

## GREEN LANDSCAPING ALTERNATIVES FOR A SUSTAINABLE FUTURE

INSTALLATION DETAILS FOR CORE Grass<sup>TM</sup> 60-40 (Commercial Grade)

CORE Grass<sup>TM</sup> - Honeycomb Grass Stabilizer Panels:

Panels shall be  $\pm$  45" x  $\pm$  39" x 1 3/5" (1.15 m x 1.0 m x 40 mm) (MEDIUM) (JUMBO panels also available = 2X medium panel size) heavy duty black injection-molded polypropylene panel having a factory applied geotextile fabric fused to the bottom such as 60-40 as manufactured by CORE Landscape Products, 2750 Cumberland Road, Courtenay, BC, Canada V9N 9P1 and shall be capable of supporting wheelchairs and all car and heavy truck traffic. Compressive strength is tested under ASTM D 1621-04a and shall be 1016 kg/0.0175 m<sup>2</sup>. Loading capacity shall be > 300 tons/m<sup>2</sup>, > 380 psi, when filled with grass over the specified base.

### CORE GRASS HONEYCOMB CELL INFILL MATERIALS

## Specifier Notes:

- A. For a permeable system, fill cells with Structural Soil as per recipe offered by CORE Landscape Products. Structural Soil can be created from locally sourced materials.
- B. Infill sizes with Structural Soil and compact with lawn roller and apply water. Reapply Structural Soil to 10 mm over top of grid and compact. You should not be able to see the grid.
- C. Apply grass seed or hydroseed to previously leveled and compacted soil in grids. If laying sod over top of grid, ensure that roots are fully established (and protected) in grids cells prior to use (see Note D).
- D. Allow 4-6 weeks for grass seed and sod to fully establish prior to vehicular or pedestrian use.
- E. Vehicular passes per day not limited when using grass seed. When using sod, vehicle passes limited to 5 per day.

## **EXECUTION**

#### **EXAMINATION**

- A. Evaluate site conditions. Notify the Engineer and refrain from excavation until site conditions have been corrected.
- B. Evaluate that the layout of the project is as indicated on the drawings. Notify the Engineer and do not proceed until the layout of the project matches the drawings.

## A. Subgrade Preparation:

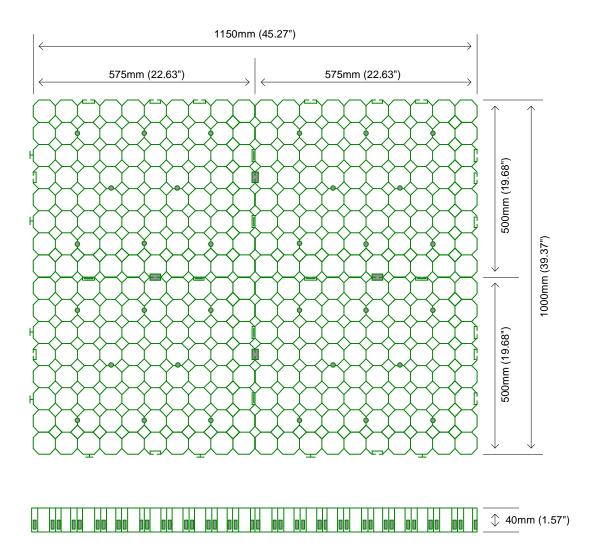
- 1. Excavate and shape foundation soils to grades, elevations, and dimensions as indicated on the drawings. Be sure water will flow away from any structures. Install moisture barrier if projects meets a foundation with a basement.
- 2. Confirm foundation soil meets specified compaction through proof rolling or other conventional method and is examined by the Engineer. If unacceptable foundation soils are encountered, excavate affected areas and replace these areas with suitable quality material as directed by the Engineer. For subgrade soil compaction a vibratory plate, compactor, or roller is recommended.

# **B.** Base Preparation:

- 1. For subgrade or base preparation, level and clear the area of large objects such as rocks, or pieces of wood. Excavate area allowing for unit thickness and top layer. Leave 50 mm (2.0 inches) for CORE Grass<sup>TM</sup> 60-40 (40 mm) and top layer (10 mm) to meet final grade.
- 2. Examine Horticultural subsoil at the XXXX to verify suitable compaction, elevation, drainage, and/or improper gradients before commencing work. This subsoil layer must be a minimum 2-2.75" in depth for grass root growth below the grid surface. A 60/40 ratio of sand/soil is recommended. Discrepancies from detailed or specified conditions shall be reported to the Landscape Architect and the Owner's Representative so as to not delay work.
- 3. Installation constitutes acceptance by the Contractor of existing conditions and assuming responsibility for satisfactory performance of the system.
- 4. Place the panels. Position the panels on the prepared subgrade. Cutto shape with aviation shears or skill saw with fine-toothed blade. Use protective gloves to avoid abrasions. Top of hexagon cell panels should be 1 cm (10 mm) below adjacent hard surfaced pavements or final grade.
- 5. All hard surfaces abutting areas to receive Grass Surfacing shall be in place prior to commencing work. Finished soil work shall be no more than 1/2" below adjacent hard surfaces. Adjust soil levels accordingly so that this will be possible.
- 6. Place first row of panels against a stationary edge if possible. The panels have interlocking connectors; however some installations do not require them to be used. Use connectors only in areas with greater traffic or steeper grades. No anchors are needed for grass stabilizer panels under a 20 degree slope.
- 7. Fill cells with chosen infill. Cell walls must be sufficiently covered with infill to prevent any equipment or load bearing vehicular traffic from damaging the grid.
- 8. Compact infill as per Landscape Architect or Project Engineer specifications.
- 9. Contour compacted surface to specified elevation and grade as indicated on the drawings.
- 10. Install edge restraint if desired. Standard metal, plastic, concrete edge restraints or concrete curbing may be used.

## **Post-Placement**

- A. Snow plowing Use shovels or blades with plastic blades.
- B. Use of salt for de-icing is allowed.



**CORE GRASS 60-40** 



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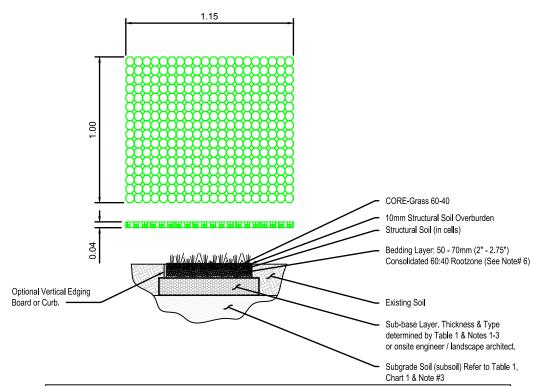


	Chart i & Note #5					
Table 2: Paving Grid Sp	Table 2: Paving Grid Specification					
Description	Data					
Product Material Colour Options Paver Dimensions Nominal Internal Cell Size Structure Type Cell Wall Thickness Weight (per m²) Load Bearing Capacity (filled) Crush Resistance (unfilled) Basal Support & Anti-Shear Open Cell % Connection Type Chemical Resistance UV Resistance Toxicity	COREgrass 60-40HDR  100% Recycled Polyproplylene Green & Custom Available  45.3" x 39.4" x 1.6" (1150 x 1000 x 40 mm)  2.4" (60 mm) Rigid-Walled Closed Cell  98mil (2.5mm)  7.7 lbs (3.5kg) > 300 Tons / m² 200 Tons / m² 1ntegral 5.5" (140 mm) long section ground stakes Top 94% / Base 72% Interlocking built-in H connector Excellent High Non Toxic					
Bedding Layer	60 : 40 Root Zone (See Note #6) : 2" - 2.75" Thick					
Paver Fill (Seed Bed)	60 : 40 Root Zone (See Note #7) : 1.7" Thick					
Grass Seed	Seed as per Local Specifications					
Fertilizer	Pre-Seed Fertilizer followed up with appropriate seasonal fertilizer					
Sub-Base Type	DoT Class 5 or a modified permeable Class 7 reduced Fines Sub-Base (Table 1 & Notes 1-5)					
Sub-Base Reinforcement	GeoGrid Optional					



#### **DESIGN NOTES:**

Note #6

Note #1	A sub-base (i.e. 'Class 5' Aggregate) may be used provided that an adequate drainage system is installed. Alternatively a permeable / open graded 'reduced
	fines' sub-base layer may be specified as part of Low Impact Development (LID), or National Pollutant Discharge Elimination System (NPDES).
Note #2	Where drains are omitted and a 'reduced fines' sub-base is specified for LID / NPDES this must be covered with either a geotextile fabric and / or a clean,
	suitably graded gravel blinding to avoid the bedding layer leaching into the sub-base.

Note #3 Specific advice on CBR% strengths, ground conditions and construction over weak ground with a CBR less than 1% is available upon request.

CBR% = California Bearing Ratio, a measurement of sub-grade soil strength. (or equivalent measures for your state / province)

Note #4 If required, typical drainage systems (not pictured) use 4" diameter perforated pipe drains, laid at a minimum gradient of 1 : 100, bedded on gravel in trench backfilled and covered with a geotextile fabric. Pipes leading to a suitable outfall or dry well. Drains installed down center or one edge of areas up to 16' wide.

Wider areas may require additional lateral drains at 16' - 32' centers. Drainage design should be determined by specific site conditions.

Note #5 Drainage for a LID / NPDES application will vary according to the site, but generally omits the requirement for extensive pipe and trench drainage systems within the sub-base layer and may require an additional layer of geotextile fabric at base of construction.

Root zone bedding and paver fill must be a free-draining, structurally sound blend of sand : soil or sand : composite such as used in sports / golf construction and normally identified as a 60 : 40 or 70 : 30 ratio blend. The use of site-won materials or in-situ self blending is NOT recommended without taking further advice.

Note #7 Structural Soil mix as provided by CORE Landscape Products.

Note #8 Maximum advised gradient for traffic applications: 12% (1:8) 7°. Make use of specific pegging points if required for steep slope applications (i.e. >20°).

Pegging is not necessary for standard access.

Please note that the information above is given as a guide only. All sizes and weights may vary to what is published.

Table 1: Typical Sub-base Thickness (Tx) Requirements - refer to 2 Typical Construction Profile

APPLICATION / LOAD	CBR (%) STRENGTH OF SUBGRADE SOIL	(TX) DoT SUB-BASE THICKNESS (mm & inches) (see Notes 1 - 5)	
Fire Trucks, Coaches and occasional HGV access	> 6	100 mm	4"
	= 4 < 6	120 mm	4.75"
	= 2 < 4	190 mm	7.5"
	= 1 < 2	380 mm	15"
Light vehicle access and overspill car parking	>6	100 mm	4"
	= 4 < 6	100 mm	4"
	= 2 < 4	135mm	5.4"
	= 1 < 2	260mm	10.3"

Chart 1: Field guidance for estimating sub-grade strengths

Consistency	Indicator			Strength	
	Tactile (feel)	Visual (observation)	Mechanical (test)	CBR	си
	,		SPT	%	kN / sqm
Very Soft	Hand sample squeezes through fingers	Man standing wi <b>ll</b> sink > 3"	< 2	<1	< 25
Soft	Easily moulded by finger pressure	Man walking sinks 2" - 3"	2 - 4	Around 1	25 - 40
Medium	Moulded by moderate finger pressure	Man walking sinks 1"	4 - 8	1 - 2	40 - 75
Firm	Moulded by strong finger pressure	Utility Truck ruts 0.5" - 1"	8 - 15	2 - 4	40 - 75
Stiff	Cannot be moulded but can be indented by thumb	Loaded construction vehicle ruts by 1"	15 - 30	4 - 6	75 - 150

This field guide is provided as an aid to assessing the mechanical stabilization requirements in commonly encountered site conditions. CORE Landscape Products accepts no responsibility for any loss or damage resulting from the use of this guide.

Please note that the information above is given as a guide only. All sizes and weights are nominal figures and may vary to what is published. CORE Landscape Products cannot be liable for damage caused by incorrect installation of this product. Final determination of the suitability of any information or material for the use contemplated and the manner of its use is the sole responsibility of the user and the user must assume all risk and responsibility in connection therewith.

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