1.0 GENERAL

1.1 References

.1 Comply with all standards mentioned in this specification, unless more stringent requirements are given herein.

.2 American Society for Testing and Materials (ASTM):
- .1 ASTM D2047 - 11, Standard Test Method for Static Coefficient of Friction of Polish-Coated Flooring Surfaces as Measured by the James Machine
- .2 ASTM D2240: Standard Test Method for Rubber Property (Durometer Hardness).
- .3 ASTM D3389 - 10 - Standard Test Method for Coated Fabrics Abrasion Resistance (Rotary Platform, Double Head Abrader)
- .4 ASTM E84 - 12c, Standard Test Method for Surface Burning Characteristics of Building Materials
- .5 ASTM E648 – 10e1 - Standard Test Method for Critical Radiant Flux of Floor Covering Systems Using a Radiant Heat Energy Source
- .6 ASTM E662 – 13 - Standard Test Method for Specific Optical Density of Smoke Generated by Solid Materials
- .7 ASTM E2180 -07(2012) - Standard Test Method for Determining the Activity of Incorporated Antimicrobial Agent(s) in Polymeric or Hydrophobic Materials
- .8 ASTM F150 - 06, Standard Test Method for Electrical Resistance of Conductive and Static Dissipative Resilient Flooring
- .9 ASTM F1859 - 12, Standard Specification for Rubber Sheet Floor Covering Without Backing
- .10 ASTM F1861 - 08(2012)e1, Standard Specification for Resilient Wall Base
- .11 ASTM G21- 09 - Standard Practice for Determining Resistance of Synthetic Polymeric Materials to Fungi

.3 Canadian Standards Association (CSA)
- .1 CSA B651-12 - Accessible Design for the Built Environment.

.4 European Standards:
- .1 DIN 51130 – 2010 – Testing of floor coverings – Determination of the anti-slip property – Workrooms and fields of activities with slip danger, walking method – Ramp test *(For reference – Standard withdrawn)*
- .2 EN 660 – 1999 – Resilient floor coverings – Determination of wear resistance (Parts 1 & 2)
- .3 EN 685 – 2007 – Resilient, textile and laminate floorings - Classification

.5 International Organization for Standardization (ISO):
- .1 ISO140-7 – 1998 - Measurement of sound insulation in buildings and of building elements – Part 7: Field measurement of impact sound insulation of floors
- .2 ISO 1817 – 2011 – Rubber, vulcanized or thermoplastic – Determination of the effect of liquids
- .3 ISO 10581 – 2013 – Resilient floor coverings. Homogeneous poly(vinyl chloride) floor covering - Specifications.

.6 Underwriter's Laboratories of Canada

.1 CAN/ULC-S102 – 10 – EN - Method of Test for Surface Burning Characteristics of Building Materials and Assemblies

1.2 Action and Informational Submittals

.1 Provide submittals in accordance with Section 01 33 00 and the following requirements:

.1 Shop drawings: show general layout of sheets and location of joints and position of integrated art work.

.2 Submit samples: of all specified products in all colour and finish choices in accordance with Section 01 33 00 - Submittal Procedures.

.3 Submit a sample: of each flooring, 300 x 300 mm, and of each resilient baseboard, 300 mm long.

.4 Technical data: submit manufacturer's printed product literature, specifications and data sheets and include product characteristics, performance criteria, finish and limitations.

.5 Extra Materials, special tools and spare parts: supply 2% of each type and colour of resilient flooring, baseboards, transition trims and related adhesives and primers.

1.3 Delivery and Storage

.1 Sheet products shall be delivered in rolls of maximum length and width produced by the manufacturer.

.2 Store rolls vertically and as per the resilient flooring manufacturer recommendations.

1.4 Environmental Requirements

.1 The Contractor is responsible for ensuring all site conditions meet the requirements of the resilient flooring manufacturer.

.2 Ensure concrete topping meet the requirements of the resilient flooring manufacturer. Refer to Structure Specifications.

.3 Installation of the resilient flooring to be carried out no sooner than the specified curing time of concrete topping. Refer to the the resilient flooring manufacturer recommendations and Structure Specifications.

.4 Concrete topping surface must be free of all contaminants that can inhibit bond. Ensure concrete topping's finish meet the requirements of the resilient flooring manufacturer. Refer to Structure Specifications.

.5 Moisture and alkalinity tests must be performed on concrete topping substrate, under in-service conditions. The results must meet the requirements of the resilient flooring manufacturer.

.6 Room and concrete temperature must be maintained within the recommended range of 65˚F to 86 ˚F (18°C to 30˚C), 48 hours prior to installation, during the installation, and 48 hours after the installation. Recommended ambient humidity control level is between 35 to 55%. Comply with resilient flooring manufacturer recommendations

.7 Installation of resilient flooring will not commence until the building is enclosed and all other trades

have completed their work. Ensure a secure and clean working area before, during and after the installation of the resilient flooring.

.8 As per the resilient flooring manufacturer recommendations, the radiant heating system has to be turned off 48 hours before the installation, remain off during the entire installation and 48 hours after the installation.

.9 As per the resilient flooring manufacturer recommendations, do not subject flooring system to drastic temperature fluctuations; adjust settings gradually by increasing 5 °C per hour to the desired temperature.

.10 Unwrap floor covering and allow it to acclimatize in installation area for 24 hours before application.

.11 Keep sheet flooring rolls in an upright position during acclimatization period.

1.5 Waste Management

.1 Separate waste materials for disposal, re-use and recycling in accordance with Section 01 74 19.

2.0 PRODUCTS

2.1 General

.1 Ensure compatibility of flooring products with primers, adhesives and all other materials specified herein and in Structure specifications, as well as any other materials within or applied to the substrate.

.2 Primers to be as per the resilient flooring manufacturer's recommendations.

.3 Colours and textures to be chosen by the Departmental Representative from the manufacturer's standard product range.

2.2 Resilient Rubber Sheet Flooring

.1 General quality as per ASTM F1859 and ISO 1817. Calendered and vulcanized (dual durometer construction); smooth surface texture; factory applied low-gloss finish, cured by ultraviolet (UV) processing; having the following characteristics:

.1 3.0 mm thickness, homogeneous rubber compound with solid background colors with randomly dispersed colored chips throughout the wear layer's entire depth

.2 Flammability Class 1 (ASTM E648); smoke density < 450 (ASTM E662); resistant to cigarette and solder burns.

.3 Slip resistance (static coefficient of friction) ≥ 0.8 (ASTM D2047).

.4 Abrasion resistance 1000g on H-18 wheel with 1000 cycles, <0.15g weight loss (ASTM D3389).

.5 VOC content: Greenguard Gold and Greenguard certified for low VOC emissions.

.6 Resistant to bacteria, fungi, and micro-organism activity (ASTM E2180, ASTM G21).

.7 Sound absorption ≥14 dB (ASTM E2179).

.2 Colors: product chart must contain a large choice of textures and colours, including a large choice of bright, solid colours (including dark grey, medium grey, greige, light grey, deep turquoise, light turquoise, moss green, light green, yellow and orange).

.3 6 Colours, to be selected by the Departmental Representative:

.4 Artwork water jet cut into rubber sheet resilient flooring: Provide 3 additional Colours, to be selected by the Departmental Representative. The different shapes will be water jet cut from the same resilient rubber sheet flooring product and inserted into the main flooring. Digital drawing of artwork will be provided by Departmental Representative.

.5 Floor Adhesive: High performance two-part polyurethane adhesive as per flooring manufacturer's recommendations. The adhesive must withstand a minimum temperature of 33˚C at substrate level.

2.3 Resilient Baseboard

.1 Rubber base with toe: as per ASTM F1861, group 1 (solid) and CAN / CSA A126.5, top set coved, in continuous rolls, 102 mm high, 3.2 mm thick, 36.5 m long, with end stops and pre-molded protruding corners (inside and outside). Plan for minimum number of joints.
  .1 Provide 6 colors to match the adjacent flooring colours.
  .2 Adhesive: water repellent, recommended by the baseboard manufacturer, compatible with the substrate.

2.4 Finishing Mortar

.1 Finishing mortar for screeds, for spaces around penetrations trough concrete floors, for finishing screed at the edge of foot grilles, for creating the drainage slopes (1 to 2%) in the rooms where floor drains are specified: accelerated drying mortar, ready for use. With or without aggregates as recommended by the manufacturer, or as approved by the Departmental Representative.

2.5 Accessories

.1 Transition moulding or finishing Trim 1 between resilient flooring and floor finishes levelled with subfloor: 2.5 mm height vinyl profiled strips to match height and colour of adjacent flooring. Align the installation on the door frame stopper. ADA compliant.

.2 Stainless steel threshold : Anodised matte aluminium extrusion between resilient flooring and exposed concrete: 3.5 mm height. Align the installation on the door frame stopper. ADA compliant.

3.0 EXECUTION

3.1 General

.1 Do not start until other trades have finished their work.

.2 Solidly pack all open spaces around floor penetrations with finishing mortar.

.3 Prepare concrete subfloor in accordance with manufacturer’s current printed guidelines.

.4 Once the substrate's surface preparation has been completed and it is believed to be ready to receive resilient flooring, perform a bond test as per the resilient flooring manufacturer's instructions.

.5 Install rolls of resilient flooring following manufacturer's current printed guidelines. The installer must be experienced and possess the skills to achieve good seams.

.6 Use adhesives as recommended by the manufacturer of each product.

.7 Terminate flooring at centerline of door in openings where adjacent floor finish or colour is dissimilar.

.8 Install transition or finishing trims at junctions of resilient flooring with dissimilar materials. Ensure that height changes between surfaces conform to section 4.3.2 - Changes in Level, of CSA B651-12.

.9 Install flooring throughout the floor areas prior to the installation of built-in furniture.

.10 Install flooring on access doors, where indicated, maintaining the continuity of appearance.

.11 Interrupt resilient flooring at expansion joints.

.12 Cut flooring with care and fit neatly along walls, columns and around fixed objects.

3.2 Examination

.1 Examine surfaces to receive finishes for acceptability of structural stability, levelness, texture, moisture content, cleanliness, etc.

.2 Ensure that temperature and ventilation are adequate.

.3 Notify in writing deficiencies to Departmental Representative prior to commencing work, and do not commence work until all conditions which may adversely affect the quality of the work have been corrected.

3.3 Preparation of Surfaces

.1 Prepare substrate surface to remove all detritus, projections, oils, adhesives and other contaminants, and obtain a clean, level surface that meets all the requirements of the adhesive and resilient flooring manufacturer's.

.2 If required, apply a thin coat of finishing mortar to level the surface as per adhesive and resilient flooring manufacturer's recommendations.

.3 If recommended by adhesive and flooring manufacturers, prime surfaces as recommended. Allow to dry for 24 hours before installation of flooring.

3.4 Installation

.1 Install adhesive as recommended by manufacturers of flooring adhesives and flooring. Ensure full adherence of adhesive and flooring.

.2 Install rolls of resilient flooring following manufacturer's current printed guidelines.

.3 Layout flooring to provide equal size at perimeter. Adjust layout as necessary to eliminate flooring that is cut to less than half full width.

.4 Lay flooring with arrows in the same direction.

.5 Install flooring without cracks or voids at seams. Lay seams together without stress. Remove excess adhesive immediately.

.6 Scribe flooring neatly at perimeter and obstructions.

.7 Install resilient baseboard and accessories as per manufacturers' instructions.

3.5 Cleaning

.1 As work progresses, remove any excess adhesive from floors, bases and walls with care.

.2 Remove marks and dirt completely while they are still wet with a clean white cloth dampened with detergent. Do not use acetone or similar products to clean the floor.

.3 Wait at least a minimum of 72 hours after the resilient flooring has been completely installed before performing initial maintenance

.4 Perform initial cleaning as per Section 01 74 11 and following the flooring manufacturer's written instructions.

3.6 Protection of Finished Work

.1 Protect new flooring with adequate panels or boards until just before final inspection.

.2 Prohibit foot traffic on floor for 24 hours and heavy traffic or rolling loads on floor for 72 hours after application as per the manufacturer's recommendation.

End of Section