contractor shall conform to all relevant federal, state, and local regulations; the conditions included in any permit; and to the conditions included in the project engineer's plans unless otherwise approved by the Wisconsin Department of Natural Resources (WDNR) and project engineer.
2. Erosion control devices shall conform to the latest edition of the WDNR technical standards and WI DOT Product Acceptability List (PAL).
3. A copy of the erosion control plan and permits shall be kept onsite and available for inspection throughout the duration of the project. Submit plan revisions or amendments to the WDNR at least 5 days prior to field implementation.
4. At no time may construction equipment or fill be placed in a waterway or wetland, except as approved by WDNR permit. The contractor shall not store any equipment or materials in any wetland (except by approved permit), floodplain, or floodway.
5. Public and private access roads shall be kept free of tracked sediment and at a minimum cleaned at the end of each workday (not by flushing). As well, the contractor shall take minimization measures for dust control to the maximum extent practicable.
6. Bare soil areas, including soil stockpiles, left undisturbed for 7 days, shall be stabilized with: temporary or permanent seed and mulch (properly anchored by crimping, netting, or tackifier); hydromulch; tarp; or other approved method.
7. The use, storage and disposal of chemicals, oil & grease, cement and other compounds and materials used on the construction site shall be managed during the construction period to prevent their transport by runoff into waters of the state; in the event of any spill notification shall be immediately reported to the WDNR and local authorities. All construction debris and litter shall be cleaned daily.
8. If the contractor determines that dewatering will be necessary, a dewatering plan following WDNR technical standard 1061 shall be submitted by the contractor to the WDNR for approval. Notify the WDNR if dewatering is scheduled to occur in areas of soil and/or groundwater contamination, or if dewatering will occur from a high capacity well (70 GPM or greater). Provide anti-scour protection and maintain non-erosive flow during dewatering.
9. Between September 15 and October 15 stabilize with mulch, tackifier and a perennial seed mix with winter wheat, annual rye, oats or annual rye. During the non-growing season (Oct. 15 - April 15), winter stabilization shall include seeding with dormant seed mix and winter wheat and the use of mulch and polymer/tackifier (as an anchoring method) or a Class 1-type B erosion mat on all bare soil areas of the site.
- Mulch shall consist of hay or straw free of diseased plant residue, noxious weeds, harmful chemical residues, heavy metals, hydrocarbons, and other known environmental toxicants.
- Mulch shall cover a minimum of 80% of the soil surface and shall be ½ to 1 ½ inches thick.
- If the conditions are too cold to apply a polymer/tackifier, a mulch crimper or biodegradable netting shall be used as a temporary alternate anchoring method.
10. If snow cover prevents the installation of these items; the condition of the site, including the amount of snow cover, will be noted on every erosion and sediment control inspection report. Once the snow is 2 inches or less on a majority of the site, the above-mentioned winter stabilization methods shall be immediately employed.
11. All finish graded ditches and swales shall be planted, sodded or seeded and mulched or matted immediately after completion.
12. If any item in the erosion control plan requires modification, the contractor shall submit an erosion control plan revision to the project engineer and WDNR Stormwater Specialist to receive approval before proceeding.
13. All land disturbing activities shall be conducted in a logical sequence as to minimize the amount of bare soil exposed at any one time. Maintain existing vegetation as long as possible.
14. Any off-site sediment deposits shall be cleaned up and restored or stabilized with 24 hours, weather permitting, of any off-site sediment deposition. All sediment shall be properly disposed of and stabilized in an upland location on or off-site.
15. Make appropriate provisions for watering, as needed, during the first 8 weeks following seeding or planting areas whenever more than 7 consecutive days of dry weather occur (no rain).

EROSION CONTROL INSTALLATION AND SEQUENCING

1. The construction site is a industrial dock re-development construction project including site grading, stormwater pond, new rail spur, new dock wall, new office and scale building, and utility construction adjacent to Lake Superior.
2. Tracking pad, silt fence, IMPC, and diversion berm shall be installed prior to any land disturbing activities. Followed by demolition, clear & grubbing, pond and berm, dock wall, rail, utilities, and buildings, berm prep for dredge, dredging (by others) in June 2023, final grading, berm capping, and final seeding.
3. Hall routes and construction access shall be established, and submitted to and approved by the Owner, prior to any construction activity.
4. Dredge contractor (by others) to move dredge from barge to berm via the sediment transfer area and hauling route and to dewater to pond as needed.
5. Dredge contractor Flows shall be directed during construction to the silt fencing, pond, diversion berm or the drainage swale. Pond to be used as temporary sediment basin during construction with orifice restrictor.
6. Following construction of the drainage swale interim manufactured perimeter control shall be installed.
7. Turbidity barriers, or other approved best management practice, shall be installed prior to any work along the channel bank or in the channel for wall repair and utility (pipe) installation.
8. Upon completion of grading any disturbed ground shall be temporality seeded and mulch placed within 7 days.
9. Permanent stabilization shall occur after final grading, of any areas that were temporarily seeded.

REMOVAL OF EROSION CONTROL MEASURES

1. Interim Manufactured Perimeter Control shall be removed when all land disturbing construction activities have been completed and the area has reached final stabilization. Any soil disturbance that has occurred because of its removal shall be immediately stabilized.
2. Silt Fence shall be removed when all land disturbing construction activities have been completed and the area has reached final stabilization. Any soil disturbance that has occurred because of its removal shall be immediately stabilized.
3. Tracking Pad shall be removed when all land disturbing construction activities have been completed along its associated access road. Any soil disturbance that has occurred as a result its removal shall be immediately stabilized.
4. Construction site diversion berms shall be removed when all land disturbing construction activities have been completed. Any soil disturbance that has occurred as a result its removal shall be immediately stabilized.

EROSION CONTROL INSPECTION AND MAINTENANCE

1. Inspect all erosion control measures prior to commencing grading activities. Erosion control measures shall be inspected weekly and within 24 hours of every ½ inch or greater rain event. Maintenance shall be in accordance with the WDNR technical standards and the engineer's plans and specifications and as deemed necessary by regulatory agencies. Keep inspection reports on-site and available upon request. All maintenance and/or repairs shall be completed within 24 hours of notification by the erosion control inspector. The contractor shall maintain an erosion control logbook on site noting inspection date and times, repairs necessary, and repairs made.
2. The contractor shall install and maintain the erosion control measures in accordance with WDNR technical standards and as follows:

A. Tracking Pad (1057) - Maintenance shall take place by scraping or top-dressing with additional aggregate. A minimum 50-foot-long and 12-inch thick pad consisting of a minimum of 3-inch clear washed stone shall be maintained. The width of the tracking pad shall extend the full distance of the egress point.
B. Silt Fence (1056) - Sediment /debris/deposits shall be removed when they reach 50% of the height of the silt fence. Removed sediment shall be deposited in a suitable non-wetland or floodplain area and stabilized. Silt fence that is damaged or not performing as designed shall be repaired or replaced immediately.
C. Interim Manufactured Perimeter Control (1071) - Sediment /debris/deposits shall be removed when they reach 50% of the height of the Interim Manufactured Perimeter Control product. Removed sediment shall be deposited in a suitable non-wetland or floodplain area and stabilized. Interim Manufactured Perimeter Control that is damaged or not performing as designed shall be repaired or replaced immediately.
D. Construction Site Diversion Berm (1066) - Diversion Berms shall be inspected weekly and maintained in accordance with the WDNR technical standard 1066. Berms that are damaged or not performing as designed shall be repaired or rebuilt immediately.

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EROSION CONTROL NOTES

C. REISS DOCK
C. REISS COMPANY, LLC
ST. LOUIS BAY, SURPERIOR, WI

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SURVEY	BURSE
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SHEET NUMBER
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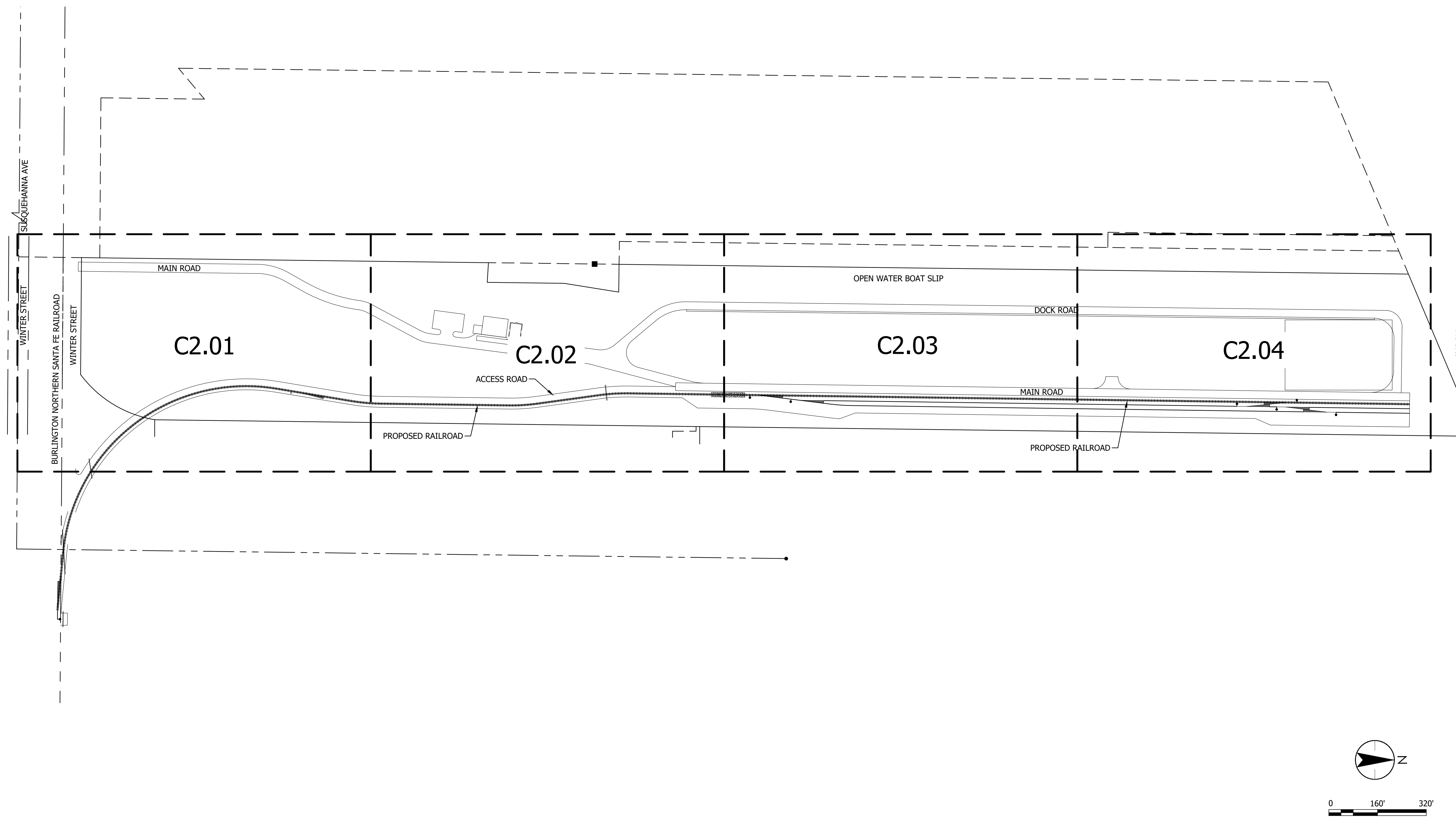

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SITE PLAN SHEET INDEX

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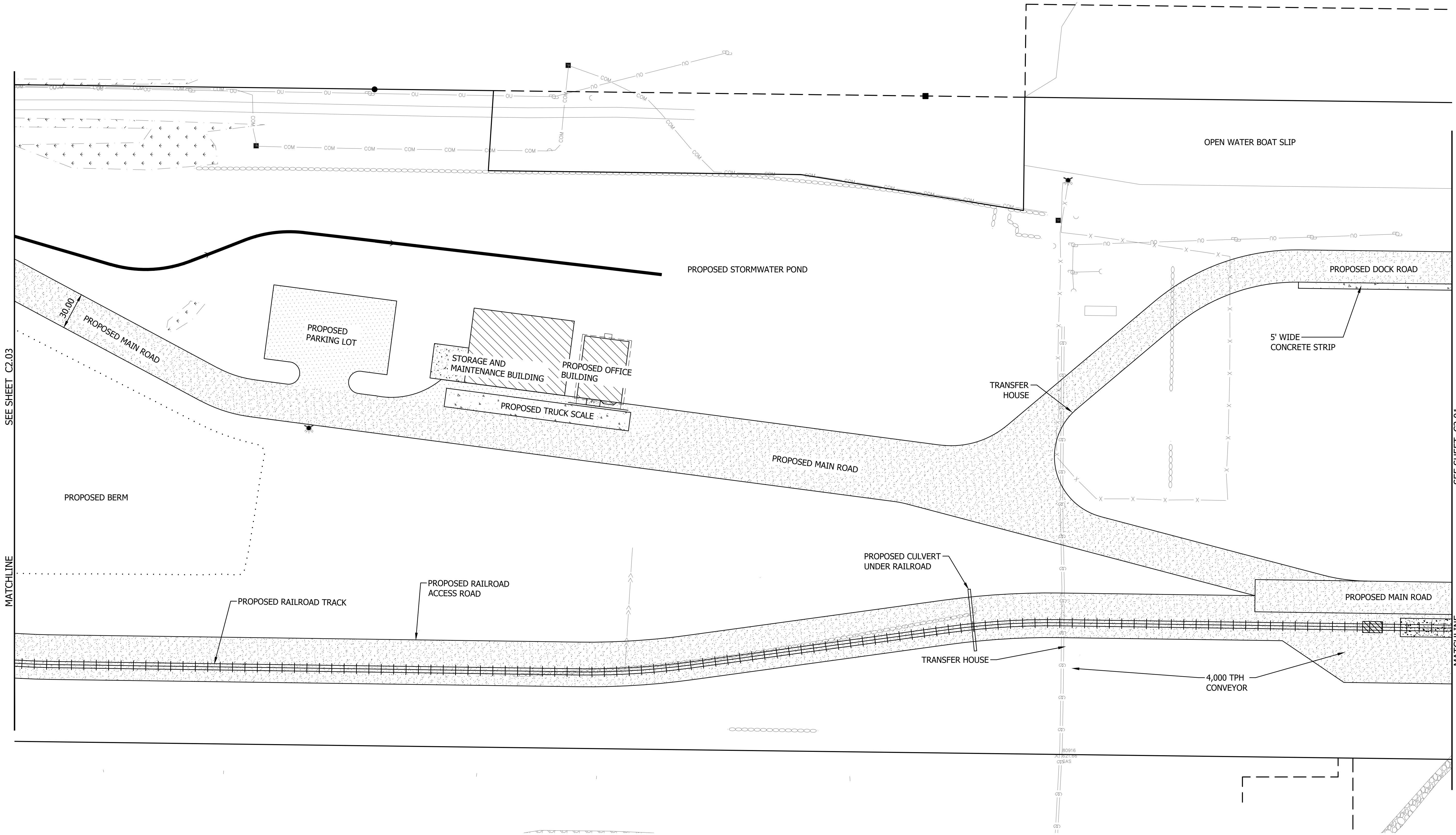

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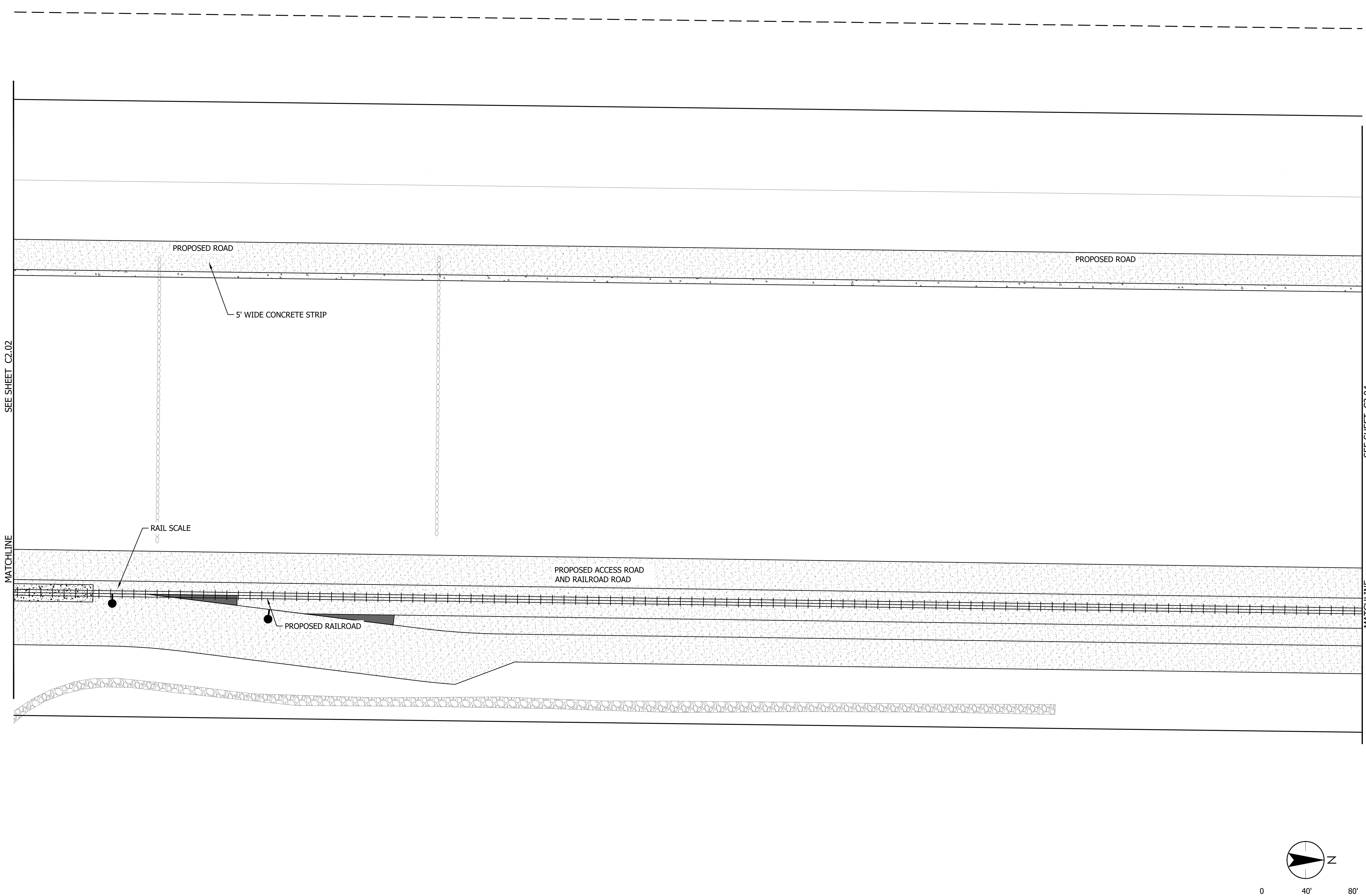

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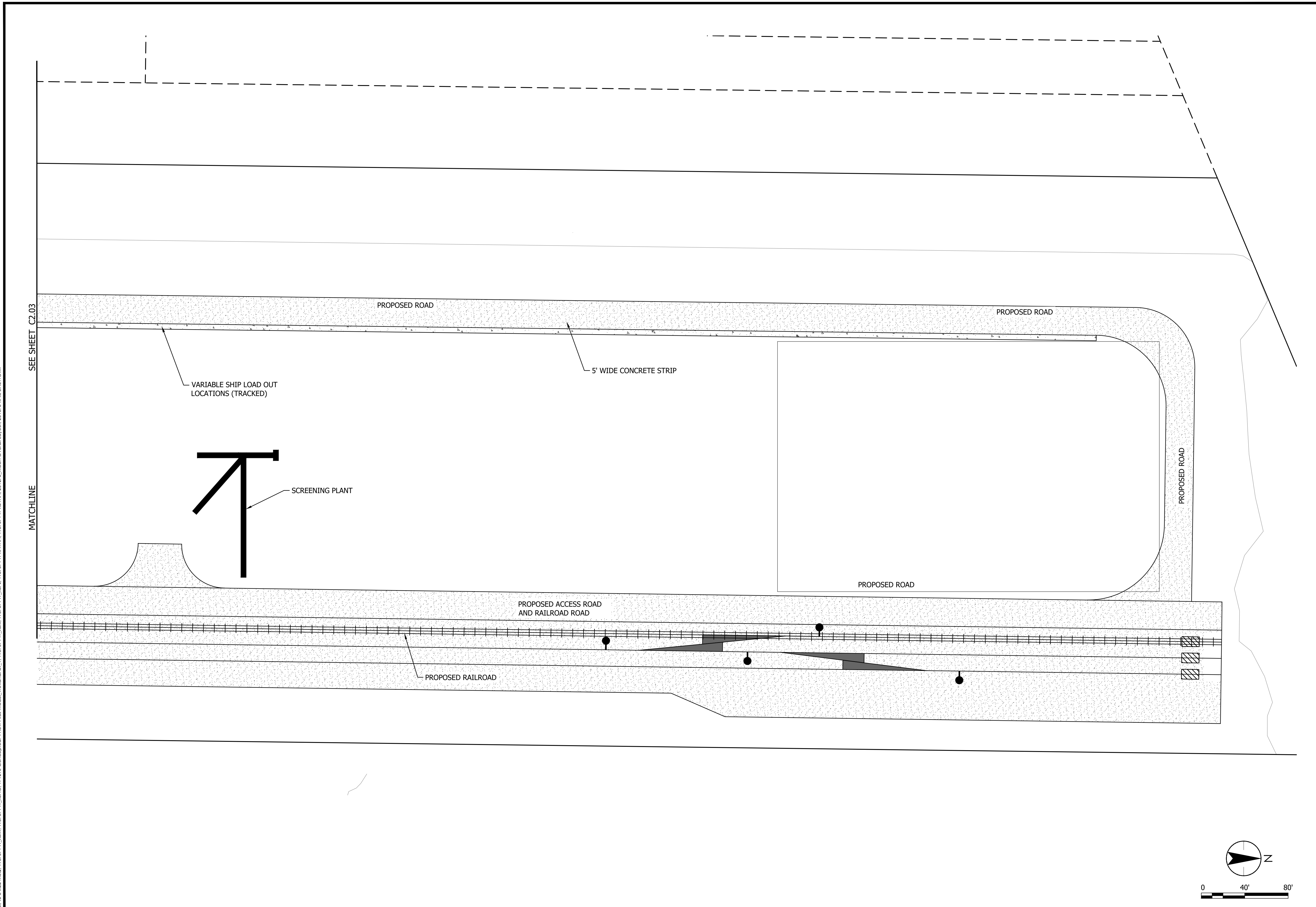

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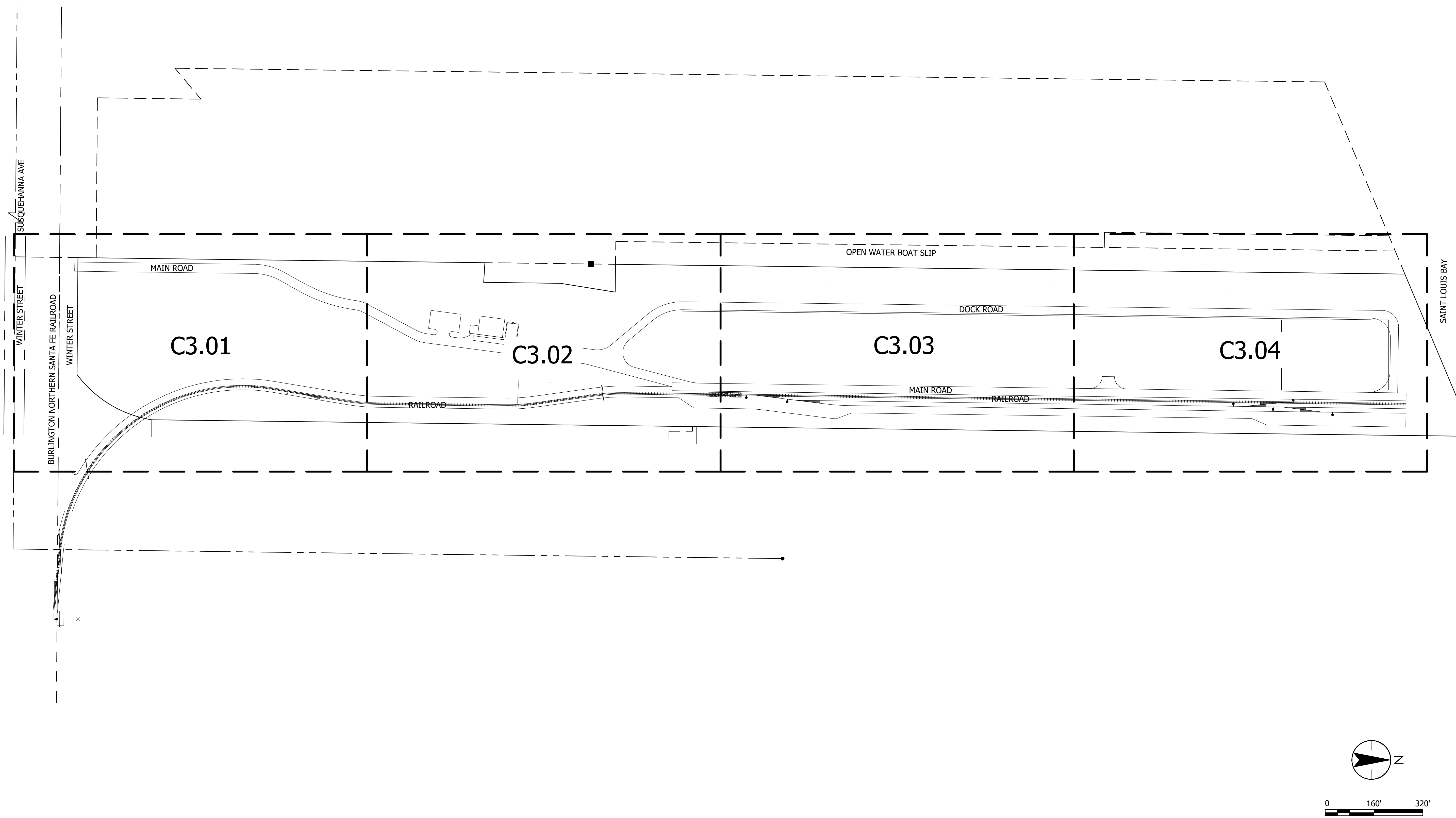

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GRADING PLAN SHEET INDEX

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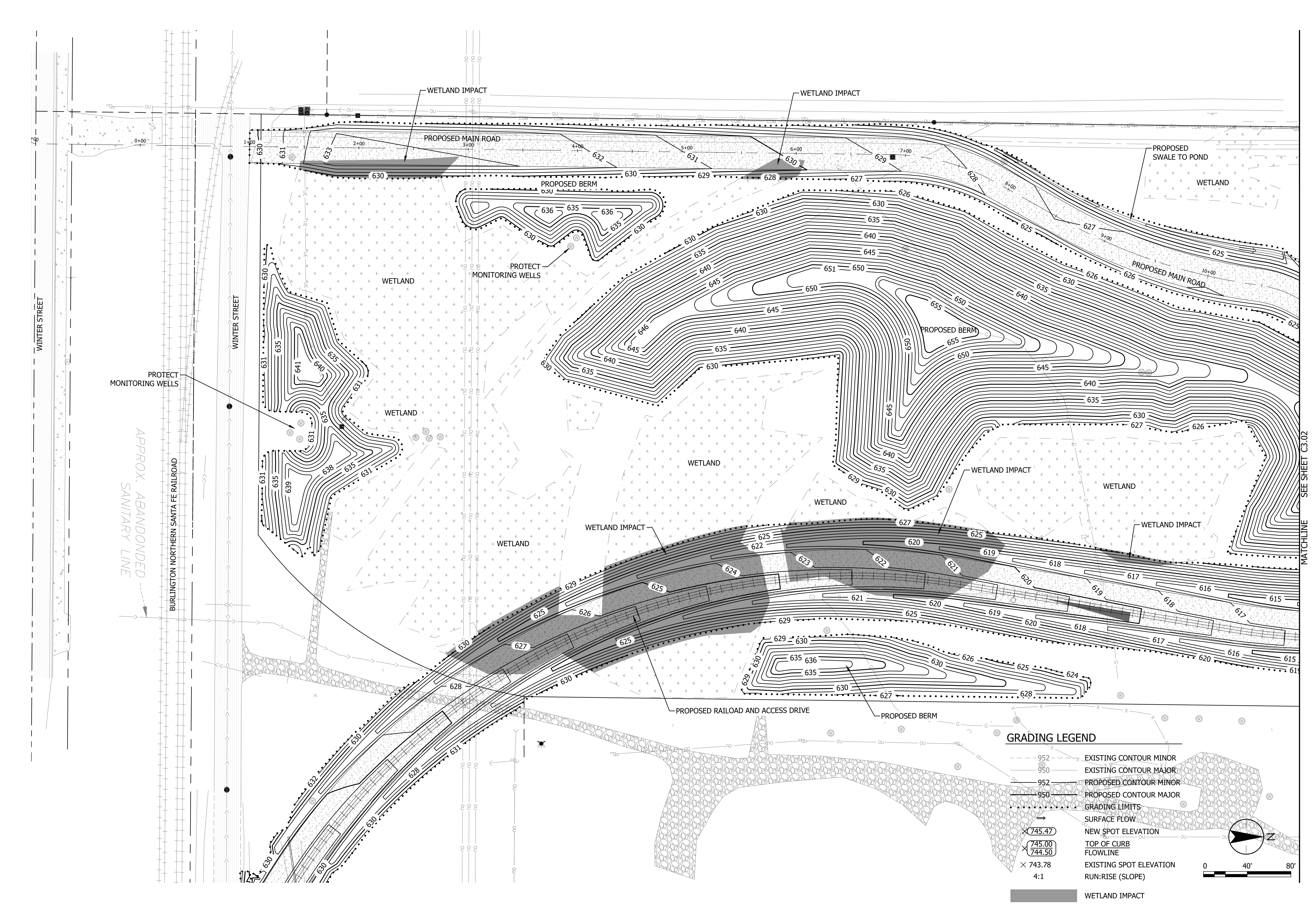

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SHEET NUMBER
C3.01

Plot Date: 06/30/2022 - 10:19am
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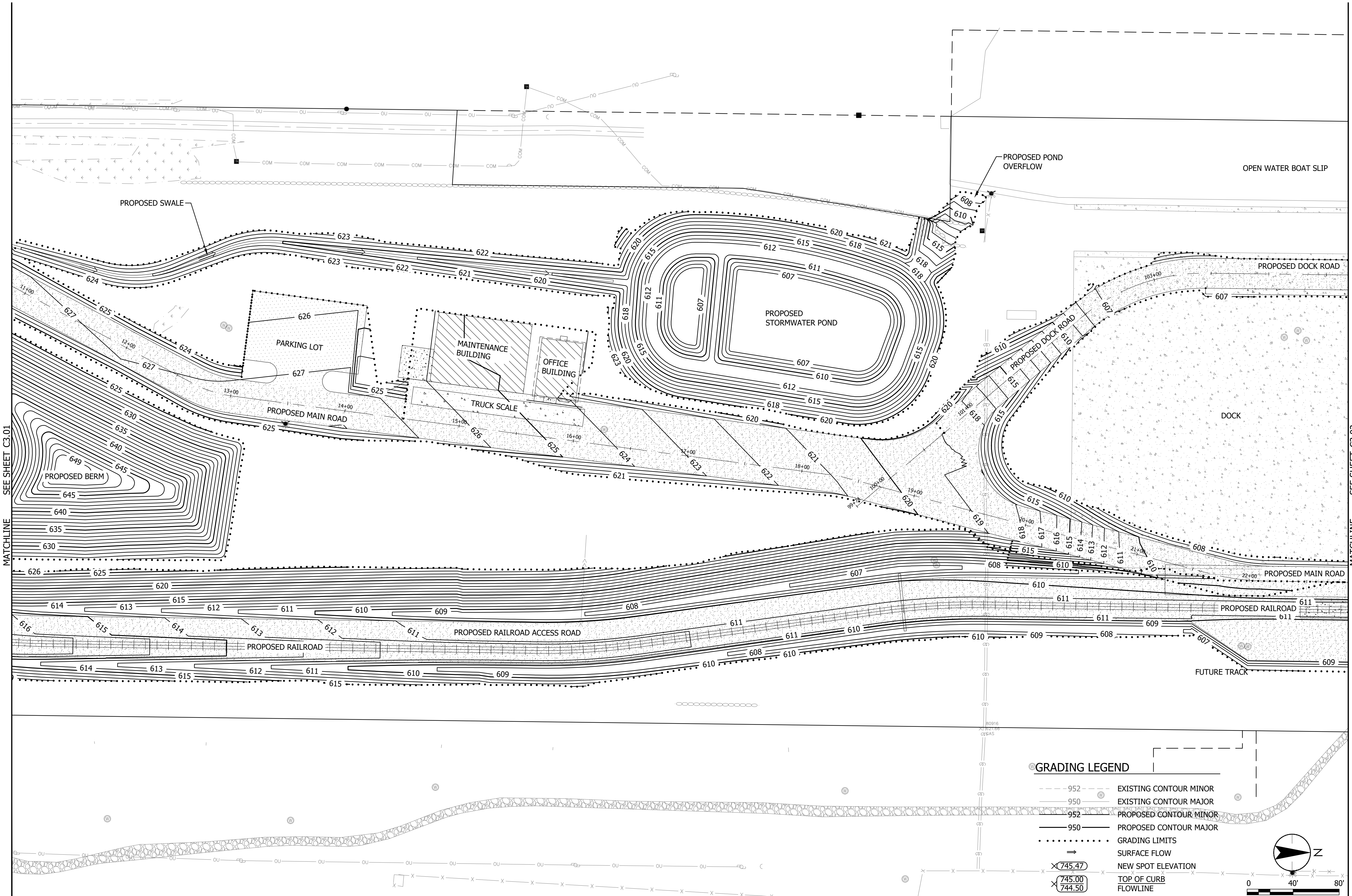
Xrefs: TB-34x22-MEQ, 193707141_XSXT, … 201075-RAIL LINEWORK



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GRADING PLAN

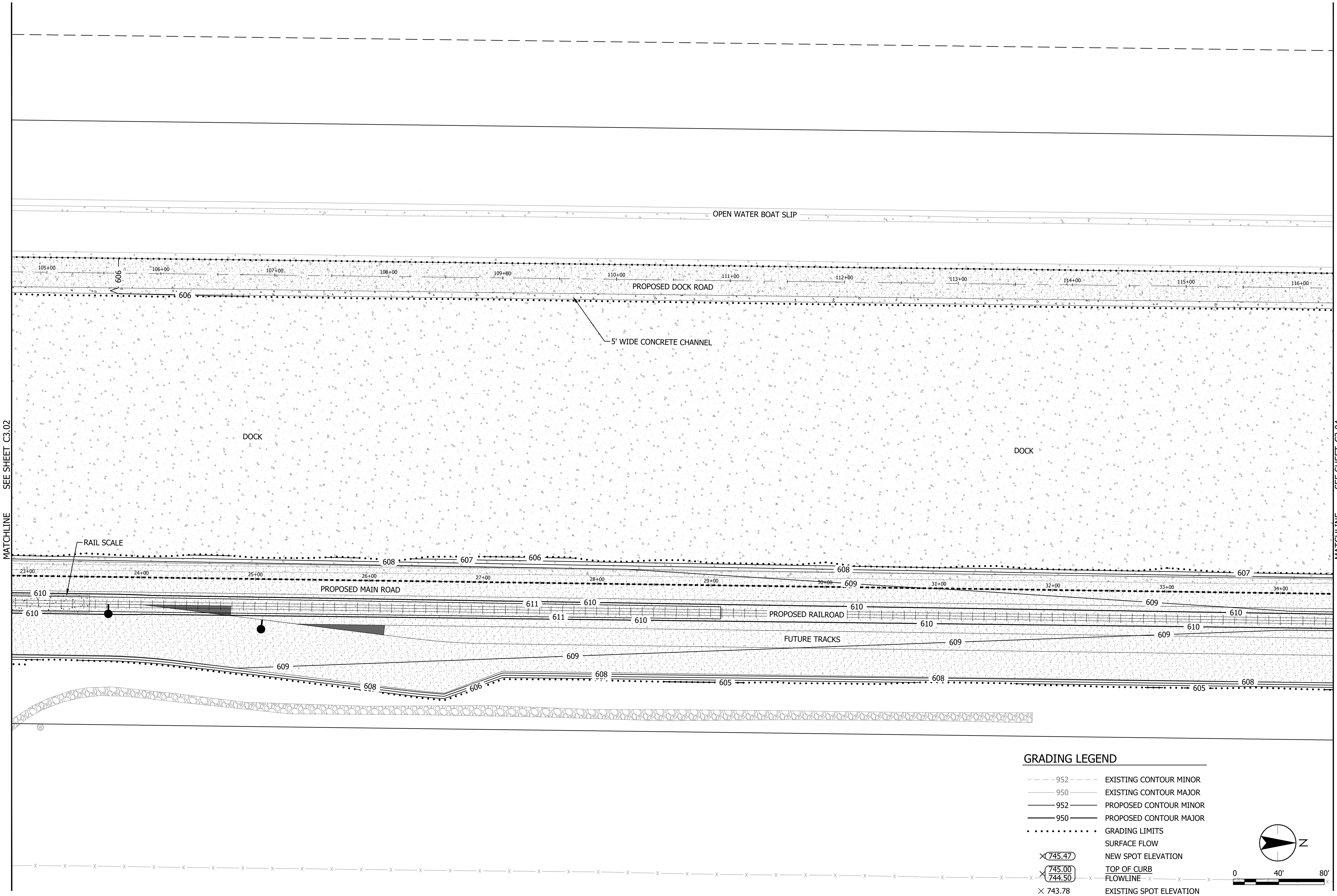
C. REISS DOCK
C. REISS COMPANY, LLC
ST. LOUIS BAY, SURPERIOR, WI

DATE OF ISSUANCE	
June 30, 2022	

NO	REVISION	DATE

SURVEY	BURSE
DRAWN	AJR
DESIGNED	AJR
CHECKED	AJR
APPROVED	AJR
PROJ. NO.	193707141

SHEET NUMBER
C3.02



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GRADING PLAN

C. REISS DOCK
C. REISS COMPANY, LLC
ST. LOUIS BAY, SURPERIOR, WI

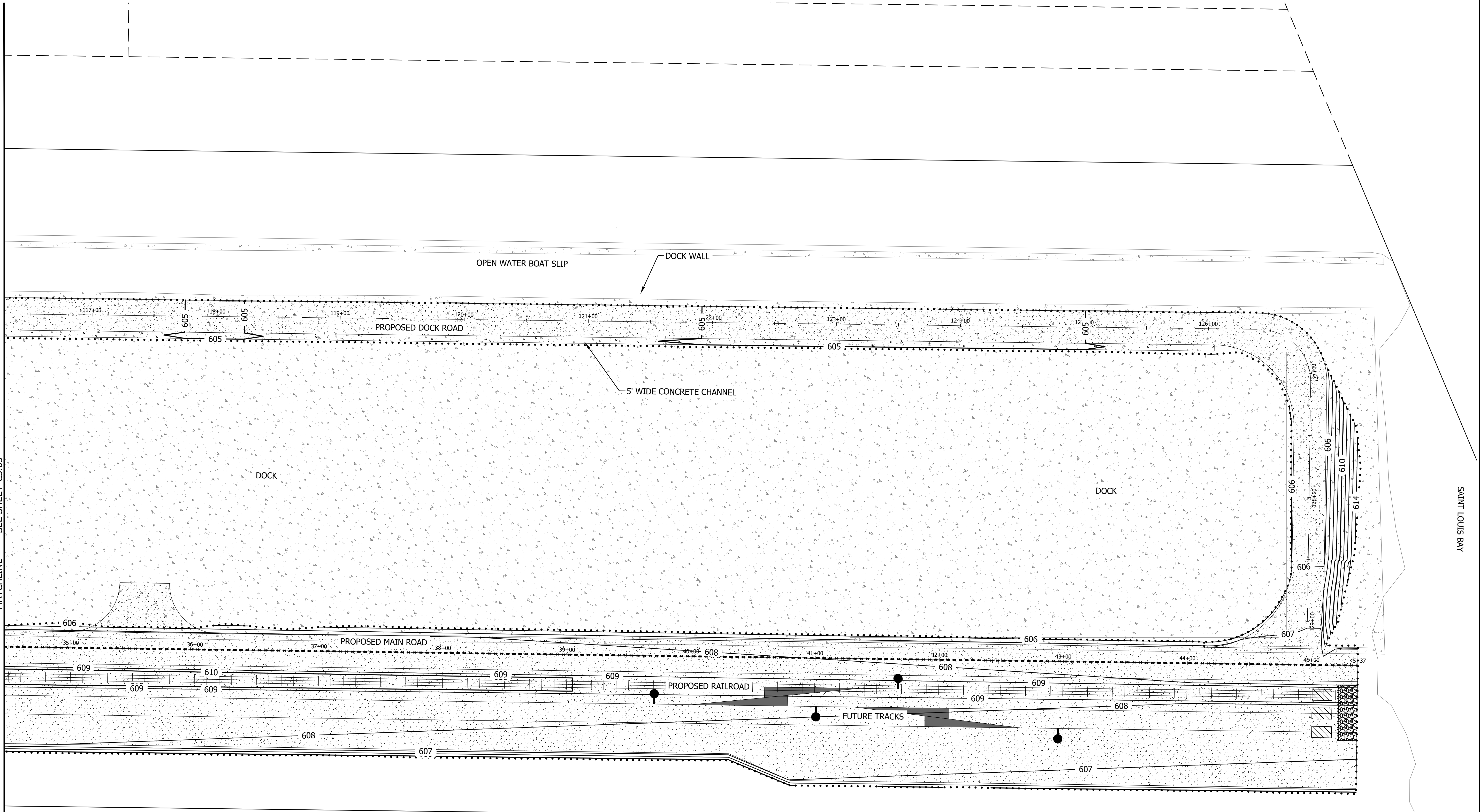
DATE OF ISSUANCE
June 30, 2022

NO	REVISION	DATE

SURVEY	BURSE
DRAWN	AJR
DESIGNED	AJR
CHECKED	AJR
APPROVED	AJR
PROJ. NO.	193707141

SHEET NUMBER
C3.03

Plot Date: 06/30/2022 - 10:20am
Drawing name: V:\1937\active\193707141\03_data\gis_cad\cad\dwg\SHEETS\193707141C300.dwg



GRADING LEGEND

952	EXISTING CONTOUR MINOR
950	EXISTING CONTOUR MAJOR
952	PROPOSED CONTOUR MINOR
950	PROPOSED CONTOUR MAJOR
....	GRADING LIMITS
	SURFACE FLOW
× 745.47	NEW SPOT ELEVATION
× 745.00 / 744.50	TOP OF CURB / FLOWLINE
× 743.78	EXISTING SPOT ELEVATION
4:1	RUN:RISE (SLOPE)

N

0 40' 80'

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GRADING PLAN

C. REISS DOCK
C. REISS COMPANY, LLC
ST. LOUIS BAY, SURPERIOR, WI

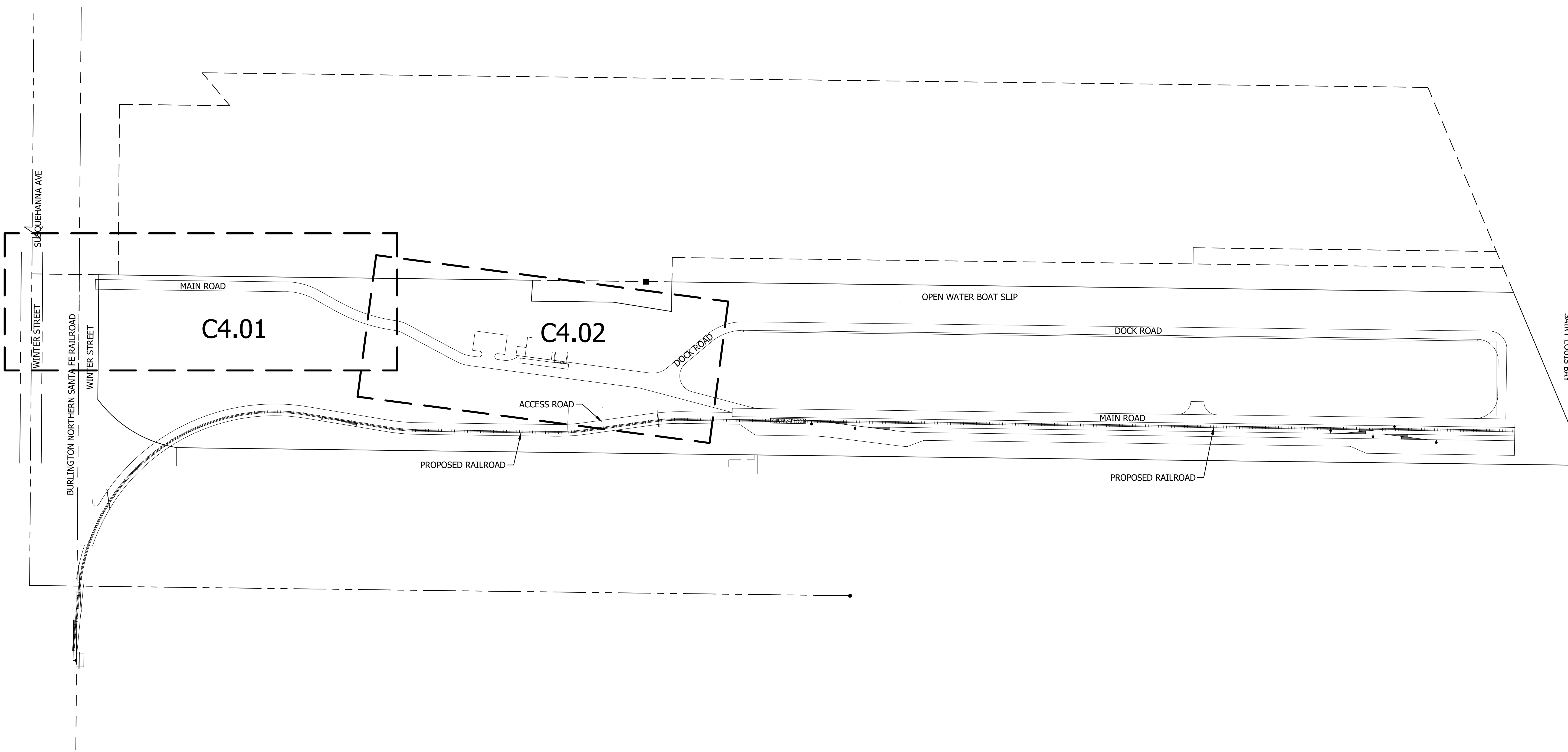
DATE OF ISSUANCE
June 30, 2022

NO	REVISION	DATE

SURVEY	BURSE
DRAWN	AJR
DESIGNED	AJR
CHECKED	AJR
APPROVED	AJR
PROJ. NO.	193707141

SHEET NUMBER
C3.04

Plot Date: 06/30/2022 - 10:20am
Drawing name: V:\1937\active\193707141\03_data\gis_cad\cad\dwg\SHEETS\193707141C300.dwg



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UTILITY PLAN SHEET INDEX

C. REISS DOCK
C. REISS COMPANY, LLC
ST. LOUIS BAY, SURPERIOR, WI

DATE OF ISSUANCE
June 30, 2022

NO	REVISION	DATE

SURVEY	BURSE
DRAWN	AJR
DESIGNED	AJR
CHECKED	AJR
APPROVED	AJR
PROJ. NO.	193707141

SHEET NUMBER
C4.00

Plot Date: 06/30/2022 - 10:21am
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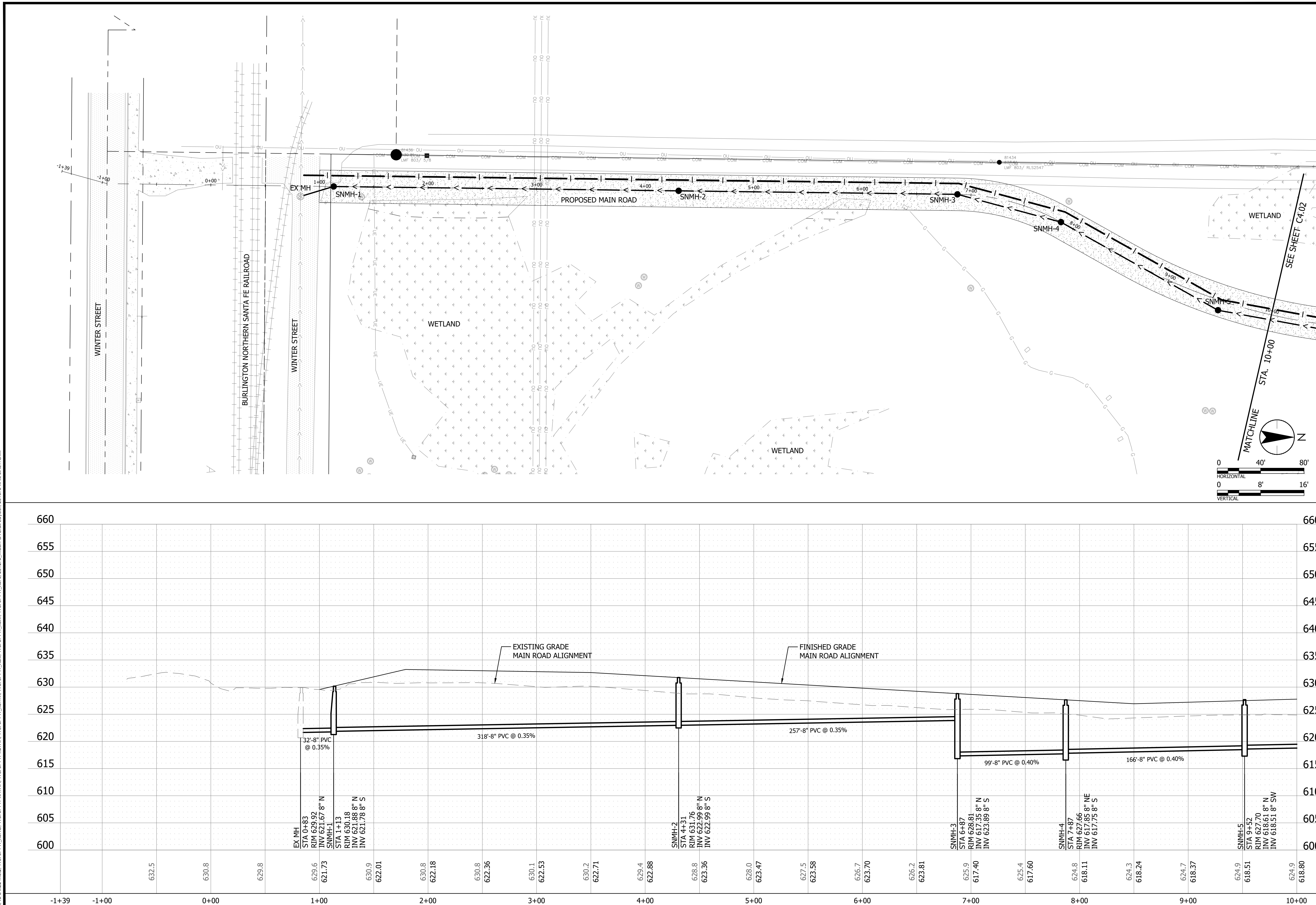

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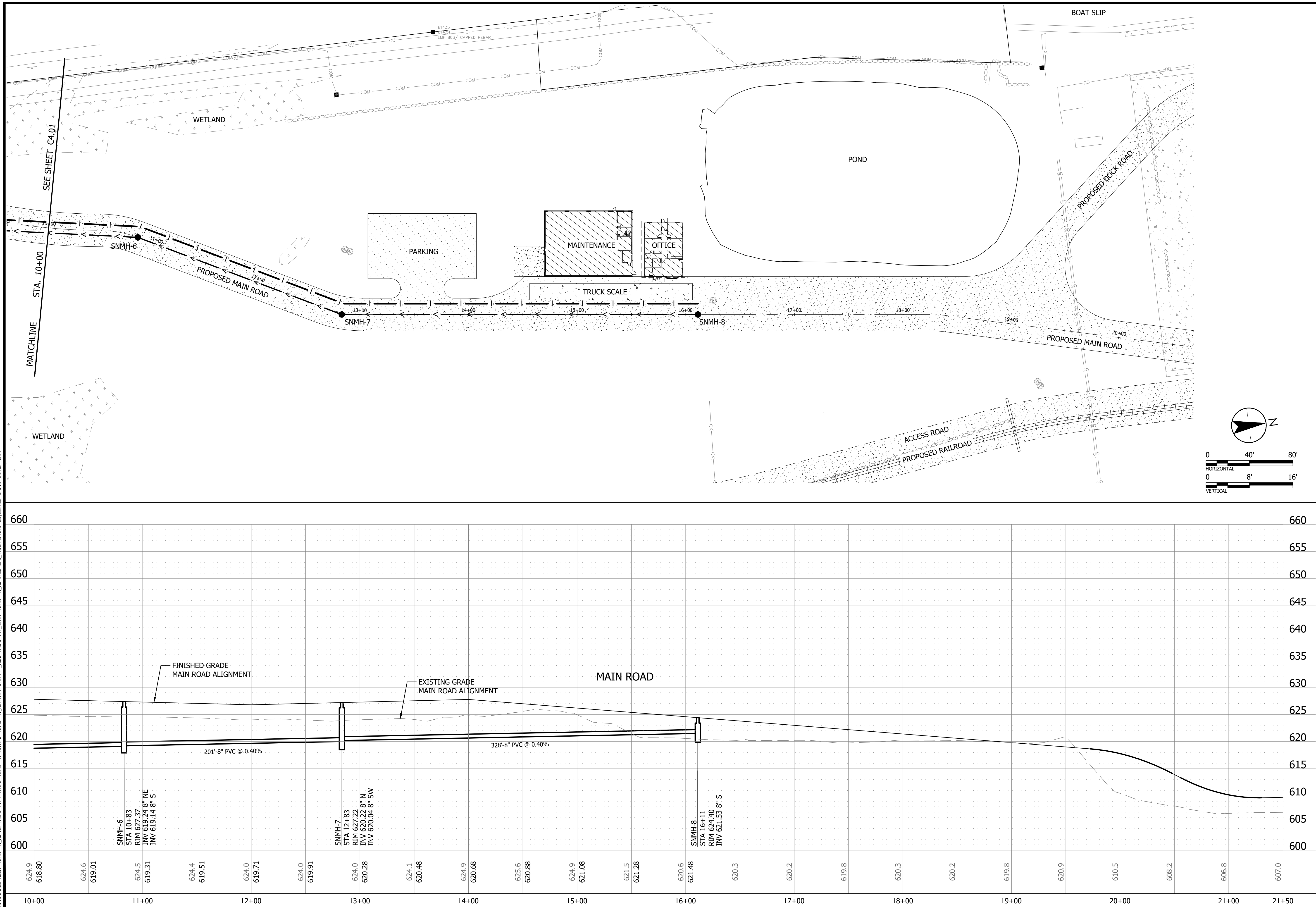
UTILITY PLAN

C. REISS DOCK
C. REISS COMPANY, LLC
ST. LOUIS BAY, SURPERIOR, WI

DATE OF ISSUANCE		
June 30, 2022		
NO	REVISION	DATE

SURVEY	BURSE
DRAWN	AJR
DESIGNED	AJR
CHECKED	AJR
APPROVED	AJR
PROJ. NO.	193707141

SHEET NUMBER
C4.01



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UTILITY PLAN

C. REISS DOCK
C. REISS COMPANY, LLC
ST. LOUIS BAY, SURPERIOR, WI

DATE OF ISSUANCE
June 30, 2022

NO	REVISION	DATE

SURVEY	BURSE
DRAWN	AJR
DESIGNED	AJR
CHECKED	AJR
APPROVED	AJR
PROJ. NO.	193707141

SHEET NUMBER
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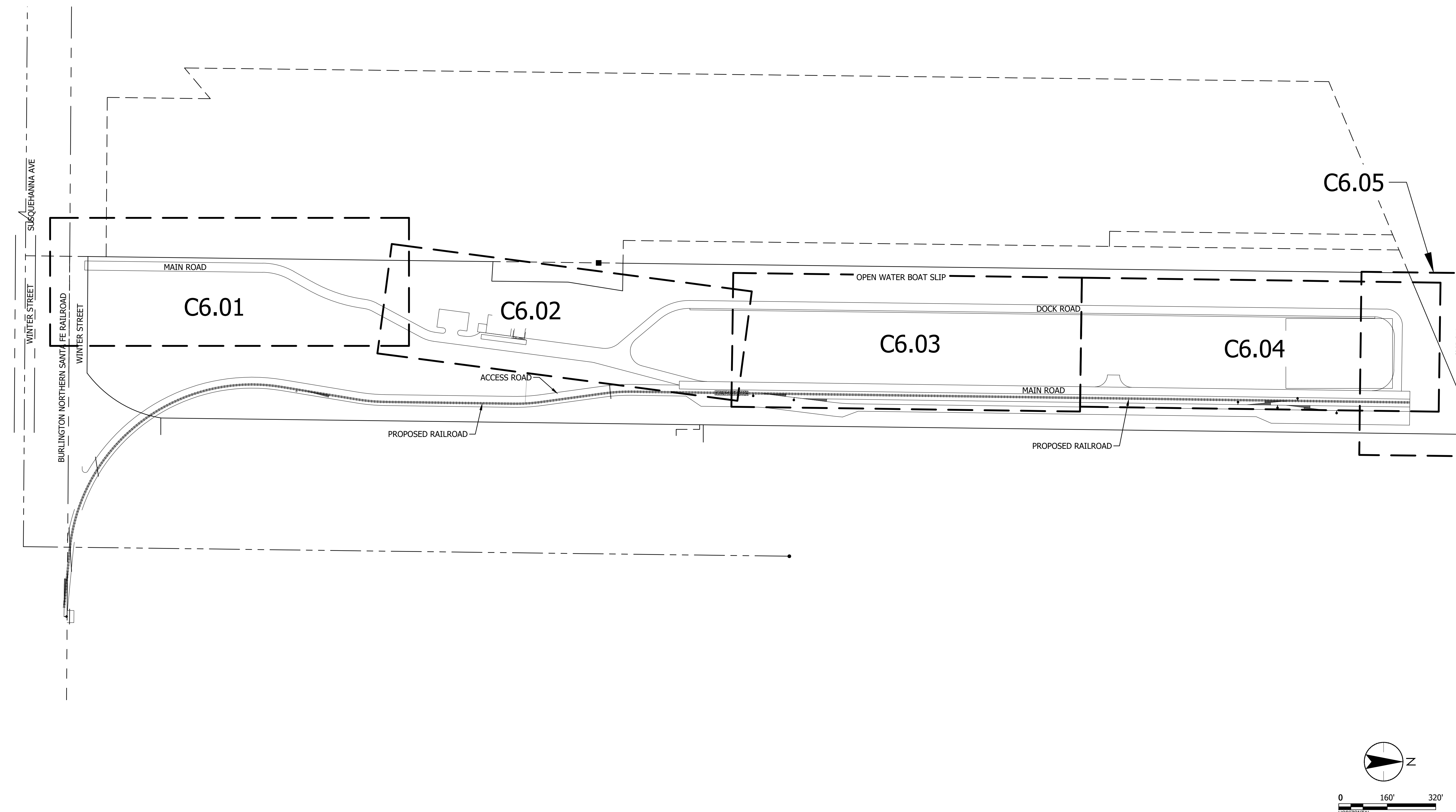

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ROAD PLAN SHEET INDEX

C. REISS DOCK
C. REISS COMPANY, LLC
ST. LOUIS BAY, SURPERIOR, WI

DATE OF ISSUANCE
June 30, 2022

NO	REVISION	DATE

SURVEY	BURSE
DRAWN	AJR
DESIGNED	AJR
CHECKED	AJR
APPROVED	AJR
PROJ. NO.	193707141

SHEET NUMBER
C6.00

Plot Date: 06/30/2022 - 10:22am
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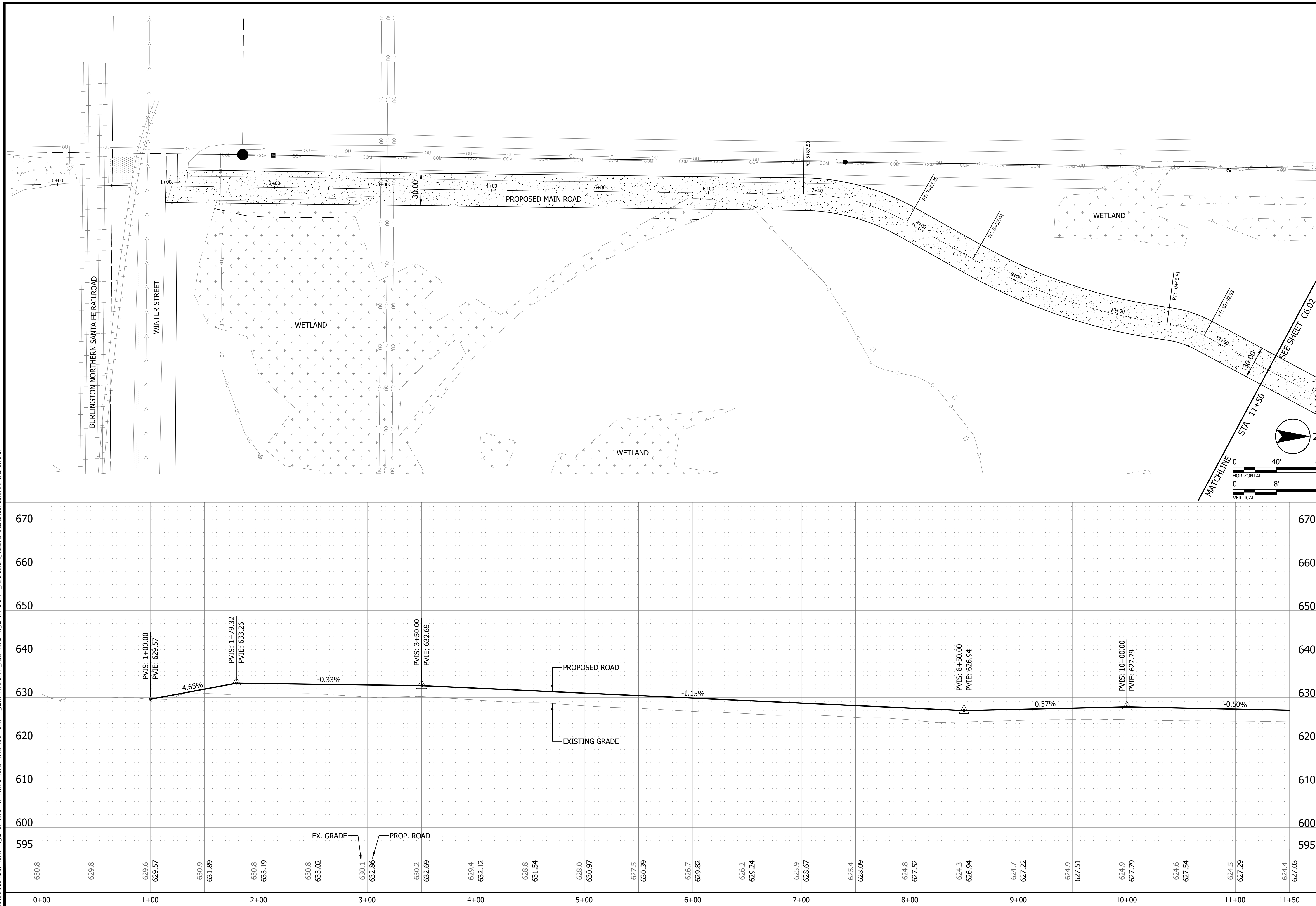

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MAIN ROAD PLAN AND PROFILE

C. REISS DOCK
C. REISS COMPANY, LLC
ST. LOUIS BAY, SURPERIOR, WI

DATE OF ISSUANCE	
June 30, 2022	

NO	REVISION	DATE

SURVEY	BURSE
DRAWN	AJR
DESIGNED	AJR
CHECKED	AJR
APPROVED	AJR
PROJ. NO.	193707141

SHEET NUMBER
C6.01

Plot Date: 06/30/2022 - 10:22am
Drawing name: V:\1937\active\193707141\03_data\gis_cad\cad\dwg\SHEETS\193707141C600.dwg
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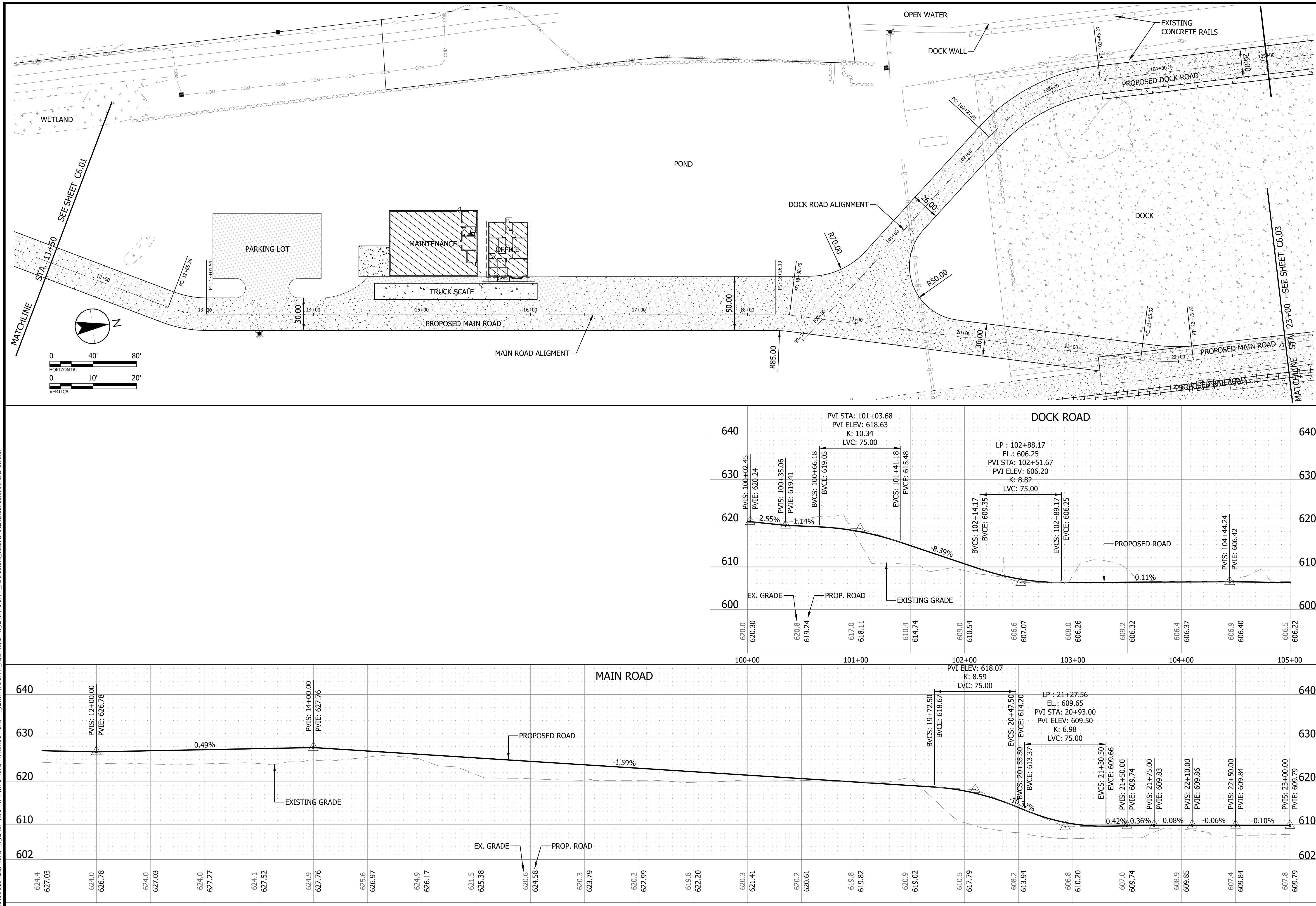

MAIN ROAD AND DOCK ROAD PLAN AND PROFILE

C. REISS DOCK
C. REISS COMPANY, LLC
ST. LOUIS BAY, SURPERIOR, WI

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DATE OF ISSUANCE		
June 30, 2022		
NO	REVISION	DATE

SURVEY	BURSE
DRAWN	AJR
DESIGNED	AJR
CHECKED	AJR
APPROVED	AJR
PROJ. NO.	193707141

SHEET NUMBER
C6.02

Plot Date: 06/30/2022 - 10:22am
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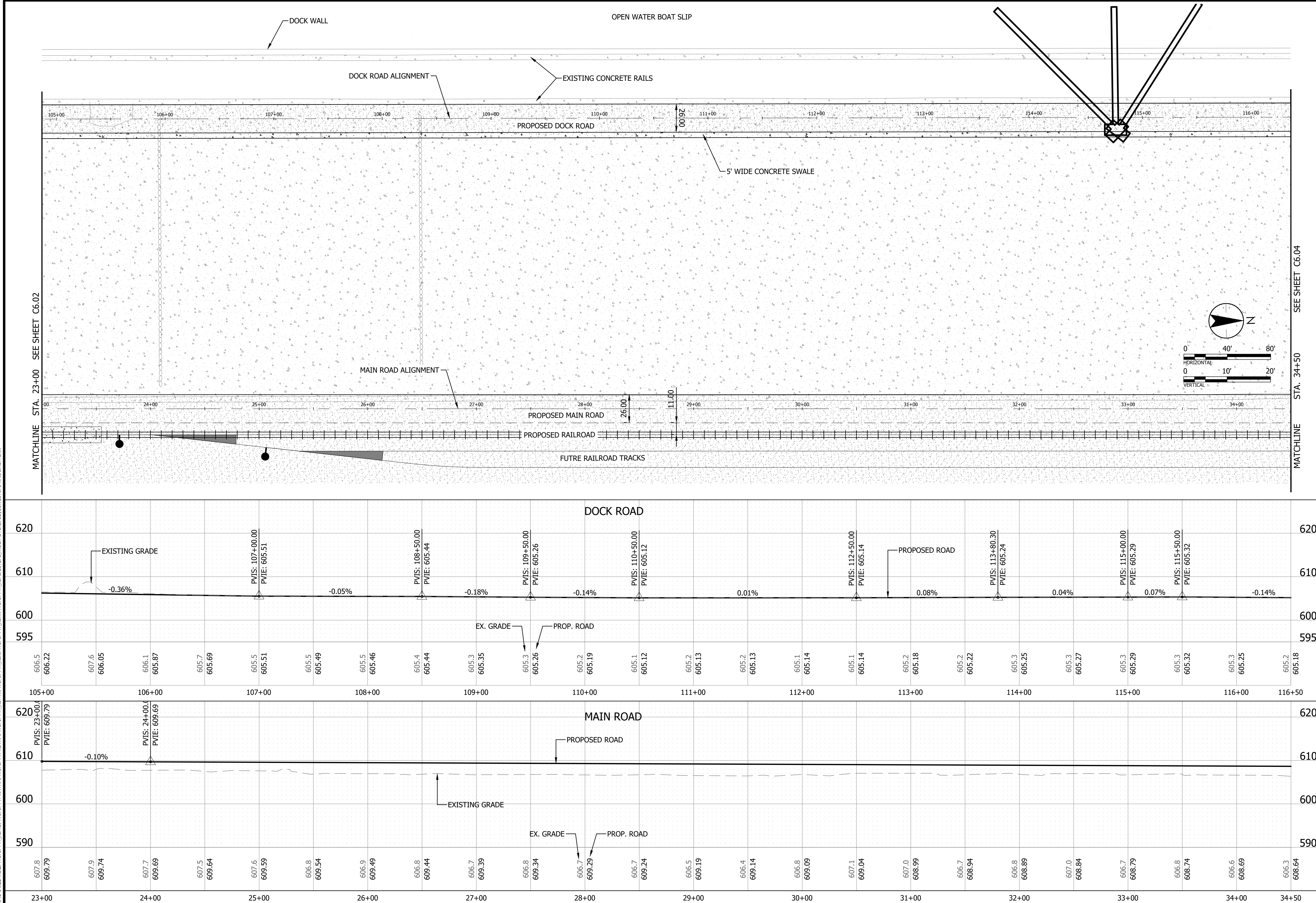

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MAIN ROAD AND DOCK ROAD PLAN AND PROFILE

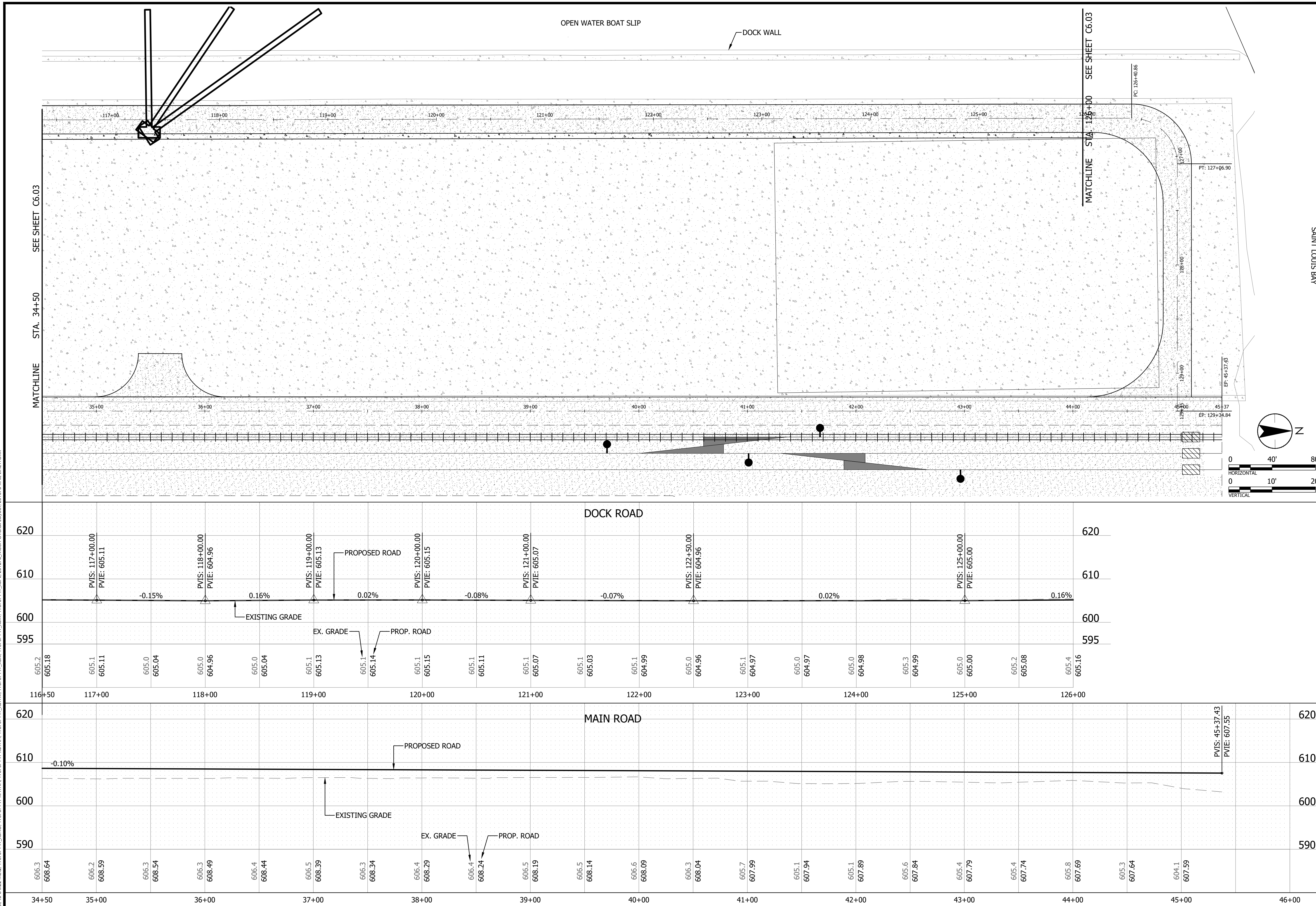
C. REISS DOCK
C. REISS COMPANY, LLC
ST. LOUIS BAY, SURPERIOR, WI

DATE OF ISSUANCE
June 30, 2022

NO	REVISION	DATE

SURVEY	BURSE
DRAWN	AJR
DESIGNED	AJR
CHECKED	AJR
APPROVED	AJR
PROJ. NO.	193707141

SHEET NUMBER
C6.03



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MAIN ROAD AND DOCK ROAD PLAN AND PROFILE

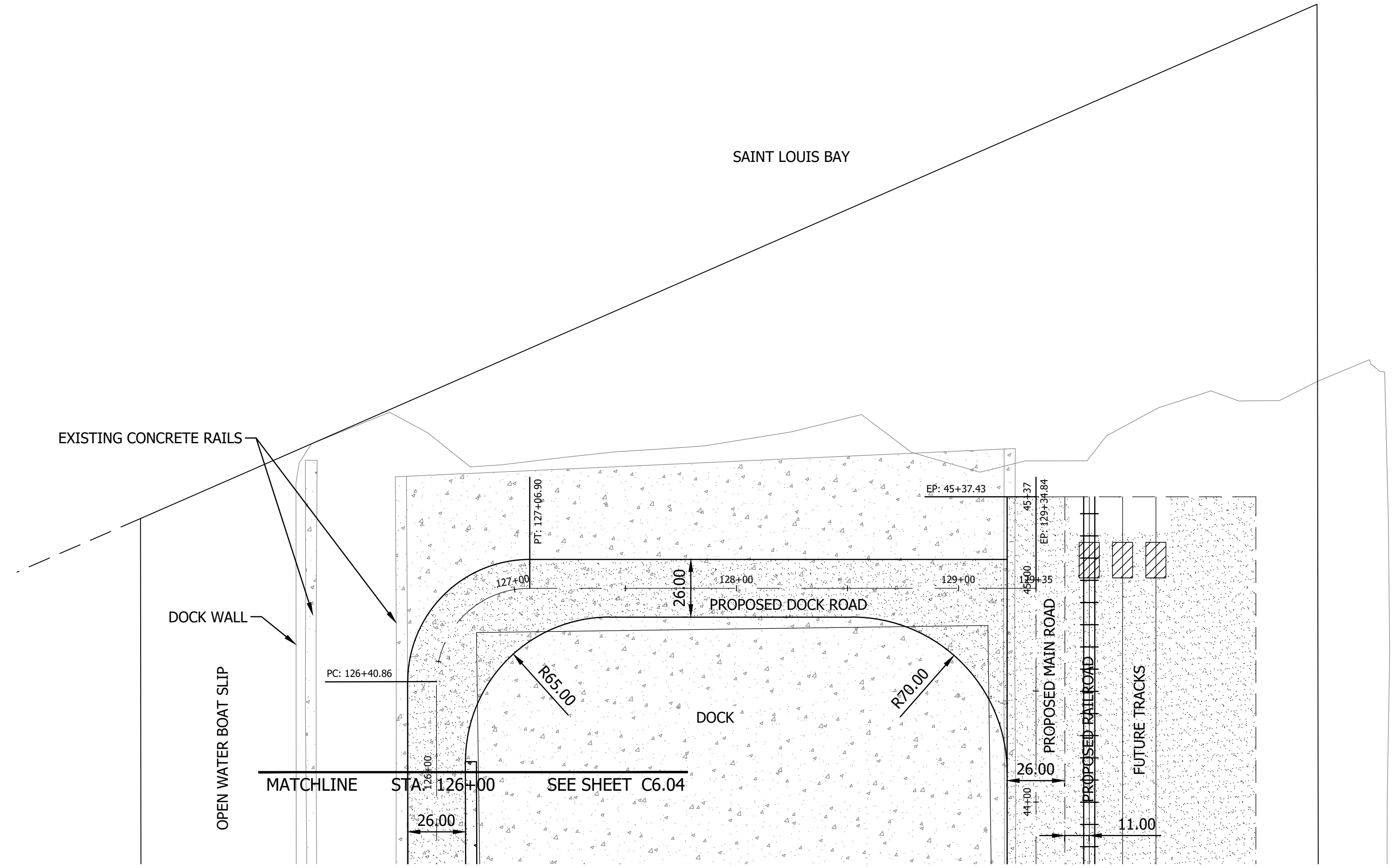
C. REISS DOCK
C. REISS COMPANY, LLC
ST. LOUIS BAY, SURPERIOR, WI

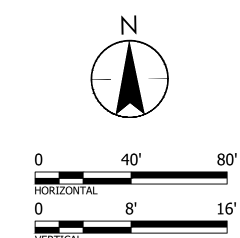
DATE OF ISSUANCE: June 30, 2022

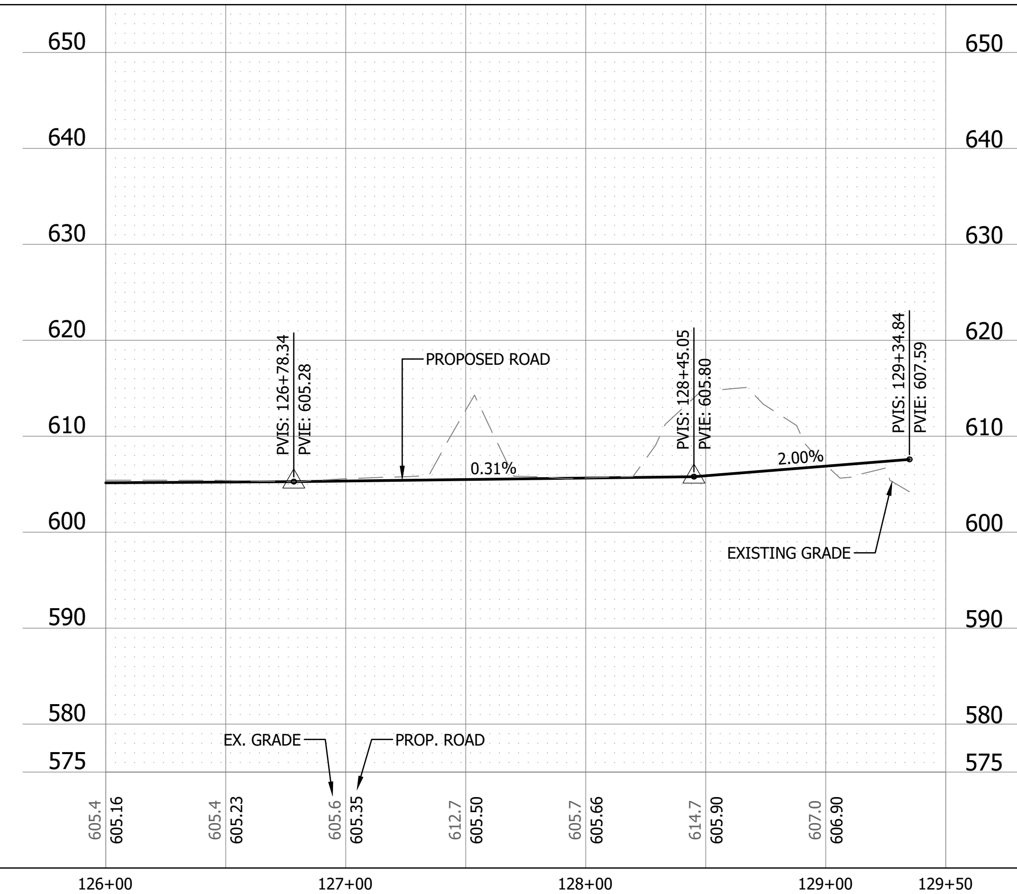
NO	REVISION	DATE

SURVEY	BURSE
DRAWN	AJR
DESIGNED	AJR
CHECKED	AJR
APPROVED	AJR
PROJ. NO.	193707141

SHEET NUMBER: C6.04







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DOCK ROAD PLAN AND PROFILE

C. REISS DOCK
C. REISS COMPANY, LLC
ST. LOUIS BAY, SURPERIOR, WI

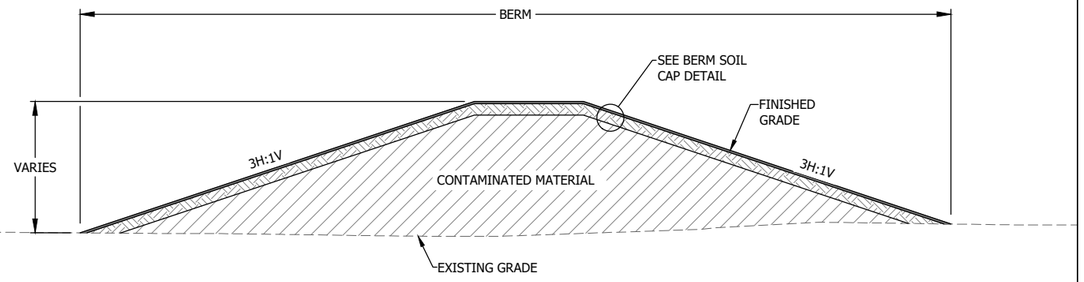
DATE OF ISSUANCE
June 30, 2022

NO	REVISION	DATE

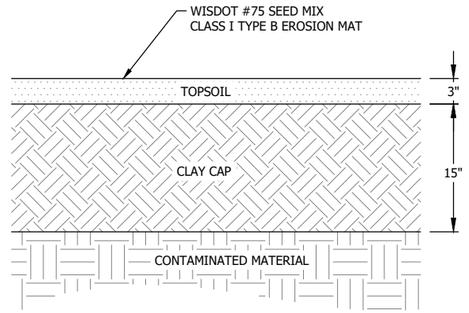
SURVEY	BURSE
DRAWN	AJR
DESIGNED	AJR
CHECKED	AJR
APPROVED	AJR
PROJ. NO.	193707141

SHEET NUMBER
C6.05

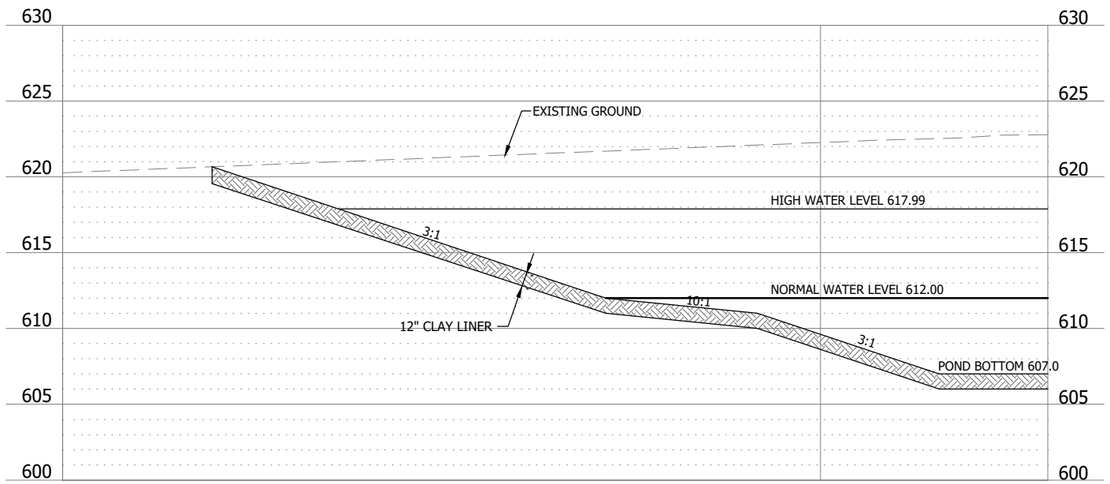
Plot Date: 06/30/2022 - 10:22am



1 BERM TYPICAL SECTION
NTS



2 BERM SOIL CAP
NTS



A POND CROSS SECTION
NTS

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CONSTRUCTION DETAILS

C. REISS DOCK
C. REISS COMPANY, LLC
ST. LOUIS BAY, SUPERIOR, WI

DATE OF ISSUANCE
June 30, 2022

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SURVEY	BURSE
DRAWN	AJR
DESIGNED	AJR
CHECKED	AJR
APPROVED	AJR
PROJ. NO.	193707141

SHEET NUMBER
C8.01

Plot Date: 06/30/2022 - 10:57am
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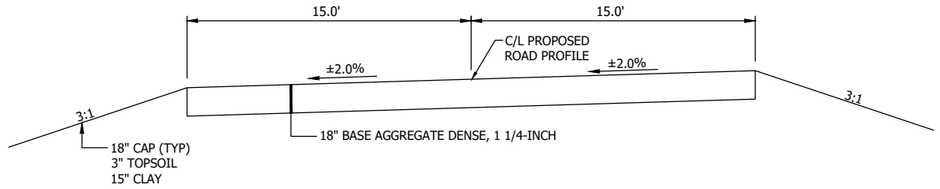
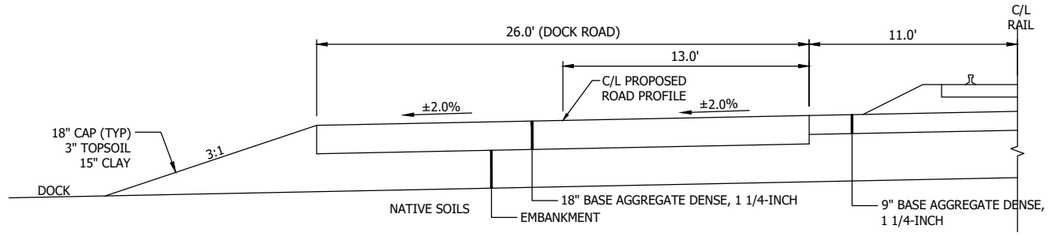


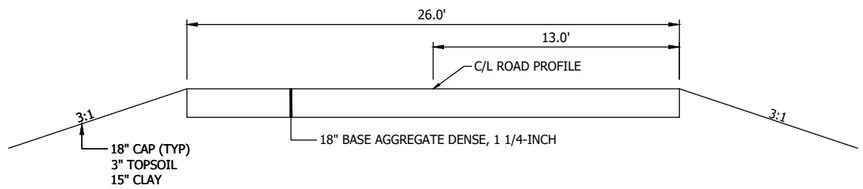
1 PROPOSED TYPICAL MAIN ROAD SECTION
STA. 1+00 - STA. 13+98.13

2 PROPOSED TYPICAL MAIN ROAD SECTION (OFFICE AREA)
STA. 13+98.13 - STA. 18+53.87

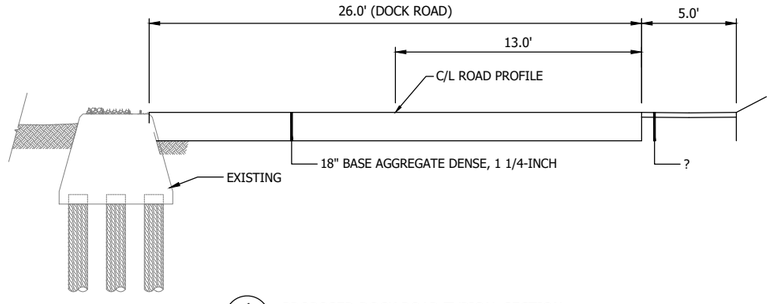
2 PROPOSED TYPICAL MAIN ROAD SECTION (INTERSECTION)
STA. 18+53.87 - STA. 21+29.14



3 PROPOSED DOCK ROAD TYPICAL SECTION
STA. 21+29.14 - STA. 45+37.35



3 PROPOSED DOCK ROAD TYPICAL SECTION
STA. 100+00 - STA. 103+50.43
STA. 126+08.50 - STA. 129+33.65



4 PROPOSED DOCK ROAD TYPICAL SECTION
STA. 103+50.43 - STA. 126+08.50

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TYPICAL ROAD SECTIONS

C. REISS DOCK
C. REISS COMPANY, LLC.
ST. LOUIS BAY, SURPERIOR, WI

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CHECKED	AJR
APPROVED	AJR
PROJ. NO.	193707141

SHEET NUMBER
C8.02

Plot Date: 06/30/2022 - 10:23am
Drawing Name: n:\935\active\193707141\03_data\gis_cad\cad\dwg\SHEETS\193707141C800.dwg
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