

SECTION 04100 - CEMENT AND LIME MORTAR

PART 1 GENERAL REQUIREMENTS

1.1 SECTION INCLUDES

- A. Mortar for unit masonry.

1.2 RELATED SECTIONS

- A. Unit Masonry System.....Section 04300

1.3 REFERENCE DOCUMENTS

- A. ASTM C144 - Aggregate for Masonry Mortar.
- B. ASTM C150 - Portland Cement.
- C. ASTM C207 - Hydrated Lime for Masonry Purposes.
- D. ASTM C270 - Mortar for Unit Masonry.
- E. ASTM C387 - Packaged, Dry, Combined Materials, for Mortar and Concrete.
- F. ASTM C780 - Preconstruction and Construction Evaluation of Mortars for Plain and Reinforced Unit Masonry.
- G. IMIAC - International Masonry Industry All-Weather Council: Recommended Practices and Guide Specifications for Cold Weather Masonry Construction.

1.4 TESTING AND INSPECTION

- A. The Owner will engage and pay for the services of an independent testing laboratory to perform inspections, tests and sampling at the job site.
- B. All masonry work shall be inspected according to BOCA Table 1705.5, Special Inspection for Masonry Construction.

1.5 SUBMITTALS

- A. Special Inspections will not be required for this project.
- B. All structural inspections will be implemented and performed by the owner..

1.6 DELIVERY, STORAGE AND HANDLING

- A. Deliver products to site in original, unopened packages marked with brand name.

- B. Store aggregates and cement in a dry location where they are protected from deleterious substances.
- C. Any cement sacks containing hard lumps shall be rejected.

PART 2 PRODUCTS

2.1 MATERIALS

- A. Cement: ASTM C150, Portland Type I or II. Masonry cement is not permitted.
- B. Aggregate: ASTM C144, natural or manufactured sand.
- C. Hydrated Lime: ASTM C207, Type S.
- D. Premix Mortar: ASTM C1042, using gray cement.
- E. Fine Aggregate: ASTM C144, washed sand.
- F. Water: Clean and potable.
- G. Prohibited Ingredients: No gypsum or any ingredient introducing calcium chloride is permitted.
- H. Water Repellent: Dry-Block Mortar Admixture as manufactured by Forrer Industries, Inc., Milwaukee, Wisconsin.

2.2 MORTAR MIXES

- A. For CMU: ASTM C270, Type S by volume proportion. Two parts cement, one part lime, and seven parts sand plus coloring agent in amount to provide a close color match to the block. East Spread may be used in place of lime.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Verify field measurements, surfaces and substrates before starting work.
- B. Report in writing to the Engineer prevailing conditions that will adversely effect satisfactory execution of the work of this section. Do not proceed with work until unsatisfactory conditions have been corrected.
- C. By beginning Work, contractor accepts conditions and assumes responsibility for correcting unsuitable conditions.

3.2 MORTAR MIXING

- A. Thoroughly mix mortar ingredients in a mechanical batch mixer in accordance with ASTM C270. Mix water and sand first. Then mix in the cement. Add the lime last, and mix for 3 minutes minimum.
- B. Do not retemper after the mortar has begun its initial set and hardened enough to become harsh.
- C. Use mortar within 2 hours of initial mixing at temperatures of 80°F, and within 2½ hours of initial mixing at temperatures under 50°F.
- D. All mortar used in the exterior CMU wythe shall contain the recommended amount of Dry-Block mortar admix for water-repellency and to assure proper bond strength. The required amount is one quart of Dry-Block mortar admix per bag of Portland cement when mixed at the job site with lime with not more than three times the volume of cement and lime, of masonry sand. Easy Spread may be used in place of lime.

END OF SECTION