Can Plants Grow In Rock?
Improved Stormwater Management

- Stormwater regulations under the Clean Water Act.
- Green roofs reduce stormwater runoff, slow the rate of runoff and generate a delay in the runoff.
- Green roofs can also improve quality (turbidity, temperature, and various pollutants).

General Public Benefits: Stormwater

Source: National Research Council, Institute for Research in Construction

Green Roof Media Depths

<table>
<thead>
<tr>
<th>Plants</th>
<th>Minimum Media Depth</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sedums</td>
<td>1” to 3” +</td>
</tr>
<tr>
<td>Groundcovers and Grasses</td>
<td>8” to 10”+</td>
</tr>
<tr>
<td>Shrubs</td>
<td>18” to 24”+</td>
</tr>
<tr>
<td>Large Shrubs, Small Trees</td>
<td>24” to 3’+</td>
</tr>
<tr>
<td>Shade Trees</td>
<td>3’ +</td>
</tr>
</tbody>
</table>

WHAT MAKES IT GROW?

DON'T CALL IT DIRT!

- Substrate
- Engineered Soil
- Planting Mix
- Medium
- Media
- Or......

That Stuff That Looks Like Dirt
The SIX properties a planting media must possess are:

- Good drainage and aeration
- Water holding capacity (without getting too saturated or heavy)
- Nutrient holding capacity (CEC)
- Permanent
- Lightweight but Sturdy (can’t shrink or blow away)
- Stable (must support the plants)
GROWING MEDIA FOR ROOF TOPS

• **INTENSIVE**
  - lightweight aggregate: 35%-60%
  - coarse sand (USGA): 25%-50%
  - organic (compost): 5%-20%

• **EXTENSIVE**
  - lightweight aggregate: 60%-100%
  - organic: 0%-40%*
  - coarse sand: 0%-35%
  - *: Arid locations OM may be supplemented

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**NOTICE**

Peanut hulls are being used as part of a natural riparian buffer and soil amendment within Suncoast Town/Carrera Park.

Persons with a peanut allergy should be advised that this product has been spread throughout the grassy areas of the park.

Park users are asked to take all necessary precautions. More information about the product will be available at the City information booth during special events and at City Hall during regular business hours. For information call 775-845-8196 or visit www.suncoastre.com to learn more.
INTENSIVE MEDIA

Structural Loading

Source: Monica Kuhn & Steven W. Peck
Value Engineering = Devalue Engineering

DON'T DO IT!
This can be called DIRT!
Blowing in place
80% Stalite fines
20% Compost Blend

3/8” Stalite Base

Compacting

NAVCC
Culpepper, VA
Cuttings must be watered until rooted
June 29, 2005 full sun
20 parts Stalite
1 part compost (5%)

Oct 25, 2005 full sun
20 parts Stalite
1 part compost (5%)

20:1 coarse
20:1 fines

20:1 coarse
20:1 fines

STORMWATER BMPS

Rain Garden
Hazelton School
Waynesville, NC

One Seasons Growth
What Goes Up
Does Not
Necessarily
COME DOWN
EASILY!

Source: Earthpledge
The potential of green roofs is only limited by your imagination!!
Who We Are: Green Roofs for Healthy Cities

- A not-for-profit association representing the green roof industry in North America.
- Established in 1999, our mission is to build awareness of the economic, social and environmental benefits of green roof infrastructure across North America.
- Advance the development of the market for green roof products and services through shared resources.