**09681 SHEET CARPETING**

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**SPECIFIER:**
An optional keynote to the Drawings follows major product titles, for A/Es using National CAD Standard.
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PART 1 GENERAL

1.1 RELATED REQUIREMENTS

A. Coordinate sheet carpeting with work before and after. See especially:
   1. Finish on concrete floors 03300
   2. Plumbing floor cover plates with recess for carpet 15431
   3. Electrical and telephone floor cover plates with recess for carpet 16132

1.2 REFERENCES

A. American Society for Testing and Materials (ASTM). Test methods for:
   1. D1335-05 Tuft Bind of Pile Floor Coverings.
   2. D2859-04 Ignition Characteristics of Finished Textile Floor Coverings (includes CPSC FF 1-70).
   4. D5793-05 Binder Sites per Unit Length or Width of Pile Floor Coverings
   5. D6859-05 Pile Thickness of Finished Level Pile Yarn Floor Coverings.
   8. F710-04 Preparing Concrete Floors to Receive Resilient Flooring.
   9. F1869-98 Measuring Moisture Vapor Emission Rate of Concrete Using Anhydrous Calcium Chloride, Method F.

B. American Association of Textile Colorists and Chemists (AATCC):
   1. 134 Static Generation
   2. 138 Antimicrobial Qualities Retention
   3. 16E Colorfastness to Light
   4. 174 Antimicrobial / Fungicidal Activity Assessment of Carpets
   5. 175 Soil and Stain Resistance
   6. 193 Aqueous Liquid Repellency

C. Carpet and Rug Institute (CRI):

D. National Fire Protection Association (NFPA):
   1. 253 Flooring Radiant Panel Test
   2. 258 Tests Smoke Generated

1.3 OVERALL STANDARDS

1.4 QUALITY ASSURANCE

A. Producer Qualifications:
   1. At least 15 years production experience with sheet carpet similar to type specified.

B. Installer Qualifications.
   1. Certified (or trained and approved) by the sheet carpet producer.
   2. At least 5 years demonstrable experience in the installation of commercial sheet and tile carpeting.

1.5 SUBMITTALS

A. Early Submittals. Submit and obtain approval before making other submittals:
   1. Text of Special Warranty, on producer’s corporate letterhead, as will be signed at completion, including duration and recycling guarantee: Submit for approval of A/E and Board.
   2. Certification of Installer. Submit sheet carpet producer’s certification of its installer for approval of A/E and Board

B. Product Data. Specifications for each sheet carpet style, including tests passed; description of adhesive, rubber base, transition strips and edge strips.

C. Selection Samples. Submit samples of sheet carpet in the range of colors and patterns specified for selection of one or more colors and patterns by A/E.

D. Record Samples. Specified sheet carpet, 18x18 in., in the color and pattern selected.

E. Maintenance Manuals (2): Routine care and instructions for removing common stains.

F. Closeout Submittals: Submit executed Special Warranty, producer’s invoice (original or copy as required by warranty), producer’s certification that installer has followed producer’s instructions for installation, and producer’s maintenance instructions.

1.6 SPECIAL WARRANTIES

A. By Producer: In addition to the warranty and correction of work requirements of the General Conditions, provide a written and signed Special Warranty from the sheet carpeting producer (or its Subcontractor), endorsed by Contractor, to correct defects in the sheet carpeting work, including perimeter base and accessory products, as follows:
   1. Correct until date of Substantial Completion of the Work and, without any pro-rating over time, for 15 years after, or for the lifetime of the carpeting, whichever is the published standard of the producer.
   2. Agreeing to replace products having any of the following defects for the duration of the Special Warranty:
      a. Excessive surface wear, defined as losing more than 10% of pile face fiber by total fiber weight;
      b. Carpet tile generating static build-up greater than 2.0 kV;
      c. Carpet tile losing its tuft or fibers due to defective tuft bind;
      d. Carpet tile ravelling at its edges or delaminating from its backing;
      e. Carpet tile developing mold before any mold development in building walls, ceilings or HVAC system.
3. Exclusions: Damage from inflicted abuse, traffic by heavy wheeled equipment or shoe cleats, improper maintenance, excessive moisture in floor slab, or from mold that develops because of mold that has infected other parts of building.

4. Recycling guarantee: The installer must coordinate with the Producer/Manufacturer to recycle any existing carpet. The manufacturer supplying carpet must recycle or provide waste to energy alternatives for carpet. The installer must prepare carpet as requested by the supplying manufacturer. No carpet shall be placed in any dumpster nor shall carpet be left on any job site unless approved in writing by the Board. The Installer is advised to call the supplying manufacturer to incorporate any costs necessary to recycle the existing materials. The Board shall not incur any additional costs or change orders for the recycling.

B. By Installer: In addition to the warranty and correction of work requirements of the General Conditions, provide a written and signed Special Warranty from the sheet carpet installer (or Subcontractor), endorsed by Contractor, to correct defects in sheet carpet and perimeter base installation, including perimeter base and accessory products, as follows:
1. Correct for 2 years after date of Substantial Completion of the Work.
2. Agreeing to correct by reinstalling work having these defects, providing new products as needed:
   a. Improperly oriented and defectively cut or seamed pieces.
   b. Lifting, doming or puckering, trip hazard at edges;
   c. Improperly applied adhesive, squeezed-up adhesive;
   d. Loss of adhesion of sheet carpet to concrete.
3. Excluding Manufacturing defects in carpet tile; cracks imparted by substrate movement; damage from inflicted abuse, loss of adhesion from excessive substrate moisture in floor slab.

PART 2 PRODUCTS

2.1 SHEET CARPET WITH UNITARY BACKING

A. Description. Tufted level loop nylon pile carpet on unitary, non-cushion backing.
   1. Face yarn: Nylon fiber, branded, continuous filament, soil hiding, such as Antron Lumena, Eco Solution Q, or Ultron VIP.
   2. Yarn dyeing: 100% solution dyed, not yarn or piece dyed.

************ SPECIFIER: Only the Shaw carpets specified here are normally produced with anti-microbial treatment. If this treatment is wanted for all carpets, specify as follows after confirming availability with producers. ************

- Anti-microbial treatment during yarn manufacture: Provide so as to achieve at least 90% reduction of anti-bacterial and anti-fungal activity; AATCC 174.
- Anti-microbial qualities retention: Provide anti-microbial treatment that will retain anti-bacterial and anti-fungal qualities after carpet has been washed 15 times; AATCC 138.

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4. Static control: Permanent integral, not coated, static control feature
5. Backing: A unitary backing such as Everbond EX, Tekloc, or UltraLok.
6. Finished pile yarn weight: 27 to 29 oz/yd².
8. Pile thickness: 0.140 to 0.250 in.; ASTM D6859.

B. Standards.
1. Soil / Stain Resistance: Stain inhibiting chemical applied during manufacture of yarn (not afterward). Soil / stain resistance levels:
   a. At least 6; AATCC 175, Red 40 Stain Scale.
   b. At least 3: AATCC 195.
2. Recycled content:
   a. Fiber: At least 25% by weight.
   b. Backing: At least 20% by weight.
3. Peak electrostatic charge: 2.0 kV maximum; AATCC 134 (step & scuff method).
4. Colorfastness to light: Contrast score of Grade 5 or higher (Gray Scale) as tested by comparing exposed and unexposed carpet samples after an exposure of 60 AFU; AATCC 16E.
5. Tuft bind: Not less than 14.00 lb; ASTM D1335.
6. Wear: Hexapod walker score of 3 to 5; ASTM D5252.
7. Radiant panel fire test: Critical radiant flux, when adhered to cement board, of at least 0.45 W/cm²; ASTM E648.
8. Smoke density test: Optical density <350 in flaming mode; ASTM E662.
9. Methanamine pill flammability test: Must pass, following CPSC FF 1-70; ASTM D2859.
11. ADA status: Carpet shall be ADA compliant.

C. Product / Producer.

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2.2 RUBBER BASE

A. Description. Rubber (not vinyl),
   1. Height: 4 in. unless 6 in. is shown on the Drawings.
   2. Profile: Plain bottom unless otherwise shown on Drawings.
   3. Outside and inside corners: Permanently form corners with no joint within 4 in. of corner. Do not use premolded corner pieces.
   4. Color: As selected for each carpet color by A/E from the base producer’s full palette of colors.
   5. Base adhesive: Waterproof, non-toxic, low-VOC, light colored, formulated for maximum adhesion of rubber base.

B. Standard: ASTM F1861, Type TS, Group 1, Style A.
C. Product / Producer. Burke Mercer, Flexco, Johnsonite, RCA, or Roppe.

2.3 ACCESSORIES

A. Leveling Compound: Polymer-fortified cement-based compound with pH <9.0.

B. Carpet Adhesive and Seaming Cement: Water-based, water-resistant, antimicrobial, non-toxic, compliant with latest CRI Green Label Plus Adhesive Emissions Test Criteria, non-flammable, light colored or clear.
   1. Adhesive shall not be easily displaced by furniture moving or easily lifted by unauthorized persons, however it shall be releasable without spudding.
   2. Product: 220, by Mapei, or as recommended by carpet producer.

C. Aluminum Transition and Edge Strips: Gently tapered profile, at least 2 in. wide that will grip the edge of carpet without going above adjacent pile height.
   1. Fasten strips over concrete with shielded stainless steel or brass screws.
   2. Product: Strips as produced by Pemko, Reese, or Zero.

D. Rubber Transition and Edge Strips: With gently tapered profile, 1-1/2 to 2-1/2 in. wide that do not go above carpet pile height. Not vinyl. As produced by Roppe.

PART 3 EXECUTION

3.1 EXAMINATION AND PREPARATION

A. Field Conditions. Verify that slabs are ready to receive sheet carpet.
   1. Floors shall be smooth, cured, clean, and laitance-free, with temperature from 60 to 80 °F and pH <9.0.
   2. Verify that substrate is free of sealers, curing compounds, hardeners, old adhesive, and other substances that interfere with bond of carpet to substrate.

B. Moisture Test.
   1. Between 14 and 21 days before the date of tile installation, perform moisture tests on each area in which carpet will be placed.
      a. At slabs on grade. One test for each 4000 ft² area.
      b. At elevated slabs. One test at 2nd Floor and one additional test at highest floor receiving carpet in buildings that are 3 floors or taller.
   2. Follow ASTM F710 and perform calcium chloride tests using CaCl₂ as weighed in laboratory; ASTM F1869.
   3. From tests, determine each area’s moisture vapor emission rate (MVER) (the H₂O emitted in 24 h from a 1000 ft² area). The MVER figure shall be less than 3.5 lb.

C. Correct defects and bad conditions discovered during examination. Grind down ridges and other irregularities. Make edges of abutting flooring finishes smooth and clean. Fill depressions, level changes, cracks, and holes with leveling compound.
   1. If an adjoining floor finish will be the slightest distance above the face of the carpet, trowel a ramp back at least 1 ft from its edge so that the carpet face will be slightly above – not even with or below – the other finish.
3.2 INSTALLATION

A. Install carpet following producer’s current published recommendations and instructions, except as more stringently specified herein.

B. Install carpet at 60 – 85 °F air temperature, under ventilated, dry, dust-free conditions.
   1. Condition carpet to site conditions for at least 72 hours before installing.
   2. Verify carpet color match between rolls before installing.
   3. Vacuum floors free of grit before installing carpet, then damp mop and let dry.

C. Extend carpet into toe spaces, door reveals, closets, and other similar departures from straight room boundaries. Provide edge strips at doors.

D. Orient carpet rolls and pieces so that adjacent pile runs in the same direction. Line up pattern repeats from piece to piece.

E. Scribe, cut without fraying, and fit carpet to butt tightly at vertical surfaces, built-ins, pipes, outlets, edgings, thresholds and nosings.
   1. Bind cut edges that are not covered by an edge strip, except where an edge is tightly butted against a wall or rubber base.
   2. Cover each carpet edge with an aluminum edge strip where traffic can occur. Use rubber strips only where screw attachment of aluminum strips is impractical.
   3. Locate edge strips in doorways to fall under the closed door.

F. Set carpet in ample and uniform adhesive coat using notched trowel. Remove excess adhesive from floor, base and wall surfaces.

G. Cut protruding yarns with sharp scissors. Vacuum clean the carpet installation using a commercial machine with a rotating brush head.

H. Protect carpet against damage and soiling from construction and furniture / equipment placing until time of Substantial Completion of the Work. Use undyed, untreated roll paper and secure to prevent lifting.

3.3 FIELD QUALITY CONTROL

A. The Board will select a 1 yd² piece of carpet, randomly from a roll end or other waste, for testing for compliance with the Contract Documents. Testing will be performed by MDCPS Testing Lab.

B. Retesting disputed tests and the replacement of defective carpet shall be at Contractor’s expense. ///