

## HOMEOWNER INSTALLATION FOR CORE Gravel 50-35HDR

COREgravel - Honeycomb Gravel Stabilizer Panels:

Panels are  $\pm 45.3" \times \pm 30.7" \times 1.4"$  (1.15 m x .78 m x 35mm) (MEDIUM) heavy duty black/white or grey injection-molded polypropylene panel having a factory applied geotextile fabric fused to the bottom and are capable of supporting wheelchairs and occasional light truck traffic. Compressive strength is tested under ASTM D 1621-04a and is 1016 kg/0.0175 m<sup>2</sup>. Loading capacity is > 250 tons/m<sup>2</sup>, > 350 psi, when filled with gravel over the specified base.

### CORE GRAVEL HONEYCOMB CELL INFILL MATERIALS

Specifier Notes:

A. For a permeable system, fill cells with clean, angular or round stones, gravel or decorative stones.

B. Infill gravel sizes range between 1/8" to 1/2", but the ideal size is 3/8", and can be either clear or pre-washed of all fines before delivering to the site. No gravel less than 1/8" nor more than 1/2" is recommended.

D. Install infill gravel by back-dumping into the cells from buckets mounted on rubber-tired tractors. Avoid sharp turns of the tractor, driving only on gravel-filled cells. Spread gravel laterally from the pile using power brooms, blades, flat bottomed shovels and/or wide asphalt rakes to fill the cells. Depending on the size of the project, you can compact the gravel with a vibrating plate compactor. If using pea gravel, no plate compaction is necessary.

### INSTALLATION

1. Excavate area allowing for unit thickness and top layer. Leave 45 mm (1.8 inches) for COREgravel® 50-35 (35 mm) and top layer (10 mm) to meet final grade.

2. Excavate and shape foundation soils to grades, elevations, and dimensions as necessary for your site, or as per drawings. Be sure water will flow away from any structures.

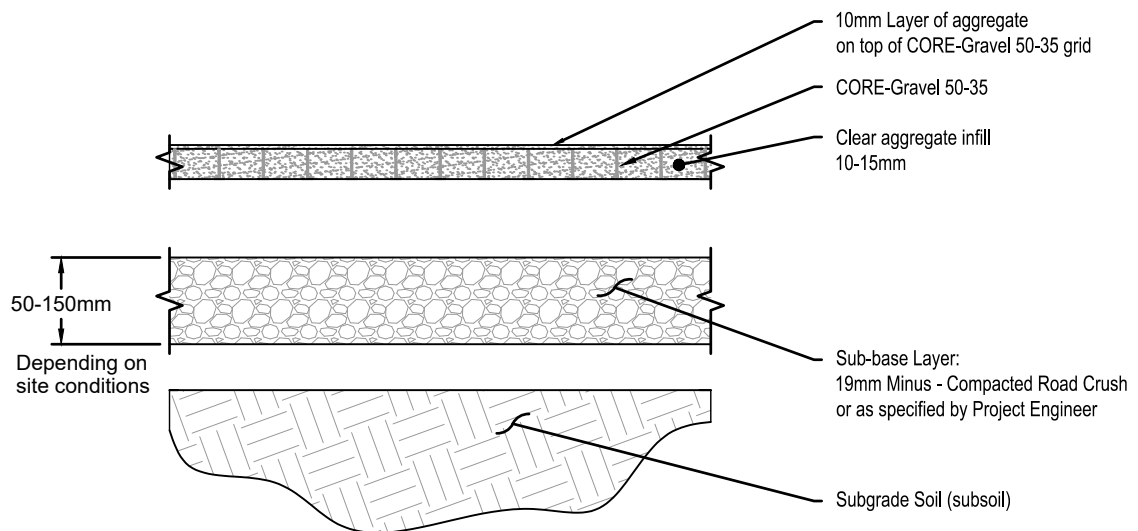
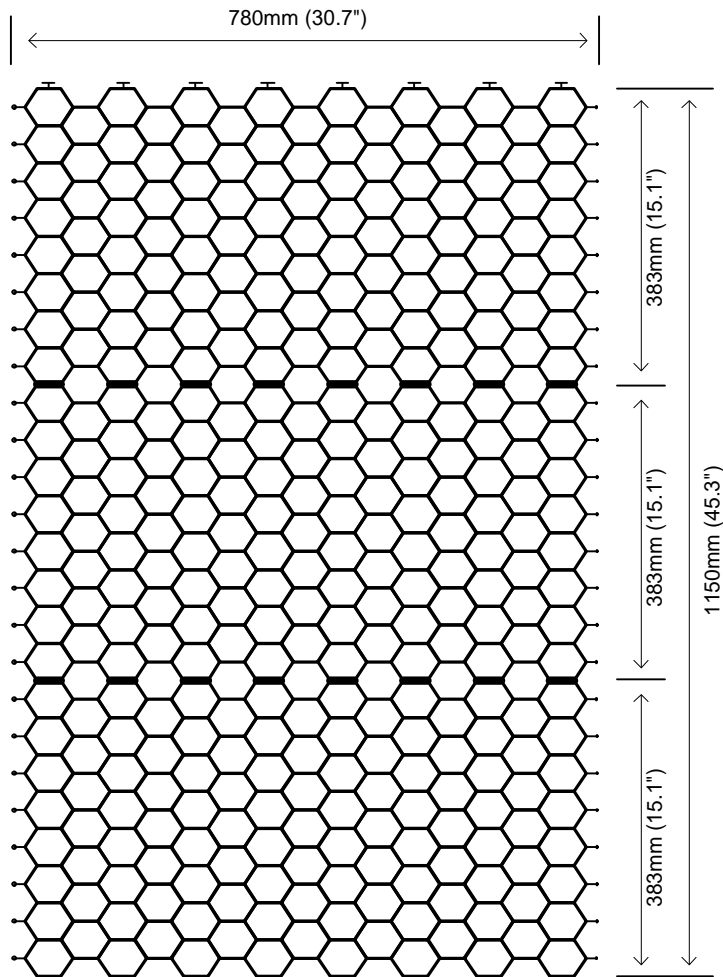
3. If site requires a structural base, fill with 3/4" road crush as necessary. A typically homeowner driveway will require a minimum of 2" of road crush, but site specific conditions may call for a deeper subbase. Maximum base layer: 6" (i.e. parking lot).

4. Compact your base layer with a vibratory plate, compactor, or roller.

5. Place the panels. Position the panels on the prepared subgrade with geotextile face down. Cut to 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.
6. All hard surfaces abutting areas to receive Gravel Surfacing shall be in place prior to commencing work. Finished gravel work should be no more than 1/2" below adjacent hard surfaces.
7. Place first row of panels against a stationary edge if possible. The panels have interlocking connectors. You can install panels 'side by side' or in a 'herring bone' pattern; either method works. No anchors are needed for gravel stabilizer panels installed on slopes less than 20 degrees.
8. Fill cells with chosen infill. Maximum particle size of granular infill material should not exceed  $\frac{1}{2}$ ". Minimum particle size can be 1/8" to allow porosity. Cell walls must be sufficiently covered with infill to prevent any equipment or load bearing vehicular traffic from damaging the grid.
9. Install edge restraint if desired. Standard metal, plastic, concrete edge restraints or concrete curbing may be used.
10. You can: Water stones thoroughly for an immediate finished look!

### **Post-Placement**

- A. Reserve a few 5 g. buckets of infill stones on site to top dress as necessary over the next year. Once the area is fully packed, top dressing is no longer necessary.
- B. Snow plowing – Use shovels or blades with plastic blades. If using a metal blade, set blade 2" above gravel surface, leaving a layer of snow. This system is free draining during freeze/thaw events.
- C. Use of salt for de-icing is allowed.



# CORE GRAVEL 50-35HD\*//HDR\*\*

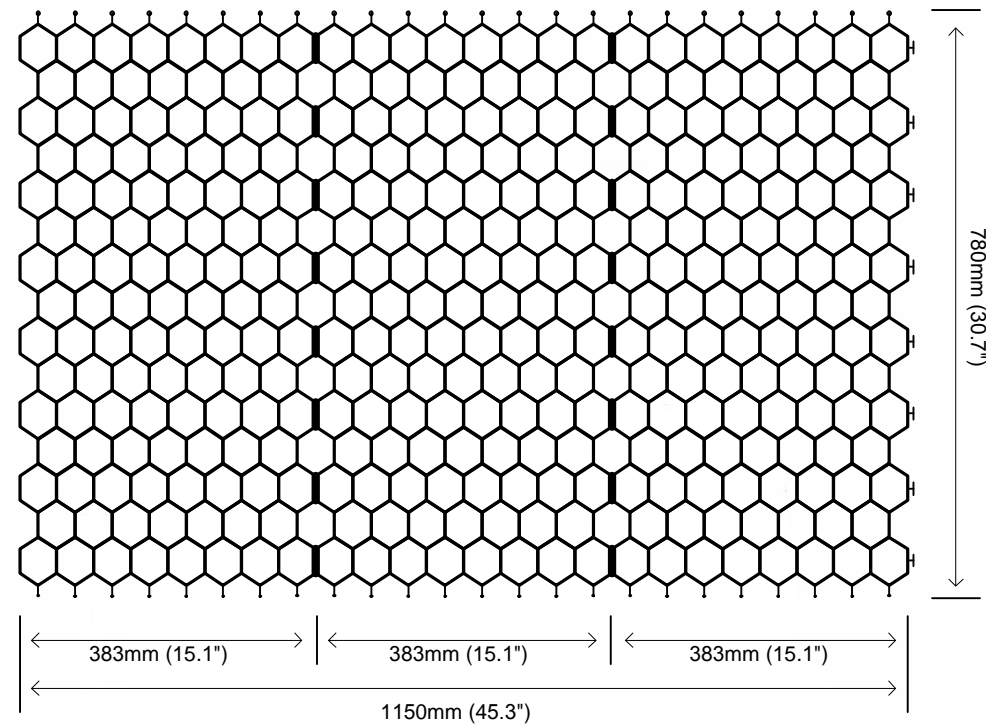
\*Virgin, white plastic  
 \*\*100% recycled, grey plastic



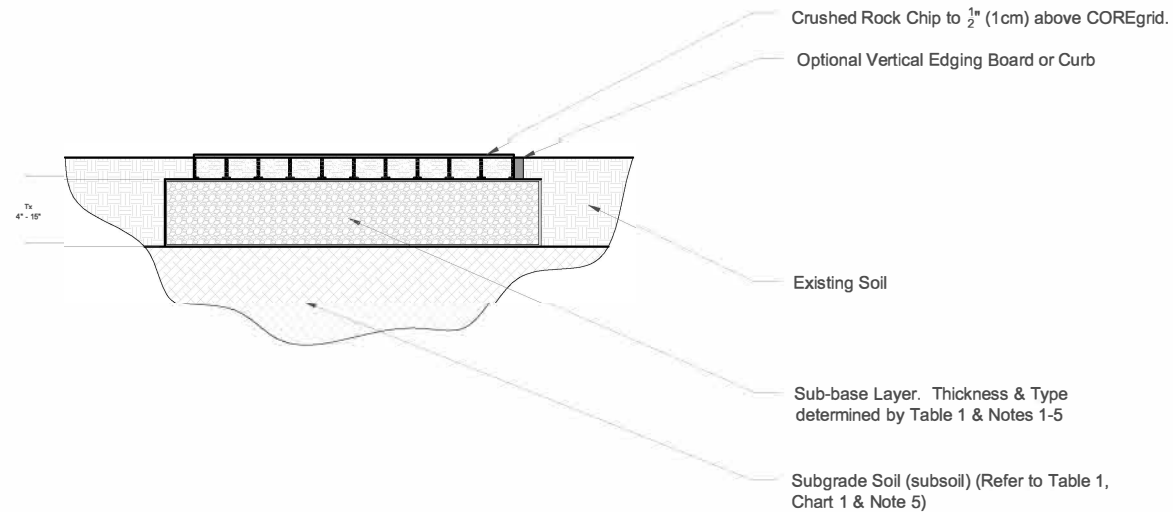
GREEN LANDSCAPING ALTERNATIVES FOR A SUSTAINABLE FUTURE

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1 CORE™ 50-35 HD/R : Surface Paving  
Grid Scale : N.T.S.



2 CORE™ 50-35 HD/R : Gravel Surface: Typical Construction Profile  
Scale : N.T.S.

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)	
		mm	inches
Fire trucks, Coaches and occasional HGV access	≥ 6	150mm	6"
	= 4 < 6	180mm	7.1"
	= 2 < 4	285mm	11.3"
	= 1 < 2	570mm	22.5"
Light vehicle access and overspill car parking	≥ 6	150mm	6"
	= 4 < 6	150mm	6"
	= 2 < 4	202.5mm	8.1"
	= 1 < 2	390mm	15.5"

Table 2 : Paving Grid Specification

Description	Data
Product	CORE™ 50-35 HD/R
Material	100% Recycled Polypropylene
Color options	White & grey
Paver dimensions	45.3' x 30.7' x 1.38" (1150 x 780 mm)
Nominal internal cell size	2.0" (50 mm)
Structure Type	Rigid-walled, flexible semi-closed cell
Cell wall thickness	90 mil (2.3 mm)
Weight (Per square meter)	5.5 lbs (2.5 kg)
Load bearing capacity (filled)	> 250 tons/m <sup>2</sup>
Crush Resistance (unfilled)	150 tons/m <sup>2</sup>
Basal support & Anti-Shear	Integral 5.5" (140 mm) long section ground spikes
Open cell %	Top 94% / Base 72%
Connection type	Interlocking built-in male-female connector
Chemical resistance	Excellent
UV resistance	High
Toxicity	Non Toxic
Paver fill	0.4"(10mm) to 0.6" (16mm) clear, crushed or rounded aggregate to 0.5" (1 cm) overburden
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

- Note 1: A subbase (i.e. 'Class 5' Aggregate) may be used provided that an adequate drainage system is installed. Alternatively, a permeable / open-graded 'reduced fines' subbase 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' subbase is specified for LID/NPDES this must be covered with either a geotextile fabric (available from us or others) and/or a clean, suitably graded gravel bedding to avoid the bedding layer leaching into the subbase.
- 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 subgrade soil strength.
- Note 4: If required, typical drainage systems (not pictured) use 4" diameter perforated pipe drains laid at minimum gradient 1:100, bedded on gravel in trench backfilled with '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 subbase layer and may require an additional layer of geotextile fabric at base of construction.
- Note 6: Paver fill must be a free-draining (no fines), structurally sound aggregate.
- Note 7: 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 not necessary for standard access. The CORE gravel grids can be installed on slopes up to 30°, with pegging. The aforementioned 'maximum advised gradients' are based on local bylaws and engineer recommended maximum slopes and include, but are not limited to, 5% for parking, 8% for fire trucks, 12% for public roads, and 15-21% for driveways.

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

Chart 1: Field guidance for estimating sub-grade strengths

Consistency	Indicator			Strength	
	Tactile (feel)	Visual (observation)	Mechanical (test)	CBR	CU
			SPT		
Very Soft	Hand sample squeezes through fingers	Man standing will 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