Drawings are developed from the Tile Council of North America’s (TCNA) 2016 TCNA Handbook for Ceramic Tile Installation and the Terrazzo, Tile and Marble Association of Canada’s (TTMAC) Tile Installation Manual. MAPEI products are listed as options and are substituted for TCNA’s and TTMAC’s listed ANSI and ISO (ISO 13007) standards. For Natural Stone Tiles: refer to TCNA Natural Stone Selection and Installation Guide and consult stone tile supplier for suitability. Please refer to the referenced handbooks and current data sheets for complete instructions and application limitations. Some installation methods and component materials are not included. MAPEI encourages the user to consult all approved resources to ensure a complete assembly.
PART 1  GENERAL

1.1 SECTION INCLUDES

A. Surface preparation Materials.
B. Stone Tile setting mortars and adhesives.
C. Grout for stone tile.
D. Crack isolation membrane for stone tile.

1.2 RELATED SECTIONS

A. Section 09 30 33 - Stone Tiling: Stone tile materials.

1.3 REFERENCES

E. ISO 13007 - International Standards Organization; classification for Grout and Adhesives.
F. LEED® - Leadership in Energy and Environmental Design.

1.4 SUBMITTALS

A. Submit under provisions of Section 01 30 00.
B. [Product Data]: Manufacturer's technical information for each product specified.
C. Samples: Color charts for selection of grout.
D. Installation Instructions: Manufacturer's printed instructions for each product.

1.5 QUALITY ASSURANCE

A. To ensure warranty requirements and compatibility of products; please provide all stone tile grout, setting materials, additives, accessories, and factory-prepared dry-set mortars from the same manufacturer.
B. Installer Qualifications:

1. Installer is [a five-star member of the National Tile Contractors Association] [or] [a Trowel of Excellence member of the Tile Contractors' Association of America]
2. Installer's supervisor for the Project holds the International Masonry Institute's Foreman Certification.
3. Installer employs [Ceramic Tile Education Foundation Certified Installers] [or] [installers recognized by the U.S. Department of Labor as Journeyman Tile Layers].

1.6 PRE INSTALLATION CONFERENCE

A. Convene one week prior to commencing work of this section.

B. Require attendance of installation material manufacturer, stone tile supplier, stone tile installer and installers of related work. Review installation procedures and coordination required with related work.

C. Meeting agenda includes but is not limited to:
   1. Stone Tile and installation material compatibility.
   2. Grouting procedure.
   3. Maintenance and cleaning products and methods.
   4. Surface Preparation.

1.7 DELIVERY, STORAGE AND HANDLING

A. Deliver and store packaged materials in original containers with seals unbroken and labels intact until time of use. Prevent damage or contamination to materials by water, freezing, foreign matter or other causes.

B. Do not use frozen materials unless specifically allowed by manufacturer.

C. Deliver and store materials on site at least 24 hours before work begins.

D. Provide heated and dry storage facilities on site.

1.8 ENVIRONMENTAL REQUIREMENTS

Comply with requirements of referenced standards and recommendations of material manufacturers for environmental conditions before, during, and after installation.

A. For interior applications:
   1. Do not begin installation until building is completely enclosed and maintaining temperature and humidity conditions consistent with "after occupancy" conditions for a minimum of 2 weeks.
   2. Maintain continuous and uniform building temperatures of not less than 10°C (50°F) during installation.
   3. Ventilate spaces receiving tile in accordance with material manufacturer's instructions.

PART 2 PRODUCTS

2.1 MANUFACTURERS

A. Acceptable Manufacturer: MAPEI Americas U.S.A., 1144 E. Newport Center Rd., Deerfield Beach, FL 33442; ASD. Toll Free Tel: 800-42-MAPEI; Tel: 954-246-8888; Fax: 954-246-8801; Email: mapeitechsvcs@mapei.com; Web: www.mapei.us.
B. Acceptable Manufacturer: MAPEI, Inc. Canada, 2900 Francis-Hughes, Laval, PQ, Canada, H7L3J5. Toll Free Tel: 800-361-9309; Tel: 450-662-1212; Fax: 450-662-0444; Email: TServicessCA@mapei.com; Web: www.mapei.ca.

C. Substitutions: Not permitted.

D. Sustainability:

1. Selected MAPEI products may help contribute to LEED® certification of projects up to two (2) points for MR Credit 4: Recycled content, MR Credit 5: Regional Materials (point are awarded based on contribution of all project materials).
2. Credit 4.1: Low-Emitting Materials – Adhesives & Sealants;

2.2 STONE TILE

A. Acceptable manufacturers: Subject to conformity with the enclosed requirements, provide products coming from one of the following manufacturers:

1. 

2.3 SURFACE PREPARATION MATERIALS

A. Reduced-preparation, self-leveling underlayment MAPEI, “Novoplan Easy” for smoothing and repairing interior floors before the installation of floor coverings from 1/8” up to 1” (3 mm to 2,5 cm).

1. Requires a MAPEI Primer.

B. Fast setting self-leveling underlayment, MAPEI, “Novoplan 2 Plus” for smoothing and repairing interior floors before the installation of floor coverings from 1/8” up to 1” (3 mm to 2,5 cm).

1. Requires a MAPEI Primer.

2.4 OPTIONAL MEMBRANE

A. Crack Isolation and Sound Control; flexible, thin, load-bearing, fabric reinforced, ‘peel-and-stick’ crack-isolation and sound-reduction membrane that requires primer complying with ANSI A118.12; MAPEI, “Mapeguard 2”.

1. Requires “MAPEI SM Primer”.

B. Premium Latex Based Waterproofing and Crack Isolation Membrane; fast setting, flexible, thin, load-bearing, waterproofing membrane system consisting of a premixed, quick-drying liquid latex, complying with ANSI A118.10 and ANSI A118.12; and having IAMPO certification as a shower pan liner MAPEI, "Mapelastic AquaDefense".

2.5 MORTAR MATERIALS

A. Improved modified dry-set cement mortar for thin-set applications complying with ANSI A118.15E, A118.4, A118.11 and ISO 13007 C2ES2P2; MAPEI “Kerabond/Keralastic System” consisting of factory-prepared dry-set mortar with MAPEI latex additive.

B. Improved modified dry-set cement mortar for large and heavy tile thin-set applications complying with A118.15E, A118.4, A118.11 and ISO 13007 C2ES2P2; MAPEI “Kerabond T/ Keralastic System” consisting of factory-prepared dry-set mortar with MAPEI latex additive.
C. Improved modified dry-set cement mortar, fast setting for large and heavy tile thin-set applications complying with ANSI A118.15F, A118.4, A118.11 and ISO 13007 C2FS2P2; MAPEI “Granirapid” two-component system, of hydraulic mortar and flexible liquid polymer additive.

D. Modified non-sagging dry-set cement mortar for large and heavy tile thin-set applications, complying with ANSI A118.4, A118.11 and ISO 13007 C2TES1P1; MAPEI “Ultraflex LFT”.

E. Improved modified dry-set cement mortar, fast setting non-sagging for large and heavy tile thin-set applications, complying with ANSI A118.15, A118.11 and ISO 13007 C2TFS1P1; MAPEI “Ultraflex LFT Rapid”.

F. Improved modified dry-set cement mortar for large and heavy tile thin-set applications, complying with A118.15, A118.4, A118.11 and ISO 13007 C2ES1P1; MAPEI “Ultraflex 3”.

2.6 GROUT MATERIALS

A. Epoxy Grout: 100-percent solids, water cleanable, complying with ANSI A118.3 and ISO 13007 RG; MAPEI “Kerapoxy”.
1. Color: __________.

B. Epoxy Grout: Premium Epoxy Grout and Mortar with Coated Quartz, 100-percent solids, water cleanable, complying with ANSI A118.3 and ISO 13007 RG; MAPEI “Kerapoxy CQ”.
1. Color: __________.

C. Unsanded Grout: Unsanded polymer-modified Portland cement ceramic tile grout, complying with ANSI A118.6 and ISO 13007 CG2WA, for joints less than 1/8 inch (3 mm) wide; MAPEI “Keracolor U”.
1. Color: __________.

D. Sanded Grout: Fast-setting sanded polymer-modified grout, complying with ANSI A118.6, ANSI A118.7 and ISO 13007 CG2WAF, for joints between 1/16” to 3/4” (1.5 mm to 19 mm) wide; MAPEI “Ultracolor Plus FA”.
1. Color: __________.

E. Ready-to-Use Grout: Professional-grade, ready-to-use color consistent quartz aggregate, for use with grout joints 1/16” to 1/2” (1.5 to 12 mm); MAPEI, “MAPEI Flexcolor CQ”.
1. Color: __________.

2.7 STONE TILE, SEALERS, CLEANERS AND MAINTENANCE PRODUCTS

A. Complete line of sealers, cleaners and maintenance products for use with stone, tile and grout.
2.8 MIXES
   A. Proportion and mix materials in accordance with manufacturer's most current written
      instructions and applicable ANSI standards.

2.9 FLEXIBLE SEALANT.
   A. Professional-grade, 100%-silicone sealant specifically formulated for heavy traffic
      expansion and movement joints, horizontal and vertical complying with ASTM standards;
      slump (ASTM C639), tack-free time (ASTM C679.) shore "A" hardness (ASTM C661), joint
      movement (ASTM C920), elongation at break (ASTM D412), flexibility (ASTM C734) and
      passes weatherability (Accelerated Weathering Tester QUV), Product: MAPEI "Mapesil T"

PART 3 EXECUTION

3.1 EXAMINATION
   A. Examine substrates for compliance with requirements for conditions affecting
      performance of the work. Refer to ANSI A108.01; General requirements for sub-surfaces
      and preparations by other trades materials or TTMAC’s Tile Specification Guide 09 30 00
      Tile Installation Manual
   
   B. Do not proceed with stone tilework until surfaces and conditions comply with
      requirements indicated in reference tile installation standard and manufacturer's printed
      instructions.
   
   C. Installation of flooring materials indicates the acceptance of substrate.

3.2 INSTALLATION
   A. Install stone tile in accordance with manufacturer's printed instructions and the applicable
      requirements of ANSI A108 Series for the materials being used.
   
   B. Install stone tile using TCNA or TTMAC methods specified on the drawings.
   
   C. Install expansion and control joints in accordance with TCNA method EJ171 (or TTMAC
      301MJ method in Canada).

3.3 GROUTING
   A. Grout joints in accordance with manufacturer’s instructions and ANSI A108.10 or ANSI
      108.6.
   
   B. Clean standing water, dust, and foreign substances from joints to be grouted.
   
   C. Clean and dry tile surfaces.
   
   D. After grouting, remove all grout residues promptly.

3.4 PROTECTION
   A. Protect installed stone tilework from damages by other trades and general abuse until
      substantial work completion and acceptance.
   
   B. Refer to manufacturer’s product data sheet for recommendations regarding protection.

END OF SECTION