

1.0 GENERAL

1.1 INSPECTION AND TESTING

Issuance and acceptance of Contractor's construction schedule is needed prior to agreement of inspection and testing.

- .1 The Contractor shall have an approved set of drawings and specifications available prior to calling the Project Manager for an inspection. As-built drawings are needed prior to acceptance of a FAC inspection.
- .2 Flushing of Irrigation System - the Contractor shall, in the presence of the Project Manager, flush all of the irrigation piping and then fill it with water. The Project Manager must be made aware of the proposed flushing schedule a minimum of 2 business days in advance of any flushing activities. Flushing activities must take place between Monday to Friday and during typical City hours of operation. If the Project Manager has not been properly informed of the flushing schedule, the Contractor must repeat all flushing activities. The Contractor must flush all ends of the mainline, lateral, and swing-joint a minimum of 3 water turnovers per line, prior to the installation of the sprinkler head. If silt, soil, or other debris enters the pipe during the flushing period, the process must be repeated to the satisfaction of the Project Manager. The contractor must dispose of the flushing water in an environmentally responsible manner while not creating damage or hardship to adjacent properties.
- .3 Backflow Prevention Assembly Installation, Certification, and Testing.
 - .1 The Backflow Prevention device must be tested by a Certified Backflow Prevention Tester to ensure that it is working properly. The person testing the backflow preventer must be a registered Cross Connection Control (CCC) and Backflow Prevention Tester and registered with the City of Medicine Hat, Environmental Utilities Department. The testing of the backflow preventer shall be the responsibility of the Contractor. Prior to the approval to issue water into the irrigation system, the backflow prevention device must be installed. Once water is available to the BFP, the Dual Check Valve Assembly (DCVA) must be tested to ensure it is functioning properly.
 - .2 The Certified Tester shall test the device and complete the City of Medicine Hat Cross Connection Control Testing and Inspection Report. The CCC Testing and Inspection Report must confirm that the backflow prevention device has successfully passed the test.
 - .3 The report is completed in triplicate and all copies are to be forwarded

to the Project Manager for signature, and then will be forwarded as follows:

- .1 Environmental Utilities Department (Attention: Cross Connection Control Officer) Top white copy
 - .2 Certified Tester - Yellow copy
 - .3 Owner of the property or department - Pink copy.
- .4 Once the device is tested, the certified tester is responsible for attaching a Backflow Prevention Assembly Tag to the device and indicating the results of the test on the tag.
- .4 Irrigation Installation with Pressure Test
- .1 The Project Manager shall be given at minimum 2 business days notice when an open trench/pressure test inspection is required. The trench inspection and pressure test must take place between Monday to Friday and during typical City hours of operation.
 - .2 The following procedures shall be followed when pressure testing an irrigation system:
 - .1 All irrigation systems to be tested from downstream of the DCVA.
 - .2 The Contractor shall **NOT** operate the main service valve. Before pressure test is to take place, the Contractor shall contact the Environmental Utilities Department (EUD) to confirm that the main service valve is in the off position. The Contractor shall request to the EUD that the main service valve be operated to the open position. The Project Manager should be notified of this activity.
 - .3 Items, which must be in place and complete for the open trench/pressure test inspection include:
 - .1 Confirm trench depth and alignment: depth verification may be required for a pipe installed by means of ploughing. If this is the case, the inspector can uncover sections of the pipe with his own capacity while a contractor's representative is present. If depth deficiencies arise, the inspector can dictate to the contractor to uncover multiple additional locations to prove proper depth at the contractor's expense.
 - .4 A hydro-static pressure test will be conducted in the presence of the Project Manager to ensure compliance. The pressure test will be

conducted utilizing a minimum of 1 hour duration at a minimum pressure of 120psi. If at any time the pressure drops greater than 5psi, the test will be started over. Additionally, if any repairs to the system are required, the test will be started over.

- .5 At the discretion of the Project Manager a pressure gauge shall be placed on any point in the system and a reading shall be taken to confirm expected pressure loss in the system. The City shall provide the pressure gauge. The Contractor shall supply all of the connections and requirements to conduct the test. The Project Manager will pressure test with water 100% of the installed mainline piping and a minimum of 30% of the installed lateral piping.
- .6 The Contractor shall receive in writing from the Project Manager, approval of the open trench inspection and pressure test.

.5 Irrigation Wiring Inspection

- .1 The Project Manager shall be given one (1) working day notice when an irrigation wiring inspection is required. The wiring inspection must take place between Monday to Friday and during typical City hours of operation.
- .2 Items, which must be in place and complete for the irrigation wiring inspection include:
 - .1 irrigation wire properly positioned beside the pipe in the trench
 - .2 any wire splices must be visible for inspection prior to backfill
 - .3 wire splices must utilize a 3M DBYR/Y-6 splice kit (or approved equivalent). The top/open connection end is to be positioned facing upward.
 - .3 wire connections at the controller
 - .4 for open trench installations, all wiring should be bound with electrical tape at intervals not exceeding 10m
- .3 The Contractor shall receive in writing from the Project Manager, approval of the wiring inspection before proceeding with backfill.

.6 Irrigation System Inspection (after installation is complete)

- .1 Items, which must be in place and complete for the irrigation system include:
 - .1 backfilling and compaction
 - .2 irrigation head adjustment

- .3 valve boxes in place, granular base installed, and clear of debris
 - .4 water pressure on and flowing freely through the system
 - .5 all heads activated and operating as per manufacturer's recommendations and the irrigation design
 - .6 cabinet and controller installed
- .2 The Contractor shall receive in writing from the Project Manager, approval of the irrigation system before proceeding with final landscape development.
- .7 Total Completion Inspection (prior to acceptance of the project)
- .1 Items, which must be in place and complete for the Total Completion Inspection include:
 - .1 Activation of each individual zone.
 - .2 Adjustment of any irrigation heads that are improperly adjusted.
 - .2 The Contractor shall receive in writing from the Project Manager, approval of the total completion and acceptance of the irrigation project.

END OF SECTION