

From: Byers, Harris <Harris.Byers@stantec.com>
Sent: Wednesday, July 19, 2023 8:58 AM
To: Beggs, Tauren R - DNR; Adam Tegen; Knapke.Eric@epa.gov
Subject: Interim Vegetated Engineered Barrier for Lot 3 in Redevelopment Area 1 of the River Point District in Manitowoc, Wisconsin
Attachments: Lot 3 - Interim Vegetated Engineered Barrier.pdf

Team:

Attached is a brief letter describing the plan to construct an interim vegetated barrier at Lot 3 in Redevelopment Area 1 of the River Point District in Manitowoc, Wisconsin.

This interim vegetated barrier will be constructed to stabilize construction in the adjacent road rights of ways while creating a physical barrier to impacted subsurface material. 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.

** Tauren, I'm sending you an additional copy through the portal for your records.

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

July 19, 2023
File: 193708490

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

Dear Mr. Tegen,

**Reference: Construction of 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 letter summarizes the plan to import clean, pre-characterized fill, to bring the elevation of Lot 3 of the River Point District (herein referred to as the "Property") to rough grade and finish the ground surface with turf grass as an interim vegetated engineered barrier. The locations of Lot 3 (outlined in black) 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.

The stamped engineering plan set for this work, including proposed final grades, stormwater management, and finished cross-sections, is provided in Attachment A. This interim engineered barrier will prevent direct contact with subsurface impacts identified by Stantec (2023b) until a developer is identified.

Importing Clean Fill

Approximately 6,855 cubic yards of clean granular fill will be imported, placed, and compacted at the Property to stabilize nearby rights-of-way construction while bringing the Property to rough grade. The granular fill (previously characterized by Stantec, 2023a) will be sourced from a nearby residential development. The granular fill will be finished with 3-inches of topsoil and seeded with turf grass. Turf grass will be watered as necessary to establish appropriate vegetative cover. The stamped engineering plan set for this proposed work is provided in Attachment A.

Future Work

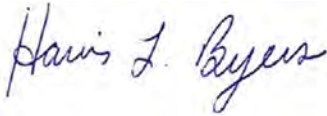
Conceptual non-industrial reuses at the Property and nearby areas are illustrated on Figure 3. Proposed soil management activities and specific sitewide engineered barrier construction and maintenance details will be discussed in greater detail in a combined Remedial Action Plan / Materials Management 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 letter to WDNR for agency records.

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

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
Attachment A – Plan Set

LIMITATIONS

The conclusions in this letter (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, 2023a, Characterization of Soil at 333 Reed Avenue, Manitowoc, Wisconsin, May 19, 2023.

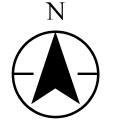
Stantec, 2023b, Phase II ESA, Lot 3, River Point District, Manitowoc, Wisconsin, July 18, 2023 .

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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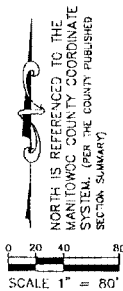
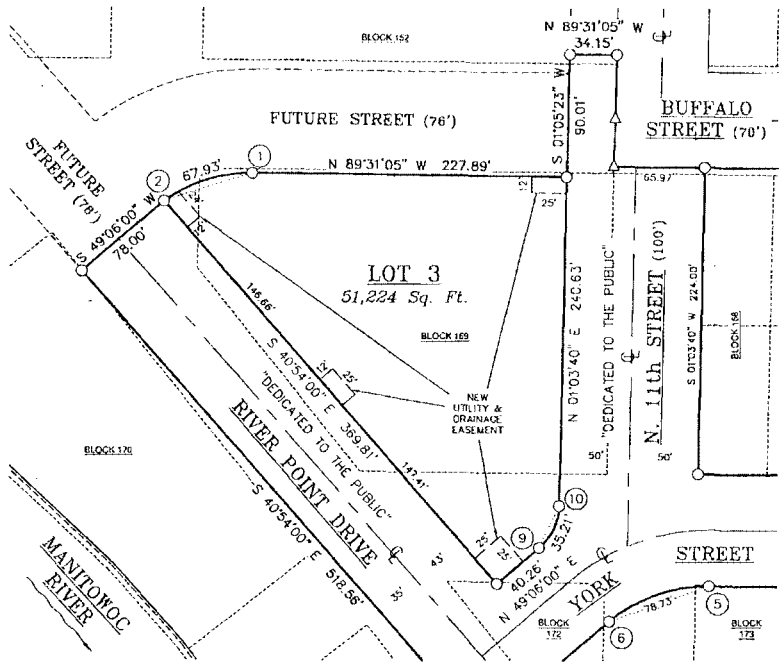
STATE OF WISCONSIN
 COUNTY OF MANITOWOC
 RECEIVED FOR RECORDING
 09/17/2021 2:11:16 PM

Corner Point
 A DIVISION OF A.C. MEADLANDS SERVICE

360 S. 46th Street
 Manitowish Waters, WI 54220
 PH 920.682.6733

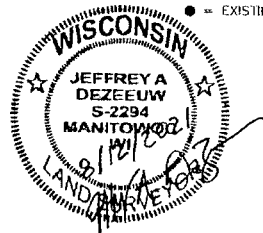


CERTIFIED SURVEY MAP DOC# 1240183 VOL 35 PG 210
 LOCATED IN BLOCKS 168, 169, 170, 172, AND 173 OF THE ORIGINAL PLAT OF THE CITY OF MANITOWOC AND
 ADJACENT VACATED STREETS, BEING PART OF GOVERNMENT LOT 3 OF SECTION 30, TOWN 19 NORTH, RANGE 24 EAST,
 CITY OF MANITOWOC, MANITOWOC COUNTY, WISCONSIN



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



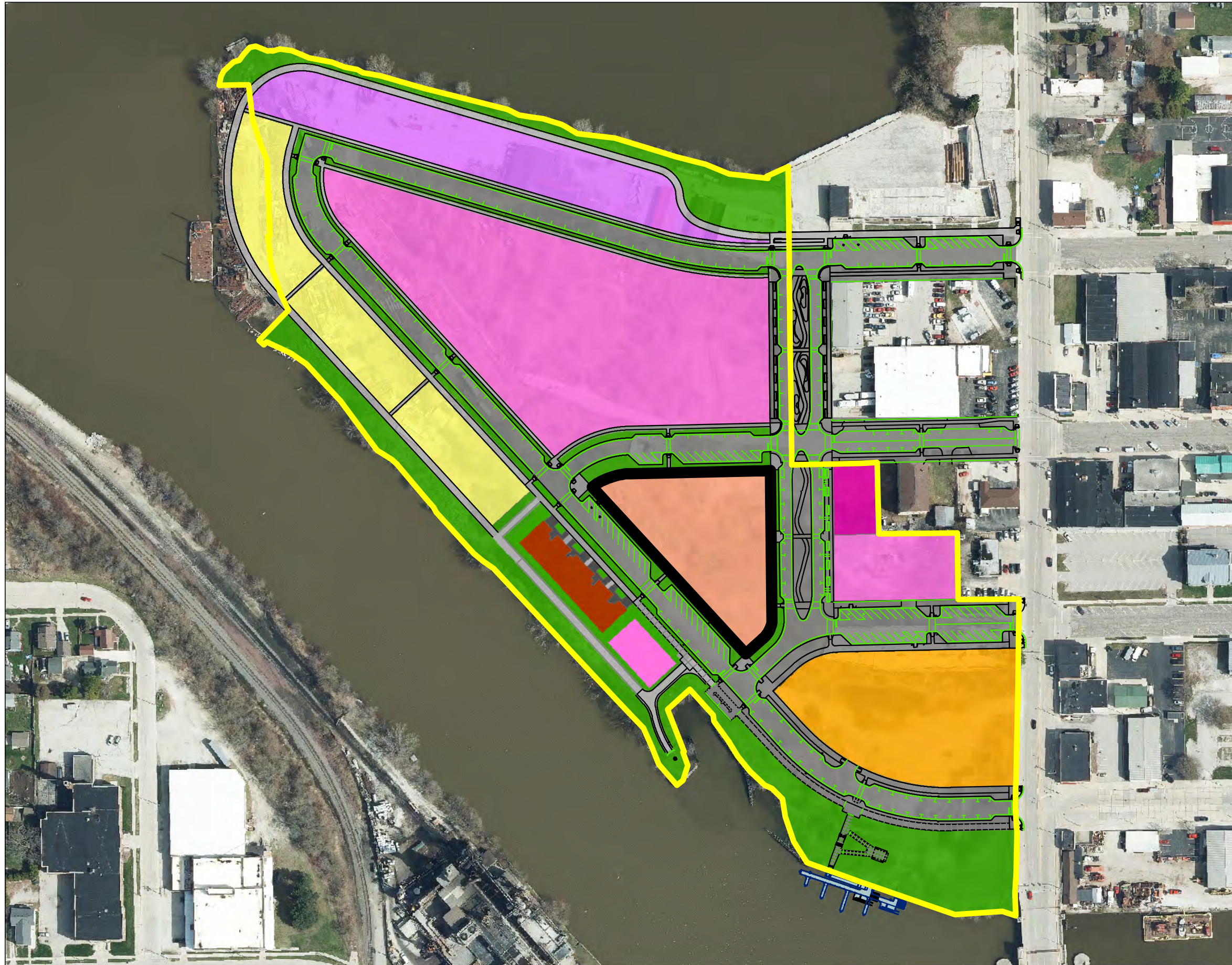
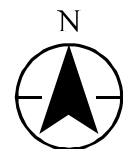


Figure No.
3
 Title
Proposed Reuse and Proposed Engineered Barriers/Caps
 Client/Project
 Lot 3
 River Point District
 City of Manitowoc
 0 125 250 Feet Prepared by HLB on 4/15/2021

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



ATTACHMENT A

Plan Set

Plot Date: 04/28/2023 - 3:42pm
 Drawing name: C:\pwworking\stntec\193709261\193709261.dwg
 User: jstntec\jstntec
 The contractor shall verify and be responsible for all dimensions. Do not scale the drawings. Any errors or omissions shall be reported to Stantec without delay. No use for any purpose other than that authorized by Stantec is forbidden.

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

GENERAL

1. THE CONTRACTOR SHALL NOTIFY THE OWNER AND THE MUNICIPALITY FORTY-EIGHT HOURS PRIOR TO THE START OF CONSTRUCTION.
2. THE CONTRACTOR SHALL INDEMNIFY THE OWNER, THE ENGINEER, AND THE MUNICIPALITY, THEIR AGENTS, ETC., FROM ALL LIABILITY INVOLVED WITH THE CONSTRUCTION, INSTALLATION, AND TESTING OF THE WORK ON THIS PROJECT.
3. SITE SAFETY SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
4. THE BIDDER WILL BE SOLELY RESPONSIBLE FOR DETERMINING QUANTITIES AND SHALL STATE SUCH QUANTITIES IN HIS OR HER PROPOSAL. HE OR SHE SHALL BASE THEIR BID ON HIS OR HER OWN ESTIMATE OF THE WORK REQUIRED AND SHALL NOT RELY ON THE ENGINEER'S ESTIMATE.
5. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING SOIL CONDITIONS PRIOR TO COMMENCEMENT OF CONSTRUCTION. A GEOTECHNICAL REPORT MAY BE AVAILABLE FROM THE OWNER. THE CONTRACTOR SHALL ABIDE BY THE RECOMMENDATIONS FO THE GEOTECHNICAL ENGINEER.
6. THE CONTRACTOR IS RESPONSIBLE FOR EXAMINING ALL SITE CONDITIONS PRIOR TO COMMENCEMENT OF CONSTRUCTION AND SHALL COMPARE FIELD CONDITIONS WITH DRAWINGS.
7. THE CONTRACTOR SHALL OBTAIN AND PAY FOR ALL PERMITS REQUIRED FOR EXECUTION OF THE WORK. THE CONTRACTOR SHALL CONDUCT HIS WORK ACCORDING TO THE REQUIREMENTS OF THE PERMITS.
8. THE CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING ALL UTILITY INFORMATION SHOWN ON THE PLANS PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR SHALL CALL DIGGER'S HOTLINE AT 1-800-242-8511 TO NOTIFY THE UTILITIES OF HIS OR HER INTENTIONS, AND TO REQUEST FIELD STAKING OF EXISTING UTILITIES.
9. CONTRACTOR IS ADVISED THAT ALL MUD AND DEBRIS MUST NOT BE DEPOSITED ONTO THE ADJACENT ROADWAYS PER THE REQUIREMENT OF THE MUNICIPALITY OR OTHER APPROPRIATE GOVERNMENT AGENCIES.
10. ANY ADJACENT PROPERTIES OR ROAD RIGHTS-OF-WAY WHICH ARE DAMAGED DURING CONSTRUCTION MUST BE RESTORED BY THE CONTRACTOR. THE COST OF THE RESTORATION IS CONSIDERED INCIDENTAL AND SHOULD BE INCLUDED IN THE BID PRICES.

MAINTENANCE, INSPECTIONS AND REPORTING

1. EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE INSTALLED BEFORE CONSTRUCTION ACTIVITIES BEGIN IN EACH REPRESENTATIVE PROJECT PHASE. PRACTICES SHALL BE CHECKED FOR EFFECTIVENESS WEEKLY AND FOLLOWING RAINFALL EVENTS 0.5 INCHES OR GREATER. ANY DEVICES NEEDING REPAIR SHALL BE ADDRESSED IMMEDIATELY.
2. STORM DRAIN INLET PROTECTION SHALL BE REPLACED WHEN SEDIMENT COLLECTED IN THE DEVICE HAS REDUCED THE CAPACITY BY HALF. ACCUMULATED SEDIMENT SHALL BE DEPOSITED IN A SUITABLE AREA AND STABILIZED.
3. SILT FENCES SHALL BE REPAIRED WHEN SEDIMENT HAS REACHED HALF THE HEIGHT OF THE FENCE. SILT FENCES HAVE A LIFE SPAN OF ONE YEAR, AND SHALL BE REPLACED WHEN WORN OUT. DAMAGED OR DECOMPOSED FENCES, UNDERCUTTING, OR FLOW CHANNELS AROUND THE END OF BARRIERS SHALL BE REPAIRED OR CORRECTED.
4. SEEDED AREAS SHALL BE FERTILIZED, RESEDED AND MULCHED AS NECESSARY. INSPECT SEEDED AREAS WEEKLY AFTER PLANTING TO ENSURE THAT VEGETATION IS ADEQUATELY ESTABLISHED. LIMIT VEHICLE TRAFFIC AND OTHER FORMS OF COMPACTION IN AREAS THAT ARE SEEDED.
5. MULCH THAT IS DISPLACED SHALL BE REAPPLIED AND PROPERLY ANCHORED. MAINTENANCE SHALL BE COMPLETED AS SOON AS POSSIBLE WITH CONSIDERATION TO SITE CONDITIONS.
6. EROSION MATTING, SILT FENCES, STRAW WATTLES, TEMPORARY DITCH CHECKS, STONE OUTLET PROTECTION, ETC. SHALL BE REPLACED AS NECESSARY.
7. STONE TRACKING PAD SHALL BE SCRAPED OR TOP DRESSED WHEN EXISTING STONE BECOMES BURIED OR IF SEDIMENT IS NOT BEING REMOVED EFFECTIVELY FROM TIRES. SEDIMENT THAT IS TRACKED ONTO THE PUBLIC ROADWAY MUST BE REMOVED IMMEDIATELY. A MINIMUM 12-INCH THICK PAD SHALL BE MAINTAINED.

THE FOLLOWING CONSTRUCTION SITE INSPECTIONS SHALL BE PERFORMED BY THE CONTRACTOR, AND ARE REQUIRED PER THE WPDES GENERAL PERMIT:

1. CONDUCT WEEKLY INSPECTIONS OF IMPLEMENTED EROSION AND SEDIMENT CONTROL BEST MANAGEMENT PRACTICES, AND REPORTING.
2. INSPECTIONS OF EROSION AND SEDIMENT CONTORL WITHIN 24 HOURS AFTER A PRECIPITATION EVENT OF 0.5 INCHES OR GREATER, AND REPORTING.
3. REPAIR OR REPLACE EROSION AND SEDIMENT CONTROL BEST MANAGEMENT PRACTICES AS NECESSARY WITHIN 24 HOURS OF AN INSPECTION OR DEPARTMENT NOTIFICATION THAT A REPAIR OR REPLACEMENT IS NEEDED.
4. MAINTAIN WEEKLY WRITTEN REPORTS OF ALL INSPECTIONS CONDUCTED AT THE CONSTRUCTION SITE. WEEKLY INSPECTION REPORTS SHALL INCLUDE ALL OF THE FOLLOWING:
 - A. DATE, TIME AND LOCATION OF THE CONSTRUCTION SITE INSPECTION.
 - B. NAME OF THE INDIVIDUAL WHO PERFORMED THE INSPECTION.
 - C. ASSESSMENT OF THE CONDITION OF EROSION AND SEDIMENT CONTROLS.
 - D. DESCRIPTION OF ANY EROSION AND SEDIMENT CONTORL BEST MANAGEMENT PRACTICE IMPLEMENTATION AND MAINTENANCE PERFORMED.
 - E. DESCRIPTION OF THE PRESENT PHASE OF LAND DISTURBING ACTIVITY AT THE CONSTRUCTION SITE.

GRADING

1. THE PROPOSED IMPROVEMENTS SHALL BE CONSTRUCTED ACCORDING TO THE WISCONSIN D.O.T. STANDARD SPECIFICATIONS, LOCAL ORDINANCES AND SPECIFICATIONS, AND RECOMMENDATIONS IN THE GEOTECHNICAL REPORT.
2. THE CONTRACTOR SHALL MAINTAIN SITE DRAINAGE THROUGHOUT CONSTRUCTION. THIS MAY INCLUDE THE EXCAVATION OF TEMPORARY DITCHES OR PUMPING TO ALLEVIATE WATER PONDING.
3. SILT FENCE AND OTHER EROSION CONTROL FACILITIES MUST BE INSTALLED PRIOR TO CONSTRUCTION OR ANY OTHER LAND DISTURBING ACTIVITY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING ALL EROSION CONTROL FACILITIES ONCE THE THREAT OF EROSION HAS PASSED WITH THE APPROVAL OF THE GOVERNING AGENCY.
4. THE CONTRACTOR SHALL ASSUME SOLE RESPONSIBILITY FOR THE COMPUTATIONS OF ALL GRADING AND FOR ACTUAL LAND BALANCE, INCLUDING UTILITY TRENCH SPOIL. THE CONTRACTOR SHALL IMPORT OR EXPORT MATERIAL AS NECESSARY TO COMPLETE THE PROJECT.
5. GRADING SHALL CONSIST OF CLEARING AND GRUBBING EXISTING VEGETATION, STRIPPING TOPSOIL, REMOVAL OF THE EXISTING PAVEMENT OR FOUNDATIONS, IMPORTING OR EXPORTING MATERIAL TO ACHIEVE AN ON-SITE EARTHWORK BALANCE, GRADING THE PROPOSED BUILDING PADS AND PAVEMENT AREAS, SCARIFYING AND FINAL COMPACTION OF THE PAVEMENT SUBGRADE, AND PLACEMENT OF TOPSOIL.
6. NO FILL SHALL BE PLACED ON A WET OR SOFT SUBGRADE. THE SUBGRADE SHALL BE PROOF-ROLLED AND INSPECTED BY THE GEOTECHNICAL ENGINEER BEFORE ANY MATERIAL IS PLACED.
7. ALL FILL SHALL BE CONSIDERED STRUCTURAL FILL AND SHALL BE PLACED IN ACCORDANCE WITH THE GEOTECHNICAL REPORT.
8. ALL SIDEWALKS SHALL HAVE A MAXIMUM 2.0% CROSS SLOPE. SEE TYPICAL DETAIL.

EROSION CONTROL NOTES

1. EROSION CONTROL MEASURES MUST BE INSPECTED AND REPAIRED WEEKLY AND AFTER EACH RAIN TOTALING ONE-HALF INCH OR MORE. THE INSPECTIONS SHALL BE RECORDED AND KEPT ON FILE ONSITE WITH THE STORMWATER POLLUTION PREVENTION PLAN.
2. ANY SEDIMENT REACHING A PUBLIC OR PRIVATE ROAD OR SIDEWALK SHALL BE REMOVED BY STREET CLEANING, OTHER THAN FLUSHING, IMMEDIATELY.
3. CONTRACTOR SHALL KEEP A COPY OF THE EROSION CONTROL PLANS AT THE PROJECT SITE AND PROVIDE COMPLETED INSPECTION FORMS TO THE CITY OF MANITOWOC. THE CITY OF MANITOWOC AND WDNR MAY REQUEST INSPECTION REPORTS AT ANY TIME.
4. ALL EROSION CONTROL METHODS SHALL BE IN ACCORDANCE WITH WDNR TECHNICAL STANDARDS AND CITY OF MANITOWOC REQUIREMENTS AND STANDARDS.
5. ALL EXPOSED SOIL AREAS NOT DISTURBED FOR UP TO SEVEN DAYS SHALL BE IMMEDIATELY RESTORED WITH SEED AND MULCH.
6. COPIES OF THE INSPECTION REPORTS SHALL BE KEPT AT THE PROJECT SITE FOR CITY OF WDNR ACCESS.
7. TEMPORARY GRADING METHODS SHALL BE USED TO DIRECT WATER TO THE TEMPORARY STABILIZED CONVEYANCE SWALES.
8. DEWATERING AS NEEDED TO BE DONE ACCORDING TO WDNR STANDARD 1061.
9. DISTURBED AREAS THAT CANNOT BE STABILIZED WITH A DENSE GROWTH OF VEGETATION BY SEEDING AND MULCHING DUE TO TEMPERATURE (WINTER) OR TIMING OF CONSTRUCTION, SHALL BE STABILIZED BY APPLYING ANIONIC POLYACRYLAMIDE (PAM) IN ACCORDANCE WITH WDNR TECHNICAL STANDARD 1051.
10. CONTRACTOR IS RESPONSIBLE FOR EROSION CONTROL MEASURES AND PERFORMING MAINTENANCE THROUGHOUT THE DURATION OF CONSTRUCTION ACTIVITIES.



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

PROFESSIONAL ENGINEER
 WISCONSIN

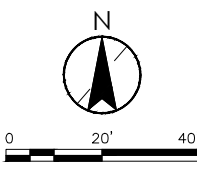
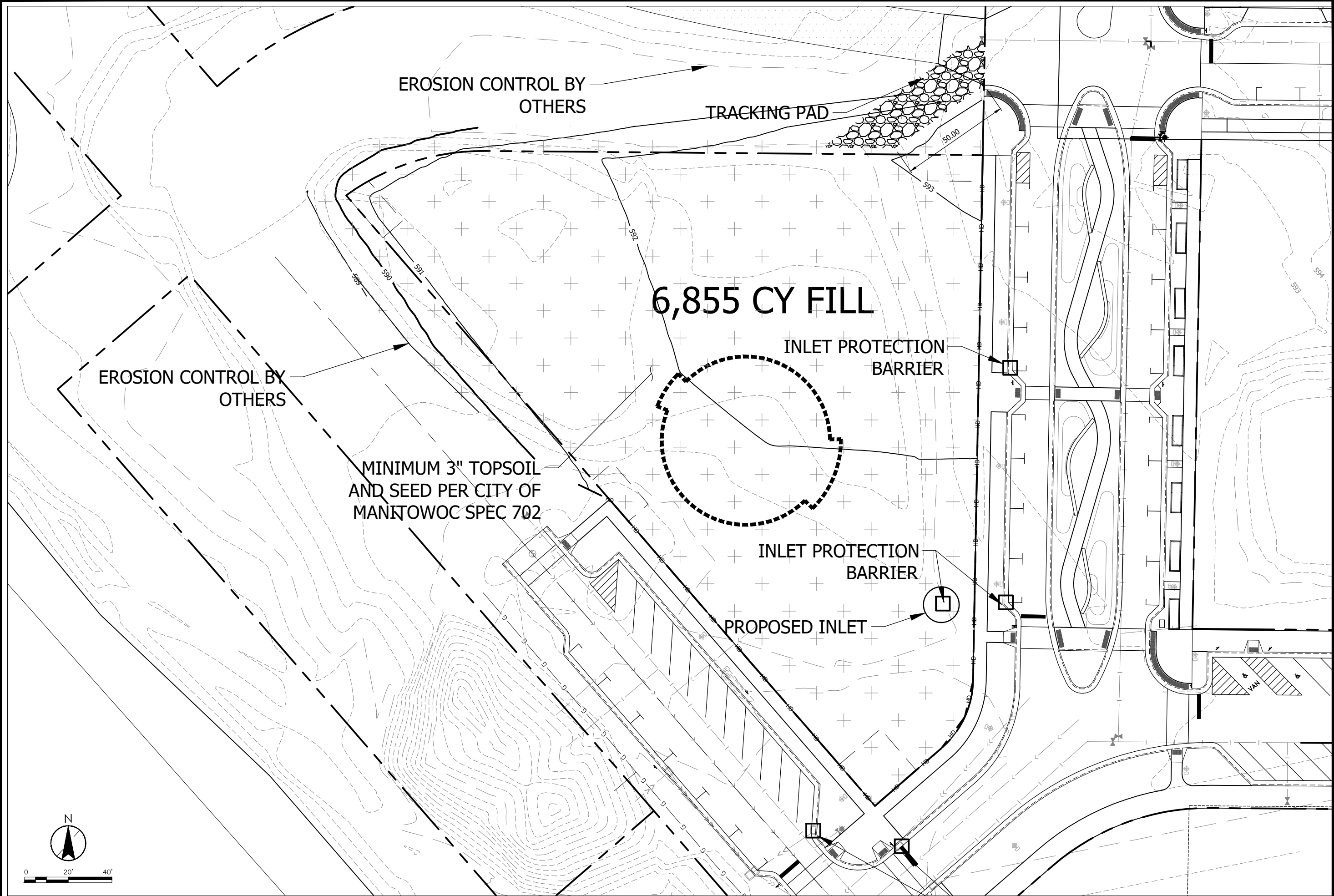
GENERAL NOTES

RIVER POINT FILL
 CITY OF MANITOWOC
 MANITOWOC COUNTY, WISCONSIN

DATE OF ISSUANCE	
April 28, 2023	
NO	REVISION DATE
SURVEY	#####
DRAWN	
DESIGNED	
CHECKED	---
APPROVED	###
PROJ. NO.	193709261
SHEET NUMBER	
G0.02	

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.

Plot Date: 05/22/2023 - 12:37pm
 Drawing name: C:\pwworking\stntec\193709261\193709261.dwg
 User: jstntec\jstntec



DATE OF ISSUANCE	May 22, 2023
NO. REVISION	DATE
SURVEY	#####
DRAWN	
DESIGNED	
CHECKED	
APPROVED	###
PROJ. NO.	193709261
SHEET NUMBER	C1.02

