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

December 11, 2020

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

Reference: Construction Documentation Report for Demolition and Removal of Structural Impediments, River Point District – Site 3
1110 Buffalo Street
Manitowoc, Wisconsin 54220
WDNR BRRTS ID: 07-36-583000 (LGU Exemption)
WDNR BRRTS ID: 03-36-001962 (Closed LUST)
WDNR BRRTS ID: 02-36-585491 (Open ERP)

Dear Mr. Tegen:

Stantec Consulting Services Inc. (Stantec) prepared this construction documentation report on behalf of the Community Development Authority of the City of Manitowoc (CDA; current property owner) following the demolition and removal of structural impediments at Site 3 of the River Point District redevelopment project located at 1110 Buffalo 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 3 is illustrated on Figure 2.

Descriptions of work performed for the assessment, demolition, and removal of the structural impediments at Site 3 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 3 of the River Point District consists of 5.1 acres of land within the larger 20.1-acre River Point District.

Prior Ownership/Use

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 3

The Stantec (2019) Phase I ESA notes that large portions of Site 3 were leased to a variety of bulk fuel storage companies operating under a variety of names during the early/mid-20th Century, including: Stephani-Strupp Oil Co, William H. Froehlich, Shell Oil, Lake Park Oil, Spindler Co., and the Standard Oil Company. Consolidation of bulk petroleum storage operations began at the Property in 1969 by the "Wingfield Oil Company" with continued consolidation through 1975. The Wingfield Oil Company was renamed "Holmes Oil Corporation" on August 4, 1976. The Holmes Oil Corporation appears to have vacated the Property concurrent with reported removal of the final petroleum aboveground Storage Tanks (ASTs) by 1997.

Records indicate most of the petroleum stored/handled at Site 3 was fuel oil. However, state records indicate a significant quantity of leaded and unleaded gasoline, diesel fuel, kerosene, and used/waste motor oil may have been stored in bulk at the Property. It would be impractical to document specific fueling/storage operations dating across roughly 80 years of bulk petroleum storage at Site 3. The locations of known historic features associated with bulk fuel storage by tenants are illustrated on Figure 3 and include 34 ASTs, 12 underground storage tanks (USTs), seven pump houses, four oil houses, and associated pipe runs.

Current Ownership

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 CDA on March 21, 2019. The current owner acquired the Property on April 12, 2019 for the purpose of blight elimination and 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 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.

Proposed Redevelopment

Current redevelopment plans include development of Site 3 for multi-family reuse. 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. As the concrete oil/pump house slabs and other petroleum 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.

Reference: Construction Documentation Report for Demolition and Removal of Structural Impediments, River Point District – Site 3

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.

Task 1 – Pre-Demolition Investigation and Soil Sampling

Overview and Methods

Under contract with Stantec, Veit & Company, Inc. (Veit) completed approximately 225 linear feet of test trenches/pits around the perimeters of each known oil/pump house 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 to assess foundation features on Site 3 is illustrated on Figure 4, 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 3 as outlined in Task 3 of the Stantec (2020b) Workplan. Each test pit excavation was immediately backfilled with removed spoil for site safety.

Following removal of identified impediments, approximately 450 linear feet of additional exploratory test pits were also completed in the vicinity of known former aboveground storage tanks (ASTs) and underground storage tank (USTs) on Site 3 to determine if tanks or tank infrastructure (i.e., piping, saddles) remain below ground surface. The location of each exploratory test pit and the features they were performed to investigate are illustrated on Figure 5, and a summary of exploratory test pit observations is provided on Table 1.

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

Results – Foundation Feature Test Pits

The large oil house slab in the southeast corner of Site 3 was approximately 2.25 feet (2.25') above the surrounding ground surface. On August 14th, 2020, Stantec installed three test pits to assess foundation features along the perimeter of the large oil house slab (TP-10 through TP-12) and noted the depth of the footing was consistent from the top of the concrete for the entire slab (3.75' to the top of the footing from the top of the concrete, and 4.75' to the bottom of the footing from the top of the concrete). The footings were approximately 2.25' wide (Attachment A, Photograph No. 1). The oil house slab was found to have a 6-inch (6") to 8" slab thickness with "pencil rod" wire mesh reinforcement (Attachment A, Photograph No. 2). The northern 15 feet of the large oil house slab protruded from the rest of the structure and was visibly hollow beneath and supported by concrete piers. No piping, remaining petroleum infrastructure or evidence of petroleum contamination was observed in test pits TP-10 through TP-12.

Reference: Construction Documentation Report for Demolition and Removal of Structural Impediments, River Point District – Site 3

Stantec completed five test pits (TP-13 through TP-17) in areas of known prior oil or pump house operations on the north end of Site 3 where foundation slabs were visible at or above the ground surface. A summary of observed foundation features (foundation wall and/or footing depths, slab thicknesses, etc.) in association with these test pits is provided on Table 1. No piping or remaining petroleum infrastructure was observed in these test pits; however, evidence of residual petroleum impacts to soil was observed three feet below ground surface in test pit TP-17 performed on the southern edge of the small pump house slab on Site 3 (Attachment A, Photograph No. 5). Soil from TP-17 was screened and sampled for VOCs, PAHs, and RCRA metals. The analytical results will be provided in a future Phase II ESA for Site 3 as outlined in Task 3 of the Stantec (2020b) Workplan.

Three test pits (TP-18 through TP-20) were performed to investigate two foundation features identified in the field on August 14th, 2020 that were not previously documented due to presence of cover from dense vegetation or soil overburden:

- An approximately 600 square-foot slab (20' by 30' in dimension) identified in the wooded area near the center of Site 3 was investigated by test pits TP-18 and TP-19 and is assumed to be a former storage house (Attachment A, Photograph No. 6).

- A large concrete slab (approximately 72' x 13' in dimension) was identified on the western end of Site 3 while performing *exploratory test pit # 10* (discussed in the following section) to determine whether infrastructure associated with a former AST farm in the area remained below the ground surface (Attachment A, Photograph No. 7). The surface of the slab was at the ground surface, obscured by a few inches of vegetated soil overburden. The exact depth of the foundation walls associated with this slab could not be determined due to the combination of shallow groundwater (two to three feet below ground surface) and granular soils in the area, but were observed to extend to a minimum of six feet below ground surface. The slab was determined to be approximately 16" to 18" thick.

The locations of these field-identified foundations are illustrated on Figure 4. A summary of observed foundation features in association with these test pits is provided on Table 1. No piping or remaining petroleum infrastructure was observed in these test pits; however, evidence of residual petroleum impacts to soil was observed from one to six feet below ground surface in test pit TP-20 performed in the northwestern corner of the field-identified slab associated with a former AST farm (Attachment A, Photograph No. 8).

Results – Exploratory Test Pits

On August 14th, 2020, Stantec completed 16 exploratory test pits (approximately two to three feet deep) in the vicinity of known former AST farms and USTs on Site 3 to determine if concrete foundations, tanks or tank infrastructure (i.e., piping, saddles) remained below ground surface. A summary of observed features (ex. evidence of former tanks, media encountered, etc.) in association with these test pits is provided on Table 1. No piping or remaining petroleum

infrastructure was observed in these exploratory test pits; however, evidence of residual petroleum impacts was observed in 10 of the exploratory test pits performed (refer to Table 1). Buried concrete features were identified in four of the exploratory test pits performed on Site 3:

- *Exploratory test pit #8* – Large concrete blocks (approximately 4' x 4' x 20" in dimension), cinder blocks and piping with electrical conduit were encountered beneath the ground surface in the area of a former UST near the northwest corner of the Property (refer to Figures 5 and 6). The area was excavated to approximately six feet below ground surface and the concrete, cinder blocks and conduit were removed from the excavation (Attachment A, Photograph Nos. 11 - 13).

- *Exploratory test pit #10* – A large concrete slab (also assessed by TP-20 as discussed in the previous section) was encountered a few inches below the ground surface in the area of a former AST farm on the western end of Site 3 (Attachment A, Photograph No. 7). The foundation walls of the slab extend at least six feet below ground surface, and the slab is approximately 16" to 18" thick. This feature was not removed as part of this scope of work. The slab was surveyed by a Corner Point, LLC (Corner Point) professional land surveyor on August 25th, 2020 and is illustrated on Figure 6 as a remaining feature on Site 3.

- *Exploratory test pit #15* – A concrete wall with pieces approximately 4' x 3' x 12" in dimension was encountered on the very eastern end of the test pit performed in the area of a former AST farm. These blocks framed the western boundary of the east-adjacent gravel pad (refer to Figure 6). This wall was removed as a part of this excavation (Attachment A, Photograph No. 15). The northern, eastern, and southern boundaries of the gravel pad may also have concrete walls remaining in place but were not investigated or removed as part of this scope of work.

- *Exploratory test pit #16* – Three large concrete blocks measuring 14' x 7' x 12" , 9' x 6.5' x 20" and 8' x 3.5' x 16" in dimension (in the order encountered from east to west) were removed from the test pit preformed in the area of the former AST farm closest to the former large oil house (refer to Figure 6). Several smaller concrete blocks approximately 4' x 2' x 12" in dimension were also encountered and removed from the excavation. These concrete features may be remnants of saddles and/or supporting structures for the tanks in the former AST farm (Attachment A, Photograph Nos. 16 and 17).

Other features identified during exploratory test pit trenching on Site 3 include:

- While performing *exploratory test pit #8*, a small pile containing miscellaneous concrete curb-stop debris was discovered just west of the test pit excavation (Attachment A, Photograph No. 20).

- Fill material with Prussian blue coloration, which appeared to be consistent with ferrocyanide salts in oxide box waste was encountered approximately 2.5 feet below ground surface in *exploratory test pit #11*, and shallow groundwater encountered approximately three feet below ground surface was the same blue color (Attachment A, Photograph No. 14). The excavation was immediately backfilled, and the area was staked and roped off using "CAUTION" tape for site safety (Attachment A, Photograph No. 21).

- An unmarked water shut-off valve was encountered on the south end of *exploratory test pit #12*. The valve was exposed and marked so that its location could be documented for future work at Site 3 (Attachment A, Photograph No. 22).

These features were surveyed by a Corner Point professional land surveyor on August 25th, 2020 and are depicted on Figure 6 as remaining features on Site 3.

Task 2 – Removal of Structural Impediments and Petroleum Infrastructure

Overview and Methods

Stantec retained Veit as the demolition contractor for the removal of the concrete foundation features on Site 3 following the pre-demolition assessment performed on August 14th, 2020 as part of Task 1. Foundation features that remained following demolition were surveyed and recorded by a Corner Point professional land surveyor on August 25th, 2020 and are depicted on Figure 6.

Results

Between August 14th and 17th, 2020, Veit demolished the majority of the foundation features present on Site 3. The floor slab of the large former oil house was broken using an excavator with a hammer attachment and the concrete was stockpiled and staged in the northwest corner of Site 1. The entire large former oil house floor slab contained wire mesh (Attachment A, Photograph No. 2), and the foundation walls of the large former oil house and the walls of other foundation features on Site 3 contained rebar reinforcement approximately 1/3" in diameter (Attachment A, Photograph Nos. 18 and 19). No fill material (only void space) was present between the floor slab of the large former oil house (approximately 2.25' above ground surface) and the top of the ground surface. Other elevated foundation features present on Site 3 contained brown fill sand between the floor slab and the top of the ground surface.

Some foundation features on Site 3 were not able to be fully assessed until the start of demolition. The following items were discovered/addressed during demolition:

- A series of large concrete piers were found supporting the center of the large oil house slab. These piers were removed as part of slab demolition (Attachment A, Photograph No. 19).

- A semi-circular concrete remnant previously obscured by vegetation at the ground surface was discovered by Veit during the removal of foundation features in the northeast corner of Site 3 (Attachment A, Photograph No. 24). The concrete remnant contained rebar and is located just northwest of a former AST farm and *exploratory test pit #4*. It remains in place (coordinates: 302027.116 feet, 232478.601 feet) and its location is depicted on Figure 6.

- A vertical pipe approximately 2" in diameter was encountered in the southwest corner of the former storage building on Site 3 (Attachment A, Photograph No. 23). Electrical conduit was also present and connected to the outside of the pipe. The nature of the pipe is unknown; it remains in place (coordinates: 302028.599 feet, 232303.809 feet) and its location is depicted on Figure 6.

Except where noted above, floor slabs, footings and footing walls from each foundation feature assessed were removed as part of demolition on Site 3.

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. 25 - 27). 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' x 3' 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 (Attachment A, Photograph Nos. 28 and 29); the crushed concrete is currently staged on the northwest side of Site 1 pending future reuse (Attachment A, Photograph No. 30). The stockpile containing reinforced concrete was removed by Veit on September 16th, 2020 (Attachment A, Photograph Nos. 29 and 30). The approximate volumes of non-reinforced and reinforced concrete generated from the structural impediments removed from Site 3 were 618 cubic yards and 88 cubic yards, respectively.

Conditions of Monitoring Wells on Site 3

Three groundwater monitoring wells were affected during pre-demolition and demolition activities on Site 3:

- Shallow monitoring well MW-58 is located just west of the former pump house structure. The protective stick-up pipe was bumped by the excavator bucket while performing test pit TP-17. The protective pipe was scuffed, but the monitoring well casing within remains intact.

Reference: Construction Documentation Report for Demolition and Removal of Structural Impediments, River Point District – Site 3

- A bulldozer backed into MW-64 located north of the large former oil house slab in the southeast corner of Site 3 while removing a load of demolition debris. The protective pipe was scuffed, and the casing of the monitoring well was damaged, rendering the well inoperable. MW-64 was not abandoned as a part of this scope of work, but abandonment is planned in future activities at Site 3.

- A large tree fell onto monitoring well MW-72 during clearing activities performed to access the former oil house foundations in the northeast corner of Site 3. The protective pipe was damaged and appeared to have advanced a couple inches further into the ground from the impact of the felled tree, but the monitoring well casing within remains intact.

The top of casing and top of ground surface elevations for MW-58, MW-64 and MW-72 were recaptured by a Corner Point professional land surveyor on August 25, 2020. No other groundwater monitoring wells were impacted by pre-demolition or demolition activities on Site 3.

FUTURE CONSIDERATIONS

Most of the foundation features present on Site 3 (including floor slabs, footings and footing walls) have been removed. The only foundation features on Site 3 assessed as part of this scope of work that remain in place, as illustrated on Figure 6, are:

- The large concrete slab (approximately 72' x 13' in dimension) in the area of a former AST farm remains on the western end of Site 3 (as assessed by TP-20 and *exploratory test pit #10*).

- The northern, eastern, and southern foundation walls of the gravel pad encountered just east of *exploratory test pit #15* remain.

- A semi-circular concrete remnant containing rebar remains in the northeast corner of Site 3, just northwest of *exploratory test pit #4*.

Other features identified during demolition that remain on Site 3 that a future developer would need to consider, as illustrated on Figure 6, include:

- A small pile containing miscellaneous concrete curb-stop debris remains just west of *exploratory test pit #8*.

- Fill, which appears to be consistent with manufactured gas plant oxide box waste encountered approximately 2.5' below ground surface remains in the vicinity of *exploratory test pit #11*.

- An unmarked water shut-off valve is located on the south end of *exploratory test pit #12*, in the area of apparent oxide box waste.

Reference: Construction Documentation Report for Demolition and Removal of Structural Impediments, River Point District – Site 3

- A vertical pipe (the nature of which is unknown) remains in the southwest corner of the (removed) former storage building.

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

Regards,

STANTEC CONSULTING SERVICES INC.

Whitney Cull
Geological Engineer in Training
Whitney.Cull@stantec.com
(262) 219-4740

STANTEC CONSULTING SERVICES INC.

Harris L. Byers, Ph.D.
Sr. Brownfields Project Manager
Harris.Byers@stantec.com
(414) 581-6476

STANTEC CONSULTING SERVICES INC.

Richard J. Binder, P.G., CPG
QA/QC Manager
Rick.Binder@stantec.com

Enclosures: Table
Figures
Attachments

REFERENCES

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 3, 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 3 Test Pit Summary
Construction Documentation Report
River Point District, Site 3
1110 Buffalo Street, Manitowoc, WI

Test Pits - Performed to Assess Known or Field-Identified Foundations

Test Pit ID	Performed to Assess	Associated Sample Location	Top of Ground (Depth from top of concrete)	Top of Footing (Depth from top of concrete)	Bottom of Footing[1] (Depth from top of concrete)	Slab Thickness	Piping Encountered?	Petroleum Contamination Observed?	Trench Length
TP-10	Large Oil House Slab	SB-93/TW-93	2'3"	3'9"	4'9"	6 - 8"	No	No	20'
TP-11	Large Oil House Slab	SB-93/TW-93	2'3"	3'9"	4'9"	6 - 8"	No	No	30'
TP-12	Large Oil House Slab	SB-93/TW-93	2'3"	3'9"	4'9"	6 - 8"	No	No	20'
TP-13	Small Oil House Slab	-	0'0"	*	6'0"	18"	No	No	20'
TP-14	Small Oil House Slab	SB-88/TW-88	0'0" - 3'0"	5'2"	6'2"	18"	No	No	20'
TP-15	Small Oil House Slab	SB-88/TW-88	0'0" - 1'6"	5'4"	6'0"	18"	No	No	10'
TP-16	Small Oil House Slab	SB-90/TW-90	0'0" - 2'5"	*	3'5"	12"	No	No	15'
TP-17	Small Pump House Slab	SB-87/TW-87	0'0"	*	18"	18"	No	Yes, 3' bgs	20'
TP-18	Field-Identified Slab	SB-84/TW-84	0'0"	*	6'0"	16"	No	No	20'
TP-19	Field-Identified Slab	SB-84/TW-84	0'0"	*	6'0"	16"	No	No	20'
TP-20	Field-Identified Slab	SB-85/TW-85	0'0"	*	> 6'0"	16 - 18"	No	Yes, 1' to 6' bgs	30'

Notes:
* No footing present; foundation walls were straight-poured.
[1] Where no footing is present, measurement corresponds to depth of foundation wall from top of concrete.
bgs Below ground surface
' Feet
" Inches

Exploratory Test Pits - Performed to Determine Presence/Absence of Below Grade Features

Test Pit ID	(Former) Feature Performed to Assess	Evidence of (Former) Feature(s) Identified	Media Encountered	Concrete Removed?	Trench Length
1	Underground Storage Tank	None	Foundry fill, clay	No	20'
2	Underground Storage Tank	Petroleum odor	Foundry fill, clay	No	18'
3	Aboveground Storage Tank Farm	Gravel sub-base and petroleum odor	Rounded gravels	No	24'
4	Aboveground Storage Tank Farm	Gravel sub-base	Rounded gravels	No	33'
5	Underground Storage Tank	Petroleum odor	Fill, clay	No	23'
6	Underground Storage Tanks (2)	Petroleum odor	Fill, gravel	No	23'
7	Underground Storage Tank	None	Fill sand, clay	No	21'
8	Underground Storage Tank	Buried concrete blocks	Clay, large concrete blocks	Yes	27'
9	Pump House	Strong petroleum odor	Foundry fill, sand, gravels	No	22'
10	Aboveground Storage Tank Farm	Large concrete slab and strong petroleum odor	Large concrete slab	No	54'
11	Underground Storage Tank	Petroleum odor	Foundry fill, sand	No	22'
12	Underground Storage Tank	None	Foundry fill, sand	No	20'
13	Underground Storage Tank	Yes, petroleum odor	Foundry fill, sand	No	13'
14	Underground Storage Tank	None	Foundry fill, sand	No	12'
15	Aboveground Storage Tank Farm	Buried concrete blocks, gravel sub-base and petroleum odor	Rounded gravels, large concrete blocks	Yes	36'
16	Aboveground Storage Tank Farm	Buried concrete blocks, gravel sub-base and petroleum odor	Rounded gravels, large concrete blocks	Yes	76'

Notes:
bgs Below ground surface
' Feet
All exploratory test pits were performed to a depth of 2' to 3' bgs.

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

193707884
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
River Point District Property Identification Numbers and Sites

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

0 125 250 Feet

193707884
Prepared by HLB on 2/5/2020

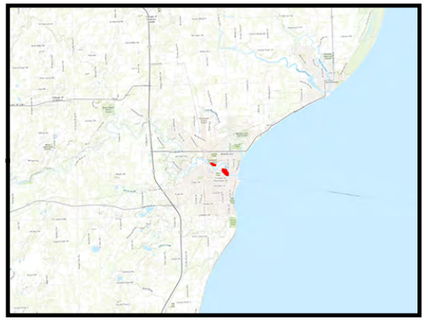
N

Legend

- Parcel Identification Numbers
- Cap Maintenance Area

Project Areas

- Site 1 - 200 North 10th Street
- Site 2 - 1101 Buffalo Street
- Site 3 - 1110 Buffalo 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
Historic Site 3 Features

Client/Project
River Point District, Site 3
1110 Buffalo Street
City of Manitowoc

0 60 120 Feet

Prepared by HLB on 3/25/2020

Legend

- Site 3 - 1110 Buffalo Street (1)
- River Point District

Prior Site Features (City Records)

- Oil House (4)
- Oil Tank (AST) (34)
- Pump House (5)
- UST (2)

Additional Site Features (WDNR Files)

- Former UST (10)
- Product Piping (2)
- Pump House (2)
- Soil Excavation (3)

N

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

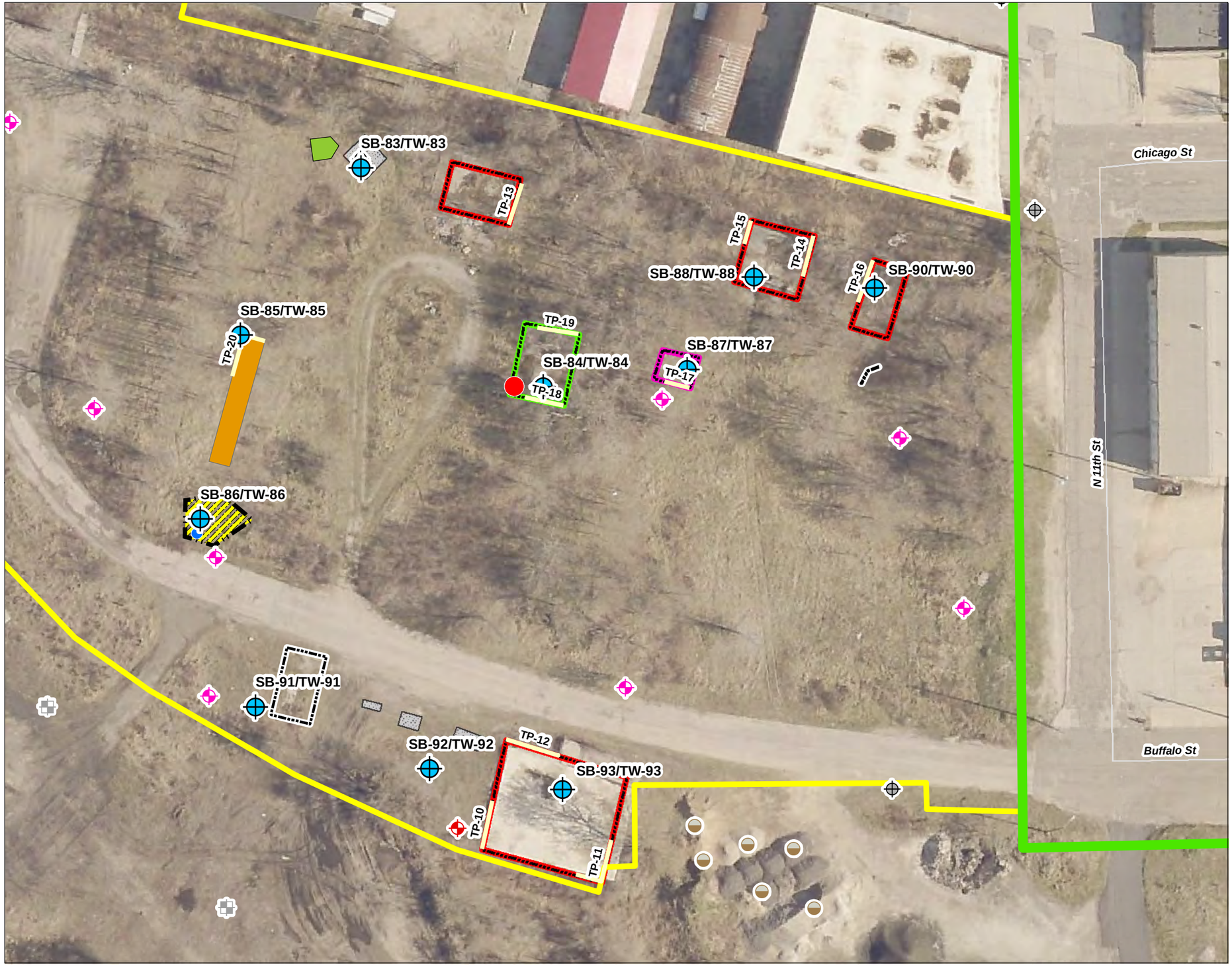


Figure No.
4

Title
Test Pit Locations and Site 3 Features

Client/Project
River Point District, Site 3
1110 Buffalo Street
City of Manitowoc

0 37.5 75 Feet

Prepared by HLB on 3/25/2020

N

Legend

- River Point District
- Site 3 - 1110 Buffalo Street
- Test Pits
- Post-Slab Removal Sample Locations

Prior Sample Locations (Stantec, 2020)

- Soil Boring (2)
- Surface Grab (6)
- Soil Boring/Temp Well (13)
- Groundwater Monitoring Well (1)
- Groundwater Monitoring Well (AECOM, 2020) (9)

Remaining Features

- Concrete Debris
- Concrete Slab
- Concrete Wall
- Oxide Box Waste
- Unknown Pipe
- Water Valve

Removed Slabs and Foundations

- Former Oil House (4)
- Former Pump House (1)
- Former Storage (?) (1)
- Misc. Concrete (4)

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.
5

Title
Exploratory Test Pits and Site 3 Target Features

Client/Project
Riverpoint District Site 3
1110 Buffalo Street
City of Manitowoc

0 30 60 Feet

Prepared by HLB on 3/25/2020

N

Legend

- River Point District
- Site 3 - 1110 Buffalo Street
- Exploratory Test Pits

Historic Features No Longer Present Onsite

- AST Farm
- Additional Features

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

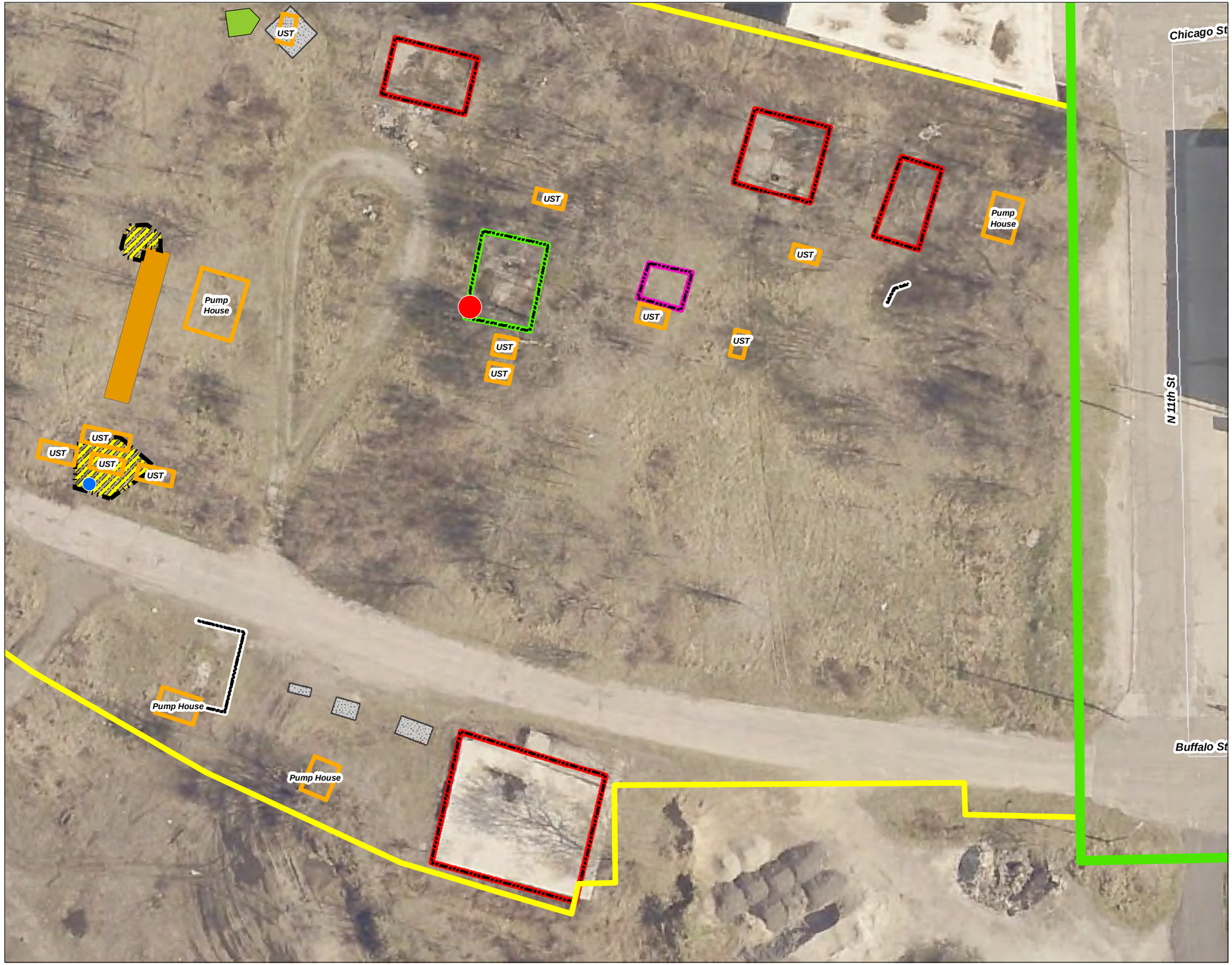


Figure No.
6

Title
Removed and Remaining Features at Site 3

Client/Project
Riverpoint District Site 3
1110 Buffalo Street
City of Manitowoc

0 30 60 Feet

Prepared by HLB on 3/25/2020

N

Legend

- River Point District
- Site 3 - 1110 Bufalo Street
- Features Not Present

Removed Slabs and Foundations

- Former Oil House (4)
- Former Pump House (1)
- Former Storage (?) (1)
- Misc. Concrete (4)

Remaining Features

- Concrete Debris
- Concrete Slab
- Concrete Wall
- Apparent Oxide Box Waste
- Unknown Pipe
- Water Valve

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

ATTACHMENT A
PHOTOGRAPHIC LOG

Stantec

Photographic Log

Client:	**City of Manitowoc**	**Project:**	**193707884**
Site Name:	**River Point District, Site 3**	**Site Location:**	**1110 Buffalo Street, Manitowoc, WI**

Photograph ID: 1

Photo Location:
Large oil house slab - southeast corner

Direction:
Looking northwest

Survey Date:
8/14/2020

Comments:
Test pit TP-11 was performed to assess the depth of the footing and foundation walls of the large oil house slab; no evidence of petroleum infrastructure or contamination was observed

Photograph ID: 2

Photo Location:
Large oil house slab - northern end

Direction:
Looking east

Survey Date:
8/14/2020

Comments:
Wire mesh was observed throughout the floor slab of the large oil house foundation

Client:	**City of Manitowoc**	**Project:**	**193707884**
Site Name:	**River Point District, Site 3**	**Site Location:**	**1110 Buffalo Street, Manitowoc, WI**

Photograph ID: 3

Photo Location:
TP-14, small oil house slab in northeast end of Site 3

Direction:
Looking south

Survey Date:
8/14/2020

Comments:
Several concrete columns were discovered in test pit TP-14, along the east side of a small oil house slab; the columns were removed as part of demolition

Photograph ID: 4

Photo Location:
TP-14, small oil house slab in northeast end of Site 3

Direction:
Looking north

Survey Date:
8/14/2020

Comments:
TP-14 following removal of the concrete columns; no evidence of petroleum contamination was observed

Client:	**City of Manitowoc**	**Project:**	**193707884**
Site Name:	**River Point District, Site 3**	**Site Location:**	**1110 Buffalo Street, Manitowoc, WI**

Photograph ID: 5

Photo Location:
TP-17, small pump house slab - southwest corner

Direction:
Looking north

Survey Date:
8/14/2020

Comments:
Test pit TP-17 was performed to assess the depth of the footing and foundation walls; petroleum contamination was observed in this test pit approximately three feet below ground surface

Photograph ID: 6

Photo Location:
Field-identified storage slab - northeast corner

Direction:
Looking west

Survey Date:
8/14/2020

Comments:
Test pit TP-19 was performed to assess the depth of the foundation walls of the field-identified storage slab; no evidence of petroleum infrastructure or contamination was observed

Client:	**City of Manitowoc**	**Project:**	**193707884**
Site Name:	**River Point District, Site 3**	**Site Location:**	**1110 Buffalo Street, Manitowoc, WI**

Photograph ID: 7 **Photo Location:** Field-identified former AST farm slab - southern end **Direction:** Looking north **Survey Date:** 8/14/2020 **Comments:** Test pit TP-20 was performed to assess the depth of the foundation walls of the field-identified former AST farm slab	
Photograph ID: 8 **Photo Location:** Field-identified former AST farm slab - northwest corner **Direction:** Looking north **Survey Date:** 8/14/2020 **Comments:** Performing TP-20; petroleum contamination was observed in this test pit approximately one to six feet below ground surface	

Client:	**City of Manitowoc**	**Project:**	**193707884**
Site Name:	**River Point District, Site 3**	**Site Location:**	**1110 Buffalo Street, Manitowoc, WI**

Photograph ID: 9

Photo Location:
Exploratory test pit #3

Direction:
Looking east

Survey Date:
8/14/2020

Comments:
Typical appearance of an exploratory test pit with fill and evidence of petroleum contamination present

Photograph ID: 10

Photo Location:
Exploratory test pit #7

Direction:
Looking south

Survey Date:
8/14/2020

Comments:
Typical appearance of an exploratory test pit with apparent native soils (clay) with no evidence of petroleum contamination present

Client:	**City of Manitowoc**	**Project:**	**193707884**
Site Name:	**River Point District, Site 3**	**Site Location:**	**1110 Buffalo Street, Manitowoc, WI**

Photograph ID: 11

Photo Location:
Exploratory test pit #8

Direction:
Looking east

Survey Date:
8/14/2020

Comments:
Concrete and cinder block debris encountered in exploratory test pit #8 while looking for a former UST; no UST was encountered

Photograph ID: 12

Photo Location:
Exploratory test pit #8

Direction:
Looking west

Survey Date:
8/14/2020

Comments:
Concrete and cinder block debris was removed from the excavation prior to backfilling

Client:	**City of Manitowoc**	**Project:**	**193707884**
Site Name:	**River Point District, Site 3**	**Site Location:**	**1110 Buffalo Street, Manitowoc, WI**

Photograph ID: 13

Photo Location:
Exploratory test pit #8

Direction:
Looking northeast

Survey Date:
8/14/2020

Comments:
Concrete blocks removed from exploratory test pit #8; no evidence of petroleum contamination was observed

Photograph ID: 14

Photo Location:
Exploratory test pit #11

Direction:
Looking southeast

Survey Date:
8/14/2020

Comments:
Blue coloration to soil and groundwater from oxide box waste was observed while performing exploratory test pit #11; the excavation was immediately backfilled for site safety and roped off to prevent direct contact in the area

Client:	**City of Manitowoc**	**Project:**	**193707884**
Site Name:	**River Point District, Site 3**	**Site Location:**	**1110 Buffalo Street, Manitowoc, WI**

Photograph ID: 15

Photo Location:
Exploratory test pit #15

Direction:
Looking northwest

Survey Date:
8/14/2020

Comments:
The western foundation wall of the east-adjacent gravel pad was removed as a part of exploratory test pit #15; the northern, eastern and western foundation walls of the gravel pad remain

Photograph ID: 16

Photo Location:
Exploratory test pit #16

Direction:
Looking east

Survey Date:
8/14/2020

Comments:
A large concrete block measuring 14' x 7' x 12" being removed from the area of a former AST farm

Client:	**City of Manitowoc**	**Project:**	**193707884**
Site Name:	**River Point District, Site 3**	**Site Location:**	**1110 Buffalo Street, Manitowoc, WI**

Photograph ID: 17

Photo Location:
Exploratory test pit #16

Direction:
Looking west

Survey Date:
8/14/2020

Comments:
Several other large concrete blocks removed from the area of a former AST farm

Photograph ID: 18

Photo Location:
Large oil house slab - northeast corner

Direction:
Looking west

Survey Date:
8/17/2020

Comments:
Demolition and removal of the foundation walls and footings of the large oil house slab

Client:	**City of Manitowoc**	**Project:**	**193707884**
Site Name:	**River Point District, Site 3**	**Site Location:**	**1110 Buffalo Street, Manitowoc, WI**

Photograph ID: 19

Photo Location:
Large oil house slab - eastern end

Direction:
Looking south

Survey Date:
8/17/2020

Comments:
Large concrete piers and rebar were present in the center of the large oil house slab, and were removed as part of demolition

Photograph ID: 20

Photo Location:
Concrete debris pile - west of exploratory test pit #8

Direction:
Looking north

Survey Date:
8/14/2020

Comments:
A pile of concrete curb stops was observed west of exploratory test pit #8, and remains onsite

Client:	**City of Manitowoc**	**Project:**	**193707884**
Site Name:	**River Point District, Site 3**	**Site Location:**	**1110 Buffalo Street, Manitowoc, WI**

Photograph ID: 21

Photo Location:
Oxide box waste area

Direction:
Looking north

Survey Date:
8/17/2020

Comments:
The area where evidence of oxide box waste (blue) was encountered was roped off to prevent direct contact with the area

Photograph ID: 22

Photo Location:
Water shut-off valve, oxide box waste area

Direction:
Looking east

Survey Date:
8/14/2020

Comments:
An unmarked water shut-off valve was discovered while performing exploratory test pit #12 in the oxide box waste area; blue staining to soil is visible behind the valve

Client:	**City of Manitowoc**	**Project:**	**193707884**
Site Name:	**River Point District, Site 3**	**Site Location:**	**1110 Buffalo Street, Manitowoc, WI**

Photograph ID: 23 **Photo Location:** Unknown pipe, southwest corner of the former storage slab **Direction:** Looking east **Survey Date:** 9/29/2020 **Comments:** A vertical pipe (unknown nature) was observed in the southwest corner of the field-identified former storage slab and remains onsite	
Photograph ID: 24 **Photo Location:** Semi-circular concrete remnant **Direction:** Looking north **Survey Date:** 8/17/2020 **Comments:** A semi-circular concrete remnant located just northwest of a former AST farm and exploratory test pit #4 remains onsite	

Client:	**City of Manitowoc**	**Project:**	**193707884**
Site Name:	**River Point District, Site 3**	**Site Location:**	**1110 Buffalo Street, Manitowoc, WI**

Photograph ID: 25

Photo Location:
Northwest corner of Site 1

Direction:
Looking south

Survey Date:
8/20/2020

Comments:
Separating as much concrete as practicable from the rebar

Photograph ID: 26

Photo Location:
Northwest corner of Site 1

Direction:
Looking south

Survey Date:
8/20/2020

Comments:
The stockpile of concrete staged to be crushed onsite by Vinton

Client:	**City of Manitowoc**	**Project:**	**193707884**
Site Name:	**River Point District, Site 3**	**Site Location:**	**1110 Buffalo Street, Manitowoc, WI**

Photograph ID: 27

Photo Location:
Northwest corner of Site 1

Direction:
Looking southeast

Survey Date:
8/20/2020

Comments:
The stockpile of concrete staged to be crushed onsite by Vinton

Photograph ID: 28

Photo Location:
Northwest corner of Site 1

Direction:
Looking south

Survey Date:
9/2/2020

Comments:
The stockpile of concrete being crushed onsite by Vinton

Client:	**City of Manitowoc**	**Project:**	**193707884**
Site Name:	**River Point District, Site 3**	**Site Location:**	**1110 Buffalo Street, Manitowoc, WI**

Photograph ID: 29 **Photo Location:** Northwest corner of Site 1 **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	
Photograph ID: 30 **Photo Location:** Northwest corner of Site 1 **Direction:** Looking southwest **Survey Date:** 9/29/2020 **Comments:** The crushed concrete is staged near the northwest corner of Site 1, and the former stockpile that contained reinforced concrete has been removed