Maintenance Manual

The PaveDrain® System is a one of kind performance paving surface that takes all of the positive attributes of traditional paving surfaces and puts them together into one single permeable paving surface.

- **Flexible paving surface**
  - *Our cracks are built into the surface…no costly or environmentally harmful tar sealing is required.*
- **Permeable paving surface**
  - *Let the stormwater infiltrate like Mother Nature intended.*
- **Internal storage chamber for stormwater management**
  - *Up to one inch of additional stormwater is held in the arch.*
- **Replaceable units**
  - *Minimal labor, minimal equipment…quick, cheap repairs.*
- **Minimal Maintenance**
  - Commercial OSHA approved air wand and compressor.

Questions & Answers

Q: How often should the PaveDrain System be vacuumed/swept or maintained?

A: Vacuuming or sweeping of the PaveDrain System will only clean the top surface for aesthetic purposes only. Vacuuming or sweeping is not powerful enough to pull debris up from between the joints of the PaveDrain units. PaveDrain typically resists clogging of the joints because they are not filled with aggregates or sand. This allows the sedimentation and debris that comes off of traditional surfaces to be washed down between the joints of the PaveDrain system and into the aggregate bedding layer. It could be years before the PaveDrain System needs to be air wanded on a traditional parking lot surface.

However, it is recognized that even the PaveDrain System can clog in a residential or urban streetscape with heavy debris. Trees (Magnolia Trees, Willow Trees, Evergreens, etc.) that drop an excessive amount of foliage (cones, seeds, pines, leaves) onto the PaveDrain System may need to be regularly blown open for this type of foliage.

The first year of installation in a residential or urban streetscape with heavy debris should be checked monthly or bi-monthly to set a regularly scheduled maintenance program. If the PaveDrain should lose some of its infiltration performance the recommended repair is to blow the joints free of debris with proper air compressor equipment with an air wand attachment; then dispose of the removed debris.

The use of an air compressor with wand will NOT void the warranty of the PaveDrain System. Proper use of all equipment listed within the manual is to be expected (following operation manuals of the equipment is required).

Q: What is the proper air compressor equipment?

A: EXAMPLES of air compressor equipment are shown on the next page. NOT AN ENDORSEMENT.

- ✓ SAFE
- ✓ OHSHA Approved
- ✓ Ergonomic
- ✓ Made in USA

Compressor Features

- 15.7 CFM@175 psi
- Cast iron two stage compressor
- Aluminum head for heat dissipation
- 8 Gallon Twin tank receivers
- Manual drive valves for proper maintenance

Generator

- 120 volts @60 Hz.
- 3.8 Hr. run time @full load
- 80.4 decibel rating
- 1.7 gallon fuel tank capacity
- On/Off switch

Q: Can the PaveDrain System be snow plowed?

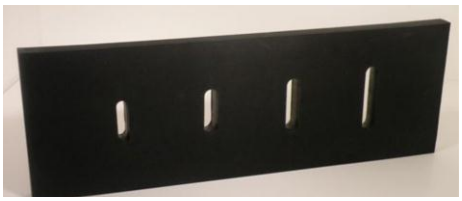
A: Yes. The recommended snow plowing method is with a rubber tipped snow blade. The following is an excerpt from a popular rubber snow blade provider. NOT AN EDORSEMENT

www.plowrubber.com

Long Lasting: Our rubber snowplow edges are made of a tough, resilient rubber compound that shows very little wear after many hours of use. They can outlast steel edges many times. No Gouging: Rubber edges easily adjust to irregular road surfaces & pavement markers-without gouging. Rubber edges save you costly repairs to submerged lighting and surfaces such as cobblestone and brick.

Fast, Clean, Quiet Snow Removal:

Our edges have a "squeegee action" to clean faster, better & much quieter than steel cutting edges.



Lower Maintenance Costs: Since our rubber snowplow edges need fewer replacements than steel edges, fewer man-hours & less down time means lower costs. Rubber edges also absorb damaging shock that would be transmitted to the plow, truck, and driver with a steel edge.

Less Damaging: Rubber cutting edges are less likely to rip out or damage submerged lighting. Less likely to damage road surfaces like concrete, asphalt, brick, and cobblestone.

Less Fatigue: Rubber cutting edges reduce driver fatigue and equipment wear by minimizing blade and equipment vibration.

Q: Should the PaveDrain System be sealed?

A: A sealant is not discouraged, but it is not mandatory. A sealant is an economical way to assist the PaveDrain System to resist the damage caused by salting of adjacent hardscape surfaces. Sealing of the PaveDrain System will increase its longevity. Some of the more popular brands are shown below. Both are available in 55 gallon drums.

Natural Look – iN www.techniseal.com/web/product.php?prodID=291

Code	Size	Color	Coverage
221-318	55 gallons	-	Covers up to 6600 sq. ft.

Its distinctive feature is its ability to protect without changing the appearance of the surface. As an oil repellent, it makes cleaning easier by preventing oil, grease (barbecue) and dirt from penetrating the material. As a water-repellent, it helps prevent the appearance of mold and protects against water damage. Easy to apply, it provides maximum effectiveness and durability. It won't make surfaces more slippery and hence is ideal for protecting pool decks, patios, steps, sidewalks, etc. It resists the elements (freeze-thaw cycles, sun, rain, etc.), as well as salt.

SRW (PS-X) Penetrating PAVER www.srwproducts.com

SSSPLUS10 55GAL 485 lbs

Used to protect and seal any clean and dry cementitious surface, above ground, vertical or horizontal. It protects the surface against damaging effects of water intrusion, acid rain, deicing chemicals, freeze/thaw exposure, airborne dirt, smog, industrial fumes, and most other atmospheric chemicals. It retains the original appearance of pavers, brick, retaining walls, stone, masonry, cultured stone and concrete surfaces with a non-yellowing UV resistant finish.

Q: Should the PaveDrain System be salted or sanded?

A: A light salting is preferred over sanding. Covering the PaveDrain surface with a heavy salting is not recommended. Salting is hard on everything, sanding will help with traction, but also has the adverse effect of washing the sand between the joints and into the base material, which will decrease the performance of the base material. Of note, it will take years if not decades to show any decreased drainage performance to the PaveDrain System's aggregate bedding layer in typical parking lot applications.

Pre-wetting salt has become common. Wetting provides moisture to make brine. Faster melting action may be expected. In addition, the wet salt has less of a tendency to bounce off the surface during installation or by traffic therefore saving money.

While any liquid de-icing chemical can be used to pre-wet, liquid calcium chloride is used widely. Applications of 6-10 gallons per cubic yard of salt are recommended. Calcium chloride has the added advantage of producing extra melting due to its effectiveness.

Initial projects have shown a penchant for the surface of the PaveDrain System to remain dry and mostly…ice free. Stormwater does not collect on the top surface of the PaveDrain blocks; therefore it runs down the sides and into the base material. The only slipping issue that has been documented is early mornings where a frost cover has coated the surface of the blocks. Once the sun hits the surface, this is quickly melted and does not warrant a salting.

Q: Can an individual PaveDrain Block be replaced?

A: If a PaveDrain block breaks under pressure or sudden impact, it is easy to replace the single block without having to pull out the entire mattress. Follow these steps to repair a single block.

Step 1

First, break out the broken block using a 3 lbs hammer, being careful not to damage any surrounding blocks. It is best to start in the middle of the block and work your way out. A concrete masonry chisel can help as well.

Step 2

Once you have loosened the concrete, begin to pull out the pieces by hand, removing all of the block from the area. If there are still pieces that are stuck, continue to use the hammer to break them free.

Step 3

Once the block is free, perform one final check to clear the cables and any block remnants that may have collected under adjacent blocks. Take the cable and pull as much slack to you as possible. This will allow you to tuck the cable into the new blocks arch.

Step 4

Now that the damaged block is fully removed, you are ready to place the new block in. Line up the replacement block to fit the hole where the old block was.

Step 5

Slide the new block down into place. You may use a rubber mallet to tamp it down securely at the edges, again be sure not to damage the new block by using you 3 lbs hammer or too much force.

***If you have issues with the existing cable (as shown in Step 3 above) you can cut the cable and remove it from the hole. It will not affect the performance of the system. You will want to make sure that you mark this on your site plan drawings. That way if you have to remove the mat to repair a water line or electrical line under the system you will be prepared.*

Please go to www.pavedrain.com and review the Maintenance Video located under the "media" section or the "installation and maintenance" section of the site.