SECTION 09900

PAINTING

PART 1 - GENERAL

1.1 SUMMARY:

A. Section Includes:

1. Complete painting of all surfaces throughout the interior and exterior of the buildings, except as otherwise specified or indicated in the finish schedule.

2. Field painting of exposed bare and covered pipes, conduits, hangers, exposed steel and iron work, and primed metal surfaces of equipment installed under the mechanical and electrical work. Coordinate with Division 15 and 16 Installers and UCB staff for color coding.

3. Mechanical grilles, registers, louvers (except aluminum), panel covers and frames for electrical work.

4. Paint exterior roof, wall-mounted or ground mounted equipment including aluminum and factory finished items with color approved by UCB.

Work Not Included:

1. Shop priming of ferrous metal items and fabricated components included under their respective sections.

2. Pre-finished items.

3. Integrally colored CMU or face brick.

4. Metal toilet partitions.

5. Acoustic materials.

6. Anodized aluminum.

7. Stainless steel.

8. Bronze.

9. Do not paint over any:

   a. Moving parts of operating units.
b. Equipment identification.

c. Performance rating data.

d. Name or nomenclature plates.

e. Code-required labels.

C. Related Sections:

1. Section 02580 - Pavement Marking.

2. Section 07180 - Water Repellents: Moisture resistant coatings for masonry.


4. Section 15190 - Mechanical Identification: Identification and stenciled painting of mechanical products specified under Division 15.

5. 15856 packaged rooftop heating/cooling units, 15855 air handling units with coils, and 15575 breechings, chimneys, stacks and flues.


7. Sections 16370 medium voltage transformers (liquid filled), 16321 medium voltage transformers (dry type), 16345 medium voltage switch gears, 16620 standby power generation systems.

1.2 SUBMITTALS:

A. Submit 3 sets of samples with scheduled color product type, color formula and texture to simulate actual conditions on 12" x 12" hardboard for Architect and UCB Project Manager review.

B. Resubmit samples, if requested, until required sheen, color and texture is achieved.

C. On actual wood surfaces, provide 4" x 8" samples of each natural and stained wood finish.

D. On actual wall surfaces and other building components, duplicate painted finishes of acceptable samples, as directed by UCB Staff.

E. At beginning of project, provide a complete summary list of specific manufacturer's products, color identification numbers, manufacturer technical data sheets and MSDS.
Sheets that will be applied in this project. List shall compare each color number with each specified or selected color number. A copy of this list shall be given to the appropriate UCB Project Manager, and Structural Analyst in Work Management Group.

F. **LEED EQc4: Low-Emitting Materials**
   Provide documentation from the manufacturer identifying the VOC and chemical component limits for all indoor paints and finishes.

1.3 **QUALITY ASSURANCE:**

A. Conform to Painting and Decorating Contractors of America "Architectural Specification Manual".

B. All materials shall be applied free from runs, sags, wrinkles, streaks, shiners and brush marks.
   All materials shall be applied uniformly. If any reduction of the coating’s viscosity is necessary, it shall be done in accordance with the manufacturer’s label directions.

New plaster and other masonry surfaces shall not be primed until it has been determined these substrates have dried sufficiently to safely accept paint. Unacceptable moisture content should be reported to the architect or the project manager.

No exterior painting shall be undertaken if air or surface temperature is below 50º F nor immediately following rain or until frost, dew or condensation has evaporated.

A minimum interior temperature of 65º F shall be maintained during the actual application and drying of the paint, and until occupancy of the building occurs. Adequate ventilation shall be maintained at all time to control excessive humidity which will adversely affect the curing of coatings. The Contractor is solely responsible for maintaining suitable temperature and ventilation.

Before painting begins, all other crafts shall have completed their work, and shall have removed all dirt and debris resulting therefrom. The rooms or areas are to be left in broom clean condition.

Enamel and varnish undercoats are to be sanded smooth prior to the recoating. Tops and bottoms of doors are to be finished in the same manner as door facing, after the carpenters complete fitting of them.

1.4 **MAINTENANCE:**

A. Provide Paint formulations for all paint colors.

B. Removal
1. Remove all trash, empty cans, solvents and all painting related materials.

PART 2 - PRODUCTS

2.1 MANUFACTURERS:

A. Benjamin Moore & Company
B. Diamond Vogel
C. The Glidden Company
D. KWAL-Howells, Inc.
E. PPG Industries
F. Sherwin-Williams Company
G. ICI
H. Substitutions must be pre-approved by UCB project manager and UCB paint shop. Any proposed substitution must be available in the Boulder Metro area.

2.2 MATERIALS:

Materials submitted for approval may be asked to match CU’s standard off white color sample for testing. Testing shall include, but is not limited to, accurate color match, hiding capabilities, touch-up capabilities, sheen match and other performance characteristics. Materials submitted for approval by UCB staff of exterior finishes shall be weather resistant with colors approved by UCB staff.

A. Quality:

1. Provide the best quality Contractor grade or better of the various types of coatings as regularly manufactured by acceptable paint material manufacturers.

2. Materials not displaying the manufacturer's identification as a standard, best-grade product will not be acceptable.

3. If project is asking for LEED Certification, materials must comply with the Green Seal Standard, for paints, GS-11, requirements for voc and chemical component limits. www.greenseal.org/standards/paints.html
<table>
<thead>
<tr>
<th>Type</th>
<th>VOC (g/l = grams/liter)</th>
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<tbody>
<tr>
<td>Interior Non-Flat</td>
<td>150 g/l</td>
</tr>
<tr>
<td>Exterior Non-Flat</td>
<td>200 g/l</td>
</tr>
<tr>
<td>Interior Flat</td>
<td>50 g/l</td>
</tr>
<tr>
<td>Exterior Flat</td>
<td>100 g/l</td>
</tr>
<tr>
<td>All types</td>
<td>Contain not more than 1.0% by wt. of the sum total of Aromatic Compounds.</td>
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</tbody>
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4. Waterborne or latex acrylic coatings shall be used unless prior approval for substitution is obtained.

5. Material Safety data sheets and technical product data sheets must be included with O&M Manuals for all products used.

6. Specialty Paints and Paint Systems:
   All specialty products should be included in review documents or specifications. Facilities Operations Paint Shop should be consulted for application solutions to best meet the need and be consistent with similar Campus coatings. Examples to include but not limited to: Floor coatings, High heat and Chemical Resistant coatings, Specialty Metal coatings, etc.

2.3 VOLUME SOLID CONTENTS:

When applied at a rate of 400SF per gallon-obtaining a MIL thickness when dry of a minimum of 1.3 MILS, the minimum acceptable Volume Solid Content must be A (see list below) minimum and angular specular sheen should be B (see list below).

<table>
<thead>
<tr>
<th></th>
<th>A</th>
<th>B</th>
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<tbody>
<tr>
<td>-For Flat finish</td>
<td>38%</td>
<td>0-5 @ 60º</td>
</tr>
<tr>
<td>-For Eggshell or Satin finish</td>
<td>36%</td>
<td>16-32 @ 60º</td>
</tr>
<tr>
<td>-For Semi-Gloss finish</td>
<td>34%</td>
<td>30-60 @ 60º</td>
</tr>
<tr>
<td>-For Gloss finish</td>
<td>34%</td>
<td>60-80 @ 60º</td>
</tr>
</tbody>
</table>

These could apply to both interior and exterior products, with the possible "satin" or “pearl” addition.

PART 3 - EXECUTION

3.1 SCHEDULE:

A. Areas requiring specific paint finish are as follows:

1. Elevator, Mechanical and Electrical Room Painting:
   a. Walls and Ceilings: Off white acrylic latex semi-gloss.
b. Floors (Elevator and Electrical Rooms Only): Light grey waterborne floor finish

2. Baseboard Radiation Covers:
   a. Area Inside Metal Covers: Paint flat black or appropriate color to match.

3. Access Flooring:
   a. Space Beneath Floor Surface: Paint flat black or appropriate color to match.

4. Wall and Ceiling Return Air Grilles:
   a. Space Behind Grilles: Paint flat black for a distance of 24" from face of grille or appropriate color to match.

5. Non-Galvanized Iron Pipes: Color to match background.

6. Roof, Wall, or Ground Mounted Equipment:
   Color approved by UCB Staff.

   CONTACT UCB FACILITIES PLANNING FOR CAMPUS STANDARD COLORS.

B. For all paint finishes:

1. New surfaces shall have 1 primer coat and 2 finish coats.

2. Existing surfaces shall have minimum 2 finish coats.

3. If sprayed, all walls except mechanical rooms, storage areas, closets and ceilings, must be backed rolled on final coat.

4. All walls must be painted with a paint that meets CU’s sheen standards for the 16-32 measurement at 60°, and volume solid’s ratings.

5. All trim is to be painted with semi-gloss paint that meets CU’s sheen and volume solids ratings.

6. Patch Painting will not be acceptable, total affected area shall be painted. Terminate painting only at corners or joints.

END OF SECTION 09900