

ITEM 608. 55 91 M – CONCRETE GRID PAVER PARKWAY SHOULDER

DESCRIPTION: The work shall consist of furnishing and installing precast concrete castellated grid pavers in a parkway shoulder at the locations indicated and as per the configurations shown on the Plans and as approved by the Engineer.

MATERIALS: Concrete Castellated Grid Pavers shall meet the following requirements:

- Manufactured in accordance with ASTM C 1319, and the concrete is to have a minimum compressive strength of 35 MPa.
- Unit pavers shall be rated for a H20 vehicle wheel load.
- Each paver is to be precast, square or rectangular in shape, with nominal dimensions of 600 mm long, 400 mm minimum wide, and 100 mm thick.
- Castellated grid shall create a series of protruding concrete knobs on the surface to create an open top surface void area ratio of approximately 75% and bottom void ration through base lattice structure of 20 to 40%.
- Pavers shall be manufactured by a member of the Interlocking Concrete Pavement Institute (ICPI).
- Color of the units will be untinted, natural.

Bedding sand shall be manufactured sand meeting the material requirements of Subsection 703-07 Concrete Sand.

CONSTRUCTION DETAILS: Prior to the start of construction, the Contractor shall provide for the approval of the Engineer, a detailed layout plan for the Concrete Grid Pavers, showing the orientation of the paver units and the location of any required sawcuts in order to place paver units adjacent to skewed curbs. Cutting of grid paver units will in accordance with Manufacturer recommendations only.

The Contractor shall remove the existing grass, soil, and foreign objects to a depth of 350+/- mm below proposed finish grade and to the dimensions indicated on the Plans, and provide a prepared subgrade in accordance with Subsection 203 of the Standard Specifications. Prior to starting the installation of the concrete castellated grid pavers, the Contractor shall satisfactorily place a compacted subbase of structural soil or other approved base material as indicated on the Plans and install concrete retainer curbs as indicated on the Plans, all in accordance with the applicable Payment Items.

Installation of concrete grid pavers shall not begin until the Contractor has ensured that the subbase has been placed to the proper thickness and grade, and has been uniformly compacted to 98% Proctor Density. A layer of bedding sand, 13 to 25 mm thick, shall be placed upon the compacted subbase surface. The bedding sand shall have a consistent moisture content but shall not be saturated. The bedding sand shall be screeded to create a consistent thickness and a uniform surface, but shall not be compacted.

Place the Concrete Grid Pavers upon the bedding sand in accordance with Manufacturer's recommendations. Begin hand placement immediately adjacent to existing roadside curb. Provide a 5 mm joint between the paver units; do not allow the paver units to touch one another. Continue paver unit

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placement moving outward from the roadside curb toward the concrete or other retainer curb.

The Contractor shall limit the area of prepared sand bedding to the number of Concrete Grid Pavers that he can install in a single day or consecutive work shifts. If this work cannot be accomplished in a single day, the Contractor shall protect the bedding sand surface from weather overnight. Any disturbed bedding sand shall be raked and re-screeded prior to the recommencement of paver unit placement.

The Contractor shall spread the specified topsoil or other approved infill material mix over the top of the castellated Concrete Grid Pavers in accordance with the applicable specifications as indicated on the Plans, filling the cells and other open portions of the pavers to a height that, after watering and/or settlement of the topsoil or other approved infill material mix, the mix is within 15+/- mm below the top of the paver's exposed castellated surface.

The Contractor, unless otherwise specified, shall apply seed to the topsoiled surfaces, cover with mulch, and water in accordance with the applicable specifications as indicated on the Plans.

The Contractor shall protect the castellated Concrete Grid Pavers from vehicular traffic until the grass has been established to a uniform color and density as approved by the Engineer.

METHOD OF MEASUREMENT: Concrete Grid Paver Parkway Shoulder shall be measured in place by the number of square meters satisfactorily placed as shown in the contract documents, or as ordered by the Engineer.

BASIS OF PAYMENT: The unit price bid per square meter shall include the cost of furnishing all labor, materials and equipment, to complete the work, including sand bedding. Any necessary excavation, concrete or other retainer curbs, subbase of structural soil or other approved base material, topsoil or other approved infill mix, grass seed, mulch, and other landscape restoration will be paid for under their appropriate items.