

SUMMARY OF FLOODPLAIN IMPACTS

Date: 9/14/2020

Project ID: BUT-TR21-7.52 Hamilton Mason @ Mauds Hughes Intersection (PID 110993)

Floodplain Affected: Gregory Creek

Description of Project:

Improvements to the intersection of Hamilton Mason Road and Mauds Hughes Road by the addition of turn lanes and a traffic signal. The project will shift the intersection slightly eastward and include realigning Mauds Hughes Road for 0.3 miles on either side of the intersection. There will also be a coordinated traffic signal added to the railroad underpass.

Why must this project be located in the Floodplain?

There are significant geographic constraints that surround this intersection. Directly west of Mauds Hughes Road is Gregory Creek. To the east of Mauds Hughes Road is steep terrain, as well as a railroad right-of-way easement. These geographic features confine the project leaving minimal project alternatives.

What alternatives were considered, if any?

Multiple roundabouts of different sizes and configurations were considered at this intersection. Because of geographic constraints, the proximity of the Hamilton Mason bridge over Gregory Creek, and the one lane railroad bridge east of the intersection, a roundabout was found unfeasible for this location.

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

Yes, it is a Butler County standard that development cannot raise the 100 year floodplain. In order to ensure this standard was met, Mauds Hughes Road was shifted eastward, away from Gregory Creek, as much as possible. The construction limits were reduced west of the relocated Mauds Hughes Road by utilizing 3:1 slopes, instead of 4:1 slopes (4:1 being BCEO standard slope design). A HEC-RAS hydraulic study was also performed to confirm that the 100 year floodplain did not rise.

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

Print Name: Matt Brubaker, P.E.

Signature: Matt Brubaker

Title: Design Engineer