

Approved: 2002-12-04

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 51 00 - Temporary Utilities.
- .4 Section 01 78 00 - Closeout Submittals.

1.2 REFERENCES

- .1 American Association of Textile Chemists and Colorists (AATCC)
 - .1 AATCC 16-1998, Color Fastness to Light.
 - .2 AATCC 23-1999, Color Fastness to Burn Gas Fumes.
 - .3 AATCC 118-1997, Oil Repellency: Hydrocarbon Resistance Test.
 - .4 AATCC 129-2001, Colour Fastness to Ozone in the Atmosphere Under High Humidities.
 - .5 AATCC 134-2001, Electrostatic Propensity of Carpet.
 - .6 AATCC 171-2000, Carpets: Cleaning of; Hot Water Extraction Method.
 - .7 AATCC 174-1998, Antimicrobial Activity Assessment of Carpets.
 - .8 AATCC 175-1998, Stain Resistance: Pile Floor Coverings.
 - .9 AATCC 189-2001, Fluorine Content of Carpet Fibers.
- .2 American Society for Testing and Materials (ASTM International)
 - .1 ASTM D1055-97, Specification for Flexible Cellular Materials - Latex Foam.
 - .2 ASTM D1335-98, Tuft Bind of Pile Floor Coverings.
 - .3 ASTM D1667-97, Standard Specification for Flexible Cellular Materials-Vinyl Chloride Polymers and Copolymers (Closed-Cell Foam).
 - .4 ASTM D3936-00 Standard Test Method for Resistance to Delamination of the Secondary Backing of Pile Yarn Floor Covering.
 - .5 ASTM D5252-98a, Standard Practice for the Operation of the Hexapod Drum Tester.
 - .6 ASTM D5417-99, Standard Practice for Operation of the Vettermann Drum Tester.
 - .7 ASTM E84-01, Test Method for Surface Burning Characteristics of Bulding Materials.
 - .8 ASTM E648-00, Standard Test Method for Critical Radiant Flux of Floor-Covering Systems Using a Radiant Heat Energy Source.
 - .9 ASTM E662-01, Standard Test Method for Specific Optical Density of Smoke Generated by Solid Materials.
- .3 Canadian General Standards Board (CGSB)

- .1 CAN/CGSB-4.2 No.27.6-M91, Textile Test Methods - Flame Resistance - Methemine Tablet Test for Textile Floor Coverings.
- .2 CAN/CGSB-4.2 No.77.1-94/ISO 4919:1978, Textile Test Methods - Carpets - Determination of Tuft Withdrawal Force.
- .3 CGSB 4-GP-36M-78, Carpet Underlay, Fiber Type.
- .4 CAN/CGSB-4.129-93(R1997), Carpets for Commercial Use.
- .5 CGSB 20-GP-23M-78, Cushion, Carpet, Flexible Polymeric Material.
- .6 CAN/CGSB-25.20-95, Surface Sealer Floors.
- .4 Carpet and Rug Institute (CRI)
 - .1 CRI-104-96, Standard Installation of Commercial Carpet.
 - .2 IAQ Carpet Testing Program.
- .5 National Floor Covering Association (NFCA)
 - .1 Floor Covering Specification Manual 1998.
- .6 Underwriters' Laboratories of Canada (ULC)
 - .1 CAN/ULC-S102-88(R2000), Surface Burning Characteristics of Building Materials and Assemblies.
 - .2 CAN/ULC-S102.2-88(R2000), Surface Burning Characteristics of Flooring, Floor Covering and Miscellaneous Materials and Assemblies.

1.3 SUBMITTALS

- .1 Submit control submittals in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Submit verification to demonstrate compliance with CAN/ULCS102 and CAN/ULCS102.2.
- .3 Submit proof that carpet has been tested and passed the Indoor Air Quality (IAQ) Carpet Testing Program requirements of the Carpet and Rug Institute (CRI) and the Canadian Carpet Institute (CCI).
- .4 Submit report verifying that tuft bind meets requirements of CAN/CGSB-4.129 when tested to CAN/CGSB-4.2 No.77.1.
- .5 Submit report outlining proposed dust control measures.
- .6 Submit carpet schedule using same room designations indicated on drawings.
- .7 Submit carpet manufacturer's installation instructions: Indicate special procedures and perimeter conditions requiring special attention.
- .8 Submit certification and description of carpet reclamation recycling process.

1.4 PRODUCT DATA

- .1 Submit product data in accordance with Section 01 33 00 - Submittal Procedures.

- .2 Submit product data sheet for each carpet, undercushion, adhesive, carpet protection and subfloor patching compound.
- .3 Submit WHMIS MSDS - Material Safety Data Sheets acceptable to Labour Canada and Health Canada for carpet adhesive and seam adhesive. Indicate VOC content.
- .4 Submit data on specified products, describing physical and performance characteristics, sizes, patterns, colours, and methods of installation.

1.5 SHOP DRAWINGS

- .1 Submit shop drawings in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Indicate locations and lengths of seams for carpeted areas.
- .3 Indicate nap direction, open edges, special patterns, and other details required by Departmental Representative to clarify work.
- .4 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.

1.6 SAMPLES

- .1 Submit samples in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Submit duplicate 675 x 900 mm pieces of each type carpet specified, duplicate 225 x 225 mm pieces for each colour selected, 300 mm square pieces of undercushion, 150 mm lengths of carpet gripper and binder bars base divider strips.

1.7 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 Schedule of carpet reclamation activities indicating following:
 - .1 Detailed sequence of removal work.
 - .2 Inventory of items to be removed and reclaimed.
 - .3 Proposed packing and transportation measures.
- .4 Reclamation agencies' records indicating receipt and disposition of use carpet.
- .5 Certification: Reclamation Agency to verify in writing that used carpet was removed and recycled in accordance with carpet fibre manufacturers' reclamation program.
 - .1 Record off-site removal of debris and materials and provide following information regarding removed materials.

- .1 Time and date of removal.
- .2 Type of material.
- .3 Weight and quantity of materials.
- .4 Final destination of materials.

1.8 QUALIFICATIONS

- .1 Installer Qualifications:
 - .1 Flooring contractor requirements.
 - .1 Specialty contractor normally engaged in this type of work, with prior experience in installation of these types of materials.
 - .2 Certified by carpet manufacturer prior to tender bid 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.

1.9 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.

1.10 DELIVERY, STORAGE AND HANDLING

- .1 Label packaged materials. For carpet tile products indicate nominal dimensions of tile and indicate installation direction.
- .2 Identify Packaging, labelling, packing and marking details.
- .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 65% 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.
- .7 Modular carpet: store on pallet form as supplied by Manufacturer. Do not stack pallets.

1.11 WASTE MANAGEMENT AND DISPOSAL

- .1 Separate and recycle waste materials in accordance with Section 01 74 21 - Construction/Demolition Waste Management And Disposal, and with Waste Reduction Workplan.
- .2 Remove from site and dispose of packaging materials at appropriate recycling facilities.
- .3 Collect and separate for disposal paper plastic polystyrene corrugated cardboard packaging material in appropriate on-site for recycling in accordance with Waste Management Plan.
- .4 Vacuum used carpet before removal.
- .5 Maintain possession of removed used carpet.
- .6 Remove used broadloom in large pieces, roll tightly carpet tile stack pack in cardboard boxes and pack in container trailer pallets. Use effective packing techniques to maximize amount of material in container. Do not stack carpet tile higher than 1800 mm high.
- .7 Sort only clean, dry carpet materials for reclamation. Clean is defined as carpet free from demolition debris, asbestos contamination, garbage and tack strips.
- .8 Immediately remove used carpet from site and transport to reclamation point.
- .9 Carpet undercushion: provide recycling of carpet padding where locally available or as designated by carpet reclamation program.

1.12 ENVIRONMENTAL REQUIREMENTS

- .1 Moisture: Ensure substrate is within moisture limits and alkalinity limits prescribed by manufacturer. Prepare moisture testing and provide report to Departmental Representative.
- .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 between 10 and 65% 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 Departmental Representative will arrange for ventilation system to be operated during installation of carpet. Ventilate area of work as directed by Departmental Representative by use of approved portable supply and exhaust fans.
 - .2 Ventilate enclosed spaces in accordance with Section 01 51 00 - Temporary Utilities. Provide fans with HEPA filters.

- .3 Provide continuous ventilation during and after carpet application. Run ventilation system 24 hours per day during installation; provide continuous ventilation for 7 days after completion of carpet installation.
- .6 Test existing floor levelling compound for presence of asbestos contamination. Notify Departmental Representative for additional instructions where asbestos is discovered.
- .7 Do not install carpet until space is enclosed and weatherproof, wet-work in space is completed and nominally dry, work above ceilings is complete.

1.13 EXTRA MATERIALS

- .1 Provide extra materials of carpet, carpet base, and adhesives in accordance with Section 01 78 00 - Closeout Submittals.
- .2 Provide 5 m² of each colour, pattern and type of carpeting. Provide in one continuous full width roll.
- .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.

Part 2 Products

2.1 MANUFACTURERS

- .1 Certified to Carpet and Rug Institute's and the Canadian Carpet Institute IAQ requirements.

2.2 MODULAR CARPET

- .1 Patterns and colours from manufacturers standard range.
- .2 Carpet Tile Dimensions: 610 x 610 mm.
- .3 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 Performance rating: to ASTM D5252 or ASTM D5417.
- .5 Construction: multi-level pattern loop.
- .6 Pile Surface Appearance:

- .1 Multi-level loop: sculptured.
- .7 Pile fibre: to CAN/CGSB-4.129.
 - .1 Nylon:
 - .1 Type: Nylon 6.
- .8 Yarn Ply: 2- ply.
- .9 Gauge: 47.24 per 10 cm.
- .10 Total thickness: 6.20 mm
- .11 Stitches per 10cm: 35.43
- .12 Tuft Density: 9.42 kilotex.
- .13 Yarn Dye Method: 100% solution dyed.
- .14 Total Weight: 576.40 g/m².
- .15 Colourization: patterned, multiple colour tones.
- .16 Colourfastness to light: to CAN/CGSB-4.2No.18.3 AATCC 16E.
- .17 Colour Fastness to Atmospheric Fading: to AATCC 129 and AATCC 23.
- .18 Primary Backing: woven.
- .19 Precoat: non-PVC.
- .20 Secondary Backing: non-PVC, thermoplastic polyolefin recyclable composite compound with a fibreglass reinforcing layer.
 - .1 Density: as per ASTM D1667.
- .21 Adhesive: mill applied releasable dry adhesive.

2.3 SPECIAL REQUIREMENTS

- .1 Permanent static control: to AATCC 134, 3500V maximum at 20%RH and 22°C.
- .2 Anti-microbial: to AATCC 174, 99% reduction, 0% growth.

2.4 ACCESSORIES

- .1 Base:
 - .1 Resilient base: to Section 09 65 16 - Resilient Sheet Flooring.
- .2 Seaming tape: types recommended by carpet manufacturer for purpose intended.
- .3 Adhesive:

- .1 Multi-purpose adhesive type: recommended by carpet manufacturer for direct glue down installation.
- .2 Pressure sensitive type: recommended by carpet manufacturer for direct glue down installation of modular carpet or speciality backed carpets.
- .4 Carpet protection: non-staining heavy duty kraft paper.
- .5 Concrete floor sealer: to CAN/CGSB-25.20, Type 1.
- .6 Subfloor patching compound: Portland cement base filler, mix with latex and water to form a cementitious paste.

Part 3 Execution

3.1 DEMOLITION

- .1 Remove and divert return carpet for recycling in accordance with Section 01 74 21 - Construction/Demolition Waste Management And Disposal, and with Waste Reduction Workplan. Coordinate with Consultant.

3.2 SUB-FLOOR TREATMENT

- .1 Concrete shall be inspected to determine special care required to make it a suitable foundation for carpet. Cracks 3 mm wide or protrusions over 0.8 mm will be filled and levelled with appropriate and compatible latex polymer fortified patching compound.
- .2 Do not exceed manufacturer's recommendations for patch thickness.
- .3 Large patch areas are to 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 contaminates, 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.

3.3 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.

3.4 INSTALLATION

- .1 Install carpeting using minimum of pieces.

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

3.5 MODULAR CARPET

- .1 Apply acrylic release type adhesive and install modular carpet in accordance with manufacturer's written instructions.
- .2 Lay modular carpet with butt seams.
- .3 Roll modular carpet with appropriate roller for complete contact of carpet with mill-applied adhesive to sub-floor.

3.6 SEAMS

- .1 Carpet visibility of seams and joints to acceptable industry standards.

3.7 BASE INSTALLATION

- .1 Install resilient base in accordance with Section Section 09 65 16 - Resilient Sheet Flooring.

3.8 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.

END OF SECTION