

March 31, 2022

Joseph Faudale, P.E.
The Bay Companies
8500 Bell Creek Road
Mechanicsville, VA 23116

**RE: Fairways Section 2
3100 Creighton Road
File No. 5564; POD2022-00121**

Dear Mr. Faudale:

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 March 11, 2022 and received by DPU on March 17, 2022.

□ DPU recommends approval of these plans by the Planning Commission.

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

General:

1. Agreements have not been executed at this time. Agreements must be executed prior to the authorization to begin utility construction or approval of building permits or prior to subdivision plat approval. An Information Sheet for the Preparation of Utility Agreements has not been submitted for review. If the Information Sheet is incomplete when submitted, we will send you comments for correction and resubmittal. If the required Information Sheet is complete when submitted, an Agreement will be forwarded to the Owner for signature within 21 days.
2. The Overall Water and Sewer Utility Plan shall be approved prior to the approval of section 2 of the Fairways Development.
3. Revise the hydraulic water model to include the entire length of existing 12" waterline from the intersection of Caddie Lane to the tie-in location since the flow test was done at the intersection of Caddie Lane and Creighton Road. Also, revise the Project Summary Report and Engineering Report based on updated water model result.
4. Show and label node J-1 and pipe P-19 within the schematic diagram as shown on the hydraulic calculations table. Increase size of junction and pipe labels for easier reading.
5. Revise the Project Summary Report (Form F-10) per the following and resubmit:
 - Revise the number of fire hydrants in accordance with the utility comments.
 - Revise pipe quantities to match the plans and utility plan comments.

C-1(Cover Sheet):

6. Revise water and sewer material quantities in accordance with all comments and per the following:
 - Include the number of 4" DI laterals.

C-2 (Existing Conditions and Demolition Plan):

7. Show on the plans the location of private and/or public water facility that currently serve the site.

C-3 (Overall Plan):

8. Coordinate this sheet with the Overall Water and Sewer Plan separately submitted to DPU.

C9-11 (Layout & Utility Plan):

9. Eliminate incorrect Henrico County monument (127) under notes since the correct one (15) is already provided.
10. Show lots 227 and 210 sanitary lateral connections perpendicular to the sewer main instead of the manholes to minimize infiltration.
11. Provide 5' of separation between the flushing hydrant tee and the water service connection for lot 234.
12. Provide vandal proof/ watertight frame and cover for manholes 232, 230, 223, 206, 210 and 205. Provide a rim elevation on these manholes that is 1-foot above grade where in undeveloped yard area.
13. Locate sewer lateral for lot 218 to Nine Iron Lane.
14. Label DI lateral when connecting to DI sewer main for lots 214, 215 and 226.
15. Locate sanitary sewer laterals for lots 214 and 215 further away from the house locations to allow for cleanout location between SIP and building. These laterals should have a minimum 5 feet separation between connections at the main.
16. Show and label existing 8" and 12" valves within Creighton Road near the proposed waterline tie in.
17. Revise the alignment of 30' utility easement for replacement of existing 21" AC sewer main so that future flow entering GIS 045SW009 can extend to future manhole and be at 90-degree with respect to downstream sewer.
18. There appears to be a hydraulic jump issue at manholes 206 and 212. Resolve this condition in accordance with DPU Standards section 2.2.04K.
19. Provide 30' utility easement for sewer pipe between manholes 222 and 223 since cover depth exceeds 10'.
20. Revise the material of sewer main between manholes EX 045SW009 & 232, manholes EX 45SW005 & 201 and manholes EX 45SW007 & 222 to DI.
21. Label Stone Dale Drive on the utility sheet C9.
22. Relocate water services for lots 276 and 290 to Nine Iron Drive so that service disruption is avoided where main is extended in future on both roads. Consequently, the flushing hydrants can be omitted with this change.
23. Provide sanitary sewer lateral for lot 290.
24. Provide 10' of separation between the water service for lot 207 and adjacent sanitary sewer pipe.
25. Revise the 8"x6" cross to 8"x6" tee at the intersection of Nine Iron Lane and Nine Iron Drive.
26. Provide the recordation information for the existing 16' utility easement for the existing 21" sewer main.
27. Provide mechanical joint restraint for the 11.25° bend near sanitary sewer pipe near lots 241/240.
28. Correct indicated distance on plan view (160.13') for run of sewer from manhole 217 to manhole 216 to match scaled distance on the plan view.
29. Revise the internal angle at manhole 201.
30. Reference county water and sewer book (CWB/CSB) on each utility sheet.
31. Provide exception request for fire hydrant less than 50' from proposed house. Exception request is to be addressed to the DPU Director and must provide justification for the request.
32. Bricked up openings are not allowed on manholes for future sewers. There are to be core-holed per DPU Standards at the necessary time with next section.
33. The offsite sewer utility easement shall be recorded prior to tentative acceptance of utilities and recordation of subdivision plat.

34. Provide an adequate number of fire hydrants to provide 350 feet maximum hose lay to all buildable areas since this development is zoned R-5AC and not single family residential.
- Provide a fire hydrant at property line of lots 229/230.
 - Move fire hydrant at Nine Iron Court to the other side of the entrance at the P.T.
 - Provide a fire hydrant at lot 212/213 boundary and at lot 204 on corner P.T. of Tiger Lane.

C15-18 (Road, Storm, and Utility Profiles):

35. For all sanitary sewer profiles, provide separate sewer stationing starting at the most downstream connection and proceeding upgradient with equalities at each junction manhole. Minimize stationing changes by using the longest chain of sewer line runs in the same stationing sequence. Locate sewer stationing away from road stationing to provide clarity.
36. Show invert elevations for laterals entering manholes so that crowns match with the sewer main.
37. Profile all sanitary lateral crossings that have .5' or less separation from storm sewer crossings or 1' or less from water main crossings. Verify at least .5' of vertical separation at each storm crossing and 1' at each waterline crossing.
38. Provide GIS ID number for the existing manholes where sewer tie-in will occur in all profiles to match utility plan.
39. Show all sewer laterals deeper than 12 feet on the profile and label with lot numbers.
40. The following comments pertain to Nine Iron Drive:
- Show existing storm pipe and gas line crossing the proposed waterline within Creighton Road near the tie in location.
 - Show sanitary sewer pipe crossing near STA 12+15.
 - Revise the 8"x6" tee to 8"x8" tee and the number of 8" valves to 3 near STA 15+00.
 - Show available separation between the sewer laterals for lots 216, 217 & 218 and water main with a separate cross section. Provide at least 1' of vertical separation between the waterline and sewer laterals.
 - Show pipe opening symbol from manhole 210 to 212 at manhole 212.
41. The following comments pertain to Tiger Lane profile:
- Revise the 8"x8" tee to 8"x8" cross near STA 12+75.
 - Provide at least 0.1' elevation drop across manhole 230.
 - Resolve the conflict between the lateral for lot 202 and the storm crossing. Provide at least 6" of vertical separation edge to edge and confirm with a separate profile.
42. Show pipe opening symbol from manhole 216 to 217 at manhole 217 within Nine Iron Court profile.
43. Clearly show the title of the storm profiles on sheet C-17.
44. Revise the material of sewer run between manholes EX3 and 232 to DI within Sanitary Sewer EX 3 to 232 profile. Specify 3.5' minimum cover.
45. Revise the material of sewer run between manholes EX4 and 222 to DI within Sanitary Sewer EX 4 to 222 profile.
46. Revise the material of sewer run between manholes EX5 and 201 to DI within Sanitary Sewer EX 5 to 201 profile. Also, clearly show the title of this profile.
47. Revise the material of sewer run between manholes 213 and 205 to DI within Sanitary Sewer 213 to 205 profile.
48. Provide at least 0.1' elevation drop across manhole 206 within Sanitary Sewer 213 to 205.

L01-L02 (Conceptual Landscape and lighting Plan):

49. Tree plantings must be located outside of all utility easements or at least 10 feet away from utilities within right of ways. All other proposed landscaping must not obscure visibility or hinder maintenance of above grade or at grade utilities. Any non-tree landscaping within utility easements requires the following statement on the landscaping plan: "The owner is responsible for replacement of any planting (i.e., shrubs, etc.) damaged or removed by DPU, or it's agent, as required for maintenance of county owned water and/or sewer facilities."
50. Adjust residential yard light poles and SIPs/ meter boxes to be at least 5' away so that private laterals and water services do not conflict with extension to each house.

C-44 (RPA Reforestation Plan):

51. This needs to be coordinated with DPU sewer facilities and proposed 30' sewer easement for future replacement trunk sewer.

If you have any questions concerning the above noted comments or the plans, please contact me at 501-4512 or John Clark at 501- 4501.

Sincerely,

Ireini Botros
Ireini Botros
Utility Engineer

cc: Doug Godsey, Godsey Properties

bc: M. Sossong
R. Claytor
J. Clark
Christina Goggin, Planning

INB/vr