

**From:** Byers, Harris <Harris.Byers@stantec.com>  
**Sent:** Thursday, October 5, 2023 10:33 AM  
**To:** Adam Tegen; Beggs, Tauren R - DNR; Knapke.Eric@epa.gov  
**Subject:** Construction Documentation Report of an Interim Vegetated Engineered Barrier  
**Attachments:** Construction Documentation Report of an Interim Vegetated Engineered Barrier.pdf

Team:

Attached is a brief letter report summarizing the recent remedial work in Lot 3 of the River Point District. This remediation work was completed using funds provided under a fiscal year (FY) 2022 United States Environmental Protection Agency Brownfield Cleanup Grant awarded to the City under Cooperative Agreement Number BF00E03197 following the approach outlined in the Stantec (2021) Analysis of Brownfield Cleanup Alternatives.

As summarized in the attached, the work increased the integrity of the previous engineered barrier by importing clean soil and finishing the area in turf grass. Proposed soil management activities and specific sitewide engineered barrier construction and maintenance details will be discussed in greater detail in a combined Remedial Action Plan / Materials Management Plan to be prepared under separate cover once a developer has been identified. Furthermore, upon finalization of redevelopment plans for the Property, a post-closure modification for the sitewide engineered barrier will be submitted to the WDNR.

Tauren – a copy of this letter will be sent through the portal for archiving on BRRTS.

Sincerely,

**Harris Byers, Ph.D.**

Sr. Brownfields Project Manager  
Contaminant Hydrogeologist / Urban Geochemist

Direct: 414 581-6476  
Harris.Byers@stantec.com

Stantec  
12080 Corporate Parkway Suite 200  
Mequon WI 53092-2649



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Stantec Consulting Services Inc.  
12080 Corporate Parkway, Suite 200 Mequon WI 53092

September 29, 2023  
File: 193709261

**Attention: Adam Tegen**  
City of Manitowoc, Wisconsin  
900 Quay Street  
Manitowoc, WI 54220-4543

Dear Mr. Tegen,

**Reference: Construction Documentation Report of an Interim Vegetated Engineered Barrier  
Lot 3 of the River Point District  
Manitowoc, Wisconsin  
BRRTS ID: 02-36-585491 (Open ERP), 02-36-176478 (Closed ERP), 07-36-583000 (LGU  
Exemption/General Property)  
ACRES ID: Pending**

This report summarizes the construction of a temporary vegetated barrier in Lot 3 of the River Point District (herein referred to as the "Property") between 2021 and 2023 to prevent direct contact with subsurface impacts identified by Stantec Consulting Services Inc. (Stantec) (2023b) until a developer is identified. The locations of Lot 3 (outlined in green) and the River Point District (outlined in yellow) relative to regional topography are illustrated on Figure 1. The certified survey map of Lot 3 is adapted on Figure 2. Proposed conceptual non-industrial reuses at the Property and nearby areas are illustrated on Figure 3. This remediation work was completed using funds provided under a fiscal year (FY) 2022 United States Environmental Protection Agency Brownfield Cleanup Grant awarded to the City under Cooperative Agreement Number BF00E03197 following the approach outlined in the Stantec (2021) Analysis of Brownfield Cleanup Alternatives.

#### **Importing Clean Fill - 2021**

As noted previously by Stantec (2022), portions of Lot 3 were filled in 2021 using pre-characterized material to create safe slopes for the new rights of way constructed along the eastern (extension of North 11th Street) and southwestern (future River Point Drive) Property boundaries. Figure 4 is adapted from Stantec (2022) and illustrates the extent and thickness of the fill placed at the Property in 2021 as part of Phase 1 of the River Point Development.

#### **Importing Clean Fill - 2023**

Following the Stantec (2023c) plan, approximately 6,900 cubic yards of pre-characterized (Stantec, 2023a) fill was imported from the residential redevelopment at 333 Reed Avenue to bring the Property to grade. The imported fill was seeded with turf grass. The turf grass is being watered as necessary to establish an appropriate vegetative cover until future non-industrial redevelopment begins.

A figure illustrating the total thickness of fill placed on the Property between 2021 and 2023 is provided on Figure 5. Elevation contour lines of the current ground surface (thin black lines) and initial ground surface (dashed grey lines) is provided on Figure 6. The perimeter of the former railroad turntable foundation is illustrated as thick dashed black lines on Figure 5 and Figure 6. Cross-sections of the Property illustrating the

Reference: **Construction Documentation Report of an Interim Vegetated Engineered Barrier; Lot 3 of the River Point District; Manitowoc, Wisconsin**

ground surface in 2018 (thin grey line), the 2021 fill (dashed black line) and fill placed in 2023 (thick black line) to bring the Property to grade are provided on Figure 7.

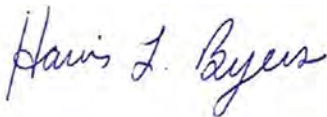
### Future Work

Proposed soil management activities and specific sitewide engineered barrier construction and maintenance details will be discussed in greater detail in a combined Remedial Action Plan / Materials Management Plan to be prepared under separate cover once a developer has been identified. Furthermore, upon finalization of redevelopment plans for the Property, a post-closure modification for the sitewide engineered barrier will be submitted to the WDNR.

Stantec recommends submitting this report to WDNR for agency records.

Regards,

**STANTEC CONSULTING  
SERVICES INC.**



Harris L. Byers, Ph.D.  
Sr. Brownfields Project Manager  
Harris.Byers@Stantec.com  
Phone: 414-581-6476

**STANTEC CONSULTING  
SERVICES INC**



Stu Gross, P.G.  
QA/QC Manager  
Stu.Gross@stantec.com

### ENCLOSURES

Figures

### LIMITATIONS

The conclusions in this report (Report) are Stantec's professional opinion, as of the time of the Report, and concerning the scope described in the Report. The opinions in the document are based on conditions and information existing at the time the document was published and do not take into account any subsequent changes. The Report relates solely to the specific project for which Stantec was retained and the stated purpose for which the Report was prepared. The Report is not to be used or relied on for any variation or extension of the project, or for any other project or purpose, and any unauthorized use or reliance is at the recipient's own risk. Stantec has assumed all information received from the City of Manitowoc and third parties in the preparation of the Report to be correct. While Stantec has exercised a customary level of judgment or due diligence in the use of such information, Stantec assumes no responsibility for the consequences of any error or omission contained therein. This Report is intended solely for use by the City of Manitowoc in accordance with Stantec's contract with the City of Manitowoc. While the Report may be provided to applicable authorities having jurisdiction and others for whom the City of Manitowoc is responsible, Stantec does not warrant the services to any third party. The report may not be relied upon by any other party without the express written consent of Stantec, which may be withheld at Stantec's discretion.




### REFERENCES

Stantec, 2021, Analysis of Brownfield Cleanup Alternatives, October 29, 2021  
Stantec, 2022, Site-Specific Sampling and Analysis Plan, Phase II ESA for Lot 3 of the River Point District, March 7, 2022.  
Stantec, 2023a, Characterization of Soil at 333 Reed Avenue, Manitowoc, Wisconsin, May 19, 2023.  
Stantec, 2023b, Phase II ESA, Lot 3, River Point District, Manitowoc, Wisconsin, July 18, 2023 .  
Stantec, 2023c, Construction of Interim Vegetated Engineered Barrier, July 19, 2023.

# FIGURES



Figure No.  
**1**  
 Title  
**Location of Lot 3 and Regional Topography**  
 Client/Project  
 Lot 3  
 River Point District  
 City of Manitowoc  
 0 265 530 Feet  
 193708490  
 Prepared by HLB on 1/27/2022

**Legend**  
 Lot 3  
 City of Manitowoc  
 River Point District



Notes  
 1. Coordinate System: NAD 1983 StatePlane Wisconsin South FIPS 4803 Feet

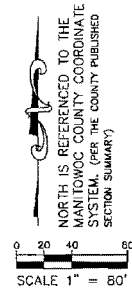
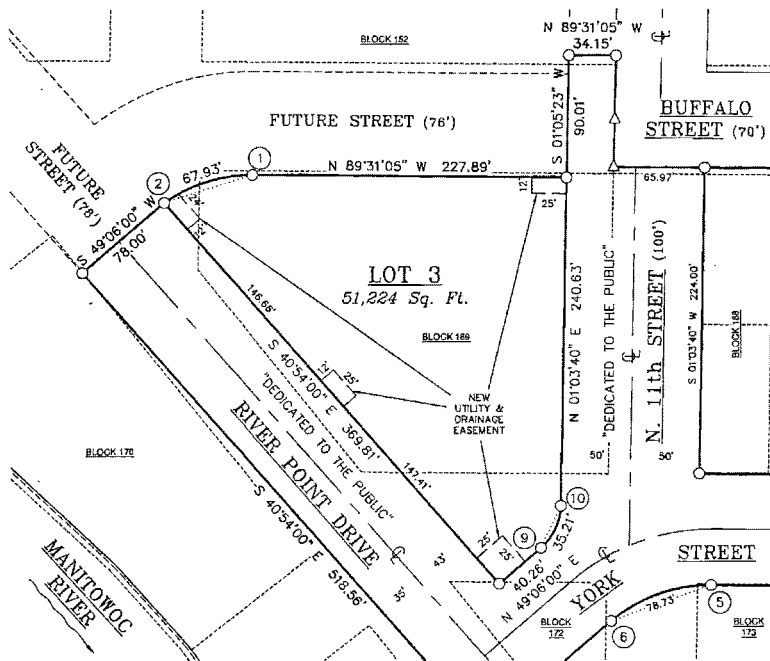


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STATE OF WISCONSIN  
 KRISTINA BURG  
 RECEIVED FOR RECORD  
 08/17/2021 2:01:16 PM



**CERTIFIED SURVEY MAP** DCC# 1240183 VOL 35 PG 210  
 LOCATED IN BLOCKS 168, 169, 170, 172, AND 173 OF THE ORIGINAL PLAT OF THE CITY OF MANITOWOC AND  
 ADJACENT VACATED STREETS, BEING PART OF GOVERNMENT LOT 3 OF SECTION 30, TOWN 19 NORTH, RANGE 24 EAST,  
 CITY OF MANITOWOC, MANITOWOC COUNTY, WISCONSIN



**LEGEND**

- = 3/4" x 18" IRON REBAR SET WEIGHING 1.13 LBS/FT
- ✕ = SET CHISELED "X" IN CONCRETE
- △ = SET 7" IRON SPIKE
- = EXISTING IRON ROD



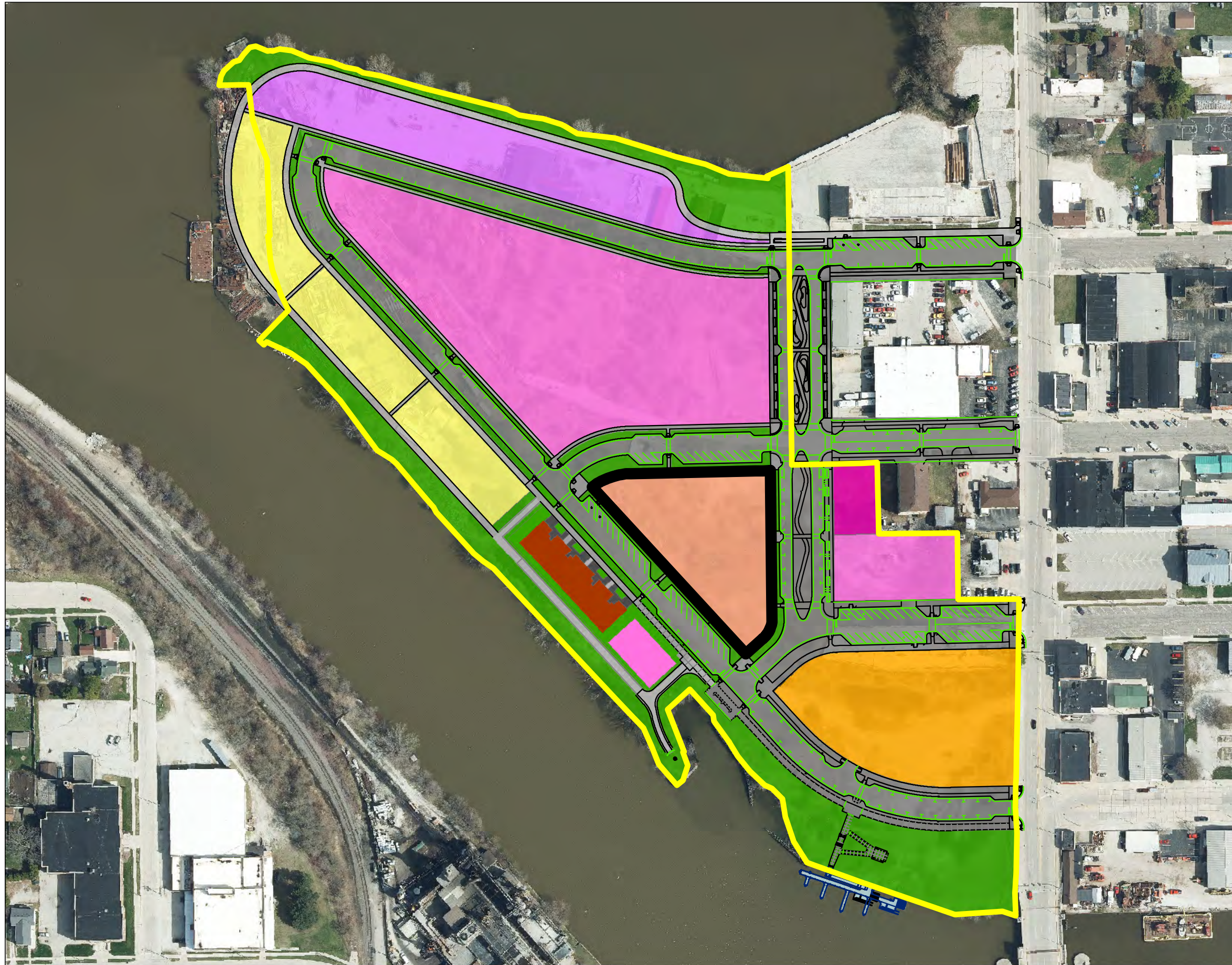


Figure No.  
**3**  
 Title  
**Proposed Reuse and Proposed Engineered Barriers/Caps**  
 Client/Project  
 Lot 3  
 River Point District  
 City of Manitowoc  
 0 125 250 Feet Prepared by HLB on 4/15/2021

**Legend**

Lot 3  
 River Point District  
 Future Commercial (2024-2025)

**Proposed Redevelopments**

Town Homes (2025-2026)  
 Town Homes (2024-2025)  
 Commercial (Finished)  
 Multi-Family (Finishing 2022)  
 Roadway (2021-2024)  
 Landscaping (2023-2025)  
 Floating Dock and Pier (2023)  
 Multi-Family Residential (2023-2024)  
 Sidewalk (2024-2025)  
 River Walk / Park (2023-2024)  
 Proposed Commercial (2025-2026)

Notes  
 1. Coordinate System: NAD 1983 StatePlane Wisconsin South FIPS 4803 Feet  
 2. Orthophotograph: Manitowoc County, 2017



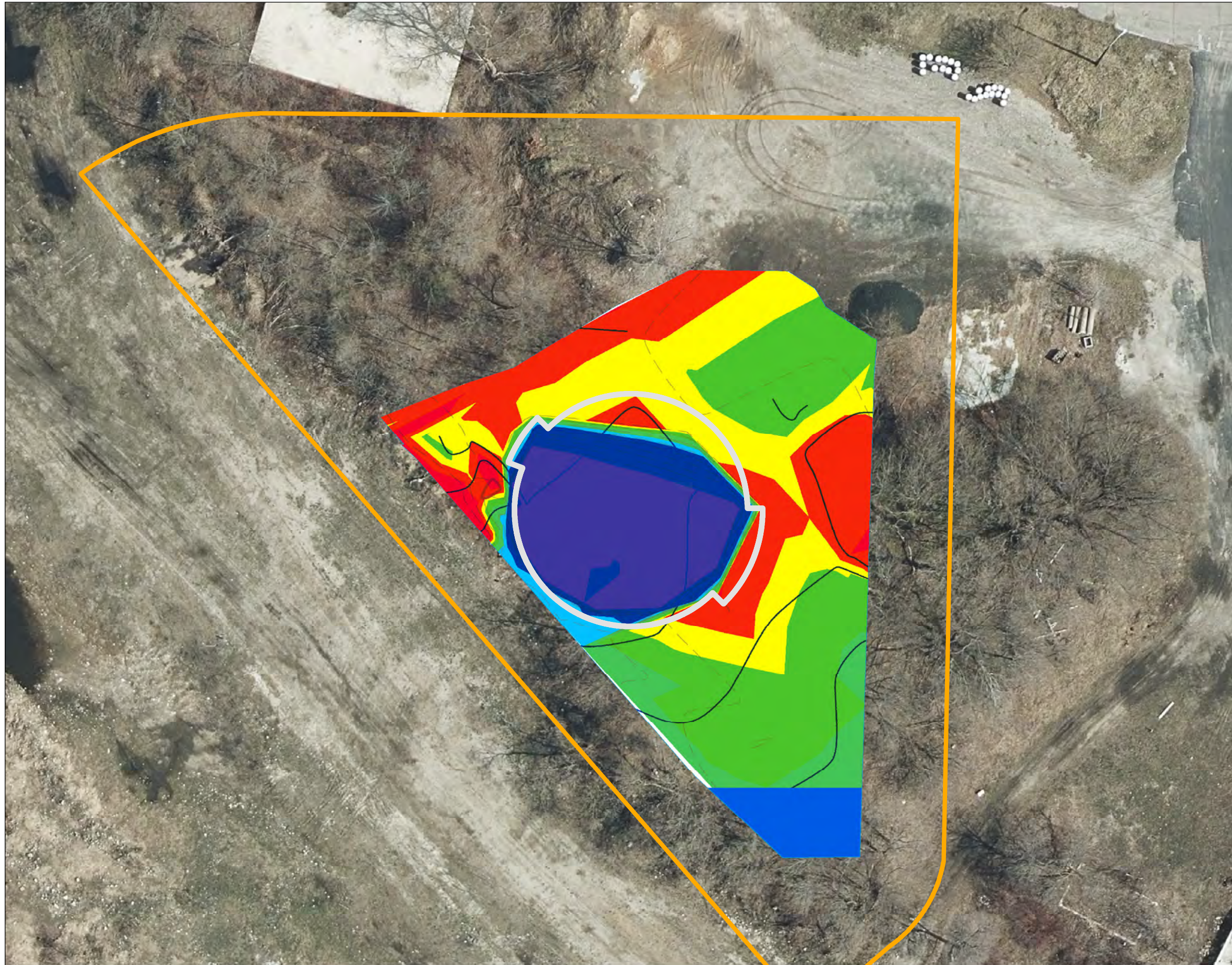
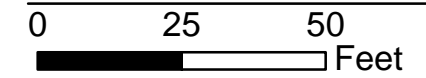


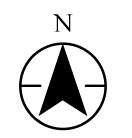


Figure No.  
**4**  
 Title  
**Project Area and Fill  
 Placed in 2021**  
 Client/Project  
 Lot 3  
 River Point District  
 City of Manitowoc  
Prepared by HLB on 10/11/2021



**Legend**

-  Turntable
-  Lot 3



**2021 Fill Thickness (Feet)**

-  -0.5 to 0.0
-  -2.0 to -0.5
-  0.0 to 0.5
-  0.5 to 1.2
-  1.2 to 2.2
-  2.2 to 3.0
-  3.0 to 8.2
-  8.2 to 9.2

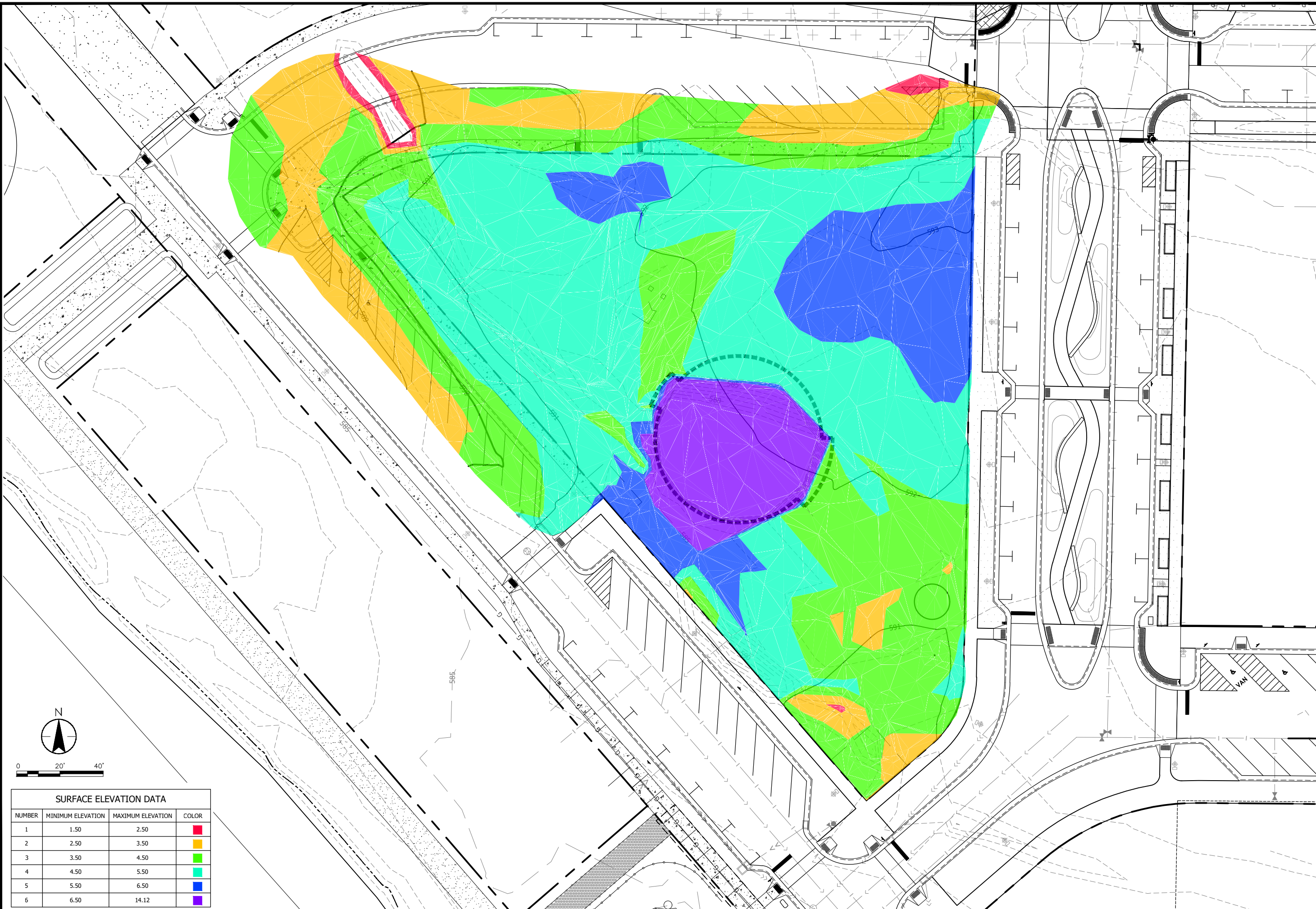
Notes  
 1. Coordinate System: NAD 1983 HARN WISCRS Manitowoc County Feet  
 2. Orthophotograph: Manitowoc County, 2020  
 3. The quality of the fill material is summarized in Stantec (2021).





THE CONTRACTOR SHALL VERIFY AND BE RESPONSIBLE FOR ALL DIMENSIONS. DO NOT SCALE THE DRAWING. ANY ERRORS OR OMISSIONS SHALL BE REPORTED TO STANTEC WITHOUT DELAY. NO USE FOR ANY PURPOSE OTHER THAN THAT AUTHORIZED BY STANTEC IS FORBIDDEN.

Plot Date: 09/13/2023 - 1:27pm  
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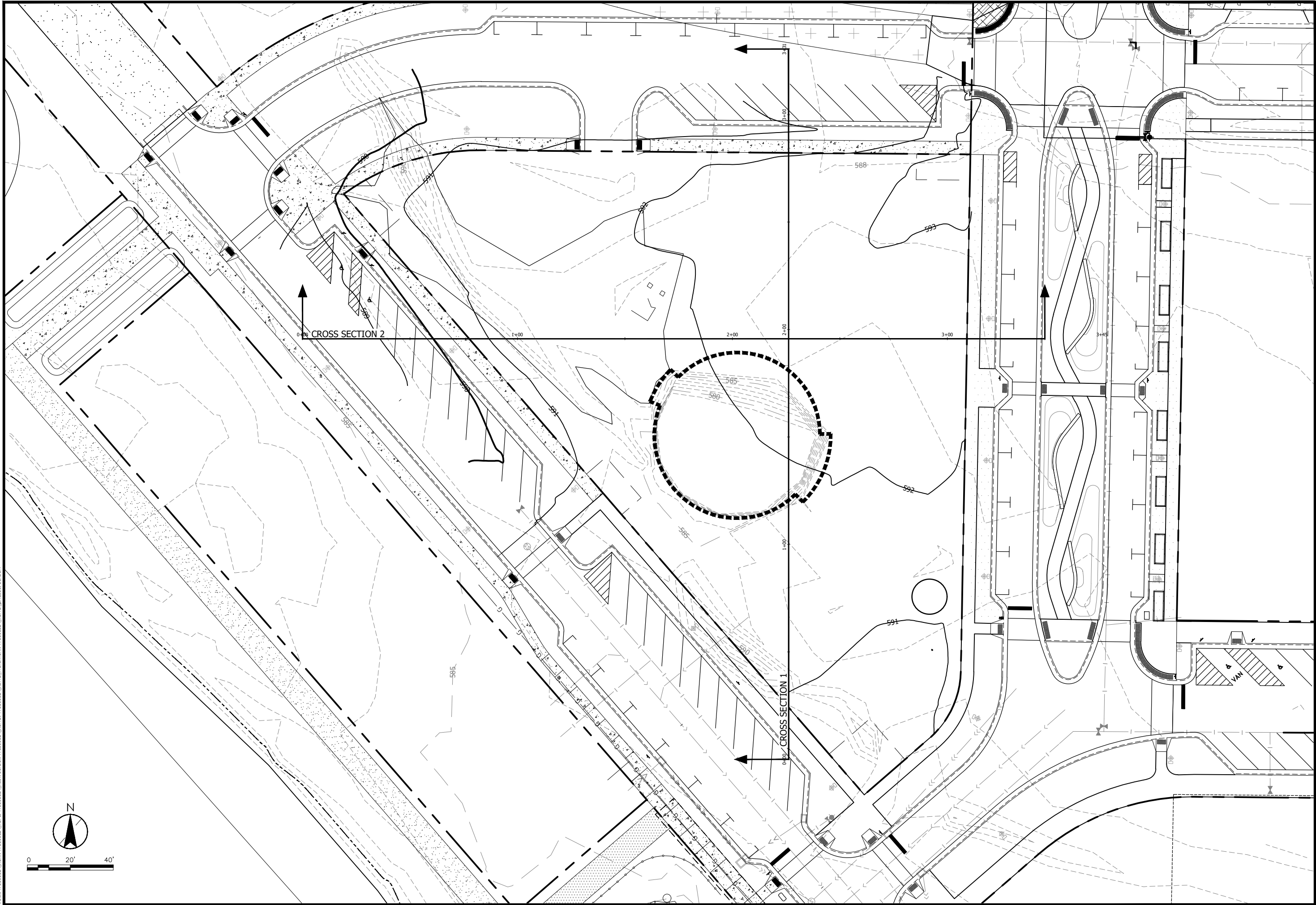
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NUMBER	MINIMUM ELEVATION	MAXIMUM ELEVATION	COLOR
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2	2.50	3.50	Orange
3	3.50	4.50	Light Green
4	4.50	5.50	Cyan
5	5.50	6.50	Blue
6	6.50	14.12	Purple

TRIANGLE LOT GRADING EXHIBIT  
 RIVER POINT FILL  
 CITY OF MANITOWOC  
 MANITOWOC COUNTY, WISCONSIN

DATE OF ISSUANCE	September 13, 2023
NO. REVISION	DATE
SURVEY	#####
DRAWN	
DESIGNED	
CHECKED	
APPROVED	###
PROJ. NO.	193709261
SHEET NUMBER	Figure 5

THE CONTRACTOR SHALL VERIFY AND BE RESPONSIBLE FOR ALL DIMENSIONS. DO NOT SCALE THE DRAWING. ANY ERRORS OR OMISSIONS SHALL BE REPORTED TO STANTEC WITHOUT DELAY. NO USE FOR ANY PURPOSE OTHER THAN THAT AUTHORIZED BY STANTEC IS FORBIDDEN.

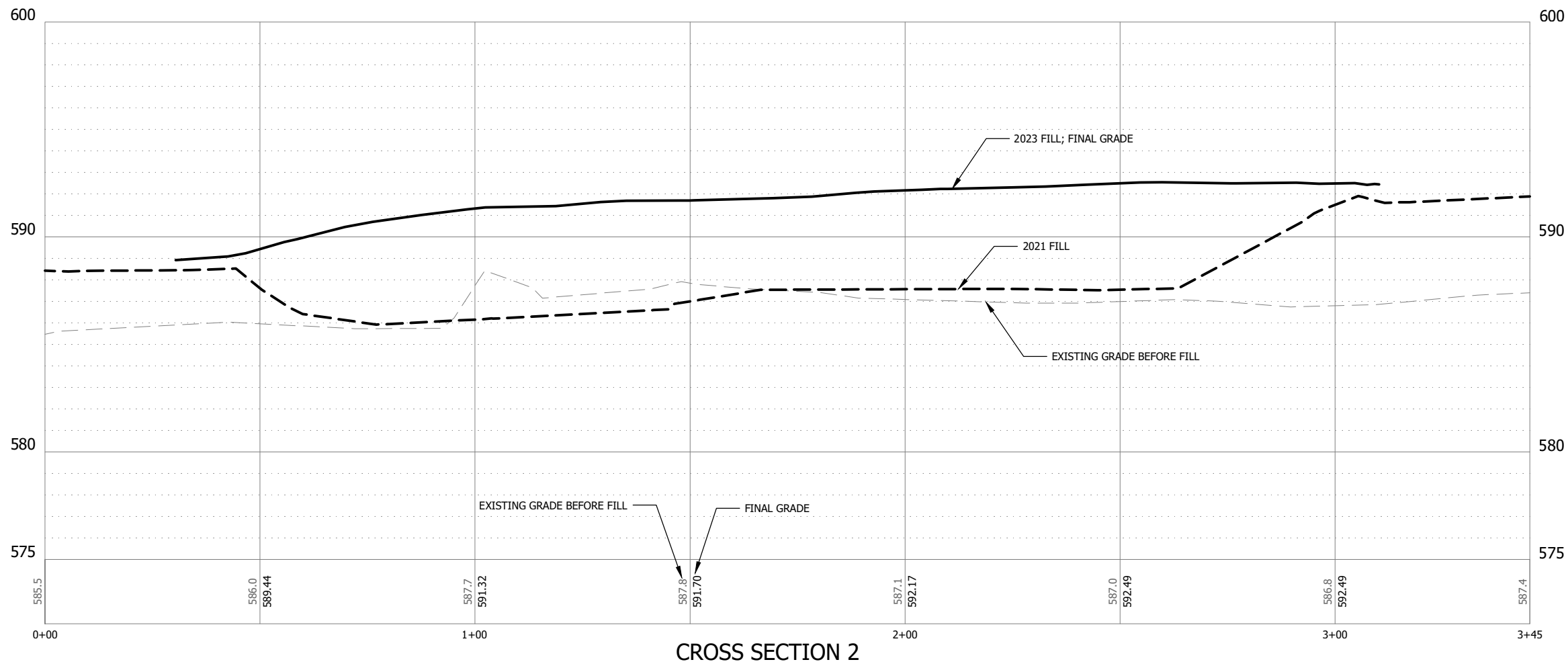
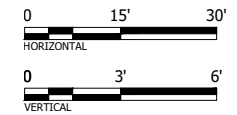
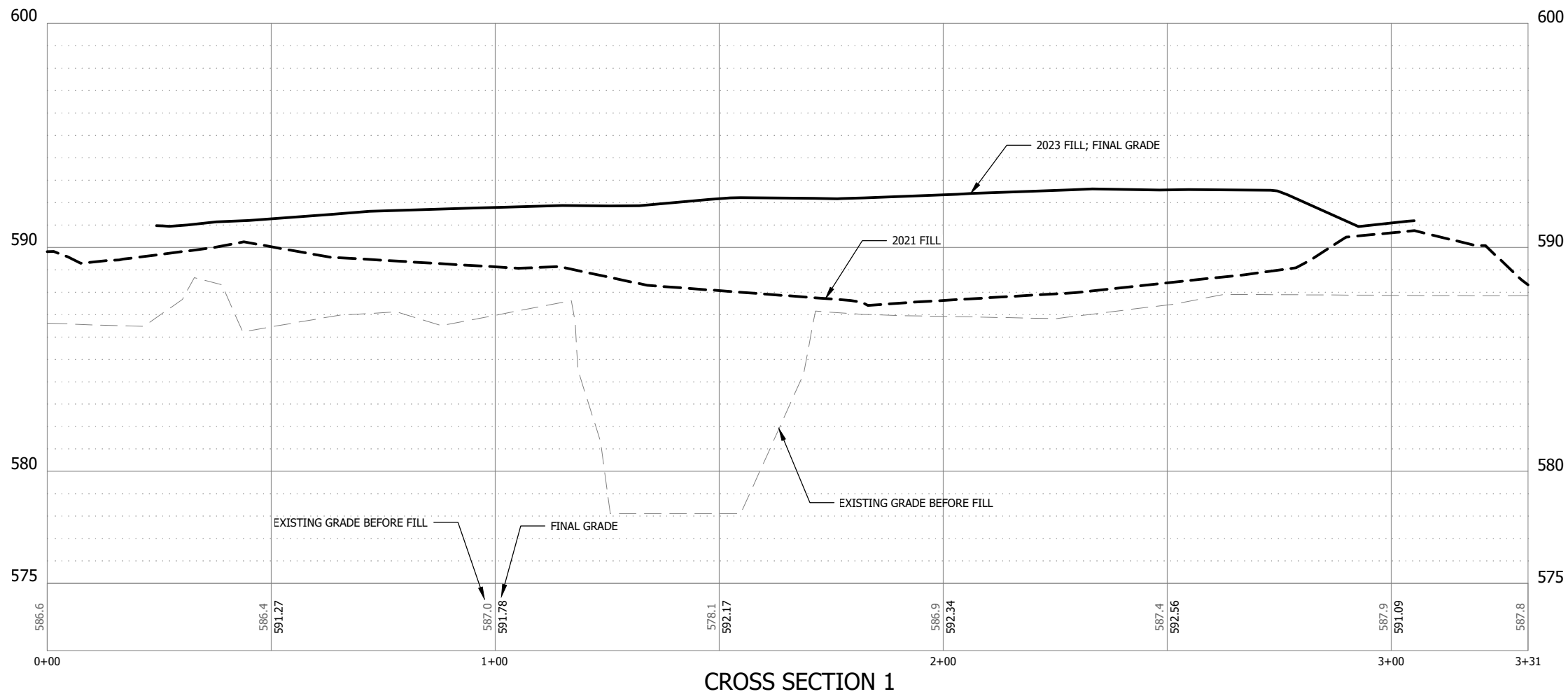
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**TRIANGLE LOT GRADING EXHIBIT**  
 RIVER POINT FILL  
 CITY OF MANITOWOC  
 MANITOWOC COUNTY, WISCONSIN

DATE OF ISSUANCE	September 13, 2023
NO. REVISION	DATE
SURVEY	#####
DRAWN	
DESIGNED	
CHECKED	
APPROVED	###
PROJ. NO.	193709261
SHEET NUMBER	<b>Figure 6</b>

THE CONTRACTOR SHALL VERIFY AND BE RESPONSIBLE FOR ALL DIMENSIONS. DO NOT SCALE THE DRAWING. ANY ERRORS OR OMISSIONS SHALL BE REPORTED TO STANTEC WITHOUT DELAY. REPRODUCTION OR USE FOR ANY PURPOSE OTHER THAN THAT AUTHORIZED BY STANTEC IS FORBIDDEN.



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TRIANGLE LOT GRADING CROSS SECTIONS

RIVER POINT FILL  
 CITY OF MANITOWOC  
 MANITOWOC COUNTY, WISCONSIN

DATE OF ISSUANCE	September 13, 2023	
NO	REVISION	DATE
SURVEY	#####	
DRAWN		
DESIGNED		
CHECKED		
APPROVED	###	
PROJ. NO.	193709261	
SHEET NUMBER	Figure 7	