



low impact development technical workshop series

Grid Lattice Paving Systems

Topics

Gravelpave, Grasspave and Grassy Pavers

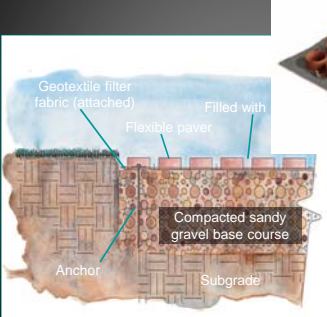
Applications, Materials and Construction

WASHINGTON STATE UNIVERSITY
EXTENSION

 **HERRERA**

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Flexible Pervious Gravel Pavers




Trade Names

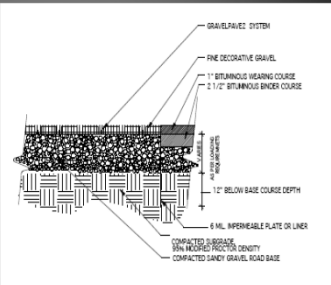
- Gravelpave2
- Agrablock
- Integra 500
- Ground Grid
- Netpave 50

Flexible Pervious Gravel Pavers

Base course specification

Sandy gravel material common for road base

Sieve	% Passing
1"	100
3/4"	90-100
3/8"	70-80
#4	55-70
#10	45-55
#40	25-35
#200	3-8



Installation of Flexible Plastic Pervious Pavement with Gravel Surface
(Refer to manufacturer's technical specifications for complete installation details)



1. Install and compact base
2. Unroll paver, connect and cut as needed
3. Secure to base with anchors*
4. Fill with open graded 3/8" aggregate (gravel)
6. Use and maintain

*Check with Specific Manufacturer. Some do not supply Anchors


Flexible Pervious Gravel Pavers



Grid colors to match aggregate

Flexible Pervious Gravel Pavers

Gravel fill examples




Use clean, sharp, hard, uniform size: 3/16 inch to 3/8 inch

Crushed Granite 3/16"
Decomposed Granite 3/8"
Hard Limestone 3/8"
Add 25-50% sharp mason's sand to maintain porosity


Carbon Canyon 5/16" minus
Sanora Tan 3/8"
Sharp Angular Pea Gravel
Do Not Use Recycled Pea Gravel

Flexible Pervious Gravel Pavers

Trails




Garden Of the Gods
Colorado Springs Park and Recreation Dept.
Colorado Springs, CO



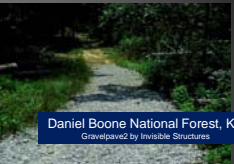
Severe rutting prior to installation
Park estimates an 80% reduction in maintenance time and cost.

Flexible Pervious Gravel Pavers


Trails




Saperton Landing, BC
Gravelpave2 by Invisible Structures



Daniel Boone National Forest, KY
Gravelpave2 by Invisible Structures



Oakdale Nature Preserve, IL
Gravelpave2 by Invisible Structures



Private Residence Trail, CO
Gravelpave2 by Invisible Structures

Flexible Pervious Gravel Pavers

Utility access, fire lanes and specialty installs



Colorado Springs City Building, CO
Firelane
Gravelpave2 by Invisible Structures



Tri Rail Station, Miami Airport, FL
Utility and Foot Traffic
Gravelpave2 by Invisible Structures



Seneca Post Office, PA
Eave drip line erosion control
Gravelpave2 by Invisible Structures



Westside Water Reclamation, Vancouver, WA
Utility and Foot Traffic
Gravelpave2 by Invisible Structures

Flexible Pervious Grass Pavers

Fire Lanes and Emergency Access



100' ladder with outrigger
70,000 lbs.
Grasspave2 by Invisible Structures



Dupont Center, Irvine, CA
fire lane
Grasspave2 by Invisible Structures

5,720 psi load bearing capacity (filled)

Flexible Pervious Grass Pavers



World's Fair Park, Knoxville, TN
Grasspave2 by Invisible Structures

Primary Applications

- Parking
- Fire/emergency access
- Utility access
- Residential drives and parking
- Pedestrian traffic



City Works Yard, Vancouver, BC

Flexible Pervious Grass Pavers

Stadium and arena parking lots



Ladd Peables Stadium, Mobile, AL
Grasspave2 and Impermeable Asphalt



Orange Bowl, Miami, FL
Grasspave2 and Impermeable Asphalt



St. Louis Rams Stadium, MO
Grasspave2 and Impermeable Concrete



Mitchell Center Arena, Mobile, AL
Grasspave2 and Gravelpave2 perimeter in Impermeable Asphalt



Flexible Pervious Grass Pavers

Seasonal and overflow parking

Snow removal
Raise blade 1 inch above surface and/or attach skids





Westfarms Mall, West Hartford, CT

Flexible Pervious Grass Pavers

Urban heat island mitigation

- Grass Albedo 0.40
- Air Conditioning effect through transpiration



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Flexible Pervious Gravel Pavers

Americans with Disabilities Act (ADA)



Gravelpave2 - tested to meet required standards by Beneficial Designs, Inc. April 1999

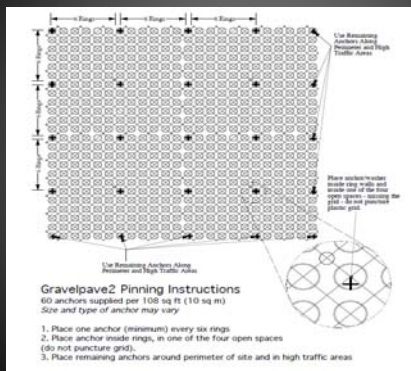


Flexible Pervious Gravel Pavers

Follow pinning instructions



Flexible Pervious Gravel Pavers



Flexible Pervious Grass Pavers

Installation costs

\$6.00 to \$7.00/sq foot

- Base course including excavation
- Polymer/fertilizer
- Flexible Grass Paver
- Sand
- Hydroseeding or thin cut sod
- Labor

Potential site cost savings

- No root barrier for trees
- Reduce or eliminate drainage infrastructure (depends on subgrade)
- Stormwater mitigation
- Multiple use site
- Reduced maintenance?
- 60 year lifespan (Grasspave2)

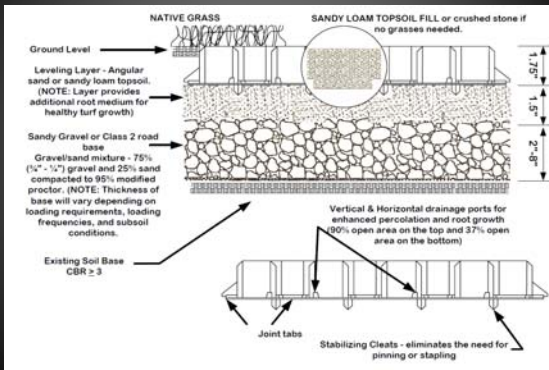
Grassy Pavers



- Exceeds H-20 loading requirements.
- Turf (sandy loam) or aggregate (3/16 minus to 3/8) top fill.
- Both Grassy Pavers and Invisible Structures recycled HDPE.



Grassy Pavers



Flexible Pervious Grass Pavers



LEED™ Points
(Leadership in Energy and Environmental Design)
LEED points for all products - Grasspave2 photos shown

- Reduced site disturbance
- Stormwater management
- Reduced heat island effect
- Water efficient landscaping
- Innovative wastewater technology
- Water use reduction
- Recycled content
- Erosion and sediment control
