

**SECTION 09 68 00
CARPETING**

PART 1 – INTRODUCTION

1.1 General

- A. This section serves as a specification guideline for providing project design services for the Florida State University (FSU). The design professional shall provide construction documents for related projects and products which comply with the recommendations and requirements contained herein. Any request for clarification or to vary from the section requirements shall be directed to the FSU Project Manager.
- B. The design professional and contractor shall comply with all applicable carpet specification requirements stated herein. No variance from these guidelines shall be approved during the shop drawing process without prior written approval obtained from the FSU Project Manager.
- C. Carpet Design Goals – It is in the best interest of the Florida State University and our environment to utilize products that promote sustainability. Sustainability refers to the longevity of a product, the amount of recycled content, and if the product can be recycled at the end of its life.
- D. FSU reserves the right to test all carpet materials delivered to the site for compliance with specification requirements. The contractor will be liable for replacement should these materials fail testing.
- E. Do not specify carpet on stair treads and risers unless approved in advance. Approvals must be obtained in written format from the carpet manufacturer and the FSU Project Manager. Most manufacturers do not warrant carpet installed on stairs.
- F. Select colors and patterns that alleviate soiled appearance. White and off-white colors are not allowed. Medium to dark colors are preferred. Solid color choices shall be limited to accent areas.
- G. Carpet install direction, pattern, and seaming shall be clearly addressed in drawings and specifications.
- H. Transitions and moldings shall be clearly addressed in the drawings and specifications.
- I. Expansion joint details shall be clearly addressed in the drawings and specifications. Expansion joints shall not be carpeted over unless approved in advance. Approvals must be obtained in written format from the FSU Project Manager.
- J. Carefully evaluate new and existing furniture glides and casters, if applicable, to ensure they are the correct type for the flooring type specified.
- K. Dye lot sizes shall be identified and clearly addressed in the specifications and drawings to prevent multiple dye lots from being installed in one room.

1.2 Product Selection

A. **Product Type:** The design professional shall be responsible for carpet type and color selection. Based on appropriateness of use, design selections shall be made from the following:

1. **Modular Carpet:** Same as hard backed carpet except supplied as individual solid backed carpet squares or planks. Recommended for general use and where additional cleanability, acoustical dampening and durability is desired. Modular carpet is also recommended where frequent carpet replacement is anticipated, where access to the substrate is necessary and where replacement of roll goods is impractical due to obstructions in the space.
2. **Vinyl Cushion Roll Carpet:** 6 ft roll goods, solid backing impervious to moisture - moisture impermeable for high traffic areas where reducing the number of flooring seams is required and where 12 ft rolled goods are impractical due to obstructions in the space.
3. **Broadloom Carpet:** 12 ft rolled goods; solid backing impervious to moisture - moisture impermeable for high traffic areas where reducing the number of flooring seams is required.
4. **Entryway Flooring:** Required at all building entrances subject to high pedestrian or service traffic.

B. **Use of Carpet:** Carpet shall be applied to areas within projects according to the following recommendations:

1. **Very High Traffic Zones** – Use ceramic tile, walk-off carpet, or similar materials in the immediate vicinity of the doorway, elevator entrance or other highly concentrated traffic zone. As traffic concentration begins to be more spread out, transition to carpet using the recommendations below for high traffic zones
2. **High Traffic Zones** – Modular carpet is recommended for high traffic zones where frequent carpet replacement is likely. These zones must be designed carefully and with respect to the challenges of each project, but in general, the design professional should consider modular carpet in corridors, lobbies, atriums, classrooms, aisles, assemblies, lounges and similar spaces. Careful consideration should be given to the conditions of the transition of modular carpet to other types of carpets and flooring types.
3. **Classrooms** – Due to the severe use, likelihood of spills, and acoustical considerations, Vinyl cushion roll and modular carpet are recommended for most classrooms. The backing provides this carpet with much better acoustical properties and is much more impervious to moisture penetration.
4. **Areas with High Sunlight Exposure or Exposure to Bleaching Chemicals** – Use solution dyed carpet for superior color retention and resistance to fading. Provide this carpet as a broadloom, vinyl cushion roll, or modular design, depending on the traffic characteristics of the space, as outlined above. Examples of such areas are atriums, spaces located inside large areas of south or west-facing glass, spaces adjacent to certain laboratories using chemicals with bleaching properties, spaces adjacent

to food prep/service areas and carpeted areas adjacent to janitor's closets and restrooms.

5. **All Other Areas** – Other areas, including offices, can be carpeted with broadloom carpet at the discretion of the design professional but must obtain written approval from the FSU Project Manager in advance. Careful consideration should be given to the use, traffic load, and sunlight exposure of each area in choosing the most effective carpet for that area.

1.3 General Installation Guidelines

- A. The FSU Project Manager shall coordinate an installation schedule with the owner's representative and the contractor to minimize disturbance of the dept's operations.

PART 2 – GENERAL

2.1 Summary

- A. This section includes carpet, carpet adhesive, and carpet accessories.

2.2 Related sections

- A. Section 09 65 00 Resilient Flooring & Accessories (resilient wall base)

2.3 Submittals

- A. **Product Data:** Provide manufacturers complete product data for each type of carpet material, adhesive, and installation accessory as required, including:
 1. Product data and test results as required in section 2.8 and part 3 of this specification.
 2. Product data related to adhesive and other installation accessories.
 3. Indicate type of adhesive (glue down, peel & stick tabs, etc.)
 4. Sub floor preparation instructions.
- B. **Shop drawings:** Provide shop drawings, if required in construction documents, indicating seam locations, location of dye lot changes, tile install direction (quarter turn, ashlar, etc.) and broadloom pile direction for the design professional's approval.
- C. **Design Guideline Compliance:** The carpet manufacturer or specifying design professional shall fill out the "Carpet Compliance Checklist," attached at the end of this document indicating compliance and submit it to the FSU Project Manager assigned to the project.
- D. **Samples:** Provide samples for verification purposes in the manufacturer's standard size, showing full range of color, texture, and pattern variations expected. Provide 2 additional samples (full size modular tiles or 12 x 12 broadloom) to the FSU Project Manager for submittal to FSU Building Services for testing purposes. Prepare samples from the same material to be supplied to the owner.
- E. **Warranties:** The carpet manufacturer shall provide copies of their sample warranties with their bids. See also section 2.9.

2.4 Closeout Submittals

- A. **Maintenance Data:** Submit the manufacturers recommended cleaning, stain removal procedures, and maintenance schedule.

- B. **Warranty:** Must include “proof of purchase” indicating original purchaser, installer, install dates, etc. as required by manufacturer to maintain proof of warranty.
- C. **Recycled Material:** submit the recycled material verification form provided by Marpan Recycling, Tallahassee, FL. See also section 2.7.

2.5 Attic Stock

- A. **Required Overages:** Each project requires a percentage of USEABLE overage of the installed area, as listed below, for each carpet type, color, and pattern; delivered, wrapped and labeled. The carpet manufacturer shall include the required amount of overage in their bids as follows:
 - 1 sy – 500sy ordered = 5% but not less than one carton
 - 501 – 1000sy ordered = 4% but not less than 25sy
 - 1001 – 2500sy ordered = 2% but not less than 40sy
 - 2500sy – higher ordered = 1% but not less than 50sy
 - Broadloom carpet requires a min. single piece size of 12ft x 10ft

2.6 Pre-installation Coordination:

- A. **Pre-installation Meeting:** A pre-installation conference shall be held prior to the removal of existing floor (if applicable) and subfloor preparation. The meeting shall include representatives from FSU Building Services, the sub-contractor that is installing, general contractor or construction manager, the design professional, and the FSU project manager. The following items shall be discussed:
 - 1. Review existing conditions, presence of hazardous materials, existing floor finish removal, and sub floor preparation required.
 - 2. Review installation requirements previously submitted including installation method and direction, adhesives, transitions, and seaming.

2.7 Reclaiming Process:

- A. **Recycling:** All carpet waste shall be recycled per the options listed below.
 - 1. LEED Projects: Follow the design professionals LEED specification for removal and recycling of any carpet waste. If this option is not specifically addressed in a LEED project, then option 2 shall be followed and included in the specifications and construction documents.
 - 2. Non-LEED Projects: The following shall be noted in the specifications and construction documents. If these documents are not required, the following shall be discussed prior to bidding and/or receiving quotes:
 - a) The contractor is responsible for removing carpet waste for recycling using the services of Marpan Recycling, Tallahassee, FL.
 - b) The contractor is responsible for obtaining documentation from Marpan detailing the amount or weight of the material that was able to be recycled. A recycled material verification form shall be supplied to the FSU Project Manager at close out.

2.8 Quality Assurance

- A. **General:** Provide carpet identical to that tested as required below, by independent, approved testing agencies. All carpet supplied to each project under this contract shall comply with applicable testing and inspecting organization for each test required below:

- 1. Fire Performance Characteristics: Provide carpet meeting or exceeding

the following fire performance characteristics or the current requirements of Building Code authorities, whichever is more restrictive.

a) Carpet Surface Burning Characteristics – small scale ignition test (Methenamine Pill Test):

- Test Method: CPSC FF-1-70, 16 CFR Part 1630, or ASTM D-2859
- Rating: Pass.

b) Critical Radiant Flux:

- Test Method: ASTM E-648; NFPA 253.
- Rating: Class I.

c) Smoke Generation Characteristics:

- Test Method: ASTM E-662.
- Rating: 0 - 450.

2. Appearance Retention Characteristics – Provide carpet meeting or exceeding the following:

a) Texture Appearance Retention Rating (TARR):

- Test Method: Carpet and Rug Institute (CRI) Test Method 103 rated in accordance with ASTM D-7330 using ASTM D-5252 (commercial hexapod).
- Rating:
 - I. Severe Use (3.5 min. TARR rating) for corridors, assemblies, entries, lobbies, dining areas, and lounges
 - II. Heavy Use (3.0 min. TARR rating) for conference rooms, classrooms, staff and administration offices

b) Soil Resistance:

- Treatment by fiber manufacturer

c) Stain Resistance:

- Treatment by carpet manufacturer

B. Installer Qualifications: installers shall be approved by the flooring manufacturer and demonstrate a minimum of five (5) years of experience with similar materials, quantities, and complexity.

2.9 **Warranties**

A. Manufacturer: The manufacturer shall supply unrestricted, full replacement non-prorated warranties as listed below:

1. Wear: No more than 10% yarn loss by weight for a minimum of 15 years of carpet under normal use.
2. Edge Ravel: Guaranteed no edge ravel in normal use for a minimum of 15 years of normal carpet use.
3. Tuft Bind: Guaranteed not to zipper for a minimum of 15 years of normal carpet use.

4. Delamination: Primary and secondary backings guaranteed not to delaminate for a minimum of 15 years of normal carpet use.
5. Dimensional Stability: Guaranteed not to lose dimensional stability for a minimum of 15 years of normal carpet use.

B. Contractor/Installer Warranty:

1. The contractor shall give FSU a written, notarized warranty guaranteeing carpet installation and related work for a period of one year after the date of substantial completion. The warranty shall commit the contractor to making all repair and replacement including labor and materials at no cost to FSU.

PART 3 – PRODUCTS

3.1 Modular Carpet and Vinyl Cushion Roll

A. Carpet Materials:

1. Construction: tufted – level or multi-level loop pile.
 - a) Tip shear allowable:
 - 30% or less of the total pattern
 - Projects less than 10,000sf
 - Restricted to corridors not adjacent to entries, conference rooms, staff and administration suite or offices
2. Yarn: Invista Antron Legacy or Invista Antron Lumena type 6,6 nylon
3. Dye method: 100% yarn dyed, 100% solution dyed, or a combination of yarn dyed, and solution dyed.
 - a) Continuous and piece dyed: allowable in projects less than 10,000 sf
4. Pile yarn face weight: 18 oz per square yard or higher measured according to ASTM D-5848.
5. Average pile yarn density: 5500 minimum measured according to HUD/FHA UM-44d
6. Gauge: 1/10, 1/12, 5/64, 1/16, or 1/20, measured according to ASTM D-5793.
7. Stitches per inch: 8.0 minimum measured according to ASTM D-5793.
8. Backing:
 - a) Primary: Tufted – 100% reinforced synthetic, woven or non-woven
 - b) Secondary: High performance, and moisture impermeable

- B. Carpet Adhesive: Provide adhesive by the carpet manufacturer for intended use condition. No substitutions. All adhesive used for modular carpet tile shall be a releasable adhesive.**

3.2 Broadloom Carpet

A. Carpet Materials:

1. Construction: tufted – level or multi-level loop pile.
2. Yarn: Invista Antron Legacy or Invista Antron Lumena type 6,6 nylon
3. Dye method: 100% yarn dyed, 100% solution dyed, or a combination of yarn dyed, and solution dyed.
4. Pile yarn face weight: 18 oz per square yard or higher measured according to ASTM D-5848.
5. Average pile yarn density: 5500 minimum measured according to HUD/FHA UM-44d
6. Gauge: 1/10, 1/12, 5/64, 1/16, or 1/20, measured according to ASTM D-5793.
7. Stitches per inch: 8.0 minimum measured according to ASTM D-5793.
8. Backing:
 - a) Primary: Tufted – 100% synthetic, woven or non-woven
 - b) Secondary: High performance, and moisture impermeable

B. Carpet Adhesive: Provide releasable adhesive by the carpet manufacturer for intended use condition. No substitutions.

3.3 Entryway Flooring

A. Walk off carpet tile:

1. Contains reinforced nylon with polypropylene scraper fibers and yarns to remove dirt soil and moisture from shoes.
2. Moisture resistant hard back modular tile
3. Entrance Mat Systems are not allowed
4. Entrance Grilles & Grids are not allowed

3.4 Acceptable Carpet Manufacturers

A. Manufacturers: Subject to the requirements of this specifications, provide carpet manufacturers as follows:

1. Mohawk
2. Mannington
3. Tarkett
4. Masland
5. Avant
6. Bentley Mills
7. Other, if approved in advance

PART 4 – EXECUTION

4.1 Removal & Installation

A. Comply with manufacturer's requirements, guidelines, and recommendations in order to maintain manufacturer's warranty, including but not limited to:

1. Removal of old adhesive prior to installing new carpet.
2. Priming or encapsulating old adhesive prior to installing new carpet.
3. Preparation of sub floor.
4. Installing over existing resilient floors due to asbestos containing materials is decided by FSU on a case by case basis. Approvals must be obtained in written format from the FSU Project Manager. If a Project Manager is not assigned to the project, then approval shall be obtained from FSU Building Services
 - a) Remove existing wax or floor polish without chemicals and/or prime as required by the manufacturer of new flooring.
 - b) If the existing floor does not contain asbestos it shall always be removed prior to installation of new floor.

4.2 Sub-floor Preparation

A. General:

1. It is the responsibility of the carpet contractor to remove any existing carpet and pad prior to installing new carpet.
2. All surfaces on which the carpet is to be installed shall be clean and free of dust, dirt, and debris. Floors are to be thoroughly swept and vacuumed by the carpet contractor before applying adhesive.
3. Floors shall be free of all wax, grease, paint, oil or any other substance that would create adherence problems. Cracks, pour joints, etc. are to be filled with a top-quality patching compound and finished smoothly. The carpet contractor, through the project construction contractor, shall notify the design professional and the University of any flooring conditions that would prevent the completion of satisfactory work.
4. Any holes, cracks, depressions, or other imperfections shall be filled and brought to a true plane with non-shrinking grout (similar or equal to "Surco" by W.R. Grace and Company).
5. The design professional shall inspect the surface preparation prior to the installation of the carpet.
6. Moisture tests of substrates are required prior to the installation of carpet. A satisfactory reading, conforming to the manufacturer's requirements, shall be obtained before installation is permitted.

4.3 Installation

A. General:

1. Comply with Carpet & Rug Institute (CRI 104) – latest edition of the Carpet Installation Standard.
2. Use low VOC adhesives.
3. Carpet shall not be installed prior to drywall installation.
4. All carpet edges exposed to view shall be finished with a metal strip or molding unless it abuts to a thicker LVT (Luxury Vinyl Tile) meant to eliminate transition moldings.
5. The contractor is responsible for coordinating material delivery and installation with the sequencing of the work. Carpet shall be installed using an installer, installation materials, i.e., adhesives, edging, etc., and methods approved by the carpet manufacturer.
6. All carpet shall be installed in strict accordance with the approved seaming plan and shop drawings.
7. Do not install multiple dye lots within one room.

A. Modular:

1. Contractor shall follow the floor pattern, tile direction, and adhesive type as submitted and outlined in section 2.3 submittals.
2. Ensure straight-square installations by applying at least two perpendicular chalk lines onto the substrate (at a 90-degree angle to each other). These chalk lines should extend the entire length and width of the area to be covered. A laser line can also be utilized for this purpose. The location and intersection point of the chalk lines should be determined to achieve the design intent and reduce waste.
3. Tile in the completed installation should be tight but not compressed with no visible gaps, peaks, or overlaps.
4. Rolling, if required by manufacturer, should be performed to press the tile into the adhesive.
5. Some modular tiles have pre applied adhesives (peel and stick) that have special floor preparation requirements. Consult the carpet manufacturer for recommended installation procedures and the use of primers, if required.

B. Broadloom or rolled goods:

1. Follow manufacturers guideline for installation and seaming.
2. Stretch-in installations are not allowed unless approved in advance. Approvals must be obtained in written format from the FSU Project Manager.
3. Install with the minimum number of seams and carpet sections.
4. All seams shall be finished with a seam sealer approved by the manufacturer of specified product.
5. Avoid seams at major (traffic - turning) pivot points.
6. Carpet shall run lengthwise in the same direction unless specifically noted otherwise.
7. Run major seams parallel to traffic paths, not across.
8. Avoid seams which intersect perpendicular to doorways. Seaming that occurs at doorways shall be run parallel to the opening and centered directly under the door.
9. Cross Joints, which are necessary due to length of rolls, shall be placed to avoid occurring at locations near doors, pivot points, etc.
10. The mill or factory edge on all roll carpet is to be trimmed far enough in from the carpet edge in order to provide a clean and even seam. Manufacturers' recommended cutting methods shall be used.
11. Cut edges on all rolled carpets are to be treated with a seam sealer at the edge of the carpet at the base of the pile and primary backing. On all carpets, excess sealer is to be removed in accordance with the manufacturer's recommendations. To ensure an almost 100% contact with the adhesive, the carpet is to be pressed with a roller or push broom per the manufacturer's standard procedures. Note: carpet with an attached cushion is not to be treated with a floor-covering roller exceeding 30 pounds.

4.4 Cleaning & Protection

A. Post installation: provide the following procedures after materials are installed:

1. As job progresses, any surplus adhesive squeezed out between joints shall be removed.

2. Remove excess adhesive, seam sealer, paint, and other surface blemishes using a cleaner recommended by the manufacturer.
3. Remove defective or long yarns protruding from surface.
4. Vacuum and remove all debris.
5. Any stains remaining shall be removed by approved methods.
6. Upon completion of work, all wall base and edging shall be cleaned, and all foreign materials removed by approved methods.

- B. Damage to the facility or surrounding property incurred by the contractor during any stage of carpet installation shall be repaired and the damaged area restored to its original condition by the contractor at no expense to FSU.

4.5 Project Closeout

- A. Closeout Submittals: the following items are to be submitted to the owner at the end of the project.
1. See Part 2.4 Closeout Submittals
 2. See Part 2.5 Attic Stock