

March 1, 2024

Malachi Mills, PE,
RK&K, LLP
2100 E Cary St, Suite 309
Richmond, VA 23223

RE: Seven Hills Commerce Park (Revised)
6200 Monahan Rd
POD2023-00297

Dear Mr. Mills:

We have reviewed the construction plans submitted to the Planning Department on February 2, 2024.

Please address the following comments and **resubmit revised construction plans** for review. Water and Sewer Agreements that must be executed by the Owner and the County for water and sewer improvements **have not** been executed.

General:

1. An Information Sheet for Preparation of Agreements for Water and/or Sewer Service is required but has not yet been submitted. The Information Sheet allows the Department of Public Utilities to prepare the Water and Sewer Agreements that must then be executed by the Owner and the County prior to the authorization to begin utility construction or approval of building permits. It is recommended that the Information Sheet be submitted as soon as possible to avoid delays with the utility construction. Preparation of the agreements may take up to 15 days after receipt of the Information sheet. Execution by the County after execution by the Owner may take up to 10 days. Conflicts between the completed Information Sheet and the plans may generate additional review comments. **For all new Henrico County Department of Public Utilities Applications, such as Water and Sewer Agreements, should be submitted online through the Build Henrico customer portal under Water and Sewer Agreements within Public Utilities Review.**
2. Review the following comments on the Local Review Form and resubmit for review:
 - a. Update the Local Review Form information due to the changes made to the plan per DPU comments.
 - b. How was the Average Day calculated?
 - c. The Peak Hour and Maximum Day Demand appears to be incorrect.

C-5.00 Demolition Sheet:

3. Provide a note indicating all existing valves will be flushed to grade.
4. A reference has been added to the plan indicating the fire hydrant on Airport Drive is to be replaced; however, this is not shown or labeled on the utility plan sheet.

C-9.00 UTIL (Overall Utility Plan):

5. Update the Material Quantities per changes made to the plan sheet.

C-9.01 Utility Plan:

6. Valves are required every 1000' in accordance with DPU Standards.
7. Use four (4) 45° bends in accordance with D-485 for all water line adjustments. Update all the bends referenced for the vertical alignment. See all utility and waterline profile sheets.
8. As previously commented, is the distance labeled between the water line from the face or back of curb? The comment letter response references face of curb; however, this is not specified on the utility plan.
9. As previously commented, reference the detail number for the domestic backflow preventer details in the backflow preventer callouts. See all utility sheets as well.
10. Be advised, the monitoring manholes are shown in the truck parking spaces. The MMH should always be accessible for sampling. DPU will block access to the parking spaces when sampling the MMH. See all utility sheets.

C-9.2 Utility Plan:

11. Relocate the 12" x 8" reducer between STA 8+00 and 7+00 near a fire hydrant tee connection. See all reducers shown on the plan.
12. There are two (2) 12" 45° bends shown near STA 22+00 but only one is referenced on the plan.
13. A reference has been provided to see profile, 12" water main near STA 14+00 in the proposed Seven Hill Blvd; however, the water line size is 16" in Seven Hill Blvd.
14. The water main stub located in Monahan Rd (located north of proposed Seven Hills Blvd) is missing from the plan sheet.
15. Per DPU Master Facilities plan, install a 16" water main in Monahan Rd. Oversized credits will be provided for installing the 16" in lieu of the 12" pipe.

C-9.3 Utility Plan:

16. As previously commented, valves should be installed before the reducers on the water line.
17. Change the cross-branch references from "crossings" to "cross" on the utility plan sheets.
18. Shift all boundary valves in the utility easements. See all utility sheets.
19. Flip flop the location of the 8" GV and boundary valve on the fire service line to serve Bldg-3. The valve should be installed near the tee branch.
20. Be advised, copper is spelled incorrectly on the service line for Bldg-3.
21. Fire hydrants should be installed no more than 7' from the face of curb. Review the fire hydrant near STA 9+00.
22. Relocate the storm culvert out of the utility easement between MH-F and MH-G.
23. Change the material of the sanitary sewer between MH-F and MH-G from "PVC" to "DI."

C-9.4 Utility Plan:

24. As previously commented, provide a tee connection, valve, and plug (water line stub) near STA 16+00 for future water main extension to the 30" water main in Charles City Rd located northwest of Building-4. Also, provide a utility easement that extends to the water line stub to the property line for the future water line extension.
25. Relocate the valve located near STA 2+00 to the northern side of the tee on the 12" branch.
26. DPU recommends relocating the sewer main out of the gutter pan between MH-G and G-1.
27. Provide a 10' horizontal separation between the water and sewer main between MH-G and G1.

C-9.5 Utility Plan:

28. Provide a gate valve prior to the reducers.
29. An adjustment symbol is missing on the 12" water main between STA 0+00 and 23+00.

C-10.00 Water Pressure Calc:

30. DPU is reviewing the changes to the hydraulic analysis and will reach out to the engineer once the review is completed.

Storm Sewer Profiles:

31. As previously commented, show all water and sewer crossings on the storm sewer profiles.
32. Several water line crossings are referenced but the crossings and clearances are not shown on the profile.

Waterline Profiles:

33. Review the following comments pertaining to the water line Profile:

Sheet C13.06:

- a. Reduce the width of the water line adjustment on the 16" water main profile between STA 0+00 and 0+50 by raising the water line back up after the 36" storm crossing at STA 6+99.75.
- b. Show valves to proposed final grade.
- c. The 12" water main-Monahan Rd cannot be reviewed as the full extent of the water line was not shown on the utility plan sheet.

Sheet C13.07:

- d. Sanitary sewer crossings are called out as storm sewer crossings on the profiles.
- e. Use a water line adjustment for the 15" storm sewer crossing at STA 21+03.42. Once the water crosses under the storm pipe, be sure to raise the 8" pipe back up to maintain 3.5' of cover.
- f. The size of the tee is labeled incorrectly at STA 13+90.28.
- g. The 8" 45° bend (at STA 13+27.28) and one of the 12" x 8" reducers do not belong on the profile. Coordinate the water line profile with the utility plan.
- h. The profile of the 12" water main terminates at 22+85.70; however, it should be profiled to STA 22+96. Show the full extent of the profile.
- i. Why is the water line so deep between STA 9+75 and 15+00? Use adjustments to adjust under the storm sewer between the two stations.
- j. Sheet 13.08:
- k. Review the water line adjustment at STA 68.48. Why is the bottom of the water line adjustment shown at a slope?
- l. Show the 72" sanitary sewer crossing near STA 2+00 and 3+00.
- m. A 12" x 6" tee missing near 15+91.64.
- n. The profile is missing between STA 8+00 and 13+00.
- o. Correctly show the water line adjustment near STA 13+64.93.
- p. Profile all water line stubs.

34. Review the following comments pertaining to the Sanitary Sewer Profile:

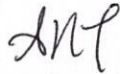
- a. The inverts at MH-A appear to be incorrect. How was the Invert Out (151.61) derived? This invert impacts the upstream profiles and possibly can avoid installing the water line under the sanitary sewer. Once the invert is correct, install all run of sewer pipe at minimum slope so the water line can be installed over the sanitary sewer.
- b. A minimum of 2.5' of drop is required for a drop connection at MH-B. An additional manhole will be needed to make the tie in connection at MH-B to avoid the top of the 72" sanitary sewer crossing.
- c. The 72" sanitary sewer is not referenced on the sanitary sewer of Bldg-2.

Malachi Mills, P.E.
March 1, 2024
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Seven Hills Commerce Park

If you have any questions concerning the above noted comments or the plans, please contact me at 501-4508 or John Yi at 501-4511.

Sincerely,

A handwritten signature in black ink, appearing to read 'ANT'.

Alice Thompson
Utilities Engineer

cc: John Mason, Lingerfelt Development, LLC
Douglass Urquhart, International Real Estate Development, Inc.

bc: Ralph Claytor
Daniel Ivy
Marchelle Sossong
Spencer Norman, Planning

ANT/vr