# Campus Design Standards

## 09200 – Exterior Cement Plaster

![University of San Diego Image]

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<thead>
<tr>
<th>Department</th>
<th>Name</th>
<th>Signature</th>
<th>Date</th>
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<tbody>
<tr>
<td>PDC Manager</td>
<td>Tim Doudna</td>
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<td>5/7/19</td>
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<tr>
<td>PDC Director</td>
<td>Zack Knipe</td>
<td></td>
<td>5/7/19</td>
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<tr>
<td>Director Building</td>
<td>Robert Brauer</td>
<td></td>
<td>5/7/19</td>
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<tr>
<td>Maintenance</td>
<td>André Hutchinson</td>
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<td>5/7/19</td>
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<tr>
<td>Facilities AVP</td>
<td>Ky Snyder</td>
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<td>5/7/19</td>
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<tr>
<td>Operations VP</td>
<td>Mary Whelan</td>
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<td>4/30/19</td>
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09200 – Exterior Cement Plaster

Introduction

Exterior design intent is to remain visually consistent with the historical buildings on campus that lack modern day expansion/control joint placement. In effort to visually retain the massing of the buildings, strategic locations of control joints must be placed within the exterior Portland cement plaster finish.

Control joints are to be reviewed with the USD Project Manager for approval prior to the Construction Document phase.

Designer is to recommend stucco mix designs, additives, and accessories that will minimize cracking.

Contacts

1. The Project Manager (Planning, Design and Construction)

Index of References

1. USD Master Plan Design Guidelines  
   \textit{Appendix 1.1}

Code/Sustainability References

1. California Building Code
2. LEED Silver (Pursuit of certification on a project by project basis)
3. Building Energy Efficiency Standards
4. California Fire Code
5. ASTM
6. CLCPA

Exterior Plaster Finish Guidelines

1. Plaster Materials:
   a. Cement – Portland Cement: ASTM C 150, Type I
      i. Note: "Plastic Cement" will not be accepted
      ii. Eisenwall Rapid Set to be considered on a per project basis
   b. Lime – Subject to compliance with the requirements to minimize cracking and improve workability, provide the following lime-alternative admixture:
      i. "Gibco," Gibco Industries, Inc. P.O. Box 880, Langley, OK 918-782-4000
         www.gibco-usa.com
   c. Sand: per ASTM C897
   d. Synthetic Fibers: per ASTM C1116
   e. Bonding agents: Per ASTM C932
   f. Acrylic Admixture – Integral acrylic bonding agent. Provide one of the following:
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i. Larsen Products Corp., “Acrylic Admix-101”
ii. Tamms Industries, Inc., "Akkro 7-T"
iii. Thoro System Products, Inc., "Acryl60"
iv. DryvitAC100
v. Note: When using acrylic admixture, the lime content in the mix must be modified to balance the proportional ratio between the lime and acrylic. Consult with manufacturer for correct balance.

Factory-Prepared Finish Coat: Manufacturer's standard packaged blend of Portland cement, ASTM C 150, Type I or Type III; hydrated lime, Type S, STM C 206 or ASTM C 207; aggregate, ASTM C 897; and compatible with base coat and finish texture and color indicated above. Subject to compliance with the requirements, provide one of the following:

i. Tamms Industries Inc., "Tamms Stucco Finish"
ii. ChemRex, "Thor Stucco"

Water: Clean, fresh, suitable for domestic consumption, free from such mineral or organic substances that would affect the set of the plaster

2. Backing Material
   i. Densglass Gold

3. Plaster Mix and Compositions
   a. Base Coat Mixes and Compositions per ASTM C 926
   b. Scratch Coat:
      i. 1 part Portland Cement
      ii. 0 to ¾ parts lime
      iii. 2-1/2 to 4 parts sand
      iv. Acrylic admixture
      v. Fiber
   c. Brown Coat:
      i. 1 part Portland Cement
      ii. ¾ to 1-1/2 parts lime
      iii. 3 to 5 parts sand
      iv. Acrylic admixture
      v. Fiber
   d. Finish Coat:
      i. Factory Prepared Finish Coat – Add water only. Comply with manufacturer’s directions.
      ii. Job mixed Finished Coat – Proportion in parts by volume per sum of materials.
         1. 1 part Portland Cement
         2. ¾ to 1-1/2 parts lime
         3. 3 parts sand
4. The approved finish coat material shall be selected per the approved samples and per the approved mockup. Finish coat texture, and color shall match the University's campus standard.

**Exterior Plaster Installation Guidelines**

1. Control Joints
2. Vertical Surfaces: 144 square feet maximum area of plaster panels between joints
3. Horizontal Surfaces: 100 square feet maximum area of plaster panels between joints
4. Install where control joints occur in surface on construction directly behind plaster.
5. Install where plasterwork areas change dimension, to delineate panel areas and to relieve the stress that occurs at the corner formed by the dimension change.

**Requirements for Submittals and Shop Drawings**

1. Samples: For initial selection purposes, inform of manufacturer's color charts showing full range of colors.
   a. Include similar samples of material for accessories involving color selection. Samples for verification purposes in units at least 12 inches square of each type of finish indicated, in sets for each color, texture, and pattern specified, showing full range of variations expected in these characteristics.
   b. Shop Drawings: Showing fabrication and installation of metal lath and framing including plans, elevations, sections, details of components, flashing, accessories and attachments to other units of Work.
   c. Show locations and installation of control and expansion joints.
2. Mock-Up: Prior to installing plaster work, construct mock-up for each type of finish and application required to verify selections made under Sample submittals and to demonstrate aesthetic effects, qualities of materials and execution, and the ability of the subcontractor to perform work in compliance with the contract documents. All mockups must be installed on the building and must pass a field water test prior to proceeding with installation for the balance of the building. Build mockups to comply with the following requirements, using materials indicated for final unit of Work.
   a. Mockup of exterior plaster/stucco shall be integrated into the overall building mock-up per Architect's sketch.
   b. Mock-up shall accurately represent job conditions including joints, sealants, texture, anchors, insulation, and finishes/colors per mock-up drawing.
   c. Obtain written acceptance of mock-up by Owner and Architect prior to construction of final work.

**Requirements for As-built Drawings**

Prior to the completion of construction and occupancy, the plaster subcontractor is required to provide the Project Manager a detailed schedule of materials used in each space of the project, including the manufacturer, supplier, color name and number, finish and texture applied. An
electronic version of the final exterior plaster finish schedule is to be provided as part of the "as-built" documentation for the project. See Appendix 1.2 for Documentation and Archiving.

Reference Photos

Alcala Vistas

Degheri Alumni Center

Fowler Park

Jenny Craig Pavilion

Kroc Institute for Peace and Justice
Loma Hall

Manchester Apartments

Shiley Center for Science and Technology

Mother Rosalie Hill Hall
Student Life Pavilion

Torero Store

END OF DOCUMENT