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SECTION 096816 - SHEET CARPETING

1. GENERAL
	1. RELATED DOCUMENTS
		1. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.
	2. SUMMARY
		1. Section Includes:

Tufted broadloom sheet carpet.

* + 1. Related Requirements:

Section 024119 "Selective Demolition" for removing existing floor coverings.

**Section 096513 "Resilient Base and Accessories"** for resilient wall base and accessories installed with carpet.

Section 096813 "Tile Carpeting."

* 1. PREINSTALLATION MEETINGS
		1. Pre-installation Conference: Conduct conference at [**Project site**] <**Insert location**>.

Review methods and procedures related to carpet installation including, but not limited to, the following:

Review delivery, storage, and handling procedures.

Review ambient conditions and ventilation procedures.

Review subfloor preparation procedures.

Follow manufacturer's broadloom sheet carpet installation guidelines and/or Carpet and Rug Institute Installation Standard 2011 where applicable.

* 1. ACTION SUBMITTALS
		1. Product Data: For each type of product.

Include manufacturer's written specifications and lab documents for any physical testing.

Include installation recommendations for each type of substrate as specified in carpet manufacturer's installation guidelines and/or Carpet and Rug Institute Standard 2011, where applicable.

Include carpet maintenance recommendations as outlined by manufacturer.

Carpet manufacturer shall also submit a plan for recycling the specified carpet at the end of the useful life of the carpet.

Carpet: For each type indicated. Include manufacturer's written data on physical characteristics, durability, and fade resistance.

Carpet Cushion: For each type indicated. Include manufacturer's written data on physical characteristics and durability.

* + 1. LEED Submittals:

Product Data for Credit EQ 4.3 and 4.1:

For carpet, documentation indicating compliance with testing and product requirements of CRI's "Green Label Plus" program and SCAQMD.

For installation adhesive, documentation including printed statement of VOC content.

2. Product Data for Credit MR 4:

For carpet, documentation indicating pre-consumer, post-consumer, and total recycled content.

* + 1. Shop Drawings: Show the following:

Columns, doorways, enclosing walls or partitions, built-in cabinets, and locations where cutouts are required in carpet.

Carpet type, color, and dye lot.

Locations where dye lot changes occur.

Seam locations, types, and methods.

Type of subfloor.

Type of installation.

Pattern type, repeat size, location, direction, and starting point.

Pile direction.

Type, color, and location of insets and borders.

Type, color, and location of edge, transition, and other accessory strips.

Transition details to other flooring materials.

* + 1. 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.

Carpet: 12-inch square Sample.

Exposed Edge, Transition, and Other Accessory Stripping: 12-inch long Samples.

Carpet Cushion: 6-inch square Sample.

Carpet Seam: 6-inch Sample.

Mitered Carpet Border Seam: 12-inch square Sample. Show carpet pattern alignment.

* + 1. Product Schedule: For carpet. Use same designations indicated on Drawings.
		2. Sustainability: Provide the Statement of the Achievement Level the carpet has attained for Gold or Platinum points, based on specific Sustainable Attribute Performance for all product stages according to ANSI/NSF 140.
	1. INFORMATIONAL SUBMITTALS
		1. Qualification Data: For qualified Installer.
		2. Product Test Reports: For carpet, for tests performed by a qualified independent testing agency.
	2. CLOSEOUT SUBMITTALS
		1. Maintenance Data: For carpet to include in maintenance manuals. Include the following:

Methods for maintaining carpet, including cleaning and stain-removal products and procedures and manufacturer's recommended maintenance schedule.

Precautions for cleaning materials and methods that could be detrimental to carpet.

* 1. QUALITY ASSURANCE
		1. Manufacturer Qualifications: Carpet manufacturer shall have no less than 5 years experience of producing recyclable carpet and shall have published product literature clearly indicating compliance with requirements of this section.

Commitment to Sustainability: Carpet manufacturer must practice environmental responsibility through programs of recycling, reuse, conservation, and source reduction. Manufacturer should have a public demonstration of such efforts through reporting documents such as an annual sustainability report that contains third party verification and confirmation.

* + 1. Installer Qualifications: An Installer with a minimum of 5 years of commercial carpet installation experience, and who is certified by the International Certified Floorcovering Installers Association at the [**Commercial II**] [**Master II**] <**Insert description**> certification level.
		2. Fire-Test-Response Ratings: Where indicated, provide carpet identical to those of assemblies tested for fire response per NFPA 253 by a qualified testing agency.
		3. Mockups: Build mockups to verify selections made under Sample submittals and to demonstrate aesthetic effects and set quality standards for fabrication and installation.

Build mockups at locations and in sizes shown on Drawings.

Subject to compliance with requirements, approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

* 1. DELIVERY, STORAGE, AND HANDLING
		1. Comply with carpet manufacturer's installation recommendations and the Carpet and Rug Institute Installation Standard 2011 where applicable.
	2. FIELD CONDITIONS
		1. Comply with carpet manufacturer's installation recommendations and the Carpet and Rug Institute Standard 2011 for temperature, humidity, and ventilation limitations.
		2. Environmental Limitations: Do not deliver or install carpet until spaces are enclosed and weather tight, wet work in spaces is complete and dry, and ambient temperature and humidity conditions are maintained at occupancy levels during the remainder of the construction period.
		3. HVAC system should be operational and running prior to carpet installation and should remain running after carpet installation.
		4. Do not install carpet over concrete slabs until slabs have cured, and are sufficiently dry to allow bond between adhesive and concrete, and Concrete slabs should have moisture and pH readings that are within specified tolerance of the adhesive to be used.
		5. Where demountable partitions or other items are indicated for installation on top of carpet, install carpet before installing these items.
	3. WARRANTY
		1. Special Warranty for Carpet: Manufacturer agrees to repair or replace components of carpet installation that fail in materials or workmanship within specified warranty period.

Warranty does not include deterioration or failure of carpet due to unusual traffic, failure of substrate, vandalism, or abuse.

Failures include, but are not limited to, more than 10 percent loss of face fiber, edge raveling, dimensional stability, excess static discharge, loss of tuft bind strength, delamination, stain removal, colorfastness to light, and colorfastness to atmospheric contaminants.

Carpet and fiber must be manufactured and warrantied by same manufacturer.

Warranty Period: Lifetime Limited Commercial Warranty from date of Substantial Completion.

1. PRODUCTS
	1. TUFTED BROADLOOM SHEET CARPET
		1. Basis-of-Design Product: Subject to compliance with requirements, provide Patcraft Cosmic EPBL I0277 or comparable product by one of the following:

<**Insert manufacturers' names**>.

<**Insert manufacturers' names**>.

* + 1. Source Limitations:

Single Source Responsibility: Provide products that have components manufactured by a single source, i.e. fiber and backing, as well as final carpet product, should be manufactured and warranted by same company.

Commitment to Sustainability: Carpet manufacturer must practice environmental responsibility through programs of source reduction, recycling, reuse, and conservation.

* + 1. Color: As selected by Architect from manufacturer's full range.
		2. Pile Characteristics: Pattern Loop pile.
		3. Fiber Content: 100 percent trilobal, minimum 24 denier per filament (DPF) nylon 6. Fiber must contain a minimum of 45 percent recycled content (20 percent pre consumer recycled content and 25 percent post consumer recycled content.
		4. Fiber Name: Eco Solution Q Nylon.
		5. Dye Method: 100 percent solution dye.
		6. Gauge: 1/10.
		7. Stitches: 11.5.
		8. Pile Thickness: 0.099 for finished carpetper ASTM D 6859.
		9. Surface Pile Weight: 24 oz./sq. yd.
		10. Density: 8727 oz./cu. yd.
		11. Primary Backing: Woven synthetic.
		12. Secondary Backing: 100 percent thermoplastic polyolefin compound with a reinforcing layer.
		13. Backing System: EcoWorx Performance Broadloom.
		14. Width: 12 feet.
		15. Applied Soil-Resistance Treatment: SSP Shaw Soil Protection.
		16. Texture Appearance Retention Rating (T.A.R.R.): Severe.
		17. Recycling Requirements:

Total Carpet Product Recycled Content:

Pre-Consumer Recycled Content: 7.5 percent.

Post-Consumer Recycled Content: 22.3 percent.

Total Recycled Content: 29.8 percent.

Recycled Content: Preference will be given to manufacturer's recycling 100 percent of reclaimed broadloom carpet back into broadloom carpet with recycled content.

Carpet Disassembly and Recycling: Carpet capable of disassembly and recycling, with nylon being recycled into nylon and backing being recycled into backing.

Carpet product must meet guidelines of Presidential Executive Order 13101, and must meet the spirit of section 6002 of the Resource and Recovery Act (RCRA).

* + 1. Performance Characteristics: As follows:

Critical Radiant Flux Classification, Flooring Radiant Panel ASTM E 648: Not less than 0.45 W/sq. cm.

Smoke Density: Less than 450 per ASTM E 662.

Methanamine Pill Test CPSC FF1-70: Must pass pill test.

Tuft Bind: Not less than 6.25 lbf per ASTM D 1335.

Delamination: Not less than 2.5 lbf/in. per ASTM D 3936.

Colorfastness to Atmospheric Contaminants: Not less than 4, per AATCC 164.

Colorfastness to Light: Not less than 4 after **60** AFU (AATCC fading units) per AATCC 16, Option E.

Electrostatic Propensity: Less than 3.5 kV per AATCC 134.

Emissions: Provide carpet that complies with testing and product requirements of Carpet & Rug Institute's "Green Label Plus" program.

* 1. INSTALLATION ACCESSORIES
		1. Trowelable Leveling and Patching Compounds: Latex-modified, hydraulic-cement-based formulation provided or recommended by carpet manufacturer.
		2. Trowelable Adhesives: Water-resistant, mildew-resistant, non-staining, premium grade type to suit products and subfloor conditions indicated, that complies with flammability requirements for installed broadloom sheet carpet and is recommended by carpet manufacturer for installation.

Shaw 3500 or available equivalent where slab moisture does not exceed 85 percent per ASTM F 2170 or 5 lbs per ASTM F 1869. Where moisture does not exceed 85 percent and anti-microbial protection is required, use the Shaw 3600 adhesive or available equivalent. Where moisture exceeds 85 percent or 5 lbs but does not exceed 90 percent or 8 lbs, use Shaw 3400 adhesive or available equivalent.

Use adhesives with VOC content not more than 50 g/L when calculated accord.ng to 40 CFR 59, Subpart D (EPA Method 24).

Use adhesives that comply with the product requirements of the California Department of Health Services' "Standard Practice for the Testing of Volatile Organic Emissions from Various Sources Using Small-Scale Environmental Chambers."

Adhesives shall comply with the testing ad product requirements of the carpet and Rug Institute Green Label Plus Program.

* + 1. Tackless Carpet Stripping (Where a Stretch in Installation is Required): Water-resistant plywood, in strips as required to match cushion thickness and that comply with manufacturer's modular carpet installation guidelines and/or Carpet and Rug Institute Installation Standard 2100 where applicable.
		2. Seam Adhesive: Hot-melt adhesive tape or similar product recommended by carpet manufacturer for taping seams and butting cut edges at backing to form secure seams and to prevent pile loss at seams. Seal seams using a premium grade seam sealer such as the Shaw 8300.
		3. Metal Edge/Transition Strips: Extruded aluminum with [**mill**] <**Insert finish**> finish of profile and width shown, of height required to protect exposed edge of carpet, and of maximum lengths to minimize running joints.
1. EXECUTION
	1. EXAMINATION
		1. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for maximum moisture content, alkalinity range, installation tolerances, and other conditions affecting carpet performance. Examine carpet for type, color, pattern, and potential defects prior to installation See manufacturer's requirements for substrate conditions and ambient conditions..
		2. Concrete Subfloors: Verify that concrete slabs comply with ASTM F 710 and the following:

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 carpet manufacturer.

Subfloor finishes comply with requirements specified in Section 033000 "Cast-in-Place Concrete" for slabs receiving carpet.

Subfloors are free of cracks, ridges, depressions, scale, and foreign deposits.

Lightweight concrete and gypcrete subfloors may require a primer such as Shaw 9050 or equivalent to reduce surface porosity.

* + 1. For wood subfloors, verify the following:

Underlayment over subfloor complies with requirements specified in Section 061000 "Rough Carpentry."

Underlayment surface is free of irregularities and substances that may interfere with adhesive bond or show through surface.

Unfinished wood should be primed using a liquid latex primer, such as Shaw 9050 or equivalent.

* + 1. For Painted Subfloors: Verify the following:

Perform bond test recommended in writing by adhesive manufacturer.

* + 1. Proceed with installation only after unsatisfactory conditions have been corrected.
	1. PREPARATION
		1. General: Comply with Carpet and Rug Institute Installation Standard 2011, "Site Conditions; Floor Preparation," and with carpet manufacturer's written installation instructions for preparing substrates.
		2. Use trowelable leveling and patching compounds containing a cementitious base with a latex additive, according to manufacturer's written instructions, to fill cracks, holes, depressions, and protrusions in substrates. Fill or level cracks, holes and depressions 1/8 inch wide or wider, and protrusions more than 1/32 inch, unless more stringent requirements are required by manufacturer's written instructions.
		3. 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 carpet manufacturer.
		4. Broom and vacuum clean substrates to be covered immediately before installing carpet.
	2. INSTALLATION
		1. Comply with Carpet and Rug Institute Installation Standard 2011.
		2. Comply with carpet manufacturer's written recommendations and Shop Drawings 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.
		3. Do not bridge building expansion joints with carpet.
		4. 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.
		5. Extend carpet into toe spaces, door reveals, closets, open-bottomed obstructions, removable flanges, alcoves, and similar openings.
		6. 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, non-staining marking device.
		7. Install pattern parallel to walls and borders to comply with Carpet and Rug Institute Installation Standard 2011, "Patterned Carpet Installations" and with carpet manufacturer's written recommendations.
		8. Comply with carpet cushion manufacturer's written recommendations. Install carpet cushion seams at 90-degree angle with carpet seams.
	3. CLEANING AND PROTECTING
		1. Perform the following operations immediately after installing carpet:

Remove excess adhesive, seam sealer, and other surface blemishes using cleaner recommended by carpet manufacturer.

Remove yarns that protrude from carpet surface.

Vacuum carpet using commercial machine with face-beater element.

* + 1. Protect installed carpet to comply with Carpet and Rug Institute Installation Standard 2011, "Protecting Indoor Installations."
		2. 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 096816