

November 30, 2023

David Ellington, PE  
Kimley-Horn & Associates  
2035 Maywill St., Suite 200  
Richmond, VA 23230

**RE: Chef Store**  
**LOCATION: 7821 Shrader Road**  
**POD NO. 2023-00492**

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 November 14, 2023.

DPU recommends approval of these plans by the Director of Planning.

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 been submitted and is being reviewed. If the Information Sheet is incomplete, we will send you comments for correction and resubmittal. If the Information Sheet is complete, an Agreement will be forwarded to the Owner for signature within 21 days.

**Cover sheet**

2. Include "Utility Plan" within the cover sheet title.

**Property and Easement Exhibit (CA-102)**

3. Provide a standard 20-foot width easement for public utility mains. A width of 16 feet with 8 feet from the back side of the hydrant will be acceptable for fire hydrants.

**Phase 1 E&S and Demolition (CE-101)**

4. Adjust sediment trap to be outside of the existing sewer utility easement.

**Utility Plan (CU-101)**

5. Revise water and sewer material quantities in accordance with all comments and per the following:
  - Include vertical feet for the manholes.
6. Verify sizes of the domestic backflow preventer and fire line reduced pressure detector assembly with your mechanical engineer as these seem oversized.
7. Provide bearings and internal angles for sewer and lateral connection.
8. Resolve overlapping between all notes. Information on existing manholes and existing sewer easement is not very legible.
9. The hydrant at the eastern frontage can be omitted since ISO fire flow calculations will only require 1 hydrant for 1000 gpm when revised per subsequent comment.
10. Provide GIS ID for each existing sewer manhole.

11. Show limits of open cut within Shrader Road and include DPW standard detail for pavement repair.
12. Are there any food preparation activities occurring with this facility? If so, pretreatment (i.e., grease trap) shall be provided with appropriate details and information. Also, any storage of fats, oils and grease shall be shown on the plan if there are outside facilities.
13. Show any irrigation meter or exclusion meter that may be needed for irrigation of landscaping.
14. Reference county water book and sewer book sheet numbers.
15. Improve legibility of existing sewer utility easement by using darker lines and resolving overlap of recordation information with other notes and features.
16. Label existing manholes with GIS IDs.
17. Provide 8" waterline extension for this project in accordance with DPU standards for minimum size waterline for commercial property.
18. Provide an 8"x4" tee and 4" valve with tapped plug for the domestic water service since service line distance exceeds 25 feet. See DPU D-530 for reference.
19. Adjust the following valves:
  - Include a valve with the tapping sleeve where connecting to the existing 12" water main.
  - The valves on the line side of the hydrant tees can be omitted for both hydrants.
20. Label existing waterline within Shrader Road as 12" DI.
21. Label existing sewer main as 8" PVC along the property frontage.
22. Provide an internal angle of at least 90 degrees relative to downstream sewer where 6" lateral connects to the doghouse manhole.
23. Locate monitoring manhole outside of the parking space.
24. Provide a boundary valve (per D-476) at the easement boundary for the fire line.
25. Show all existing water and sewer utilities within Shrader Road.
26. Add the following note, "Where possible in unpaved areas, manhole castings shall be approximately 12 inches above final grade using appropriate covers (i.e. - vandalproof, watertight)."
27. Label doghouse manhole as having a vandalproof/watertight frame and cover in both profile and plan view.

#### **Water Model (CU-301)**

28. Revise model to use C=120 for all lines.
29. Update model to reflect ISO fire flow changes.

#### **Utility Details and Profiles (CU-501, -502)**

30. Include details for thrust blocking(D-700), and electronic marker balls (D-740, 750).
31. Add the following note: "Electronic markers (ball type) shall be installed on all water mains and sewer gravity mains in accordance with specification 2.2.05N and 4.2.02E of the 2014 DPU Design and Construction Standards."
32. The Ci value for the ISO fire flow calculations should be rounded down to 2000. Revise the remainder of the form based on this value.
33. For all sanitary sewer profiles, provide separate sewer stationing starting at the most downstream connection and proceeding upgradient with equalities at each junction manhole.
34. The following pertain to profile for existing sewer:
  - Coordinate title and labeling of manholes with the plan view.
  - Sewer is 8" PVC.
  - Provide a table to address the raising and lowering of existing manholes to finished grade. This table should include:
    - a. Existing top elevation.
    - b. Proposed top elevation.



- c. Amount of modification required, i.e., vertical feet of raising or lowering.
  - d. Proposed method of adjusting each manhole.
  - e. Phase of construction each manhole modification is to be done.
35. The following pertain to the profile for proposed sewer:
- Eliminate the drop stack and design 6" lateral to cross over top of the storm pipe with 0.5' separation and at least 2.08% slope. Drop stacks create potential maintenance issues with blockages.
  - Match crowns between the proposed 6" lateral and existing 8" sewer main at the doghouse manhole.
  - Label monitoring manhole as per D-125.
36. The following pertain to the waterline profile:
- Provide 8" waterline per previous plan view comment.
  - Show crossings for storm sewer and fiber optic communications line.
  - Show waterline at the correct minimum depth of cover of 3.5 feet.

**Landscape Plan (LP-101)**

37. 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."
38. Locate bushes near proposed fire hydrant and existing manhole to be at least 5 feet away.

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

Sincerely,



John L. Clark PE  
Utilities Engineer

cc: Aaron Bertrand, Richmond Shrader Road, LLC  
Luan Thanh Nguyen & Nhi Hong Nguyen

bc: Ralph Claytor  
Marchelle Sossong  
Daniel Ivy  
Christina Goggin, Planning

JLC/vr