

Approved: 2007-12-31

Part 1 General

1.1 RELATED SECTIONS

- .1 Section 09 21 16 – Gypsum Board Assemblies.

1.2 REFERENCES

- .1 American National Standards Institute (ANSI)/Ceramic Tile Institute (CTI)
 - .1 ANSI A108.1-99, Specification for the Installation of Ceramic Tile (Includes ANSI A108.1A-C, 108.4-.13, A118.1-.10, ANSI A136.1).
 - .2 CTI A118.4-92, Specification for Latex Cement Mortar (included in ANSI A108.1).
 - .3 CTI A118.6-92, Specification for Ceramic Tile Grouts (included in ANSI A108.1).
- .2 American Society for Testing and Materials International (ASTM)
 - .1 ASTM C207-06, Specification for Hydrated Lime for Masonry Purposes.
 - .2 ASTM C979-05, Specification for Pigments for Integrally Coloured Concrete.
- .3 Canadian General Standards Board (CGSB)
 - .1 CGSB 71-GP-22M-78(AMEND.), Adhesive, Organic, for Installation of Ceramic Wall Tile.
 - .2 CAN/CGSB-75.1-M88, Tile, Ceramic.
- .4 Terrazzo Tile and Marble Association of Canada (TTMAC)
 - .1 Tile Specification Guide 09 30 00 2006/2007, Tile Installation Manual.
 - .2 Tile Maintenance Guide 2000.

1.3 SUBMITTALS

- .1 Provide submittals in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Provide product data in accordance with Section 01 33 00 - Submittal Procedures.
 - .1 Include manufacturer's information on:
 - .1 Ceramic tile, marked to show each type, size, and shape required.
 - .2 Elastomeric membrane and bond coat.
 - .3 Reinforcing tape.
 - .4 Latex cement mortar and grout.
 - .5 Organic adhesive.
 - .6 Fasteners.
- .3 Provide samples in accordance with Section 01 33 00 - Submittal Procedures.
 - .1 Wall tile: submit 300 x 300 mm sample panels of each colour, texture, size, and pattern of tile.

- .2 Adhere tile samples to 11 mm thick plywood and grout joints to represent project installation.

1.4 QUALITY ASSURANCE

- .1 Quality Assurance Submittals:
 - .1 Manufacturer's Instructions: manufacturer's installation instructions.
 - .2 Manufacturer's Field Reports: manufacturer's field reports specified.

1.5 DELIVERY, STORAGE AND HANDLING

- .1 Packing, shipping, handling and unloading:
 - .1 Deliver, store and handle materials in accordance with Section 01 61 00 - Common Product Requirements.
- .2 Waste Management and Disposal:
 - .1 Separate waste materials for recycling in accordance with Section 01 74 21 - Construction/Demolition Waste Management and Disposal.

1.6 AMBIENT CONDITIONS

- .1 Maintain air temperature and structural base temperature at ceramic tile installation area above 12 degrees C for 48 hours before, during, and 48 hours after, installation.
- .2 Do not install tiles at temperatures less than 12 degrees C or above 38 degrees C.

1.7 MAINTENANCE

- .1 Extra Materials:
 - .1 Provide maintenance materials in accordance with Section 01 78 00 - Closeout Submittals.
 - .2 Provide minimum 2% of each type and colour of tile required for project for maintenance use. Store where directed.
 - .3 Maintenance material same production run as installed material.

Part 2 Products

2.1 WALL TILE

- .1 Ceramic tile: to CAN/CGSB-75.1, Type 3, 10.5 x 10.5 x 7.5 mm size, square edges, glazed surface, solid pattern, colour as selected by PWGSC Representative.
- .2 Provide cove and bullnose shapes for backsplashes, and where indicated and required to complete tile work.

2.2 MORTAR AND ADHESIVE MATERIALS

- .1 Cement: to CSA-A5, type 10.
- .2 Sand: to ASTM C144, passing 16 mesh.

- .3 Hydrated lime: to ASTM C207, Type N.
- .4 Latex additive: formulated for use in cement mortar and thin set bond coat.
- .5 Water: potable and free of minerals and chemicals which are detrimental to mortar and grout mixes.

2.3 BOND COAT

- .1 Organic adhesive: to CGSB 71-GP-22M, Type 1 ANSI A136.1.
- .2 Latex Cement mortar: to ANSI A108.1, two-component universal dry-set mortar.

2.4 GROUT

- .1 Colouring Pigments:
 - .1 Pure mineral pigments, limeproof and nonfading, complying with ASTM C979.
 - .2 Colouring pigments to be added to grout by manufacturer.
 - .3 Job coloured grout are not acceptable.
 - .4 Use in Commercial Cement Grout, Dry-Set Grout, and Latex Cement Grout.
- .2 Cement Grout: to ANSI A108.1.
 - .1 Use one part white cement to one part white sand passing a number 30 screen.
- .3 Commercial Cement Grout: to CTI A118.6.
- .4 Dry-Set Grout: to CTI A118.6.
- .5 Latex Cement Grout: to ANSI A108.1, fast curing, high early strength, polymer-modified, stain resistant, sanded mix for floors, unsanded mix for walls and floors with polished tiles commercial tile grout.
- .6 Chemical-Resistant Grout:
 - .1 Epoxy grout: to ANSI A108.1, having quality, colour and characteristics to match epoxy bond coat. Adhesive and grout by same manufacturer.
 - .2 Furan grout: to CTI A118.5.

2.5 ACCESSORIES

- .1 Sealant: in accordance with Section 07 92 00 - Joint Sealants.

2.6 MIXES

- .1 Cement:
 - .1 Bond or setting coat: 1 part cement, 1/3 part hydrated lime, 1 part water.
 - .2 Measure mortar ingredients by volume.
- .2 Dry set mortar: mix to manufacturer's instructions.
- .3 Organic adhesive: pre-mixed.

- .4 Mix bond and levelling coats, and grout to manufacturer's instructions.
- .5 Adjust water volumes to suit water content of sand.

Part 3 Execution

3.1 MANUFACTURER'S INSTRUCTIONS

- .1 Compliance: comply with manufacturer's written recommendations or specifications, including product technical bulletins, handling, storage and installation instructions, and datasheets.

3.2 WORKMANSHIP

- .1 Do tile work in accordance with TTMAC Tile Installation Manual 2006/2007, "Ceramic Tile", except where specified otherwise.
- .2 Apply tile to clean and sound surfaces.
- .3 Fit tile around corners, fitments, fixtures, drains and other built-in objects. Maintain uniform joint appearance. Cut edges smooth and even. Do not split tiles.
- .4 Maximum surface tolerance 1:800.
- .5 Make joints between tile uniform and approximately 1.5 mm wide, plumb, straight, true, even and flush with adjacent tile. Ensure sheet layout not visible after installation. Align patterns.
- .6 Lay out tiles so perimeter tiles are minimum 1/2 size.
- .7 Sound tiles after setting and replace hollow-sounding units to obtain full bond.
- .8 Make internal angles square, external angles bullnosed.
- .9 Use bullnose edged tiles at termination of wall tile panels, except where panel abuts projecting surface or differing plane.
- .10 Install divider strips at junction of tile flooring and dissimilar materials.
- .11 Allow minimum 24 hours after installation of tiles, before grouting.
- .12 Clean installed tile surfaces after installation and grouting cured.

3.3 FIELD QUALITY CONTROL

- .1 Manufacturer's Field Services:
 - .1 Provide manufacturer's field services consisting of product use recommendations and periodic site visits for inspection of product installation in accordance with manufacturer's instructions.

3.4 CLEANING

- .1 Proceed in accordance with Section 01 74 11 - Cleaning.

END OF SECTION