**NOTE TO PROJECT ARCHITECT: SHEET FLOORING IS ONLY TO BE SPECIFIED AS REQUIRED FOR MEDICAL OR HEALTH RELATED CLEANING. SHEET FLOORING IS NOT TO BE SPECIFIED IN TYPICAL STUDENT OR ADMINISTRATION AREAS**

**PART 1 - GENERAL**

**1.01 SUMMARY**

A. Provisions of Division 01 apply to this section.

B. Section Includes:

1. Resilient sheet vinyl flooring with integral cove base as indicated.

C. Related Sections:

1. Section 03 30 00: Cast-in-Place Concrete.

2. Section 09 65 10: Rubber Flooring and Stair Covering.

3. Section 09 65 19: Vinyl Composition Tile.

4. Section 09 65 30: Rubber Base.

**1.02 DEFINITIONS**

A. Pop-up: A pop-up is defined as any surface deviation or looseness of substrate that is equal to or greater than 1/64 (0.015625) inch above the concrete floor level, regardless of the size.

**1.03 SUBMITTALS**

A. Product Data: Submit manufacturer’s published technical data describing materials, construction and recommended installation procedures. Submit technical data and installation instructions for each adhesive material. Submit list and Product Data of recommended finish materials.

B. Maintenance Instructions: Submit manufacturer’s recommendations for maintenance, care and cleaning.

C. Samples: Submit Samples of each type of resilient sheet flooring in each available color and pattern. Following color selections, submit 12 inch square Samples of each selected color and pattern. Submit pint cans of each type of adhesive.

D. Installer's Experience Qualifications: Submit list of not less than 5 projects, extending over period of not less than 5 years, indicating installer’s experience record. Submit letter from manufacturer indicating manufacturer's approval for installer of the products.

**1.04 QUALITY ASSURANCE**

A. Qualifications of Installer: Minimum 5 years experience in successfully installing the specified products or similar flooring materials.

B. Comply with the following as a minimum requirement:

1. All materials shall be ADA compliant.

2. ASTM E 84: Class A Flame Spread Rating of 25 or less.

3. Fire Test Data: ASTM E 648, NFPA 253, ASTM E 662, NFPA 258.

**1.05 DELIVERY, STORAGE AND HANDLING**

A. Materials shall be delivered to the Project site in original unopened manufacturer’s packaging clearly labeled with manufacturer’s name. Materials shall be stored at not less than 70 degrees F for not less than 48 hours before installation.

**1.06 PROJECT CONDITIONS**

A. Ventilation and Temperature: Verify areas that are to receive new flooring are ventilated to remove fumes from installation materials, and areas are within temperature range recommended by the various material manufactures for Project site installation conditions.

**1.07 WARRANTY**

1. Manufacturer shall provide 2 year material warranty.
2. Installer shall provide a 2 year labor warranty.

**PART 2 - PRODUCTS**

**2.01 ACCEPTABLE MANUFACTURERS**

A. Armstrong Contract Interiors, Lancaster PA 17604, Azrock, Domco Inc., USA, P.O. Box 354, Florence, AL 35631, or equal.

**2.02 MATERIALS**

A. Sheet vinyl: Conform to ASTM F 1303, Type II, and Grade 1. Sheet vinyl shall be Class A, inorganic fibrous asbestos-free backing, 0.090 inch gage with 0.050 inch wear layer, colors and patterns as selected.

B. Crack Filler and Leveling Compound: Cementitious type, shall be Durabond's Webcrete # 95, Ardex SD-F, Armstrong S-194 or as recommended by flooring manufacturer.

C. Concrete Primer: Non-staining type recommended by manufacturer of resilient sheet vinyl flooring.

D. Moisture Detection Equipment: Calcium chloride testing system, consisting of pre-packaged anhydrous calcium chloride crystal test kits, and an electronic gram weight scale measurable in 1/10 grams. Equipment shall be manufactured by one of the following:

1. Sealflex Industries, Inc., 2925 College Avenue, Suite B-4, Costa Mesa, CA 92626.

2. Vaprecision Professional Emission Testing Systems, 2941 West Mac Arthur Blvd., Suite 138, Santa Ana, CA 92704.

E. Adhesive and Seam-Sealing Treatment for Sheet Vinyl: Adhesives shall be suitable for on-, above-, and below-grade installation. Seam treatment shall be as recommended by flooring manufacturer and as follows:

1. Un-backed sheet vinyl:

a. Heat weld.

b. Liquid chemical sealer.

c. Special seam adhesive.

2. Fibrous-backed sheet vinyl:

a. Liquid chemical sealer.

b. Special seam adhesive.

F. Accessories: Stainless steel or extruded aluminum top trim and 3/4 inch radius plastic fillets with integral cove base.

G. Miscellaneous Shapes: Provide miscellaneous moldings as follows and as required to complete the installation. Catalog numbers are those of Mercer. Colors shall be as selected by Architect from manufacturers standard colors.

1. Corner Guards, No. 695 Junior Corner Guard.

2. Utility Moldings: No. 655 Utility Molding.

3. Carpet to Tile: No. 150 Tile-Carpet Joiner.

4. Tile Reducer: No. 633, 1/8 inch size.

H. Underlayment: One of the following, grades stamped on panels as indicated.

1. Underlayment A-C Exterior, Sanded Face.

2. Underlayment B-C Exterior, Sanded Face.

3. C-C Plugged Exterior, Sanded Face.

4. Underlayment C-C. Plugged Exterior, Sanded Face.

I. Floor Sealer: Provide one of the following:

1. Super Polymer 85, manufactured by Maintex, City of Industry, CA.

2. Butcher’s Mainstay Floor Finish, manufactured by Waxie Stationary Supply, San Diego, CA.

1. Polymer L. A. manufactured by Alkot Industries, Tarzana, CA.

J. Slip – resistance: Minimum coefficient of friction 0.6 per ASTM D.2047

**PART 3 - EXECUTION**

**3.01 COORDINATION**

A. Coordinate with related Work to assure level, smooth, and clean finish surfaces to receive floor tile.

**3.02 EXAMINATION**

A. Field verify all dimensions and other conditions affecting the Work of this section before commencing the Work of this section.

B. Before the Work of this section is started, examine surfaces to receive resilient sheet vinyl flooring and correct deficiencies before starting the Work of this section.

**3.03 PREPARATION**

A. Concrete Slabs:

1. Do not start preparation until concrete floor slabs are at least 90 days old.

2. Leveling: Check subfloors for level, and make floor slabs true to level and plane within a tolerance of 1/8 inch in 10-feet. Test floor areas both ways with a 10-foot straightedge and repair high and low areas exceeding allowable tolerance. Pop ups shall be hammered out and floor filled with a cementitious leveling compound. Remove high areas by power sanding, stone rubbing or grinding, chipping off and filling with leveling compound, or equivalent method. Fill low areas with leveling compound. Repair and level the surfaces having abrupt changes in plane, such as trowel marks or ridges, whether or not within the allowable tolerance. Clean areas where repairs are performed.

1. Cleaning: After leveling, if required, clean substrates of all deleterious substances and foreign matter.
2. Cracks or Depressions: Fill voids with cementitious leveling compound of the type recommended by flooring manufacturer for the specific conditions.

5. Moisture Testing: Test new and old concrete slabs for adequate dryness. Testing shall conform to ASTM F 1869, and the following. Minimum testing requirements are 3 calcium chloride tests for the first 1,000 square feet of floor area, and one for each additional 1,000 square feet or fraction thereof. Unless more stringent requirements are recommended by flooring manufacturer, maximum allowable moisture release at time of flooring installation shall be 3 pounds per 24 hours per 1,000 square feet. Provide report of test as specified above. For each test, perform the following steps:

a. Weigh the sealed dish of crystals immediately prior to exposure. Record starting weight, date, and time.

b. Open kit and set crystal dish on clean concrete surface. Immediately install plastic dome over the dish. Confirm the dome is gasketed to the concrete and is airtight.

c. Leave test to absorb moisture for 60 to 72 hours. Maintain room temperature above 55 degrees F for duration of test.

d. After exposure, remove and discard housing. Replace dish lid and tape shut. Weigh the sample within one hour of removal from floor.

e. Compute the vapor emission in pounds, indicate location of test and vapor emission on report.

f. Delay application of flooring until sub-floors are sufficiently dry, or perform remedial measures as recommended by flooring materials manufacturer.

6. Priming: Prime concrete floor slabs installed directly on grade and other slabs if recommended by flooring manufacturer.

B. Wood Subfloors:

1. Install plywood underlayment on wood subfloors, except where subfloor is acceptable to flooring manufacturer. Install underlayment with smooth side up, leaving 1/16 inch at panel edges and ends. Leave a 1/8 of an inch gap between the underlayment and adjoining vertical surfaces. Edge gaps shall be filled with sealant before the finish floor is installed. Offset underlayment edges and sub floor edges 4 inches and stagger panel corners. Joints in plywood shall not be located at doorways or within 12 inches of center of doorway.

2 Install 14 gage annular nails, of length sufficient to penetrate into subflooring, to fasten underlayment. Locate nails 3/8 inch to 3/4 inch from panel edges, spaced one inch on center, staggered. Nail at 8 inches each way in the field. Nails in plywood shall not be over driven. Staples are not permitted.

3. Sweep floors. Vacuum sanding dust.

**3.04 INSTALLATION OF SHEET FLOORING**

A. Sheet Vinyl: Install flooring with adhesives as recommended by flooring manufacturer. Reverse alternate sheet widths, match pattern as required and cut seams to provide tight joints and preserve flooring pattern. Seal seams as specified with no skips or gaps. Closely trim to pipes, jambs, outlets, and like conditions. Form with integral cove base, 6 inches high unless otherwise indicated, over plastic fillets, finished at top with metal trim.

B. Sheet Vinyl with Heat-Welded Seams:

1. Install as above and in accordance with manufacturer’s instructions.

2. Cut sheet material in lengths and sizes required. Reverse alternate sheets, where recommended by flooring manufacturer. Lay cut sheets flat and allow to acclimate to room temperature before installation.

3. Mix and install adhesives in accordance with manufacturer's instructions. Provide safety precautions during mixing and installation as recommended by adhesive manufacturer.

4. Install sheets and roll over floor surface. Adhere entire flooring using adhesives as recommended by flooring manufacturer. Work out wrinkles and air pockets. Roll material in two directions starting at center of sheet. Fit flooring neatly and tightly around penetrations. Scribe flooring to doorjambs. Terminate in center of doorways beneath closed doors.

5. Cut, rout, and heat weld all seams, with equipment and methods recommended by flooring manufacturer. Routing depth shall be no greater than 2/3 of the wear layer thickness. Insert welding rod and thermally fuse rod and adjacent material to produce a seamless homogeneous surface. Allow heat weld to cool and trim in 2 passes. Second trimming shall result in flush, smooth surface at all seams including walls and corners of integral cove areas. Inspect completed seams and reseal if necessary.

6. Extend sheets up wall to form integral coved base, 6 inch high unless otherwise indicated. Install cove fillets in corners and where walls intersect floors and other vertical surfaces to be covered. Install adhesive on vertical surfaces and hand roll flooring into place. Install metal edging strip at top of base.

C. Sheet Vinyl with Liquid Seam Sealer or Special Seam Adhesive (double-cut or recess- scribe seams with no gaps):

1. Install as above and in accordance with manufacturer’s instructions.

2. Liquid Seam Sealer: Install chemical sealer inside all seams and field cuts including integral cove areas with applicator as recommended by flooring manufacturer. Protect chemically sealed seams from all traffic for a minimum of 3 hours.

2. Special Seam Adhesive: Install special seam adhesive beneath all seams and field cuts including integral cove areas. Install all adhesives as recommended by flooring manufacturer. Remove excess adhesive at seams. Protect newly sealed seams from traffic.

D. Installation of Trim Shapes: Provide reducer strips to cover all exposed edges of resilient flooring. Provide carpet-to-tile strips at junctions with carpet.

E. Install adhesive in a thin film evenly with a notched trowel, with type of trowel recommended by flooring manufacturer.

1. Mix adhesive in accordance with manufacture’s instructions.

2. Install adhesive only in the area that can be covered by flooring material within the adhesive manufacturer’s recommended working time.

3. Remove adhesive that has dried or filmed over.

H. Provide reducer where floor covering edges are exposed, such as at center of the door or where floor coverings terminate.

**3.05 CLEANING**

A. Keep all flooring surfaces clean as installation progresses.

B. Clean flooring when sufficiently seated and remove foreign substances.

C. Finish sheet vinyl flooring with 2 coats of floor finish(Approved by FUSD custodial dept.) installed in accordance with manufacturers instruction. Do not buff unless specifically required. Provide the manufacturers recommended drying time for each coat.

1. Clean adjacent surfaces of adhesive or other materials. Replace all damaged or defective Work.
   1. **CLEAN UP**

A. Remove rubbish, debris and waste material and legally dispose off the Project site.

**3.07 PROTECTION**

A. Protect the Work of this section until Substantial Completion.

**END OF SECTION**