

Engineering has reviewed the plans for the CoW-Haynes/Lacewell Police and Fire Training Facility project submitted January 31, 2018 and have the following comments:

General

1. Comment left on here as a placeholder-wetland delineation map and wetland impact permit is pending. *Provide approved wetland delineation map and wetland impact permit once they have been obtained.*

Narrative Statement and Design Calculations

2. Wetland Sizing: Wetland 1 and 2: There appear to be discrepancies between the sizing inputs and the application (IV.14).
3. Wetland Sizing: Wetland 1 and 2: Provide a detailed computation of the stage-storage relationship, including a table of water-surface elevation versus volume of storage. I cannot confirm surface areas and volumes, etc. without providing stage-storage.
4. Stormwater Analysis Point 2: Should be 4.51 acres? Application has drainage area listed as 2.51 acres plus 2 acre by-pass for total of 4.51 acres.
5. Stormwater Pre/Post: Same thing for Pond 2 ($2.51+2.00=4.51$).
6. Hydrograph No. 5: 4.49 acre drainage area vs. 4.51?
7. *Previous Comment: Pond Report BMP 1: Per the technical standards, an emergency spillway shall be provided (TSSM Ch. V.D.4). Stormwater Wetlands #1 does not appear to have an emergency spillway.* The Pond Report was omitted from the re-submittal so I cannot verify the wetlands designs within the routing. Also, please include the Pond Report for the 50-year with the principal spillway obstructed or not operating properly. Check that the pond design inputs match all relevant elevations in the wetland schedule on C715.
8. For storm drainage system C, is the Q sidestream the flow coming from SCM 1 during the 10 and 50-year design event? If so, the outflow added to C3 is the same for each storm (6.06), but should be increased for the 50-year. And 6.06 cfs is a little low for what is coming from the outfall during the 10-year storm.
9. Outlet Protection Design: There appears to be a discrepancy between the input parameters and the Storm Drainage Schedule for FES D4.

Supplement-EZ Form

10. Supplement Wetlands: Both wetlands provide peak attenuation, correct? Wetland #2 lists 'No'. Also, verify the peak attenuation depths are correct. Provide a brief explanation of the depths in your response letter so I understand how you determined them so I can understand.
11. Stormwater Wetland MDC From 02H.1054; #15: It appears the sides of the wetlands are being sodded with Bermuda, which is a non-clumping turfgrass. #15 should be answered 'Yes' for both wetlands as non-clumping turfgrass is a requirement per the MDC 15 for Stormwater Wetlands.

Design Plans

12. C303: The drainage area for SCM #2 per the application is 2.51 acres. With a by-pass acreage of 2 acres, the post-developed drainage area for Drainage Basin 2 should be 4.51 acres? And the Post-Developed Study Area should be 4.51 acres as well?
13. C303/C304/C305: What is the square footage of the impervious area between the Hurst Street right-of-way and the trench drain that is left untreated?
14. C715: The emergency spillway must be a minimum of six (6) inches higher than the top of the outlet structure per the technical standards for detention facilities. The ES does not appear to meet that requirement.
15. C716/717: Outlet Structure is in old location and emergency spillway is missing for SCM-1.

Please submit one complete set of plans, the stormwater narrative, calculations, supplement and any other supporting documentation to Engineering for additional review. Please call or email if there are any questions. Thank you.