

June 27, 2014

Nancy Rodrique, LA
Vanesse Hangen Brustlin, Inc.
Two Columbus Center, 4500 Main Street, Suite 400
Virginia Beach, VA 23462

**RE: Short Pump Park Pump Road and Three Chopt Road
3425 Pump Rd
File - County; POD No. 2013-00180**

Dear Ms. Rodrique:

We have reviewed the construction plans submitted to the Planning Department on June 13, 2014.

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 **are not required for this County project.**

Cover Sheet:

1. Provide an original signature and date on the engineer's seal on the cover sheet.
2. Sheet 5.04 is missing from the construction plans. If there will be no Sheet 5.04, then update the sheet numbers on the plan sheets and sheet index.

Sheet C5.01:

3. Provide four northing/easting points on the plan.
4. Change the solid line style to dash line style for all existing water mains shown on the plan.
5. The fire hydrant located northeast of STR: A-2 is too close to the storm sewer. Provide an 8-10' separation between the hydrant and storm pipe.
6. Is the distance labeled from the existing water main to the face or back of curb? Clearly label the distance on the plan.
7. Will the existing meter that served the irrigation system for the field, the concession stand and 1-story frame Deep Run School building need to be reduced since the meter will only serve the irrigation system now? Provide an updated Domestic Meter Sizing Form to support the existing meter size.
8. Change the material type of the service lines prior to the domestic water meters from "PVC" to "Copper" See Sheet C5.03 as well.
9. Label the size of all of the proposed water meters. See Sheet C5.03 as well.
10. Provide a utility easement around the proposed water meter to serve the Concession Stand and 1-story frame building located on the school's property.
11. Remove the bends in the service line prior to the water meter to serve the Concession Stand and 1-story frame building. If the line needs to deflect, then place the bends after the water meter.
12. Remove the 2" x 1.5" reducer from the domestic service line. The service line can be reduced at the yoke in the meter box. See Sheet C5.03 as well.

13. Indicate the size of the proposed backflow preventers on the plans. See Sheet C5.03 as well.
14. Revise the location of the nozzle on the fire hydrant northeast of STR-A-2. The nozzle on the fire hydrant should face the road.
15. Provide an easement around the proposed fire hydrant to be relocated on the school's property northeast of STR: A-2.
16. Sewer laterals should be installed at a minimum slope of 2.08% to the edge of the utility easement or ROW line. The sewer slope can be decreased to a minimum 1.04% after the lateral has left the easement or right of way in accordance with Building Inspections Standards.
17. Delete the existing stub shown at MH (STA: 92+59.31) on the utility plan sheet since the stub is shown to be abandoned on the demolition sheet.
18. Fill out a NOI to determine if a monitoring manhole will be required for the Concession Stand and 1-story frame Deep Run School Building.

Sheet C5.03:

19. The utility easement around the existing 30" water main should terminate at the property line between the School's property and the County's property.
20. The valve that is party of the tapping sleeve and valve assembly should be installed near the tee. Shift the valve closer to the tee.
21. Will the proposed waterline be adjusted under the storm sewer at the entrance to the park?
22. Label the distance from the proposed water main to either the face or back of curb in the entrance road.
23. Use a 2" corp. stop in place of the 8" x 2" tee to connect the proposed water meter to the water main.
24. There are too many unnecessary valves on the water main. Remove the two valves on the west of the two tees at the end of the water main. Only provide the valve prior to the 8" plug.
25. Provide a callout for all of the proposed valves.
26. Reduce the fire hydrant lead and place fire hydrant at the end of the water main closer to the curb.
27. Reduce the domestic service line prior to the water meter to place the water meter closer to the curb.
28. Remove the valve on the domestic service line. A valve is not necessary if a corp. stop is utilized.
29. The drain from the dog park cannot discharge into the sanitary sewer. DPU does not allow rainwater to drain into the sanitary sewer. The drain must discharge to the storm sewer.

Sheet C5.05:

30. Relocating the fire hydrant and valve on the fire hydrant lead northeast of S-10 will cause a water main shut down. DPU suggest abandoning the existing fire hydrant and install a new hydrant on the main.

Sheet C5.09:

31. Show the water main crossing between STR-B-10 and B-11 on the storm sewer profiles.

Sheet C8.04:

32. Use the details from the current Standards. The new Standards have not been approved so change the Standard Meter Box Installation for 1 1/2" Services to D-222 in current Standards.
33. Remove the Corporation/Curb Stop with Box detail from the Utility Details Sheet.

Sheet C9.18:

34. Provide signatures on the Review Checklist, Domestic Meter Sizing Form, and Fire Flow Estimate form.
35. The fixture value for the Water Closet-Flush Valve on the Existing Concession and Historic Building Meter Sizing Form is incorrect. Review the calculations carefully and update the Combined Fixture Value Total on the Form.

36. The Combined Fixture Value Total on Domestic Meter Sizing Form for the Large Shelter & Dog Park is incorrect.
37. Provide a Fire Flow Estimate form for the Pump House.
38. Is the Ground Floor Area on the Fire Flow Estimate form for the Restroom Area only?
39. Based on the Fire Estimate Form two fire hydrants are required for a Fire Flow of 1250gpm. Update the form accordingly. An additional fire hydrant will be required onsite to meet ISO requirements.
40. Review the below comments on the Review Checklist:
 - a. Remove the Sanitary Sewer Demand from the Water utility Calculations Sheet. The design basis for this project should be evaluated using 5GPD/Person. Review and revise the Review Checklist accordingly.
 - b. The Equivalent Residential unit on the Review Checklist is evaluated by dividing the Average Design Flow by 300.
 - c. The Peak Hour Domestic Flow is evaluated by multiplying the Average Domestic Design Flow by 2.7 and the calculation should be in gpm.

F1.00:

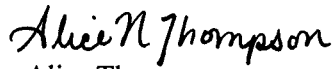
41. The discharging pipe schematic does not match what is shown on the utility plan. The water source to the Pump House comes in from the back of the building on the schematic is shows it coming in from the side of the building. Update schematic and show the sewer discharge on the schematic as well.
42. What is the flow capacity of the pump house?
43. Provide a profile for the sanitary sewer force main to show how the force main enters S-1 via gravity.

General:

44. Since sewer service is being provided for the 2-story Concession Stand and Restroom building, a monitoring manhole may be required for this project. Submit a NOI to DPU for review.
45. Landscaping cannot be approved until final utility layout has been approved.
46. Agreements are not required for this County project.

If you have any questions concerning the above noted comments or the plans, please contact me at 501- 4508 or Tanneh Togba-Lee at 501-4512.

Sincerely,


Alice Thompson
Utilities Engineer

cc: Steve Hart, County of Henrico Division of Recreation & Parks
R. Claytor, A. Seal
Greg Garrison, Planning
ANT/mab