

SECTION 09680

CARPET

PART 1 – DESIGN DIRECTIVES

- 1.1 **Space Classifications:** Dartmouth College classifies spaces into the following categories. These categories are sometimes used in establishing the required floor finishes.
- A. PUBLIC SPACES: Areas at main entrances, main floor corridors, primary circulation areas near major lecture rooms.
 - B. COLLEGE SPACES: Corridors and through traffic spaces which do not receive as much traffic as Public Spaces.
 - C. GROUP USE SPACES: Spaces, which are used primarily by the occupants of the space with little or no through traffic.
 - D. UTILITY SPACES: Back-of-house mechanical and electrical areas typically used only by College Operations and management staff.
- 1.2 **Extent of Carpeting:** Use carpeting and carpet tile where approved by the Facilities Planning Office (FPO) and the Facilities Operations and Management Office (FO&M). Expenses associated with maintenance and replacement cycles should be incorporated into the decision to use carpeting or carpet tile.
- 1.3 **Carpeting Prohibitions:** Do not use carpet or carpet tile in the following areas:
- A. Where food is served or eaten.
 - B. In any basement or below grade level where dampness or water may be present [even rarely].
 - C. Near any building entrance that doesn't have replaceable entry matting.
 - D. In any major circulation areas that would be better served by HARD SURFACE FLOORING, such as lobbies, corridors (Public areas as defined above).
 - E. In areas with wheeled traffic.
 - F. Experimental laboratories.

PART 2 – PRODUCTS

- 2.1 **Requirements:** Dartmouth College Facilities Operation and Management has established the following guidelines for the above classifications:
- A. PUBLIC SPACES: Provide hard, durable, easy-to-clean floors which can withstand tracked-in snow, water, and heavy traffic. Provide only slip-resistant surfaces. Terrazzo, stone, ceramic tile, and masonry pavers are examples of acceptable finishes. Review slip-resistance with FO&M prior to floor selection.
 - B. COLLEGE SPACES: Vinyl composition tile, seamless flooring, and finishes used in Public Spaces are acceptable. Use carpet only where it is truly needed. Avoid the use of carpet in areas with wheeled traffic, high traffic, water, and food service.
 - C. GROUP SPACES: Same as for COLLEGE spaces. The floor finish should be selected to suit the intended occupancy [example: seamless flooring in labs].
 - D. UTILITY SPACES: Typically sealed concrete is sufficient. See Guidelines 03345 and 09710.

- 2.2 The **grade** of carpet quality shall be determined by space needs. Specify carpet with the following characteristics, as a minimum, and unless project requirements dictate otherwise:
- A. Carpet, cushion and adhesives shall bear the IAQ (Indoor Air Quality) label from the Carpet & Rug Institute (CRI).
 - B. All material shall be new, first quality and from a single dye lot for each job.
 - C. All carpet shall be recyclable.
 - D. **Fiber:** Type 6 Nylon or approved equal, 100% recyclable Nylon Fiber, Or, containing a minimum 10% post consumer and 15% post industry recycled nylon fiber. Carpet Tile, either new or recycled content shall include backing materials.
 - E. **Codes:** Conform to applicable code for flame/fuel/smoke rating requirements in accordance with latest ASTM requirement. Carpet shall meet ADA minimum coefficient of friction of .6 for accessible ramps.
 - F. **Gauge:** Minimum $\frac{1}{8}$ to $\frac{1}{10}$
 - G. **Stitches:** Minimum 8 to 12 per inch in both directions.
 - H. **Pile weight:** Minimum 26 oz. per square yard for roll goods.
 - I. **Dye method:** Solution dyed, is preferable, piece-dyed or yarn-dyed as approved. Each type of carpet shall be from one dye lot only.
 - J. **Backing:** In high traffic Areas specify Unitary Backing or Woven Carpet for increased tuft bind to prevent seam raveling and backing delamination from wheeled traffic or over wetting.
 - K. **Adhesives:** Specify the adhesive to be used. Use only strippable, water-resistant, non-flammable, non-combustible adhesives. For work in occupied areas, low odor adhesives are required. Contact FO&M for additional advice. Use only adhesives that are specified by the carpet manufacturer for use with their product.
 - L. **Density:** Minimum 6,200 oz. per cubic yard for roll goods; minimum 5,400 oz. per cubic yard for carpet tile.
 - M. **Electrostatic propensity:** Less than 3.5 kV resistance at 20% R.H. and 70°F; AATCC 134.
 - N. **Mildew and Microbe Resistance:** Permanent anti-microbial treatment, when available.
 - O. **Flammability:** Provide carpet which is fire-resistive or fire-retardant and which meets requirements of the International Building Code. Class I.
 - P. **Warranty:** 10 year wear, stain, edge ravel (delamination) and color-fastness to light.
 - Q. **Emissions:** Adhesives, Non-toxic, low odor and VOC, solvent free with no alcohol, glycol or ammonia; antimicrobial with no hazardous vapors and no carcinogenic material per OSHA regulation 29 CFR 1910-1200. Require carpet manufacturers to provide this information and to certify that their carpets have low emission levels and are environmentally safe.
 - R. **Airing:** Carpet shall be aired out or ventilated in the warehouse for a minimum of 24 hours prior to installation to minimize odor and off-gas problems related to tetraphenylcyclohexene (4-PC) build up.
 - S. **Accessories:** Shall be compatible with carpet used and comply with manufacturer's recommendations.
 - T. Discontinued products or end-of-runs are unacceptable.
 - U. **Extra material:** 10% for roll goods; one unbroken box (approximately 5 square yards) of carpet tiles to be delivered to Facilities Operations & Management. Maintenance stock should be fresh, full roll width material and not scraps.
 - V. **Shop Drawings Required:** Specify that carpet installation "shop drawings" be provided to show carpet layout, seams, and machine direction. In broadloom carpet, locate seams only in areas with low traffic and minimize the number of seams. Since all carpet has a machine direction due to the manufacturing process, show machine directions on shop drawings and run all carpet "grain" in the same direction. Show changes of grain direction that may be suggested to reduce seams.
- 2.3 **Broadloom Carpet Materials:** Due to the wide variety of possible material selections that will meet the above criteria, additional considerations that should be addressed include:
- A. Color Selection which will affect cleaning cycles.
 - B. Availability of replacement materials for future renovation work.

- C. Pile Type: low pile, tufted level loop carpet with maximum pile height of 1/2" to allow for wheelchair accessibility. Woven carpet will resist wear better over time and is preferred in high traffic areas such as classrooms, stairs, etc.
- 2.4 **Carpet Tile Materials:** Carpet tile is not often used at Dartmouth College, but is sometimes used in high traffic areas such as libraries. When carpet tile is used, the Manufacturer's written recycling policy shall be available prior to final selection.

PART 3 – EXECUTION

- 3.1 **Carpet Tile Installation:** Fully adhere all tiles in all areas with appropriate releasable adhesives to prevent movement and bacterial growth under the carpet tiles.
- 3.2 **Broadloom Carpet Installation:** Use only direct glue down installation. In general, do not use carpet pad or cushion (wet carpet cushion is a major problem at Dartmouth College). There are a few exceptions where carpet cushion is acceptable (example: the President's House). ADA requires a firm cushion, pad or backing, or none at all. Use only 100% Synthetic felt pad 7/16" thick, consisting of needle-punched construction of postindustrial synthetic fiber. Coordinate limitations of the accessibility requirements of the ADA with backing and carpet installation.
- 3.3 Concrete shall be sealed prior to carpet installation.
- 3.4 Carpet installation shall be acceptable where indicated on the approved design documents. Provide molded nosing for lecture hall aisles when carpet is specified. Carpeting shall be direct glue-down.

END OF SECTION 09680