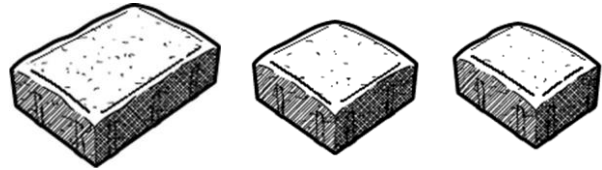




Cobble Series 60mm



PART 1: GENERAL

References

- A. American Society of Testing Materials (ASTM)
 - 1. C936, Standard Specification for Solid Concrete Interlock Paving Units
 - a. Clarification, Section 1.2 – Hydro-Flo pavers have the desired special feature of being permeable. Therefore, regarding Section 5.4, by design, the absorption rate is greater for Hydro-Flo pavers than the 5% desired for non-pervious pavers. Similarly, for Section 5.3 the compressive strength for Hydro-Flo pavers is less than the 8,000 psi required for non-pervious pavers as the main property of pervious concrete, permeability, is inversely proportional to strength.
 - 2. C140, Standard Test Methods of Sampling and Testing Concrete Masonry Units
 - 3. C136, Method for Sieve Analysis for Fine and Coarse Aggregate
 - 4. C33, Specification for Concrete Aggregates
 - 5. D2940, Standard Specification for Graded Aggregate Material for Bases

Quality Assurance

- A. Engage an installer who has successfully completed installations similar in type and size to this project. Installer shall provide certification of experience.
- B. As applicable by state/provincial and local laws, contractor shall hold a current contractor's and business license in the state/ province and locality where work is performed.

Delivery, Storage and Handling

- A. Deliver interlocking pavers to the site in plastic wrapped cubes capable of transfer by fork lift. Unload pavers at job site in such a manner that no damage occurs to the product.
- B. Cover sand and topsoil with waterproof covering to prevent exposure to rainfall or removal by wind. Secure the covering in place.

Environmental Conditions

- A. Do not install sand or pavers during heavy rain or snowfall.
- B. Do not install frozen sand or topsoil.

PART 2: PRODUCTS

Dimensions, Quantities and Weight

<u>Large Cobble</u>	<u>Medium Cobble</u>	<u>Small Cobble</u>
A. 9" x 6" x 2 3/8"	6" x 6" x 2 3/8"	6" x 4" x 2 3/8"
B. Stones per SF: 2.67	Stones per SF: 4	Stones per SF: 5.33
C. Stones per pallet: 256	Stones per pallet: 384	Stones per pallet: 480
D. Coverage: 96 sf per pallet	Coverage: 96 sf per pallet	Coverage: 90 sf per pallet
E. Weight: 26 lb/sf, 2503 lb/pallet	Weight: 24.5 lb/sf, 2349 lb/pallet	Weight: 24.5 lb/sf, 2349 lb/pallet

Crushed Stone Filler, Bedding, Base and Subbase

- A. Crushed stone with 90% fractured faces, LA Abrasion < 40 per ASTM C131, minimum CBR of 80% per ASTM D1883.
- B. Do not use rounded river gravel.
- C. All stone materials shall be washed with less than 1% passing the No. 200 sieve.
- D. Joint/opening filler, bedding, base and sub-base: conforming to ASTM D448 gradation as shown in Tables 1, 2, 3 and 4 below:
 - 1. Depths of each layer per designer, landscape architect and/or soils engineer.

**Table 1: ASTM C33 Fine Aggregate Joint Filler
– Grading Requirements:**

Sieve Size	Percent Passing
3/8 inch (9.5 mm)	100
No. 4 (4.75 mm)	95-100
No. 8 (2.36 mm)	80-100
No. 16 (1.18 mm)	50-85
No. 30 (600 µm)	25-60
No. 50 (300 µm)	5-30
No. 100 (150 µm)	0-10

Table 2: No. 8 Bedding Aggregate – Grading Requirements:

Sieve Size	Percent Passing
1/2 inch (12.5 mm)	100
3/8 inch (9.5 mm)	85 to 100
No. 4 (4.75 mm)	10 to 30
No. 8 (2.36 mm)	0 to 10
No. 16 (1.18 mm)	0 to 5

Table 3: No. 57 Base Aggregate – Grading Requirements:

Sieve Size	Percent Passing
1 1/2 inch (37.5 mm)	100
1 inch (25 mm)	95 to 100
1/2 inch (12.5 mm)	25 to 60
No. 4 (4.75 mm)	0 to 10
No. 8 (2.36 mm)	0 to 5

Table 4: No. 2 Subbase Aggregate – Grading Requirements:

Sieve Size	Percent Passing
3 inch (75 mm)	100
2 1/2 inch (63 mm)	90 to 100
2 inch (50 mm)	35 to 70
1 1/2 inch (37.5 mm)	0 to 15
3/4 inch (19 mm)	0 to 5

PART 3: EXECUTION

Note: The specifier should be aware that the top surface of the pavers after compaction may be 1/8 to 1/4 in. (3 to 7 mm) above the final elevations after compaction. This difference in initial and final elevations is to compensate for possible minor settling.

Examination

Note: For vehicular areas, specify compaction of the soil subgrade to a minimum of 95% standard Proctor density for open-graded aggregate bases. Density should be monitored in the field with a nuclear density gauge. Compaction of open-graded bases should be with at least five passes of roller compactor without vibration. Stabilization of the soil and/or base material may be necessary with weak or saturated soils.

- A. Verify that base is dry, uniform, even, free of any sediment (if open-graded), and ready to supportsand, pavers and imposed loads.
- B. Verify gradients and elevations of base are correct.
- C. Verify location, type, installation and elevations of edge restraints around the perimeter area to be paved.
- D. Beginning of installation means acceptance of base and edge restraints.

Installation

- A. Spread the leveling coarse aggregate evenly over the compacted, open-graded base course and screed uniformly to 1 – 1 ½ in. (25 - 40 mm) thickness. The screeded aggregate should not be disturbed. Place sufficient aggregate to stay ahead of the laid pavers.
- B. Ensure that pavers are free from foreign materials before installation.
- C. Lay the pavers in the pattern(s) as shown on the drawings. Maintain straight pattern lines.
- D. Joints between the pavers shall be between 1/16 in. and 1/8 in. (2 to 4 mm) wide.
- E. Fill gaps at the edges of the paved area with cut pavers or edge units.
- F. Cut pavers to be placed along the edge with a double-bladed splitter or masonry saw.
- G. Compact and seat the pavers into the screeded aggregate using a low amplitude, 75-90 Hz platecompactor capable of at least 5,000 lbs. (22 kN) centrifugal compaction force. Note: A rubber or neoprene pad between the compactor and grids is necessary to prevent cracking or chipping on textured surfaces.
- H. Vibrate and compact the pavers again, sweeping a small fraction of ASTM C33 fine aggregate or equivalent into the joints and openings until it is within ½ in. (13 mm) from the top surface. This willrequire at least two or three passes with the compactor. Do not compact within 3-ft (1 m) of the unrestrained edges of the paving units.

