



Reviewed for Code Compliance
Inspections Division
Approved with Conditions
Date: 05/16/14

SECTION 32 14 10 - PRECAST CONCRETE PAVERS

PART 1 - GENERAL

1.1 APPLICABLE PUBLICATIONS:

- A. The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by basic designation only.

1.1.1 AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM) PUBLICATIONS:

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| ASTM C150-82 | Cement, Portland |
| ASTM C595-82 | Blended Hydraulic Cements |
| ASTM C936-82 | Standard Specifications for Solid Concrete Interlocking Paving Units |

1.1.2 AMERICAN CONCRETE INSTITUTE (ACI) PUBLICATION:

- | | |
|------------|-----------------------------------|
| ACI 301-81 | Structural Concrete for Buildings |
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1.1.3 PRESTRESSED CONCRETE INSTITUTE (PCI):

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| PCI MNL116 | 1985 Manual for Quality Control for Plants and Production of Precast and Prestressed Concrete Products |
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1.2 SUBMITTALS:

1.2.1 MANUFACTURER'S CATALOG DATA:

- A. Provide catalog information on all products/accessories within this section.

1.2.2 SAMPLES:

- A. Provide color catalog showing paver manufacturer's standard colors.
- B. Provide one (1) paver of each type/color to be used for this work.
- C. Sample Paving Panels: Construct a 3' x 3' sample panel of each paver material. Panel shall be constructed of the indicated paver, setting materials, bond pattern, joint treatment, etc., as indicated on the drawings.
 - 1. Panel shall not be constructed in a location becoming part of the final pavement and shall remain undisturbed until all paving is complete. Remove panel upon completion of paving.
 - 2. Obtain the Architect's approval of sample before starting paving work. The approved samples shall become the standard for entire job.



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1.2.3 CERTIFICATES:

- A. Manufacturer's certification that products meet specification requirements.
- B. Proven Field Performance — Satisfactory field performance is indicated with units similar in composition, and made with the same manufacturing equipment as those to be supplied for this project. Pavers shall not exhibit objectionable deterioration such as cracking and spalling for one (1) year after date of installation.

1.3 WORK INCLUDED:

- A. Supply and place 2" bituminous paving as setting bed.
- B. Supply and install concrete paving stones and accessories in quality, shape, and thickness as specified. Color to be as selected by the Landscape Architect.

1.4 DELIVERY AND STORAGE:

- A. Paving stones shall be delivered and unloaded at job site with or without pallets and bound in such a manner that no damage occurs to the product during handling, hauling and unloading.

PART 2 - PRODUCTS

2.1 MATERIALS:

2.1.1 CONCRETE PAVERS:

Concrete Pavers supplied by: Belgard Manufacturing Company, Pavers shall be "Dublin Cobble Modular" 2 3/8"x 3"x6", 2 3/8"x6"x6", 2 3/8"x9"x6" color selected by Landscape Architect.

A. Physical Requirements:

- 1. Compressive Strength — At the time of delivery to the work site, the average compressive strength shall not be less than 8000 PSI with no individual unit strength less than 7200 PSI with testing procedures in accordance with ASTM Standard C-140.
- 2. Absorption — The average absorption shall not be greater than five percent (5%) with no individual unit absorption greater than seven percent (7%).

2.1.2 PAVER EDGE RESTRAINT:

Provide paver edge restraints at all free (non-contained) paver edges. Edging shall be P.V.C. sections: Rigid for straight runs; flexible for curves and radiuses. All sections shall have pre-drilled holes for anchoring spikes. Provide 10" hot dipped galvanized coated anchoring spikes. Maximum hole spacing shall be 1' o.c. Provide



P.V.C. pipe connectors as recommended by the manufacturer. Acceptable products/manufacturers are:

"Pave Edge" by Pave Tech., Inc.

NOTE: Where edge restraint is used, the base material shall extend to 6" beyond the paver edge.

PART 3 - EXECUTION

3.1 INSTALLATION:

3.1.1 SUBGRADE, BASE, AND SETTING BED REQUIREMENTS:

- A. Subgrade: Subgrade to be compacted to a 95% density, with particular attention being paid to trenches and filled foundation areas. Refer to the requirements in Section 312000 — "Earthwork"
- B. Base: Base requirements shall be as per plans and as specified. Base requirements shall be from crushed road base, compacted to 96% density. Base shall be fine graded and compacted to 3½" below desired finished grade for 6 cm stone, and 4¼" below desired finished grade for 8 cm stones. Maximum allowable tolerance for both subgrade and base is ¼".
- C. Bituminous Base: Base to be MDOT "12.5mm" Bituminous Base.

3.1.2 PAVING UNITS:

The handling of paving units shall not cause chipping or cracking of the concrete. Members injured in any manner by handling or installation methods shall not be patched but shall be replaced with new members at the expense of the Contractor. The handling of the paving members shall be by means of suitable equipment and the following:

- A. The contractor shall have experience in installation of concrete pavers.
- B. Pavers shall be laid hand tight with care taken to maintain straight and true lines. Joints between pavers shall be no greater than 1/8" in width.
- C. Paving stones shall be taken in a random fashion from 3 or more pallets at the same time to blend color variations.
- D. Any necessary cutting shall be accomplished with a masonry saw to insure all cuts fit neatly and accurately without damaged edges. Care shall be taken during the layout to minimize cutting.
- E. Care should be taken when transporting material over uncompacted paving stones to prevent damage to the pavement or premature compaction of the sand bedding.



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- F. Upon completion of work covered in this Section, the Contractor shall clean all work areas by removing debris, surplus material, and equipment from the site.
- G. Install grid pavers in strict accordance with this specification and the manufacturer's written requirements.

3.2 INSPECTION:

- 3.2.1 Verify that earthwork is completed to correct line and grade.
- 3.2.2 Check that subgrade is smooth, compacted, and free of frost or excessive moisture.
- 3.2.3 Do not commence work until conditions are satisfactory.

3.3 VISUAL INSPECTION:

- 3.3.1 All units shall be sound and free of defects that would interfere with the proper placing of the unit or impair the strength or permanence of the construction.
- 3.3.2 Replace defective work which is found unacceptable to the Landscape Architect.

3.4 EDGE RESTRAINTS

Install restraints at all free (non-contained) paver edges. Install in strict accordance with manufacturer's recommendations.

* END OF SECTION 32 14 10 *