

SECTION 096813 - TILE CARPETING

PART 1 – GENERAL

1.01 SUMMARY

- A. Related Documents: Drawings and general provisions of the Contract.
- B. As part of the institution's sustainability strategy, the owner intends to create a circular economic for as much of its facilities supply chain as possible. A key part of that circular economic model includes the owner's plans to recycle 100% of their existing and future plastic flooring inventory as it becomes available for replacement. Depending on the deferred maintenance cycle (10-15 years), the effort will result in the institution moving the physical footprint to a carbon free, glue free, floor prep free, incineration free flooring program.
- C. The owner recognizes the existence of embodied carbon inside building materials and is intent on working to lower those Scope 3 emissions whenever possible.
- D. The successful manufacturer will have implemented a focused and systematic effort to reduce their overall environmental footprint. In order to eliminate greenwash, the manufacturer must be able to clearly articulate their company-wide goals and achievements with specific performance against historical benchmarks.
- E. Execution of this circular economic model will result in the elimination of tons of carbon emissions, carpet landfill burden, constructive use of tons of additional recycled content, the elimination of glue buckets and reduced floor prep expenses.
- F. This is a *non-proprietary* specification. However, owner reserves the right to analyze all products using metrics that truly matter, and ultimately use the most environmentally friendly alternative submitted.

1.02 SUBMITTALS

- B. Shop drawings shall be submitted to Architect/Owner for approval prior to installation of floor. Randomly installed modular products are preferred due to elimination of dye lots, minimization of waste and ease of repair/replacement. Manufacturer will inform Architect/Owner of projected trim waste on project prior to bid. Copy of approved shop drawings to be available on job site during installation.
- C. Floor schedule using same room designations indicated on drawings.
- D. Product Data: Provide data on specified products, describing physical and performance characteristics, sizes, patterns, colors available, method of installation and sustainability attributes.
- E. Verification Samples: Submit samples illustrating color and pattern for each carpet material specified.

- F. Manufacturer's Installation Instructions
- G. Maintenance Data: Include maintenance procedures, recommendations for maintenance materials and equipment, suggested schedule for cleaning and include any information relative to water use, contamination and runoff.
- H. Manufacturer's Product Warranty: **15 years from date of Substantial Completion.**
- I. Carbon Neutral Certificate stating how many tons of embodied CO2 are sequestered.

1.03 QUALITY ASSURANCE

A. Manufacturer Qualifications

1. Company specializing in manufacturing specified carpet with minimum 15 years documented experience in the production of modular carpet.
2. Upon request, manufacturer to provide representative to assist in project start-up and to inspect installation while in process and upon completion. Representative will notify designated contact if any installation instructions are not followed.
3. Manufacturer must provide verification of its registration to the ISO 9001 Quality Management System
4. Manufacturer must state (as a submittal) their total company's improvement of, or reduction in the following environmental categories (global footprint), over the last ten years minimum:
 - a) Product carbon footprint
 - b) Overall energy reduction
 - c) Percent of renewable energy used (of total energy consumption)
 - d) GHG emissions at all manufacturing sites
 - e) Raw materials from bio-based or recycled materials
 - f) Water Use
 - g) Post-consumer carpet diverted from landfill
 - h) Manufacturing waste sent to landfill

B. Installer Qualifications

1. Flooring contractor to be a specialty contractor normally engaged in this type of work and shall have prior experience in the installation of these types of materials.
2. Flooring contractor possessing Contract for the product installation shall not sub-contract the labor without written approval of the Project Manager.
3. Flooring contractor will be responsible for proper product installation, including floor testing and preparation as specified by the manufacturer.

5. Flooring contractor to provide Owner a written installation warranty that guarantees the completed installation to be free from defects in materials and workmanship for a period of one year after job completion.
6. Flooring contractor to provide Owner a report of all recycling activity.

1.04 DELIVERY, STORAGE, & HANDLING

- A. Deliver materials to the site in manufacturer's original packaging listing manufacturer's name, product name, identification number, and related information.
- B. Store in a dry location, between 65 degrees F and 90 degrees F and a relative humidity below 65%. Protect from damage and soiling.
- C. Make stored materials available for inspection by the Owner's representative.
- D. Store materials in area of installation for minimum period of 48 hours prior to installation.

1.05 PROJECT CONDITIONS

- A. Sub-floor preparation is to include all required work to prepare the existing floor for installation of the product as specified in this document and Manufacturer's installation instructions.
- B. All material used in sub-floor preparation and repair shall be recommended by the carpet manufacturer and shall be chemically and physically compatible with the carpet system being bid.
- C. Maintain minimum 65 degrees F ambient temperature and 65% Relative Humidity for 72 hours prior to, during, and 48 hours after installation.
- D. Do not install flooring until space is enclosed and weatherproof, wet-work in space is completed and nominally dry, work above ceilings is complete, and ambient temperature and humidity conditions are and will be continuously maintained at values near those indicated for final occupancy.

1.06 EXTRA MATERIALS

- A. Provide additional 5% carpet for "attic stock"

PART 2 – PRODUCTS

2.01 RECYCLED CONTENT

- A. The highest post-consumer recycled content is preferred in both backing and fiber. If post-consumer content is not available, consideration will be given to the product with highest post-industrial content.
- B. Manufacturer must clearly itemize the amount of post-consumer content v. post-industrial content.

- C. Recycled content must be certified by a neutral, independent, third party organization.

2.02 RECYCLABILITY & RECYCLING PROGRAM

- A. Product should be one hundred percent (100%) closed-loop recyclable back into flooring.
- B. Flooring must be installed glue free without full spread wet adhesives to prevent backing contamination and allow for "clean recycling". Products whose removal requirements or processes may damage sub-floor will not be considered.
- C. Manufacturer must maintain and operate a recycling effort capable of reclaiming and recycling 100% of installed carpet. First choice is repurposing, provided carpet is in usable condition. Second choice is closed loop recycling turning carpet into carpet. Third choice is waste to energy. In all cases, landfill is the last alternative is landfill. A written plan, in accordance with this options, must be approved by owner in writing prior to award.

2.03 PRODUCT WARRANTY

- A. Warranty to be sole source responsibility of the Manufacturer.
- B. If the product fails to perform as warranted when properly installed and maintained, the affected area will be repaired or replaced at the discretion of the Manufacturer.
- C. Chair pads should not be required as a condition of warranty.
- D. Warranty shall not exclude carpet product installed on stairs provided it is properly installed and maintained.
- E. The 15 year non-prorated warranty shall specifically warrant:
 - 1. Against loss of more than 10% by weight of face fiber
 - 2. Against edge ravel, backing separation, shrinking, stretching, cupping, doming and
 - 3. Against excessive static electricity
 - 4. Antimicrobial effectiveness.
 - 5. 100% solution dyed yarns against excessive color loss

2.04 FIBER

- A. Nylon Fiber: 100% Solution Dyed Bulked Continuous Filament (BCF) Nylon Type 6 or Type 6,6
- B. Modification ratio of 2.2 or less.
- C. Carpet with yarn dyed (100% or blends), piece-dyed or printed fiber should be avoided due to potential loss of color and unnecessary water usage, resulting effluents and energy consumed in manufacturing process.

- D. 100% non-virgin fiber is preferred.
- E. Stain inhibitor should be applied to the fiber during fiber manufacturing to resist staining and soiling.

2.05 BACKING CHARACTERISTICS

- A. Backing should be inherently stable, free lay and require little to no wet adhesion applied to subfloor, thereby eliminating any future floor preparation expenses for the owner. The product should be installed without glue such that backing contamination does not occur and easy removal, reclamation and clean recycling into new carpet tile can be expedited.
- B. Primary Backing: Non-woven synthetic, latex and preservative protection
- C. Secondary Backing: Thermoplastic with fiberglass reinforcement. An operational recycling technology of this backing system must be in place and commercially available for consideration.
- D. Product Size: 50cm by 50cm, 1m by 50cm, 1m by 25 cm, 1m by 1m. All products must be interchangeable inside a consistent grid: soft & hard surface
- E. Impervious to moisture
- F. No delamination

2.06 PERFORMANCE CHARACTERISTICS

- A. Test reports for the following performance assurance testing to be submitted upon request.

Submitted results shall represent average results for production goods of the referenced style. Requirements listed below must be met by all products.

1. Flooring Radiant Panel
ASTM E-648 / NFPA 253: Class 1 (CRF: 0.45 watts/sq cm or greater)
2. Federal Flammability
CPSC FF 1-70: Passes
3. Smoke Density
ASTM E-662 / NFPA 258: < 450 Flaming Mode
4. Electrostatic Propensity
AATCC 134 (Step & Scuff): 3.0 kV or less
5. Lightfastness
AATCC 16E: 4 @ 100 hours solution dyed
6. TARR
3.0 Minimum
7. Dimensional Stability
ISO 2551/ASTM D 7570 Dimensional Stability <.10%

2.07 PRODUCT MANUFACTURING SPECIFICATIONS

J+J Flooring
(404) 747-7731
3404 Oakcliff Rd # C1, Atlanta, GA 30340

Manufacturer will meet the following construction requirements:

- A. Construction: Tufted
- B. Gauge: 12th Gauge
- C. Dye Method: 100% Solution Dyed
- D. Dye Lots: Guaranteed mergeable
- E. Preservative: Permanent, organically based, compounded in primary backing layer
- F. Carbon Footprint: Neutral, as certified by 3rd party, across the full life cycle

Substitutes/Alternates

Subject to compliance with all requirements, "or equal" must match the selected colors, have similar aesthetic appearance. Substitution sample and submittals must be submitted for written approval of quality and color at least ten days prior to bid to be considered.

2.08 PRODUCT ENVIRONMENTAL SPECIFICATIONS

Manufacturer will provide data establishing the fact that their products are *equal to or below the industry average* for carpet tiles in the following categories, as denoted by publicly available third party certified Environmental Product Declarations (Per 3rd party verified Environmental Product Declaration following ISO 14025 guidelines, EPD with Product Category Rules (PCR) for Building-Related Products and Services - Part A: Calculation rules for the LCA and Requirements Project Report.

- A. Embodied Carbon (global warming potential, GWP kg CO₂ equivalents)
- B. Ozone Layer Depletion (ozone depletion potential, ODP kg CFC-11 equivalents)
- C. Acid Rain (acidification potential of land and water, AP kg SO₂ equivalents)
- D. Water pollution from nitrogen and phosphorus fertilizers (eutrophication potential, EP kg N equivalents)
- E. Smog (smog formation potential, SFP kg O₃ equivalents)

Substitutes/Alternates

Subject to compliance with all requirements, "or equal" must have similar sustainability characteristics. Substitution sample and submittals must be submitted for written approval of quality and color at least ten days prior to bid to be considered.

2.09 ACCESSORIES

- A. Materials recommended by Manufacturer for patching, priming, etc.
- B. Transition strip free installation required. Carpet and hard surface of comparable total thickness should be installed adjacent to each other free of transition strips.

2.10 INSTALLATION ACCESSORIES

- A. Trowelable Leveling and Patching Compounds: Latex-modified, hydraulic-cement-based formulation provided or recommended by carpet tile manufacturer.
- B. Adhesives: Water-resistant, mildew-resistant, nonstaining, pressure-sensitive type to suit products and subfloor conditions indicated, that complies with flammability requirements for installed carpet tile and is recommended by carpet tile manufacturer for releasable installation.

PART 3 EXECUTION

3.01 EXAMINATION / PREPARATION

- A. Prepare sub-floor to comply with criteria established in Manufacturer's installation instructions. Use only preparation materials that are acceptable to the Manufacturer.
 - 1. Remove all substances from sub-floor that would interfere with or be harmful to the installation.
 - 2. Remove sub-floor ridges and bumps. Fill cracks, joints, holes, and other defects.
- C. Verify that sub-floor is smooth and flat within specified tolerances and ready to receive carpet
- D. Verify that substrate surface is dust-free
- E. Verify that concrete surfaces are ready for installation by conducting moisture and pH testing. Results must be within limits recommended by Manufacturer.
- F. There will be no exceptions to the provisions stated in the Manufacturer's installation instructions.

3.02 INSTALLATION - GENERAL

- A. Install product in accordance with Manufacturer's installation instructions.
- B. Adhesive must meet the requirements of CRI's Green Label Plus program for adhesive. Provide documentation.
- C. Installation methodology will be VOC friendly for both installers & occupants of building
- D. Trim carpet neatly at walls and around interruptions.

3.03 PROTECTION & CLEANING

- A. Remove excess adhesive and/or seam sealer from floor and wall surfaces without damage.
- B. All rubbish, wrappings, debris, trimmings, etc. to be removed from site and recycled or disposed of properly.
- C. Clean and vacuum surfaces using a beater brush/bar commercial vacuum.
- D. After each area of is installed, protect from soiling and damage by other trades.

3.04 RECYCLING

1.1 Scope of Work

Owner requires that existing carpet being removed and carpet trim waste from new installation be recycled in the best possible manner. A reclamation plan will be submitted to owner for approval at start of work. Said plan will provide directions for the reclamation of recyclable carpet at the job site.

- A. First choice is repurposing, provided carpet is in usable condition
- B. Second choice is closed loop recycling turning carpet into carpet
- C. Third choice is waste to energy
- D. Last alternative is landfill

1.2 Description of Services Collection (Labor): Carpet must be removed from the existing installation and prepared for pickup based on the type of material and reclamation option selected. Specifications for removal from the job site are as follows:

A. Removal of carpet tile for recycling

1. Carpet tile must be palletized and secured for shipping; shrink wrapped, banded, strapped.
2. Pallets must be a minimum size of 40"x40" and material stacked approximately 54" high.
3. Pallets cannot be double stacked in the trailer.
4. Tile must be kept dry and free of any moisture damage.
5. Trailers must be free of any non-carpet debris, construction waste, cardboard boxes, trash.
6. Material must not contain mold or mildew.
7. Wet carpet will not be accepted.
8. Material must not contain vinyl asbestos or adhesives containing asbestos.

B. Removal of broadloom carpet for recycling

1. Less than full truckload quantities of broadloom (<3,000 yds) will need to be cut or rolled and secured to a pallet by shrink wrap or banding. Pallets must be a minimum size of 40"x40".
2. Full truckload quantities of broadloom (>3,000 yds) should be rolled and secured. The rolls should be neatly placed and stacked in the trailer.

3. Wet carpet will not be accepted.
4. Containers must be free of any non-carpet debris, construction waste, cardboard boxes, trash.
5. Material must not contain tac strips or metal staples.
6. Material must not contain mold or mildew.
7. Material must not contain vinyl asbestos or adhesives containing asbestos.

Material Loading: Shipper must load material on the carrier; drivers will not assist. Notification must be given prior to quote submittal of any special requirements such as liftgate, small trucks, etc. Additional fees will apply. Processing: All possible recycling options must be clearly presented and/or submitted on paper subsequent to job start. The accepted reclamation option must be approved in writing by the party requesting the services.

Certification: A certificate verifying the reclamation of the carpet and the pounds of material diverted from the landfill will be furnished upon request.

END OF SECTION 096813