

## SECTION 096800 – CARPETING

### PART 1 - GENERAL

#### 1.1 M.S.U. ISSUES

- A. Broadloom carpet is used typically in residential, dining, lounge and administrative spaces of Housing and Food Services buildings. In Academic buildings, the typical areas for carpet are administrative, auditoriums, libraries, conference rooms, large lecture halls, reception rooms and lounges. Classroom carpeting is not recommended. Carpeting is not recommended for any ground floor public lobby, due to high maintenance required for winter slush and salt. Carpet shall meet flame, smoke and other code mandated fire safety standards.
- B. Direct glue down installation is preferred. The use of carpet cushion in corridors, classrooms, lobbies and places of public assembly is discouraged
- C. Computer room carpeting shall be especially constructed for use in computer rooms with permanent anti-static properties at a level acceptable to the computer manufacturer (typically 2.0 or less.)
- D. When base is specified in conjunction with the carpet, it shall be square-cut straight 4-inch vinyl base, installed prior to the installation of the carpet. It shall be glued to the walls and base cabinets, with field formed corner pieces jointed at least two-feet beyond the corner. Color shall be dark brown or black consistent with the building standard.
- E. Broadloom carpet shall be installed with as few seams as possible. All seams shall be shall be seam sealed.
- F. Carpet without cushion shall be glued to the substrate. Carpet with cushion shall have cushion glued directly to the substrate. Carpet over cushion shall be installed using the double stick method.
- G. All scraps of carpet larger than ten square feet shall be delivered to the Project Representative to be stored at the building for future repairs.
- H. It is the intent of MSU that all carpet and carpet tile installation used on its projects will comply with LEED™ NC 2.2 Credit Requirements EQ Credit 4.1: Adhesives and Sealants and LEED NC 2.2 Credit Requirements EQ Credit 4.3: Low-Emitting Materials Carpets for carpets and installation accessories.

#### 1.2 SUMMARY

- A. This Section includes the following:
  - 1. Tufted carpet.
  - 2. Woven carpet.
  - 3. Carpet cushion.
  - 4. Carpet Tile

### 1.3 SUBMITTALS

- A. Product Data: For each type of product indicated. Include manufacturer's written data on physical characteristics, durability, and fade resistance. Include installation recommendations for each type of substrate required.
- B. Provide an installation diagram from the carpet installer prior to installation. It will include the following as applicable to the project:
  - 1. Columns, doorways, enclose walls or partitions, built-in cabinets, and locations where cutouts are required in carpet.
  - 2. Carpet type, color, and dye lot.
  - 3. Seam locations, types, and methods.
  - 4. Type of installation.
  - 5. Pattern type, repeat size, location, direction, and starting point.
  - 6. Pile direction.
  - 7. Type, color, and location of insets and borders.
  - 8. Type, color, and location of edge, transition, and other accessory strips.
  - 9. Transition details to other flooring materials.
  - 10. Type of cushion.
- C. Samples: For each of the following products and for each color and texture required. Label each Sample with manufacturer's name, material description, color, pattern, and designation indicated on Drawings and in schedules.
  - 1. Carpet: 12-inch- square Sample.
  - 2. Exposed Edge Stripping and Accessory-: 12-inch- long Samples.
  - 3. Carpet Cushion: 6-inch- square Sample.
  - 4. Carpet Seam: 6-inch Sample.
- D. Maintenance Data: Provided prior to installation of the carpeting and including the following:
  - 1. Methods for maintaining carpet, including cleaning and stain-removal products and procedures and manufacturer's recommended maintenance schedule.
  - 2. Precautions for cleaning materials and methods that could be detrimental to carpet.
- E. Submit printed VOC statement and product data for carpet and installation accessories in accordance with the General Administrative Requirements of the MSU Construction Standards 01300.1.2. Submit documentation for carpet materials of compliance with the Carpet and Rug Institute (CRI) Green Label Plus Testing Program [www.carpet-rug.com/](http://www.carpet-rug.com/). Installation Adhesives Maximum VOC content when tested according to ASTM D 5116: 2-Ethyl-1-Hexanol: 3.00 mg/sq. m x h and also certified as compliant with CRI Green Label Plus testing program.

### 1.4 QUALITY ASSURANCE

- A. Installer Qualifications: An experienced installer who is certified by the Floor Covering Installation Board or who can demonstrate compliance with its certification program requirements.

## 1.5 DELIVERY, STORAGE, AND HANDLING

- A. General: Comply with CRI 104, Section 5, "Storage and Handling".
- B. All carpet shall be shipped to the site in original factory wrappings bearing labels verifying that all carpet is from the same dye lot. Carpet shall be delivered to the job site at least 48 hours prior to installation.

## 1.6 PROJECT CONDITIONS

- A. General: Comply with CRI 104, Section 6.1, "Site Conditions; Temperature and Humidity."
- B. Environmental Limitations: Do not install carpet until wet work in spaces is complete and dry, and ambient temperature and humidity conditions are maintained at the levels indicated for Project when occupied for its intended use.
- C. Do not install carpet over concrete slabs until slabs have cured and are sufficiently dry to bond with adhesive and concrete slabs have pH range recommended by carpet manufacturer.
- D. Where demountable partitions or other items are indicated for installation on top of carpet, install carpet before installing these items.

## PART 2 - PRODUCTS

### 2.1 CARPET

- A. Pattern: Soil and traffic hiding patterns are preferred. Solid colors should be used with discretion.
- B. Fiber Content: Minimum 80% solution dyed nylon.
- C. Face Construction: Level-loop pile or cut and loop pile.
- D. Surface Pile Weight: Minimum 28 oz per sq yd.
- E. Primary Backing: Polypropylene.
- F. Width: Of width appropriate to require fewest possible seams.
- G. Performance Characteristics: As follows:
  - 1. Anti-static rating less than 3.0 KV.
  - 2. Critical Radiant Flux Classification: ASTM E-648 Class I (Not less than 0.45 W/sq. cm.)
  - 3. Methenamine Pill Test ASTM D 2859. Pass Doc FF 1-70, 16 CFR 1630.
  - 4. Smoke Density: ASTM E-662 Dm. 0-450.

## 2.2 CARPET CUSHION

- A. The use of carpet cushion in corridors, classrooms, lobbies and places of public assembly is discouraged. When carpet cushion is used, it shall be of entirely synthetic and inert durable construction, reinforced and resilient to wheel wear, and which may be glued directly to the floor by double stick application. The use of animal hair and organic fibers is not permitted.

## 2.3 CARPET TILE

- A. Pattern: Soil and traffic hiding patterns are preferred. Solid colors should be used with discretion. Tiles should always be non-directional.
- B. Fiber Content: Minimum 80% solution dyed nylon.
- C. Face Construction: Level-loop pile or cut and loop pile.
- D. Surface Pile Weight: Minimum 20 oz per sq yd.
- E. Backing: Synthetic cushion.
- F. Performance Characteristics: As follows:
  - 1. Anti-static rating less than 3.0 KV.
  - 2. Critical Radiant Flux Classification: ASTM E-648 Class I (Not less than 0.45 W/sq. cm.)
  - 3. Methenamine Pill Test ASTM D 2859. Pass Doc FF 1-70, 16 CFR 1630.
  - 4. Smoke Density: ASTM E-662 Dm. 0-450.

## 2.4 INSTALLATION ACCESSORIES

- A. Trowelable Leveling and Patching Compounds: Latex-modified, hydraulic-cement-based formulation provided by or recommended by the carpet manufacturer or carpet cushion manufacturer, as appropriate.
- B. Adhesives: Water-resistant, mildew-resistant, nonstaining type to suit products and subfloor conditions indicated, that complies with flammability requirements for installed carpet and that is recommended by the carpet manufacturer or carpet cushion manufacturer, as appropriate:
- C. Seaming Cement: Product recommended by carpet manufacturer for butting cut edges at backing to form secure seams and to prevent pile loss at seams.
- D. Molding: Vinyl of appropriate width and height required to protect exposed edge of carpet, and of maximum lengths to minimize running joints.

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Examine substrates, areas, and conditions for compliance with requirements for maximum moisture content, alkalinity range, installation tolerances, and other conditions affecting carpet performance. Verify that substrates and conditions are satisfactory for carpet installation and comply with requirements specified.
- B. Concrete Subfloors: Verify that concrete slabs comply with ASTM F 710 and the following:
  - 1. Slab substrates are dry and free of curing compounds, sealers, hardeners, and other materials that may interfere with adhesive bond. Determine adhesion and dryness characteristics by performing bond and moisture tests recommended by the carpet manufacturer or carpet cushion manufacturer, as appropriate.
  - 2. Subfloor finishes comply with requirements specified in Division 3 Section "Cast-in-Place Concrete" for slabs receiving carpet.
  - 3. Subfloors are free of cracks, ridges, depressions, scale, and foreign deposits.
- C. For wood subfloors, verify the following:
  - 1. Underlayment over subfloor complies with requirements specified in Division 6 Section "Rough Carpentry."
  - 2. Underlayment surface is free of irregularities and substances that may interfere with adhesive bond or show through surface.
- D. Proceed with installation only after unsatisfactory conditions have been corrected.

### 3.2 PREPARATION

- A. General: Comply with CRI 104, Section 6.2, "Site Conditions; Floor Preparation," and carpet manufacturer's written installation instructions for preparing substrates indicated to receive carpet installation.
- B. Use trowelable leveling and patching compounds, according to manufacturer's written instructions, to fill cracks, holes, and depressions in substrates.
- C. Remove coatings, including curing compounds, and other substances that are incompatible with adhesives and that contain soap, wax, oil, or silicone, without using solvents. Use mechanical methods recommended in writing by the carpet manufacturer or carpet cushion manufacturer, as appropriate:
- D. Broom and vacuum clean substrates to be covered immediately before installing carpet. After cleaning, examine substrates for moisture, alkaline salts, carbonation, or dust. Proceed with installation only after unsatisfactory conditions have been corrected.

### 3.3 INSTALLATION

- A. Direct-Glue-Down Installation: Comply with CRI 104, Section 8, and "Direct Glue-Down Installation."
- B. Double-Glue-Down Installation: Comply with CRI 104, Section 9, and "Double Glue-Down Installation."
- C. Carpet with Attached-Cushion Installation: Comply with CRI 104, Section 10, and "Attached Cushion."
- D. Carpet with Preapplied Adhesive Installation: Comply with CRI 104, Section 10.4, "Pre-Applied Adhesive Systems (Peel and Stick)."
- E. Stair Installation: Comply with CRI 104, Section 12, and "Carpet on Stairs."
- F. Comply with carpet manufacturer's written recommendations for seam locations and direction of carpet; maintain uniformity of carpet direction and lay of pile. At doorways, center seams under the door in closed position.
- G. Do not bridge building expansion joints with carpet.
- H. Cut and fit carpet to butt tightly to vertical surfaces, permanent fixtures, and built-in furniture including cabinets, pipes, outlets, edgings, thresholds, and nosings. Bind or seal cut edges as recommended by carpet manufacturer.
- I. Extend carpet into toe spaces, door reveals, closets, open-bottomed obstructions, removable flanges, alcoves, and similar openings.
- J. Maintain reference markers, holes, and openings that are in place or marked for future cutting by repeating on finish flooring as marked on subfloor. Use nonpermanent, nonstaining marking device.
- K. Install pattern parallel to walls and borders.
- L. Install carpet cushion seams at 90-degree angle with carpet seams.

### 3.4 CLEANING AND PROTECTION

- A. Perform the following operations immediately after installing carpet:
  - 1. Remove excess adhesive, seam sealer, and other surface blemishes using cleaner recommended by carpet manufacturer.
  - 2. Remove yarns that protrude from carpet surface.
  - 3. Vacuum carpet using commercial machine with face-beater element.
- B. Protect installed carpet to comply with CRI 104, Section 15, and "Protection of Indoor Installations."

- C. Protect carpet against damage from construction operations and placement of equipment and fixtures during the remainder of construction period. Use protection methods indicated or recommended in writing by carpet manufacturer.

END OF SECTION 096800