

SECTION 09220

PORTLAND CEMENT PLASTER (STUCCO)

PART 1 - GENERAL

1.01 DESCRIPTION

A. Scope:

1. Provide portland cement plaster horizontal surfaces complete as indicated on Drawings and herein specified.

1.02 RELATED WORK

- A. UNIT MASONRY: Section 04220.
- B. COLD FORMED METAL FRAMING: Section 05400.
- C. INSULATION: Section 07200.
- D. FURRING AND LATHING: Section 09201.
- E. PAINTING: Section 09900.

1.03 DESIGN CRITERIA

A. Allowable Tolerances:

1. For flat surfaces, do not exceed 1/4-inch in 8-feet for bow or warp of surface, and for plumb and/or level.

1.04 QUALITY ASSURANCE

- A. Approved Products: As applicable, products used herein shall comply with requirements of the Florida Product Approval System as required by Florida Statute 553.842 and Florida Administrative Code 9B-72.

B. Reference Standards:

1. American Society for Testing and Materials (ASTM):
 - a. Referenced Standards.
2. Portland Cement Association (PCA):
 - a. PCA "Plasterer's Manual," except where more detailed or more stringent requirements are indicated.

1.05 SUBMITTALS

A. Product Data:

1. Submit manufacturer's product specifications and installation instructions for each product, including data showing compliance with specification requirements.

B. Samples:

1. Submit samples indicative of proposed finish to the Architect for review and approval.
2. Approved samples shall become the basis of comparison for all plaster work.
3. Submit samples and identify proposed locations for all plaster trim pieces

1.06 PRODUCT DELIVERY, STORAGE, AND HANDLING

- A. All manufactured materials shall be delivered in the original packages, containers, or cartons, bearing the brand name and manufacturer's identification, and stored in a dry space, protected from the elements and from damage to containers.

1.07 JOB CONDITIONS

A. Protection of Surfaces:

1. Use all means necessary to protect the work and materials of this Section before, during and after installation; and to protect the work and materials of other trades from moisture deterioration and soiling which may occur from plastering operations.
2. Provide temporary covering or other provisions as may be necessary to minimize harmful spattering of plaster on other work.
3. Do not apply plaster immediately before or during a rainstorm.

B. Environmental Conditions:

1. Warm Weather Requirements:
 - a. Protect plaster against uneven and excessive evaporation and from strong flows of dry air, both natural and artificial.
2. Ventilation shall be provided to properly dry the plaster during and subsequent to its application.

PART 2 - PRODUCTS

2.01 CEMENT PLASTER MATERIALS

A. General:

1. Except as otherwise indicated, provide standard products recommended by the manufacturer for the application indicated, complying with ASTM C 926.

B. Cement:

1. Portland Cement shall conform to ASTM C 150, Type I, and be of same source to insure uniformity throughout entire project. Approved types of plasticity agents may be added to portland cement in the manufacturing process or when mixing; but in no case shall the amount of plasticity agent exceed ten percent (10%) of the volume of cement in the plaster mix.
- C. Lime:
 1. Lime shall be dry Hydrated Lime, ASTM C 206, Type S.
- D. Aggregates:
 1. Inorganic aggregates used for plaster shall conform to ASTM C 35 except that graduation of locally produced sand shall be such that the fineness modulus is between 1.20 and 2.35.
- E. Water:
 1. Water shall be clean and free from injurious amounts of oils, acids, alkalis, salts, organic materials, or substances that may be deleterious to the plaster or to any metal in the plaster.
- F. Integral Waterproofer:
 1. SEC #1 as manufactured by SEC Manufacturing Company, or approved equal.
- G. Bonding Agents (if indicated or required):
 1. Bonding agents, integral or surface-applied, shall be used in accordance with the manufacturer's directions.
- H. Skim Coat
 1. Provide E.I.F.S. type skim coat such as "Primus" by Dryvit Systems, Inc. or approved equal.
 2. Primus is a 100% polymer-based product, which is field mixed in a 1 to 1 ratio by weight with Portland cement to produce Primus mixture. Provide Sand Textured Finish.

2.02 PLASTER TRIM, EDGES, STOPS, BEADS

- A. Basis of Design: PVC Accessories as manufactured by Plastic PC Components, Inc., <http://www.plasticcomponents.com> or approved equal. Provide "slip joint" type where plaster encounters differing (change in) substrates. Provide:
 1. #2227 3/4" Channel Reveal to form pattern shown on Drawing A111
 2. #2227C 3/4" Channel Reveal Intersection
 3. CB-58-16 Casing Bead / Starter Trac® where plaster field terminates at ACM or gypsum board.
 4. Other pieces deemed necessary by installer.Submit samples and identify proposed locations for all plaster trim pieces.

2.03 MIXING AND PROPORTIONING PORTLAND CEMENT PLASTER

- A. All plaster mix ingredients shall be mixed in a mechanical mixer with the minimum amount of water

needed to produce a plaster of workable consistency. Plaster shall be mixed for a minimum of two (2) minutes or until all ingredients are uniform in color after all ingredients are in the mixer.

B. Plaster ingredients shall be mixed in the following proportions:

1. Three (3) Coat Application:

Coat	Portland Cement by volume	Lime by volume	Aggregates	Integral Waterproofer
1st (base)	1	- - -	3-1/2	- - -
2nd (brown)	1	15% max.	2	1 qt. per bag of cement

3rd (finish) Refer to Specification section 09960 for Tex-Cote.

PART 3 - EXECUTION

3.01 INSPECTION

A. Examine the areas and conditions under which this Work is to be performed. Correct conditions detrimental to the proper and timely completion of this Work. Do not proceed until unsatisfactory conditions have been corrected.

3.02 PREPARATION

A. Prior to application, ensure mechanical and electrical services behind surfaces to receive cement plaster have been tested and approved.

B. Ensure masonry is sound and metal lath has been properly installed and rigidly secured.

C. Place metal accessories true to lines and levels.

3.03 PLASTER APPLICATION

A. General:

1. Refer to Drawings for extent and locations of areas to receive plaster.

2. Portland cement plaster (stucco) application shall be performed by skilled mechanics experienced in this type of work. All work shall be properly rodded true and straight, flush with grounds applied in strict accordance with ASTM C 926 and with the recommendations of the PCA "Plasterer's Manual," unless otherwise indicated.

3. Do not use materials which are caked or lumpy, or which are dirty or contaminated by foreign materials. Use only clean water, free from impurities which might impair the plaster work; do not use water which has been used to clean tools. Do not use excessive water in the mixing and application of plaster materials.

4. Sequence plastering applications with other work in accordance with recognized industry standards. Delay application of finish coat until adjoining work has been completed, wherever possible.

5. Screed plaster work at all angles, arises, corners, and every eight (8) feet on surfaces. Place screeds to true grounds; scrape screeds and grounds clean. All finished surfaces shall be straight, true, and plumb. Form corners, angles, and intersections accurately, in

perfect line, every angle true and full.

B. Thickness:

1. Portland cement plaster (stucco) shall be applied in thicknesses as follows:

Plaster Base	First (Base) Coat	Second (Brown) Coat	Third (Finish) Coat	Total Thickness
Masonry	3/8"	1/4"	*	3/4" Min.
Metal Lath	3/8"	1/4"	*	3/4" Min.

* Per E.I.F.S. type skim coat manufacture's recommendations.

C. Methods:

1. First (Base) Coat:
 - a. Apply first (base) coat to masonry and/or metal lath with sufficient pressure to form a good key. Bring to plumb, true, even surface, rough in texture. When sufficiently set, float scratch with dry float. Cross scratch evenly to form bond for second (brown) coat.
2. Second (Brown) Coat:
 - a. Apply second (brown) coat as soon as first (base) coat has set sufficiently to carry the weight (approximately 3 hours). Float or rod to true, even surface and keep moist until application of third (finish) coat.
3. Third (Finish) Coat:
 - a. Finish coat to be Sand Textured E.I.F.S. type skim coat (Primus or equal). After mixing, the working time of Primus mixture is approximately 1 hour depending on ambient conditions. Under average drying conditions [21 °C (70 °F), 55% R.H.], protect work from rain for at least 24 hours. Air and surface temperature for application of Primus mixture must be 4 °C (40 °F) or higher and must remain so for a minimum of 24 hours. Surfaces must not be below 4 °C (40 °F) or painted and must be clean, dry, structurally sound and free of efflorescence, grease, oil, form release agents and curing compounds. Thoroughly mix the Primus with Type I or Type II Portland cement at a 1 to 1 ratio by weight. Allow the mixture to set for 5 minutes. Re-temper, adding a small amount of water to achieve the desired workability. Clean tools with water while Primus mixture is still wet. Primus must be stored at 4 °C (40 °F) or above in tightly sealed containers out of direct sunlight. Clean potable water may be added to adjust workability. Do not add water until after the cement is thoroughly mixed. Do not overwater. Use only Type I or Type II gray or white Portland cement.

D. Curing:

1. Damp cure portland cement plaster (stucco) as follows:
 - a. Surfaces shall be protected from the sun, hot-dry winds, or excessive ventilation using canvas, cloth, or plywood barriers; then kept moist with a fog spray of water until proper hydration takes place; usually 48-hours for temperatures ranging 50-degrees and above.

- b. Do not damage finished surface by water erosion during damp curing operation.

3.04 CUTTING AND PATCHING

- A. Cut, patch, repair and point-up portland cement plaster (stucco) as required and as necessary to accommodate other work. Repair cracks and indented surfaces. Point-up finish plaster surfaces around items which are built into or penetrate plaster surfaces. Repair or replace plaster work to eliminate blisters, buckles, check cracking, dry outs, efflorescence, excessive pinholes, and similar imperfections. Repair or replace the work as necessary to comply with specified tolerances and required visual effects. Follow E.I.F.S. skim coat finish manufacture's recommendations for repairs.

3.05 PROTECTION

- A. Remove temporary covering and other provisions made to minimize splattering of plaster on other work. Repair surfaces which have been stained, marred or otherwise damaged during plastering work.

END OF SECTION 09220