

## **SUMMARY OF FLOODPLAIN IMPACTS**

**Date:** August 23, 2024

**Project ID:** CUY West Creek Greenway Trail (PID 108940)

**Floodplain Affected:** West Creek in the City of Parma

### **Description of Project:**

Cleveland Metroparks' CUY West Creek Greenway Trail (PID 108940) project is located within a Special Flood Hazard Area (SFHA) Zone A in the city of Parma. Cleveland Metroparks will construct a 10' wide all-purpose trail with portions of boardwalk and a new bridge over West Creek in the Cleveland Metroparks' West Creek Reservation from the east end of Coventry Drive to Broadview Road (SR-176) across from Civic Drive in the City of Parma in Cuyahoga County. Users will be able to cross Broadview Road to connect to an existing portion of all-purpose trail at the City of Seven Hills' Recreation Center.

### **Why must this project be located in the Floodplain?**

The purpose of the project is to create an all-purpose trail connection from to link West Creek Reservation to the larger trail network to enable access for users. The community desire for such a connection was documented in the West Creek Greenway Plan and Cuyahoga Greenways Plan. Construction of the bridge that encroaches in the SFHA is necessary to make this connection for the project to move forward. The project has been designed to minimize impacts to the floodplain.

### **What alternative sites were considered, if any?**

Various sites within the project area for crossing West Creek were looked at during the development of the project, including a more northerly alignment. The crossing location was ultimately selected based on available real estate, required span length of bridge, grade for the bridge approaches based on the elevation on both sides of the creek, presence of trees and wetlands, and characteristics of the floodplain.

### **Were any mitigation measures utilized on this project? If so, please describe.**

The creek crossing location was determined to be the best area to achieve the goals of the project. The project's Hydrology and Hydraulics Report indicated that setting the bridge piers in the floodplain will not adversely affect the floodplain and will actually result in a small decrease in the starting water surface elevation. In summary, the report indicated:

- The results of the 5-year hydraulic analyses shows that the starting water surface elevation (WSE) is below the low chord of the proposed bridge;
- The results of the 100-year hydraulic analyses show that the WSE for the proposed 3-span steel beam bridge results in a very minor lowering of the WSE when compared to the existing condition. This decrease converges to the existing WSE by the next upstream cross-section. There are no occupied structures within the 100-year

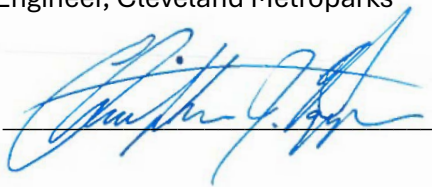
- floodplain. There is a minimal decrease in 100-year areal inundation caused by the proposed 3-span steel beam bridge; and
- Finally, the proposed 3-span steel beam bridge was compared to the existing condition. The proposed bridge results in a decrease of 0.05 feet in the 100-year WSE. Thus, the proposed structure meets the National Flood Insurance Program (NFIP) criterion for development within a FEMA SFHA Zone A.

To the best of my knowledge, this project has complied with all applicable Local, State, and Federal Floodplain protection standards.

**Name:** Christopher J. Papp, P.E.

**Title:** Civil Engineer, Cleveland Metroparks

**Signature:** \_\_\_\_\_

A handwritten signature in blue ink, appearing to read "Christopher J. Papp", is written over a horizontal line. The signature is stylized and cursive.