Summary of Existing

and Potential Impacts

For

2022 Carroll Park Improvements

Landfill Exemption Application

City of La Crosse

Wisconsin

January, 2022

Prepared by

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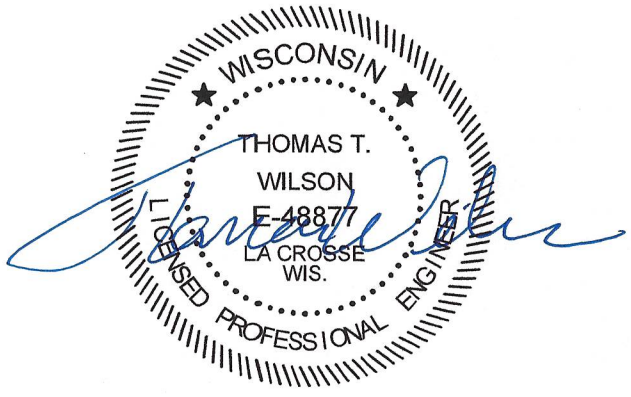
ENGINEERING



EXISTING SITE CONDITIONS

The existing site is currently a developed municipal baseball field complex constructed on a historical fill site. The site address is 1701 Marco Drive and is located on Isle La Plume in the city of La Crosse. The fill site is identified as La Crosse Isle La Plume Land Fill with Facility ID# 632066160. It is listed on BRRTS on the Web as enrolled in the Environmental Repair Program (ERP).

Historically the site was a city dump for municipal waste. The south end of Isle La Plume where the site is located began to be used as a city dump in 1940 and continued to receive city waste until it was closed in 1976 when the La Crosse County Landfill opened. Between 1940 and 1953 the city burned much of the refuse, but burning was discontinued in 1953 when the city began to burying the waste.

Two soil borings were conducted within the footprint of the proposed building site. Both borings indicated a surface layer of silty sand fill between 0.5ft to 2ft deep. Beneath the surface layer of silty sand is a layer of refuse to a depth of approximately 11.5ft below the surface, beneath which is alluvium soil to the bottom of the borings at 31ft below the surface. Groundwater was found at a depth of 11.5ft and 12.5ft. The soil borings are attached to the end of this report.

Soil samples were taken for lab analysis to measure the corrosivity, toxicity and other chemical attributes of the soil. Samples were collected on January 14th, 2022. The soil samples were taken from an excavation made into the refuse layer approximately 5.5ft below the surface in the vicinity of the proposed building footprint. During excavation the clean sandy fill on the surface was separated from the refuse layer material. After the soil samples were taken the refuse material was replaced and the excavation was topped off with the clean sandy fill material. The samples were received by Pace Analytical for analysis on January 17th, 2022 and the results are currently pending.

The site will be monitored for methane production in the near future. A monitoring well is to be constructed and monitored for methane gas. The well will be tested for methane gas for 10 consecutive days and the measurements recorded. Given the nature of the waste on the

proposed building site, it is anticipated that a significant amount of methane will be detected and steps will need to be taken to reduce risks to the building and its occupants.

PROPOSED DEVELOPMENT

The proposed development consists of an approximately 1200 square foot concessions, restroom and storage building, 385 linear feet of storm sewer, grading and excavation and other necessary improvements. This project is part of an ongoing development of the historical land fill area as a municipal ballpark. In the vicinity of the proposed development there are currently 3 ball fields in use by the city. Over the past few years, other improvements to Carroll Park have been made including paved parking, sidewalk and storm water improvements. The proposed site of the building is the best location given the nature of the site and the layout of the park complex.

SUMMARY OF ACTIONS TO BE TAKEN

During grading any excavation of the existing fill and soil that cannot be use as onsite fill will need to be disposed of off-site in an appropriate manner. As mentioned above the soils are currently being analyzed for chemical components that could affect how the soils should be disposed of. It is expected that excavated waste fill material from this project will be disposed of at the La Crosse County Landfill. In past recent construction projects, the La Crosse County Landfill has accepted waste material from this area of the historic Isle La Plume landfill.

The decomposition of municipal waste beneath the building presents a potential risk of methane buildup in the enclosed concession and restroom building, which could have harmful effects on the occupants of the building or potentially lead to an explosion. Proper measures will need to be taken in the design of the enclosed concessions building to prevent the accumulation of methane in the structure and its associated hazards. All existing waste fill

material beneath the building foundation is planned to be removed and replaced with imported structural fill. This may mitigate the amount of methane infiltration into the building. In addition, an active ventilation system with a vapor barrier is being designed to be constructed with the structure foundation. With these measures, and the relatively low-risk appliances expected to be used in the building, the risks of a dangerous level of methane accumulating in the build is low.

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LOG OF BORING

See Descriptive Terminology sheet for explanation of abbreviations

Project Number B2110717
Geotechnical Evaluation
Carroll Park Concession Building
Carroll Park
La Crosse, Wisconsin

BORING: **ST-1**

LOCATION: See attached sketch

NORTHING: 125392 EASTING: 444139

DRILLER: LOGGED BY: B. Wright START DATE: 12/22/21 END DATE: 12/22/21

SURFACE ELEVATION: 643.0 ft RIG: Subcontractor METHOD: SURFACING: WEATHER: Sunny

Elev./ Depth ft	Water Level	Description of Materials (Soil-ASTM D2488 or 2487; Rock-USACE EM 1110-1-2908)	Sample	Blows (N-Value) Recovery	q_p tsf	MC %	Tests or Remarks
641.0		SILTY SAND (SM), with roots, brown, moist (TOPSOIL FILL)					
2.0		FILL: POORLY GRADED SAND with SILT (SP-SM), fine-grained, brown, moist		4-4-4 (8)		11	P200=9%
639.0							
4.0		FILL: POORLY GRADED SAND with SILT (SP-SM), fine to medium-grained, black, moist to wet	5	4-4-2 (6)			
		Contains refuse, glass and plastic		1-1-1 (2)		40	P200=11%
			10	1-1-4 (5)			
631.5							
11.5	▽	POORLY GRADED SAND (SP), fine to medium-grained, gray, wet, loose to medium dense (ALLUVIUM)		3-6-6 (12)			
			15	4-5-6 (11)			
			20	4-4-4 (8)			
			25	4-4-5 (9)			
			30	4-5-6 (11)			
612.0							
31.0		END OF BORING Boring then grouted	35				Water observed at 12.5 feet while drilling.

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LOG OF BORING

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Project Number B2110717
Geotechnical Evaluation
Carroll Park Concession Building
Carroll Park
La Crosse, Wisconsin

BORING: **ST-2**

LOCATION: See attached sketch

NORTHING: 125392 EASTING: 444198

DRILLER: LOGGED BY: B. Wright START DATE: 12/22/21 END DATE: 12/22/21

SURFACE ELEVATION: 645.0 ft RIG: Subcontractor METHOD: SURFACING: WEATHER: Sunny

Elev./ Depth ft	Water Level	Description of Materials (Soil-ASTM D2488 or 2487; Rock-USACE EM 1110-1-2908)	Sample	Blows (N-Value) Recovery	q_p tsf	MC %	Tests or Remarks
644.5							
0.5		SILTY SAND (SM), with roots, brown, moist (TOPSOIL FILL)					
		FILL: POORLY GRADED SAND with SILT (SP-SM), fine to medium-grained, black, moist		4-6-8 (14)		7	P200=11%
			5	6-8-8 (16)		9	
		Contains refuse and glass		4-5-5 (10)			
			10	4-2-2 (4)		20	
633.5	▽						
11.5		POORLY GRADED SAND (SP), fine to medium-grained, gray, wet, loose to medium dense (ALLUVIUM)		3-3-4 (7)			
			15	3-3-4 (7)			
			20	4-5-6 (11)			
			25	4-5-7 (12)			
			30	4-6-8 (14)			
614.0							
31.0		END OF BORING Boring then grouted	35				Water observed at 11.5 feet while drilling.