PERVIOUS PAVEMENT ORDINANCE

Lower Makefield Township Environmental Advisory Council

March 19, 2014
Overview

1. What is pervious pavement?

2. Why is it beneficial?

3. What are we proposing?
What is Pervious Pavement?
Pervious Pavement System

- Crushed Stone Storage Layer
  - Uncompacted Soil
  - Previous Pavement

Layer Depth: 12 to 36 inches
Impervious Asphalt

Pervious Asphalt
Pervious Interlocking Paver Blocks
# Applications of Pervious Pavement

<table>
<thead>
<tr>
<th>YES</th>
<th>No</th>
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<tbody>
<tr>
<td>Parking lots</td>
<td>Pavement regularly used by large trucks and buses</td>
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<tr>
<td>Walking/Bike paths</td>
<td>Slopes more than 5%</td>
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<tr>
<td>Sidewalks</td>
<td>Poorly drained soils or high water table</td>
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<tr>
<td>Patios</td>
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<td>Residential driveways</td>
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<td>Low volume roads (limited truck use)</td>
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Why is pervious pavement beneficial?
The Environmental Benefits (LID)

- Reduces stormwater runoff and flooding
- Replenishes water tables and aquifers
- Prevents polluted water from entering our streams
- Protects nearby trees and vegetation
- Quicker melting of snow, less ice, less salt needed.
Makefield School

Reduced stormwater runoff and flooding
Oil runoff from impervious parking pavement
Tree Protection
- Can have pervious pavement within the tree drip line
- Allows water to reach the roots
Parking Lots, Denver, CO – Next morning following snow. Sites are directly across street
Makefield School

No Icing on Pervious Surface
Other Benefits of Pervious Pavement

• **More Efficient Land Development**
  Reduced need for detention basins and other stormwater facilities → lower cost/ less land use

• **Fewer Zoning Variance Requests for Impervious Surface**

• **Easier Compliance with Stormwater Ordinance Requirements**
What are we proposing?
Pervious Pavement Credit

Currently our zoning ordinances consider all pervious pavement as impervious

• Proposed ordinance - only 50 % of the pervious surface is considered as impervious

• Credit available at commercial sites, schools, churches, etc.; cannot be taken by residential dwellings (R1, R2, R3, R4)
Limits to Credit

• Total pervious and impervious surface at the site can be no greater than 1.25 of the Zoning impervious limit

example: site with 20% impervious limit can have no more than 25% pervious plus impervious cover.
Design Criteria

• Designed according to the PA Best Management Practices Manual

• Applicant must demonstrate sufficient soil infiltration below pervious pavement

• The stone storage layer must have sufficient capacity to accommodate the 2-year storm (3.36 inches in 24-hours)
Maintenance and Inspections

- Owner must submit a signed and recorded maintenance agreement with the Township

- Pervious pavement must be cleaned at least once every two years

- Township inspection once every 3 years (similar to other stormwater BMPs)