

Report to Council of Non-Bid Public Works Construction Project Completed Using City Staff

Project: Regent St & N Kenosha Dr Storm Culvert Replacement (#13879)

Date: 2/5/2024

Agency: Engineering

Final Cost: \$144,713.79

Background

In 2021, sink holes were identified over the median in Regent St, above the corrugated metal pipe (CMP) culverts that connected the greenway running between the two lanes of N Kenosha Dr. The CMP type storm sewer culvert is often prone to degradation and corrosion, and the Mendota Springs Harbor Greenway is scheduled for improvements for storm water capacity. However, the estimated capacity improvements would require installing box culvert and could not be installed as a temporary repair due to high project costs, necessary planning, and coordination with other utility owners. Engineering Operations (OPs) was able to coordinate purchasing pipe at a size that would meet the current needs for the repair, coordinate survey, design, and permitting, as well as install the new sewer pipe culvert. OPs was able to manage mitigation of immediate soil and settling issues which allowed Engineering more time to develop and review design and alternative options until the replacement could be scheduled. OPs helped to coordinate with MG&E and Water Utility (WU) to move gas and water main to lower the depth of the culvert to account for the larger pipe culvert size. OPs completed the work and restored the right of way surface, including seeding/matting, curb/gutter, sidewalk, and pavement patching.

This report is intended to inform the Mayor and Common Council and to satisfy the requirements of Wisconsin Statute 62.15(14).

Scope of Work

The scope of work included completing a geotechnical site review, survey, and permitting. Gas & water utility crossings were exposed to determine the depth of the utilities to eliminate conflicts with the new installation of culvert. Utilities were determined to be in contact and were relocated prior to the removal and replacement of the storm sewer culvert. Traffic control and erosion control measures were established prior to starting work and maintained for the duration of work through restoration. Work included the removal of 250-ft of 42-in CMP culvert, installing 60-in HDPE culvert, and replacing curb/gutter and sidewalk at the crossings. Terraces, medians, and the greenway were restored with topsoil, seed, and matted to prevent erosion.

Recycling and Waste Disposal

Initial removal and replacement of the storm culvert minimized the removal of materials from the site. Asphalt, concrete, and base course gravel removal was limited to the width of the work and Engineering Operations delivers construction waste to a recycling center. Topsoil was excavated and stockpiled, which reduced the amount necessary for replacement for restoration. The asphalt replacement was completed by grinding only the top two to three inches of asphalt and replacing with new asphalt. This method eliminates removed waste, extended use of equipment, and minimizes hauling waste to recycling centers or the Sycamore clean fill site.

Cost Detail

Final project cost was \$144,713.79. Line items costs are provided below.

ITEM	COST
Wages and Benefits	
Engineering & Engineering Operations	\$ 54,908.29
Water Utility	\$ 1,466.58
Equipment	
Engineering & Engineering Operations	\$ 37,939.57
Water Utility	\$ 280.00
Purchased Services	
Geotechnical Report, Survey, Tree Inventory	\$ 16,776.50
Materials and Supplies	
Engineering & Engineering Operations	\$ 31,368.71
Water Utility	\$ 1,974.14
TOTAL	\$ 144,713.79

Summary of Cost Comparison

The work necessary to plan, procure materials and equipment, and complete the installation and restoration for this project is comparable to the scope of work typically bid as Public Works projects. The scale of work is marginally smaller than a typical Public Works project, however, completing the project with City staff allowed significantly more flexibility for the project. Based on the average cost of accepted bids and competitive bid prices for recent Public Works projects, the overall cost of labor with benefits, materials, and equipment is highly competitive.

An estimated cost for the project at Public Works bid prices and including 10% Engineering (City staff time, survey, design, inspection, inventory, permitting, etc.) totaled \$139,817.