

Development Certification and Acceptance

The following list is intended to clarify Fort Mill's (FM) policies and procedures regarding the acceptance of development infrastructure into the town's systems for ownership, operations, and maintenance. It does not override any previous policy or procedure issued. The developer's engineer (engineer) must certify all installations including testing and daily construction reports.

FM personnel shall be given a minimum of 5 working days notice prior to any testing.

Water System

Installation

- Engineer or his **designated representative** shall be on site daily during utility construction activities. The Engineer is not required to be on site for all construction, but should review enough activity to certify construction. Designated representatives include inspectors, soils testing companies, etc.
- Engineer shall produce daily logs of construction activity. Contractors shall not provide this information. These must be provided to FM prior to acceptance.
- Engineer shall review pipe bedding and approve prior to installation. This shall be noted on inspection reports.
- Compaction must be conducted and tested in lifts to specifications.
- Pipe must be properly bedded according to specifications.
- Should FM personnel require, rock must be provided as bedding material.
- All valves, blow-offs, hydrants, etc. must be at final grade prior to testing.
- Fire hydrants shall be covered until operational.
- **Connection to FM water systems shall only be conducted under direct review of FM personnel. No valves shall be opened for any reason without FM personnel review.**

Testing

- Compaction tests must be conducted to specifications. Results shall be supplied to FM prior to acceptance.
- Pressure tests must be completed to specifications. Engineer must certify. FM personnel must witness.
- All fire hydrants on tested section shall be blown off at the conclusion of pressure tests.
- All tracer wire shall be tested for continuity.
- All valves shall be exercised fully.
- Bacteriological sampling shall be witnessed by FM personnel.

Final Acceptance Requirements

- Record Drawings received in print and digital formats. PDF is required. AutoCAD or ARCGIS shapefiles are required. AutoCAD and Shapefiles must be on proper coordinate systems.
- Engineer's Certifications and Testing Results
- Engineer's Certification of Value of Construction
- Field Reviews Completed
 - All meter boxes level, clean, and to final grade. All shall be properly marked.
 - All hydrants placed to final grade and aligned properly.
 - All tracer wire easily accessible, connected, and tested.
 - All valve boxes aligned vertically over the operating nut and to proper grade with correct labeling.
 - All valves operational with operating nuts visible for inspection.
- **NO SYSTEM SHALL BE OPENED TO THE ACTIVE FORT MILL DISTRIBUTION SYSTEM UNTIL THE OPERATING PERMIT HAS BEEN RECEIVED.**

Gravity Sewer

Installation

- Engineer or his **designated representative** shall be on site daily during utility construction activities. The Engineer is not required to be on site for all construction, but should review enough activity to certify construction. Designated representatives include inspectors, soils testing companies, etc.
- Engineer or his **designated representative** shall produce daily logs of construction activity. Contractors shall not provide this information. These must be provided to FM prior to acceptance.
- Engineer or his **designated representative** shall review pipe bedding and approve prior to installation. This shall be noted on inspection reports.
- Compaction must be conducted and tested in lifts to specifications.
- Pipe must be properly bedded according to specifications.
- Should FM personnel require, rock must be provided as bedding material.
- All manholes shall be fully grouted and at final grade prior to testing.
- Grade rings shall be limited to 2 per manhole.
- **Any gravity connection to operational systems shall be plugged at all times. Removal of plugs shall only be conducted under direct review of FM personnel and after final acceptance.**

Testing

- Compaction tests must be conducted to specifications. Results shall be supplied to FM prior to acceptance.
- Pressure tests must be completed to specifications. Engineer must certify. FM personnel must witness.

- All lines shall have a mandrel pull and shall be lamped. Engineer must certify. FM personnel must witness.
- All lines shall be inspected via video recording with a copy being supplied to FM. FM personnel may conduct this inspection as schedules and workloads permit.

Final Acceptance Requirements

- Record Drawings received in print and digital formats. PDF is required. AutoCAD or ARCGIS shapefiles are required. AutoCAD and Shapefiles must be on proper coordinate systems.
- Engineer's Certifications and Testing Results
- Engineer's Certification of Value of Construction
- Summary of Permit Flows: Total Permit Flow, Previously Accepted Flow, Flow Requested, Permit Flow Remaining
- Field Reviews Completed
 - All manhole covers level, clean, and to final grade. Frames shall be centered over the riser section.
 - All manhole inverts shall be clean and holding no standing water. No leaks shall be noted anywhere in manhole.
 - All gravity piping shall be clean and clear with no standing water.
 - All tracer wire easily accessible and connected where applicable.
 - All downstream gravity and/or pump stations shall be reviewed for debris.
- NO SYSTEM SHALL BE OPENED TO THE ACTIVE FORT MILL COLLECTION SYSTEM UNTIL THE OPERATING PERMIT HAS BEEN RECEIVED.

Sewer Pump Stations

Installation

- Engineer or his designated representative shall be on-site at installation of wetwell for the duration of the installation.
- Engineer shall review and certify bedding for wetwell prior to installation.
- All wetwell joints shall be wrapped externally.
- All wetwells shall be lined. All manholes directly adjacent to wetwell shall be lined.
- All force mains shall be installed and tested to water system requirements. Testing pressures shall be adjusted accordingly.
- Gravity inlets to wetwell shall be plugged. Removal of plugs shall only be conducted under direct review of FM personnel and after final acceptance.

Testing

- Standard start-up procedures shall be conducted by the manufacturer and witnessed by engineer and FM personnel. Flow and head conditions must be noted and within specifications.
- All plug and check valves must be exercised.

- No foreign material shall be allowed in the pump station during testing. Wetwell must be clean.

Final Acceptance Requirements

- Record Drawings received in print and digital formats. PDF is required. AutoCAD or ARCGIS shapefiles are required. AutoCAD and Shapefiles must be on proper coordinate systems.
- Engineer's Certifications
- Engineer's Certification of Value of Construction
- Review completed by Town of Fort Mill Pump Station Technician
- Field Reviews Completed
 - All meter boxes level, clean, and to final grade.
 - All water connections placed to final grade and aligned properly.
 - All tracer wire easily accessible and connected.
 - All valve boxes aligned vertically over the operating nut and to proper grade with correct labeling.
 - All valve pits clean and clear of standing water.
 - All valves operational with operating nuts visible for inspection.
 - All bypass piping to final grade and operational.
 - All manhole requiring epoxy linings shall be completed and certified by lining provider.
- SCDHEC Requirements
 - Letter from Professional Engineer of record for the project stating that the, " construction is complete and in accordance with the approved plans and specifications, to the best of their knowledge, information and belief". This letter should include the permit number and installed line totals and/or pump station information that coordinates with the Construction Permit.
 - Letter(s) from final owner and/or entity responsible for final operation and maintenance of the system
 - Copy of the sewer leakage/pressure test results
 - Copy of the Pump station/Draw down test
 - Record Drawings signed and sealed by the Professional Engineer on record
 - Site inspection by a Departmental Representative
- NO SYSTEM SHALL BE OPENED TO THE ACTIVE FORT MILL COLLECTION SYSTEM UNTIL THE OPERATING PERMIT HAS BEEN RECEIVED.

Stormwater

Installation

- Engineer or his **designated representative** shall be on site daily during utility construction activities. The Engineer is not required to be on site for all construction,

but should review enough activity to certify construction. Designated representatives include inspectors, soils testing companies, etc.

- Engineer shall produce daily logs of construction activity. Contractors shall not provide this information. These must be provided to FM prior to acceptance.
- Engineer shall review pipe bedding and approve prior to installation. This shall be noted on inspection reports.
- Compaction must be conducted and tested in lifts to specifications.
- Pipe must be properly bedded according to specifications.
- Should FM personnel require, rock must be provided as bedding material.
- Pipe shall be complete. No broken pipe shall be installed. No joint damage shall be allowed.
- All manholes, inlets, and structures shall be fully grouted and at final grade prior to final review.
- All structures and pipes must be completely clean prior to final review.

Review

- All manholes, inlets, and structures shall be inspected.
- Lamping shall be conducted for all pipelines.
- All lines shall be inspected via video recording with a copy being supplied to FM. FM personnel may conduct this inspection as schedules and workloads permit.

Final Acceptance Requirements

- Record Drawings received in print and digital formats. AutoCAD and Shapefiles must be on proper coordinate systems.
- Engineer's Certifications
- Engineer's Certification of Value of Construction
- Field Reviews Completed
 - All manhole and inlets level, clean, and to final grade. Frames shall be centered over the riser section.
 - All manhole and inlet inverts shall be clean and holding no standing water. No leaks shall be noted anywhere in manhole.
 - All gravity piping shall be clean and clear with no standing water.

Roads

Installation and Testing

- Engineer or his **designated representative** shall be on site daily during construction activities. The Engineer is not required to be on site for all construction, but should review enough activity to certify construction. Designated representatives include inspectors, soils testing companies, etc.
- Engineer shall produce daily logs of construction activity. Contractors shall not provide this information. These must be provided to FM prior to acceptance.

- Compaction must be conducted and tested in lifts to specifications. Excavation for the purpose of testing lower lifts will not be allowed. Lifts must be tested individually prior to the next lift being started.
- Bedding for curb and gutter must be tested according to specifications.
- Proof rolling shall be conducted on all roads. No deflection is allowed under load.
- All curb and gutter shall be complete and undamaged prior to acceptance.
- No paving shall occur without approval of the Town of Fort Mill. TOFM will inspect all base material before binder course placement and all binder course prior to placement of surface course. Placement of asphalt without approval shall result in removal of any material placed or no acceptance by the TOFM.
- See Street Acceptance Policy for final FM acceptance of roadways.

Record Drawings

- Record Drawings received in print and digital formats. PDF is required. AutoCAD or ARCGIS shapefiles are required. AutoCAD and Shapefiles must be on proper coordinate systems.
- Record Drawings (As-Builts) must be clear and legible.
- No scanned PDFs of approved drawings will be allowed.
- All fixtures (water, sewer, and stormwater) shall be placed at their surveyed locations on the drawings. We cannot assume they are placed at their proposed locations, this never happens.
- All fixtures shall be individually labeled. This includes valves, fittings, hydrants, hydrant valves, etc.
- Drawings shall indicate material, size, elevation, depth, etc. on the plan sheets and not just on the profiles.
- All pipes shall be tied to the fixtures associated with them.
- Measurements for line lengths shall be based on their associated locations and fixtures and shall not be assumed to match proposed plans.
- Sewer invert and cover measurements shall be to the hundredths of a foot.
- All laterals shall be shown as they are placed in the field.