

## Bid No.030723-Tile Work at Multiple School sites

### PART 1 - GENERAL

#### 1.1 DESCRIPTION

A. Furnish all labor, materials, tools, equipment and services necessary for and reasonably incidental to complete the tile work as specified.

B. Related documents: general provisions of contract, including General and Supplementary Conditions apply to work of this section.

C. For the purpose of this contract, the terms Owner, District, Architect, and Engineer shall mean Madera Unified School District.

D. Scope of Work:

New floor and wall tile, new floor sheet vinyl

#### 1.2 REFERENCE STANDARDS

A. Comply with current editions and applicable Specifications of the following:

1. American Society for Testing and Materials (ASTM).
2. American National Standards Institute (ANSI).
3. Tile Council of America (TCA) Handbook for Ceramic Tile Installation.

#### 1.3 QUALITY ASSURANCE

A. Provide tile materials of each type, color and finish from Daltile (<https://www.daltile.com/>). Provide setting, grouting and related materials of each type, color and finish obtained from one source.

B. Deliver, store and handle materials in accordance with manufacturer's instructions.

C. Tile contractor, by commencing the work of this section, assumes overall responsibility to assure that all assemblies, components and parts shown or required within the work of this section comply with contract documents and are compatible with each other and with the conditions and expected use.

D. Installer Qualification: Engage an installer with a minimum of five (5) commercial tile installations similar in material, design and scope to that indicated.

E. Pre-Installation Meeting: Prior to tile installation, conduct a pre-installation project meeting. Contractor, Subcontractor, and Owner representative shall be notified of the meeting.

#### 1.4 SUBMITTALS

A. Verification Samples: Submit the following for each type, color, size, and finish included in the work.

1. Daltile Semi-Gloss Arctic White 0190 and Navy K189 Wall Tiles. 6"x6". Trim 6"x6" Bullnose and Cove Base.
2. Daltile Keystones Desert Grey Speckle D200 Mosaic Unglazed Straight Joint floor tiles. 2"x2". 12"x24" sheet.
3. Grout color samples. Snow White for wall grout, Grey for floor grout.

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### 4. Armstrong Corlon Heterogeneous Commercial Grade Sheet Vinyl, White Cliffs 88702

B. Product and Installation Data: The applicable ANSI specifications for ceramic tile installed with: Portland cement mortar, dry-set or latex Portland cement mortar, organic adhesive, epoxy adhesive, chemical resistant furan mortar and grout, modified epoxy emulsion mortar, ANSI specifications for the installation of ceramic tile grouts.

1. Tile manufacturer's product and technical data indicating compliance with applicable standards.
2. Mortar and grout manufacturer's technical data sheets indicating suitability for the installation specified and compliance with applicable standards.
3. Sealant or prefabricated joint manufacturer's product and technical data.

### 1.5 ENVIRONMENTAL

- A. Comply with requirements of referenced standards and recommendations of material manufacturers for environmental conditions before, during and after installation.
- B. Maintain environmental conditions and protect work during and after installation to comply with referenced standards and manufacturer's printed recommendations.
- C. Maintain minimum and maximum temperature limits as recommended by manufacturers.

## PART 2 - PRODUCTS

### 2.1 GENERAL REQUIREMENTS

- A. Furnish tile complying with "Standard Grade" requirements per ANSI A137.1 -1988, for types of tile indicated.
- B. Comply with ANSI Standard for Tile Installation Material and current Tile Council of America Handbook for products and materials indicated for setting and grouting.

### 2.2 TILE

- A. Unglazed and glazed porcelain tile shall be standard grade quality as manufactured by Daltile, and shall conform to the requirements of ANSI A137.1 - 1988.
- B. Supply each specified product from a single manufacturer; supply all setting materials and grout materials from a single manufacturer.
- C. Size: Tile shall be manufactured to specific size after firing and shall be 6x6. All measurements are in inches unless otherwise specified.

2.3 Color: Arctic White 0190 and Navy K189 wall tile. Keystones Desert Grey Speckle D200. See attached photos

### 2.4 SETTING AND GROUTING MATERIALS:

- A. Use appropriate installation mortars according to ANSI A118-1999 series or A136.1-1999.
- B. Use grout per ANSI A118.3, A118.5, A118.6 A118.7 or A118.8-1999.
- C. Use waterproofing/Anti Fracture Membrane as required according to ANSI A118.10-1999.

### 2.5 HETEROGENEOUS COMMERCIAL GRADE SHEET VINYL

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A. Heterogeneous sheet vinyl shall be commercial grade quality as manufactured by Armstrong, and shall conform to the requirements of: ASTM F 1303, Type II, Grade 1, Class A Backing. FIRE TEST DATA: ASTM E 648 Critical Radiant Flux - 0.45 watts/sq. cm. or more - Class I ASTM E 662 Smoke - 450 or less

B. MATERIAL: A polyurethane-coated wear layer composed of polyvinyl chloride resin, stabilizers, fillers and pigments on a backing suitable for use on approved subfloors on all grade levels.

C. CONSTRUCTION AND COLORS: Random, multisized vinyl chips embedded in a vinyl matrix. Color and pattern detail are dispersed throughout the thickness of the wear layer. Color pigments are insoluble in water and resistant to cleaning agents and light. Corlon White Cliffs 88702

D. ROLL SIZE: Max Width 6'-1.829m Length 82.05'- 25m Area 30-54.71 sq yds (Min-Max). Gauge: 0.080" (2.00 mm) overall (nominal) 0.050" (1.27 mm) wear layer (nominal). Shipping Weight: 5.4 lbs/sq yd. Gloss: (Typical Value) 60° specular: approximately 5-15

E. COVE CAP: Stainless Steel - Type 304, Industry Standard Brushed Finish #4, 24 gauge, nominal .024" +/- .0015, Round top profile

E. Supply each specified product from a single manufacturer; supply all setting materials from a single manufacturer.

### PART 3 – EXECUTION

#### 3.1 EXAMINATION

A. Examine substrates where tile will be installed for compliance with requirements for installation tolerances and other conditions effecting performance of installed tile. Verify that substrates for setting tile are well cured, structurally sound dry, clean, and free from oil or waxy films, curing compounds or other coatings and surface treatments.

B. Do not proceed with installation until unsatisfactory conditions have been corrected. Commencement of work signifies acceptance of substrate and installation conditions.

C. Restrooms will be stripped bare by the owner (partitions, plumbing fixtures, accessories, etc. all removed). New USG Durock brand cement board will be installed by the owner on walls.

#### 3.2 PREPARATION

A. Substrate Preparation: Prepare and clean substrate in accordance with installation standards and manufacturer's instructions, and as follows:

1. Remove protrusions, bumps and ridges by grinding or chipping.
2. Repair, fill, and level cracks, holes, depressions and rough or chipped areas in substrate using patching material recommended by setting materials manufacturer.

#### 3.3 INSTALLATION

A. Manufacturers' Instructions: Perform work in compliance with standard accepted installation guidelines and setting materials per manufacturers' instructions.

B. General Installation Standards: Install tile in accordance with ANSI A108 standards, appropriate TCA methods, and written instructions of the specified manufacturers.

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### C. Installing Tile:

1. Install tile in grid pattern plumb and level. Align joints when adjoining tiles on floor, base, walls, and trim. Adjust to minimize tile cutting and to avoid tile less than half size. Use coved base with square cap for walls receiving wall tile. Bullnose tile to finish on top of the wall. Floor tile to be installed over existing tile.
  2. When possible, smooth cut edges of tile and/or use appropriate cutter or wet saw to produce smooth cuts. Provide straight cuts which align with adjacent materials.
  3. Extend tile into recesses and under equipment and fixtures to form a complete covering without interruption.
  4. Terminate tile neatly at obstructions, edges, and corners, without disruption of pattern or joint alignment.
  5. Provide tile joints uniform in width, subject to variance in tolerance allowed in tile size. Make joints smooth and even, without voids, cracks, or excess mortar or grout. Where wall tile and floor tile have same modular dimensions, align wall tile joints with floor tile joints.
  6. Mix mortar in strict accordance with manufacturer's recommendations.
  7. Apply setting material in accordance with manufacturer's directions and install tile before mortar has started initial cure. For thin set mortar application, use a notch trowel that will achieve the recommended coverage of mortar after tiles have been installed. Reference standard coverage information and follow manufacturer's recommendations for trowel size when using mortar.
  8. Do not spread more material than can be covered within 10 to 15 minutes. If "skinning" occurs, remove mortar and spread fresh material. Spread mortar with notches running in one direction that shall be perpendicular to the pressing, pushing and pulling of tile during placement.
  9. Place tile in fresh mortar, press, push and pull the tile slightly to achieve as near 100% coverage and contact of tile with setting material and substrate as possible. The coverage shall be no less than 85% and be sufficiently distributed to give full support of the tile. Make sure that all corners and edges are well supported with mortar. Leave no hollow corners or edges.
- NOTE: 95-100% coverage is mandatory for wet or exterior areas. A skim coat ("back-butter") of mortar can be placed onto the entire back of the tile using a trowel in order to assist in optimum adhesion and coverage of the mortar being used.
10. Ensure there is a minimum 1/8" of mortar between tile and substrate after proper bedding. Installer must periodically remove sheets or individual tiles to assure proper bond coverage consistent with industry specifications. If coverage is found to be insufficient, use a larger size notch trowel.
  11. Use a beating block and hammer or rubber mallet so that faces and edges of individual tiles are flush and level with faces and edges of adjacent tiles, and to reduce lippage.
  12. Floor bullnose trim is intended to coordinate with floor field tile in the standard 90-degree installation position.
  13. Wall tile height is the height of the existing tile of the room. 100% coverage on the floors. The top of the furred out urinal walls are to be tiled. No tile is to be installed on existing brick walls. See attached photos for reference.

### D. Grouting:

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1. Install grout in accordance with ANSI A108.10, A108.6, A108.8, A108.9-1999 correlating to grout type chosen and manufacturer's recommendations.
2. Mix grout material in strict accordance with manufacturer's directions.
3. Apply grout to produce full, smooth grout joints of uniform width, and free of voids and gaps.
4. Cure all setting and grouting materials in accordance with manufacturer's recommendations.
5. Wall grout 1/16".

### E. Cleaning and Protection:

1. If one has been used, remove grout release and clean tile surfaces so they are free of grout residue and foreign matter, in accordance with manufacturer's instructions. If a grout haze or residue remains, use a suitable grout haze remover or cleaner and contact grout manufacturer for recommendations. Flush surface with clean water before and after cleaning. Do not use harsh hydrochloric, muriatic or sulfuric acid or acid-based cleaners to clean glazed tiles or tiles grouted with latex modified grout.
2. When a heavy residue of Portland cement grout is present, acceptable tile cleaning acids may be used. However, the grout should be allowed to cure a minimum of 10 days before this aggressive cleaning method is employed. Tile and grout shall be soaked with water before cleaning. In the absence of a recommendation from the grout manufacturer, acid cleaning may be done with a saturated solution of phosphoric or sulfamic acid, mixed in accordance with manufacturer's recommendations.
3. Leave finished installation clean and free of cracked, chipped, broken, unbonded, and otherwise defective tile work.

### F. Installing Sheet Vinyl

1. Resilient flooring should only be installed in temperature-controlled environments. It is necessary to maintain a constant temperature before, during and after the installation. Therefore, the permanent or temporary HVAC system must be in operation before the installation of resilient flooring. Portable heaters are not recommended as they may not heat the room and subfloor sufficiently. Kerosene heaters should never be used.
2. The surface shall be free of dust, solvents, varnish, paint, wax, oil, grease, sealers, curing compounds, residual adhesive, adhesive removers and other foreign materials that might affect the adhesion of resilient flooring to the substrate or cause a discoloration of the flooring from below. Spray paints, permanent markers and other indelible ink markers must not be used to write on the back of the flooring material or used to mark the substrate as they could bleed through, telegraphing up to the surface and permanently staining the flooring material. If these contaminants are present on the substrate, they must be mechanically removed prior to the installation of the flooring material.
3. In renovation or remodel work, remove any existing adhesive residue\* so that 100% of the overall area of the original substrate is exposed.
4. Allow all flooring materials and adhesives to condition to the room temperature for a minimum of 48 hours before starting the installation.
5. The area to receive the resilient flooring should be maintained at a minimum of 65°F (18°C) and a maximum of 100°F (38°C) for 48 hours before, during and for 48 hours after completion. NOTE: When using S-240 Epoxy Adhesive, the maximum room temperature should not exceed 85°F (29°C).

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6. During the service life of the floor, the temperature should never rise above 100°F (38°C) nor fall below 55°F (13°C). The performance of the flooring material and adhesives can be adversely affected outside this temperature range.
7. For concrete substrates, conduct moisture testing (moisture vapor emission rate [MVER]) and/or percent relative humidity (in-situ probe). Bond Tests must also be conducted for compatibility with the substrate. Please refer to Subfloors and Underlayments.
8. Radiant-heated substrates must not exceed a maximum surface temperature of 85°F (29°C).
9. Concrete floors should be tested for alkalinity. The allowable readings for the installation of Armstrong flooring are 5 to 9 on the pH scale
10. Install the flooring as per the Armstrong recommendations for that particular material.

### G. PRECAUTIONS

1. Do not install any polyester-backed flooring over existing asphalt tile or any adhesive residue.
2. Do not install any polyester-backed products over existing on-grade or below-grade tile.

### 3.4 Supplemental Information

#### SPECIAL CONDITIONS:

1. Close Out Documentation: must provide the District with Warranties, Maintenance Instructions and any pertinent guidelines