



DEPARTMENT OF PUBLIC UTILITIES  
(804) 501-4517

COMMONWEALTH OF VIRGINIA  
**COUNTY OF HENRICO**

## **INTER-OFFICE MEMORANDUM**

**TO:** Christina Goggin, Planning

**FROM:** John Clark, Public Utilities

**SUBJECT:** Darbytown Townhouses Concept Plan (POD2022-00372)

**DATE:** July 21, 2022

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We have reviewed a concept plan for the above referenced project submitted to the Planning Office on July 1, 2022 and received by DPU on July 6, 2022. The plan proposes a residential development of 17 townhouses.

Our comments are intended to provide guidance for requirements for design and construction of the water and sewer service that will be provided by the County systems. Construction plans for water and sewer shall be designed in accordance with DPU Standards. The levels of detail provided in the following comments are based on the amount of detail provided on the plans.

### **General:**

1. New updated construction and utility plans for this project will be required that are in accordance with current DPU Standards and are signed by a current licensed professional engineer with Balzer. The 2005 plans were never approved and have been voided and discarded. In addition, a current standard cover sheet template shall be provided with updated owner, developer, and engineer information.
2. Utility Agreements for water and sewer service will be required for this project.
3. Include with the construction plan submittal the following:
  - DPU Engineering Report (form F-1) with project checklist and water and sewer design calculations.
  - Water system hydraulic calculations demonstrating adequate pressures.
  - Water system flow availability request (form F-7).
  - ISO fire flow estimate (form F-9) that are in accordance with current ISO guideline methodology.
  - Information sheet and associated attachments (form F-5) for development of Utility Agreements.
  - Current standard water and sewer construction notes (form F-11).
  - Current water and sewer material notes (form F-6).
  - Other related DPU utility details.

### **Sheet 3(utility plan)**

4. It appears that these are individual townhouse lots for sale. Therefore, the sewer shall be public and centered within a 20-foot utility easement.
5. DPU would prefer that the sewer be brought out into the front and within the drive aisle as much as possible.
6. Alignment of the sewer along the back will need to be coordinated with lot fencing while maintaining 10 feet of separation from the storm sewer. Sewer shall also be DIP given the limited accessibility along the back.
7. The sewer tie-in is at an unacceptable angle regarding core hole separation from the adjacent private sewer also entering the existing manhole. A minimum of approximately 45 degrees of separation is required.

8. Lateral connection from lots 5 and 6 of block C must be at a 90-degree minimum internal angle with respect to downstream sewer.
9. Provide correct recordation reference for the offsite sewer utility easement.
10. Label on adjacent site which runs of sewer are private and public.
11. Label each existing manhole with a GIS ID.
12. Show wrought iron fence, trees, and bushes that are on adjacent property near the sewer extension. Sewer extension and easement must not contain trees and should try to cross the fence in a more perpendicular alignment. Also, provide information on the existing fence in regard to footer construction and spacing, section lengths, and removability of the sections.
13. Water system design will be based on hydraulic calculations and fire hydrant requirements.
14. Fire protection requirements will be determined when revised ISO fire flow calculations are submitted for review.
15. Fire hydrants shall be located in accordance with DPU Standards and so that maximum hose lay to any part of a structure shall not exceed 350 feet for multifamily residential.
16. Provide 50 feet setback from building to fire hydrant. Otherwise, submit an exception request to the DPU Director with justification.
17. Certify whether the 2-hour rated fire division wall is the same as a building separation wall as specified in chapter 5 of the 2014 ISO "Guide for Determination of Needed Fire Flow".
18. Provide a fire hydrant at the eastern end of the waterline for meeting 350-foot maximum hose lay. Provide 8" water main from the 8 x 8 tee to this hydrant. Water main can be 6" from the west side of this tee to the flushing hydrant at the western end.
19. A 5/8" water meter will suffice for each townhouse.

**Sheet C10(notes and details)**

20. Provide current DPU details, notes, and references.

**Sheet C11(calculations)**

21. Update and sign all ISO fire flow calculation forms per current ISO methodology. Revise the calculations as required based on the type of wall between townhouse units as this will significantly impact the calculated effective area.

If you have any questions, please call me at 501-4501.

*John L. Clark*

John L. Clark, P.E.  
Utilities Engineer II

cc: Bradley Schurman, PE, Balzer & Associates  
Christos Marafatsos

bc: Ralph Claytor  
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Alice Thompson  
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JLC/vr