



# Plan Notes

## Table of Contents

|                                       |   |
|---------------------------------------|---|
| Table of Contents .....               | 1 |
| General plan notes.....               | 1 |
| Waterline shutdown notes .....        | 3 |
| Sewer main bypass pumping notes ..... | 3 |
| Force main shutdown notes .....       | 4 |

## General plan notes

(Add to all plans)

- Refer to Union County Specifications, Union County Water & Sewer Extension Policy and Union County Water & Sewer Extension Ordinance
- Water and sewer taps, materials and installation to be by the developer.
- (Insert engineering firm) certifies that design is based on ground survey.
- Verification has been made by (Insert engineering firm) that each lot is capable of having gravity sewer service to the center of the lot at the front setback
- (Insert engineering firm) confirms that water mains, sewer mains, service lines, meter boxes, fire hydrants and laterals will not be in conflict with any proposed utility installation, landscaping and/or driveways. Any conflicts shall be at the developer's expense to coordinate and resolve and could result in delay of water meters being set.
- Meters will not be set if water meter boxes, sewer clean-outs, valve boxes or their appurtenances are damaged or improperly positioned.
- A Union County Water's utility right-of-way shall exist on all sanitary sewer laterals, water meters, and fire hydrants. The utility right-of way is located 5 feet all sides from the cleanout, water meter, or fire hydrant to the public or private road right-of-way.
- The property owner shall not construct or permit construction or placement of any type structure, plant trees, or make use of the easement area in any manner that will result in interference, interruption, or impediment of Union County Water easement and ingress/egress.
- Any changes made to the plans (storm water, erosion, trees, landscaping, etc.) Must be shown and identified by revision number and clouding. Failure to do so will delay the approval of this project.
- Only Union County Water personnel will operate the active valves which included the tapping valve.
- Fire hydrants shall be placed a minimum distance of 6 feet back of curb and gutter sections and back of ditch in roadway sections) & have a clear space of 5 feet from any permanent structures.
- All proposed sewer connections to the existing sewer system by straddle manhole shall not cut into the existing sewer pipe until the proposed sewer line has been accepted by Union County Water. Also, all core connections to existing manholes must be plugged with a concrete plug in the invert out at the 1st proposed mh upstream of the tie in point. The sewer plug shall not be removed until the proposed sewer line has been accepted by Union County Water. If plug is removed prematurely or existing pipe is damaged the contractor may be liable for cleaning all downstream sewer main at Union County Water discretion.
- The contractor shall at all times provide and maintain ample means and equipment with which to remove and properly dispose of any and all water entering the excavation or other parts of the work and keep all excavations dry until such time as pipe laying and grading is completed and structures to be built therein are completed. No water shall be allowed to rise around the pipe in un-backfilled trenches nor shall it be allowed to rise over masonry until the concrete or mortar has set (minimum 24 hours). All water pumped or drained from the work shall be disposed of in such a manner as to prevent siltation and erosion to adjacent property or other construction.
- If well and/or septic systems are encountered, contact Union County Environmental Health at 704-283-3553 or unioncountyehealth@unioncountync.gov for their sequence of events and other pertinent information.
- Union County Water is not responsible for the maintenance of the walking trail and will not be responsible for repairs of the walking trail due to maintenance of the sewer line.



- The contractor shall contact Union County Water personnel after materials have been approved by Union County Water and at least 48 hours before beginning construction to schedule a preconstruction meeting. Please reach out to Lee Dillon at lee.dillon@unioncountync.gov to schedule the meeting.
- Any work or test performed without notification and contact with field inspectors shall be installed at the contractor's risk and subject to removal.
- Materials are subject to field inspection to ensure compliance with Union County Water Approved Plans, Union County Water specifications, and condition of materials prior to installation.
- As-builts are required to update all information provided on construction drawings. Contractor may provide material lengths and crossing separations to engineer as record information. As-builts will need to identify contractor provided information.

## Waterline shutdown notes

(to be added only when a waterline shutdown will be required)

- Waterline shall be fully installed, tested and approved by Union County Water before connections to the existing waterline can be made.
- The contractor shall have all necessary personnel, equipment, and materials on site before Union County Water will shut down the existing waterline to make the connection.
- Union County Water personnel will operate all the valves during the shutdown period.
- Union County Water requires a minimum notification of 10 business day prior to scheduling of any waterline shutdown. Union County Water will need to approve day and time of shutdown.
- Construction sequence:
  1. The contractor shall install all necessary proposed waterline infrastructure.
  2. The contractor shall perform all necessary tests and acquire Union County Water approval for the proposed infrastructure.
  3. The contractor shall schedule waterline shutdown with Union County Water a minimum of 10 business days prior to the desired shutdown date.
  4. If all requirements have been met, Union County Water personnel will operate the valves for the shutdown.
  5. Contractor shall make all necessary connection to the existing waterline and reconnect all services to the relocated waterline.
  6. Once all connections have been made Union County Water will open the valve to restore service.
  7. Existing waterline to be abandoned by removal or inject flow able fill into the main.

## Sewer main bypass pumping notes

(to be added only when a sewer main bypass will be required)

- Proposed sewer line shall be fully installed, tested and approved by Union County Water before bypass pumping can be stopped.
- The contractor shall have all necessary personnel, equipment, and materials on site before beginning bypass pumping operations.
- The vendor/contractor shall provide a bypass pumping plan for Union County Water's review and approval. Plan shall include but is not limited to the following items:
  - Estimated start date for bypass pumping



- Duration of bypass pumping
- Sizing calculations for pumps to adequately handle sewer flows.
- List of impacted customers with addresses
- Backup plan for pump failure. If bypass pumping operations are to continue during hours of no construction (no construction personnel onsite) the contractor will need to provide an auto dialer system.
- Emergency contacts
- Once Union County Water approves the bypass pumping plan, a notification of start date must be given to Union County Water's inspector 10 business day prior to any bypass pumping operations starting.
- Union County Water will not allow the start of bypass pumping operations if a large rain event is predicted during the duration of the bypass pumping operation.
- If an auto dialer is required the contractor shall be the primary contact with the engineer as the secondary.
- All sewer line replacements/relocations that require bypass pumping shall be dip. Pvc will not be allowed, so as to not require the 30-day mandrel test.
- Union County Water will contact impacted customers per Union County Water standards
- Construction sequence:
  1. Install all necessary traffic control measures.
  2. Set up all equipment necessary for bypass pumping operations.
  3. Plug the upstream and downstream pipes to isolate the work area.
  4. Start bypass pumping operations
  5. Install all proposed sewer inside the work area (sewer shall be backfilled before testing can begin.
  6. Perform all required testing and submit asbuilt plans and engineer's certification.
    - i) pressure test
    - ii) Visual inspection
    - iii) Video inspection of laterals
  7. Once the proposed system has been tested and accepted by Union County Water, the plugs can be removed and the bypass pumping can be stopped.
  8. Any existing sewer can be removed or abandoned in place per Union County Water standards.

## Force main shutdown notes

- Proposed force main shall be fully installed, tested and approved by Union County Water before connections to the existing force main can be made.
- The contractor shall have all necessary personnel, equipment, and materials on site before Union County Water will shut down the existing force main to make the connection.
- Union County Water personnel will operate all the valves and/or pumps during the shutdown period.
- Union County Water requires a minimum notification of 20 business day prior to scheduling of any force main shutdown. Union County Water will need to approve day and time of shutdown.
- The work to be done during the force main shutdown shall be during the night.
- Construction sequence:
  1. The contractor shall install all necessary proposed force main infrastructure (including all necessary downstream gravity sewer).



2. The contractor shall perform all necessary tests and acquire Union County Water approval for the proposed infrastructure.
3. The contractor shall schedule force main shutdown with Union County Water a minimum of 20 business days prior to the desired shutdown date.
4. If all requirements have been met, Union County Water personnel will operate the valves and/or pumps for the shutdown.
5. Contractor shall make the necessary connection to the existing forcemain.
6. Once the connection has been made Union County Water will open the valve to restore service.
7. The existing force main shall be abandoned be per the force main abandonment procedures.

