

May 6, 2022

Louise Pretzman, PE
Langan Engineering & Environmental Services
1300 Wilson Blvd., Suite 450
Arlington, VA 22209

**RE: New Season Treatment Center at Oak Hill
Plaza Shopping Mall
LOCATION: Oak Hill Plaza S.C.
FILE NO. 5581 POD NO. 2022-00188**

Dear Ms. Pretzman:

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 April 8, 2022 and received by DPU on April 21, 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. 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. 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. Engineer is to request available flow for fire protection. Engineer to provide hydraulic calculations demonstrating adequate residual pressure throughout the distribution system assuming fire flow at worst case fire hydrant(s). System shall be designed to maintain a minimum pressure of 20 psi at ground level elevation at all points in distribution system with peak flow (domestic + fire flow) conditions.
3. The DPU Monitoring and Compliance Division will need to review this plan and receive a completed NOI form for evaluation. Any comments requiring further action will be forwarded to you upon receipt by our office.
4. VDOT plan approval and road permits will be required for any utility work within Mechanicsville Turnpike.

Cover

5. P.E. Seal with original signature and date is required on the Cover Sheet. A facsimile of seal, signature and date is acceptable on all other sheets.
6. Include "utility plan" within the title.
7. List contact person for the owner/developer under site data.

C140(Utility)

8. Sewer connection location mistakenly indicates that there is a tie-in to an existing manhole at the specific location. There is not as the sewer is transite (asbestos cement) pipe that was installed 46 years ago and is typically brittle. DPU strongly recommends connection to the nearest manhole (label as 021NW0040) shown at the intersection instead of the transite pipe so as to avoid complications from pipe failure and required replacement. Sewer connection should be done with the following in mind:
 - DPU requires a 6" sanitary lateral for commercial customers.
 - Extension from the manhole should be done at a 45-degree angle with respect to existing sewer so as to provide adequate core hole separation and hopefully preserve existing manhole wall integrity. Extension can be done with either a 6" lateral or 8" main.
 - A monitoring manhole will be required for this facility per D-125 and must be located onsite and outside of the main entrance road for DPU staff safety and maintaining traffic flow. Lateral must also enter the monitoring manhole with a slope of 2-5% for adequate sampling velocity.
9. Label pipe entering and leaving the manhole as AC and not RCP.
10. Add the following note, "Connections to existing manholes without stubs or bricked-up openings shall be the equal of either Kor-N-Seal w/stainless steel expander ring or Press-Seal w/nylon expander sleeve installed by core drilling manhole and in strict accordance with manufacturer's specifications."
11. Show lightly stippled area where open cut is required within Mechanicsville Turnpike and include standard pavement restoration detail.
12. If sewer is extended within the entrance road, there shall be 10 feet horizontal separation from the existing water main where parallel.
13. Fire protection requirements will be determined when ISO required fire flow calculations are submitted for review.
14. Additional fire hydrants will most likely be required as the existing hydrant is too close to the building at 15 feet for primary fire protection. Proposed hydrants are to be at least 50 feet from the building if possible.
15. Provide exception request for the existing fire hydrant and any hydrant that is less than 50' from the proposed building. Exception request is to be addressed to the DPU Director and must provide justification for the request.
16. A domestic backflow preventer will be required on the water service for this facility and can be either external(D-400) or internal (D-405) to the building. Please show per applicable DPU details and label device size and type.
17. Provide a standard width 20-foot utility easement for water and sewer mains. Smaller width easements will be acceptable for water service (10 feet).
18. Show existing utility easement for the 8" DI water main and provide the recordation information (DB & PG) on the plans.
19. Provide benchmarks consistent with DPU Spec. 5.5 L. (Add note for contractor reestablishing benchmarks if temporary and can be disturbed).
20. Include reference to applicable county water and sewer book sheets in lower right corner of sheet (CSB/CWB=021NW and 021NE)
21. Water meter size was not indicated on the plan. Water service line size shall be per DPU Standards for the specific meter size.
22. Label existing water main material and size.
23. Provide nearest county monumentation markers used for site survey.
24. Provide a minimum of 3 GIS northing/easting reference points on the utility plan sheet.

25. Correct the following notes:

- Note 12 can indicate a minimum cover of 3'-6" for 8" pipe and smaller.
- Note 24 has an incorrect sheet reference for utility details.

C200(stormwater profiles)

26. Show utility crossings within these profiles.

C210(Sanitary Sewer Profile)

27. Revise profile in accordance with previous comments made on sewer extension design.
28. Lateral shall enter manhole using an invert drop range of 0.1-0.5 foot and should at least match crowns with sewer main where pipe sizes are dissimilar.

C520-521(Utility Details)

29. Provide filled out forms for the Domestic Meter Sizing and Fire Flow Estimate forms.
30. Provide a tabulated list of water and sewer material quantities.
31. Include details for fire hydrant(D-495) and domestic backflow preventer (D-400 or D-405).

C522(Utility Forms)

32. This sheet can be eliminated. None of the forms were filled out and are too small and can be submitted separately from the plans. Please omit the Project Summary Report and the sewer design form and submit the other forms filled out and separate from the plans.

LP101(Landscape)

33. 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."

E101(Lighting)

34. All light poles shall be at least 10 feet away from public utilities and outside of utility easements.

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

Sincerely,

John L. Clark

John L. Clark, PE
Utilities Engineer

cc: Jim Horwitz, Metro Treatment of Virginia, LP
bc: Ralph Claytor
Marchelle Sossong
Megan Gallagher, Daniel Ivy
Ireini Botros
Aimee Crady, Planning

JLC/tt