Road School

Permeable Pavements on Campus

March 6, 2013
Purdue’s History of Storm Water Management Projects

- 2009 Campus Wide Sustainable Storm Water Master Plan  
  [http://www.wabashriver.net/hydrology/](http://www.wabashriver.net/hydrology/)

- Porous Asphalt
  1. 2007 Horticulture Service Dr.,
  2. 2008 N. Beering Drive,
  3. 2008 Band Practice Field, and
  4. 2010 BCC Parking Lot

- Pervious Concrete Parking Lots
  5. 2007 3rd and Russell
  6. 2010 Armory
  7. 2011 Marriott Hall

- Permeable Pavers
  8. 2008 Rush Crossing the Tracks
  9. 2011 Stadium Mall
  10. 2009 Hilltop Apts
  11. 2012 Nelson Food Science
  12. 2012 Horticulture Rain Garden
STADIUM PARKING LOT
STORM WATER INFILTRATION SYSTEM
2008 POROUS ASPHALT
#3 2011 Stadium Mall Landscape Renovation
#4 2010 Armory Parking Lot Paving
#4  Armory Parking Lot
#5 2008 Band Practice Field

CLAYTON W. DEMENT FIRE STATION
(building roof #4)
Band Practice Field
#6 Black Cultural Center
NOTES:

1. Concrete walls of existing basement to be ordered to match #2gradation and shortened into 100 #40 area as part of ongoing relocation project; all remaining #40 area to be shortened into #40 #6 crushed limestone aggregate (per No. 40 standard specifications, Section 406).

2. Structural soil consists of soil and crushed aggregate. The mixture ratio of the structural soil should be per technical drawings recommendations. Refer to project specifications for more information.

3. All structural soil material to be placed in layers not to exceed eight (8) inches in loose thickness and be uniformly compacted to 90% maximum dry density in accordance with ASTM D-6967.

4. The aggregate detention area should be geographically located on the site, approximately centered between the interior planting slab. In accordance with the separation analysis, the aggregate detention area should have a minimum surface area of 1,500 square feet and a minimum volume of 1,500 cubic feet. Vertical and horizontal drains, and depths are acceptable as long as the above requirements are met.

5. The exposed sand and gravel layer directly beneath the detention area should have the same minimum surface area requirements described above to provide adequate infiltration into the subsurface system. The location of the existing sand and gravel layer should be field verified by owner's representative prior to installation of aggregate detention area.

PERVERSIVE PARKING LOT CROSS SECTION
#8 2008 RUSH Crossing at the Tracks
#9 2011 Marriott Hall- Service Dock Area
First and University St.
#10 2012 HORT Entryway
Lessons Learned

1. Infiltration tests pre & post
2. Timing of pavement installation with a sub-drain
3. Emergency overflow path
4. Maintenance for permeable pavements
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