

CASE STUDY



PROJECT DETAILS

Project Name:

U.S. Highway 10/ Waldo Boulevard

Location:

Manitowoc, WI

Owner:

WisDOT

Engineer:

WisDOT

General Contractor:

Vinton Construction Company

Product Manufacturer:

County Materials Corporation

Date:

2019

Key Products:

Reinforced Concrete Pipe, Elliptical Reinforced Concrete Pipe, Precast Concrete Structures

Community Resolves Flooding with Reinforced Concrete Pipe Storm Water System

Solutions: Large diameter reinforced concrete pipe resolves flooding and erosion concerns; reinforced concrete pipe installed 29 feet below ground

After several years of planning, a stretch of U.S. Highway 10 in Manitowoc, WI, known as Waldo Boulevard, underwent extensive reconstruction. The project outlined the highway's reconfiguration and substantial upgrades to the surrounding storm water infrastructure.

Waldo Boulevard descends steeply toward the Little Manitowoc River, causing runoff to accumulate quickly during rain events. The existing reinforced concrete pipe (RCP) storm water system, installed nearly 100 years prior, was undersized and unable to accommodate excess runoff volume. This caused several manhole covers to blow off and require bolting for temporary resolution. The Wisconsin Department of Transportation (WisDOT) sought to enhance safety and flow capacity by upgrading the system with larger round and elliptical RCPs manufactured by County Materials.

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The former system remained in serviceable condition after nearly a century of use, despite being undersized for the area's needs. Its low life cycle costs and proven durability encouraged project leaders to specify RCP for the replacement system. The new system was designed to direct runoff into an oversized 120" diameter manhole that slows the conveyed water before it enters an elliptical RCP. To accommodate the site's slope and the pipes' large size, sections of the system were installed 29 feet below ground, a depth only RCP can endure without excessive bedding and trench engineering.



County Materials manufactured and delivered more than 3,750 LF of round and elliptical RCP for the Waldo Boulevard project. Precise product deliveries kept the storm water system active and minimized disturbance during construction. The improved system mitigates flooding and positions the community for future growth.



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