

DIVISION 09 - FINISHES

PLASTER AND GYPSUM BOARD	09 20 00
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Gypsum Board Finish Levels:

1. For occupied spaces and surfaces exposed to public view:
 - a. Provide a lightly textured finish over a Gypsum Association (GA) Level 4 finish
 - b. Smooth finish over a GA Level 5 finish may be used in specific areas if approved by the University's Representative.
2. For unoccupied areas, such as storage and mechanical rooms, provide a medium texture finish over a GA Level 3 finish.
3. For concealed spaces such as shafts or spaces above the ceiling areas, and areas where gypsum board is used as a substrate for tile, provide a GA Level 2 finish.

For exterior cement plaster, refer to the University's Standard Specification Sections 09 22 36.23 Cement Plaster lathing and Lath Accessories and 09 24 00 Portland Cement Plastering.

ACOUSTICAL CEILINGS	09 51 00
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General Requirements

Suspended acoustical ceilings shall be installed in accordance with the provisions of ASTM C 635 (materials) and ASTM C 636 (installation).

Codes and Standards

1. Ceiling design shall meet 2013 CBC Section 1613.1 Earthquake Loads. Every structure and portion thereof, including non-structural components that are permanently attached to structures and their supports and attachments, shall be designed and constructed to resist the effects of earthquake motions in accordance with ASCE 7, excluding Chapter 14 and Appendix 11A. The seismic design category for the structure is permitted to be determined in accordance with Section 1613 or ASCE 7.
2. In accordance with ASCE 7-10 Chapter 13, acoustical tile or lay-in panel ceilings in Seismic Design Categories D, E and F shall be designed and installed in accordance with ASTM C 635, ASTM C 636 and ASTM E580, Section 5-Seismic Design Categories D, E and F as modified by this section.
3. Lateral force bracing is required for all ceiling areas greater than 1000 ft².

Installation

1. Lighting fixtures shall be positively attached to the ceiling suspension main runners or cross runners that have the same carrying capacity as the main runners.
2. Pendant hung lighting fixtures shall be supported directly from the structure above using no less than number 9 gauge wire or an approved alternative support.
3. The ceiling suspension system shall not provide any direct support.
4. Pendant mounted light fixtures of any weight that are free to swing in any direction shall be detailed and installed so that they can swing at least 45 degrees from the vertical in any direction without contacting an obstruction.
5. Adjacent fixtures shall be separated by a distance equal to at least one and one half times the length of the pendant.

6. If the pendant mounted light fixture is not directly and independently braced below the ceiling, then a bracing assembly is required where the pendant hanger penetrates the ceiling.
7. Special details are required to attach the pendant hanger to the bracing assembly to transmit horizontal force. **Exception:** Where the weight of the fixture is less than 20 pounds, a compression post is not required in the bracing assembly.
8. If an alternate means of ceiling grid construction is used, the suspended heavy-duty grid ceiling framing system must be installed in accordance with the Evaluation Service Report (ESR) and manufacturers' published installation instructions.
9. Submittal shall include the full ESR installation requirements of the heavy-duty grid ceiling framing system.

Products

1. Acceptable heavy-duty grid ceiling framing system manufacturers' include Armstrong installed per ICC-ESR-1308, USG installed per ESR-1222 or approved equal.

FLOORING	09 60 00
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1. If selecting flooring other than linoleum, vinyl composite tiles (VCT), roll carpet, or carpet tiles, consult the University's Representative to confirm the additional purchase and storage of attic stock for future repairs.
2. Plank flooring: Careful consideration shall be given prior to specifying vinyl or laminate plank flooring, including foot traffic, acoustics, maintenance, and storage of attic stock. Since product lines are routinely updated, flooring may need to be replaced in full in the event of significant wear or damage. Storage for attic stock must be available at project site, consult the University's Representative. In renovation projects, existing subfloor properties may be incompatible with the use of plank flooring.

BASE AND ACCESSORIES	09 65 13
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1. Base: Thermoplastic rubber (TR) or thermoset vulcanized rubber (TS). Consult the University's Representative prior to specifying thermoplastic vinyl (TV) base.
2. Adhesives:
 - a. Aerosol adhesives shall not exceed the VOC limits specified in the Green Seal Standard GS-36 (01/11/2011)
 - b. Non-aerosol adhesives and primers shall not exceed the VOC limits specified in the South Coast Air Quality District Rule 1168 (01/07/05).

RESILIENT SHEET FLOORING	09 65 16
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1. General Requirements:
 - a. Chemical-use laboratories, glass wash or other areas where liquids are used or stored shall have watertight flooring.
 - i. Provide seam sealed, non-pervious, one piece flooring with a slip resistance coefficient of 0.6 or greater and at least a 4-inch continuous

cove or equivalent. Flooring material to be compatible with the chemicals to be used or stored.

- ii. Flooring at Permanent Cabinets: Resilient flooring is required under fixed floor cases and cabinets.

RESILIENT LINOLEUM FLOORING	09 65 16.13
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- 1. General Requirements: Linoleum shall not be used in wet environments.

RESILIENT TILE FLOORING	09 65 19
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- 1. Vinyl Composition Tiles (VCT):
 - a. Shall be 12 inches by 12 inches
 - b. Recommended in areas of heavy traffic
 - c. Shall not be used in area requiring water-tight flooring

CARPETING	09 68 00
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Colors and shades selected should be of medium intensity (not so light as to easily show soiling or so dark as to show dust and lint). Multi-colored and non-directional patterns are desirable for their soil-hiding capability. Solid color carpet should not be used.

Carpet shall be certified by the California Gold Sustainable Carpet Standard at the gold or platinum level. Carpet tile systems shall not exceed the target emissions factors of the Carpet and Rug Institute's following programs:

- 1. Carpet: Green Label Plus Program and Testing Procedures.
- 2. Carpet Cushion: Green Label Program and Testing Procedure
- 3. Carpet Adhesive: Green Label Program and Testing Procedure.

Handicapped Requirement - $4500 \text{ (min)} = (\text{yarn weight}) (36) \text{ divided by pile height.}$

ROLL CARPET

Type: Carpet shall be installed by direct glue-down method, unless otherwise noted, and shall be a woven or tufted product, meeting or exceeding the following criteria.

Construction - Woven or tufted

Texture - Loop pile

Fiber - 3rd or 4th generation continuous filament soil hiding nylon; Allied Chemical, DuPont, Badische, or equal.

Face Weight:

Woven: Minimum 25 oz.

Tufted: Minimum 28 oz.

Gauge: Minimum 1/8 inch

Density:

Woven: Minimum 5100

Tufted: Minimum 6000

Warranty: 10 year limited wear warranty.

Primary Backing: nonwoven synthetic

Secondary backing: High performance precoat laminated to a thermoplastic polyolefin compound with a fiberglass reinforced layer. Backing shall contain a minimum of 10 percent recycled content by total weight of product. Backing should be recyclable, PVC free, free of 4-PCH, brominated flame retardants, and phthalate plastizers.

CARPET TILE

Carpet Type: Carpet tile shall be manufactured by Shaw Commercial, Interface, Bentley, Patchcraft, Mohawk, Mannington, or equal, and in accordance with the following specifications.

Yarn: Solution Q nylon, post-consumer type 6 nylon, or type 6-6 nylon

Gauge: 85 sq. inches

Yarn Weight: 15 oz./sq. yard minimum

Stitches/6 inc.: 55.2.

Pile Height: 0.250 in.

Tile Size: Standard carpet tile dimensions

Warranty: 10 year limited wear warranty

Adhesive: Pressure sensitive, releasable adhesive from the same manufacturer as the carpet tile

WALK-OFF CARPET TILES

Provide walk-off carpet tiles at main building entrances where the primary finish is carpet.

Yarn: Solution Q nylon, post-consumer type 6 nylon, or type 6-6 nylon

Manufacturer: Same as carpet.

Adhesive: Pressure sensitive, releasable adhesive from the same manufacturer as the walk-off carpet tile

PAINTING AND COATING 09 90 00

Materials shall be top-of-the-line products by firms with over 5 years manufacturing experience with a full product line. Prime coats and finish coats for any 1-paint system shall be the products of the same manufacturer.

Architectural coatings shall comply with the Green Seal Standards GS-11 (01/01/10) and the most current LEED Requirements, whichever is more stringent.

1. Aromatic Compounds: the product shall contain no more than 1.0 percent by weight of the sum total of aromatic compounds. Testing for the concentration of these compounds shall be performed if they are determined to be present in the product during a materials audit.
2. Prohibited Chemicals: the manufacturer shall demonstrate that the following chemical compounds are not used as ingredients in the manufacture of the product.
 - a. Halomethanes: methylene chloride
 - b. Chlorinated ethanes: 1,1,1-trichloroethane
 - c. Aromatic solvents: benzene, toluene (methylbenzene), ethylbenzene
 - d. Chlorinated ethylenes: vinyl chloride
 - e. Polynuclear aromatics: naphthalene

- f. Chlorobenzenes: 1,2-dichlorobenzene
- g. Phthalate esters: di (2-ethylhexyl) phthalate, butyl benzyl, phthalate, di-n-butyl phthalate, di-n-octyl phthalate, diethyl phthalate, dimethyl phthalate
- h. Miscellaneous semi-volatile organics: isophorone
- i. Metals and their compounds: antimony, cadmium, hexavalent chromium, lead, mercury
- j. Preservatives (antifouling agents): formaldehyde
- k. Ketones: methyl ethyl ketone, methyl isobutyl ketone
- l. Miscellaneous volatile organics: acrolein, acrylonitrile

EXECUTION

Backprime all wood installed against steel, concrete, plaster, or tile, and all wood with surfaces exposed in exterior locations.

A single color matching walls and ceilings shall be used on all surfaces. Visible surfaces behind vents, grilles, etc., shall be painted flat black. Insides of all drawers, shelves inside cabinets, and other wood surfaces where scheduled or noted shall be given one coat of clear gloss lacquer, or clear polyurethane-base varnish.

VENTILATION

The room/space shall be supplied with 100 percent outside air during painting and for a period of 72 hours following completion of painting. The air leaving the room/space shall be exhausted only to the outside, with no distribution to any occupied spaces during painting and for a period of 72 hours following completion of painting.

FLUID APPLIED FLOORING	09 96 00
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Fluid applied (epoxy) floors should be non-slip and meet any additional requirements of the facility, such as conductivity.

Specifications should address the following:

1. Include specifications for how to prep the slab or sub-surface (bead blasting, primer etc.) and require moisture testing where appropriate. Integrate the basis of design manufacturer's installation into the specification.
2. Pre-qualify installers or require that the installers are approved by the manufacturer
3. Include requirements for a pre-installation conference with manufacturer's representative in attendance to inspect the site preparation, climate and materials. Require Manufacturer's Representative provide inspection during installations at key milestones.
4. Installation should be continuous, and the contractor should have adequate materials and crew to insure installation is continuous with a wet edge and without a variation in appearance.
5. Specification should include a site-specific extended warranty, certified by the manufacturer requiring that the finish remain free of crazing, peeling, blistering, bubbling etc. for a minimum of 5 years.
6. All products used in the assembly system need to be compatible and acceptable by the epoxy manufacturer

7. All interfaces with architectural elements (walls, casework, drains etc.) and other junctures require detailing.
8. Note that Contractor substitutions may require re-detailing of junctions
9. Consider including mock-ups on significant installations
10. Flush out the building to reduce odors – refer to Division 1 if applicable.

End of Division 09