



GOOCHLAND COUNTY

Public Utilities

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Private Development Reference Guide

Steps and benchmarks for Private Development of Public Utilities to be conveyed to Goochland County Department of Public Utilities (DPU). Refer to the Goochland County Department of Public Utilities Design and Construction Standards (DPU Standards) for detailed information regarding the requirements contained in this document. Definitions of the terms used in this document are as contained in the Standards.

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2. Utility Plan Approval from Goochland DPU – **DEVELOPER & ENGINEER**

Plan approval must be received from DPU prior to start of construction for any public utility construction project. This approval is typically included with Community Development Department approval of the POD (Plan of Development), or LDP (Land Disturbance Plan) associated with a project. Any project which consists only of construction of water and sewer infrastructure to be turned over to the county may be submitted directly to DPU and will be reviewed and approved as a UTP (Utility Plan).

3. Obtain Utility Permit – **DEVELOPER & ENGINEER**

Utility permit serves to authorize construction of utilities destined for conveyance to Goochland DPU. Developers must satisfy the below requirements for issuance of Utility Permit.

- A)** A Utility Permit Application (the Application) must be submitted to DPU for review and approval prior to the start of any utility construction.
- B)** The Utility Permit Fee must be remitted to Goochland DPU at the time of Application. The fee is based on a percentage of the cost for the construction of public water and sewer infrastructure associated with the project. The current fee is provided on the most recent version of the DPU's Utility Permit Application (Application). Developers are asked to self-report utility construction cost but may be required by DPU to present documentation certifying the accuracy of their cost of utility construction.
- C)** A Utility Agreement (Agreement) is required for every UTL and UTP. The Agreement is between the county and the developer(s) of the project. The form of the Agreement depends on the scope of construction and the number of developers and landowners involved with the project.
- D)** An On-Site Utility Agreement will be used when utility construction is limited to parcels owned by the developer(s).
- E)** An Off-Site Utility Agreement is required for any project involving the construction of utilities on parcels not owned by the developer(s).
- F)** The Developer(s) must provide an approved surety instrument equal to the amount of the utility construction costs reported on the Application. Typical surety instruments accepted by Goochland DPU are Performance Bonds and Letters of Credit. Surety instrument documentation must be submitted to DPU for review and approval.
- G)** To ensure product conformance with Goochland County Standards and Specifications, the Developer(s) or their utility contractor must submit to Goochland DPU, for review and approval, all "shop drawings" and product submittal information related to utility construction. Submittals must be reviewed and accepted by DPU prior to start of any utility construction.
- H)** All Off-Site utility easements on parcel(s) not owned by the Developer(s) must be reviewed, approved by DPU, and recorded in County land records before a UTL or UTP will be issued for the project.

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4. Pre-construction meeting –

After issuance of the Utility Permit, DPU requires Developer(s) or their duly authorized Representative(s) to coordinate and schedule an onsite pre-construction meeting with the Goochland County DPU Construction Manager. DPU Construction Manager may invite other DPU team members as he deems necessary, and maintains the right to require attendance by any or all the following entities:

- Developer(s) or Developer(s) Representative
- Off-site Landowners
- General Contractor
- Utility Contractor
- Design Engineer

Prior to the start of any utility construction, the following site conditions must be met:

- A)** Rough grade (within 12” of proposed finished grade) must be obtained within the utility installation area.
- B)** All major earthwork (mass grading, cutting, filling & hauling) must be confined to areas outside of the utility installation area.
- C)** All wooded and/or non-roadway utility construction areas must be cleared/mulched in their entirety.

Once the utility construction area meets the above requirements, the DPU Construction Manager will certify that the project site is ready for utility construction. The DPU Construction Manager reserves the right to delay certification of site readiness if any of the above requirements are not met, or if other issues are identified which may interfere with utility construction or render the utility construction area unsuitable or unsafe.

When all obligations and requirements are met to the satisfaction of DPU Construction Manager, the project may proceed to construction phase.

5. Construction Phase – **CONTRACTOR**

All construction related to public water and sewer utilities must be performed in accordance with the approved plans and DPU Standards. The utility contractor must coordinate all construction activity with the Goochland DPU Construction Management Team. This includes the following:

- A)** All construction or installation of Public Utilities **MUST** be coordinated through Goochland DPU Construction Management Team. Any installation of Public Utility that occurs without scheduling or notifying Goochland DPU Construction Management Team may be rejected at DPU’s discretion.

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- B) The Contractor must coordinate their means & methods, including scheduling the work with the DPU Construction Management Team, for any/all temporary or permanent tie-ins to existing public utilities.
- C) Inspection of delivered and stored materials by DPU Construction Management Team. DPU reserves the right to reject any materials which do not meet the Standards, or which have been improperly handled or stored at any time.
- D) Daily observation of installed utilities by DPU Construction Management Team.
- E) Coordinating timing and means & methods of all “wet taps” of public water system with DPU Construction Management Team. All “wet taps” must be observed by DPU Construction Management Team.
- F) The Developer(s) or their Contractor must arrange for the GPS capture by DPU of all fixed points of utility construction. This includes, but is not limited to, water line bends, tees, valves, and hydrants as well as sewer manholes, lateral connections, and clean outs. Utility contractors may be required to leave these fixed points open, provide temporary site inspection ports, or otherwise allow for agreed upon methods to facilitate DPU to perform GPS capture of these points.

6. Acceptance Testing – **CONTRACTOR**

The Developer(s) or their Utility Contractor(s) must perform acceptance testing of installed water and sewer infrastructure to the satisfaction of the Goochland County Construction Management Team and in accordance with DPU Standards. All acceptance testing must be scheduled with the Goochland DPU Construction Management Team at least 48 hours in advance of said testing. Complete and detailed requirements for Acceptance Testing of water and sewer infrastructure are contained within the DPU Standards of Design and Construction, but typically include the following:

SEWER

- A) Vacuum testing installed manholes. This should be performed before the installation of manhole frame and cover at top of manhole.
- B) Air testing each individual sewer run between manholes.
- C) Hydrostatic pressure testing of all public force main.
- D) CCTV documentation of installed sewer. (See Final Construction Phase).

WATER

- E) Hydrostatic pressure testing of all installed water main and service connections.
- F) Super chlorination of all installed water main and service connections.
- G) Bacteriological sampling and testing. The sampling is to be performed by a third party under the observation of Goochland DPU Construction Management Team. Testing to be performed by laboratory with state certification for coliform and e-coli testing of drinking water. Test results must be remitted to Goochland DPU Construction Management Team before any further work can proceed.
- H) Visual observation by DPU Inspector of final tie-in(s) after full pressurization.

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7. Final Construction Phase – **CONTRACTOR**

Prior to declaring construction complete, the Utility Contractor(s) and General Contractor should coordinate and/or schedule of the following benchmarks, which are required before the project may proceed to the Utility Acceptance Phase.

- A)** All major earthworks for the entire project must be complete. The entire project area must be at finished grade with the exclusion of future landscaping.
- B)** Utility construction must be complete. This includes paving of all roads containing water or sewer infrastructure. At minimum, base asphalt must be in place on all roads within utility construction area. Goochland DPU does not consider valve boxes, manholes, or other utilities located in roadway to be complete until pavement has been installed. Final paving must be in place prior to requesting Final Acceptance.
- C)** Valve boxes, meter boxes, manholes, and other utility enclosures must be set to finished grade.
- D)** Valve boxes set in greenspace must extend 2" - 4" above adjacent grade and must include a concrete collar around the top of the valve box.
- E)** Valve boxes must be centered above valve operating nuts.
- F)** All installed valves are to be left fully open unless otherwise directed by Goochland DPU Construction Management Team.
- G)** Meter boxes and flushing hydrant enclosures in green space must extend 2" – 4" above adjacent grade to allow for future finished landscaping. All boxes and enclosures must be free of debris and dirt. Positive drainage of surface water away from enclosures shall be provided.
- H)** Fire hydrants must be painted bright, reflective silver, and must be clean and fully functional. Fire hydrant elevations shall be set based on finished grade so that no future raising or lowering will be required.
- I)** Tracer wire access boxes shall be installed at the rear of all fire hydrants. Tracer wire access box tops must be set flush with the break-away flange of the fire hydrant. Tracer wire access boxes must be wired and fully functional.
- J)** Sanitary sewer clean out stacks must extend 2' – 4' above adjacent grade. Each clean out shall have a permanent cap installed at its opening. The clean out stack may be cut to match finished grade by the plumber performing final tie-in of the building lateral.
- K)** Developer(s) and builder(s) must ensure that the final clean out cap provided at finished grade conforms to DPU Standards.
- L)** Goochland DPU strongly advises developers and utility installers to provide safety fence or silt fence in a 3' -5' radius around all meter boxes and clean out stacks to guard against unwanted intrusion into those areas. The developer is responsible for maintaining these assets until Final Acceptance of public utilities is granted by Goochland DPU.
- M)** Manholes must have appropriate frame and cover installed. All manhole parging and concrete work must be complete. Manholes must be free of dirt, gravel, and debris. Manholes in unmaintained greenspace must extend 12" – 18" above adjacent grade, with an essentially unsloping grade provided for a 5' radius around manhole.
- N)** CCTV documentation of all installed sanitary sewers must be provided to Goochland DPU. Camera documentation should occur AFTER pavement (minimum of base pavement) has been installed.

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- O) CCTV documentation must show sewer to be free of debris and/or foreign material, with no detectable infiltration. Issues discovered during upon CCTV documentation must be resolved before issuance of any acceptance by DPU. It is therefore recommended that the Developer(s) have all installed sewer lines and manholes jetted and cleaned before CCTV documentation occurs.
- P) All required acceptance testing must be completed and documented to the satisfaction of Goochland DPU Construction Management Team.

8. Tentative Acceptance – **DEVELOPER & ENGINEER & CONTRACTOR**

The Developer(s) must meet the following benchmarks to achieve Tentative Acceptance of the water and sewer infrastructure they have constructed. Goochland DPU will not install water meters or otherwise offer services to any installed utility connection until Tentative or Final Acceptance is granted for all parts of public utilities associated with a project.

- A) All requirements listed in the previous Final Construction Phase must be met before consideration will be given for Tentative Acceptance.
- B) Design engineers must submit to Goochland DPU, for review and approval, As-Built record drawings prepared in accordance with DPU standards for Record Drawings.
- C) All public utility easements associated with the project must be approved and recorded, including any revisions made necessary by changes during construction.
- D) Street addresses must be assigned for all lots served by public utilities. Typically, this requirement will be met during the POD (Plan of Development) approval process. Public utility infrastructure constructed from an LDP (Land Disturbance Plan) cannot be conveyed to the county until the POD for the project has been approved by Goochland County.
- E) The Developer(s) or their Representative must submit a signed Tentative Acceptance Application to the Goochland DPU Construction Management Team. This will initiate a Punch-list inspection of installed utilities. The punch list inspection will focus on, but will not be limited to, the requirements included in the previous Final Construction Phase section. Goochland DPU reserves the right to cancel the inspection upon finding an excessive number of items not in compliance with DPU Standards. The Developer(s) and their Utility Contractor(s) are responsible for performing their own due diligence in ensuring installed utilities are in conformance with approved plans and specs, and DPU Standards. The Goochland DPU Construction Management Team WILL NOT act as project manager for the Developer(s).
- F) All deficiencies identified on the Punch List must be resolved to the satisfaction of the Goochland DPU Construction Management Team. Resolutions must be coordinated through the Goochland DPU Construction Management Team. Addressing punch list items without notifying DPU may result in the rejection of work performed. It is highly recommended that punch list resolutions be planned, coordinated, and scheduled with the Goochland DPU Construction Management Team.
- G) Goochland DPU prefers that all “dry utilities” meant to serve the project area be installed at the time of public utility Tentative Acceptance. Goochland DPU recognizes that this is not always possible but reserves the right to postpone Tentative Acceptance until “dry utility” installations located near water or sewer infrastructure have been installed. It is the developer’s

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responsibility to ensure that “dry utility” installations do not damage installed public utilities and will not interfere with the operability of water and sewer infrastructure.

- H) Upon Goochland DPU Construction Management Team’s satisfaction that all benchmarks, obligations and requirements for Tentative Acceptance have been met, Goochland DPU will update VA811 utility mapping to reflect newly installed public utilities. Goochland DPU will take responsibility for locating installed public utilities upon issuance of Tentative Acceptance.
- I) Once the above requirements have been met, Goochland DPU a Tentative Acceptance letter will be sent to the party with whom the county has entered the Utility Agreement for the project. Upon Tentative Acceptance, the Developer(s) will be authorized to reduce the amount of the surety for the project to 10% of the original utility construction costs.
- J) While project’s public utilities are under tentative acceptance, developer is solely responsible for damage incurred to public utilities. Regardless of damage source, be it from construction activities, defect, or installation error, developer must warranty all installed public utilities through one year post issuance of Final Acceptance. DPU reserves the right to withhold service from parcels where damaged utilities have been observed and corrective action has not been taken to the satisfaction of DPU Construction Management Team.
- K) Upon issuance of Tentative Acceptance, developer, builders, or property owners are free to apply for connection(s) and request meter installation(s). See Chapter 12, Connection Fees, of this document.

9. Final Acceptance – **DEVELOPER**

The Developer(s) must meet the following benchmarks to achieve Final Acceptance of the water and sewer infrastructure they have constructed. Tentative Acceptance of a utility project is typically a prerequisite for achieving Final Acceptance. However, certain types of projects are encouraged to seek Final Acceptance without going through the Tentative Acceptance process. These projects include but are not limited to, off-site utility installations and non-residential projects with no phasing. Developers should consult with the Goochland DPU Construction Management Team to determine if foregoing Tentative Acceptance for Final Acceptance is right for their project. The following requirements must be met before Final Acceptance will be issued.

- A) All requirements listed in the previous Tentative Acceptance Section must be met before consideration can be given for Final Acceptance.
- B) All road construction activities within the entire project area must be complete, including finished paving.
- C) All Erosion and Sedimentation controls related to utility installation must be removed and utility project areas must be stabilized. NOTE: No E&S measures may be removed without approval from the Goochland County Department of Community Development Environmental Division.
- D) For residential projects, at least 80% of the homesites included in the POD must have Building Permits issued by the Goochland County Building Official. DPU may allow exceptions to this requirement on a case-by-case basis.

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- E) Developer(s) or their Representative must submit a complete, signed Final Acceptance Application to Goochland DPU Construction Management Team. This will initiate a Punch-list inspection of installed utilities.
- F) All deficiencies identified on the Final Inspection Punch List must be resolved to the satisfaction of DPU Before Final Acceptance will be approved.
- G) Resolution of punch list items must be coordinated through the Goochland DPU Construction Management Team. Addressing punch list items without notifying DPU may result in rejection of the work performed. It is highly recommended that resolution of punch list items be planned and scheduled with Goochland DPU Construction Management Team.
- H) Upon the Goochland DPU Construction Management Team's satisfaction that all benchmarks, obligations and requirements have been met, will issue a Final Acceptance letter will be sent to party with whom the county has entered the Utility Agreement for the project. At this time, the performance surety can either be converted into a one-year defect bond in the amount of 10% of the original construction cost, or a separate 10% defect bond can be posted by the Developer(s), whereupon the entirety of the performance surety will be released.
- I) The 10% Defect surety must be maintained throughout the warranty period, which shall last for one calendar year from the date the Final Acceptance letter is issued.

10. Warranty Phase and Final Release – **DEVELOPER**

During the warranty period, the Developer(s) shall be responsible for promptly repairing any defects or failures which may occur in the covered water and sewer infrastructure. The following process shall be followed at the conclusion of the warranty period:

- A) By the fifth day of the eleventh month of the warranty period, the Developer(s) shall notify DPU that the warranty period is approaching expiration and may request Final Release of the defect surety.
- B) Upon notification from Developer(s), DPU will perform a punch-list inspection of installed utilities.
- C) Prior to Final Release, Developer(s) shall address all items identified on the Final Release Punch List to the satisfaction of Goochland DPU Construction Management Team. All work must be coordinated through the Goochland DPU Construction Management Team. Addressing punch list items without notifying DPU may result in the rejection of work performed, and a delay in Final Release. It is highly recommended that resolution of punch list items be planned and scheduled with Goochland DPU Construction Management Team.
- D) Upon Goochland DPU Construction Management Team's satisfaction that all benchmarks, obligations, and requirements for Final Release have been met, DPU will send a Final Release letter to the party with whom the county entered the Utility Agreement. This letter will authorize 100% release of any/all surety related to the construction and warranty of the water and sewer infrastructure associated with the project.

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11. Water Theft – **DEVELOPER**

Goochland DPU prohibits unmetered use of water from the public water system for any purpose exclusive of authorized fire protection. Tampering with meter settings and fire hydrants for the purpose of unmetered water use is considered theft. Unregulated and improvised connections to meter setters and fire hydrants present a health risk to the public by way of cross-connection contamination potential. As such, Goochland DPU reserves the right to assess fines to parcel owners, and/or require replacement of compromised assets where documented tampering of public water system has occurred. Furthermore, Goochland DPU reserves the right to preemptively lock newly constructed meter settings until connection application is approved and meter installation is imminent. Examples of water system tampering/theft are pictured below. Developers should make efforts to prohibit water theft at their project site.



12. Connection Fees – **DEVELOPER**

- A) Connection Fee Applications for residential development (CFAR) or commercial development (CFAC) are required before initiation of service for connections made to public water system.
- B) Current connection fee rates and applications can be found at Goochland DPU's website. <https://www.goochlandva.us/235/Public-Utilities>
- C) DPU will not accept Connection Applications until Tentative Acceptance, at minimum, has been issued for utilities immediately serving the applying connection.