

POST CONSTRUCTION LONG TERM STORMWATER SYSTEM MAINTENANCE PLAN FOR  
PROJECT NAME: CVS/pharmacy #05165  
ENTITY RESPONSIBLE FOR STORMWATER MAINTENANCE & INSPECTION: **CVS PHARMACY**

The Owner shall provide for adequate long term maintenance and continuation of stormwater control measures to ensure that the facilities are and remain in proper working condition in accordance with approved design standards, rules and regulations, and applicable laws. The Owner shall perform preventative maintenance activities at intervals described in the Maintenance Procedures below along with necessary landscaping (grass cutting, etc.) and trash removal as part of regular maintenance.

The Owner shall perform routine inspections to ensure that all long term stormwater management facilities are properly functioning. These inspections shall be conducted on an annual basis, at a minimum. These inspections shall be conducted by a person familiar with control measures implemented at the site.

**SYSTEM DESCRIPTION:**

The site consists of Portland cement concrete pavement, TRUEGRID gravel, gravel and grass/landscaping over which stormwater is sheet flowed to three dry retention ponds with an outfall control structure or earthen weir with elevated outfall weir inverts. The required treatment volume is stored in the dry retention ponds below the outfall inverts and forced to percolate through the soil into underdrain pipes. From the outfall structure stormwater enters the municipal subsurface drainage system.

**MAINTENANCE PROCEDURES**

**1. DRY RETENTION POND**

- The facility should be checked annually for signs of erosion, vegetation loss, and channelization of the flow.
- The grass should be mowed when it reaches a height of 8 inches (20.3 cm) and no shorter than 3 inches (7.6 cm). Allowing the grass to grow taller may cause it to thin and become less effective. The clippings should be bagged and removed.
- Remove cuttings and dispose of properly.
- Remove sediment by hand with a flat-bottomed shovel during dry periods.
- Remove only the amount of sediment necessary to restore hydraulic capacity, leaving as much of the vegetation in place as possible. Reseed or plug any damaged turf or vegetation.
- Roto-till or cultivate the surface of the sand/soil bed of dry swales if the swale does not draw down within 36 hours.

**2. STORMWATER PIPES AND STRUCTURES**

- These structures will be inspected and cleaned annually

**3. TRUEGRID GRAVEL OPEN GRID SYSTEM**

- The unit will be maintained per manufactured requirements (Requirements are attached).
- It will be inspected at least twice annually.

**4. GRAVEL PARKING LOT**

- The gravel parking lot shall be checked annually for signs of erosion, potholes/ruts and grass or weeds.
- When signs of erosion or potholes/ruts are present, the gravel parking lot shall be groomed to provide a uniform surface.
- Weeds/grass within the parking lot shall be removed during regular landscaping maintenance activities.

## **TRUEGRID – Maintenance Guide**

TRUEGRID typically requires very little maintenance. Most silt and sediment will decay and pass naturally through the system as tested and documented in the Brattebo and Booth 2003 study<sup>1</sup>. Here are some maintenance suggestions to ensure high permeability for the life of your TRUEGRID site.

### Leaves & Garbage:

Leaves and/or garbage should be raked, air blown or vacuumed being careful not to remove the gravel. Small particles will decay naturally and pass through the system.

### Mud or Sediment:

TRUEGRID may be hosed down with water or carefully power washed to move excess mud or sediment through the system. Care should be taken to not wash gravel out during this process.

### Snowplowing:

TRUEGRID can be plowed using standard truck-mounted snowplow blades with small riser skids on the corners of the blades to keep the bottom of the blade off the surface of the grid by roughly 1”.

### Tree or plants watering:

Adjacent trees or plants next to or part of the TRUEGRID site can be watered directly through the permeable TRUEGRID system either manually or with irrigation. TRUEGRID paving helps protect the tree roots from damage from heavy vehicles and traffic.

<sup>1</sup>Long-term stormwater quantity and quality performance of permeable pavement systems

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### Abstract

This study examined the long-term effectiveness of permeable pavement as an alternative to traditional impervious asphalt pavement in a parking area. Four commercially available permeable pavement systems were evaluated after 6 years of daily parking usage for structural durability, ability to infiltrate precipitation, and impacts on infiltrate water quality. All four permeable pavement systems showed no major signs of wear. Virtually all rainwater infiltrated through the permeable pavements, with almost no surface runoff. The infiltrated water had significantly lower levels of copper and zinc than the direct surface runoff from the asphalt area. Motor oil was detected in 89% of samples from the asphalt runoff but not in any water sample infiltrated through the permeable pavement. Neither lead nor diesel fuel were detected in any sample. Infiltrate measured 5 years earlier displayed significantly higher concentrations of zinc and significantly lower concentrations of copper and lead.

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