

IRRIGATION NOTES & LEGEND

ESTIMATED IRRIGATION QUANTITIES

Meter Locations - 1
Backflow Preventer - 1
Battery Powered Controllers - 1
Drip Zone Valves - 1
Spray Zone Valve - 2
10' R Pop-up Rotator Spray Head - 18
Main Line Pipe - 165 LF 1 1/2"
Sleeve Pipe - 85 LF (4" Sleeve)
Drip Line - 1,100 LF (3/4" Tubing)

Quantities are estimated based on design drawings. Refer to plans for any discrepancies. Plans take priority over these estimated quantities. Estimated quantities do not cover all materials necessary for installation. Quantities may be adjusted slightly due to site conditions, specific irrigation equipment, and implementation.

GENERAL NOTES

- Irrigation contractor must be licensed to perform work associated with construction or contracting of irrigation systems by the NCICLB under chapter (2008-177, S.1: 2013-383, S.3) and NC G.S. 89G.

- All materials may be of comparable manufacture and performance to the brand listed.

- Prior to the start of any work, the contractor shall verify the available static water pressure (PSI) and gallons per minute (GPM) at the point of connection to the water source. Any replacements, relocation, or additional materials required as a failure to check the PSI and GPM shall be done at the contractor's expense.

- The irrigation contractor shall, in the presence of the Division Roadside Environmental Engineer and the municipality's employees responsible for the maintenance of the system, meet the following obligations:

- Explain the complete operation of the system
- Be available to answer any questions of the system operators during the first year of operation
- Winterize the system during November of the first year of operation
- Reenergize the irrigation system in April the following year and check the system for full operation

GENERAL NOTES cont'd

- The irrigation design provided in the plans is schematic in nature, and the irrigation contractor may be required to make adjustments in the field as necessary. These adjustments shall be made at no additional cost to the owner and shall be made only after notification is made to the owner (NCDOT).

- The contractor(s) shall familiarize themselves with the site so that they are aware of any special conditions that may exist that could affect their bid proposal and shall hereafter be responsible for all cost incurred by themselves in relation to the installation.

- Place valves boxes, back flow preventers, and other irrigation devices in plant beds wherever possible.

- The contractor is to minimize disturbance in sod areas and replace sod when necessary.

- Place pressure reducing valves in discreet locations.

- All irrigation products are to be Hunter, Rainbird, or Toro (as approved by the Division Roadside Environmental Engineer or Landscape Architect).

- If there is an existing system in place, be sure to use irrigation heads that are consistent with the existing system.

- The contractor is responsible for providing 'As Built' plans to the owner (NCDOT) at the time of project approval. The plans shall be clear, concise, and show all elements of the irrigation system, the location of all equipment, sleeves, irrigation lines, numbered zones, controller(s), heads, and valves.

BACKFLOW PREVENTION



- The reduced pressure backflow preventer assembly shall be the responsibility of the irrigation contractor. The backflow shall be 1.5" in size. The backflow assembly shall be installed downstream of the irrigation meter. The unit must be installed in accordance with all local and state code requirements and shall have an approved cover.

CONTROLLER W/ BATTERY POWERED TIMER



- Controller may be of comparable manufacture and performance to the brand named.

- The controller shall be a Hunter, Rainbird, or Toro Modular unit with at least 12 available zones. The controller shall incorporate a 24 VAC with the approximate location shown on the plans. Location must be approved by the Division Roadside Environmental Engineer.

- The battery operated controller is to be placed in Carson valve boxes model #910-1 with #910-2 covers.

- All 120 VAC wiring shall be installed in accordance with all applicable electrical code requirements.

- The contractor shall install a wired Hunter, Rainbird, or Toro rain sensor that is compatible with the make and model of the controller. The rain sensor shall be placed in plant beds where there are no overhead obstructions that can block precipitation. The sensor mount is to be painted a dark hunter green in order to blend into the landscape.

CONTROLLER WIRING

Valve (common) wires shall have white insulation while valve (hot) wires shall have red insulation. Both the (common) and (hot) wires shall be #14 AWG. Tracer wires shall be installed above all irrigation piping (main line and laterals). Valve wiring shall follow mainline piping where feasible. All wiring shall be installed in accordance with local code requirements.

- Wire splices shall be kept to an absolute minimum. Where major concentrations of splices are necessary, they shall be placed in a approved valve box with cover installed at grade level. Splices at valve locations shall be made inside of the valve box. All splice locations shall be noted on the as built plan.

- Wire runs shall be installed with enough slack and/or expansion loops to prevent excessive strain due to thermal contraction.

- All wire splices shall be made using UL approved direct burial connectors and waterproof materials. All electrical work shall be installed according to code.

ELECTRIC CONTROL VALVE



- Valves shall be Hunter, Rainbird, or Toro.

- Location of AC powered electric remote-control valve with flow-control feature

- All remote control valves shall be installed in Carson valve boxes with lids mounted at grade level. Single valves may be installed in a Carson model #910-1 valve box with cover, while multiple valves (up to, 2 - 1" valves or 1 - 1 1/2") shall be installed in Carson model #1419-1 box with #1419-2 cover.

HEADS



- Hunter, Rainbird, or Toro Pop-up Rotator Spray heads fitted with adjustable nozzles or 90°, 180°, 270°, and 360° adjustable arc nozzles for 10'.

- All heads in turf areas shall have a 6" pop-up stroke and heads in plant beds shall have 12" pop-up stroke. If installed with less than 1/3 of the sprinkler body exposed above grade, it shall be installed on polyethylene flex swing joint poly pipe fitted with elbows (3/8" insert by 1/2" M.P.T. and/or 3/8" insert by 3/4" M.P.T.)

- If greater than 1/3 of the sprinkler body is exposed, then the 6"-12" pop-up head shall be mounted on a schedule 40 PVC pipe riser as described below in relation to mounting shrub head models. In mounting 6"-12" pop-up heads on shrub type risers, care shall be taken to install the head in such a manner that the surrounding plant material (planned or existing) will hide the body of the sprinkler.

- All pop-up irrigation heads designed adjacent to curbs or pavement shall be installed with a clearance of 2" from the edges of all paved areas to provide for edging and maintenance operations. Heads installed on shrub risers or with the top of the head more than 2" above the grade shall be installed with a minimum 6" clearance from paved areas.

- All threaded pipe connections shall be assembled using Teflon thread sealing tape.

HEAD RADII

- The irrigation contractor shall adjust the radius and throw of each sprinkler head to provide optimum coverage while minimizing overspray onto hardscapes or buildings. Adjust heads to eliminate dry spots. Coverage must be head to head.

- Approximate arc and radius of individual spinkler head coverage shall be as illustrated. Individual head or nozzle model numbers may be dependent upon these specific characteristics.

PIPE

- PR 200 PVC Lateral Piping

- Minimum depth of cover over lateral piping to be 12". Lateral pipe sizing schedule and summation of gallonage demand on a particular branch of pipe within a control section shall be determined by using the gpm for a nozzle based on a 60 psi base head pressure and full radius at that pressure as reported in the manufacturer's product catalog. Pipe sizes for the lateral lines shall be as follows:

----- Sch 40 Main Line Piping.

- The main line shall be installed so that it doesn't conflict with existing utilities.
- Size of pipe to be a minimum of 1 1/2"
- Depth of cover of mainline piping to be a minimum 18".
- Piping shall be schedule 40 solvent weld PVC pipe with schedule 40 PVC solvent weld fittings unless otherwise noted.

- The contractor shall take all precautions necessary to avoid damaging existing plantings and their roots during the installation of the irrigation system and shall coordinate their efforts with the landscape contractor to optimize the efficiency and the aesthetic quality of the installation.

SLEEVES

- Sleeves shall be 4" Sch. 40 PVC. The irrigation contractor shall coordinate with the landscape contractor to ensure proper installation of the irrigation system with the landscape and hardscape.

WATER SUPPLY/METER



- The meter shall be installed by the local municipality.

- The meter is 1.5" in size. Since the water supply for the system will be potable water, the contractor will be required to install a backflow prevention device which will be located downstream of the irrigation meter.

- This irrigation system shall be capable of delivering 33 gpm minimum with one control station operating at a time at 60 psi at the base of the head for optimum performance of the irrigation system.

- A manual shut-off valve is required at meter or point of connection location for emergency shut-off purposes.



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HL0065: Rutherford US 221A Improvement
Railroad Ave & College Ave
TIP #: HL0065

SHEET DESCRIPTION:

PREL. DESIGN DATE: 4/21/2026

FINAL DESIGN DATE: 4/21/2026

PROJECT DESIGNER:

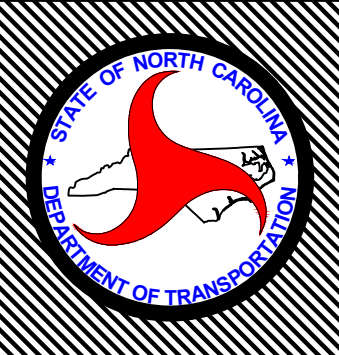
Azad Atashi

PROJECT TEAM:

A. Sumter & T. Dunston

Irrigation Specifications

Scale: No Scale



T.I.P. # HL0065

WBS # - - - - -

FED I.D. # - - - - -

SHEET NO:

L25

TOTAL SHEET NO:

L26