

						
	Geoblock®	Geoblock®5150	Rolled Product	Hex Cell-1	Drainage Cell	Hex Cell-2
Base Depth (Overflow Parking, CBR=4)	2"	0"	6"	4"	4" Growing Media over 3" Washed Coarse River Sand with geonet layer between	1.5" masonry sand over 2" road base
Base Depth (Fire Truck Access, CBR=4)	6"	4"	12"	8" minimum	Not recommended by manufacturer for heavy applications	1.5" masonry sand over 8" road base
<b>SIGNIFICANCE</b>	<b>Reduced base depth leads to reduced excavation and backfill and therefore reduced overall project cost.</b>					
Flexural Strength	Moderate Rigid Product	High Rigid Product	None Rolled Product	High Rigid Product	Moderate Rigid Product Supported by columns not walls	High Rigid Product
<b>SIGNIFICANCE</b>	<b>Stiffer paver units provide better support distributing loads across entire installation, limiting contact pressure to the base.</b>					
Free Draining Sand in Base	No	No	Yes compacted sandy gravel required	No	Yes required	Yes
Moisture Retaining Topsoil in Base	~35% allows root penetration	~35% allows root penetration	No	No	4" layer which will compact and limit drainage	No
Paver Infill	Pulverized Topsoil	Pulverized Topsoil	Clean, sharp sand, compacted	Sandy loam or loam	Clean, Sharp Sand mixed with topsoil	Topsoil, but over 1.5" of sand
<b>SIGNIFICANCE</b>	<b>Sand does not retain moisture, topsoil does. More sand leads to need for more watering and/or requires moisture retaining additives. Fertilizer/chemicals must be added at regular intervals. Grass grows better in topsoil than in sand.</b>					
Load Transfer Mechanism	86.4 in <sup>2</sup> /ft <sup>2</sup> contact at base, 18.7 in <sup>2</sup> /ft <sup>2</sup> at surface reduces contact pressure by 462%	80.6 in <sup>2</sup> /ft <sup>2</sup> contact at base, 17.3 in <sup>2</sup> /ft <sup>2</sup> at surface reduces contact pressure by 466%	29.05 in <sup>2</sup> /ft <sup>2</sup> contact at base, 7.3 in <sup>2</sup> /ft <sup>2</sup> at surface for 398% reduction in contact pressure	57 in <sup>2</sup> /ft <sup>2</sup> contact at base, 12.96 in <sup>2</sup> /ft <sup>2</sup> at the surface for 440% reduction in contact pressure	50.4 in <sup>2</sup> /ft <sup>2</sup> contact at base, 50.4 in <sup>2</sup> /ft <sup>2</sup> at surface for little reduction in contact pressure	90.7 in <sup>2</sup> /ft <sup>2</sup> contact at base, 14.4 in <sup>2</sup> /ft <sup>2</sup> contact at surface reduces contact pressure by 630%
<b>SIGNIFICANCE</b>	<b>Paver units with significantly more surface area at the bottom of the unit than on the top (the "snowshoe" effect) reduce contact pressure to the base resulting in a shallower cross section.</b>					
Unit Area	5.3 ft <sup>2</sup>	5.3 ft <sup>2</sup>	2.78 ft <sup>2</sup>	4.00 ft <sup>2</sup>	1.34 ft <sup>2</sup>	2.14 ft <sup>2</sup>
Joint Type/Shear Transfer between units	<b>Tabular</b> allows for complete unit-to unit shear transfer	<b>Tabular</b> allows for complete unit-to unit shear transfer	<b>Peg and Hole</b> minimal shear transfer	<b>Tongue and groove</b> moderate shear transfer	<b>Vertical tongue and groove</b> low shear transfer	<b>Over/Under locking system</b> little shear transfer
<b>SIGNIFICANCE</b>	<b>The larger the paver unit, the less connection points. In all systems, especially those with little shear transfer from the connection mechanism, the connections will be the weakest part of the entire system. Less connections are better.</b>					
Cell-to-Cell Relationship	Common cell walls	Common cell walls	No common cell walls	Common cell walls	Cubical with support structure of unbraced columns	Common Cell walls
<b>SIGNIFICANCE</b>	<b>Common cell walls are needed in order to resist torsional loading. Lack of common cell walls increases the propensity for the pavers to buckle when vehicles turn.</b>					
Cell Size	2.25" x 2.25"	3.1" x 3.2"	2.15" ID rings	2.5" Hexagonal cells	~2" x~2"	2.5" Hexagonal cells
Cell Depth	1.18"	2"	1"	1.5"	2"	1.75"
<b>SIGNIFICANCE</b>	<b>The deeper the cell, the more topsoil that can be confined and remain uncompacted. This allows the infiltration rate to remain high and the roots to remain undamaged. Roots require free moving water and air to survive.</b>					
Weight/ft <sup>2</sup>	0.87 lb/ft <sup>2</sup>	1.77 lb/ft <sup>2</sup>	0.40 lb/ft <sup>2</sup>	1.125 lb/ft <sup>2</sup>	0.94 lb/ft <sup>2</sup>	1.12 lbs/ft <sup>2</sup>
<b>SIGNIFICANCE</b>	<b>Typically, more plastic per unit weight means a stronger product. When evaluating price, consider cost per unit weight.</b>					