

Subject: Irrigation Mainline Repair (2", 2 1/2" & 3")

Approved:

PROCEDURE:

Irrigation Mainline Repair (2", 2 1/2" & 3")

INTENDED AUDIENCE: LNR personnel assigned to the irrigation team.

PURPOSE: To ensure timely repair of leaks or breaks in 2"-3" irrigation mainlines in order to maintain proper coverage of plant material at the University of Central Florida.

- I. **Knowledge** – Employee should be trained in mainline repairs for the irrigation system campus.
- II. **Safety** –It is the employee’s responsibility to determine if added Personal Protective Equipment (PPE) is needed and to consult with their Supervisor prior to starting the task.
PPE includes:
 - a. Safety Glasses
 - b. Work Boots
- III. **Prior to Irrigation Mainline Repair**
 - a. Pick up any irrigation parts needed for truck stock from the Irrigation Store Room or Central Stores before leaving the LNR compound.
 - b. Make sure to have flags on your truck to mark any repairs needed while repairing the mainline.
 - c. Turn water off before making the mainline repair.
- IV. **Pipe Preparation for the Irrigation Mainline Repair**
 - a. Dig up the area and remove all the dirt from the broken irrigation mainline and expose enough pipe to make a proper repair.
 - b. Determine the depth of the hole needed to make the mainline repair.

CAUTION: If the depth of the hole is five (5) feet or greater, the banks of the hole must be shored up to prevent the hole collapsing.

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- c. Using a pipe saw, cut the broken or leaking part of the pipe out of the existing piping.
- d. Determine the parts that are necessary for the repair (Rags fittings, Saw Zaw, Schedule 40 pipe couplings, tees and solvent and primer) and retrieve them from the irrigation truck.
- e. Take a rag and clean the existing pipe to make sure that there is no dirt on the pipe where the repair is being made.
- f. Clean the existing pipe with a rag and solvent on the surface of the pipe where the repair will be made.

V. Irrigation Mainline Repair

- a. Layout the required pipe and fittings needed for the repair in the direction they will be installed.
- b. Measure and mark the new pipes to the correct length of the repair needed.
- c. Using the saw cut the new pipe to the correct length.
- d. Apply primer to the new fitting and new pipe and then reapply primer to the new fitting again.
- e. Apply solvent to the new pipe and new fitting and then reapply solvent to the new pipe.
- f. Insert the new fitting to the new pipe and twist a quarter turn and hold new fitting in the new pipe for at least 15 seconds to make sure the pipe does not back out of the fitting.
- g. Repeat steps Vc through Ve for each new fitting needed for the irrigation valve repair.

Note: Make sure to cut the pipe straight on the outside diameter.

Note: The repaired valve and pipe will need to sit at least 24 hours before the water can be turned back on.

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- h. Backfill the hole, compacting the soil and if needed add additional soil until the area is back to proper grade.
- i. Re-pressurize the mainline once the repair has set up for 24 hours.

VI. Site Clean-Up

- a. Ensure all the soil is in intended the area and not on the turf or hardscape features (i.e. sidewalks, curbing, roads); rake or blow as needed.
- b. Collect all broken pipe, old fittings, and any other debris.
- c. Collect all hand tools and return to Irrigation trucks.