# Specifications

## PREPARATORY WORK

* 1. Contractor must receive verbal and/or written notice to proceed prior to commencement of construction activities.
  2. Contractor must attend all preconstruction meetings prior to the commencement of work.
  3. Power and Water are NOT to be turned off at any time, except emergencies, without prior notification and approval by the Project Administrator. Any work interfering with building occupants’ use of space must be coordinated in advance.
  4. Loading, unloading, material delivery, and contractor site access points will be determined by the COR. Use of other areas is prohibited.
  5. Contractors are responsible for furnishing sanitary items (temporary toilets, Covid masks, sanitizers, hand-washing stations, clean drinking water, etc.) for their work force. No guarantees that access to existing bathrooms will be granted.

## DEMOLITIONS

1. Dust isolation and temporary walls as required for safety- Cover all door openings with plastic paper to avoid dust in other areas.
2. Protect any finish flooring with rosin paper and hardboard.
3. Allow measures to leave all hallways clean and usable at end of each working day site will be left broom/vacuum clean each day.
4. A dumpster to be placed on site and emptied on a weekly basis.
5. Remove bathroom furniture.
6. Remove electrical appliances and sanitary ware.
7. Remove all wall and floor tiles.
8. Dispose off debris arising from the demolition
9. All removed appliances to be set aside and delivered to warehouse for auction as a complete set.

## PLUMBING

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| **Adapt and renovate the plumbing positions to IRC AND IPC CODES**   1. Based on the existing pipes in the bathroom the contractor will adapt and renovate the positions of water supply and drains, (Cold and hot water). ATTACHED RELATED CODES. 2. PLUMBING   PPR WORKS  PPR  PIPES  PPR Pipes and fittings shall be to ASTM F 2389 - Standard specification for pressure rated  polypropylene (PP) piping system  All piping used in the construction of the works shall be straight, cleanly finished, round in cross-section, free from cracks, surface flows, laminations and other defects and free from scale.  Fittings shall be to ASTM F 2389 - Standard specification for pressure rated  polypropylene(PP) piping system and shall be compatible in all respects with the materials and class of piping being installed. Where standard fittings are not available for the duty required, reductions on the run and to the branch shall be in all cases be made with reducing sockets. Reducing bushes and long screw connectors with backnuts shall not be used.  *Plumbing-summary*  **Master Walk-In Shower**  *Walk-in shower. Includes fully tiled shower with glass door.*  ***Install toilet: 1.0***  *Install toilet drain and install new flange*  *Install new supply line (service stop & supply tube in chrome finish)*  *Install toilet*  ***Tub***  *Rough in and supply for new alcove tub*  *Tie into existing vent*  *Install Americast 5' tub*  *Install shower valve / diverter*  *Install new vanity sink: 1.0*  *Rough in waste and supply lines for vanity sink*  *Tie into existing vent*  *Install new sink and faucet*  Grab Bars  1. Grab bars will be stainless steel, able to withstand standard loading applicable to ANSI. |

## ELECTRICAL

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| **Make modifications on the electrical installation all to IPC and IRC codes.**   1. Modifications need to be made so the electrical receptacles are in the new sinks. Mirror lighting, led downlighters. 2. All bathroom receptacles must be GFCI protected. All light fixtures above a tub or shower must be rated for damp locations (tub) or wet locations (shower). Switches must not be reachable from within a tub or shower.   The vanity area should include both overhead and side lighting. Place side lighting centered at eye level.  Where possible, provide natural lighting as well from a window or skylight area equal to at least 10% of the floor area.  In addition, fixtures must be at least 6 feet above the water line and switches must be a minimum of 5 feet from the edge of the bathtub or shower.   |  | | --- | | **Electrical summary**  **Provide all electrical required for project**  **Disconnect and re-work existing wiring as required**  **Owner to provide all decorative fixtures**  **Supply and install Panasonic fan/light combo 1.0**  **Wire for vanity light 1.0**  **Install new dedicated 20amp circuit for GFCI 1.0**  **Supply and install 1.0 5" Juno Recessed Light with White Baffle** | |

## MECHANICAL VENTILATION

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| Bathroom ventilation to be provided either by an operable window (3 sq. ft. or greater) or by mechanical means - a bathroom vent fan (20 continuous or 50 cfm intermittent, vented to the building exterior.)  Lighting as well as mechanical ventilation are both required where there is not an adequate operable window.  All of the model codes require that the vent fan must exhaust to the building exterior:   1. Residential code: R303 Ventilation air from the space shall be exhausted directly to the outside. 2. Mechanical code: M1501.1 Outdoor discharge. The air removed by every mechanical exhaust system shall be discharged to the outdoors. 3. M1507.1 General. Where toilet rooms and bathrooms are mechanically ventilated, the ventilation equipment shall be installed in accordance with this section. 4. M1507.2 Recirculation of air. Exhaust air from bathrooms and toilet rooms shall not be recirculated within a residence or to another dwelling unit and shall be exhausted directly to the outdoors. 5. M1507.3 Exhaust Rates for Residential Dwellings - Oregon 2011 Code adopted from **IRC**   A picture containing table  Description automatically generated  A picture containing table  Description automatically generated |

## TILE INSTALLATION.

1. **Delivery and installation of the new bathroom floor and walls.**

Delivery and installation of ceramic/Porcelain floor wall and floor tiles, trade value €50 per square meter.

Tiles placed in a mortar bed, thickness 10 cm.

**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.Stone tile 1

2.Bullnose tile 2

3. Grout color samples. Snow White for wall grout, Grey for floor grout.

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\_\_\_\_\_\_\_, 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.

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.

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 approximately 70” around the perimeter 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:

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.

**E-Furnish and Installation of the new custom made bathroom vanity.**

1. board: waterproof laminated blockboard
2. Countertop 20mm white galaxy ceasarstone
3. Splash board LG Hi-Macs Alpine white S28
4. sinks integrated in the countertop .LG Hi-Macs CB540R Alphine wight S28
5. Floor cabinet with 4 drawers.
6. Mirror cabinet with 4 doors above sink.

**F-The Installation of a walk inn shower.**

1.  Shower drain Rosco doucheline
2.  Safety glass panel.(10mm)

**G-New dropceiling**

1.  Drop ceiling will be in gyproc with 6 Led-spots.
2.  Ceiling will be painted