

SECTION 09 24 23
STUCCO

PART 1 GENERAL

1.1 REFERENCES

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

B. ASTM INTERNATIONAL (ASTM):

ASTM A185/A185M.....Standard Specification for Steel Welded Wire Reinforcement, Plain, for Concrete

ASTM C1032.....Standard Specification for Woven Wire Plaster Base

ASTM C1063.....Standard Practice for Installation of Lathing and Furring to Receive Interior and Exterior Portland Cement-Based Plaster

ASTM C150/C150M.....Standard Specification for Portland Cement

ASTM C206.....Standard Specification for Finishing Hydrated Lime

ASTM C841.....Installation of Interior Lathing and Furring

ASTM C847.....Standard Specification for Metal Lath

ASTM C897.....Aggregate for Job-Mixed Portland Cement-Based Plasters

ASTM C926.....Application of Portland Cement-Based Plaster

ASTM C933.....Welded Wire Lath

ASTM D1784.....Standard Specification for Rigid Poly(Vinyl Chloride) (PVC) Compounds and Chlorinated Poly(Vinyl Chloride) (CPVC) Compounds

1.2 SUBMITTALS

A. Submit the following in accordance with Section 01 33 00 SUBMITTAL PROCEDURES:

SD-02 Shop Drawings

Lath

SD-03 Product Data

Proportions and Mixing

SD-04 Samples

Sample Panel

1.3 QUALITY ASSURANCE

- A. Submit, if required, a SAMPLE PANEL as follows: One 300 mm (12 inch) square stucco panel showing finish texture and color and exposed reinforcement at the edges, one 300 mm (12 inch) square of reinforcement, and a 300 mm (12 inch) length of each accessory proposed, prior to proceeding with stucco work.

1.4 DELIVERY, STORAGE, AND HANDLING

- A. Deliver packaged materials to the site in the original packages and containers with labels intact and seals unbroken. Keep cementitious materials dry and stored off the ground, under cover and away from damp surfaces until ready to be used. Aggregate shall be covered to prevent the absorption or loss of moisture.

1.5 ENVIRONMENTAL REQUIREMENTS

- A. Do not apply stucco when the ambient temperature is 4 degrees C (40 degrees F) or lower, or when a drop in temperature below 4 degrees C (40 degrees F) is expected within 48 hours after application.

PART 2 PRODUCTS

2.1 PORTLAND CEMENT

- A. Portland cement shall conform to ASTM C150/C150M, gray portland cement Type I.

2.2 LIME

- A. Lime shall conform to ASTM C206, Type S.

2.3 SAND

- A. Sand aggregate for job-mixed base coat and job-mixed finish coat stucco shall conform to ASTM C897.

2.4 ACCESSORIES

- A. Accessories shall be roll formed galvanized steel, or rigid polyvinyl chloride (PVC), except that cornerite and striplath shall be formed from steel sheets with manufacturer's standard galvanized coating. Vinyl members shall be in accordance with ASTM D1784. Welded wire corner reinforcements shall be zinc coated, galvanized 1.4 mm (17 gauge) steel wire conforming to ASTM A185/A185M. Furring shall include hangers, bolts, inserts, clips, fastenings, and attachments of number, size, and design to develop the full strength of the members.

2.5 METAL LATH

- A. Metal lath shall conform to ASTM C847, types and weights in accordance with the various spacing shown in ASTM C841. Lath for vertical application shall be expanded metal or welded or woven wire and shall

have paper backing with a minimum vapor permeance of 287.2 ng per Pa per second per square meter (5 perms). Woven wire lath shall be a maximum 38 x 38 mm (1-1/2 x 1-1/2 inch) mesh wire of not less than 1.37 mm (0.0540 inch) nominal diameter and shall conform to ASTM C1032. Welded wire lath shall conform to ASTM C933, with openings not to exceed 50 x 50 mm (2 x 2 inches). Expanded metal or wire lath shall be fabricated in a manner to provide not less than 6 mm (1/4 inch) keying between wire and paper backing and keying shall be obtained by a uniform series of slots in a perforated face paper woven between the wires.

2.6 WATER

- A. Provide clean, fresh, potable water, free from amounts of oils, acids, alkalis and organic matter that would be injurious to the stucco.

PART 3 EXECUTION

3.1 FRAMING

- A. Framing shall be installed as indicated.

3.2 CONTROL JOINTS

- A. Control joints shall be located as indicated on the drawings. Prefabricated control joint members shall be installed prior to the application of the stucco. Control joints shall be cleared of all stucco within the control area after stucco application and prior to final stucco set.

3.3 LATH

- A. Install lath in accordance with ASTM C841 or ASTM C1063 except as otherwise specified. Metal and wire lath shall be applied straight, without buckles and with joints staggered. End laps of metal lath shall be not less than 25 mm (1 inch). When paper-backed lath is used, the paper shall be split from the lath at all lap areas to provide a paper to paper and lath to lath lap. Horizontal joints shall be shiplapped. Lath shall be interrupted at all control joints. Submit drawings showing details of construction for reinforcement, furring, and grounds; including manufacturer's installation instructions for stucco materials, and locations where each mix and coating thickness will be used.

3.3.1 Steel and Wood Supports

- A. Metal lath without integral backing over wood frame construction shall be applied only after a backing of shiplapped waterproofed building paper or other approved material has been applied to the area to receive the stucco. Lath shall be secured to the wood frames with nails or staples spaced not over 150 mm (6 inches) on centers along each support; and where sheets of lath are lapped, fasteners shall be driven so as to hold both lapped edges securely in place. Lath shall be secured to steel frames in accordance with ASTM C841 or ASTM C1063, as applicable.

3.3.2 Over Flashings

- A. Lath over metal lintels shall be extended vertically over the angles to a height of not less than 150 mm (6 inches) and horizontally across the underside of the lintels and shall be secured in an approved manner. Lath over metal flashings shall lap the flashings not less than 50 mm (2 inches) and shall be extended vertically for a height of not less than 150 mm (6 inches).

3.3.3 Special Shapes, Profiles, and Contours

- A. Special shapes, profiles, and contours shall be formed with wood, metal or aluminum furring and reinforcing.

3.4 FURRING

- A. Furring shall be installed to true lines and surfaces and shall be rigidly supported and secured in place.

3.5 PROPORTIONS AND MIXING

- A. Proportions and mixing for job-mixed base coat and finish coat shall conform to the applicable requirements of ASTM C926. Mixing of mill-mixed finish coat shall be in accordance with the manufacturer's directions. Submit detailed description of the proposed job-mix proportions for base and finish coats; including identification of thickness of coats.

3.6 STUCCO APPLICATION

- A. Stucco shall be applied in three coats to a thickness of not less than 25 mm (1 inch) as measured from the back plane of metal reinforcement, exclusive of ribs or dimples or from the face of solid backing or support, with or without metal reinforcement, to the finished stucco surface, including moderate texture variations. Stucco application shall conform to the applicable requirements of ASTM C926 and the following:

3.6.1 Workmanship

- A. Items or features of the work in connection with or adjoining the stucco shall be in place, plumb, straight, and true prior to beginning the stucco work. Metal and wire lath, where required, shall be in place and positioned to provide a good key at back of lath. Where lath is applied over copper, the copper shall be given a heavy coat of bituminous paint. Each stucco coat shall be applied continuously in one general direction, without allowing mortar to dry at edges. Where it is impossible to work the full dimension of a wall surface in a continuous operation, jointing shall be made at a break, opening, or other natural division of the surface. Edges to be joined shall be dampened slightly to produce a smooth confluence. Exterior corners of stucco shall be slightly rounded. Stucco on soffit surfaces shall be pitched forward to form a drip.

3.6.2 Scratch Coat

- A. Scratch coat shall be applied not less than 10 mm (3/8 inch) thick under sufficient pressure to form good keys and to completely embed the reinforcement. Before the scratch coat has set, it shall be lightly scratched in one direction and vertical surfaces shall be scratched in

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the horizontal direction only. The scratch coat shall be fog cured for a minimum of 72 hours.

3.6.3 Brown Coat

- A. The scratch coat shall be dampened evenly to obtain uniform suction before the brown coat is applied. There shall be no visible water on the surface when the brown coat is applied. The brown coat shall be applied to the scratch coat with sufficient pressure to force the stucco into the scratches and shall be brought to a plumb, true, even plane with rod or straightedge. When set sufficiently, the brown coat shall be uniformly floated with a dry float to promote densification of the coat and to provide a surface receptive to bonding of the finish coat. Brown coat shall be fog cured for a minimum of 72 hours.

3.6.4 Finish Coat

- A. Surfaces of the brown coat shall be dampened not more than 1 hour before the finish coat is to be applied to a uniform wetness with no free-standing water on the surface. The finish coat shall have a smooth trowel finish and shall conform to the approved sample. The finish coat shall be fog cured for a minimum of 48 hours. Care shall be taken to prevent staining.

3.6.5 Surface Tolerance

- A. When a 3 m (10 foot) straightedge is placed at any location on the finished surface of the stucco, excluding rough-textured finish, the surface shall not vary more than 3 mm (1/8 inch) from the straightedge.

3.7 CURING AND PROTECTION

- A. Perform fog curing by applying a fine mist of water to the stucco. Care shall be exercised during fog curing to avoid erosion damage of the stucco surfaces. Do not use a solid stream of water. Frequency of fogging shall be not less than three times daily. Protect the stucco from the direct rays of the sun during severe drying conditions using canvas, cloth or other approved sheet material, when directed.

3.8 PATCHING AND POINTING

- A. Loose, cracked, damaged or defective work shall be replaced or patched as directed. Patching shall match existing work in texture and color and shall be finished flush.

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