Stantec Consulting Services Inc.
12075 Corporate Parkway, Suite 200 Mequon WI 53092

December 11, 2020

Attention: Mr. Adam Tegen
Community Development Director
City of Manitowoc
900 Quay Street
Manitowoc, Wisconsin 54220

Reference: Construction Documentation Report for Demolition and Removal of Structural Impediments, River Point District – Site 1
200 North 10th Street
Manitowoc, Wisconsin 54220
WDNR BRRTS ID: 02-36-585491 (Open ERP)
WDNR BRRTS ID: 07-36-583000 (LGU Exemption)
WDNR BRRTS ID: 02-36-00408 (Closed)

Dear Mr. Tegen:

Stantec Consulting Services Inc. (Stantec) prepared this construction documentation report following the demolition and removal of structural impediments at Site 1 of the River Point District redevelopment project located at 200 North 10th Street (herein referred to as the "Property"). The location of the River Point District relative to local topography is shown on Figure 1, and the relative location of Site 1 is illustrated on Figure 2.

Descriptions of work performed for the assessment, demolition, and removal of the structural impediments at Site 1 are further detailed in the following sections.

BACKGROUND

General Site Information

The River Point District currently consists of 23 individual contiguous parcel identification numbers (PINs), as illustrated on Figure 2. As summarized in the Stantec (2019) Phase I Environmental Site Assessment (ESA), the current PINs appear to correspond to leases between the previous owner and a variety of historic commercial/industrial tenants/occupants. Site 1 of the River Point District consists of 6.1 acres of land within the larger 20.1-acre River Point District. The Property consists of five contiguous parcels of land with the following PINs: 173000, 173003, 173100, 173160, and 173170. As noted previously, it is critical to realize that the individual PINs corresponded to leases between the previous owner and a variety of former industrial/bulk petroleum storage/commercial tenants.

Ownership

As described in the Stantec (2019) Phase I ESA, the River Point District consists of a 20.1-acre peninsula bound to the north, south, and west by the Manitowoc River and bound to the east by North 10th Street and North 11th Street. The peninsula appears undeveloped in 1835, with industrial development for coal transloading and lumber/sawmill occurring by 1868. Historic records indicate the River Point District was transferred from the Manitowoc Terminal Company to the Manitowoc and Western Railroad Company on July 22, 1895, which is consistent with railroad development in the late 19th Century.

Reference: Construction Documentation Report for Demolition and Removal of Structural Impediments, River Point District – Site 1

A Phase I ESA was completed by Stantec (2019) per the All Appropriate Inquiries rule detailed in 40 CFR §312.21 utilizing ASTM E1527-13 on behalf of the current owner (The Community Development Authority of the City of Manitowoc [CDA]) on March 21, 2019. The current owner acquired the Property on April 12, 2019 for the purpose of blight elimination and subsequently received a Local Governmental Unit (LGU) Environmental Liability Exemption from the Wisconsin Department of Natural Resources (WDNR) per ch. 292.11(9) of the Wis. Admin. Code on March 18, 2019 under Bureau for Remediation and Redevelopment Tracking System (BRRTS) Case No. 07-36-583000. Since taking ownership, the CDA has maintained compliance with the required continuing obligations and no records have been identified indicating that the CDA is considered potentially liable or known to be affiliated with any other person that is potentially liable for contamination at the Property.

Prior Use

Stantec (2019) Phase I ESA notes the northern portion of Site 1 was developed for bulk petroleum storage/distribution by the "Clarke Oil Company" (presumably a tenant) between 1912 and 1919. Bulk petroleum storage operations expanded between 1919 and 1927, at which point the operation consisted of eight oil tanks and a pump house. Bulk petroleum storage ceased between 1927 and 1946. The owner, Soo Line Minneapolis St. Paul and Sault St. Marie Railroad Company, leased the parcel to "JF Kerscher Co." on May 22, 1950, who constructed a large warehouse and utilized the Property for a variety of storage/commercial uses. A Phase II ESA completed by SEC Donohue, Inc in 1992 (SEC Donohue, Inc, 1992) identified heavy metal and petroleum impacts using the total recoverable petroleum hydrocarbons method (USEPA Method 9073). Based on evaluation criteria used at the time, WDNR closed this spill case (BRRTS Case No. 02-36-00408) on April 6, 1993.

Proposed Redevelopment

Current redevelopment plans include reuse of Site 1 for commercial purposes. However, as discussed in the Stantec (2020a) Phase II ESA, residual impacts to soil and groundwater remain at the Property at concentrations greater than health-based standards. A subsurface site investigation compliant with Chapter NR 716 Wis. Admin. Code was required at the Property to facilitate proposed commercial redevelopment. As the concrete building slab of the former warehouse and other structural impediments were significant obstacles to completing the warranted investigation, the City secured funding from the Wisconsin Economic Development Corporation (WEDC) for a Site Assessment Grant (SAG) in 2020 (Contract Number SAG FY20-25001) to remove the structural impediments and petroleum infrastructure as described herein.

SCOPE OF WORK

As outlined in the Stantec (2020b) Workplan, the scope of work for removing structural impediments described in Task 1 and Task 2 was completed as follows.

Reference: Construction Documentation Report for Demolition and Removal of Structural Impediments, River Point District – Site 1

Task 1 – Pre-Demolition Investigation and Soil Sampling

Overview and Methods

Under contract with Stantec, Veit & Company, Inc. (Veit) completed approximately 312 linear feet of test trenches/pits around the perimeters of each slab/feature to assess the depth of the footings and footing walls, the presence or absence of remaining petroleum infrastructure (i.e., piping), and determine if residual petroleum contamination was identifiable surrounding the slabs. The location of each test pit completed on Site 1 is illustrated on Figure 3, and a summary of test pit observations is provided on Table 1. Soil from test pits with suspected contamination was screened with a photoionization detector (PID) and sampled for volatile organic compounds (VOCs), polycyclic aromatic hydrocarbons (PAHs), and Resource Conservation and Recovery Act (RCRA) metals. The analytical results of these samples will be provided in a future Phase II ESA for Site 1 as outlined in Task 3 of the Stantec (2020b) Workplan. Each test pit excavation was immediately backfilled with removed spoil for site safety.

The depth to groundwater was measured using an interface probe in monitoring well MW-14, located on the east end of the warehouse slab, to determine where saturated soil conditions would be encountered.

A photographic log depicting pre-demolition investigation activities is included as Attachment A.

Results

The former warehouse slab was approximately 3.2 feet (3.2') to 4' above the surrounding ground surface. On August 13th, 2020, Stantec installed six test pits along the perimeter of the warehouse slab (TP-1 through TP-3, and TP5 through TP-7) and noted the depth of the footing was consistent from the top of the concrete for the entire slab (8.0' to the top of the footing from the top of the concrete, and 9.25' to the bottom of the footing from the top of the concrete). The warehouse slab was found to have a 6-inch (6") to 8" slab thickness with "pencil rod" wire mesh reinforcement (Attachment A, Photograph No. 14). No entrance to a basement was observed for the former warehouse slab on Site 1 as suggested in the Stantec (2020b) Workplan, but an area of gravel and unpainted brick/cinderblock fill was discovered near the center of the northern edge of the slab that may have formerly served as a boiler room. This is further discussed as part of Task 2 of this report.

Two pipes were encountered 3.0' below ground surface in test pit TP-3 near the south-central edge of the warehouse slab, appearing to run from the northwest to southeast away from the building (Attachment A, Photograph No. 3). Test pit TP-4 delineated the piping to at least 80 feet from the slab to the active gravel access road (Figure 3). The piping run consisted of two parallel pipes, one 2" and one 4" in diameter, both encased with wooden planks and consistently 3.0' below grade (Attachment A, Photograph Nos. 4 - 8). The piping run remains at the Property and is depicted on Figure 4.

Reference: Construction Documentation Report for Demolition and Removal of Structural Impediments, River Point District – Site 1

Stantec completed a continuous, 90-foot test pit (TP-5) along the west end of the southern warehouse slab foundation in an area with known prior bulk petroleum storage (Figure 3). No piping or remaining petroleum infrastructure was observed in TP-5 (Attachment A, Photograph No. 9); however, evidence of residual petroleum impacts to soil was observed from one to eight feet below ground surface. Evidence of petroleum contamination was also observed in test pits TP-6 and TP-7, which were completed on the west and northwest ends of the warehouse slab, respectively (Attachment A, Photograph No. 10).

On August 14th, 2020, the smaller, 500 square foot concrete remnant foundation wall west of the warehouse slab on Site 1 was investigated with test pits TP-8 and TP-9 (refer to Figure 4). The foundation wall remained at grade and was previously supported by concrete piers approximately 1-foot square in width). The piers extended to 5.0' to the top of their footings from the top of ground surface, and to 5.8' to the bottom of the footing from the top of ground surface for each instance. Only the perimeter of the concrete foundation remained in this location at the time of the investigation, comprising of approximately 92 linear feet of concrete with 18" of thickness and reinforced with rebar (Attachment A, Photograph Nos. 11 - 13).

Groundwater at Site 1 was shallow; the depth to groundwater in monitoring well MW-14 installed in the east end of the warehouse slab measured 6.65 feet below the top of the well casing on August 13th, 2020, corresponding to a shallow groundwater elevation of approximately two to three feet below ground surface.

Task 2 – Removal of Structural Impediments and Petroleum Infrastructure

Overview and Methods

Stantec retained Veit as the demolition contractor for the removal of the 20,200 square foot warehouse slab and the 500 square foot remnant foundation wall on Site 1 following the pre-demolition assessment performed on August 13th and 14th, 2020 as part of Task 1. Foundation features that remained following demolition were surveyed and recorded by a Corner Point, LLC (Corner Point) professional land surveyor on August 25th, 2020 and are depicted on Figure 4.

Monitoring well MW-14 was properly abandoned by Stantec personnel per Chapter NR 141 Wis. Admin. Code, as it was installed through the eastern portion of the 20,200 square foot warehouse slab and would otherwise have been destroyed during demolition. The well abandonment form for MW-14 is included as Attachment B.

Results

Between August 17th and 19th, 2020, Veit demolished the majority of the 20,200 square foot warehouse slab (Attachment A, Photograph Nos. 15, 19 - 21). The floor slab was broken using an excavator with a hammer attachment and the concrete stockpiled and staged in the northwest corner of Site 1. The entire warehouse floor slab contained wire mesh (Attachment A, Photograph No. 14), with fill sand present to at least the depth of the foundation walls. The foundation walls generally contained no metal reinforcement, with the exception of walls surrounding the western 70 feet of the slab (presumed to be an addition to the building) which

contained rebar reinforcement approximately 1/3" in diameter (Attachment A, Photograph Nos. 33 - 36). The location of the western addition to the warehouse is illustrated on Figure 4.

Some features of the warehouse slab were not able to be fully assessed until the start of demolition. The following items were discovered/addressed during demolition:

- The apparent former loading dock along much of the southern edge of the warehouse slab had a second foundation wall approximately four feet north of and parallel to the southern foundation wall, and with a run of approximately 193 linear feet (Attachment A, Photograph No. 31). The outer (southern) foundation wall was approximately 8" thick, and the inner (northern) discovered wall was approximately 12" thick. It was the inner (northern) foundation wall that continued the rest of the way west (approximately 70 feet) once past the edge of the loading dock (refer to Figure 4). Both the inner and outer foundation walls in this area were removed as part of demolition, leaving only the footings behind. The elevation of the top of the remaining footing was measured to be 582.87 feet above mean sea level (ft amsl) by a professional land surveyor.

- A series of concrete piers approximately 12" square and 4' deep were found in two rows running east-west through the slab, framing the central third of the slab. These piers were excavated and removed as part of slab demolition.

- An area that was suspected to be the location of a former basement (Attachment A, Photograph Nos. 26 - 28) was found to have unpainted brick and cinderblock backfill in an approximately 1,125 square foot area along the north side of the warehouse slab (refer to Figure 4). The perimeter of the former basement had 12" thick walls extending approximately 6'0" below the top of the slab, with metal ductwork (approximately 6 to 8" in diameter) emanating from the area and extending in multiple directions to the rest of the building, suggesting that it may have been the location of a former boiler room (Attachment A, Photograph No. 22). A smaller, approximately 68 square foot room was found to be south-adjacent to the basement (Attachment A, Photograph Nos. 23 - 25), with 8" thick foundation walls extending to 4'8" below the top of the slab (refer to Figure 4). A 6" thick concrete floor was also present in this small room. Foundation walls and floors associated with these features were removed during demolition, leaving only the footings in place. The metal ductwork network beneath the slab was largely left in place. No tanks, boilers, drums or other means of petroleum storage were observed in the former basement while removing foundation features, and no olfactory or visual petroleum impacts to the unpainted brick/cinderblock fill material were observed. The brick/cinderblock fill material remains in the area of the former basement, and was covered with a couple feet of sand (present as general fill for the majority of the warehouse slab) and smoothed to match the approximate grade of the rest of the remaining fill soils for site safety and optics (Attachment A, Photograph Nos. 29 - 30).

- A buried water shut-off valve was discovered on the north side of the slab in the area of the former basement. At the request of a field representative from Xcel Energy, Inc. (Xcel), Veit exposed the water shut-off valve so it could be properly marked and documented

by Xcel (Attachment A, Photograph No. 32). It remains in place (coordinates: 301,959.444 feet and 232,143.919 feet) and its location is depicted on Figure 4.

Monitoring well MW-14 installed through the eastern end of the warehouse slab was abandoned by Stantec personnel in accordance with Chapter NR 141 Wis. Admin. Code on August 17th, 2020. The protective stick-up metal cover and the top five feet of riser were removed, and the borehole was sealed/backfilled to the surface with bentonite chips (Attachment A, Photograph Nos. 16 - 18). The well abandonment form for MW-14 is included as Attachment B.

On August 19th, 2020, Veit removed the smaller remnant footing wall west of the warehouse slab. The approximately 92 linear feet of concrete contained rebar at least 1" thick and was supported by (non-reinforced) concrete piers with footings approximately 2'x2'. Footings, piers and foundation features were removed in this 500 square foot area (Attachment A, Photograph Nos. 38 - 40).

Two stockpiles were created to segregate the demolition debris – one pile with concrete containing no or minimal reinforcement (ex. wire mesh) suitable for crushing onsite and another pile containing reinforced concrete (ex. rebar) that would need to be hauled offsite for disposal (Attachment A, Photograph Nos. 41 - 43). While some concrete foundation walls were present in areas with apparent petroleum impacted soils, no petroleum or other impacts to the concrete foundations themselves were observed.

At the request of the City of Manitowoc's contractor (Vinton Construction Co; Vinton), the stockpiled concrete segregated for crushing onsite was broken down to pieces that were approximately 3'x3' in dimension, or smaller, so that they could be handled by the concrete crusher. On August 31st, 2020, Vinton commenced crushing of the pile containing no/minimal reinforcement; the crushed concrete is currently staged on the northwest side of Site 1 pending future reuse (Attachment A, Photograph Nos. 44 - 47). The stockpile containing reinforced concrete was removed from Site 1 by Veit on September 16th, 2020 (Attachment A, Photograph Nos. 45, 47). The approximate volumes of non-reinforced and reinforced concrete generated from the structural impediments removed from Site 1 were 618 cubic yards and 88 cubic yards, respectively.

FUTURE CONSIDERATIONS

The primary structural impediment targeted for this work was the 20,200 square foot concrete warehouse building slab. Additionally, the 500 square foot slab remnant present adjacent to and west of the 20,200 square foot warehouse slab was removed.

The only features of the 20,200 square foot warehouse slab that remain in place are:

- The eastern 20 feet of the slab and associated foundation walls were not removed to ensure that the foundation for the east-adjoining sidewalk to the Property would not be undermined.

Reference: Construction Documentation Report for Demolition and Removal of Structural Impediments, River Point District – Site 1

- The northeastern portion of the foundation wall near the existing billboard was not removed so as not to compromise the active and electrified billboard or the north-adjoining asphalt driveway.

- The footings of the foundation walls were not removed as the foundation walls separated naturally from the footings during demolition. In addition, the footings were located below the water table and would have been difficult to remove. The perimeter footing remains at approximately 582.87 ft amsl.

Other features identified during demolition that remain on Site 1 that a future developer would need to consider include:

- Thin-walled metal ductwork remains beneath the 20,200 square foot warehouse slab.

- Unpainted brick/cinderblock fill material remains in the former basement (currently covered with a couple feet of sand for safety).

- A water shut-off valve is located near the north side of the former warehouse slab next to the former basement.

- A buried pipe chase is located approximately three feet below grade near the south-central edge of the warehouse slab. The chase trends southeast away from the building.

We trust this information meets your needs. Please feel free to contact us if you have any questions or concerns.

Regards,

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Reference: Construction Documentation Report for Demolition and Removal of Structural Impediments, River Point District – Site 1

Enclosures: Table
Figures
Attachments

REFERENCES

SEC Donohue Inc, 1992. Phase II ESA, 200 North 10th Street, Manitowoc, Wisconsin, December 17, 1992.

Stantec, 2019. 10th Street Railroad Property, Manitowoc, Wisconsin, Phase I Environmental Site Assessment, March 21, 2019.

Stantec, 2020a. Phase II Environmental Site Assessment, Riverpoint District; Manitowoc, Wisconsin, March 23, 2020.

Stantec, 2020b. Workplan and Estimate of Probable Costs for Completion of a Pre-Demolition Soil Investigation, Removal of Remaining Structural Impediments and Petroleum Infrastructure, & Completion of a Subsurface Investigation Following Demolition, Riverpoint District – Site 1, April 27, 2020.

LIMITATIONS

Documentation of activities described herein was performed in accordance with generally accepted practices of the profession for performing similar activities at the same time and in the same geographical area. Stantec observed that degree of care and skill generally exercised by the profession under similar circumstances and conditions. No other warranty is expressed or implied.

Stantec observations, findings, and opinions must not be considered as scientific certainties, but only an opinion based on our professional judgment concerning the significance of the data gathered during the course of the cleanup activity. Specifically, Stantec does not and cannot represent that the Property contains no hazardous or toxic materials or other latent condition beyond that observed by Stantec.

TABLE

Table 1
Site 1 Test Pit Summary
River Point District, Site 1
200 North 10th Street
Manitowoc, Wisconsin

Warehouse Slab - Supported with Footing Walls

Test Pit ID	Performed to Assess	Top of Ground	Top of Footing	Bottom of Footing	Slab Thickness	Trench Length	Piping Encountered?	Petroleum Contamination Observed?
		(Depth from top of concrete)						
TP-1	Warehouse Slab	3'2"	8'0"	9'3"	6 - 8"	20'	No	No
TP-2	Warehouse Slab	3'5"	8'0"	9'3"	6 - 8"	20'	No	No
TP-3	Warehouse Slab	3'10"	7'11"	9'3"	6 - 8"	20'	Yes, 3' below grade.	No
TP-4	Piping South of Warehouse Slab	--	--	--	--	80'	Yes, 3' below grade.	No
TP-5	Warehouse Slab	3'10"	8'0"	9'3"	6 - 8"	90'	No	Yes, from 1 - 8' below grade.
TP-6	Warehouse Slab	4'0"	8'0"	9'3"	6 - 8"	27'	No	Yes, 4' below grade.
TP-7	Warehouse Slab	3'3"	8'0"	9'3"	6 - 8"	20'	No	Yes, 8' below grade.

Remnant Foundation - Supported with Piers

Test Pit ID	Performed to Assess	Top of Ground	Top of Footing	Bottom of Footing	Concrete Thickness	Trench Length	Piping Encountered?	Petroleum Contamination Observed?
		(Depth from top of concrete)						
TP-8	Remnant Foundation	0'0"	5'0"	5'10"	18"	20'	No	No
TP-9	Remnant Foundation	0'0"	5'0"	5'10"	18"	15'	No	No

FIGURES

Figure No.
1

Title
River Point District and Regional topography

Client/Project
River Point District
200 North 10th Street
City of Manitowoc

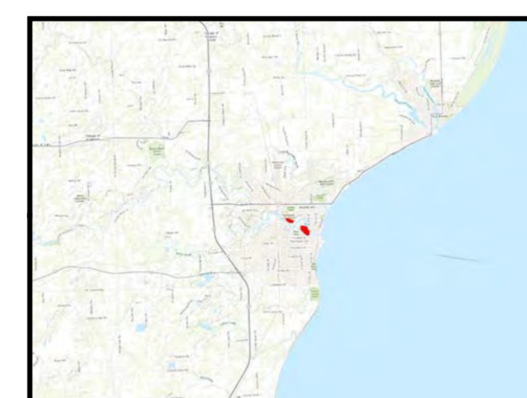
0 500 1,000 Feet

193706269
Prepared by HLB on 2/7/2020

Legend

River Point District

N



Notes

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

Stantec

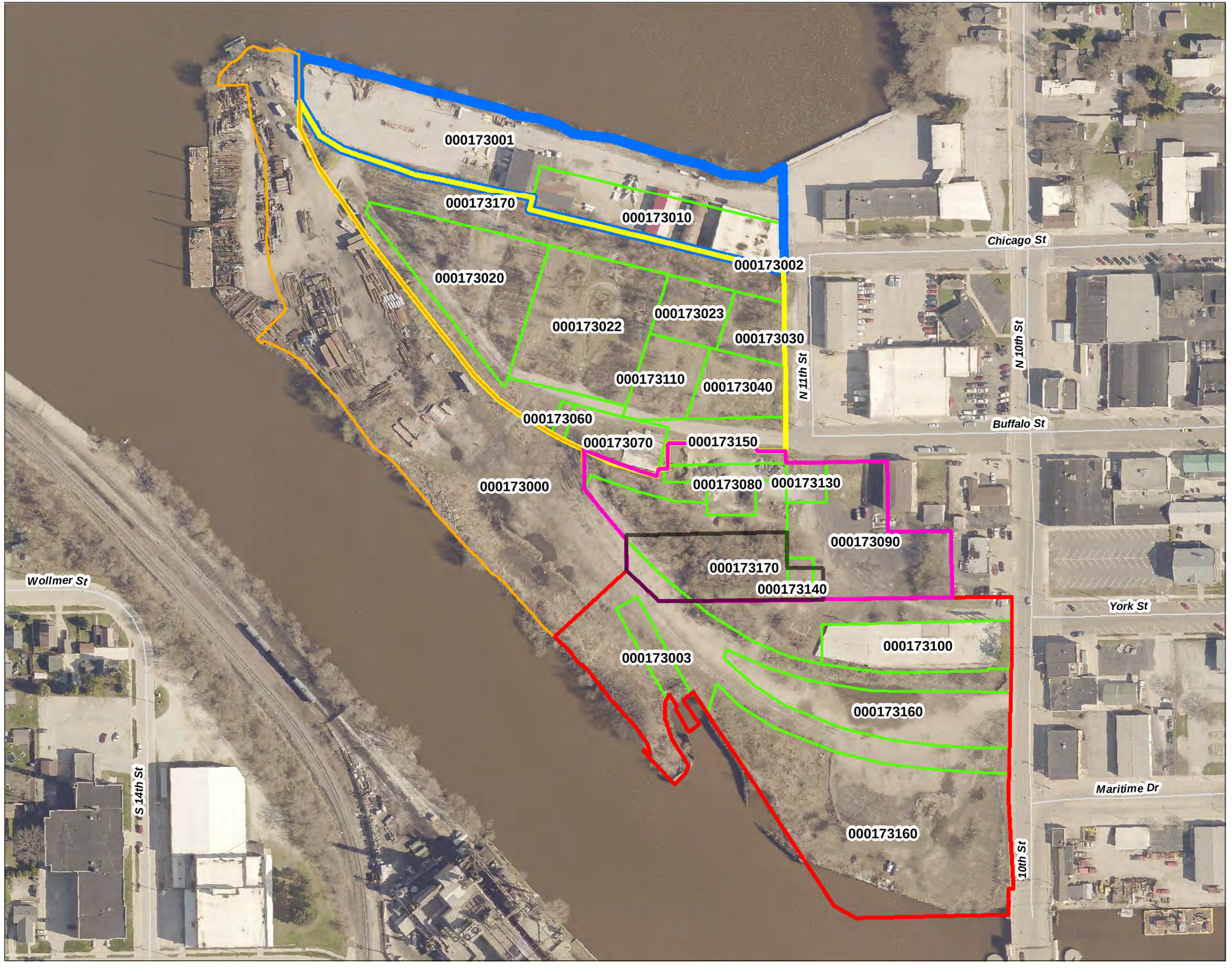


Figure No.
2

Title
Property Identification Numbers and Project Areas

Client/Project
River Point District
200 North 10th Street
City of Manitowoc

0 125 250 Feet

193706269
Prepared by HLB on 2/5/2020

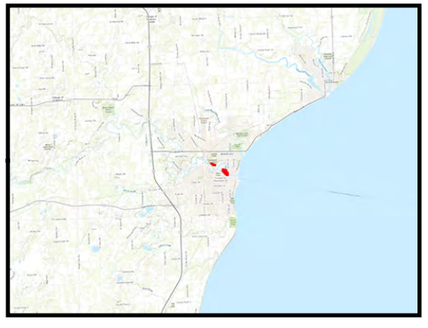
N

Legend

- Parcel Identification Numbers
- Cap Maintenance Area

Project Areas

- Site 1 - 200 North 10th Street
- Site 2 - 1101 Buffalo Street
- Site 3 - 1110 Bufalo Street
- Site 4 - 1103 Chicago Street
- Site 5 - 1200 Buffalo Street



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

Stantec

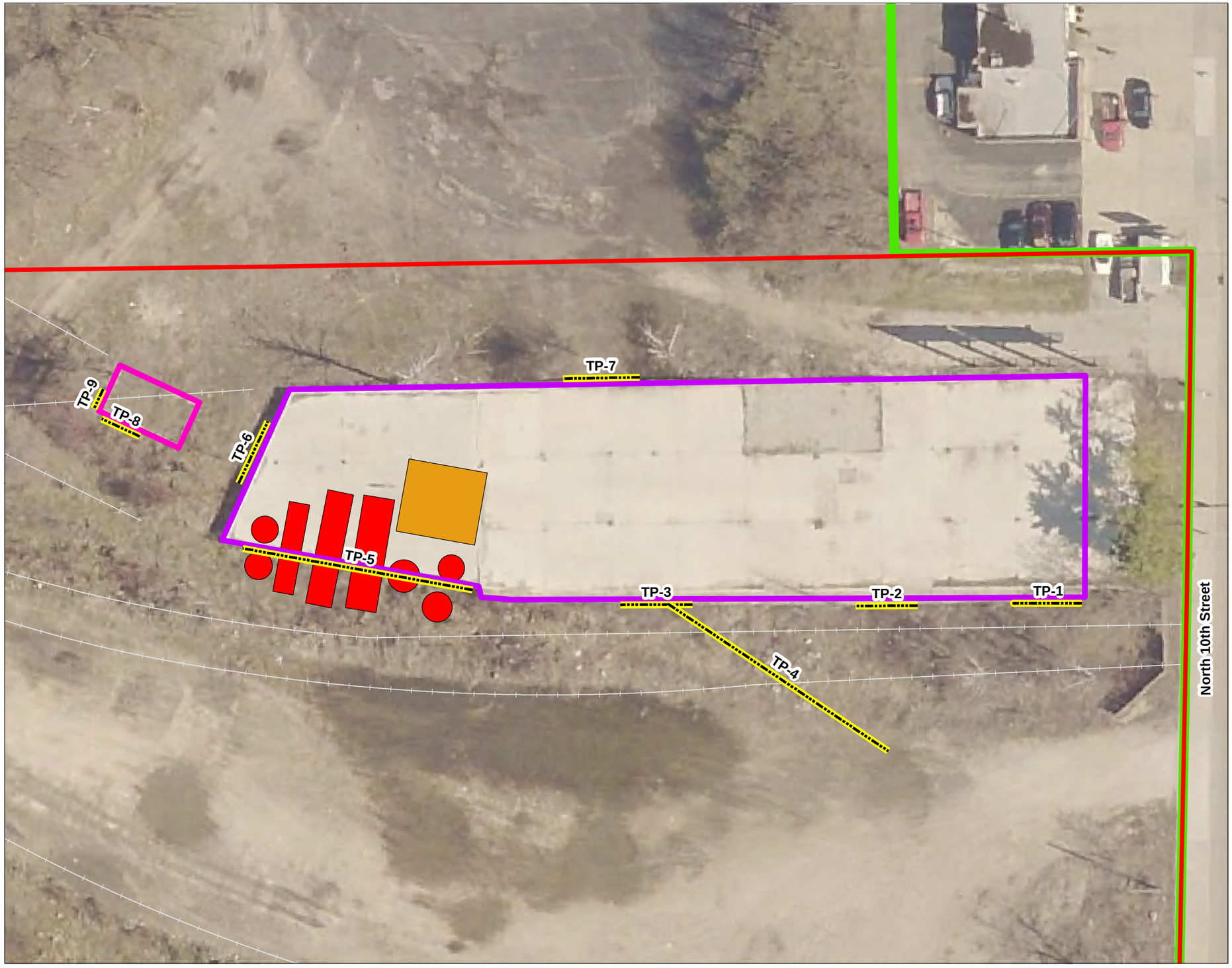


Figure No.
3

Title
Site Features and Test Pit Locations

Client/Project
River Point District, Site 1
200 North 10th Street
City of Manitowoc

0 25 50 Feet

Prepared by HLB on 3/25/2020

N

Legend

- River Point District
- Test Pits
- Site 1 - 200 North 10th Street

Prior Site Features (Stantec, 2019)

- Oil House (1)
- Oil Tank (AST) (8)
- Historic Railroad Spurs

Removed Features

- Foundation and Footing
- Former Warehouse Slab

Notes

1. Coordinate System: NAD 1983 StatePlane Wisconsin South FIPS 4803 Feet
2. Historic Site features illustrated on this figure were digitized from multiple historic maps/sources, including City Assessor files, WDNR files, and Sanborn (R) Fire Insurance Maps. These features are provided for illustration purposes only; Stantec makes no warranty as to the accuracy of these features.
3. Orthophotograph: Manitowoc County, 2017

Stantec

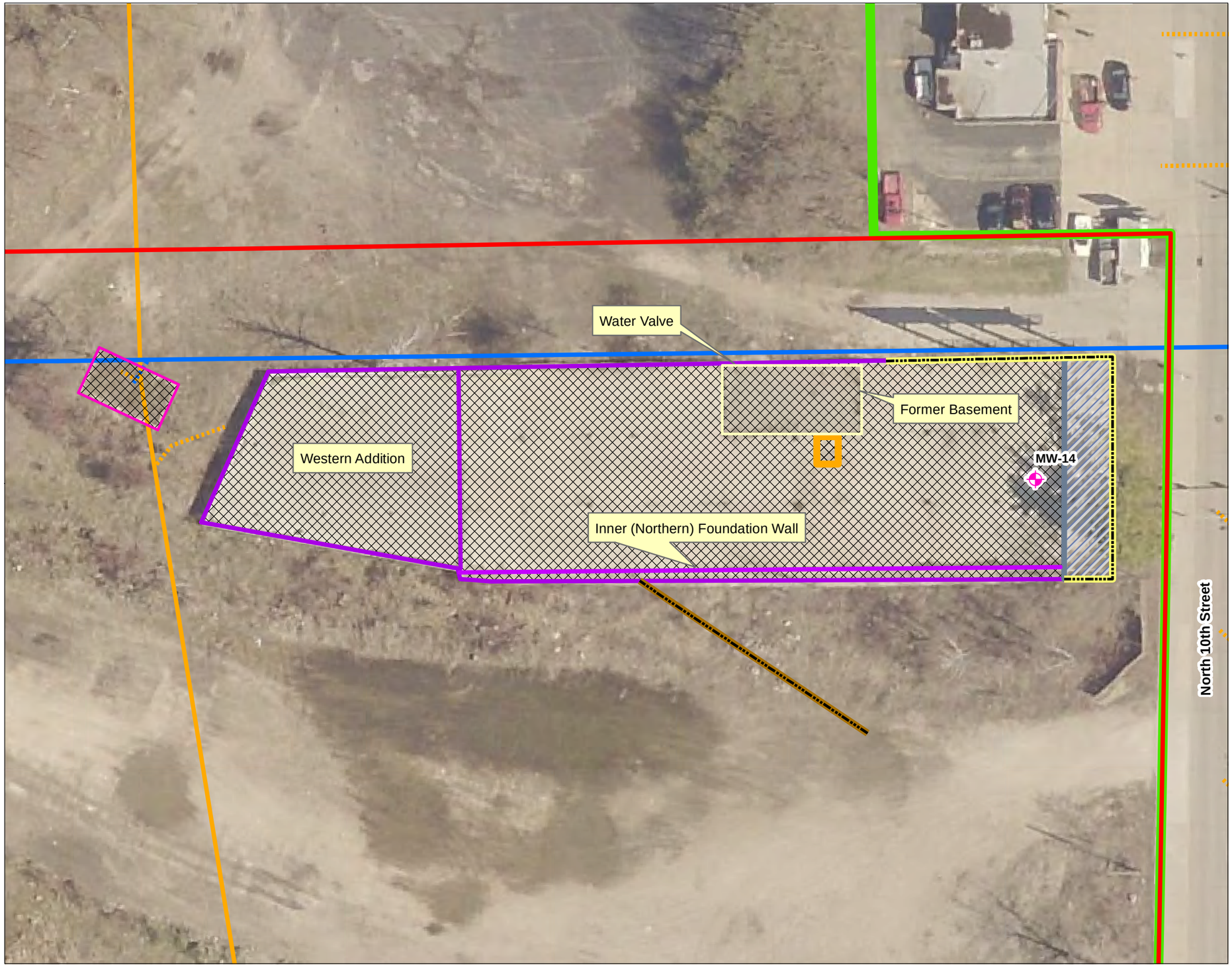


Figure No.
4

Title
Removed and Remaining Site Features

Client/Project
River Point District, Site 1
200 North 10th Street
City of Manitowoc

0 25 50 Feet

Prepared by HLB on 9/28/2020

N

Legend

- River Point District
- Site 1 - 200 North 10th Street

Remaining Features
- Concrete Slab
- Foundation Wall and Footing
- Wooden Pipe Chase
- Potable Water Conveyance System
- Potable Water Lateral
- Sanitary Conveyance System
- Sanitary Lateral

Removed Features
- Foundation and Footing (Slab Previously Removed)
- Concrete Slab and Foundation Wall (Footing Remains at 582.87 ft. AMSL)
- Concrete Slab and Foundation Wall (Footing Remains at 586.24 ft. AMSL)
- Sealed Monitoring Well

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

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ATTACHMENT A
PHOTOGRAPHIC LOG

Stantec

Photographic Log

Client:	**City of Manitowoc**	**Project:**	**193707885**
Site Name:	**River Point District, Site 1**	**Site Location:**	**200 North 10th Street, Manitowoc, WI**

Photograph ID: 1

Photo Location:
Warehouse slab - west end

Direction:
Looking east

Survey Date:
8/13/2020

Comments:
Warehouse slab condition prior to demolition

Photograph ID: 2

Photo Location:
Warehouse slab - southeast corner

Direction:
Looking northwest

Survey Date:
8/13/2020

Comments:
Measuring the depth to the top/bottom of the footing in test pit TP-1

Client:	**City of Manitowoc**	**Project:**	**193707885**
Site Name:	**River Point District, Site 1**	**Site Location:**	**200 North 10th Street, Manitowoc, WI**

Photograph ID: 3 **Photo Location:** Warehouse slab - south central **Direction:** Looking south **Survey Date:** 8/13/2020 **Comments:** Piping was found in test pit TP-3 performed along the south-central portion of the warehouse slab, running at a 45 degree angle from the building (towards the southeast)	
Photograph ID: 4 **Photo Location:** Warehouse slab - south central **Direction:** Looking south **Survey Date:** 8/13/2020 **Comments:** Performing test pit TP-4 to follow the piping discovered in TP-3	

Client:	**City of Manitowoc**	**Project:**	**193707885**
Site Name:	**River Point District, Site 1**	**Site Location:**	**200 North 10th Street, Manitowoc, WI**

Photograph ID: 5 **Photo Location:** Warehouse slab - south central **Direction:** Looking southeast **Survey Date:** 8/13/2020 **Comments:** Performing test pit TP-4 to follow the piping discovered in TP-3	
Photograph ID: 6 **Photo Location:** TP-4 - central **Direction:** **Survey Date:** 8/13/2020 **Comments:** The piping in TP-4 (one 2" and one 4" pipe, approximately three feet below grade) was encased on all sides with wood planks	

Client:	**City of Manitowoc**	**Project:**	**193707885**
Site Name:	**River Point District, Site 1**	**Site Location:**	**200 North 10th Street, Manitowoc, WI**

Photograph ID: 7 **Photo Location:** TP-4 - southeast end **Direction:** Looking northwest **Survey Date:** 8/13/2020 **Comments:** The piping in TP-4 (one 2" and one 4" pipe, approximately three feet below grade) was encased on all sides with wood planks	
Photograph ID: 8 **Photo Location:** Warehouse slab - south central **Direction:** Looking southeast **Survey Date:** 8/13/2020 **Comments:** Test pit TP-4 was backfilled for site safety (as were all other test pits); the location of the pipe was marked with lath and captured by a professional land surveyor	

Client:	**City of Manitowoc**	**Project:**	**193707885**
Site Name:	**River Point District, Site 1**	**Site Location:**	**200 North 10th Street, Manitowoc, WI**

Photograph ID: 9 **Photo Location:** Warehouse slab - southwest end **Direction:** Looking south **Survey Date:** 8/13/2020 **Comments:** Performing test pit TP-5; no piping or petroleum infrastructure was observed in this test pit	
Photograph ID: 10 **Photo Location:** Warehouse slab - west end **Direction:** Looking northeast **Survey Date:** 8/14/2020 **Comments:** Performing test pit TP-6; no piping or petroleum infrastructure was observed in this test pit	

Client:	**City of Manitowoc**	**Project:**	**193707885**
Site Name:	**River Point District, Site 1**	**Site Location:**	**200 North 10th Street, Manitowoc, WI**

Photograph ID: 11 **Photo Location:** North of small foundation remnant **Direction:** Looking south **Survey Date:** 8/14/2020 **Comments:** Performing test pit TP-8 to evaluate the depths of remnant foundation features	
Photograph ID: 12 **Photo Location:** Small foundation remnant - east end **Direction:** Looking west **Survey Date:** 8/14/2020 **Comments:** Test pits TP-8 and TP-9 performed at the west corner of the remnant foundation revealed that only an 18" concrete foundation remained around the perimeter of the area, supported by concrete piers	

Client:	**City of Manitowoc**	**Project:**	**193707885**
Site Name:	**River Point District, Site 1**	**Site Location:**	**200 North 10th Street, Manitowoc, WI**

Photograph ID: 13 **Photo Location:** West of small foundation remnant **Direction:** Looking east **Survey Date:** 8/14/2020 **Comments:** Measuring the depth of the pier at the west corner of the foundation (visible behind the measuring tape)	
Photograph ID: 14 **Photo Location:** Warehouse slab - west end **Direction:** **Survey Date:** 8/17/2020 **Comments:** The entire warehouse floor slab was 6 - 8" thick, and contained wire mesh. Brown fill sand was present beneath the slab in all areas except for the former basement	

Client:	**City of Manitowoc**	**Project:**	**193707885**
Site Name:	**River Point District, Site 1**	**Site Location:**	**200 North 10th Street, Manitowoc, WI**

Photograph ID: 15

Photo Location:
Warehouse slab - east end

Direction:
Looking west

Survey Date:
8/17/2020

Comments:
Removing the warehouse floor slab. The entire floor was removed except for the eastern-most 20 feet so as not to undermine the east-adjacent sidewalk

Photograph ID: 16

Photo Location:
Warehouse slab - east end

Direction:
Looking northwest

Survey Date:
8/17/2020

Comments:
Prior to disturbing the area, monitoring well MW-14 was abandoned by removing the top five feet of riser and filling to the top with bentonite

Client:	**City of Manitowoc**	**Project:**	**193707885**
Site Name:	**River Point District, Site 1**	**Site Location:**	**200 North 10th Street, Manitowoc, WI**

Photograph ID: 17 **Photo Location:** Warehouse slab - east end **Direction:** Looking west **Survey Date:** 8/17/2020 **Comments:** After abandoning MW-14, the green protective pipe was removed	
Photograph ID: 18 **Photo Location:** Warehouse slab - east end **Direction:** **Survey Date:** 8/17/2020 **Comments:** The green protective pipe that formerly housed MW-14	

Client:	**City of Manitowoc**	**Project:**	**193707885**
Site Name:	**River Point District, Site 1**	**Site Location:**	**200 North 10th Street, Manitowoc, WI**

Photograph ID: 19 **Photo Location:** Warehouse slab - southeast corner **Direction:** Looking southwest **Survey Date:** 8/17/2020 **Comments:** Revealing the foundation walls to facilitate removal. All perimeter foundation walls were removed, leaving only the footings in place	
Photograph ID: 20 **Photo Location:** Warehouse slab - southeast corner **Direction:** Looking southwest **Survey Date:** 8/17/2020 **Comments:** Removing the foundation walls	

Client:	**City of Manitowoc**	**Project:**	**193707885**
Site Name:	**River Point District, Site 1**	**Site Location:**	**200 North 10th Street, Manitowoc, WI**

Photograph ID: 21 **Photo Location:** Warehouse slab - southeast corner **Direction:** Looking southwest **Survey Date:** 8/17/2020 **Comments:** Area after foundation walls were removed	
Photograph ID: 22 **Photo Location:** Warehouse slab - southeast corner **Direction:** Looking south **Survey Date:** 8/17/2020 **Comments:** Metal ductwork between 6-8" in diameter was found throughout the slab fill areas, and largely left in place	

Client:	**City of Manitowoc**	**Project:**	**193707885**
Site Name:	**River Point District, Site 1**	**Site Location:**	**200 North 10th Street, Manitowoc, WI**

Photograph ID: 23 **Photo Location:** Warehouse slab - small, south-adjoining room to former basement **Direction:** Looking southwest **Survey Date:** 8/17/2020 **Comments:** A small, approximately 68 square foot room was found south-adjacent to the former basement. The room had 8" thick walls, and a 6" thick concrete floor	
Photograph ID: 24 **Photo Location:** Warehouse slab - small, south-adjoining room to former basement **Direction:** Looking northeast **Survey Date:** 8/17/2020 **Comments:** Revealing the small south-adjoining room to the former basement	

Client:	**City of Manitowoc**	**Project:**	**193707885**
Site Name:	**River Point District, Site 1**	**Site Location:**	**200 North 10th Street, Manitowoc, WI**

Photograph ID: 25

Photo Location:
Warehouse slab - small, south-adjoining room to former basement

Direction:
Looking southeast

Survey Date:
8/17/2020

Comments:
Removing the walls of the small south-adjoining room to the former basement. All features except for the footings were removed in this area

Photograph ID: 26

Photo Location:
Warehouse slab - former basement

Direction:
Looking northeast

Survey Date:
8/17/2020

Comments:
A former basement (approximately 1,125 square feet) was encountered along the northern end of the warehouse slab

Client:	**City of Manitowoc**	**Project:**	**193707885**
Site Name:	**River Point District, Site 1**	**Site Location:**	**200 North 10th Street, Manitowoc, WI**

Photograph ID: 27

Photo Location:
Warehouse slab - former basement

Direction:
Looking northwest

Survey Date:
8/17/2020

Comments:
The former basement was found to be filled with brick and cinderblock debris, and was the only portion of the warehouse slab that did not have fill sand backfill. The debris was left in place following the removal of the foundation features

Photograph ID: 28

Photo Location:
Warehouse slab - former basement

Direction:

Survey Date:
8/17/2020

Comments:
Brick and cinderblock fill encountered in the former basement

Client:	**City of Manitowoc**	**Project:**	**193707885**
Site Name:	**River Point District, Site 1**	**Site Location:**	**200 North 10th Street, Manitowoc, WI**

Photograph ID: 29

Photo Location:
Warehouse slab - former basement

Direction:
Looking east

Survey Date:
8/17/2020

Comments:
The former basement brick and cinderblock fill was left in place, but covered with a couple feet of surrounding fill sand to keep the area level/for site safety

Photograph ID: 30

Photo Location:
Warehouse slab - former basement

Direction:
Looking east

Survey Date:
8/17/2020

Comments:
The former basement brick and cinderblock fill was left in place, but covered with a couple feet of surrounding fill sand to keep the area level/for site safety

Client:	**City of Manitowoc**	**Project:**	**193707885**
Site Name:	**River Point District, Site 1**	**Site Location:**	**200 North 10th Street, Manitowoc, WI**

Photograph ID: 31

Photo Location:
Warehouse slab - south end

Direction:
Looking west

Survey Date:
8/18/2020

Comments:
A former loading dock area along the eastern two thirds of the southern warehouse slab was found to have two foundation walls 4'0" apart (the width of the loading dock). The inner (northern) foundation wall was 12" thick, and was the same wall that extended west past the loading dock area. The outer (southern) foundation wall was 8" thick; both walls were removed, leaving only the footings in place

Client:	**City of Manitowoc**	**Project:**	**193707885**
Site Name:	**River Point District, Site 1**	**Site Location:**	**200 North 10th Street, Manitowoc, WI**

Photograph ID: 32 **Photo Location:** Warehouse slab - north end **Direction:** Looking south **Survey Date:** 8/18/2020 **Comments:** A water valve was revealed during the removal of the former basement foundation walls; the water valve was left in place and thoroughly marked in the presence of an Xcel Energy representative	
Photograph ID: 33 **Photo Location:** Warehouse slab - west end **Direction:** Looking southwest **Survey Date:** 8/18/2020 **Comments:** Removing the foundation walls in the western addition (the western-most 70 feet of the warehouse slab); the foundation walls of the western addition contained rebar and was sorted separately from the rest of the concrete	

Client:	**City of Manitowoc**	**Project:**	**193707885**
Site Name:	**River Point District, Site 1**	**Site Location:**	**200 North 10th Street, Manitowoc, WI**

Photograph ID: 34

Photo Location:
Western addition - southwest corner

Direction:
Looking south

Survey Date:
8/18/2020

Comments:
Rebar visible in the walls of the western addition (approximately 1/3" in diameter)

Photograph ID: 35

Photo Location:
Western addition - southeast corner

Direction:
Looking north

Survey Date:
8/19/2020

Comments:
The eastern foundation wall of the western addition (running north-south through the warehouse slab building) was also revealed and removed, leaving only the footing behind

Client:	**City of Manitowoc**	**Project:**	**193707885**
Site Name:	**River Point District, Site 1**	**Site Location:**	**200 North 10th Street, Manitowoc, WI**

Photograph ID: 36 **Photo Location:** Western addition - east end **Direction:** Looking west **Survey Date:** 8/19/2020 **Comments:** Removing the eastern foundation wall of the western addition	
Photograph ID: 37 **Photo Location:** Western addition - northwest corner **Direction:** Looking south **Survey Date:** 8/19/2020 **Comments:** Marking the top of the footing left in place with a PVC pipe, so that it could be captured by a professional land surveyor	

Client:	**City of Manitowoc**	**Project:**	**193707885**
Site Name:	**River Point District, Site 1**	**Site Location:**	**200 North 10th Street, Manitowoc, WI**

Photograph ID: 38 **Photo Location:** Small foundation remnant - west end **Direction:** Looking east **Survey Date:** 8/19/2020 **Comments:** Removing the small foundation remnant present west of the warehouse slab (approximately 92 linear feet with rebar)	
Photograph ID: 39 **Photo Location:** Small foundation remnant - west end **Direction:** Looking northeast **Survey Date:** 8/19/2020 **Comments:** Removing the small foundation remnant present west of the warehouse slab (approximately 92 linear feet with rebar)	

Client:	**City of Manitowoc**	**Project:**	**193707885**
Site Name:	**River Point District, Site 1**	**Site Location:**	**200 North 10th Street, Manitowoc, WI**

Photograph ID: 40 **Photo Location:** Small foundation remnant - south end **Direction:** **Survey Date:** 8/19/2020 **Comments:** Several concrete piers (1'x1') with 2'x2' footings were also excavated and removed from the area	
Photograph ID: 41 **Photo Location:** Northwest of former warehouse slab **Direction:** Looking south **Survey Date:** 8/20/2020 **Comments:** Separating as much concrete as practicable from the rebar	

Client:	**City of Manitowoc**	**Project:**	**193707885**
Site Name:	**River Point District, Site 1**	**Site Location:**	**200 North 10th Street, Manitowoc, WI**

Photograph ID: 42 **Photo Location:** Northwest of former warehouse slab **Direction:** Looking south **Survey Date:** 8/20/2020 **Comments:** The stockpile of concrete staged to be crushed onsite by Vinton	
Photograph ID: 43 **Photo Location:** Northwest of former warehouse slab **Direction:** Looking southeast **Survey Date:** 8/20/2020 **Comments:** The stockpile of concrete staged to be crushed onsite by Vinton	

Client:	**City of Manitowoc**	**Project:**	**193707885**
Site Name:	**River Point District, Site 1**	**Site Location:**	**200 North 10th Street, Manitowoc, WI**

Photograph ID: 44 **Photo Location:** Northwest of former warehouse slab **Direction:** Looking south **Survey Date:** 9/2/2020 **Comments:** The stockpile of concrete being crushed onsite by Vinton	
Photograph ID: 45 **Photo Location:** Northwest of former warehouse slab **Direction:** Looking southwest **Survey Date:** 9/2/2020 **Comments:** The stockpile of concrete (left) being crushed onsite by Vinton. The stockpile on the right contained rebar and was hauled offsite by Veit on September 16, 2020.	

Client:	**City of Manitowoc**	**Project:**	**193707885**
Site Name:	**River Point District, Site 1**	**Site Location:**	**200 North 10th Street, Manitowoc, WI**

Photograph ID: 46 **Photo Location:** Northwest of former warehouse slab **Direction:** Looking south **Survey Date:** 9/29/2020 **Comments:** Site 1 conditions, post-crushing of the stockpile by Vinton	
Photograph ID: 47 **Photo Location:** Northwest of former warehouse slab **Direction:** Looking southwest **Survey Date:** 9/29/2020 **Comments:** Site 1 conditions, post-crushing of the stockpile by Vinton; the crushed gravel is staged near the northwest corner of Site 1, and the former stockpile that contained reinforced concrete has been removed	

Client:	**City of Manitowoc**	**Project:**	**193707885**
Site Name:	**River Point District, Site 1**	**Site Location:**	**200 North 10th Street, Manitowoc, WI**

Photograph ID: 48

Photo Location:
West of former warehouse slab

Direction:
Looking east

Survey Date:
8/20/2020

Comments:
Site 1 conditions of the former warehouse slab post-demolition

ATTACHMENT B
MW-14 WELL ABANDONMENT FORM

State of Wis., Dept. of Natural Resources
dnr.wi.gov

Well / Drillhole / Borehole Filling & Sealing Report

Form 3300-005 (R 4/2015)

Notice: Completion of this report is required by chs. 160, 281, 283, 289, 291-293, 295, and 299, Wis. Stats., and chs. NR 141 and 812, Wis. Adm. Code. In accordance with chs. 281, 289, 291-293, 295, and 299, Wis. Stats., failure to file this form may result in a forfeiture of between $10-25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be used for any other purpose. Return form to the appropriate DNR office and bureau. See instructions on reverse for more information.

☐ **Verification Only of Fill and Seal**

Route to DNR Bureau:
☐ Drinking Water ☐ Watershed/Wastewater ☒ Remediation/Redevelopment
☐ Waste Management ☐ Other: _____

1. Well Location Information

County	WI Unique Well # of Removed Well	Hicap #
MANITOWOC	_ _ _ _ _ _	MW-14

Latitude / Longitude (see instructions)	Format Code	Method Code
44.093659 N	☒ DD	☐ GPS008
-87.660885 W	☐ DDM	☐ SCR002 ☐ OTH001

¼ / ¼	¼	Section	Township	Range
NE	NE	30	19 N	24 ☒ E ☐ W
or Gov't Lot #				

Well Street Address: 200 N 10TH ST. OR 1110 BUFFALO ST.

Well City, Village or Town	Well ZIP Code
MANITOWOC	54220

Subdivision Name	Lot #
—	—

Reason for Removal from Service	WI Unique Well # of Replacement Well
SITE REDEVELOPMENT	N/A

2. Facility / Owner Information

Facility Name: RIVERPOINT DISTRICT

Facility ID (FID or PWS): —

License/Permit/Monitoring #: —

Original Well Owner: —

Present Well Owner: CITY OF MANITOWOC

Mailing Address of Present Owner: 900 QUAY STREET

City of Present Owner	State	ZIP Code
MANITOWOC	WI	54220

3. Filled & Sealed Well / Drillhole / Borehole Information

☒ Monitoring Well ☐ Water Well ☐ Borehole / Drillhole

Original Construction Date (mm/dd/yyyy):

If a Well Construction Report is available, please attach.

Construction Type:
☒ Drilled ☐ Driven (Sandpoint) ☐ Dug
☐ Other (specify): _____

Formation Type:
☒ Unconsolidated Formation ☐ Bedrock

Total Well Depth From Ground Surface (ft.)	Casing Diameter (in.)
14.66 (FROM TOP OF CASING)	2.00

Lower Drillhole Diameter (in.)	Casing Depth (ft.)
4.00	14.66

Was well annular space grouted? ☐ Yes ☒ No ☐ Unknown

If yes, to what depth (feet)?	Depth to Water (feet)
N/A	6.65

4. Pump, Liner, Screen, Casing & Sealing Material

Pump and piping removed?	☐ Yes	☐ No	☒ N/A
Liner(s) removed?	☐ Yes	☐ No	☒ N/A
Liner(s) perforated?	☐ Yes	☐ No	☒ N/A
Screen removed?	☐ Yes	☒ No	☐ N/A
Casing left in place?	☒ Yes	☐ No	☐ N/A
Was casing cut off below surface? (5' CUT OFF)	☒ Yes	☐ No	☐ N/A
Did sealing material rise to surface?	☒ Yes	☐ No	☐ N/A
Did material settle after 24 hours?	☐ Yes	☒ No	☐ N/A
If yes, was hole retopped?	☐ Yes	☐ No	☒ N/A
If bentonite chips were used, were they hydrated with water from a known safe source?	☒ Yes	☐ No	☐ N/A

Required Method of Placing Sealing Material
☐ Conductor Pipe-Gravity ☐ Conductor Pipe-Pumped
☒ Screened & Poured (Bentonite Chips) ☐ Other (Explain): _____

Sealing Materials
☐ Neat Cement Grout ☐ Concrete
☐ Sand-Cement (Concrete) Grout ☒ Bentonite Chips

For Monitoring Wells and Monitoring Well Boreholes Only:
☐ Bentonite Chips ☐ Bentonite - Cement Grout
☐ Granular Bentonite ☐ Bentonite - Sand Slurry

5. Material Used to Fill Well / Drillhole

	From (ft.)	To (ft.)	No. Yards, Sacks Sealant or Volume (circle one)	Mix Ratio or Mud Weight
BENTONITE CHIPS	Surface	14.66'	1/3 SACK	N/A

6. Comments

7. Supervision of Work

Name of Person or Firm Doing Filling & Sealing	License #	Date of Filling & Sealing or Verification (mm/dd/yyyy)
WHITNEY CULL, STANTEC		08/17/2020

Street or Route	Telephone Number
12075 CORPORATE PKWY, #200	(262) 219-4746

City	State	ZIP Code	Signature of Person Doing Work	Date Signed
MEQUON	WI	53092		8/17/2020

DNR Use Only

Date Received	Noted By

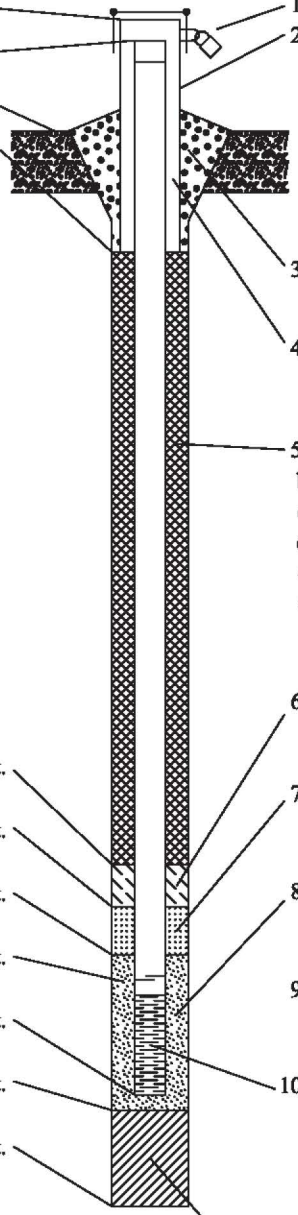
Comments:

State of Wisconsin
Department of Natural Resources

Route To: Watershed/Wastewater ☐ Waste Management ☐ Remediation/Redevelopment ☒ Other ☐

MONITORING WELL CONSTRUCTION
Form 4400-113A Rev. 7-98

Facility/Project Name: CN Manitowoc, 200 N. 10th Street	Local Grid Location of Well: ☐ N. ft. ☐ S. ☐ E. ft. ☐ W.	Well Name: 1 MW-14
Facility License, Permit or Monitoring No.: 60615404	Local Grid Origin ☐ (estimated: ☐) or Well Location ☒ Lat. ° ' " Long. ° ' " or	Wis. Unique Well No. / DNR Well Number
Facility ID	St. Plane ft. N, ft. E. S/C/N	Date Well Installed: 03/04/2020
Type of Well	Section Location of Waste/Source: ☐ E ☐ W 1/4 of 1/4 of Sec. , T. N, R.	Well Installed By: (Person's Name and Firm): Tony Kapugi / Onsite Environmental
Distance from Waste/Source ft. / Enf. Stds. Apply ☐	Location of Well Relative to Waste/Source: u ☐ Upgradient s ☐ Sidegradient d ☐ Downgradient n ☐ Not Known	Gov. Lot Number



A. Protective pipe, top elevation ft. MSL
B. Well casing, top elevation ft. MSL
C. Land surface elevation ft. MSL
D. Surface seal, bottom ft. MSL or ft.

12. USCS classification of soil near screen:
GP ☐ GM ☐ GC ☐ GW ☐ SW ☐ SP ☐
SM ☐ SC ☐ ML ☐ MH ☐ CL ☐ CH ☐
Bedrock ☐

13. Sieve analysis attached? ☐ Yes ☒ No

14. Drilling method used: Rotary ☐ 50
Hollow Stem Auger ☒ 41
Other ☐

15. Drilling fluid used: Water ☐ 02 Air ☐ 01
Drilling Mud ☐ 03 None ☒ 99

16. Drilling additives used? ☐ Yes ☒ No
Describe

17. Source of water (attach analysis, if required):

E. Bentonite seal, top ft. MSL or 0.20 ft.
F. Fine sand, top ft. MSL or ft.
G. Filter pack, top ft. MSL or 2.50 ft.
H. Screen joint, top ft. MSL or 3.00 ft.
I. Well bottom ft. MSL or 13.50 ft.
J. Filter pack, bottom ft. MSL or 13.50 ft.
K. Borehole, bottom ft. MSL or 13.50 ft.
L. Borehole, diameter 4.50 in.
M. O.D. well casing in.
N. I.D. well casing 2.00 in.

1. Cap and lock? ☒ Yes ☐ No
2. Protective cover pipe:
a. Inside diameter: 4.0 in.
b. Length: 5.0 ft.
c. Material: Steel ☒ 04
Other ☐
d. Additional protection? ☐ Yes ☒ No
If yes, describe:
3. Surface seal: Bentonite ☐ 30
Concrete ☐ 01
Other ☐
4. Material between well casing and protective pipe:
Bentonite ☒ 30
Sand Other ☐
5. Annular space seal: a. Granular/Chipped Bentonite ☐ 33
b. Lbs/gal mud weight . . . Bentonite-sand slurry ☐ 35
c. Lbs/gal mud weight . . . Bentonite slurry ☐ 31
d. % Bentonite . . . Bentonite-cement grout ☐ 50
e. Ft^3 volume added for any of the above
f. How installed: Tremie ☐ 01
Tremie pumped ☐ 02
Gravity ☐ 08
6. Bentonite seal: a. Bentonite granules ☐ 33
b. ☐ 1/4 in. ☒ 3/8 in. ☐ 1/2 in. Bentonite chips ☒ 32
c. Halliburton Hole Plug 0.5 ft^3 Other ☐
7. Fine sand material: Manufacturer, product name & mesh size
a.
b. Volume added ft^3
8. Filter pack material: Manufacturer, product name & mesh size
a. Red FlintSand and Gravel
b. Volume added 3 ft^3
9. Well casing: Flush threaded PVC schedule 40 ☐ 23
Flush threaded PVC schedule 80 ☐ 24
Other ☐
10. Screen material: PVC Screen
a. Screen Type: Factory cut ☒ 11
Continuous slot ☐ 01
Other ☐
b. Manufacturer
c. Slot size: in.
d. Slotted length: ft.
11. Backfill material (below filter pack): None ☐ 14
Other ☒

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature: Jacob Dean Firm: AECOM Tel: Fax:

Please complete both Forms 4400-113A and 4400-113B and return them to the appropriate DNR office and bureau. Completion of these reports is required by chs. 160, 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats., and ch. NR 141, Wis. Adm. Code. In accordance with chs. 281, 289, 291, 292, 293, 295, and 299, Wis. Stats., failure to file these forms may result in a forfeiture of between $10 and $25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on these forms is not intended to be used for any other purpose. NOTE: See the instructions for more information, including where the completed forms should be sent.