



**SPECIAL PROVISIONS  
FOR  
BRICK UNIT PAVING**

**Story County  
BR-810-0(93)--7A-85**

**Effective Date  
November 17, 2009**

**THE STANDARD SPECIFICATIONS, SERIES 2009, ARE AMENDED BY THE FOLLOWING MODIFICATIONS AND ADDITIONS. THESE ARE SPECIAL PROVISIONS AND THEY SHALL PREVAIL OVER THOSE PUBLISHED IN THE STANDARD SPECIFICATIONS.**

**090011.01 GENERAL**

**A. Description**

This work includes the requirements for the construction of brick paving areas.

**B. Submittals**

The Contractor shall submit three copies of the following documents to the Engineer a minimum of 30 calendar days prior to the installation of the brick paving areas.

- a. Concrete mix design.
- b. Edge restraint (Edger) manufacturer, type, size, and product data.
- c. Brick Source, absorption, and compressive strength.
- d. Full size samples of brick paving units to indicate color and shape selections.

**C. Delivery, Storage, Handling and Salvaging**

Broken bricks or materials with stained faces shall not be laid in the paving areas.

**D. Basis of Acceptance**

Do not place brick when stormy or inclement weather prevents quality installation.

**090011.02 MATERIALS**

**A. Portland Cement Concrete**

1. Materials shall conform to Section 2301 of the Standard Specifications. PCC coarse aggregate shall be Class 2 or better.

2. PCC mix for sidewalk shall meet the following requirements:

	<b>Machine Finish</b>	<b>Hand Finish</b>
1. Type of concrete	Class B or better	Class B or better
2. Slump Minimum	0.5 inches	1.5 inches
3. Slump Maximum	2.5 inches	4 inches
4. Percent Air Content		
a. Target	7%	7%
b. Minimum	6%	6%
c. Maximum	8.5%	8.5%

**B. Crushed Limestone**

Crushed limestone leveling course shall meet the requirements of Gradation 21 of the Aggregate Gradation Table in Section 4109 of the Standard Specifications.

**C. Edge Restraints (Edger)**

Edge restraints for brick paving shall be durable vinyl or polyvinylchloride. Edge restraints shall be capable of being anchored to concrete and shall be of adequate strength as to prevent the lateral movement of the brick paving. Height of edger shall not exceed the height of the brick paving and leveling course.

**D. Brick**

Brick shall be Traditional Edge Standard Pavers as manufactured by Pine Hall Brick, supplied by United Brick and Tile, Color is Pathway Red.

**090011.03 CONSTRUCTION REQUIREMENTS**

**A. Subgrade Preparation**

Meet the requirements of Section 2109 of the Standard Specifications.

**B. Form Setting**

1. Forms shall meet the requirements of Section 2511 of the Standard Specifications. Set forms true to line and grade and hold rigidly in place by stakes placed outside the forms and flush with or below the top edge of the forms. Leave forms in place not less than 24 hours after concrete is placed. Approved slip form paving equipment may be allowed in lieu of setting forms with approval of the Engineer. Dimensional lumber forms allowed only when adjusted to proper depth by the use of a nailer.
2. Brick Edge Restraints: Edge restraints shall be set true to line and grade along both edges of brick paving area.

**C. Placing Brick Pavers on a Concrete Base**

1. The Cross Section and patterns shall conform to the plan details.
2. Complete the construction of the concrete base following Section 2511 of the Standard Specifications.
3. Install edge restraints and place crushed limestone leveling course to a depth of 3/4 inch.
4. Pavers shall be installed in approximately the order in which they were manufactured. No cluster shall be installed next to a cluster that was manufactured more than 2500 cycles before or after.
5. Lay brick in the pattern as shown on the drawings. Lay pavers away from the existing

laying face or edge restraint in such a manner as to ensure that the pattern remains square. Chalk lines shall be used upon the bedding course to maintain straight joint lines. Joint spacing between pavers shall be between 1/8 inch and 1/4 inch; however, the joint width may be increased to 3/8 inch (if necessary) to maintain straight joint lines. Lines and grades shown on the plans shall be established and maintained during the installation of wearing course.

6. Pavers shall be cut using a table-mounted masonry saw. Block splitting will not be permitted. All cut faces shall be vertical. Dry cutting of pavers shall use a dust collection system.
7. Once pavers have been placed on the bedding course and cut pavers have been inserted to provide a full and complete surface, inspect the pavers for damaged units and remove and replace those units.
8. The pavement surface shall be compacted to achieve consolidation of the bedding course and paving stones and brought to design levels and profiles by two passes of a suitable plate compactor. Compaction of the pavers shall be accomplished by the use of a vibratory plate compactor capable of a minimum of 4500 pounds of compaction force. Compaction will not be permitted within 3 feet of unrestrained edges of the pavement. After compaction, inspect pavers for damage and remove and replace those units.
9. On completion of vibration, the surface tolerances shall be plus or minus 1/4 inch from finish levels. Upon completion, the wearing course surface shall be swept clean of all excess materials. Remove from the site all surplus materials, equipment and debris resulting from these operations. Check final elevations for conformance to the drawings.
10. Sand and Cement Filler: Sweep a dry mixture of 1 part brown colored PC and 3 parts sand passing the No. 16 sieve and conforming to ASTM C 144 until joints are completely filled. Provide brown colored PC Type S. Color of cement as approved by the Engineer. Fog lightly with water, clean cement stains that remain and remove any stains from adjacent concrete surfaces.
11. Backfill behind edge restraints with topsoil suitable for plant material per Section 4170 of the Standard Specifications.
12. Protection:
  - a. Protect newly laid pavers at all times with sheets of plywood. These sheets can be advanced as work progresses; but keep the protection in areas which will be subjected to movement of materials, workers, and equipment. Take precautions in order to avoid depressions and protect paver alignment until cured and ready for pedestrian or vehicle traffic.
  - b. The joints in the concrete base shall not project through the limestone leveling course.

#### **090011.04 METHOD OF MEASUREMENT**

The item for Brick Unit Paving will be the square yards of completed and accepted brick paving in the locations shown in the contract documents. PCC and Limestone Leveling Course will not be measured.

#### **090011.05 BASIS OF PAYMENT**

The Contractor will be paid the contract unit price for Brick Unit Paving. This payment shall be full compensation for field staking, form setting, transporting, furnishing and placing PCC, limestone leveling course and brick pavers and associated work. Backfill will not be paid for directly, but shall be considered incidental to the brick paving, as per plan. The work shall include all labor, equipment and materials necessary to complete the paving.