

March 7, 2022

Brian Brewer, PE
Kimley-Horn and Associates, Inc.
1700 Willow Lawn Drive, Suite 200
Richmond, VA 23230

**RE: Old Three Chopt Rd Apartments
13150 Old Three Chopt Rd
File No: 5558; POD2022-00007**

Dear Mr. Ellington:

The Department of Public Utilities has completed a review of the water and sewer plans that are part of the plan of development submitted to the Planning Department on February 14, 2022.

DPU recommends approval of these plans by the Planning Commission.

Please address the following comments before submitting the construction plans for signature.

General:

1. An Information Sheet for Preparation of Agreements for Water and/or Sewer Service has not been submitted. The Information Sheet allows the Department of Public Utilities to prepare the Water and Sewer Agreements which must then be executed by the Owner and the County prior to approval of building permits or prior to the utility pre-construction meeting and authorization to proceed with utility construction. It is recommended that the Information Sheet be submitted as soon as possible to avoid delays in either of these steps. Preparation of the Agreements may take up to 15 days after receipt of the Information Sheet and 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.
2. The Peak Hour Flow within the Water System Design is calculated by multiplying the Average Design Flow by 2.7. Review and update the subsequent calculation as necessary. Resubmit the form with the next submittal.
3. The worst-case hydrant must pull a maximum of 1000gpm but a total of 3500 must be pulled from the four worst case hydrants in the water model.
4. The Peak Hour and Maximum Day Demand within the Hydraulic Evaluation of this Project is incorrect. The Peak Hour Demand is calculated by converting the Average Day (GPD) into GPM and the Maximum Day Demand is calculated by converting the Maximum Day (GPD) into GPM. Review and revise subsequent calculations.
5. No trees are allowed in the utility easements. Landscaping and lighting cannot be approved until the final utility layout is approved by DPU.
6. Include an Overall Utility Plan in the construction plans.
7. The sanitary sewer analysis needs to evaluate the entire site which includes the flow from West Village and any other future project that will be developed on this site.
8. As stated on the preliminary comments dated January 28, 2022, a DEQ permit (certificate to construct) will be required for this project since this project will be serving more than 400 people. A tech-memo will be issued only after DPU receives a copy of the approved permit.

CE-101:

9. Show the location of all existing wells and septic tanks/drain fields.

10. Provide a note indicating all existing wells and septic tanks/drain fields will be abandoned in accordance with VDH requirements.
11. There are existing sanitary sewer laterals that connect to the existing sewer main to serve the existing homes to be demolished. If the sewer laterals will not be utilized, then reference the sewer laterals to be abandoned in accordance with DPU Standards.
12. Provide the deed book & page number (DB & PG) for the existing utility easement.
13. Provide a note indicating all existing utilities will maintain minimum cover and be protected during construction.
14. Label the size and material of all existing water and sewer mains.
15. Be advised, if a building demolition permit is desired prior to construction plan approval, then a separate disconnection or abandonment plan must be prepared and approved in advance of the demolition permit showing either disconnection location for the water and sewer services or complete abandonment for services at the water and sewer main. Disconnection or abandonment of the services would be required prior to approval of the demolition permit.

CU-101:

16. Provide four (4) northing/easting points on the plan.
17. Show the location of all existing and proposed gas lines within the property.
18. Reference the "SKM Access Rd, by Kimley-Horn and Associates, LLC, DWG File No. ____ - ____, and West Village, by Kimley-Horn and Associates, DWG File No. ____ - ____" for information concerning existing utilities.
19. Label the distance from the water line to either the face or back of curb.
20. Remove the utility easement around the proposed water mains within the ROW.
21. Will there be any businesses within the proposed Apartment building?
22. Label the horizontal separation (pipe to pipe) between the water main and storm sewer as well as sewer main and storm sewer.
23. Provide a minimum or 8-10' separation between the storm sewer and sanitary sewer. If the minimum distance cannot be obtained, change the material of the sanitary sewer pipe from PVC to DI.
24. Provide water line stationing on the proposed water main.
25. Show the limits of the encasement pipe within N Gayton Rd.
26. Specify the scale for the utility plan sheets.
27. Remove the bend (located east of MH-11) at the end of the proposed water main and replace with tee connection for the proposed fire hydrant. Terminate the water main with a plug.
28. Label the size and material of the fire service line between the water main connection and boundary valve.
29. The material referenced for the 16" water main in N Gayton Rd is incorrect.
30. The DPU Monitoring and Compliance Division is currently reviewing the NOI form information. Any comments requiring further action will be forwarded to you upon receipt by our office.
31. Provide the internal angle at each manhole.
32. Revise Material Quantities per plan comments.
33. Will a fire pump be installed with this project? If not, remove Note 3 in the Utility Notes.

CU-102:

34. There is a proposed utility easement in the proposed trash compactor location. The trash compactor cannot be placed within the proposed utility easement.
35. The minimum size water line on a commercial project for fire protection is 8 inches. Remove the 8" x 6" reducer from the proposed water main north of the proposed building.

36. Dead end lines shall not contain more than 600' of the minimum size line. Either create a loop in the water system design or increase the size of the water main to 12 inches.
37. Label the distance from the fire hydrant to the back of curb near the proposed SKM water line connection.
38. Label the sewer as "Private" between MH-1 and MH-11.
39. Could the sewer services that connect to MH-2, 3, and 4 be combined internally to have one sewer service connection in this area.

CG-301:

40. Ensure all water and sewer main sizes and crossing are labeled and shown correctly on the storm sewer profiles to coordinate with the utility plan.

CU-301

41. Be sure to match crowns with the existing sewer main at EXMH-1. Update the inverts on the sanitary sewer profiles.
42. Label the direction of the inverts entering the manhole when there is more than one connection into the manhole.
43. How was the invert (in) of 197.77 computed for MH-1?
44. There is no 6" water line crossing shown on the utility plan between MH-2 and MH-3. Coordinate the sanitary sewer profile with the utility plan.
45. Be sure to match crown at the 6" sanitary sewer connections to the proposed manholes. See Sheet CU-302 as well.

CR-101 and CU-303:

46. Show the valve that is part of the tapping sleeve & valve assembly on the water line profile.
47. Provide a minimum of 5' separation between the gate valves and the edge of the encasement pipe.
48. Some of the angles for the proposed bends are referenced incorrectly. Coordinate the water line profile with the utility plan.
49. Several bends are missing from the water line profile.
50. The size of the water line fittings does not match the size of the pipes referenced on the utility plan and water line profile.
51. The utility profiles do not coordinate the water system design shown on the utility plans. Review and revise as necessary.

CS-501:

52. Remove all details that do not pertain to this project (ex. D-170, D-410, D-185, D-505, etc).
53. Will an irrigation meter be installed for this project? If not, remove the detail from the plan sheet.
54. Provide D-525 detail on the construction plans.

CS-503:

55. With a Combined Fixture Value Total of 10142.1, a dual 2" water meter will be required for this project.
56. The maximum demand for a Combined Fixture Value Total of 10142 I approximately 196.87. Review and update the maximum day as necessary.

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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,



Alice Thompson
Utilities Engineer

cc: Steve Horman, Edward Rose Development Company, LLC

bc: Ralph Claytor
Megan Gallagher
Daniel Ivy
Marchelle Sossong
Planner, Mike Kennedy

ANT/vr

REVISED CONSTRUCTION PLANS REQUIRED