



Memo

To: Teresa K. Barnes, P.E., Design Engineer

From: M. Todd Ford, P.E., LEED AP BD+C

Date: January 10, 2019

Subject: Bank of America – West Chester – Drainage Plan

We have completed addressing your comments dated December 27, 2018, please review the enclosed documents, and text in bold for our responses.

Comments:

- 1) While there is erosion control blanket called for within the grass swale area; given that there is a velocity of 5.12 fps out of the headwall, some RCP might be necessary to prevent erosion.
 - **The upstream outlet pipe has been revised to a 15" diameter pipe and added FLEXAMAT along the channel from the headwall to the outlet to help prevent erosion. This reduced the discharge velocity to 4.09 fps as shown in the Hydraflow report on C303.**
- 2) Consider a reduced orifice on the outlet pipe that connects to the existing storm pipe; The pipe diameter needs to remain 12 inches – but a reduced orifice will help slow the water down to help prevent erosion in the area and to help sediment settle out some prior to leaving the site.
 - **The upstream outlet pipe has been revised to a 15" diameter pipe. This reduced the discharge velocity to 4.09 fps as shown in the Hydraflow report on C303. The outlet pipe remains a 12" diameter pipe as well. Based on this, it should help reduce erosion in addition to the above-mentioned channel lining.**

Enclosure

078973 Bank of America West Chester, *dated 11/30/18*

Woolpert, Inc.
4454 Idea Center Boulevard
Dayton, OH 45430-1500
937.461.5660