

SECTION 09220 - PORTLAND CEMENT PLASTER

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes the following:
 - 1. Exterior portland cement plasterwork (stucco) on metal lath.
- B. Related Sections include the following:
 - 1. Division 4 Section "Unit Masonry".
 - 2. Division 6 Section "Rough Carpentry" for wood furring included in portland cement plaster assemblies.
 - 3. Division 7 Section "Building Insulation" for thermal insulations included in portland cement plaster assemblies.
 - 4. Division 7 Section "Joint Sealants" for sealants installed with exterior portland cement plaster (stucco).

1.3 SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Samples for Initial Selection: For each type of factory-prepared finish coat indicated.
- C. Samples for Verification: For each type of colored and textured finish coat indicated; **12 by 12 inches (305 by 305 mm)**, and prepared on rigid backing.

1.4 QUALITY ASSURANCE

- A. Pre-installation Conference: Conduct conference at Project site to comply with requirements in Division 1 Section "Project Meetings".

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Store materials inside under cover and keep them dry and protected against damage from weather, direct sunlight, surface contamination, corrosion, construction traffic, and other causes.

1.6 PROJECT CONDITIONS

- A. Comply with ASTM C 926 requirements.

- B. Exterior Plasterwork:
1. Apply and cure plaster to prevent plaster drying out during curing period. Use procedures required by climatic conditions, including moist curing, providing coverings, and providing barriers to deflect sunlight and wind.
 2. Apply plaster when ambient temperature is greater than 40 deg F (4.4 deg C).
 3. Protect plaster coats from freezing for not less than 48 hours after set of plaster coat has occurred.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. In other Part 2 articles where titles below introduce lists, the following requirements apply to product selection:
1. Available Products: Subject to compliance with requirements, products that may be incorporated into the Work include, but are not limited to, products specified.
 2. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, manufacturers specified.

2.2 METAL LATH

- A. Expanded-Metal Lath: ASTM C 847 with ASTM A 653/A 653M, G60 (Z180), hot-dip galvanized zinc coating.
1. Available Manufacturers:
 - a. Dale/Incor.
 - b. Marino/Ware; Division of Ware Industries, Inc.
 - c. Western Metal Lath & Steel Framing Systems.
 - d. Or Approved Equal.
 2. Diamond-Mesh Lath: Flat type and Self-furring type.
 - a. Weight: 3.4 lb/sq. yd. (1.8 kg/sq. m).

2.3 ACCESSORIES

- A. General: Comply with ASTM C 1063 and coordinate depth of trim and accessories with thicknesses and number of plaster coats required.
- B. Zinc and Zinc-Coated (Galvanized) Accessories:
1. Available Manufacturers:
 - a. Dale/Incor.
 - b. Dietrich Industries, Inc.
 - c. Western Metal Lath & Steel Framing Systems.
 - d. Or Approved Equal.

2. Cornerbeads: Fabricated from zinc-coated (galvanized) steel.
 - a. Small nose cornerbead with expanded flanges; use unless otherwise indicated.
 - b. Small nose cornerbead with expanded flanges reinforced by perforated stiffening rib; use on columns and for finishing masonry corners.
3. Casing Beads: Fabricated from zinc-coated (galvanized) steel; square-edged style; with expanded flanges.
4. Control Joints: Fabricated from zinc-coated (galvanized) steel; one-piece-type, folded pair of unperforated screeds in M-shaped configuration; with perforated flanges and removable protective tape on plaster face of control joint.
5. Expansion Joints: Fabricated from zinc-coated (galvanized) steel; folded pair of unperforated screeds in M-shaped configuration; with expanded flanges.
6. Weep screeds: Fabricated from zinc-coated (galvanized) steel.

2.4 MISCELLANEOUS MATERIALS

- A. Water for Mixing: Potable and free of substances capable of affecting plaster set or of damaging plaster, lath, or accessories.
- B. Bonding Compound: ASTM C 932.
- C. Steel Drill Screws: For metal-to-metal fastening, ASTM C 1002 or ASTM C 954, as required by thickness of metal being fastened; with pan head that is suitable for application; in lengths required to achieve penetration through joined materials of not fewer than three exposed threads.
- D. Fasteners for Attaching Metal Lath to Substrates: Complying with ASTM C 1063.
- E. Isolation Strip at Exterior Walls:
 1. Asphalt-Saturated Organic Felt: ASTM D 226, Type I (No. 15 asphalt felt), unperforated.
 2. Foam Gasket: Adhesive-backed, closed-cell vinyl foam strips that allow fastener penetration without foam displacement, 1/8 inch (3.1 mm) thick, in width to suit steel stud size.

2.5 PLASTER MATERIALS

- A. Portland Cement: ASTM C 150, Type I.
- B. Colorants for Job-Mixed Finish-Coats: Colorfast mineral pigments that produce finish plaster color.
- C. Lime: ASTM C 206, Type S; or ASTM C 207, Type S.
- D. Sand Aggregate: ASTM C 897.
- E. Ready-Mixed Finish-Coat Plaster: Mill-mixed portland cement, aggregates, coloring agents, and proprietary ingredients.
 1. Available Products:

- a. California Stucco Products Corp.; Conventional Portland Cement Stucco.
 - b. ChemRex; Thoro Stucco.
 - c. United States Gypsum Co.; Oriental Exterior Finish Stucco.
 - d. Or Approved Equal
2. Color: As selected by Architect from manufacturer's full range.

2.6 PLASTER MIXES

- A. General: Comply with ASTM C 926 for applications indicated.
- B. Base-Coat Mixes for Use over Metal Lath: Scratch and brown coats for three-coat plasterwork as follows:
1. Portland Cement Mixes:
 - a. Scratch Coat: For cementitious material, mix 1 part portland cement and 3/4 to 1-1/2 parts lime. Use 2-1/2 to 4 parts aggregate per part of cementitious material (sum of separate volumes of each component material).
 - b. Brown Coat: For cementitious material, mix 1 part portland cement and 3/4 to 1-1/2 parts lime. Use 3 to 5 parts aggregate per part of cementitious material (sum of separate volumes of each component material).
- C. Base-Coat Mixes for Use over Brick and Concrete Unit Masonry: Single base coats for two-coat plasterwork as follows:
1. Portland Cement Mix: For cementitious material, mix 1 part portland cement and 3/4 to 1-1/2 parts lime. Use 2-1/2 to 4 parts aggregate per part of cementitious material (sum of separate volumes of each component material).
- D. Job-Mixed Finish-Coat Mixes:
1. Portland Cement Mix: For cementitious materials, mix 1 part portland cement and 3/4 to 1-1/2 parts lime. Use 1-1/2 to 3 parts aggregate per part of cementitious material (sum of separate volumes of each component material).
- E. Factory-Prepared Finish-Coat Mixes: For ready-mixed finish-coat plasters, comply with manufacturer's written instructions.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine areas and substrates, with Installer present, and including welded hollow-metal frames, cast-in anchors, and structural framing, for compliance with requirements and other conditions affecting performance.
1. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Protect adjacent work from soiling, spattering, moisture deterioration, and other harmful effects caused by plastering.
- B. Prepare solid-plaster bases that are smooth or that do not have the suction capability required to bond with plaster according to ASTM C 926.

3.3 INSTALLATION, GENERAL

- A. Fire-Resistance-Rated Assemblies: Install components according to requirements for design designations from listing organization and publication indicated on Drawings.
- B. Insulation Blankets: Where required, install blankets before installing lath unless blankets are readily installed after lath has been installed on one side.
- C. Sealant: Where required and/or detailed, seal joints between edges of plasterwork and abutting construction with sealant.

3.4 INSTALLING METAL LATH

- A. Expanded-Metal Lath: Install according to ASTM C 1063.
 - 1. On Solid Surfaces, Not Otherwise Furred: Install self-furring diamond-mesh lath.

3.5 INSTALLING ACCESSORIES

- A. Install according to ASTM C 1063 and at locations indicated on Drawings.
- B. Reinforcement for External Corners:
 - 1. Install corner bead at exterior locations.
- C. Control Joints: Install control joints at locations indicated on Drawings.
 - 1. Maximum enclosed area of control joint not to exceed 100 square feet.

3.6 PLASTER APPLICATION

- A. General: Comply with ASTM C 926.
 - 1. Do not deviate more than plus or minus **1/4 inch in 10 feet (6.4 mm in 3 m)** from a true plane in finished plaster surfaces, as measured by a **10-foot (3-m)** straightedge placed on surface.
 - 2. Finish plaster flush with built-in metal items or accessories that act as a plaster ground, unless otherwise indicated. Where casing bead does not terminate plaster at metal frame, cut base coat free from metal frame before plaster sets and groove finish coat at junctures with metal.

- B. Bonding Compound: Apply on unit masonry and concrete plaster bases.
- C. Plaster Finish Coats: Apply to provide float finish to match Architect's sample.
- D. Total cement plaster thickness shall be 5/8", unless otherwise noted, for ceilings and soffits.

3.7 CUTTING AND PATCHING

- A. Cut, patch, replace, and repair plaster as necessary to accommodate other work and to restore cracks, dents, and imperfections. Repair or replace work to eliminate blisters, buckles, crazing and check cracking, dry outs, efflorescence, sweat outs, and similar defects and where bond to substrate has failed.

3.8 CLEANING AND PROTECTION

- A. Remove temporary protection and enclosure of other work. Promptly remove plaster from doorframes, windows, and other surfaces not indicated to be plastered. Repair floors, walls, and other surfaces stained, marred, or otherwise damaged during plastering.

END OF SECTION 09220