

PART 1 GENERAL**1.1 RELATED SECTIONS**

- .1 Section 01 33 00 - Submittal Procedures.
- .2 Section 01 74 21 – Construction/Demolition Waste Management and Disposal.
- .3 Section 01 78 00 - Closeout Submittals.

1.2 REFERENCES

- .1 American Association of Textile Chemists and Colourists (AATCC)
 - .1 AATCC 118, Oil Repellency: Hydrocarbon Resistance Test.
 - .2 AATCC 134, Electrostatic Propensity of Carpet.
 - .3 AATCC 174, Antimicrobial Activity Assessment of Carpets.
 - .4 AATCC 175, Stain Resistance: Pile Floor Coverings.
- .2 American Society for Testing and Materials (ASTM)
 - .1 ASTM E84, Test Method for Surface Burning Characteristics of Building Materials.
- .3 Canadian General Standards Board (CGSB)
 - .1 CAN/CGSB-4.2 No.27.6, Textile Test Methods - Flame Resistance - Methemine Tablet Test for Textile Floor Coverings.
 - .2 CAN/CGSB-4.2 No.77.1/ISO 4919, Textile Test Methods - Carpets - Determination of Tuft Withdrawal Force.
 - .3 CGSB 4-GP-36M, Carpet Underlay, Fibre Type.
 - .4 CAN/CGSB-4.129, Carpets for Commercial Use.
 - .5 CAN/CGSB-25.20, Surface Sealer Floors.
- .4 Carpet and Rug Institute (CRI)
 - .1 CRI-104, Standard Installation of Commercial Carpet.
 - .2 IAQ Carpet Testing Program.
- .5 National Floor Covering Association (NFCA)
 - .1 Floor Covering Specification Manual.
- .6 Underwriters' Laboratories of Canada (ULC)
 - .1 CAN/ULC-S102, Surface Burning Characteristics of Building Materials and Assemblies.
 - .2 CAN/ULC-S102.2, Surface Burning Characteristics of Flooring, Floor Covering and Miscellaneous Materials and Assemblies.

1.3 SUBMITTALS

- .1 Submit verification to demonstrate compliance with CAN/ULCS102 and CAN/ULCS102.2.
- .2 Submit proof that carpet has been tested and passed the Indoor Air Quality (IAQ) Carpet Testing Program requirements of the Carpet and Rug Institute.
- .3 Submit report verifying that tuft bind meets requirements of CAN/CGSB-4.129 when tested to CAN/CGSB-4.2 No.77.1.
- .4 Submit report outlining proposed dust control measures.
- .5 Submit carpet manufacturer's installation instructions: Indicate special procedures and perimeter conditions requiring special attention.
- .6 Submit product data sheet for each carpet, accessory, adhesive, carpet protection and subfloor filler.
- .7 Submit WHMIS MSDS - Material Safety Data Sheets acceptable to Labour Canada and Health Canada for carpet adhesive and seam adhesive. Indicate VOC content.
- .8 Submit data on specified products, describing physical and performance characteristics, sizes, patterns, colours, and methods of installation.
- .9 Indicate locations and lengths of seams for carpeted areas. Orient carpet direction along main aisles, with make-up junction on room axis. Stage area on back wall grid.
- .10 Indicate nap, direction, open edges, special patterns, and other details required by Departmental Representative to clarify work.
- .11 Submit drawings showing columns, doorways, enclosing walls or partitions, built-in cabinets, and locations where cutouts are required as well as direction of carpet pile and pattern, location of edge moldings and edge bindings to Departmental Representative for review prior to installation of carpet.
- .12 Submit duplicate 610x610 mm pieces of each type carpet specified, 150 mm lengths of accessories.

1.4 CLOSEOUT SUBMITTALS

- .1 Submit operation and maintenance data for incorporation into manual specified in Section 01 78 00 - Closeout Submittals.
- .2 Submit maintenance data: include maintenance procedures, recommendations for maintenance materials and equipment, and suggested schedule for cleaning.
- .3 Include information on recycling of carpet including manufacturer's reprocessing program. Indicate which portions of material are recyclable.

1.5 QUALIFICATIONS

- .1 Installer Qualifications:
 - .1 Flooring contractor requirements.
 - .1 Specialty contractor normally engaged in this type of work, with not less than 5 years experience in installation of these types of materials.
 - .2 Certified by carpet manufacturer prior to tender submission.
 - .3 Must not sub-contract labour without written approval of Departmental Representative.
 - .2 Be responsible for proper product installation, including floor testing and preparation as specified and in accordance with carpet manufacturers written instructions.

1.6 REGULATORY REQUIREMENTS

- .1 Prequalification: compliance with Department of Consumers and Corporate Affairs regulations under "Hazardous Products Act", Part II of the Schedule, tested to CAN/CGSB-4.2-No.27.6.
- .2 Indoor Air Quality: compliance with CRI/CCI Green Label Indoor Air Quality Program, CRI/CCI-IAQ requirements for maximum total volatile chemicals released into air. Label each carpet product with CRI/CCI-IAQ label.

1.7 DELIVERY, STORAGE AND HANDLING

- .1 Deliver, store handle and protect materials in accordance with Section 01 61 00-Common Product Requirements.
- .2 Label packaged materials. For carpet tile products indicate nominal dimensions of tile and indicate installation direction.
- .3 Store packaged materials in original containers or wrapping with manufacturer's seals and labels intact.
- .4 Store carpeting and accessories in location as directed by Departmental Representative. Store carpet and adhesive at minimum temperature of 18°C and relative humidity of maximum 60% for minimum of 48 hours before installation.
- .5 Prevent damage to materials during handling and storage. Keep materials under cover and free from dampness.
- .6 Store materials in area of installation for minimum period of 48 hours prior to installation.

1.8 ENVIRONMENTAL REQUIREMENTS

- .1 Moisture: Ensure substrate is within moisture limits and alkalinity limits prescribed by manufacturer. Prepare testing results and provide report to Departmental Representative.

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- .2 Temperature: Maintain ambient temperature of not less than 18°C from 48 hours before installation to at least 48 hours after completion of work.
- .3 Relative humidity: Maintain relative humidity not greater than 60% RH for 48 hours before, during and 48 hours after installation.
- .4 Safety: Comply with requirements of Workplace Hazardous Materials Information System (WHMIS) regarding use, handling, storage, and disposal of hazardous materials.
- .5 Ventilation:
 - .1 Ventilate area of work as directed by Departmental Representative by use of approved portable supply and exhaust fans and heat sources.
 - .2 Provide continuous ventilation during and after carpet application. Run ventilation system 24 hours per day during installation; provide continuous ventilation for 3 days after completion of carpet installation.
- .6 Do not install carpet until space is temperature- and humidity-stable, wet-work in space is completed and dry, work above ceilings is complete.

1.9 EXTRA MATERIALS

- .1 Provide extra materials of carpet, carpet base, and adhesives in accordance with Section 01 78 00 - Closeout Submittals.
- .2 Provide 5m² of each colour, pattern and type of carpeting. .
- .3 Extra materials to be from same production run as installed materials.
- .4 Identify each package of carpet and each container of adhesive.
- .5 Deliver to Departmental Representative and store where directed by Departmental Representative.

1.10 QUALITY ASSURANCE

- .1 Provide certificate of quality compliance from carpet manufacturer.
- .2 Provide certificate of quality compliance from tile installer upon satisfactory completion of installation.

1.11 WARRANTY

- .1 Provide one year warranty against defects in material and workmanship from the date of Substantial Completion.

PART 2 PRODUCTS**2.1 MANUFACTURERS**

- .1 Acceptable materials: Only carpeting listed in Qualification Program List (QPL) 4.129, Carpets for Commercial Use are acceptable for use on this project.
- .2 Certified to Carpet and Rug Institute's IAQ requirements.

2.2 MODULAR CARPET

- .1 Carpet: to CAN/CGSB-4.129 and as follows.
 - .1 Certified for flammability to Health Canada regulations under "Hazardous Products (Carpet) Regulations", Part II of the Schedule.
 - .2 Maximum flame spread rating 300, maximum smoke developed classification 500.
 - .3 Certified to Carpet and Rug Institute's and the Canadian Carpet Institute's IAQ requirements.
 - .4 Acceptable material: .Tandus Centiva – Style – Overlay Accent II 02977
Color: Aged Pewter 44023
- .2 Carpet Tile Dimensions: 610x610.
- .3 Performance rating: to ASTM D5252 or ASTM D5417.
- .5 Construction: tufted.
- .6 Pile Surface Appearance:
 - .1 Level loop: textured.
- .7 Pipe Fibre: to CAN/CGSB-4.129.
 - .1 100% Nylon, anti static.
- .8 Yarn Ply: 2 ply.
- .9 Colourfastness to light: CAN/CGSB-4.2 No. 18.3.
- .10 Yarn weight: minimum 576 g/m² unless otherwise indicated.
- .11 Pile height: 4.2 mm.
- .12 Pile thickness: 2.8

2.3 SPECIAL REQUIREMENTS

- .1 Soil Resistance: Drop oil and soil resistance to AATCC 118.
- .2 Permanent static control: to AATCC 134, 3000V maximum at 20%RH and 22°C.
- .3 Anti-microbial: to AATCC 174, 99% reduction, 0% growth.
- .4 Stain resistance: to AATCC 175, 8.

2.4 ACCESSORIES

- .1 Base:
 - .1 Treat base of walls with matching carpet base as indicated.
- .2 Step nosing: Bengard NT4230 colour ST-038 Pewter.
- .3 Seaming tape: types recommended by carpet manufacturer for purpose intended.
- .4 Seaming sealer adhesive: type recommended by carpet manufacturer for purpose intended.
- .5 Binder bars: aluminium of type recommended by carpet manufacturer.
- .6 Adhesive:
 - .1 Multi-purpose adhesive type: recommended by carpet manufacturer for direct glue down installation, low odour, low VOC, free of volatile hydrocarbons such as toluene and mineral spirits.
- .7 Carpet protection: non-staining heavy duty kraft paper.
- .8 Concrete floor sealer: to CAN/CGSB-25-20, Type 1.
- .9 Subfloor patching compound: Portland cement base filler, mix with water to form a cementitious paste.

PART 3 EXECUTION**3.1 SUB-FLOOR TREATMENT**

- .1 Concrete shall be inspected to determine special care required to make it a suitable foundation for carpet. Cracks 3.0 mm wide or protrusions over 0.8 mm will be filled and levelled with appropriate and compatible patching compound.
- .2 Do not exceed manufacturer's recommendations for patch thickness.
- .3 Large patch areas are to be primed with a compatible primer.
- .4 Concrete substrates shall be cured, clean and dry.
- .5 Concrete substrates shall be free of paint, dirt, grease, oil, curing or parting agents, and other contaminants, including sealers, that may interfere with the bonding of the adhesive.
- .6 Wherever a powdery or porous concrete surface is encountered, a primer compatible with the adhesive shall be used to provide a suitable surface for glue-down installation.

3.2 PREPARATION

- .1 Prepare floor surfaces in accordance with CRI 104 Standard for Installation of Commercial Carpet.
- .2 Pre-condition carpeting following manufacturer's printed instructions.

3.3 INSTALLATION

- .1 Install in accordance with manufacturer's printed instructions and in accordance with Carpet and Rug Institute Standard for Installation of Commercial Carpet, CRI 104.
- .2 Install carpet after finishing work is completed but before floor electrical outlets have trims installed.
- .3 Finish installation to present smooth wearing surface free from conspicuous seams, burring and other faults.
- .4 Use material from same dye lot. Ensure colour, pattern and texture match within any one visual area. Maintain constant pile direction.
- .5 Hot melt adhesive seams and cross-joints.
- .6 Fit neatly around architectural, mechanical, electrical and telephone outlets, and furniture fitments, around perimeter of rooms into recesses, and around projections.
- .7 Install carpeting in pan type floor access covers.
- .8 Extend carpet into toe spaces, door reveals, closets, open-bottomed obstructions, removable flanges, alcoves, and similar openings.
- .9 Install carpet smooth and free of bubbles, puckers, and other defects.

3.4 DIRECT GLUE DOWN CARPET

- .1 Apply adhesive and install carpeting in accordance with manufacturer's written instructions, by direct glue-down method.

3.5 SEAMS

- .1 Seal edges of cut-outs with latex, binding method.
- .2 Carpet visibility of seams and joints to acceptable industry standards.

3.6 BASE INSTALLATION

- .1 Install matching carpet base at junctions of floor and wall.
- .2 Finish with matching vinyl cap where top of carpet base is exposed.

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3.7 PROTECTION OF FINISHED WORK

- .1 Vacuum carpets clean immediately after completion of installation. Protect traffic areas.
- .2 Prohibit traffic on carpet for a period of 24 hours until adhesive is cured.
- .3 Install carpet protection to satisfaction of Departmental Representative.

3.8 COMMISSIONING

- .1 Train user staff in the care and cleaning of carpet.
- .2 Acceptance of maintenance material turned over to owner.

END OF SECTION