SECTION 09 65 16

RESILIENT LUXURY VINYL SHEET AND TILE FLOORING

Display hidden notes to specifier. (Don't know how? [Click Here](http://www.arcat.com/sd/display_hidden_notes.shtml))

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\*\* NOTE TO SPECIFIER \*\* Altro USA, Incorporated; resilient flooring and walls.  
This section is based on the products of Altro USA, Incorporated, which is located at:  
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Wilmington, MA 01887  
Toll Free Tel: 800-377-5597  
Tel: 978-657-6464  
Fax: 610-746-4325  
Email: [request info (support@altrofloors.com)](http://admin.arcat.com/users.pl?action=UserEmail&company=Altro+USA,+Incorporated&coid=30328&rep=&fax=610-746-4325&message=RE:%20Spec%20Question%20(09652alt):%20%20&mf=)  
Web: <http://www.altrofloors.com>   
In Canada:   
 Altro Canada, Incorporated   
 6221 Kennedy Road, Unit 1   
 Mississauga, ON L5T 2S8   
 Your local Altro representative is: Please contact support@altrofloors.com.  
 [ [Click Here](http://www.arcat.com/arcatcos/cos30/arc30328.html) ] for additional information.  
Altro has been at the forefront of innovation for almost 100 years. Today, working closely with architects, end customers, engineers, designers and contractors around the world, our insight and expertise help them transform everyday spaces into environments that can improve the well being of everyone that uses them.

1. GENERAL
   1. SECTION INCLUDES

\*\* NOTE TO SPECIFIER \*\* Delete items below not required for the project.

* + 1. Safety flooring. (Aquarius) (Atlas 40) (Classic 25) (Stronghold 30)
       1. Accessories: Commercial use.
       2. Accessories: Behavioral and mental health facilities. (Aquarius)
    2. Slip resistant flooring. (Reliance 25) (Walkway 20) (XpressLay)
       1. Accessories: Commercial use.
       2. Accessories: Behavioral and mental health facilities. (Reliance 25) (Walkway 20)
    3. Smooth resilient sheet flooring. (Symphonia) (Orchestra) (Operetta) (Serenade) (Wood) (Wood Comfort) (Wood Acoustic) (Cantata) (Zodiac Smooth)
       1. Accessories: Commercial use.
       2. Accessories: Behavioral and mental health facilities. (Symphonia) (Orchestra) (Operetta) (Serenade) (Wood) (Wood Comfort) (Wood Acoustic) (Zodiac Smooth)
    4. Smooth resilient tile flooring. (Lavencia) (Quartz Tile) (Dole Tile) (Dolce Essentials)
  1. RELATED SECTIONS

\*\* NOTE TO SPECIFIER \*\* Delete any sections below not relevant to this project; add others as required.

* + 1. Section 03 30 00 - Cast-in-Place Concrete.
    2. Section 06 10 00 - Rough Carpentry.
    3. Division 7 - Thermal and Moisture Protection.
  1. REFERENCES

\*\* NOTE TO SPECIFIER \*\* Delete references from the list below that are not actually required by the text of the edited section.

* + 1. American Concrete Institute (ACI):
       1. ACI 302.1R - Guide to Concrete Floor and Slab Construction.
       2. ACI 302.2R - Guide for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials.
    2. ASTM International (ASTM):
       1. ASTM D 2047 - Standard Test Method for Static Coefficient of Friction of Polish-Coated Flooring Surfaces as Measured by the James Machine.
       2. ASTM E 648 / NFPA 253 - Standard Test Method for Critical Radiant Flux of Floor-Covering Systems Using a Radiant Heat Energy Source.
       3. ASTM E 662 - Standard Test Method for Specific Optical Density of Smoke Generated by Solid Materials.
       4. ASTM F 710 - Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring.
       5. ASTM F 970 - Standard Test Method for Measuring Recovery Properties of Floor Coverings after Static Loading.
       6. ASTM F 1066 - Standard Specification for Vinyl Composition Floor Tile.
       7. ASTM F 1303 - Standard Specification for Sheet Vinyl Floor Covering with Backing.
       8. ASTM F 1482 - Standard Guide to Wood Underlayment Products Available for Use Under Resilient Flooring.
       9. ASTM F 2170 - Standard Test Method for Determining Relative Humidity in Concrete Floor Slabs Using in situ Probes.
       10. ASTM F 3010 - Standard Practice for Two-Component Resin Based Membrane-Forming Moisture Mitigation Systems for Use Under Resilient Floor Coverings.
    3. German Institute for Standardization (DIN):
       1. DIN 51130 - Testing of Floor Coverings - Determination of the Anti-Slip Property - Workrooms and Fields of Activities with Slip Danger - Walking Method - Ramp Test.
    4. Underwriters Laboratories of Canada (ULC):
       1. CAN/ULC-S102.2, Surface Burning Characteristics of Flooring, Floor Covering and Miscellaneous Materials and Assemblies.
  1. SUBMITTALS
     1. Submit under provisions of Section 01 30 00 - Administrative Requirements.
     2. Product Data: Manufacturer's data sheets on each product to be used, including:
        1. Preparation instructions and recommendations.
        2. Storage and handling requirements and recommendations.
        3. Installation methods.
     3. Verification Samples: For each finish product specified, two samples, minimum size 6 inches (152 mm) square representing actual product, color, and patterns.
  2. QUALITY ASSURANCE
     1. Manufacturer Qualifications: Minimum 5 year experience manufacturing similar products.
     2. Installer Qualifications: Trained journeymen with a minimum of three years successful experience in the installation of resilient flooring.
     3. Regulatory Requirements: Provide slip resistant sheet vinyl safety flooring in compliance with the following:
        1. Americans with Disabilities Act Architectural Guidelines (ADAAG).
        2. Occupational Safety and Health Administration (OSHA).

\*\* NOTE TO SPECIFIER \*\* Include a mock-up if the project size and/or quality warrant taking such a precaution. The following is one example of how a mock-up on a large project might be specified. When deciding on the extent of the mock-up, consider all the major different types of work on the project.

* + 1. Mock-Up: Provide a mock-up for evaluation of surface preparation techniques and application workmanship.
       1. Finish areas designated by Architect.
       2. Do not proceed with remaining work until workmanship is approved by Architect.
       3. Remodel mock-up area as required to produce acceptable work.
  1. PRE-INSTALLATION MEETINGS
     1. Convene minimum two weeks prior to starting work of this section.
  2. DELIVERY, STORAGE, AND HANDLING
     1. Deliver and store products in manufacturer's unopened packaging bearing the brand name and manufacturer's identification until ready for installation.
     2. Store rolls of sheet goods in a secured upright position. Store materials in dry spaces protected from the weather, with ambient temperatures not less than 55 degrees F (12.8 degrees C) or more than 85 degrees F (29.4 degrees C).
     3. Handle materials to avoid damage.
  3. PROJECT CONDITIONS
     1. Temperature Requirements: If storage temperature is below 65 degrees F (18 degrees C), the Altro Whiterock wall panel must be moved to a warmer place and allowed to reach this temperature before installation. For further information, refer to current Installation Guide.
     2. Maintain ambient temperatures of 68 degrees F (20 degrees C) and 80 degrees F (26.7 degrees C) in spaces to receive resilient products for 72 hours before installation, during installation and 24 hours after installation.
     3. Maintain the ambient relative humidity between 40 percent and 60 percent during installation.
     4. Allow sufficient time for proper preparation, installation and cuing.
     5. Close spaces to traffic during resilient flooring installation until the installer is satisfied the adhesive has set.
     6. Verify permanent HVAC is operational. If temporary heat is required, use electric or indirect heat sources. Do not use kerosene or propane in direct contact with the ambient air.
     7. Verify other finishing operations, including painting, have been completed.
     8. Where demountable partitions and other items are indicated for installation on top of sheet resilient flooring material, install flooring material before these items are to be installed.
     9. Coordinate with plumbing subcontractor that approved surface membrane clamping drainage connections will be used, including but not limited to, surface clamping round drains, surface clamping trench drains, surface clamping floor sinks, surface clamping grease traps, or use of Altro Gulley Edge/Angle, or employment of Altro's Modified Surface Clamping Drain System.
     10. Conform to all pertinent ASTM, ACI and Altro Standards listed in, but not limited to, this specification.
  4. SEQUENCING
     1. Ensure that products of this section are supplied to affected trades in time to prevent interruption of construction progress.
  5. WARRANTY
     1. Warranty: Provide manufacturer's standard limited warranty.

1. PRODUCTS
   1. MANUFACTURERS
      1. Acceptable Manufacturer: Altro USA, Incorporated, which is located at: 80 Industrial Way; Wilmington, MA 01887; Toll Free Tel: 800-377-5597; Tel: 978-657-6464; Fax: 610-746-4325; Email: [request info (support@altrofloors.com)](http://admin.arcat.com/users.pl?action=UserEmail&company=Altro+USA,+Incorporated&coid=30328&rep=&fax=610-746-4325&message=RE:%20Spec%20Question%20(09652alt):%20%20&mf=); Web: <http://www.altrofloors.com>

\*\* NOTE TO SPECIFIER \*\* Delete one of the following two paragraphs; coordinate with requirements of Division 1 section on product options and substitutions.

* + 1. Substitutions: Not permitted.
    2. Requests for substitutions will be considered in accordance with provisions of Section 01 60 00 - Product Requirements.

\*\* NOTE TO SPECIFIER \*\* Delete article if not required.

* 1. SAFETY FLOORING
     1. Slip Resistant Sheet Vinyl:

\*\* NOTE TO SPECIFIER \*\* Delete basis of design options not required. Aquarius flooring has been approved for use in behavioral and mental health facilities.

* + - 1. Basis of Design: Aquarius, as manufactured by Altro USA, Inc.
         1. Wear Layer: Homogeneous construction.
         2. Overall Thickness: 0.08 in (2 mm).
         3. Sheet/Roll Width: 79 in (2 m).
         4. Sheet/Roll Length: 66 ft (20.1 m).
         5. Weight: 4.79 lbs per sq yd (2.6 kg per sq m).
         6. Backing: Non-woven polyester and cellulose glass fiber reinforcement scrim.
         7. Slip Resistance per ASTM D 2047: ADA compliant.

Dry: 0.88; Wet: 1.03.

* + - * 1. Static Load Limit per ASTM F 970: 1500 lbs per sq in (10342 kPa).
        2. Fire Performance:

CAN/ULC - S102.2.

ASTM E 648: Tested Class I.

ASTM E 662: Less than 450.

\*\* NOTE TO SPECIFIER \*\* Delete product options not required.

* + - * 1. Product Identification: AQ2001 Dragonfly.
        2. Product Identification: AQ2004 Cygnet.
        3. Product Identification: AQ2007 Walrus.
        4. Product Identification: AQ2010 Vole.
        5. Product Identification: AQ2021 Iguana.
        6. Product Identification: AQ2022 Newt.
        7. Product Identification: AQI2002 Blue Penguin.
        8. Product Identification: AQI2003 Treefrog.
        9. Product Identification: AQI2005 Puffin.
        10. Product Identification: AQI2006 Otter.
        11. Product Identification: AQI2008 Tern.
        12. Product Identification: AQI2009 Terrapin.
        13. Product Identification: AQI2011 Salamander.
        14. Product Identification: AQI2012 Swan.
        15. Product Identification: AQI2013 Hippo.
        16. Product Identification: AQI2014 Coral Crab.
        17. Product Identification: AQI2015 Mallard.
        18. Product Identification: AQI2016 Spoonbill.
        19. Product Identification: AQI2017 Sandpiper.
        20. Product Identification: AQI2018 Sealion.
        21. Product Identification: AQI2019 Curlew.
        22. Product Identification: AQI2023 Gosling.
        23. Product Identification: AQI2024 Sea Snail.
        24. Product Identification: PX2001 Lighthouse.
        25. Product Identification: PX2002 Cuttlefish.
        26. Product Identification: PX2003 Breakwater.
        27. Product Identification: PX2006 Shoreline.
        28. Product Identification: PX2016 Windbreak.
        29. Product Identification: PX2009 Fisherman.
        30. Product Identification: PX2004 Driftwood.
        31. Product Identification: PX2011 Seahorse.
        32. Product Identification: PX2013 Deckchair.
        33. Product Identification: PX2015 Houseboat.
        34. Product Identification: PX2010 Starfish.
        35. Product Identification: PX2012 Beach hut.
        36. Product Identification: PX2014 Sea Urchin.
        37. Product Identification: PX2005 Jellyfish.
        38. Product Identification: PX2007 Porthole.
        39. Product Identification: PX2008Anchor.
        40. Product Identification: As indicated on the Drawings.
        41. Product Identification: As selected by Architect.

\*\* NOTE TO SPECIFIER \*\* Atlas 40 is used frequently in commercial kitchens.

* + - 1. Basis of Design: Atlas 40; as manufactured by Altro USA, Inc.
         1. Wear Layer: Homogeneous construction.
         2. Overall Thickness: 0.16 in (4 mm).
         3. Sheet/Roll Width: 79 in (2 m).
         4. Sheet/Roll Length: 41 ft (12.5 m).
         5. Weight: 9.95 lbs per sq yd (5.4 kg per sq m).
         6. Backing: Non-woven polyester and cellulose glass fiber reinforcement scrim.
         7. Slip Resistance per ASTM D 2047: ADA compliant.

Dry: 0.70; Wet: 0.70.

Ramp Test per DIN 11530: R10.

* + - * 1. Static Load Limit per ASTM F 970: 1500 psi.
        2. Fire Performance:

CAN/ULC - S102.2.

ASTM E 648: Tested Class I.

ASTM E 662: Less than 450.

\*\* NOTE TO SPECIFIER \*\* Delete product options not required.

* + - * 1. Product Identification: X4039 Pewter Grey.
        2. Product Identification: X4060 Quarry Red.
        3. Product Identification: X4086 Walnut.
        4. Product Identification: X4094 Anvil.
        5. Product Identification: As indicated on the Drawings.
        6. Product Identification: As selected by Architect.

\*\* NOTE TO SPECIFIER \*\* Classic 25 is used almost exclusively in commercial kitchens.

* + - 1. Basis of Design: Classic 25, as manufactured by Altro USA, Inc.
         1. Wear Layer: Homogeneous construction.
         2. Overall Thickness: 0.10 in (2.5 mm).
         3. Sheet/Roll Width: 79 in (2 m).
         4. Sheet/Roll Length: 66 ft (20.1 m).
         5. Weight: 5.89 lbs per sq yd (3.2 kg per sq m).
         6. Backing: Non-woven polyester and cellulose glass fiber reinforcement scrim.
         7. Slip Resistance per ASTM D 2047: ADA compliant.

Dry: 0.90; Wet: 1.00.

Ramp Test per DIN 11530: R11.

* + - * 1. Static Load Limit per ASTM F 970: 1000 lbs per sq in (6895 kPa).
        2. Fire Performance:

CAN/ULC - S102.2.

ASTM E 648: Tested Class I.

ASTM E 662: Less than 450.

\*\* NOTE TO SPECIFIER \*\* Delete product options not required.

* + - * 1. Product Identification: X2594R11 Anvil.
        2. Product Identification: X2560R11 Quarry Red.
        3. Product Identification: X2539R11 Pewter Grey
        4. Product Identification: X2586R11 Walnut.
        5. Product Identification: X2542R11 Mushroom.
        6. Product Identification: X2545R11 Truffle.
        7. Product Identification: X2546R11 Graphite.
        8. Product Identification: X2547R11 Blackberry.
        9. Product Identification: As indicated on the Drawings.
        10. Product Identification: As selected by Architect.

\*\* NOTE TO SPECIFIER \*\* Stronghold 30 is used almost exclusively in commercial kitchens.

* + - 1. Basis of Design: Stronghold 30, as manufactured by Altro USA, Inc.
         1. Wear Layer: Homogeneous construction.
         2. Overall Thickness: 0.12 in (3.0 mm).
         3. Sheet/Roll Width: 79 in (2 m).
         4. Sheet/Roll Length: 49 ft (14.9 m).
         5. Weight: 7.19 lbs per sq yd (3.9 kg per sq m).
         6. Backing: Non-woven polyester and cellulose, glass fiber reinforcement scrim.
         7. Slip Resistance per ASTM D 2047: ADA compliant.

Dry: 0.92; Wet: 0.88.

Ramp Test per DIN 11530: R12.

* + - * 1. Static Load Limit per ASTM F 970: 2000 lbs per sq in (13789.5 kPa).
        2. Fire Performance:

CAN/ULC - S102.2.

ASTM E 648: Tested Class I.

ASTM E 662: Less than 450.

\*\* NOTE TO SPECIFIER \*\* Delete product options not required. Refer to altrofloors.com to confirm color selection.

* + - * 1. Product Identification: K3001 Abyss.
        2. Product Identification: K30907 Biscuit.
        3. Product Identification: K3010 Dolphin.
        4. Product Identification: K30421 Midnight.
        5. Product Identification: K30262 Russet.
        6. Product Identification: K30332 Skyline.
        7. Product Identification: K30500 Tundra.
        8. Product Identification: As indicated on the Drawings.
        9. Product Identification: As selected by Architect.

\*\* NOTE TO SPECIFIER \*\* Delete accessories paragraph below if specifying safety flooring for a behavioral or mental health facility.

* + 1. Accessories: For commercial use.
       1. Vinyl Welding Rod: Weldrod.

\*\* NOTE TO SPECIFIER \*\* Delete cove former option not required. Classic 25 and Stronghold 30 should use Altro 38R for cleanability in commercial kitchens.

* + - 1. Cove Former: Altro 20R, 0.94 in (24 mm) radius. Acceptable material, sized to suit application.
      2. Cove Former: Altro 38R, 1.75 in (45 mm) radius. Acceptable material, sized to suit application.

\*\* NOTE TO SPECIFIER \*\* Delete gulley edge/angle options not required.

* + - 1. Gulley Edge/Angle: Altro GA 35/25. Vinyl. Sized to suit application.
      2. Gulley Edge/Angle: Altro GE 35RE. Vinyl. Sized to suit application.
      3. Gulley Edge/Angle: Altro GE 25RE. Vinyl. Sized to suit application.

\*\* NOTE TO SPECIFIER \*\* Delete cap strip options not required.

* + - 1. Cap Strip: Altro C4 Vinyl. Sized to suit application.
      2. Cap Strip: Altro C7 Vinyl. Sized to suit application.
      3. Cap Strip: Altro C8 Vinyl. Sized to suit application.
      4. Cap Strip: Altro C11 Vinyl. Sized to suit application.
      5. Cap Strip: Altro Stainless steel. Sized to suit application.
      6. Subfloor Filler and Leveler: Use only gray Portland cement-based "moisture tolerant" underlayments, and patching compounds. Use for filling cracks, holes or leveling. White gypsum materials are not acceptable.

\*\* NOTE TO SPECIFIER \*\* Delete metal edge strip options not required.

* + - 1. Metal Edge Strips: Aluminum extruded, smooth with lip to extend over flooring.
      2. Metal Edge Strips: Aluminum mill finish with lip to extend over flooring.
      3. Metal Edge Strips: Stainless steel with lip to extend over flooring.

\*\* NOTE TO SPECIFIER \*\* Corner guards are used by product Classic 25. Delete if not required.

* + - 1. Stainless Steel Corner Guard:

\*\* NOTE TO SPECIFIER \*\* Delete height option not required.

* + - * 1. Height: 3 in (76 mm).
        2. Height: 5 in (127 mm) height.

\*\* NOTE TO SPECIFIER \*\* Deflector plate is used by product Classic 25 only for use under stove equipment not fitted with such. Delete if not required.

* + - 1. Stainless Steel Deflector Plate: 22 x 22 in (559 x 559 mm).
      2. Adhesives:

\*\* NOTE TO SPECIFIER \*\* Delete adhesive options not required.

* + - * 1. Altrofix 30: 2 part polyurethane for areas prone to moisture.
        2. Altrofix 31: 2 part polyurethane fast set version for repairs and small areas.

\*\* NOTE TO SPECIFIER \*\* Ecofix adhesive can be used only with Atlas 40 only and only in areas where water and excessive moisture is not an issue. Not to be used in showers, kitchens or other wet environments. Delete if not required.

* + - * 1. EcoFix 20E: Hard set for heavy rolling loads.
        2. Adhesive Applications:

All Wet Areas: Altrofix 30.

Safety Flooring: Altrofix 30.

Slip-Resistant Flooring: Ecofix 20E.

Adhesive-Free Sheet: Altro Looselay tape.

Smooth Sheet: Ecofix 20E.

Tile/Plank: Ecofix 25E.

\*\* NOTE TO SPECIFIER \*\* In behavioral and mental health facilities flooring cap strips and aluminum strips are not permissible. In these areas it is recommended to use the "rebate" or "pencil cove" installation methods. Consult Altro's website at www.altro.com/bmh with specific installation instructions for these areas. Delete accessories paragraph below if specifying safety flooring for commercial use.

* + 1. Accessories: For behavioral and mental health facilities.
       1. Vinyl Welding Rod: Weldrod.
       2. Floor Drains: Must have ligature-resistant covers and be secured with tamper-proof screws.

\*\* NOTE TO SPECIFIER \*\* Delete gulley edge/angle options not required.

* + - 1. Gulley Edge/Angle: Altro GA 35/25. Vinyl. Sized to suit application.
      2. Gulley Edge/Angle: Altro GE 35RE. Vinyl. Sized to suit application.
      3. Gulley Edge/Angle: Altro GE 25RE. Vinyl. Sized to suit application.
      4. Subfloor Filler and Leveler: Use only gray Portland cement-based "moisture tolerant" underlayments, and patching compounds. Use for filling cracks, holes or leveling. White gypsum materials are not acceptable.
      5. Caulking: Recommend or similar approved pick-proof caulking such as Pecora DynaFlex SC, with manufacturer recommended primer
      6. Adhesives:

\*\* NOTE TO SPECIFIER \*\* Delete adhesive options not required.

* + - * 1. Altrofix 30: 2 part polyurethane for areas prone to moisture.
        2. Altrofix 31: 2 part polyurethane fast set version for repairs and small areas.
        3. Adhesive Applications:

All Wet Areas: Altrofix 30.

Safety Flooring: Altrofix 30.

Slip-Resistant Flooring: Ecofix 20E.

Adhesive-Free Sheet: Altro Looselay tape.

Smooth Sheet: Ecofix 20E.

Tile/Plank: Ecofix 25E.

\*\* NOTE TO SPECIFIER \*\* Delete article if not required.

* 1. SLIP RESISTANT FLOORING
     1. Slip Resistant Sheet Vinyl:

\*\* NOTE TO SPECIFIER \*\* Delete basis of design options not required. Reliance 25 is used frequently in commercial kitchens and has been approved for use in behavioral and mental health facilities.

* + - 1. Basis of Design: Reliance 25, as manufactured by Altro USA, Inc.
         1. Wear Layer: Homogeneous construction.
         2. Overall Thickness: 0.10 in (2.5 mm).
         3. Sheet/Roll Width: 79 in (2 m).
         4. Sheet/Roll Length: 66 ft (20.1 m).
         5. Weight: 6.27 lbs per sq yd (3.4 kg per sq m).
         6. Backing: Non-woven polyester and cellulose, glass fiber reinforcement.
         7. Slip Resistance per ASTM D 2047: ADA compliant.

Dry: 0.8; Wet: 0.9.

Ramp Test per DIN 11530: R10.

* + - * 1. Static Load Limit per ASTM F 970: 2000 lbs per sq in (13789.5 kPa).
        2. Fire Performance:

CAN/ULC - S102.2.

ASTM E 648: Tested Class I.

ASTM E 662: Less than 450.

\*\* NOTE TO SPECIFIER \*\* Delete product options not required. Refer to altrofloors.com to confirm color selection.

* + - * 1. Product Identification: Arena UB2510.
        2. Product Identification: Gallery UB2511.
        3. Product Identification: Forge UB2515.
        4. Product Identification: Roof Garden UB2500.
        5. Product Identification: Temple UB2509.
        6. Product Identification: Runway UB2506.
        7. Product Identification: Stream UB2518.
        8. Product Identification: Ice Rink UBI2514.
        9. Product Identification: Statue UBI2513.
        10. Product Identification: Plaza UBI2512.
        11. Product Identification: Monument UBI2508.
        12. Product Identification: Signal UBI2516.
        13. Product Identification: Vault UBI2517.
        14. Product Identification: Streetlight UBI2505.
        15. Product Identification: Rock UBI2504.
        16. Product Identification: Pavement UBI2507.
        17. Product Identification: Fountain UBI2502.
        18. Product Identification: Pool UBI2503.
        19. Product Identification: Jet D2501.
        20. Product Identification: Fog D25153.
        21. Product Identification: Bone D25215.
        22. Product Identification: Skyline D25332.
        23. Product Identification: Midnight D25421.
        24. Product Identification: Storm D25903.
        25. Product Identification: Biscuit D25904.
        26. Product Identification: Rust D25907.
        27. Product Identification: As indicated on the Drawings.

\*\* NOTE TO SPECIFIER \*\* Walkway 20 flooring is used frequently in commercial kitchens and has been approved for use in behavioral and mental health facilities.

* + - 1. Basis of Design: Walkway 20, as manufactured by Altro USA, Inc.
         1. Wear Layer: Homogeneous construction.
         2. Overall Thickness: 0.08 in (2.0 mm).
         3. Sheet/Roll Width: 79 in (2 m).
         4. Sheet/Roll Length: 66 ft (20.1 m).
         5. Weight: 4.79 lbs per sq yd (2.6 kg per sq m).
         6. Backing: Non-woven polyester and cellulose, glass fiber reinforcement.
         7. Slip Resistance per ASTM D 2047: ADA compliant.

Dry: 0.8; Wet: 0.8.

Ramp Test per DIN 11530: R10.

* + - * 1. Static Load Limit per ASTM F 970:1000 lbs per sq in (6894 kPa).
        2. Fire Performance:

CAN/ULC - S102.2.

ASTM E 648: Tested Class I.

ASTM E 662: Less than 450.

\*\* NOTE TO SPECIFIER \*\* Delete product options not required. Refer to altrofloors.com to confirm color selection.

* + - * 1. Product Identification: Black VM28092.
        2. Product Identification: Blue VM20412.
        3. Product Identification: Bone VM20215.
        4. Product Identification: Biscuit VM20907.
        5. Product Identification: Cloud VM2014.
        6. Product Identification: Dolphin VM2010.
        7. Product Identification: Fog VM20153/SD\*.
        8. Product Identification: Midnight VM20421.
        9. Product Identification: Skyline VM20332.
        10. Product Identification: Tango VM2031.
        11. Product Identification: Tundra VM20910.

\*\* NOTE TO SPECIFIER \*\* The products below are chipped colors. Refer to altrofloors.com to confirm color selection.

* + - * 1. Product Identification: Blizzard VMI2055.
        2. Product Identification: Coal VMI2058.
        3. Product Identification: Lupin VMI2059.
        4. Product Identification: Nightfall VMI2056.
        5. Product Identification: River VMI2057.
        6. Product Identification: Tarragon VMI2052.
        7. Product Identification: Sand VMI2051.
        8. Product Identification: Savannah VMI2050.
        9. Product Identification: Whale VMI2054.
        10. Product Identification: Winter VMI2053.
        11. Product Identification: As indicated on the Drawings
        12. Product Identification: As selected by Architect
      1. Basis of Design: XpressLay, as manufactured by Altro USA, Inc.
         1. Wear Layer: 0.031 (0.8 mm).
         2. Overall Thickness: 0.09 in (2.2 mm).
         3. Sheet/Roll Width: 79 in (2 m).
         4. Sheet/Roll Length: 66 ft (20.1 m).
         5. Weight: 4.79 lbs per sq yd (2.6 kg per sq m).
         6. Backing: Non-woven polyester and cellulose glass fiber reinforcement scrim. Embossed PVC backing.
         7. Slip Resistance per ASTM D 2047: ADA compliant.

Dry: 0.78; Wet: 0.80.

Ramp Test per DIN 11530: R10.

* + - * 1. Static Load Limit per ASTM F 970: 2000 lbs per sq in (13789.5 kPa).
        2. Fire Performance:

CAN/ULC - S102.2.

ASTM E 648: Tested Class I.

ASTM E 662: Less than 450.

\*\* NOTE TO SPECIFIER \*\* Delete product options not required. Refer to altrofloors.com to confirm color selection.

* + - * 1. Product Identification: XL22153 Fog.
        2. Product Identification: XL22332 Skyline.
        3. Product Identification: XL22215 Bone.
        4. Product Identification: XLI22006 Granite.
        5. Product Identification: XLI22009 Rhino.
        6. Product Identification: XLI22007 Coffee.
        7. Product Identification: As indicated on the Drawings
        8. Product Identification: As selected by Architect

\*\* NOTE TO SPECIFIER \*\* Delete accessories paragraph below if specifying slip resistant flooring for a behavioral or mental health facility.

* + 1. Accessories: For commercial use.
       1. Vinyl Welding Rod: Weldrod.

\*\* NOTE TO SPECIFIER \*\* Delete cove former option not required.

* + - 1. Cove Former: Altro 20R, 0.94 in (24 mm) radius. Acceptable material, sized to suit application.
      2. Cove Former: Altro 38R, 1.75 in (45 mm) radius. Acceptable material, sized to suit application.

\*\* NOTE TO SPECIFIER \*\* Delete gulley edge/angle options not required.

* + - 1. Gulley Edge/Angle: Altro GA 35/25. Vinyl. Sized to suit application.
      2. Gulley Edge/Angle: Altro GE 35RE. Vinyl. Sized to suit application.
      3. Gulley Edge/Angle: Altro GE 25RE. Vinyl. Sized to suit application.

\*\* NOTE TO SPECIFIER \*\* Delete cap strip options not required.

* + - 1. Cap Strip: Altro C4 Vinyl. Sized to suit application.
      2. Cap Strip: Altro C7 Vinyl. Sized to suit application.
      3. Cap Strip: Altro C8 Vinyl. Sized to suit application.
      4. Cap Strip: Altro C11 Vinyl. Sized to suit application.
      5. Cap Strip: Altro Stainless steel. Sized to suit application.
      6. Subfloor Filler and Leveler: Use only gray Portland cement-based "moisture tolerant" underlayments, and patching compounds. Use for filling cracks, holes or leveling. White gypsum materials are not acceptable.

\*\* NOTE TO SPECIFIER \*\* Delete metal edge strip options not required.

* + - 1. Metal Edge Strips: Aluminum extruded, smooth with lip to extend over flooring.
      2. Metal Edge Strips: Aluminum mill finish with lip to extend over flooring.
      3. Metal Edge Strips: Stainless steel with lip to extend over flooring.

\*\* NOTE TO SPECIFIER \*\* Delete Adhesve paragraph if specifiying XpressLay product. Use Tape and Primer section instead.

* + - 1. Adhesives:

\*\* NOTE TO SPECIFIER \*\* Delete adhesive options not required.

* + - * 1. Altrofix 30: 2 part polyurethane for areas prone to moisture.
        2. Altrofix 31: 2 part polyurethane fast set version for repairs and small areas.
        3. EcoFix 20E: Hard set for heavy rolling loads.
        4. Adhesive Applications:

All Wet Areas: Altrofix 30.

Safety Flooring: Altrofix 30.

Slip-Resistant Flooring: Ecofix 20E.

Adhesive-Free Sheet: Altro Looselay tape.

Smooth Sheet: Ecofix 20E.

Tile/Plank: Ecofix 25E.

* + - 1. Tape and Primer:
         1. Altro XpressLay Installation Tape.
         2. W165 Tape Adhesion Promoter : Helps promote a better adhesion bond of the Altro XpressLay installation tape.

\*\* NOTE TO SPECIFIER \*\* In behavioral and mental health facilities flooring cap strips and aluminum strips are not permissible. In these areas it is recommended to use the "rebate" or "pencil cove" installation methods. Consult Altro's website at www.altro.com/bmh with specific installation instructions for these areas. Delete accessories paragraph below if specifying slip resistant flooring for commercial use.

* + 1. Accessories: For behavioral and mental health facilities.
       1. Vinyl Welding Rod: Weldrod.
       2. Floor Drains: Must have ligature-resistant covers and be secured with tamper-proof screws.

\*\* NOTE TO SPECIFIER \*\* Delete gulley edge/angle options not required.

* + - 1. Gulley Edge/Angle: Altro GA 35/25. Vinyl. Sized to suit application.
      2. Gulley Edge/Angle: Altro GE 35RE. Vinyl. Sized to suit application.
      3. Gulley Edge/Angle: Altro GE 25RE. Vinyl. Sized to suit application.
      4. Subfloor Filler and Leveler: Use only gray Portland cement-based "moisture tolerant" underlayments, and patching compounds. Use for filling cracks, holes or leveling. White gypsum materials are not acceptable.
      5. Caulking: Recommend or similar approved pick-proof caulking such as Pecora DynaFlex SC, with manufacturer recommended primer.
      6. Adhesives:

\*\* NOTE TO SPECIFIER \*\* Delete adhesive options not required.

* + - * 1. Altrofix 30: 2 part polyurethane for areas prone to moisture.
        2. Altrofix 31: 2 part polyurethane fast set version for repairs and small areas.
        3. EcoFix 20E: Hard set for heavy rolling loads.
        4. Adhesive Applications:

All Wet Areas: Altrofix 30.

Safety Flooring: Altrofix 30.

Slip-Resistant Flooring: Ecofix 20E.

Adhesive-Free Sheet: Altro Looselay tape.

Smooth Sheet: Ecofix 20E.

Tile/Plank: Ecofix 25E.

\*\* NOTE TO SPECIFIER \*\* Delete article if not required.

* 1. SMOOTH RESILIENT SHEET FLOORING
     1. Smooth Sheet Vinyl:

\*\* NOTE TO SPECIFIER \*\* Delete basis of design options not required. Symphonia has been approved for use in behavioral and mental health facilities.

* + - 1. Basis of Design: Symphonia, as manufactured by Altro USA, Inc.
         1. Wear Layer: 0.031 (0.8 mm).
         2. Overall Thickness: 0.08 in (2 mm).
         3. Sheet/Roll Width: 79 in (2 m).
         4. Sheet/Roll Length: 66 ft (20.1 m).
         5. Weight: 4.60 lbs per sq yd (2.5 kg per sq m).
         6. Backing: Non-woven polyester/cellulose glass fiber reinforcement (fix fiber) scrim.
         7. Slip Resistance per ASTM D 2047: ADA compliant.

Dry: 0.8; Wet: 0.9.

* + - * 1. Static Load Limit per ASTM F 970: 2000 lbs per sq in (13789.5 kPa).
        2. Fire Performance:

CAN/ULC - S102.2.

ASTM E 648: Tested Class I.

ASTM E 662: Less than 450.

\*\* NOTE TO SPECIFIER \*\* Delete product options not required. Refer to altrofloors.com to confirm color selection.

* + - * 1. Product Identification: Iceberg PH2003.
        2. Product Identification: Crystal PH2007.
        3. Product Identification: Vapor PH2004.
        4. Product Identification: Squall PH2011.
        5. Product Identification: Frozen PH2008.
        6. Product Identification: Flurry PH2012.
        7. Product Identification: Swordfish PH2037.
        8. Product Identification: Coyote PH2015.
        9. Product Identification: Manatee PH2016.
        10. Product Identification: Sable PH2030.
        11. Product Identification: Bubblegum PH2036.
        12. Product Identification: Chipmunk PH2020.
        13. Product Identification: Koala PH2019.
        14. Product Identification: Tulip PH2032.
        15. Product Identification: Raisin PH2040.
        16. Product Identification: Shore PH2005.
        17. Product Identification: Rye PH2002.
        18. Product Identification: Pony PH2001.
        19. Product Identification: Caribou PH2009.
        20. Product Identification: Falcon PH2006.
        21. Product Identification: Quail PH2010.
        22. Product Identification: Colt PH2013.
        23. Product Identification: Pine Cone PH2014.
        24. Product Identification: Foal PH2017.
        25. Product Identification: Clementine PH2024.
        26. Product Identification: Saffron PH2028.
        27. Product Identification: Magma PH2018.
        28. Product Identification: Geyser PH2021.
        29. Product Identification: Tidepool PH2022.
        30. Product Identification: Whirlpool PH2029.
        31. Product Identification: Wildflower PH2026.
        32. Product Identification: Lakeside PH2025.
        33. Product Identification: Brook PH2038.
        34. Product Identification: Gulf PH2034.
        35. Product Identification: Cantaloupe PH2023.
        36. Product Identification: Margarita PH2035.
        37. Product Identification: Primrose PH2039.
        38. Product Identification: Clover PH2027.
        39. Product Identification: Caterpillar PH2031.
        40. Product Identification: Porpoise PH2033.
        41. Product Identification: Owl PH2041.
        42. Product Identification: As indicated on the Drawings
        43. Product Identification: As selected by Architect

\*\* NOTE TO SPECIFIER \*\* Orchestra has been approved for use in behavioral and mental health facilities.

* + - 1. Basis of Design: Orchestra, as manufactured by Altro USA, Inc.
         1. Wear Layer: 0.028 (0.7 mm).
         2. Overall Thickness: 0.11 in (2.85 mm).
         3. Sheet/Roll Width: 79 in (2 m).
         4. Sheet/Roll Length: 66 ft (20.1 m).
         5. Weight: 4.79 lbs per sq yd (2.6 kg per sq m).
         6. Backing: Slighty blown PVC with black fleece backing.
         7. Slip Resistance per ASTM D 2047: ADA compliant.

Dry: 0.7; Wet: 0.8.

Ramp Test per DIN 11530: R10.

* + - * 1. Static Load Limit: 1000 lbs per sq in (6895 kPa).
        2. Fire Performance:

CAN/ULC - S102.2.

ASTM E 648: Tested Class I.

ASTM E 662: Less than 450.

\*\* NOTE TO SPECIFIER \*\* Delete product options not required. Refer to altrofloors.com to confirm color selection.

* + - * 1. Product Identification: Reggae CH2801.
        2. Product Identification: Romantic CH2804.
        3. Product Identification: Classical CH2807.
        4. Product Identification: Ragtime CH2810.
        5. Product Identification: Pop CH2805.
        6. Product Identification: Latin CH2803.
        7. Product Identification: Country CH2808.
        8. Product Identification: House CH2811
        9. Product Identification: Flamenco CH2806.
        10. Product Identification: Salsa CH2802.
        11. Product Identification: Motown CH2809.
        12. Product Identification: Folk CH2812.
        13. Product Identification: Fusion CH2813.
        14. Product Identification: Urban CH2816.
        15. Product Identification: Swing Ch2819.
        16. Product Identification: Punk Ch2822.
        17. Product Identification: Chant CH2814.
        18. Product Identification: Rap CH2820.
        19. Product Identification: Jungle CH2823.
        20. Product Identification: Club CH2815.
        21. Product Identification: Metal CH2818.
        22. Product Identification: Gospel CH2821.
        23. Product Identification: Jazz CH2824.
        24. Product Identification: Guitar CH2828.
        25. Product Identification: Trumpet CH2825.
        26. Product Identification: Glockenspiel CH2829.
        27. Product Identification: Cello CH2829.
        28. Product Identification: Banjo Ch2826.
        29. Product Identification: Clarinet CH2832.
        30. Product Identification: Harp CH2830.
        31. Product Identification: Bassoon CH2831.
        32. Product Identification: Violin CH2834.
        33. Product Identification: Chimes CH2836.
        34. Product Identification: Oboe CH2835.
        35. Product Identification: Bongo CH2840.
        36. Product Identification: Drum CH2837.
        37. Product Identification: Trombone CH2839.
        38. Product Identification: Piano CH2838.
        39. Product Identification: As indicated on the Drawings
        40. Product Identification: As selected by Architect

\*\* NOTE TO SPECIFIER \*\* Operetta has been approved for use in behavioral and mental health facilities.

* + - 1. Basis of Design: Operetta, as manufactured by Altro USA, Inc.
         1. Wear Layer: 0.028 (0.7 mm).
         2. Overall Thickness: 0.08 in (2 mm).
         3. Sheet/Roll Width: 79 in (2 m).
         4. Sheet/Roll Length: 66 ft (20.1 m).
         5. Weight: 4.90 lbs per sq yd (2.66 kg per sq m)
         6. Backing: Compact PVC backing.
         7. Slip Resistance per ASTM D 2047: ADA compliant.

Dry: 0.7; Wet: 0.8.

Ramp Test per DIN 11530: R10

* + - * 1. Static Load Limit per ASTM F 970: 2000 lbs per sq in (13789.5 kPa).
        2. Fire Performance:

CAN/ULC - S102.2.

ASTM E 648: Tested Class I.

ASTM E 662: Less than 450.

\*\* NOTE TO SPECIFIER \*\* Delete product options not required. Refer to altrofloors.com to confirm color selection.

* + - * 1. Product Identification: Solo OP2110.
        2. Product Identification: Harmony OP2107.
        3. Product Identification: Duo OP2111.
        4. Product Identification: Quaver OP2101.
        5. Product Identification: Crescendo OP2102.
        6. Product Identification: Waltz OP2106.
        7. Product Identification: Overture OP2123.
        8. Product Identification: Sharp OP2103.
        9. Product Identification: Melody OP2108.
        10. Product Identification: Trio OP2112.
        11. Product Identification: Quartet OP2113.
        12. Product Identification: Quintet OP2114.
        13. Product Identification: Tempo OP2115.
        14. Product Identification: Alto OP2119.
        15. Product Identification: Contralto OP2120.
        16. Product Identification: Bass OP2121.
        17. Product Identification: Clef OP2125.
        18. Product Identification: Canon OP2129.
        19. Product Identification: Key OP2131.
        20. Product Identification: Baroque OP2133.
        21. Product Identification: Tenor OP2138.
        22. Product Identification: Soprano OP2137.
        23. Product Identification: Glee OP2136.
        24. Product Identification: Madrigal OP2134.
        25. Product Identification: Acapella OP2135.
        26. Product Identification: As indicated on the Drawings
        27. Product Identification: As selected by Architect

\*\* NOTE TO SPECIFIER \*\* Serenade has been approved for use in behavioral and mental health facilities.

* + - 1. Basis of Design: Serenade, as manufactured by Altro USA, Inc.
         1. Wear Layer: 0.028 (0.7 mm).
         2. Thickness: 0.15 in (3.9 mm).
         3. Sheet/Roll Width: 79 in (2 m).
         4. Sheet/Roll Length: 66 ft (20.1 m).
         5. Weight: 5.34 lbs per sq yd (2.9 kg per sq m).
         6. Backing: Blown PVC backing.
         7. Slip Resistance per ASTM D 2047: ADA compliant.

Dry: 0.7; Wet: 0.8.

Ramp Test per DIN 11530: R10.

* + - * 1. Static Load Limit: 500 lbs per sq in (3447 kPa).
        2. Fire Performance:

CAN/ULC - S102.2.

ASTM E 648: Tested Class I.

ASTM E 662: Less than 450.

\*\* NOTE TO SPECIFIER \*\* Delete product options not required. Refer to altrofloors.com to confirm color selection.

* + - * 1. Product Identification: Cymbal SE3910.
        2. Product Identification: Tambourine SE3911.
        3. Product Identification: Bridge SE3912.
        4. Product Identification: Prelude SE3923.
        5. Product Identification: Rhythm SE3907.
        6. Product Identification: Maestro SE3903.
        7. Product Identification: Mezzo SE3913.
        8. Product Identification: Metronome SE3914.
        9. Product Identification: Octave SE3915.
        10. Product Identification: Saxophone SE3920.
        11. Product Identification: March SE3925.
        12. Product Identification: Encore SE3929.
        13. Product Identification: Bar SE3931.
        14. Product Identification: As indicated on the Drawings.
        15. Product Identification: As selected by Architect.

\*\* NOTE TO SPECIFIER \*\* Wood has been approved for use in behavioral and mental health facilities.

* + - 1. Basis of Design: Wood, as manufactured by Altro USA, Inc.
         1. Wear Layer: 0.028 (0.7 mm).
         2. Overall Thickness: 0.08 in (2 mm).
         3. Sheet/Roll Width: 79 in (2 m).
         4. Sheet/Roll Length: 66 ft (20.1 m).
         5. Weight: 4.90 lbs per sq yd (2.66 kg per sq m)
         6. Backing: Compact PVC backing.
         7. Slip Resistance per ASTM D 2047: ADA compliant.

Dry: 0.79; Wet: 0.94.

Ramp Test per DIN 11530: R10

* + - * 1. Static Load Limit: 2500 lbs per sq in (17237)
        2. Fire Performance:

CAN/ULC - S102.2.

ASTM E 648: Tested Class I.

ASTM E 662: Less than 450.

\*\* NOTE TO SPECIFIER \*\* Delete product options not required. Refer to altrofloors.com to confirm color selection.

* + - * 1. Product Identification: Bleached Oak WSM2051.
        2. Product Identification: Autumn Maple WSM2055.
        3. Product Identification: Vintage Cherry WSM2052.
        4. Product Identification: Urban Cherry WSM2053.
        5. Product Identification: Rustic Oak WSM2056.
        6. Product Identification: Walnut Noir WSM2061.
        7. Product Identification: Oak Traditions WSM2069.
        8. Product Identification: Washed Oak WSM2063.
        9. Product Identification: Manor Oak WSM2064.
        10. Product Identification: Antique Walnut WSM2057.
        11. Product Identification: Farmhouse Oak WSM2054.
        12. Product Identification: Honey Beech WSM2071.
        13. Product Identification: Mellow Maple WSM2068.
        14. Product Identification: Warm Bamboo WSM2073.
        15. Product Identification: Bleached Bamboo WSM2074.
        16. Product Identification: Castle Oak WSM2075.
        17. Product Identification: Great Oak WSM2076.
        18. Product Identification: Tower Oak WSM2077.
        19. Product Identification: Imperial Oak WSM2078.
        20. Product Identification: Sovereign Oak WSM2079.
        21. Product Identification: Seasoned Cherry WSM2059.
        22. Product Identification: As indicated on the Drawings.
        23. Product Identification: As selected by Architect.

\*\* NOTE TO SPECIFIER \*\* Wood Comfort has been approved for use in behavioral and mental health facilities.

* + - 1. Basis of Design: Wood Comfort, as manufactured by Altro USA, Inc.
         1. Wear Layer: 0.028 (0.7 mm).
         2. Overall Thickness: 0.11 in (2.85 mm).
         3. Sheet/Roll Width: 79 in (2 m).
         4. Sheet/Roll Length: 66 ft (20.1 m).
         5. Weight: 4.79 lbs per sq yd (2.6 kg per sq m).
         6. Backing: Slighty blown PVC with black fleece backing.
         7. Slip Resistance per ASTM D 2047: ADA compliant.

Dry: 0.79; Wet: 0.94.

Ramp Test per DIN 11530: R10.

* + - * 1. Static Load Limit: 1000 lbs per sq in (6895 kPa).
        2. Fire Performance:

CAN/ULC - S102.2.

ASTM E 648: Tested Class I.

ASTM E 662: Less than 450.

\*\* NOTE TO SPECIFIER \*\* Delete product options not required. Refer to altrofloors.com to confirm color selection.

* + - * 1. Product Identification: Autumn Maple Comfort WSMSC2802.
        2. Product Identification: Vintage Cherry Comfort WSMSC2803.
        3. Product Identification: Urban Cherry Comfort WSMSC2804.
        4. Product Identification: Rustic Oak Comfort WSMSC2805.
        5. Product Identification: Washed Oak Comfort WSMSC2808.
        6. Product Identification: Antique Walnut Comfort WSMSC2810.
        7. Product Identification: Farmhouse Oak Comfort WSMSC2811.
        8. Product Identification: Bleached Bamboo Comfort WSMSC2815.
        9. Product Identification: Castle Oak Comfort WSMSC2816.
        10. Product Identification: Great Oak Comfort WSMSC2817.
        11. Product Identification: Tower Oak Comfort WSMSC2818.
        12. Product Identification: Sovereign Oak Comfort WSMSC2820.

\*\* NOTE TO SPECIFIER \*\* Wood Acoustic has been approved for use in behavioral and mental health facilities.

* + - 1. Basis of Design: Wood Acoustic, as manufactured by Altro USA, Inc.
         1. Wear Layer: 0.028 (0.7 mm).
         2. Overall Thickness: 0.15 in (3.9 mm).
         3. Sheet/Roll Width: 79 in (2 m).
         4. Sheet/Roll Length: 66 ft (20.1 m).
         5. Weight: 5.34 lbs per sq yd (2.9 kg per sq m).
         6. Backing: Slighty blown PVC with black fleece backing.
         7. Slip Resistance per ASTM D 2047: ADA compliant.

Dry: 0.79; Wet: 0.94.

Ramp Test per DIN 11530: R10.

* + - * 1. Static Load Limit: 500 lbs per sq in (3447 kPa).
        2. Fire Performance:

CAN/ULC - S102.2.

ASTM E 648: Tested Class I.

ASTM E 662: Less than 450.

\*\* NOTE TO SPECIFIER \*\* Delete product options not required. Refer to altrofloors.com to confirm color selection.

* + - * 1. Product Identification: Antique Walnut Acoustic WSMA3782.
        2. Product Identification: Farmhouse Oak Acoustic WSMA3781.
        3. Product Identification: Mellow Maple Acoustic WSMA3795.
        4. Product Identification: Bleached Bamboo Acoustic WSMA3797.
        5. Product Identification: Castle Oak Acoustic WSMA3798.
        6. Product Identification: Sovereign Oak Acoustic WSMA37102.
      1. Basis of Design: Cantata, as manufactured by Altro USA, Inc.
         1. Wear Layer: 0.031 (0.8 mm).
         2. Overall Thickness: 0.09 in (2.2 mm).
         3. Sheet/Roll Width: 79 in (2 m).
         4. Sheet/Roll Length: 66 ft (20.1 m).
         5. Weight: 4.79 lbs per sq yd (2.6 kg per sq m).
         6. Backing: Embossed PVC backing.
         7. Slip Resistance per ASTM D 2047: ADA compliant.

Dry: 0.70; Wet: 0.90.

Ramp Test per DIN 11530: R10.

* + - * 1. Static Load Limit: 500 lbs per sq in (3447 kPa).
        2. Fire Performance:

CAN/ULC - S102.2.

ASTM E 648: Tested Class I.

ASTM E 662: Less than 450.

\*\* NOTE TO SPECIFIER \*\* Delete product options not required. Refer to altrofloors.com to confirm color selection.

* + - * 1. Product Identification: CA2206 Swan Lake.
        2. Product Identification: CA2210 Brigadoon.
        3. Product Identification: CA2207 Butterfly.
        4. Product Identification: CA2205 Cabaret.
        5. Product Identification: CA2214 Carmen.
        6. Product Identification: CA2208 Carousel.
        7. Product Identification: CA2203 Chicago.
        8. Product Identification: CA2202 Cinderella.
        9. Product Identification: CA2209 Evita.
        10. Product Identification: CA2215 Firebird.
        11. Product Identification: CA2213 Jersey.
        12. Product Identification: CA2204 Midsummer.

\*\* NOTE TO SPECIFIER \*\* Zodiac Smooth has been approved for use in behavioral and mental health facilities.

* + - 1. Basis of Design: Zodiac Smooth, as manufactured by Altro USA, Inc.
         1. Wear Layer: 0.028 (0.7 mm).
         2. Overall Thickness: 0.08 in (2.0 mm).
         3. Sheet/Roll Width: 79 in (2 m).
         4. Sheet/Roll Length: 66 ft (20.1 m).
         5. Weight: 4.95 lbs per sq yd (2.68 kg per sq m).
         6. Backing: PVC.
         7. Slip Resistance per ASTM D 2047: ADA compliant.

Dry: 0.79; Wet: 0.94.

Ramp Test per DIN 11530: R10.

* + - * 1. Static Load Limit: 2000 lbs per sq in (13789.5 kPa).
        2. Fire Performance:

CAN/ULC - S102.2.

ASTM E 648: Tested Class I.

ASTM E 662: Less than 450.

\*\* NOTE TO SPECIFIER \*\* Delete product options not required. Refer to altrofloors.com to confirm color selection.

* + - * 1. Product Identification: ZD2001 Hologram.
        2. Product Identification: ZD2003 Comet.
        3. Product Identification: ZD2004 Capricorn.
        4. Product Identification: ZD2007 Oxygen.
        5. Product Identification: ZD2008 Libra.
        6. Product Identification: ZD2009 Pisces.
        7. Product Identification: ZD2011 Apex.
        8. Product Identification: ZD2012 Terrain.
        9. Product Identification: ZD2017 Meteor.
        10. Product Identification: ZD2018 Celestial.
        11. Product Identification: ZD2019 Planet.
        12. Product Identification: ZD2020 Aries.

\*\* NOTE TO SPECIFIER \*\* Delete accessories paragraph below if specifying smooth resilient sheet flooring for a behavioral or mental health facility.

* + 1. Accessories: For commercial use.
       1. Vinyl Welding Rod: Weldrod.

\*\* NOTE TO SPECIFIER \*\* Delete cove former option not required.

* + - 1. Cove Former: Altro 20R, 0.94 in (24 mm) radius. Acceptable material, sized to suit application.
      2. Cove Former: Altro 38R, 1.75 in (45 mm) radius. Acceptable material, sized to suit application.

\*\* NOTE TO SPECIFIER \*\* Delete gulley edge options not required.

* + - 1. Gulley Edge/Angle: Altro GA 35/25. Vinyl. Sized to suit application.
      2. Gulley Edge/Angle: Altro GE 35RE. Vinyl. Sized to suit application.
      3. Gulley Edge/Angle: Altro GE 25RE. Vinyl. Sized to suit application.

\*\* NOTE TO SPECIFIER \*\* Delete cap strip options not required.

* + - 1. Cap Strip: Altro C4 Vinyl. Sized to suit application.
      2. Cap Strip: Altro C7 Vinyl. Sized to suit application.
      3. Cap Strip: Altro C8 Vinyl. Sized to suit application.
      4. Cap Strip: Altro C11 Vinyl. Sized to suit application.
      5. Cap Strip: Altro Stainless steel. Sized to suit application.
      6. Subfloor Filler and Leveler: Use only gray Portland cement-based "moisture tolerant" underlayments, and patching compounds. Use for filling cracks, holes or leveling. White gypsum materials are not acceptable.

\*\* NOTE TO SPECIFIER \*\* Delete metal edge strip options not required.

* + - 1. Metal Edge Strips: Aluminum extruded, smooth with lip to extend over flooring.
      2. Metal Edge Strips: Aluminum mill finish with lip to extend over flooring.
      3. Metal Edge Strips: Stainless steel with lip to extend over flooring.

\*\* NOTE TO SPECIFIER \*\* Delete Adhesive paragraph if specifying "Cantata" product. Use the tape and primer section instead.

* + - 1. Adhesives:

\*\* NOTE TO SPECIFIER \*\* Delete adhesive options not required. If specifying the "Wood" or "Wood Comfort" or "Symphonia" product, specify EcoFix 20E only.

* + - * 1. Altrofix 30: 2 part polyurethane for areas prone to moisture.
        2. Altrofix 31: 2 part polyurethane fast set version for repairs and small areas.
        3. EcoFix 20E: Hard set for heavy rolling loads.
        4. Adhesive Applications:

All Wet Areas: Altrofix 30.

Safety Flooring: Altrofix 30.

Slip-Resistant Flooring: Ecofix 20E.

Adhesive-Free Sheet: Altro Looselay tape.

Smooth Sheet: Ecofix 20E.

Tile/Plank: Ecofix 25E.

* + - 1. Tape and Primer:
         1. Altro XpressLay Installation Tape. Use with Altro Cantata.
         2. W165 Tape Adhesion Promoter: Helps promote a better adhesion bond of the Altro XpressLay installation tape.

\*\* NOTE TO SPECIFIER \*\* In behavioral and mental health facilities flooring cap strips and aluminum strips are not permissible. In these areas it is recommended to use the "rebate" or "pencil cove" installation methods. Consult Altro's website at www.altro.com/bmh with specific installation instructions for these areas. Delete accessories paragraph below if specifying smooth resilient sheet flooring for commercial use.

\*\* NOTE TO SPECIFIER \*\* Delete article not required.

* 1. Vinyl Welding Rod: Weldrod.
  2. Floor Drains: Must have ligature-resistant covers and be secured with tamper-proof screws.

\*\* NOTE TO SPECIFIER \*\* Delete gulley edge options not required.

* 1. Gulley Edge/Angle: Altro GA 35/25. Vinyl. Sized to suit application.
  2. Gulley Edge/Angle: Altro GE 35RE. Vinyl. Sized to suit application.
  3. Gulley Edge/Angle: Altro GE 25RE. Vinyl. Sized to suit application.
  4. Subfloor Filler and Leveler: Use only gray Portland cement-based "moisture tolerant" underlayments, and patching compounds. Use for filling cracks, holes or leveling. White gypsum materials are not acceptable.
  5. Caulking: Recommend or similar approved pick-proof caulking such as Pecora DynaFlex SC, with manufacturer recommended primer
  6. Adhesives:

\*\* NOTE TO SPECIFIER \*\* Delete adhesive options not required. If specifying the "Wood" or "Wood Comfort" or "Symphonia" product, specify EcoFix 20E only.

* + 1. Altrofix 30: 2 part polyurethane for areas prone to moisture.
    2. Altrofix 31: 2 part polyurethane fast set version for repairs and small areas.
    3. EcoFix 20E: Hard set for heavy rolling loads.
    4. Adhesive Applications:
       1. All Wet Areas: Altrofix 30.
       2. Safety Flooring: Altrofix 30.
       3. Slip-Resistant Flooring: Ecofix 20E.
       4. Adhesive-Free Sheet: Altro Looselay tape.
       5. Smooth Sheet: Ecofix 20E.
       6. Tile/Plank: Ecofix 25E.

\*\* NOTE TO SPECIFIER \*\* Delete article not required.

* 1. SMOOTH RESILIENT TILE FLOORING
     1. Heavy Duty Luxury Tile Flooring:

\*\* NOTE TO SPECIFIER \*\* Lavencia may be produced in various custom thickness and wear layers. Delete and edit overall thickness and wear layer options according to product specified. Number of planks per carton and square foot per carton can also change depending on thickness. Adjust accordingly. Contact Manufacturer for more detail.Delete basis of design options not required.

* + - 1. Basis of Design: Lavencia, as manufactured by Altro USA, Inc.
         1. Wear Layer: 0.028 in (0.71 mm).
         2. Wear Layer (in/mm): \_\_\_\_\_\_\_\_.
         3. Wear Layer: As determined by the Architect.
         4. Overall Thickness: 0.12 in (3.0 mm).
         5. Overall Thickness (in/mm): \_\_\_\_\_\_\_\_.
         6. Overall Thickness: As determined by the Architect.
         7. Backing: PVC.
         8. Slip Resistance per ASTM D 2047: Dry: 0.6.
         9. Static Load Limit per ASTM F970: 2000 lbs per sq in (13790 kPa).
         10. Short Term and Residual Indentation per ASTM F1914: Pass.
         11. Color Stability:

Light per ASTM F1515: Pass.

Heat per ASTM F1514: Pass.

* + - * 1. Dimensional Stability per ASTM F2199: Pass.
        2. Flexibility per ASTM F137: Pass.
        3. Fire Performance:

CAN/ULC - S102.2: Tested.

ASTM E 648: Tested Class I.

ASTM E 662: Less than 450.

* + - * 1. Chemical Resistance per ASTM F925: Tested.
        2. VOC Emissions:

CA 01350: Pass.

FloorScore: Certified.

* + - * 1. Manufactured with rapidly renewable bio-based content.
        2. Ortho-phthalate-free.
        3. Recyclable: 100 percent.
        4. Composition: UV-cured, ceramic-reinforced urethane, film print, 100 percent virgin vinyl layers and backing.

\*\* NOTE TO SPECIFIER \*\* Delete plank types and product identification options not required.

* + - * 1. Plank Type: Long plank.

Plank Size: 9.25 x 59.25 inches (235 x 1505 mm).

Pieces per Carton: 10.

Pieces per Carton: \_\_\_\_\_\_\_\_.

Pieces per Carton: As determined by the Architect.

Square Feet per Carton: 38.07 sq ft (3.54 sq m).

Square Feet per Carton (sq ft/ sq m): \_\_\_\_\_\_\_\_.

Square Feet per Carton: As determined by the Architect.

Weight per Carton: 42.18 lbs (19.13 kg)

Product Identification: LAV13011, Chateau Nordic.

Product Identification: LAV55088, Tavern Mesquite.

Product Identification: LAV88077, Oak Butternut.

Product Identification: LAV99033, Rustic Chestnut.

Product Identification: LAV99066, Malabar Blackwood.

Product Identification: LAV99077, Vintage Walnut.

Product Identification: LAV99088, Tavern Bourbon.

Product Identification: As indicated on the Drawings.

Product Identification: As selected by Architect.

* + - * 1. Plank Type: Standard plank.

Pieces per Carton: 18.

Pieces per Carton: \_\_\_\_\_\_\_\_.

Pieces per Carton: As determined by the Architect.

Plank Size: 6 x 48 inches (152 x 1219 mm).

Square Feet per Carton: 36 sq ft (3.34 sq m).

Square Feet per Carton (sq ft/ sq m): \_\_\_\_\_\_\_\_.

Square Feet per Carton: As determined by the Architect.

Weight per Carton: 38 lbs (17.24 kg).

Product Identification: LAV17011, Dove.

Product Identification: LAV17022, Tweed.

Product Identification: LAV13022, Chateau Cellar.

Product Identification: LAV13033, Chateau Saddle.

Product Identification: LAV13066, Farmhouse Whiskey.

Product Identification: LAV13077, Farmhouse Smoke.

Product Identification: LAV14011, Classic Oak.

Product Identification: LAV14022, Ash Oak.

Product Identification: LAV14033, Blonde Oak.

Product Identification: LAV15011, Rich Bamboo.

Product Identification: LAV15022, Soft Bamboo.

Product Identification: LAV15033, Tuxedo Bamboo.

Product Identification: LAV23066, Hampton Greige.

Product Identification: LAV23088, Frontier.

Product Identification: LAV44011, Amber.

Product Identification: LAV44022, Marmalade.

Product Identification: LAV44033, Crimson.

Product Identification: LAV44044, Pear.

Product Identification: LAV44055, Cobalt.

Product Identification: LAV55011, Birch Grove.

Product Identification: LAV55022, Warm Walnut.

Product Identification: LAV55044, Pale Persimmon.

Product Identification: LAV55055, Black Persimmon.

Product Identification: LAV55077, Persimmon.

Product Identification: LAV66099, Farmhouse Heritage.

Product Identification: LAV88011, Laurel Oak.

Product Identification: LAV88022, American Walnut.

Product Identification: LAV88033, Country Hickory.

Product Identification: LAV88044, African Mahogany.

Product Identification: LAV88088, Spalted Cherry.

Product Identification: LAV99022, Hampton Shores.

Product Identification: LAV14044, Ansel Oak.

Product Identification: LAV14055, Newfound Oak.

Product Identification: LAV99055, Tavern Tobacco.

Product Identification: As indicated on the Drawings.

Product Identification: As selected by Architect.

* + - * 1. Plank Type: Tile.

Pieces per Carton: 18.

Pieces per Carton: \_\_\_\_\_\_\_\_.

Pieces per Carton: As determined by the Architect.

Plank Size: 12 x 24 inches (305 x 610 mm).

Square Feet per Carton: 36 sq ft (3.34 sq m).

Square Feet per Carton (sq ft/ sq m): \_\_\_\_\_\_\_\_.

Square Feet per Carton: As determined by the Architect.

Weight per Carton: 36 lbs (16.33 kg)

Product Identification: LAV16011, Hammered Steel.

Product Identification: LAV16022, Sterling.

Product Identification: LAV16033, Alabaster.

Product Identification: LAV16044, Asher.

Product Identification: As indicated on the Drawings.

Product Identification: As selected by Architect.

* + - 1. Basis of Design: Quartz Tile, as manufactured by Altro USA, Inc.
         1. Wear Layer: Homogeneous construction.
         2. Overall Thickness: 0.08 in (2 mm).
         3. Slip Resistance per ASTM D 2047: Dry: 0.6.
         4. Static Load Limit per ASTM F970: 3000 lbs per sq in (20684 kPa).
         5. Fire Performance:

CAN/ULC - S102.2.

ASTM E 648: Tested Class I.

ASTM E 662: Less than 450.

* + - * 1. Tile Size: 24 x 24 in (610 x 610 mm).
        2. Square Feet per Carton: 60 sq ft (5.57 sq m).
        3. Weight per Carton: 48 lbs (21.8 kg)
        4. Pieces per Carton: 15.

\*\* NOTE TO SPECIFIER \*\* Delete product options not required.

* + - * 1. Product Identification: 9301 Chalk CD.
        2. Product Identification: 9701 Chalk.
        3. Product Identification: 9302 Rock Salt CD.
        4. Product Identification: 9702 Rock Salt.
        5. Product Identification: 9351 Ice CD.
        6. Product Identification: 9303 Ash CD.
        7. Product Identification: 9703 Ash.
        8. Product Identification: 9317 Platinum CD.
        9. Product Identification: 9722 Sand.
        10. Product Identification: 9322 Sand CD.
        11. Product Identification: 9324 Shale CD.
        12. Product Identification: 9724 Shale.
        13. Product Identification: 9318 Thunder CD.
        14. Product Identification: 9304 Steel CD.
        15. Product Identification: 9306 Charcoal CD.
        16. Product Identification: 9361 Celery CD.
        17. Product Identification: 9328 Espresso CD.
        18. Product Identification: 9321 Cream CD.
        19. Product Identification: 9723 Latte.
        20. Product Identification: 9323 Latte CD.
      1. Basis of Design: Dolce Tile, as manufactured by Altro USA, Inc.
         1. Wear Layer: Homogeneous construction.
         2. Overall Thickness: 0.12 in (3 mm).
         3. Slip Resistance per ASTM D 2047: Dry: 0.6.
         4. Static Load Limit per ASTM F970: 3000 lbs per sq in (20684 kPa).
         5. Fire Performance:

CAN/ULC - S102.2.

ASTM E 648: Tested Class I.

ASTM E 662: Less than 450.

* + - * 1. Tile Size: 18 x 18 in (457 x 457 mm).
        2. Square Feet per Carton: 33.75 sq ft (3.13 sq m).
        3. Weight per Carton: 44.35 lbs (20.12 kg).
        4. Pieces per Carton: 15.

\*\* NOTE TO SPECIFIER \*\* Delete product options not required.

* + - * 1. Product Identification: AD501 Dia.
        2. Product Identification: AD502 Piedra.
        3. Product Identification: AD505 Madrid.
        4. Product Identification: AD512 Leche.
        5. Product Identification: AD525 Porcelana.
        6. Product Identification: AD507 Marmol.
        7. Product Identification: AD529 Torta.
        8. Product Identification: AD527 Pastel.
        9. Product Identification: AD509 Granito.
        10. Product Identification: AD506 Ceituna.
        11. Product Identification: AD503 Cemento.
        12. Product Identification: AD504 Noche.
        13. Product Identification: AD601 Churro.
        14. Product Identification: AD508 Barcelona.
        15. Product Identification: AD526 Playa.
        16. Product Identification: AD519 Mostaza.
        17. Product Identification: AD514 Tierra.
        18. Product Identification: AD515 Tabaco.
        19. Product Identification: AD520 Paella.
        20. Product Identification: AD511 Ladrillo.
        21. Product Identification: AD606 Naranja.
        22. Product Identification: AD611 Sangria.
        23. Product Identification: AD608 Uva.
        24. Product Identification: AD524 Rio.
        25. Product Identification: AD609 Oceano.
        26. Product Identification: AD523 Agua.
        27. Product Identification: AD532 Cielo.
        28. Product Identification: AD521 Limon.
        29. Product Identification: AD605 Cilantro.
        30. Product Identification: AD522 Lago.
      1. Basis of Design: Dolce Essentials, as manufactured by Altro USA, Inc.
         1. Wear Layer: Homogeneous construction.
         2. Overall Thickness: 0.12 in (3 mm).
         3. Slip Resistance per ASTM D 2047: Dry: 0.6.
         4. Static Load Limit per ASTM F970: 1500 lbs per sq in (10342 kPa).
         5. Fire Performance:

CAN/ULC - S102.2.

ASTM E 648: Tested Class I.

ASTM E 662: Less than 450.

* + - * 1. Tile Size: 18 x 18 in (457 x 457 mm).
        2. Square Feet per Carton: 33.75 sq ft (3.13 sq m).
        3. Weight per Carton: 43.21 lbs (19.6 kg).
        4. Pieces per Carton: 15.

\*\* NOTE TO SPECIFIER \*\* Delete product options not required.

* + - * 1. Product Identification: ADE327 Gelato.
        2. Product Identification: ADE330 Parmesano.
        3. Product Identification: ADE305 Porcelain.
        4. Product Identification: ADE306 Plaster.
        5. Product Identification: ADE332 Focaccia.
        6. Product Identification: ADE333 Ciabatta.
        7. Product Identification: ADE312 Verona.
        8. Product Identification: ADE309 Florence.
        9. Product Identification: ADE331 Romano.
        10. Product Identification: ADE315 Asiago.
        11. Product Identification: ADE301 Milan.
        12. Product Identification: ADE302 Sicily.
        13. Product Identification: ADE303 Luna.
        14. Product Identification: ADE328 Argento.
        15. Product Identification: ADE360 Carbone.
        16. Product Identification: ADE329 Notte.
        17. Product Identification: ADE334 Cappucino.
        18. Product Identification: ADE308 Caffe.
        19. Product Identification: ADE307 Macchiato.
        20. Product Identification: ADE361 Doppio.
        21. Product Identification: ADE353 Crema.
        22. Product Identification: ADE362 Sole.
        23. Product Identification: ADE316 Polenta.
        24. Product Identification: ADE317 Caramello.
        25. Product Identification: ADE341 Biscotti.
        26. Product Identification: ADE350 Tangelo.
        27. Product Identification: ADE313 Stucco.
        28. Product Identification: ADE314 Pesca.
        29. Product Identification: ADE340 Tuscany.
        30. Product Identification: ADE310 Malta.
        31. Product Identification: ADE359 Rosa.
        32. Product Identification: ADE356 Venice.
        33. Product Identification: ADE344 Azzurro.
        34. Product Identification: ADE343 Nube.
        35. Product Identification: ADE357 Renaissance.
        36. Product Identification: ADE347 Basilica.
        37. Product Identification: ADE324 Vino.
        38. Product Identification: ADE348 Sorbet.
        39. Product Identification: ADE319 Pistachio.
        40. Product Identification: ADE355 Basil.
        41. Product Identification: ADE323 Cypress.
    1. Accessories:
       1. Subfloor Filler and Leveler: Use only gray Portland cement-based "moisture tolerant" underlayments, and patching compounds. Use for filling cracks, holes or leveling. White gypsum materials are not acceptable.
       2. Adhesives:

\*\* NOTE TO SPECIFIER \*\* When specifying products Dolce, and Dolce Essentials tiles, specify Ecofix25 only. Ecofix 25 can only be used with tiles. Delete adhesive option not required.

* + - * 1. EcoFix 25E: 1-part acrylic for areas free of moisture and/or temperature fluctuations.
        2. EcoFix 20E: 1-part acrylic for areas free of moisture with heavy rolling loads.

1. EXECUTION
   1. EXAMINATION
      1. Do not begin installation until substrates have been properly prepared. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.
      2. Confirm concrete slabs conform to ACI 302.1R and ACI 302.2R.
      3. Perform moisture tests on concrete floors regardless of the age or grade level. Verify concrete substrate is dry in accordance with ASTM F 2170, in strict accordance with instructions.
   2. PREPARATION
      1. Clean surfaces thoroughly prior to installation.
      2. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.
         1. Concrete per ASTM F 710.
         2. Other Monolithic Floors; ASTM F 1482
      3. When patching, a moisture tolerant patching compound must always be used.
   3. INSTALLATION
      1. Install in accordance with Altro Installation Practices and Quick Facts Guide, approved submittals, and in proper relationship with adjacent materials.
         1. All Seams shall be heat welded with Altro Weldrod only.
         2. Failure to install flooring per recommended procedures will void the limited product warranty.

\*\* NOTE TO SPECIFIER \*\* Coved installation must be used if installation is in a behavioral or mental health facility. Otherwise delete if not required..

* + 1. Coved Installation: Where Altro flooring is coved up wall surfaces and other abutments, install per Altro Installation Practices using the following accessories:
       1. Standard Wall Finishes: Rebate method. Firmly secure sheet vinyl beneath wall panel prior to sealing with pick-proof mastic.
       2. Shower Transitions: Pencil cove method. With wall flush against flooring. Ensure there are no opportunities to pick at finishes by installing Altro Whiterock wall cladding over flooring per this installation method.
  1. PROTECTION
     1. Protect installed products until completion of project.
     2. Cleaning: Remove temporary coverings and protection of adjacent work areas. Repair or replace damaged installed products. Clean installed products in accordance with manufacturer's instructions prior to Owner's acceptance. Remove construction debris from project site and legally dispose of debris.
     3. Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION