

SP-097008
(New)



Iowa Department of Transportation

**SPECIAL PROVISIONS
FOR
LIMESTONE**

**Harrison County
Project No. SB-IA-CO43(062)--2T-43**

**Effective Date
April 20th, 2010**

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.

LIMESTONE

PART 1 GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of Contract, including Iowa Department of Transportation General Supplemental Specifications, apply to this section.

1.2 SECTION INCLUDES

- A. This part of the Specifications includes all labor, materials, equipment, and supervision required to construct limestone walls.
- B. This section includes the Specifications for native regional limestone and stone accessories.

1.3 QUALITY ASSURANCE

- A. Materials and methods of construction shall comply with the American Society for Testing and Materials (ASTM) and applicable requirements of local governing authorities.
- B. Limestone Standards:
 - 1. Compressive strength (ASTM C170 – 50).
 - a. Minimum – 9000 PSI.
 - b. Average – 10,150 PSI.
 - 2. Absorption (ASTM C97 – 47) – maximum 7.5%.
- C. Provide all limestone from one quarry to ensure consistent color range and texture.
- D. Do not change source or brands of materials during the course of the work.

1.4 SUBMITTALS

- A. Product data for stone and accessories required.
- B. Samples of limestone required. Include the color and texture proposed for the work.
- C. Shop drawings.
- D. Limestone cleaning procedures and products

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Stone:
 - 1. Delivery, store, and handle limestone materials in accordance with stone supplier's recommendations.
 - 2. When blocking and packing, use non-staining materials.
 - 3. Protect stone from damage and soiling.
- B. Stone Accessories: Delivery, store, and handle masonry accessories to prevent weather damage and deterioration.

1.6 PROJECT CONDITIONS

- A. Do not use metal accessories with loose coatings, including ice, which will reduce bond.
- B. Protect partially-completed limestone work against weather damage and moisture, when work is not in progress. Cover tops of limestone with strong, waterproof, non-staining membrane.
- C. Code Weather Construction:
 - 1. Do not use frozen materials or materials mixed or coated with ice or frost.
 - 2. Do not build on frozen ground or frozen work. Remove and replace stone work damaged by frost or freezing.
- D. Protect adjacent work from damage, soiling, and staining during masonry work operations.

PART 2 PRODUCTS

2.1 LIMESTONE

- A. Suppliers: Weber Stone Company – 12791 Stone City Road – Anamosa, Iowa 52205 – 319-462-3581
Bayer Stone Company – 120 N.6TH ST – St. Mary's, Kansas 66536 – (800)255-9399
Cold Springs Granite – 202 South 3rd Ave. – Cold Springs, MN 56320 – 302-658-3621
- B. Surface Finishes: As shown on the drawings.
- C. Sizes: As shown on drawings.
- D. Grade/Quality: Anamosa Limestone – Cream
- E. Provide sound limestone uniform in color and texture, free from mineral stains, other foreign matter, and defects detrimental to appearance and durability.
- F. Color range, texture, and finish of limestone shall be within range of Owner's accepted samples.

2.2 ANCHORS, DOWELS, FASTENERS, AND SHIMS

- A. Furnish and set all anchors shown on approved shop drawings unless otherwise specified.
- B. Anchors and Pins: Type 304 stainless steel.
- C. Shims: Hard plastic or Type 304 stainless steel.

PART 3 EXECUTION

3.1 INSPECTION

- A. Examine substrates and installation conditions.
- B. Do not start limestone work until unsatisfactory conditions are corrected.

3.2 PREPARATION

- A. Establish lines, levels, and coursing.
- B. Do not use stone units with chips, cracks, voids, stains, or other visible defects.

3.3 INSTALLATION OF LIMESTONE

- A. Construct PCC Pavement in accordance with the material specifications and details shown on the drawings.
- B. Provide anchors, supports, and other attachments shown, to secure limestone in-place.
- C. Shim and adjust accessories as required for proper setting of stone.
- D. Erect work plumb and true with joints widths and alignments as shown on the drawings.

3.4 CONSTRUCTION TOLERANCES

- A. As shown on documents

3.5 CLEANUP AND REPAIR

- A. Remove and replace limestone units that are loose, broken, stained, or otherwise damaged. Provide new matching units, install as specified.
- B. Upon completion of the work, remove from site all excess materials, debris, tools, and equipment. Repair damage resulting from stone masonry work operations.
- C. Final Cleaning: After thoroughly set, clean masonry as follows:
 - 1. Remove adhering soil particles by hand with wooden paddles and non-metallic scrape hoes or chisels.
 - 2. Test cleaning methods on sample; obtain Owner's approval of sample cleaning before proceeding with cleaning of masonry.
 - 3. Protect adjacent stone and non-masonry surfaces from contact with cleaner by covering them with liquid strippable masking agent, polyethylene film, or waterproof masking tape.
 - 4. Saturate surfaces with water prior to application of cleaners; remove cleaners promptly by rinsing thoroughly with clear water.
- D. Protection: Provide final protection and maintain conditions in a manner acceptable to installer, which ensures unit masonry work being without damage and deterioration at time of substantial completion.

END OF SECTION