

# Stormwater Conveyance Deflection Testing







V1.2024

## Submittal Requirements

The deflection test is required for all flexible pipes installed within the Right-of-Way and pipes on private property that convey public runoff. The purpose of the deflection test is to ensure proper installation of flexible pipe\*, and that each segment does not exceed a 7.5% deflection.




## Mandrel Testing Requirements

The following is required for all Mandrel Testing submittals.

-  Test must be completed at least 30 days after pipe installation and final backfill.
-  The pipe must be clear of sediment and debris.
-  The test requires the uses of a 9-vane mandrel that is sized for the pipe being tested. No more that a 7.5% percent reduction in mandrel size from the inner pipe diameter is permitted for the test.
-  The mandrel must be pulled by hand.
-  The test must be conducted between the upstream and downstream structure directly connected to the pipe being tested, with the mandrel completely passing through each section of pipe.
-  The mandrel must pass completely through each flexible pipe section to be documented as “Pass” in the table below.

## Laser Profiling Requirements

The following is required for all Laser Profiling submittals.

-  Test must be completed at least 30 days after pipe installation and final backfill.
-  The pipe must be clear of sediment and debris.
-  Videos and report of laser profiling shall be included in the CCTV Inspection Submittal.

## Results

Pipe sections deformed more than 7.5% have failed the test and a repair plan must be submitted for each pipe that has failed deflection testing. Please see **COR Replair Plan** document.

If you have any questions, please contact: [asbuiltsubmittal@raleighnc.gov](mailto:asbuiltsubmittal@raleighnc.gov).

\*Flexible pipes are defined as being polypropylene or high density polyethylene pipe.

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