

Town of Mount Pleasant Pipe Specifications

Laying Pipe in Mount Pleasant

Stormwater system repairs can be very costly. It is our job to insure it is installed correctly.



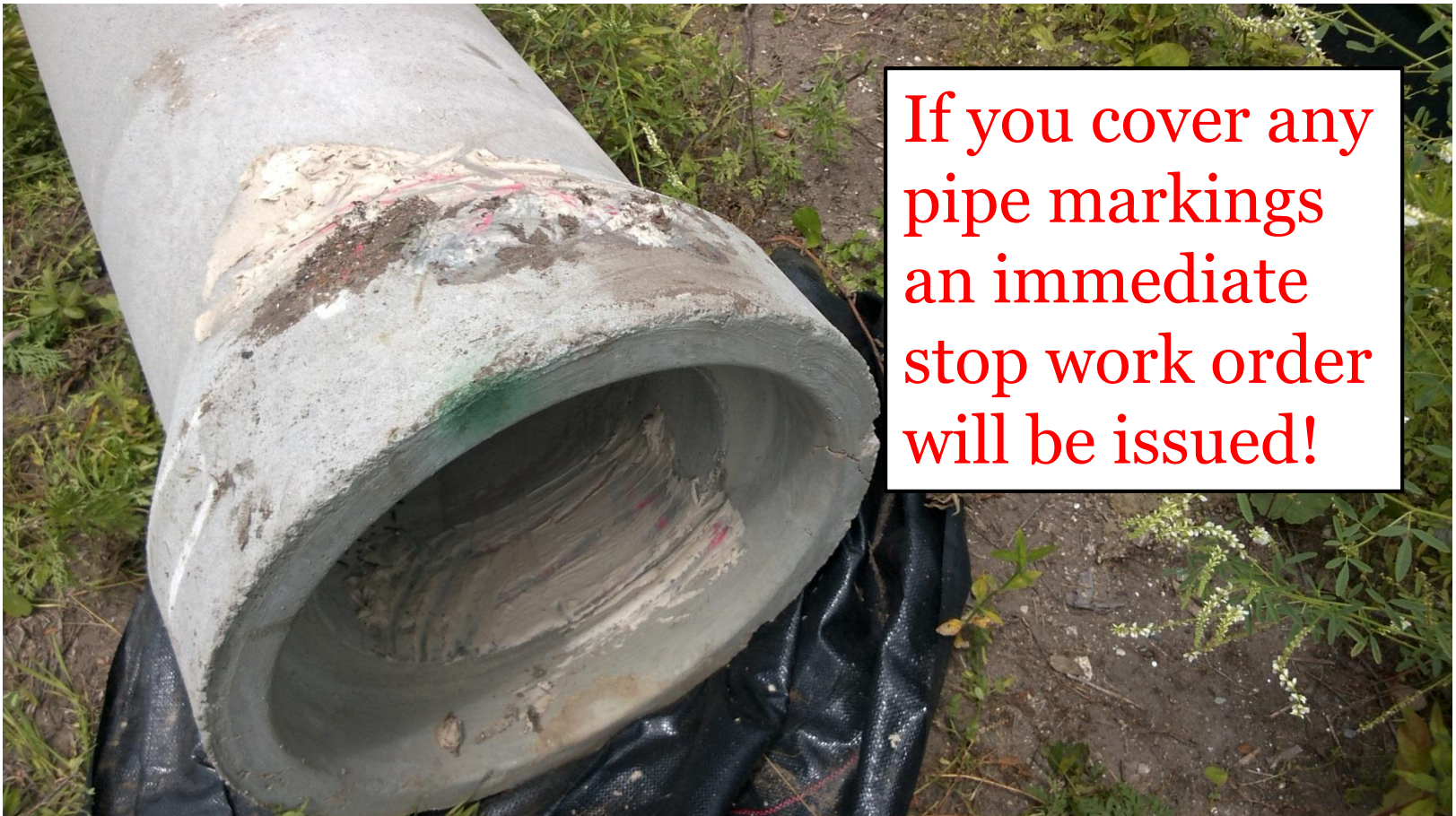
Pipe Inspection

- All pipe materials must be inspected prior to installation.
 - The first pipe inspection is conducted after the pipe is delivered.
 - Pipe that is marked with a pink dot is ready to use.
 - Pipe marked with the word box will be used in a box.
 - Pipe marked with an X has been rejected.

Pipe Inspection (cont.)

- If rejected pipe, or pipe marked for a box is used in a run it must be removed.
- If a pipe becomes chipped or cracked after the first inspection, set that pipe aside and contact the Town for a follow up inspection.

Pipe Markings



If you cover any pipe markings an immediate stop work order will be issued!

Moving Pipe Around the Site

- Care must be taken when moving pipe.
 - Do not move pipe around the site by inserting the forks into the barrel of the pipe.
 - Pipe should be moved by putting the forks underneath the pipe barrel.

Trench Preparation

- Your trench should be wide enough to accommodate your compaction equipment.
 - Trench width = outside diameter x 1.5 + 12
 - Example: 36" RCP has an O.D. of 45.5 "
 - $45.5 \text{ "} \times 1.5 + 12 \text{ "} = 80.25 \text{ "}$
 - Trench width must be 80"
 - Reference SCDOT 714-005-00
 - A stone bedding must be used if you encounter water or if the trench bed is too soft.
 - A good rule of thumb: If a 200 pound man can stand on 1 foot and leave an impression in the trench bottom, an improved foundation is required.

Laying Pipe

- Pipe must be laid, with the bell facing upstream
- A spot must be dug out to accommodate the bell. This is to ensure the barrel of the pipe is sitting on the trench foundation.
- Gaskets must be equalized using a screw driver before pipe is honed.
- Only pipe lubricant provided by the manufacturer will be allowed.
- Pipes must be honed per manufactures spec.
- A 5 oz. non-woven geotextile must be used for wrapping the joint.
 - Fabric will be 18” minimum overlap.

Backfilling Trench

- All fill is to be structural fill.
 - No clay will be allowed in the trench back fill.
 - No roots, organic material, or top soil will be allowed in the trench.
 - Back fill must be classified by the geo-tech
- The entire width of the trench must be compacted, not just beside the pipe.
- The first lift will be no higher than the first 1/3rd of the pipe, **NOT THE SPRINGLINE!**
- All lifts will be 12 inches after the first lift.

Compaction Testing

- All trenches must be tested using a nuclear density gauge.
 - Runs 50ft. or shorter – 1 test on each side of the pipe per lift.
 - Runs 50 ft. – 100 ft. – 2 tests on each side of the pipe per lift.
 - Runs over 100 ft. – 3 tests on each side of the pipe per lift.

Water In Trench

- If there is water in the trench it must be dewatered.
 - The first lift must pass compaction, regardless of water.
 - If a single pump cannot control the water in the trench you might need to well point.
 - If you encounter water the pipe must be bedded in 57 or 789 stone.
 - The entire width of the trench must have stone, not just under the pipe.
 - Slag is not an acceptable bedding material.

Compaction

- Modified proctor must be used.
- 95% compaction in the road and the right of way behind the curb.
 - 98% compaction within 2 Ft. of the sub-grade
- 90% compaction in the green areas
- When compacting the trench be careful not to damage the filter fabric.
- If we feel that you are not compacting properly we will request copies of the compaction reports. No more compaction will be allowed until we are satisfied that you are properly compacting the trench.

Pipe Inspection

- All joints must be inspected before they are backfilled.
- You may put in the first lift of backfill.
 - This lift will be no higher than the first $1/3^{\text{rd}}$ of the pipe.
- I try to come by twice a day, but sometimes I am not available twice a day.
- Call me for inspections at least 1 hour before you need me.
- If you cover the pipe without inspection you will be required to uncover the pipe.

Boxes

- All boxes must have at least 6” of stone underneath
- All pipe to box connections must be parged on the inside and outside of the box.
- Only solid bricks will be allowed.
- All brick work on the box must be parged inside and outside.
 - This includes brick work for raising tops.
 - All raised tops must be left uncovered for inspection
- All steps must be accessible from the manhole or grate.

Boxes (cont.)

- When back filling around the box, compact the material as you back fill.
 - Must be back filled in lifts.
 - Separate compaction testing is not required.
- The last joint will not be mortared inside the pipe. If that joint is mortared you will be told to remove the mortar.

Road Crossings

- Road embankments must be built before pipe can be installed.
- Once the pipe has been installed and backfilled, soil must be mounded over top of the road crossing.
- If you hit a clay layer, that material must be set aside and structural fill must be used.

Isolation Boxes

- Pond slopes will be graded to the isolation box.
- Turf Reinforcement Mats must installed per detail.
 - They will be toed in at the top and bottom of the slope.
 - They must be seeded per manufacturer specs.
 - Prepare the soil underneath the TRM.
 - Seed the soil
 - Install the TRM
 - Put soil on top of TRM
 - Seed soil on top of TRM

Beveled Pipe Ends

- All beveled pipe ends will come from the manufacturer
 - No field cuts will be allowed.
- Rip-Rap will be installed at all pipe ends.
 - Fabric must be installed underneath the rip-rap

Emergency Spillways

- Emergency spillways must be installed per plans.
 - The finished elevation of the spillway is to the top of the rip-rap or TRM
 - The finished elevation will not be to the soil. Take that into account when grading the spillway.

Special Considerations

- Native backfill material, that we determine is unsuitable, will not be used. Off site material will be used.
- It is your responsibility to control the water.
- You may work on the weekend, but be prepared to leave your trench open.

Special Considerations (cont.)

- If you are told to uncover a run, it must be backfilled and tested again.
- Any broken bells in the run must be removed. No concrete collars will be allowed.
- If we feel that you are trying to deceive us or cover anything up a stop work order will be issued immediately.

Closing

We take the installation of Town infrastructure very seriously.

- These standards protect the citizens of the Town from expensive repairs in the future.
- It also protects you from expensive repairs during the closeout process.



- Questions?