

**Addendum No. 1  
January 18, 2018**

Project: Netherlands Reformed School  
Rock Valley, Iowa  
2716

Architect: Architecture Incorporated

Letting: January 25, 2018  
3:00 p.m.  
Hoogendoorn Construction, 47895 US Highway 18, Canton, SD, 57013

Scope of this Addendum:

To all bidders and all others to whom drawings and specifications have been issued by Architecture Incorporated.

Acknowledge receipt of this addendum by listing its number and date in the bidders Form of Proposal. Failure to do so may subject bidder to disqualification. This Addendum forms a part of the Contract Documents. It modifies them as follows:

**GENERAL ITEMS:**

- 1) **CLARIFICATION: ENERGY CODE:** The Netherlands Christian Reformed School project shall comply with current energy code requirements.
- 2) **CLARIFICATION: SALES TAX:** It is our understanding that the Netherlands Christian Reformed School project is exempt from sales tax. The Owner will provide the successful Contractor with sales tax exemption certificates. All bidders, including all subcontractors and suppliers, shall remain individually responsible for verifying all applicable tax laws as they pertain to this Project.
- 3) **SECTION 042000 - UNIT MASONRY ASSEMBLIES**
  - a) Omit all references to Accent Brick (Color 2) in Article 2.5.C.3. a. 2); not applicable to this Project.
    - i) All brick furnished and installed on this Project shall be Field Brick (Color 1).
  - b) Omit all references to Triple (Square) Brick / Accent Brick (Color 2) in Article 2.5.C.3. b; not applicable to this Project.
    - i) All brick furnished and installed on this Project shall be Field Brick (Color 1).
- 4) **SECTION 074213 - METAL WALL PANELS**
  - a) An additional Basis-of-Design concealed-fastener metal wall panel for *Add Alternate #5: ADD METAL SIDING AND 2" RIGID INSULATION AT STEP IN ROOF ELEVATION AROUND EXISTING GYM* will be considered acceptable, as follows:

- i) Basis of Design Product: **Precision-Loc** metal wall panels as manufactured by Central States Manufacturing. Fluropon 70% PVDF,
  - (1) Material: Zinc-coated (galvanized) steel sheet, [**0.023-inch (24 ga)**] nominal thickness.
  - (2) Panel Width: 12-inches.
  - (3) Panel Depth: 1-inch.
  - (4) Profile: Solid, flat pan.
  - (5) Finish: Manufacturers standard Fluropon 70% PVDF finish.
    - (a) Color: As selected by Architect from manufacturers full range of standard colors.
  - (6) Pre-Approved Manufacturers: Subject to compliance with requirements, provide the product specified, or a comparable product by one of the following:
    - (a) AEP Span.
    - (b) Berridge Manufacturing.
    - (c) Firestone
    - (d) Metal Sales Manufacturing.
    - (e) Petersen Corporation.

5) SECTION 074215 - METAL SOFFIT PANELS

- a) All flush-profile metal soffit panels shall be provided in color matching Una-Clad – **Almond**.

6) SECTION 074600 – SIDING

- a) Omit the Section in its entirety; not applicable.

7) SECTION 076200 – SHEET METAL FLASHING AND TRIM

- a) All sheet metal copings installed at brick veneer locations shall be provided in color matching UNA-CLAD - **Dark Bronze** to match that copings installed at existing brick walls.
- b) **NOTE:** Color of sheet metal copings installed at metal wall panel locations shall match metal wall panel color – as specified.

8) SECTION 081416 - FLUSH WOOD DOORS

- a) Flush wood doors shall be based on doors manufactured by VT Industries with factory-applied finish.
  - i) Factory-Applied Finish: VT Industries - Oasis Finish OA07

9) SECTION 092216 - NON-STRUCTURAL METAL FRAMING

- a) Reference specification Section 092216 attached to the end of this Addendum for light gauge metal framing; 6 pages total.

- 10) SECTION 092900 - GYPSUM BOARD
- a) Reference specification Section 092900 attached to the end of this Addendum for gypsum board; 10 pages total.
- 11) SECTION 096519 - RESILIENT TILE FLOORING (VCT)
- a) Reference VCT specification Section 096519 attached to the end of this Addendum; 5 pages total.
- i) **CLARIFICATION** - VCT should be included in the Contractor's Base Bid; LVT shall be bid as an alternate to VCT flooring per Alternate No. 2.
- 12) SECTION 099123 - INTERIOR PAINT
- a) CLARIFICATION: All interior paints and coatings shall be based on products manufactured by Diamond Vogel.
- b) The gloss level of all General Paint (PNT) products shall be letter "SATIN" – to match existing.
- 13) SECTION 105123 - PLASTIC LAMINATE-CLAD LOCKERS CUBBIES
- a) Omit all references to Number Plates; not required at plastic laminate-clad cubbies.
- b) Replace any and all references to Plastic Laminate-Clad Lockers with *Plastic Laminate-Clad Cubbies*.
- 14) DRAWING 3.10 – FOUNDATION PLAN
- a) Reference the FOOTING SCHEDULE: Delete footing type "F2.6A" from the schedule list.
- 15) DRAWING 4.30 – DOOR SCHEDULE
- a) See supplemental architectural drawing SD-1 (dated 1-18-18) attached to the end of this addendum for revised detail 4/4.30.
- 16) DRAWING 7.10 – CASEWORK ELEVATIONS
- a) See supplemental architectural drawing SD-2 (dated 1-18-18) attached to the end of this addendum for revised detail 5/7.10.

END OF ADDENDUM

## SECTION 092216 - NON-STRUCTURAL METAL FRAMING

## PART 1 - GENERAL

## 1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

## 1.2 SUMMARY

## A. Section Includes:

- 1. Non-load-bearing steel framing systems for interior gypsum board assemblies.
- 2. Suspension systems for interior gypsum ceilings and soffits.

## B. Related Requirements:

- 1. Section 054000 "Cold-Formed Metal Framing" for exterior and interior load-bearing and exterior non-load-bearing wall studs; floor joists; roof rafters and ceiling joists; and roof trusses.

## 1.3 ACTION SUBMITTALS

- A. Product Data: For each type of product.

- B. Evaluation Reports: Submit evaluation reports certified under an independent third party inspection program administered by an agency accredited by IAS to ICC-ES AC98, IAS Accreditation Criteria for Inspection Agencies.

## PART 2 - PRODUCTS

## 2.1 PERFORMANCE REQUIREMENTS

- A. Fire-Test-Response Characteristics: For gypsum board assemblies with fire-resistance ratings, provide materials and construction identical to those tested in assembly indicated according to ASTM E 119 by an independent testing and inspecting agency acceptable to authorities having jurisdiction.
- B. STC-Rated Assemblies: For STC-rated assemblies, provide materials and construction identical to those tested in assembly indicated, according to ASTM E 90 and classified according to ASTM E 413 by an independent testing agency.

## 2.2 FRAMING SYSTEMS

- A. Framing Members, General: Comply with ASTM C 754 for conditions indicated.

- 1. Steel Sheet Components: Comply with ASTM C 645 requirements for metal unless otherwise indicated.

2. Protective Coating: [ASTM A 653/A 653M, **G40 (Z120)**], hot-dip galvanized coating [or] **[coating with equivalent corrosion resistance of ASTM A 653/A 653M, **G40 (Z120)**]**.
  - a. Acceptable equivalent protective coating: ClarkDietrich [**DiamondPlus**] coating.
- B. Studs and Runners: ASTM C 645.
  1. Steel Studs and Runners:
    - a. Minimum Thickness: At typical interior partition locations, provide light-gage steel framing members with [**minimum base metal thickness of 0.0296 inch (0.75 mm); minimum design thickness of 0.0312 inch (0.791 mm)**].
      - 1) Provide 20 ga steel studs and runners unless indicated otherwise. ‘Equivalent’ light-gage steel framing members [**not allowed**].
    - b. Depth: [**As indicated on Drawings**].
  2. **Contractor Option:** The Contractor shall have the option of furnishing and installing light-gage steel framing members with [**minimum base metal thickness of 0.0190 inch; minimum design thickness of 0.0200 inch**] at typical interior partition locations, provided jamps and headers at all openings are framed with specialty [**header**] [**and**] [**jamb**] studs.
    - a. Minimum Thickness at Specialty Head & Jamb Studs: [**0.0329 inch (33 mils) (20 ga.)**].
    - b. Coating: CP60 per ASTM C955.
    - c. Basis-of-Design Products: Based on RedHeader PRO framing members as manufactured by Clark Dietrich Building Systems.
    - d. NOTE: Jamb studs shall be installed full height.
- C. Slip-Type Head Joints: Where walls and partitions are indicated to [**extend**] [**seal**] to structure above, provide [**one of**] the following:
  1. Single Long-Leg Runner System: ASTM C 645 top runner with **2-inch- (51-mm-)** deep flanges in thickness not less than indicated for studs, installed with studs friction fit into top runner and with continuous bridging located within **12 inches (305 mm)** of the top of studs to provide lateral bracing.
  2. Double-Runner System: ASTM C 645 top runners, inside runner with **2-inch- (51-mm-)** deep flanges in thickness not less than indicated for studs and fastened to studs, and outer runner sized to friction fit inside runner.
  3. Deflection Track: Steel sheet top runner manufactured to prevent cracking of finishes applied to interior partition framing resulting from deflection of structure above; in thickness not less than indicated for studs and in width to accommodate depth of studs.
    - a. Products: Subject to compliance with requirements, [**provide one of the following**]:
      - 1) ClarkDietrich Building Systems; MaxTrak Slotted Deflection Track.
      - 2) MBA Building Supplies; [**FlatSteel Deflection Track**] [**Slotted Deflecto Track**].
      - 3) Steel Network Inc. (The); [**VertiClip SLD**] [**VertiTrack VTD**] Series.
      - 4) Telling Industries; [**Vertical Slip Track**] [**Vertical Slip Track II**].
- D. Firestop Tracks: Top runner manufactured to allow partition heads to expand and contract with movement of the structure while maintaining continuity of fire-resistance-rated assembly indicated; in thickness not less than indicated for studs and in width to accommodate depth of studs.

1. Products: Subject to compliance with requirements, [**provide one of the following**]:
  - a. ClarkDietrich Building Systems; BlazeFrame Firestop Track.
  - b. Fire Trak Corp.; Fire Trak System [**attached to studs with Fire Trak Posi Klip**].
  - c. Metal-Lite, Inc.; The System.

E. Flat Strap and Backing Plate: Steel sheet for blocking and bracing in length and width indicated.

1. Minimum Base-Metal Thickness: [**0.033 inch (0.84 mm)**].

F. Hat-Shaped, Rigid Furring Channels: ASTM C 645.

1. Minimum Base-Metal Thickness: [**0.018 inch (0.45 mm)**].
2. Depth: [**7/8 inch (22.2 mm)**].

G. Resilient Furring Channels: **1/2-inch- (13-mm-)** deep, steel sheet members designed to reduce sound transmission.

1. Configuration: [**Asymmetrical**] [**or**] [**hat shaped**].

H. Cold-Rolled Furring Channels: **0.053-inch (1.34-mm)** uncoated-steel thickness, with minimum **1/2-inch- (13-mm-)** wide flanges.

1. Depth: [**3/4 inch (19 mm)**].
2. Tie Wire: ASTM A 641/A 641M, Class 1 zinc coating, soft temper, **0.062-inch- (1.59-mm-)** diameter wire, or double strand of **0.048-inch- (1.21-mm-)** diameter wire.

## 2.3 SUSPENSION SYSTEMS

A. Tie Wire: ASTM A 641/A 641M, Class 1 zinc coating, soft temper, **0.062-inch- (1.59-mm-)** diameter wire, or double strand of **0.048-inch- (1.21-mm-)** diameter wire.

B. Wire Hangers: ASTM A 641/A 641M, Class 1 zinc coating, soft temper, **0.16 inch (4.12 mm)** in diameter.

C. Flat Hangers: Steel sheet, [**1 by 3/16 inch (25 by 5 mm)** by length indicated].

D. Carrying Channels: Cold-rolled, commercial-steel sheet with a base-metal thickness of **0.053 inch (1.34 mm)** and minimum **1/2-inch- (13-mm-)** wide flanges.

E. Furring Channels (Furring Members):

1. Cold-Rolled Channels: **0.053-inch (1.34-mm)** uncoated-steel thickness, with minimum **1/2-inch- (13-mm-)** wide flanges, **3/4 inch (19 mm)** deep.
2. Hat-Shaped, Rigid Furring Channels: ASTM C 645, **7/8 inch (22 mm)** deep.
  - a. Minimum Base-Metal Thickness: [**0.018 inch (0.45 mm)**].

## 2.4 AUXILIARY MATERIALS

A. General: Provide auxiliary materials that comply with referenced installation standards.

1. Fasteners for Metal Framing: Of type, material, size, corrosion resistance, holding power, and other properties required to fasten steel members to substrates.
- B. Isolation Strip at Exterior Walls: Provide [**one of**] the following:
  1. Asphalt-Saturated Organic Felt: ASTM D 226, Type I (No. 15 asphalt felt), nonperforated.
  2. Foam Gasket: Adhesive-backed, closed-cell vinyl foam strips that allow fastener penetration without foam displacement, **1/8 inch (3.2 mm)** thick, in width to suit steel stud size.

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Examine areas and substrates, with Installer present, and including welded hollow-metal frames, cast-in anchors, and structural framing, for compliance with requirements and other conditions affecting performance of the Work.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

### 3.2 PREPARATION

- A. Suspended Assemblies: Coordinate installation of suspension systems with installation of overhead structure to ensure that inserts and other provisions for anchorages to building structure have been installed to receive hangers at spacing required to support the Work and that hangers will develop their full strength.
  1. Furnish concrete inserts and other devices indicated to other trades for installation in advance of time needed for coordination and construction.

### 3.3 INSTALLATION, GENERAL

- A. Installation Standard: ASTM C 754.
  1. Gypsum Board Assemblies: Also comply with requirements in ASTM C 840 that apply to framing installation.
- B. Install supplementary framing, and blocking to support fixtures, equipment services, heavy trim, grab bars, toilet accessories, furnishings, or similar construction.
- C. Install bracing at terminations in assemblies.
- D. Do not bridge building control and expansion joints with non-load-bearing steel framing members. Frame both sides of joints independently.

### 3.4 INSTALLING FRAMED ASSEMBLIES

- A. Install framing system components according to spacings indicated, but not greater than spacings required by referenced installation standards for assembly types.
  1. Single-Layer Application: [**16 inches (406 mm)**] o.c. unless otherwise indicated.

2. Multilayer Application: [16 inches (406 mm)] o.c. unless otherwise indicated.
  3. Tile Backing Panels: [16 inches (406 mm)] o.c. unless otherwise indicated.
- B. Where studs are installed directly against exterior masonry walls or dissimilar metals at exterior walls, install isolation strip between studs and exterior wall.
- C. Install studs so flanges within framing system point in same direction.
- D. Install tracks (runners) at floors and overhead supports. Extend framing full height to structural supports or substrates above suspended ceilings except where partitions are indicated to terminate at suspended ceilings. Continue framing around ducts penetrating partitions above ceiling.
1. Slip-Type Head Joints: Where framing extends to overhead structural supports, install to produce joints at tops of framing systems that prevent axial loading of finished assemblies.
  2. Door Openings: Screw vertical studs at jambs to jamb anchor clips on door frames; install runner track section (for cripple studs) at head and secure to jamb studs.
    - a. Install two studs at each jamb unless otherwise indicated.
    - b. Extend jamb studs through suspended ceilings and attach to underside of overhead structure.
  3. Other Framed Openings: Frame openings other than door openings the same as required for door openings unless otherwise indicated. Install framing below sills of openings to match framing required above door heads.
  4. Sound-Rated Partitions: Install framing to comply with sound-rated assembly indicated.
  5. Curved Partitions [**and Soffits**]:
    - a. Bend track to uniform curve and locate straight lengths so they are tangent to arcs.
    - b. Begin and end each arc with a stud, and space intermediate studs equally along arcs. On straight lengths of no fewer than two studs at ends of arcs, place studs 6 inches (150 mm) o.c.
- E. Direct Furring:
1. Attach to concrete or masonry with stub nails, screws designed for masonry attachment, or powder-driven fasteners spaced 24 inches (610 mm) o.c.
- F. Installation Tolerance: Install each framing member so fastening surfaces vary not more than 1/8 inch (3 mm) from the plane formed by faces of adjacent framing.

### 3.5 INSTALLING SUSPENSION SYSTEMS

- A. Install suspension system components according to spacings indicated, but not greater than spacings required by referenced installation standards for assembly types.
1. Hangers: [48 inches (1219 mm)] o.c.
  2. Carrying Channels (Main Runners): [48 inches (1219 mm)] o.c.
  3. Furring Channels (Furring Members): [16 inches (406 mm)] o.c.
- B. Isolate suspension systems from building structure where they abut or are penetrated by building structure to prevent transfer of loading imposed by structural movement.
- C. Suspend hangers from building structure as follows:



1. Install hangers plumb and free from contact with insulation or other objects within ceiling plenum that are not part of supporting structural or suspension system.
    - a. Splay hangers only where required to miss obstructions and offset resulting horizontal forces by bracing, countersplaying, or other equally effective means.
  2. Where width of ducts and other construction within ceiling plenum produces hanger spacings that interfere with locations of hangers required to support standard suspension system members, install supplemental suspension members and hangers in the form of trapezes or equivalent devices.
    - a. Size supplemental suspension members and hangers to support ceiling loads within **[performance limits established by referenced installation standards]**.
  3. Wire Hangers: Secure by looping and wire tying, either directly to structures or to inserts, eye screws, or other devices and fasteners that are secure and appropriate for substrate, and in a manner that will not cause hangers to deteriorate or otherwise fail.
  4. Flat Hangers: Secure to structure, including intermediate framing members, by attaching to inserts, eye screws, or other devices and fasteners that are secure and appropriate for structure and hanger, and in a manner that will not cause hangers to deteriorate or otherwise fail.
  5. Do not attach hangers to steel roof deck.
  6. Do not connect or suspend steel framing from ducts, pipes, or conduit.
- D. Installation Tolerances: Install suspension systems that are level to within **[1/8 inch in 12 feet (3 mm in 3.6 m)]** measured lengthwise on each member that will receive finishes and transversely between parallel members that will receive finishes.

END OF SECTION 092216

## SECTION 092900 - GYPSUM BOARD

## PART 1 - GENERAL

## 1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

## 1.2 SUMMARY

- A. Section Includes:

- 1. Interior gypsum board.
- 2. Tile backing panels.
- 3. Texture finishes.

- B. Related Requirements:

- 1. Section 061600 "Sheathing" for gypsum sheathing for exterior walls.
- 2. Section 092216 "Non-Structural Metal Framing" for non-structural framing and suspension systems that support gypsum board panels.

## 1.3 ACTION SUBMITTALS

- A. Product Data: For each type of product.

- B. Samples: For the following products:

- 1. Textured Finishes: Minimum [**12 inches x 12 inches square**] for each textured finish indicated and on same backing indicated for Work.

## 1.4 QUALITY ASSURANCE

- A. Mockups: Before beginning gypsum board installation, install mockups of at least **100 sq. ft. (9 sq. m)** in surface area to demonstrate aesthetic effects and set quality standards for materials and execution.

- 1. Install mockups for the following:

- a. Each level of [**textured**] gypsum board finish indicated for use in exposed locations.

- 2. Apply or install final decoration indicated, including painting and wallcoverings, on exposed surfaces for review of mockups.
- 3. Simulate finished lighting conditions for review of mockups.
- 4. Subject to compliance with requirements, approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

## 1.5 DELIVERY, STORAGE AND HANDLING

- A. Store materials inside under cover and keep them dry and protected against weather, condensation, direct sunlight, construction traffic, and other potential causes of damage. Stack panels flat and supported on risers on a flat platform to prevent sagging.

## 1.6 FIELD CONDITIONS

- A. Environmental Limitations: Comply with ASTM C 840 requirements or gypsum board manufacturer's written recommendations, whichever are more stringent.
- B. Do not install paper-faced gypsum panels until installation areas are enclosed and conditioned.
- C. Do not install panels that are wet, those that are moisture damaged, and those that are mold damaged.
  - 1. Indications that panels are wet or moisture damaged include, but are not limited to, discoloration, sagging, or irregular shape.
  - 2. Indications that panels are mold damaged include, but are not limited to, fuzzy or splotchy surface contamination and discoloration.

## PART 2 - PRODUCTS

### 2.1 PERFORMANCE REQUIREMENTS

- A. Fire-Resistance-Rated Assemblies: For fire-resistance-rated assemblies, provide materials and construction identical to those tested in assembly indicated according to ASTM E 119 by an independent testing agency.
- B. STC-Rated Assemblies: For STC-rated assemblies, provide materials and construction identical to those tested in assembly indicated according to ASTM E 90 and classified according to ASTM E 413 by an independent testing agency.

### 2.2 GYPSUM BOARD, GENERAL

- A. Size: Provide maximum lengths and widths available that will minimize joints in each area and that correspond with support system indicated.

### 2.3 INTERIOR GYPSUM BOARD

- A. Manufacturers: Subject to compliance with requirements, **[provide products by one of the following]**:
  - 1. American Gypsum.
  - 2. CertainTeed Corp.
  - 3. Georgia-Pacific Gypsum LLC.
  - 4. National Gypsum Company.
  - 5. USG Corporation.
- B. Gypsum Board, Type X: ASTM C 1396/C 1396M.
  - 1. Thickness: **5/8 inch (15.9 mm)**.
  - 2. Long Edges: **[Tapered]**.
  - 3. Application: **[Vertical and horizontal surfaces, unless otherwise indicated]**.

- C. Moisture- and Mold-Resistant Gypsum Board: ASTM C 1396/C 1396M. With moisture- and mold-resistant core and paper surfaces.
1. Core: **[5/8 inch (15.9 mm), Type X]**.
  2. Long Edges: Tapered.
  3. Mold Resistance: ASTM D 3273, score of 10 as rated according to ASTM D 3274.
  4. Application: Install to 48 inches A.F.F. at restroom walls **[not]** indicated to receive ceramic wall tile.

## 2.4 TILE BACKING PANELS

- A. **[Coated]** Glass-Mat, Water-Resistant Backing Board: ASTM C 1178/C 1178M, with manufacturer's standard edges.
1. Products: Subject to compliance with requirements, **[provide one of the following]**:
    - a. CertainTeed Corp.; Diamondback GlasRoc Tile Backer.
    - b. Georgia-Pacific Gypsum LLC; DensGuard Tile Backer.
  2. Core: **[5/8 inch (15.9 mm), Type X]**.
  3. Mold Resistance: ASTM D 3273, score of 10 as rated according to ASTM D 3274.
  4. Application: Install behind ceramic wall tile at steel stud framed assemblies.

## 2.5 TRIM ACCESSORIES

- A. Interior Trim: ASTM C 1047.
1. Material: **[Galvanized or aluminum-coated steel sheet or rolled zinc]**.
  2. Shapes:
    - a. Cornerbead.
    - b. LC-Bead: J-shaped; exposed long flange receives joint compound use **[where indicated]**.
    - c. U-Bead: J-shaped; exposed short flange does not receive joint compound; use **[at exposed panel edges]**.
    - d. Control / expansion joints.

## 2.6 JOINT TREATMENT MATERIALS

- A. General: Comply with ASTM C 475/C 475M.
- B. Joint Tape:
1. Interior Gypsum Board: Paper.
  2. Tile Backing Panels: **[As recommended by panel manufacturer]**.
- C. Joint Compound for Interior Gypsum Board: For each coat use formulation that is compatible with other compounds applied on previous or for successive coats.
1. Prefilling: At open joints **[, rounded or beveled panel edges,]** and damaged surface areas, use setting-type taping compound.
  2. Embedding and First Coat: For embedding tape and first coat on joints, fasteners, and trim flanges, use **[drying-type, all-purpose]** compound.

3. Fill Coat: For second coat, use [**drying-type, all-purpose**] compound.
4. Finish Coat: For third coat, use [**drying-type, all-purpose**] compound.

D. Joint Compound for [**Tile Backing**] Panels: [**As recommended by backer unit manufacturer**].

## 2.7 AUXILIARY MATERIALS

- A. General: Provide auxiliary materials that comply with referenced installation standards and manufacturer's written recommendations.
- B. Steel Drill Screws: ASTM C 1002, unless otherwise indicated.
  1. Use screws complying with ASTM C 954 for fastening panels to steel members from **0.033 to 0.112 inch (0.84 to 2.84 mm)** thick.
- C. Sound Attenuation Blankets: As specified in Section 072100 "Thermal Insulation."
- D. Acoustical Joint Sealant: As specified in Section 079200 "Joint Sealants."
- E. Thermal Insulation: As specified in Section 072100 "Thermal Insulation."
- F. Vapor Retarder: As specified in Section 072100 "Thermal Insulation."

## 2.8 TEXTURE FINISHES

- A. Primer: As recommended by textured finish manufacturer.
- B. Non-Aggregate Finish: Water-based, job-mixed, aggregated, drying-type texture finish for spray application.
  1. Texture: [**Light orange-peel spatter**].
    - a. Unless indicated otherwise, apply to all interior gypsum board surfaces scheduled to receive paint, including walls, partitions, soffits and ceilings.
    - b. Coordinate final decoration of exposed gypsum board surfaces with Architect prior to application of spray-applied texture.
    - c. Match texture of existing adjacent surfaces, where applicable.

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Examine areas and substrates including welded hollow-metal frames and framing, with Installer present, for compliance with requirements and other conditions affecting performance.
- B. Examine panels before installation. Reject panels that are wet, moisture damaged, and mold damaged.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

## 3.2 APPLYING AND FINISHING PANELS, GENERAL

- A. Comply with ASTM C 840.
- B. Install ceiling panels across framing to minimize the number of abutting end joints and to avoid abutting end joints in central area of each ceiling. Stagger abutting end joints of adjacent panels not less than one framing member.
- C. Install panels with face side out. Butt panels together for a light contact at edges and ends with not more than **1/16 inch (1.5 mm)** of open space between panels. Do not force into place.
- D. Locate edge and end joints over supports, except in ceiling applications where intermediate supports or gypsum board back-blocking is provided behind end joints. Do not place tapered edges against cut edges or ends. Stagger vertical joints on opposite sides of partitions. Do not make joints other than control joints at corners of framed openings.
- E. Form control and expansion joints with space between edges of adjoining gypsum panels.
- F. Cover both faces of support framing with gypsum panels in concealed spaces (above ceilings, etc.), except in chases braced internally.
  - 1. Unless concealed application is indicated or required for sound, fire, air, or smoke ratings, coverage may be accomplished with scraps of not less than **8 sq. ft. (0.7 sq. m)** in area.
  - 2. Fit gypsum panels around ducts, pipes, and conduits.
  - 3. Where partitions intersect structural members projecting below underside of floor/roof slabs and decks, cut gypsum panels to fit profile formed by structural members; allow **1/4- to 3/8-inch- (6.4- to 9.5-mm-)** wide joints to install sealant.
- G. Isolate perimeter of gypsum board applied to non-load-bearing partitions at structural abutments, except floors. Provide **1/4- to 1/2-inch- (6.4- to 12.7-mm-)** wide spaces at these locations and trim edges with edge trim where edges of panels are exposed. Seal joints between edges and abutting structural surfaces with acoustical sealant.
- H. Attachment to Steel Framing: Attach panels so leading edge or end of each panel is attached to open (unsupported) edges of stud flanges first.
- I. Space fasteners in gypsum panels according to referenced gypsum board application and finishing standard and manufacturer's written recommendations.
  - 1. Space screws a maximum of **12 inches (304.8 mm)** o.c. for vertical applications.
- J. Space fasteners in panels that are tile substrates a maximum of **8 inches (203.2 mm)** o.c.
- K. Where required to resist the passage of [**fire**] [**smoke**] [**sound**], scribe top edge of gypsum board panels to match profile of metal deck; scribe panels to within [**1/4 inch**] of metal roof deck. Fill void between gypsum board and metal deck with [**fire-rated**] [**acoustical**] joint sealant, as specified in [**Division 07 Section "Fire-Resistive Joint Systems"**] [**Division 07 Section "Joint Sealants."**]
- L. Walls Indicated to Extend / Seal to the Structure Above: Seal construction at perimeters, behind control joints, and at openings and penetrations with a continuous bead of acoustical sealant. Install acoustical sealant at both faces of partitions at perimeters and through penetrations. Comply with ASTM C 919 and with manufacturer's written recommendations for locating edge trim and closing off sound-flanking paths around or through assemblies, including sealing partitions above acoustical ceilings.

- M. Install sound attenuation blankets before installing gypsum panels unless blankets are readily installed after panels have been installed on one side.

### 3.3 APPLYING INTERIOR GYPSUM BOARD

- A. Install interior gypsum board in the following locations:

1. Type X: [**Where required for fire-resistance-rated assembly**] and [**at all horizontal and vertical surfaces, unless otherwise indicated**].
2. Moisture- and Mold-Resistant Gypsum Board: [**Where indicated**].

- B. Single-Layer Application:

1. On ceilings, apply gypsum panels before wall/partition board application to greatest extent possible and at right angles to framing unless otherwise indicated.
2. On partitions/walls, apply gypsum panels [**vertically (parallel to framing)**] unless otherwise indicated or required by fire-resistance-rated assembly, and minimize end joints.
  - a. Stagger abutting end joints not less than one framing member in alternate courses of panels.
  - b. At stairwells and other high walls, install panels horizontally unless otherwise indicated or required by fire-resistance-rated assembly.
3. On furring members, apply gypsum panels vertically (parallel to framing) with no end joints. Locate edge joints over furring members.
4. Fastening Methods: Apply gypsum panels to supports with steel drill screws.

- C. Multilayer Application:

1. On ceilings, apply gypsum board indicated for base layers before applying base layers on walls/partitions; apply face layers in same sequence. Apply base layers at right angles to framing members and offset face-layer joints one framing member, **16 inches (400 mm)** minimum, from parallel base-layer joints, unless otherwise indicated or required by fire-resistance-rated assembly.
2. On partitions/walls, apply gypsum board indicated for base layers and face layers vertically (parallel to framing) with joints of base layers located over stud or furring member and face-layer joints offset at least one stud or furring member with base-layer joints, unless otherwise indicated or required by fire-resistance-rated assembly. Stagger joints on opposite sides of partitions.
3. On furring members, apply base layer vertically (parallel to framing) and face layer either vertically (parallel to framing) or horizontally (perpendicular to framing) with vertical joints offset at least one furring member. Locate edge joints of base layer over furring members.
4. Fastening Methods: [**Fasten base layers and face layers separately to supports with screws**].

### 3.4 APPLYING TILE BACKING PANELS

- A. Glass-Mat, Water-Resistant Backing Panels: Comply with manufacturer's written installation instructions and install at [**locations indicated to receive tile**]. Install with **1/4-inch (6.4-mm)** gap where panels abut other construction or penetrations.
- B. Where tile backing panels abut other types of panels in same plane, shim surfaces to produce a uniform plane across panel surfaces.

### 3.5 INSTALLING TRIM ACCESSORIES

- A. General: For trim with back flanges intended for fasteners, attach to framing with same fasteners used for panels. Otherwise, attach trim according to manufacturer's written instructions.
- B. Interior Trim: Install in the following locations:
  - 1. Cornerbead: Use at outside corners [**unless otherwise indicated**].
  - 2. L-Bead: Use [**where indicated**].
  - 3. U-Bead: Use [**at exposed panel edges**].
  - 4. Control Joints: Use [**where indicated**], and according to ASTM C 840.
    - a. Spacing not to exceed 30 lineal feet between control joints in walls.
    - b. Spacing not to exceed 50 lineal feet in either direction (2,500 sq ft max.) at ceilings.
    - c. Consult Architect for exact locations of control joints prior to installation of gypsum board.

### 3.6 FINISHING GYPSUM BOARD

- A. General: Treat gypsum board joints, interior angles, edge trim, control joints, penetrations, fastener heads, surface defects, and elsewhere as required to prepare gypsum board surfaces for decoration. Promptly remove residual joint compound from adjacent surfaces.
- B. Prefill open joints and damaged surface areas.
- C. Apply joint tape over gypsum board joints, except for trim products specifically indicated as not intended to receive tape.
- D. Gypsum Board Finish Levels: Finish panels to levels indicated below and according to ASTM C 840:
  - 1. Level 1: Ceiling plenum areas, concealed areas, and where indicated.
  - 2. Level 2: Embed tape and apply separate first coat of joint compound to tape, fasteners, and trim flanges where [**panels are substrate for tile and where indicated**].
  - 3. Level 3: Embed tape and apply separate first, fill, and finish coats of joint compound to tape, fasteners, and trim flanges [**at all panel surfaces that will be exposed to view, unless otherwise indicated**].
    - a. Primer and its application to surfaces are specified in Section 099123 "Interior Painting."
    - b. Match texture of existing adjacent surfaces, where applicable.
  - 4. Contractor Option: Provide smooth [**Level 4**] drywall finish at panel surfaces that will remain exposed to view in lieu of a [**Level 3 finish with light orange-peel spatter**].
    - a. Primer and its application to surfaces are specified in Section 099123 "Interior Painting."
    - b. Match texture of existing adjacent surfaces, where applicable.

### 3.7 APPLYING TEXTURE FINISHES

- A. Surface Preparation and Primer: Prepare and apply primer to gypsum panels and other surfaces receiving texture finishes. Apply primer to surfaces that are clean, dry, and smooth.



- B. Texture Finish Application: Mix and apply finish using powered spray equipment, to produce a uniform texture [**matching approved mockup and**] free of starved spots or other evidence of thin application or of application patterns.
- C. Prevent texture finishes from coming into contact with surfaces not indicated to receive texture finish by covering them with masking agents, polyethylene film, or other means. If, despite these precautions, texture finishes contact these surfaces, immediately remove droppings and overspray to prevent damage according to texture-finish manufacturer's written recommendations.

### 3.8 FIELD QUALITY CONTROL

- A. Above-Ceiling Observation: Before Contractor installs [**gypsum**] board ceilings, Architect will conduct an above-ceiling observation and report deficiencies in the Work observed. Do not proceed with installation of [**gypsum**] board to ceiling support framing until deficiencies have been corrected.
  - 1. Notify Architect [**seven**] days in advance of date and time when Project, or part of Project, will be ready for above-ceiling observation.
  - 2. Before notifying Architect, complete the following in areas to receive gypsum board ceilings:
    - a. Installation of [**80**] percent of lighting fixtures, powered for operation.
    - b. Installation, insulation, and leak and pressure testing of water piping systems.
    - c. Installation of air-duct systems.
    - d. Installation of air devices.
    - e. Installation of mechanical system control-air tubing.
    - f. Installation of ceiling support framing.

### 3.9 PROTECTION

- A. Protect adjacent surfaces from drywall compound and promptly remove from floors and other non-drywall surfaces. Repair surfaces stained, marred, or otherwise damaged during drywall application.
- B. Protect installed products from damage from weather, condensation, direct sunlight, construction, and other causes during remainder of the construction period.
- C. Remove and replace panels that are wet, moisture damaged, and mold damaged.
  - 1. Indications that panels are wet or moisture damaged include, but are not limited to, discoloration, sagging, or irregular shape.
  - 2. Indications that panels are mold damaged include, but are not limited to, fuzzy or splotchy surface contamination and discoloration.

END OF SECTION 092900

## SECTION 096519 - RESILIENT TILE FLOORING (VCT)

## PART 1 - GENERAL

## 1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

## 1.2 SUMMARY

- A. Section Includes:
  - 1. Vinyl composition floor tile (VCT).

## 1.3 ACTION SUBMITTALS

- A. Product Data: For each type of product.
- B. Samples for Verification: Manufacturer's standard size sample, one sample for each product specified.
- C. Required Moisture Test results.

## 1.4 CLOSEOUT SUBMITTALS

- A. Maintenance Data: For each type of floor tile to include in maintenance manuals.

## 1.5 QUALITY ASSURANCE

- A. Installer Qualifications: A qualified installer who employs workers for this Project who are competent in techniques required by manufacturer for floor tile installation and seaming method indicated.
  - 1. Engage an installer who employs workers for this Project who are trained or certified by floor tile manufacturer for installation techniques required.

## 1.6 DELIVERY, STORAGE, AND HANDLING

- A. Store floor tile and installation materials in dry spaces protected from the weather, with ambient temperatures maintained within range recommended by manufacturer, but not less than 50 deg F (10 deg C) or more than 90 deg F (32 deg C). Store floor tiles on flat surfaces.

## 1.7 FIELD CONDITIONS

- A. Maintain ambient temperatures within range recommended by manufacturer, but not less than **70 deg F (21 deg C)** or more than **95 deg F (35 deg C)**, in spaces to receive floor tile during the following time periods:
  - 1. 48 hours before installation.
  - 2. During installation.
  - 3. 48 hours after installation.
- B. After installation and until Substantial Completion, maintain ambient temperatures within range recommended by manufacturer, but not less than **55 deg F (13 deg C)** or more than **95 deg F (35 deg C)**.
- C. Close spaces to traffic during floor tile installation.
- D. Close spaces to traffic for 48 hours after floor tile installation.
- E. Install floor tile after other finishing operations, including painting, have been completed.

## PART 2 - PRODUCTS

### 2.1 PERFORMANCE REQUIREMENTS

- A. Fire-Test-Response Characteristics: For resilient tile flooring, as determined by testing identical products according to ASTM E 648 or NFPA 253 by a qualified testing agency.
  - 1. Critical Radiant Flux Classification: Class I, not less than 0.45 W/sq. cm.

### 2.2 VINYL COMPOSITION FLOOR TILE: VCT

- A. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be submitted for approval are the following:
  - 1. Shaw Contract Group
  - 2. Mohawk Contract Group
  - 3. Patcraft
  - 4. Tandus Centiva
  - 5. Johnsonite
- B. Basis of Design Product: Subject to compliance with requirements, provide the product below or submit for approval from one of the above manufacturer's above prior to bidding.
- C. Approved products are listed below for VCT:
  - a. Option 1 for VCT: Basis-of-Design Product:
    - 1) Manufacturer: Johnsonite
    - 2) Style: Azrock Textiles
    - 3) Module Size: 12" x 24"
    - 4) Color: TBD
  - b. Option 2 for VCT: Basis-of-Design Product:

- 1) Manufacturer: Armstrong
  - 2) Style: Raffia
  - 3) Module Size: 12" x 24"
  - 4) Color: TBD
- c. Option 3 for VCT: Basis-of-Design Product:
- 1) Manufacturer: Armstrong Bio-Based Tile
  - 2) Style: Straitions
  - 3) Module Size: 12" x 24"
  - 4) Color: TBD

D. Tile Standard: ASTM F 1066, Class 2, through-pattern tile.

E. Wearing Surface: **Smooth**.

### 2.3 INSTALLATION MATERIALS

A. Trowelable Leveling and Patching Compounds: Latex-modified, portland cement based or blended hydraulic-cement-based formulation provided or approved by floor tile manufacturer for applications indicated.

B. Adhesives: Water-resistant type recommended by floor tile and adhesive manufacturers to suit floor tile and substrate conditions indicated.

1. Adhesives shall comply with the following limits for VOC content:

a. Vinyl Composition Tile Adhesives: 50 g/L or less.

C. Floor Polish for VCT: Remove soil, adhesive, and blemishes from floor tile surfaces before applying liquid floor polish.

1. Apply manufacturer's recommendation number of coat(s), if manufacture doesn't recommend polish do not apply.

D. Floor covering should not be installed over expansion joints. Expansion joint covers compatible with floor covering should be used.

## PART 3 - EXECUTION

### 3.1 EXAMINATION

A. Examine substrates, with Installer present, for compliance with requirements for maximum moisture content and other conditions affecting performance of the Work.

1. Verify that finishes of substrates comply with tolerances and other requirements specified in other Sections and that substrates are free of cracks, ridges, depressions, scale, and foreign deposits that might interfere with adhesion of floor tile.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

### 3.2 PREPARATION

- A. Prepare substrates according to floor tile manufacturer's written instructions to ensure adhesion of resilient products.
- B. Concrete Substrates: Prepare according to ASTM F 710.
  - 1. Verify that substrates are dry and free of curing compounds, sealers, and hardeners.
  - 2. Remove substrate coatings and other substances that are incompatible with adhesives and that contain soap, wax, oil, or silicone, using mechanical methods recommended by floor tile manufacturer. Do not use solvents.
  - 3. Alkalinity and Adhesion Testing: Perform tests recommended by floor tile manufacturer. Proceed with installation only after substrate alkalinity falls within range on pH scale recommended by manufacturer in writing, but not less than 5 or more than **10** pH.
  - 4. Moisture Testing: Proceed with installation only after substrates pass testing according to floor tile manufacturer's written recommendations, but not less stringent than the following:
    - a. Perform anhydrous calcium chloride test according to ASTM F 1869. Proceed with installation only after substrates have maximum moisture-vapor-emission rate of **3 lb of water/1000 sq. ft. (1.36 kg of water/92.9 sq. m)** in 24 hours.
    - b. Perform relative humidity test using in situ probes according to ASTM F 2170. Proceed with installation only after substrates have a maximum **75** percent relative humidity level.
- C. Fill cracks, holes, and depressions in substrates with trowelable leveling and patching compound; remove bumps and ridges to produce a uniform and smooth substrate.
- D. Do not install floor tiles until they are the same temperature as the space where they are to be installed.
  - 1. At least 48 hours in advance of installation, move resilient floor tile and installation materials into spaces where they will be installed.
- E. Immediately before installation, sweep and vacuum clean substrates to be covered by resilient floor tile.

### 3.3 FLOOR TILE INSTALLATION

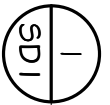
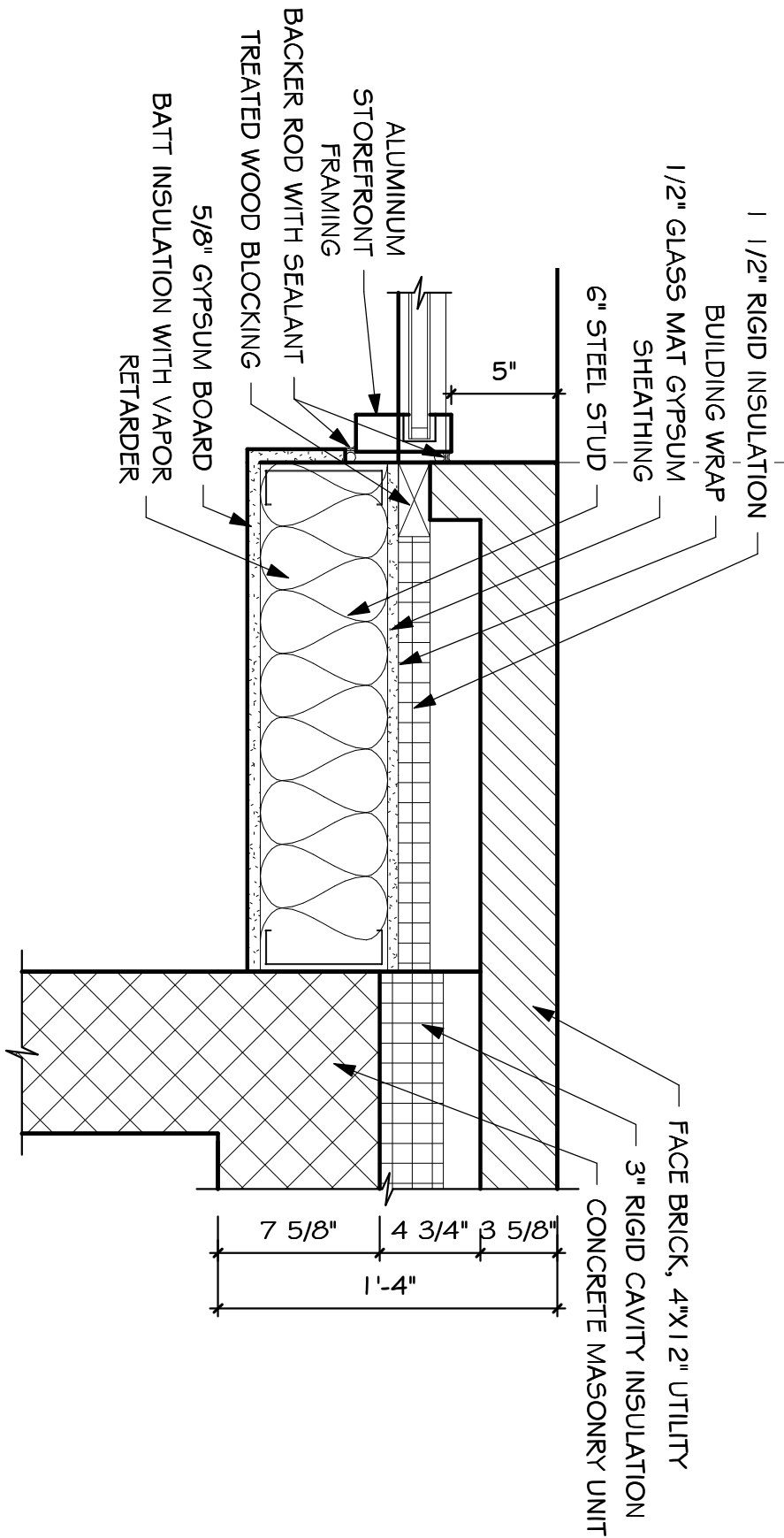
- A. Comply with manufacturer's written instructions for installing floor tile.
- B. Lay out floor tiles from center marks established with principal walls, discounting minor offsets, so tiles at opposite edges of room are of equal width. Adjust as necessary to avoid using cut widths that equal less than one-half tile at perimeter.
  - 1. Lay tiles: **if pattern is not indicated on drawings lay tiles square with room axis.**
- C. Match floor tiles for color and pattern by selecting tiles from cartons in the same sequence as manufactured and packaged, if so numbered. Discard broken, cracked, chipped, or deformed tiles.

1. Lay tiles: **in pattern of colors and sizes indicated.**
- D. Scribe, cut, and fit floor tiles to butt neatly and tightly to vertical surfaces and permanent fixtures including built-in furniture, cabinets, pipes, outlets, and door frames.
- E. Extend floor tiles into toe spaces, door reveals, closets, and similar openings. Extend floor tiles to center of door openings.
- F. Maintain reference markers, holes, and openings that are in place or marked for future cutting by repeating on floor tiles as marked on substrates. Use chalk or other nonpermanent marking device.
- G. Install floor tiles on covers for telephone and electrical ducts, building expansion-joint covers, and similar items in finished floor areas. Maintain overall continuity of color and pattern between pieces of tile installed on covers and adjoining tiles. Tightly adhere tile edges to substrates that abut covers and to cover perimeters.
- H. Adhere floor tiles to flooring substrates using a full spread of adhesive applied to substrate to produce a completed installation without open cracks, voids, raising and puckering at joints, telegraphing of adhesive spreader marks, and other surface imperfections.

#### 3.4 CLEANING AND PROTECTION

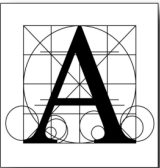
- A. Comply with manufacturer's written instructions for cleaning and protecting floor tile.
- B. Perform the following operations immediately after completing floor tile installation:
  1. Remove adhesive and other blemishes from exposed surfaces.
  2. Sweep and vacuum surfaces thoroughly.
  3. Damp-mop surfaces to remove marks and soil.
- C. Protect floor tile from mars, marks, indentations, and other damage from construction operations and placement of equipment and fixtures during remainder of construction period.
- D. Floor Polish for VCT: Remove soil, adhesive, and blemishes from floor tile surfaces before applying liquid floor polish.
  1. Apply manufacturer's recommendation number of coat(s), if manufacture doesn't recommend polish do not apply.
- E. Sealers and Finish Coats: Remove soil, visible adhesive, and surface blemishes from resilient terrazzo floor tile surfaces before applying liquid cleaners, sealers, and finish products.
- F. Cover floor tile until Substantial Completion.

END OF SECTION 096519



REVISED 4/4.30

SCALE: 1 1/2" = 1'-0"



project NETHERLANDS REFORMED PRESCHOOL ADD.  
 number 0320.2716.17 drawn AJS checked SRJ  
 date 1-18-18 revision \_\_\_\_\_

**Architecture Incorporated**  
 sioux falls and rapid city, south dakota

DRAWING

**SD1**

(PLAM-3) PLASTIC LAMINATE  
COUNTERTOP WITH 3MM EDGE

2'-0"

3MM EDGE

3MM EDGE

SINK. SEE MECHANICAL.

(PLAM-2) PLASTIC LAMINATE  
ON 3/4" INDUSTRIAL GRADE  
PARTICLE BOARD

2'-3"  
MIN.  
2'-7"

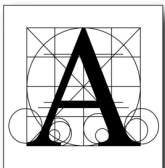
4" RESILIENT BASE

4" RESILIENT BASE

1  
SD2

REVISED 5/7.10

SCALE: 1" = 1'-0"



project NETHERLANDS REFORMED PRESCHOOL ADD.  
number 0320.2716.17 drawn AJS checked SRJ  
date 1-18-18 revision

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sioux falls and rapid city, south dakota

DRAWING

**SD2**