



Pre-Construction Packet Land Development Projects



I. Introduction

This packet provides information to Contractors performing water and sanitary sewer (utility) work in the Town of Leesburg (Town). All utility work will be done in strict accordance with the Town's standards, below and attached checklist. This packet also presents guidelines and information to assist contractors. In the event of conflict between the Town's standards and the contractor's plans, the Town's standards shall govern unless otherwise approved by the Town.

Proviso: Throughout this document, the terms "developer" and "contractor" are used. In some cases both terms are used and in other cases only one term is used. The use of one term alone ("contractor" or "developer") does not exclude the other term in the text if such meaning is applicable or practicable.

II. Reference Documents and Regulations

- A. *Design and Construction Standards Manual (DCSM)*. The DCSM provides water and sewer design requirements for engineers developing property, and for contractors performing utility work in the Town. The DCSM is incorporated into the Town Subdivision and Land Design Regulations (SLDR), which is an ordinance within the Town Code. As such, the DCSM is considered a regulation.
- B. *Other Codes, Regulations, and Trade Associations*. Contractors shall comply with all building codes, federal and state regulations, and trade associations that may be specified in the construction documents including, but not limited to, the following:
 - 1. American Society of Testing and Materials (ASTM). The ASTM requirements govern materials testing, including soil, concrete, and steel.
 - 2. American Water Works Association (AWWA). The AWWA standards cover piping materials and installation.
 - 3. Virginia Office of Safety and Health (VOSH).
 - 4. Office of Safety and Health Administration (OSHA).
 - 5. VA 811 (f/k/a "Miss Utility"). The VA811 program specifies requirements for contractors excavating in Virginia.

III. Definitions and Acronyms

- A. *Beneficial Use*. The time at which the contractor has constructed all utilities for the project to allow them to be used in their intended mode, including all safety, pressure, backflow, and FOG (fats, oils, and grease) devices; has completed final grading and placed base asphalt; and has obtained all approvals from Loudoun County. The term "substantial completion" may be used synonymously with the term "beneficial use." Upon determining that it has completed the work required for beneficial use, the contractor shall request a beneficial use inspection through the Town's website.
- B. *Final Completion*. The time at which the contractor has completed all work described in the final completion checklist and any other work as may be required by the construction



documents. Upon determining that it has completed the work required for final completion, the contractor shall request a final completion inspection through the Town's website. The term "final acceptance" may be used synonymously with "final completion."

IV. Role of the Inspector

- A. *General Oversight and Approval.* Utility Inspectors will monitor the progress and quality of the work for ultimate acceptance by the Town. The Contractor maintains sole responsibility for performing the Work according to its contract documents and the applicable Codes and Regulations.
- B. *Minor Changes in the Work.* Utility Inspectors are empowered to direct minor changes (often called "field orders" on capital projects) to the approved plans. Examples of minor changes are additional valves, foster adapters/anchor couplings, changes in grade, or minor adjustments that will not affect easements, reduce hydraulic capacity, or change the alignment. For such changes, the Utility Inspector will note the change on the field drawings.
- C. *Limitations.* Utility Inspectors will not dictate means and methods for the performance of the work. Utility Inspectors cannot order significant field changes to the work. Significant changes will require plan revision, and the Utility Inspector will advise when plan revisions are required. If revisions are required, contact Plan Review to determine necessary steps.

V. Construction Requirements and Guidelines

- A. *Safety.* The Contractor is solely responsible for compliance with all Virginia Occupational Safety and Hazard Association (VOSHA) requirements pertaining to the project and site. The Utility Inspector assumes no responsibility for the Contractor's safety under any circumstances. The Utility Inspector will endeavor to advise the highest-ranking member of the Contractor's staff at the project if the inspector observes unsafe conditions or practices. The Utility Inspector will discontinue providing inspection services until the safety problems are addressed. Failure to correct an unsafe condition or repeated conditions will result in notification to the VOSHA.
- B. *DCSM Requirements*
 - 1. *Submittals.* At least ten business days prior to start of construction, the contractor shall provide the Utility Inspector with all submittals required to perform the work. Further submittals may be required after construction commences based on work to be performed. Cutsheets need to be submitted, reviewed and approved prior to work taking place.
 - 2. *Receiving, Handling, and Storing Materials*
 - a. Receiving delivery, inspection, offloading and storage of materials in the field by the contractor shall be done as recommended by the material's manufacturer.
 - b. *New Materials-* Born on date within a year of the current date.



- c. Protection by covering to prevent UV damage and contamination due to construction activities is required. The ends of pipes while stored on site must be protected with covers.
 - d. All materials are subject to inspection to ensure that they meet the Town's standards and approved submittals. Rejected materials shall be removed from the site immediately.
 - e. Town Utility Inspectors reserve the right to obtain manufacturer's manifest/tickets for all products installed on site.
 - f. Inspections and Acceptance. The installation of project utilities will be monitored daily as work progresses.
 - g. All portions of the system shall be installed per manufacturer's specification and approved plans (pipes, fittings, hydrants, valves, manholes, service connections, etc.)
 - h. Visible utility inspections are required prior to backfill as coordinated with Utility Inspector.
 - i. Open ends of pipe to be covered in trench and hard plugged overnight.
 - j. Great care shall be taken to prevent any foreign material (rocks, soil, wood, etc.) from getting into pipes during installation.
3. Sanitary Sewer
- a. Chock the haunches of all pipes. This includes both mains and laterals.
 - b. Manhole penetrations shall be benched no higher than half of the pipe diameter.
 - c. Cleanouts will be located +/- one foot from the property line or as shown on approved plans. The cleanout stacks are to be kept vertically plumb when placing backfill. Passing camera inspections of cleanouts is required prior to occupancy.
 - d. All mains and lateral require VDOT 68 stone 12" below the bottom of the pipe and 12" above the crown of the pipe. All mains and lateral require 6" wide marking tape. Laterals are required to have 12-gauge stranded wire with green outer jacket. All manholes and lateral stacks are to be protected until final completion of the project.
 - e. Information regarding casings, slope anchors, encasements and all other details can be found in the towns DCSM details.
 - f. Where by-pass pumping of sanitary sewer is needed, detailed plans, pump, auto dialer information, and a proposed by-pass schedule shall be sent to the Utility Inspector for review 10 business days prior to starting the work. This detailed plan showing manholes, pumps, by-pass piping, and auto dialers should be completed by the pump manufacturer.
 - g. *Interruption of Service.* Any interruption of service will require 14 days of notice prior to any shutdown. All affected customers must be notified of upcoming work and then given a paper notice 48 hours prior to the start of the shutdown.



4. Waterline

- a. Utilities Department staff shall operate all valves. Contractors shall not operate valves on active systems. The utility Inspector must be on site for water shutdown and pipe tappings.
- b. Connection to the Town's active water system that requires valve operation shall be coordinated ten business days prior to starting the work.
- c. In addition to DCSM Section 2-315 requirements for thrust blocking and mechanical joint restraints, Utility Inspector may require additional restraint and blocking based on field conditions.
- d. All water main fittings and service lines will be inspected prior to placing backfill.
- e. Construction grade must be in place prior to installing water services (crocks, setters, frames and covers).
- f. No water meters will be set for the project until all testing and flushing of both the water and sanitary sewer mains have been completed.
- g. Contractor is responsible for marking the property line prior to installation of water meter setter.
- h. VDOT #68 stone is the specified bedding and backfill for water lines. 12" below the bottom of the pipe and 12" above the crown of the pipe for main lines, fire hydrant leads and fire lines. 6" of VDOT 68 stone under and over the water service lines.
- i. All PVC water mains and service line must have 12-gauge strand wire with blue outer jacket. All fire hydrants, valves and meter crocks are to be protected until final completion of the project. The town does not stock replacement parts in the event something gets damaged.
- j. See DCSM Article 2 for all horizontal and vertical separation requirements.
- k. Hydrant meter rental to be coordinated with Utility Inspector.
- l. Interruption of Service. Any interruption of service will require 14 days of notice prior to any shutdown. All affected customers must be notified of upcoming work and then given a paper notice 48 hours prior to the start of the shutdown.
- m. Backfill. The developer shall provide an independent soil testing and inspection service for quality control of utility installation. The contractor shall coordinate soils testing work with the testing service and the Utility Inspector. All backfill shall conform to Article 9 of the DCSM and reports shall be submitted to the Utility Inspector.
- n. The backfill of the trench to two feet above the top of the pipe shall be of clean material with no pieces larger than one inch in any dimension. Backfill shall be placed at a maximum of 8-inch loose lifts and compacted as specified in Article 9 Section 760 of the DCSM.

5. Testing, Cleaning, Flushing

- a. Sanitary Sewer
 1. Manholes and sewer main testing shall be in accordance with DCSM Article 4.



2. The contractor shall notify the Utility Inspector at least two business days prior to the start of any flushing operation.
 3. Flushing shall be performed in a manner that assures a clean sewer main may be inspected.
 4. Flushing water shall be disposed of according to the Virginia Department of Environmental Quality (DEQ) regulations.
 5. Flushing is to be performed one segment at a time (manhole to manhole). A screen or other approved method of collecting debris is to be located in the downstream manhole. Debris shall be removed from each manhole, not flushed down the sewer main.
- b. Waterline.
1. Hydrostatic testing of new water mains against new or existing valves that connect to an already active water main is not permitted.
 2. Contractor/developer shall be invoiced for all water used for flushing, filling, testing, sampling, etc.
 3. If sanitary sewer is not available for flushing, contractor shall be responsible for dechlorinating.
 4. Contractor/developer shall provide all proper test equipment and all tests shall be monitored by the Utility Inspector.
 5. Construction purity samples will be collected by Utility Inspector and tested by town. Contractor/developer will be invoiced for all construction purity samples.
 6. Passing water main flushing, sampling and hydrostatic tests are required before any water service connection is installed.
 7. Water main disinfection shall be performed in accordance with AWWA Standard C651-99.
 8. The meter and appurtenances will be inspected as part of the occupancy permit process.
6. Closed Circuit Television (CCTV)
- a. Developer/contractor should perform the initial CCTV inspection (recommended when pipe is backfilled to subgrade) and keep an acceptable inventory of installed sanitary sewer mains and laterals.
 - b. The contractor shall perform a formal CCTV inspection of sanitary sewer mains upon placement of base asphalt for beneficial use. The contractor is at risk of additional repair/replacement if inspection fails. This inspection shall be in accordance with the National Association of Sewer Services Companies (NASSCO) and a copy of the report shall be provided to the Utility Inspector for review and comments.
 - c. Contractor shall provide the Utility Inspector with camera files of the formal CCTV for review within five business days of completing the initial CCTV inspection.



- d. The town will CCTV the sewer lines one time: At the end of the performance bond period, which is prior to the maintenance bond becoming effective. The CCTV inspection fee is set forth in Town Code Sec. 34.1-213, Appendix B.

VI. Environmental Compliance

- A. *Fats, Oil, and Grease.* All pretreatment and cross connection control devices shall be approved and inspected by the Environmental Compliance Inspector prior to occupancy.
- B. *Backflow Test Reports.* All required backflow test reports must be submitted to the Town prior to occupancy. Town does not test devices
- C. *Cross-connection and Backflow.* Inspections need to be set up with the Environmental Compliance Inspector prior to any occupancy request.

VII. Completing the Project

- A. *Public Facilities Permit (PFP).* The PFP documents the purchase of water and/or sewer availability (capacity) in the Town's water and sewer system. The contractor (or developer) shall pay its PFP fees prior to commencing construction of the building/house. Issuance of the PFP is a precondition to issuance of the Town zoning permit, Loudoun County Building Permit and to installing the water meter.
- B. *Meter Set.* Upon request from the contractor through the Town's website, the Town's meter technicians will inspect the water meter crock to determine if the meter crock complies with the DCSM and is suitable for the meter installation. If the meter crock is determined to be unsuitable or otherwise does not comply with the DCSM, the contractor shall be required to correct the deficiencies.
- C. *Beneficial Use.* Contractor shall contact Utility Inspector to initiate the process. A punch list may need to be addressed. All items must be resolved and re-inspected prior to the release of beneficial use. Contractor to request a re-walk of failed inspection with the inspector. When the project, or property, is considered suitable for beneficial use, the contractor may request the meter set from the Town. See the appendices.
- D. *Occupancy Inspection.* The Utility Inspector will inspect the water components (meter, crock, setter) and sewer components (sanitary lateral at the first cleanout and the cleanout cover). The Town will conduct a CCTV inspection of the sanitary lateral from the first cleanout to the sewer main. All deficiencies shall be corrected prior to approval by the Utility Inspector.
 - 1. *In-Town.* The approval by the Utility Inspector is a prerequisite to the issuance of the approval form at Town Hall, which the developer will need to present to the County for its occupancy approval.
 - 2. *Out-of-Town.* The developer is responsible for having the County approval form onsite.
- E. *Final Completion.* Contractor shall contact the Utility Inspector to initiate the process. A punch list may need to be addressed for both performance and maintenance bond releases. As-built drawings are required prior to the release of performance bond.



Contractor to request a re-walk of failed inspection with the inspector. See the appendices.

VIII. Scheduling

A. *Town Holidays.* The following will be observed as holidays for all Town employees.

1. First day of January – New Year’s Day
2. Third Monday in January – Martin Luther King, Jr.'s Birthday
3. Third Monday in February – President's Day
4. Last Monday in May – Memorial Day
5. Nineteenth day of June – Juneteenth Day
6. Fourth Day of July – Independence Day
7. First Monday in September – Labor Day
8. Second Monday in October – Columbus Day
9. Eleventh Day in November – Veteran’s Day
10. Fourth Thursday in November – Thanksgiving Day
11. Fourth Friday in November – Day after Thanksgiving
12. Twenty-fourth day of December – Christmas Eve half-day off
13. Twenty-fifth day of December – Christmas Day
14. Twenty-sixth day of December – Day after Christmas
15. Last Day of December - New Year's Eve half-day off*
16. Other days as determined by Town Council.

B. *Overtime Requests.* The Town’s normal working hours are 7:00 AM – 3:30 PM. Any requests for inspection services outside these normal working hours must be submitted via the Town’s online inspection services request form. All requests must be received no later than 3:30pm, two business days prior to the date inspection services are requested. If the contractor chooses to work outside of these normal working hours, work is to be left open until the Utility Inspector can complete the inspection. All costs for inspection services provided outside of normal working hours will be invoiced by the Town monthly. All invoices must be paid prior to Beneficial Occupancy or Final Completion status. (See website links page in the back of this packet.

C. The Town of Leesburg reserves the right to deny any request for inspection services due to weather, operational concerns, staff availability, or any other unforeseen circumstances.

IX. Communications with Town Inspectors

The Utility Inspectors will provide contact information (phone, email) to developers and contractors at the preconstruction meeting. For questions or comments about inspection



services, see the town's website. <https://www.leesburgva.gov/departments/utilities-water-and-sewer/design-construction/inspection-services>

X. Appendices

- A. Pre-construction Meeting Agenda
- B. Requirements for CCTV Inspections
- C. Requirements for Beneficial Use Inspection (checklist)
- D. Requirements for Final Completion Inspection (checklist)
- E. Requirements for Meter Installation- Meter Crock/Vault Inspection(checklist)
- F. Contact Information and Website Links