

Addendum No. 2  
March 3, 2023

FHS – SHOSHONE,  
IDAHO

Bid date is **March 7, 2023**. Bids due prior to **2:00PM**.

This addendum addresses the following:

- Architect Addendum Narrative.
- Revised Specifications
- Revised drawings.

Attachments:

- Revised Bid Package Descriptions by Starr Corp dated 3/3/23
- LKV Architects Addendum No. 2, Dated March 3, 2023

End of Add. No. 2



Family Health Services - Shoshone, ID - Bid Package Summary				ADDENDUM-02 REVISIONS 3/3/23
Bid to Starr Corporation by March 7, 2023 at 2:00PM				
Bid Package No.	Package Description	Spec Section	Description	Additional Comments: All items include material, labor, and equipment for installation.
1	Sitework	Division 1	General Requirements	All sections to be included in their entirety. Surveying for this scope of work is included in this package. Testing will be by Owner.
1	Sitework	C2.1, C4.1 & C5.1	Areas 1 & 2 delineation plans	Refer to C2.1, C4.1 and C5.1. Areas #1 and #2 are delineated on these drawings. Both areas will be part of the base bid. A breakout cost for Area #2 will be required on the Sitework bid form.
1	Sitework	C1.1	Erosion & Sediment Control / SWPPP	Include and maintain erosion & sediment controls / SWPPP for entire project as outlined on Sheet C1.1 - Civil Notes.
1	Sitework	022300	Site Clearing	Dust abatement included in this scope of work.
1	Sitework	023000	Earthwork	1). Exclude rock excavation in base bid. The bid form will include a unit cost add-on for rock excavation. 2). All earthwork as shown on drawings. 3). Scope of work includes placing gravel for site concrete. Gravel to be placed within +/- 0.1" of finish grade. 4). Provide 4" of crushed ¾" gravel for building pad. 5). Pad to be built prior to under slab utilities being installed. 6). Landscape areas to be graded to +/- 0.1' of finish grade.
1	Sitework	312213	Rough Grading	Include in its entirety.
1	Sitework	312316	Excavation	1). Foundation excavation and backfill is included in this scope of work. 2). Installation of gravel for building pad is part of this work package.
1	Sitework	312317	Trenching	Include in its entirety.
1	Sitework	Per Plans	Site Utilities	1). Includes the following utility piping; sewer service from connection point at the street to 5' outside the building foundation, water line service including the connection at the street to 5' from the building foundation. 2). Includes the installation of the site storm water culverts and piping. 3). Includes installation of roof drain underground piping including a removable flexible boot at the connection between downspout & underground piping.
1	Sitework	321216	Asphaltic Concrete Paving	1). Includes striping and precast concrete wheel stops. 2). Provide sawcutting and removal of existing asphalt pavement as needed for driveway construction.
2	Concrete	Division 1	General Requirements	All sections to be included in their entirety.
2	Concrete	C2.1, C4.1 & C5.1	Areas 1 & 2 delineation plans	Refer to C2.1, C4.1 and C5.1. Areas #1 and #2 are delineated on these drawings. Both areas will be part of the base bid. A breakout cost for Area #2 will be required on the Concrete bid form.
2	Concrete	033000	Concrete	ADD-01: 1). Install steel column anchor bolts & Simpson Hold-down anchor bolts supplied by Others. 2). Supply & install wood sill plate anchor bolts at foundation walls. 3). Includes all form work and materials for the footing, foundations and interior slabs on grade. 4). Provide and install reinforcing steel. 5). Concrete light pole bases by Others. 6). Pre-cast concrete wheel stops are by Others. 7). Provide fiber reinforcing at all polished concrete floor areas per Spec 033000.
2	Concrete	033509	Concrete Cure & Finishing Systems	Includes finishings for interior & exterior concrete to include sealers for interior concrete floors and exterior sidewalks.
2	Concrete	321313	Concrete Paving	1). Includes all form work and materials for the sidewalks, curb, and exterior slabs on grade. 2). Provide and install reinforcing steel. 3). Provide Trash Enclosure footings for gate posts & drop rod assembly and concrete slab. 4). Provide detectable warning surfaces @ pedestrian ramps.
2	Concrete	051200	Structural Steel Framing	Include grout for column bases.
2	Concrete	071000	Dampproofing and Vapor Retarders	Includes foundation dampproofing & under-slab vapor barriers.
2	Concrete	072100	Building Insulation	Includes foundation perimeter insulation, only.
2	Concrete	079000	Joint Sealants	ADD-01: All joints at exposed concrete slabs / sidewalks to receive joint sealant, both interior and exterior, except for polished concrete floor areas, which are done by Others.
3	Polished Concrete Floors	Division 1	General Requirements	All sections to be included in their entirety.
3	Polished Concrete Floors	033543	Polished Concrete	Includes honing, polishing, dyeing & sealing.
3	Polished Concrete Floors	079000	Joint Sealants	Includes joint sealants for all interior slabs where polished concrete occurs.
4	Metals	Division 1	General Requirements	All sections to be included in their entirety.
4	Metals	051200	Structural Steel Framing	Include steel columns and W3; 16GA Deck over crawl space.
4	Metals	055000	Metal Fabrications	ADD-01: Provide a 'steel' roof access ladder with security door in lieu of aluminum-type shown on drawings. Includes steel columns and anchor bolts
4	Metals	A3-1	Canopy	Include canopy structure at north exterior elevation above door. Refer to Spec 055000 for product information.
5	Rough Carpentry	Division 1	General Requirements	All sections to be included in their entirety.
5	Rough Carpentry	Per Plans	Trash Enclosure	Provide fence & gates as shown on plans including the TREX decking material.
5	Rough Carpentry	3 / A10-4	Bulk Head Framing Detail	Provide wood framing for this bulk head-type, (3 / A10-4), typical.
5	Rough Carpentry	061000	Rough Carpentry	1). Includes all interior & exterior wall framing, wood trusses, glu-lam beams, connectors, fasteners, exterior wall sheathing & roof decking. 2). Provide 3/4" backer board for telephone terminal boards per B / E0.1. 3). Provide 3/4" plywood base for computer screen in ALL EXAM ROOMS; Elevation 142a / A8-9. 4). Provide 4'x4'x 3/4" plywood in ceilings of Procedure 135 & Operator Rooms 113, 114, 115 & 116 for equipment backing. 5). Provide wood parapet and roof nailers including 1/2" x 8" Hook Anchors, (REF: 2,6 / A10-3).

5	Rough Carpentry	061800	Glued-Laminated Construction	Scope includes supply and install of glued-laminated beams and all connectors.
5	Rough Carpentry	061930	Plate Connected Wood Trusses	Scope includes supply and install of wood trusses and all related connectors.
6	Casework	Division 1	General Requirements	All sections to be included in their entirety.
6	Casework	062000	Finish Carpentry	Include in its entirety. Provide chair rails.
6	Casework	064100	Casework	1). Includes, but not limited to all upper & lower cabinets, countertops, backsplashes, hardware & fasteners. 2). Provide Plastic Laminate at window sills. 3). Provide and construct all casework walls shown to receive Melamine finish over 3/4" particle board and plastic laminate finish in scope of work. Refer to Sheet A10-1 for examples. 4). All other framed walls by Others.
6	Casework	064100	Casework	<b>ADD-02: Provide Lockers as shown on Sheets A8-7 &amp; A8-14.</b>
6	Casework	064550	Simulated Wood Trim	Provide molded units with manufacturer's standard primed finish, (FYPON). Field painted by Others.
6	Casework	079000	Joint Sealants	Sealants for this scope of work only.
7	Cement Board Stucco System	Division 1	General Requirements	All sections to be included in their entirety.
7	Cement Board Stucco System	072423	Cement Board Stucco System	Includes the installation of the cement board, foam and all other stucco related components. Includes Air / weather barrier where all stucco occurs, (Flashings, 2 layers - 15# Feltpaper, 1/2" Duralock & Drainage Mat - See Specs).
7	Cement Board Stucco System	079000	Joint Sealants	Sealants for this scope of work only.
8	Roofing	Division 1	General Requirements	All sections to be included in their entirety.
8	Roofing	073110	Asphalt Shingle Roofing	Include in its entirety.
8	Roofing	074600	Pre-Formed, Pre-Finished Metal Siding	Include in its entirety. Includes Air / Weather barrier where all metal siding occurs, (Flashings, 2 layers - 15# Feltpaper & Drainage Mat - See Specs).
8	Roofing	075400	Single Ply Membrane Roofing (TPO)	Include in its entirety.
8	Roofing	076000	Flashing and Sheet Metal	Include in its entirety for metal siding and roofing, only.
8	Roofing	079000	Joint Sealants	Sealants for this scope of work only.
9	Doors and Hardware	Division 1	General Requirements	All sections to be included in their entirety.
9	Doors and Hardware	081000	Hollow Metal Doors, Metal Door and Window Frames	1). Includes metal hollow frames. 2). Provide HM frames @ exterior and Knock-Down frames @ interior. 3). Provide "FRP" Doors for exterior per Spec 081000-3; 2.4; E. 4). This scope of work includes supply and installation.
9	Doors and Hardware	081429	Flush Wood Doors	This scope of work includes supply and installation. Provide factory-finished doors, as specified.
9	Doors and Hardware	083123	Floor Doors and Frames	This scope of work includes supply and installation.
9	Doors and Hardware	087100	Door Hardware	This scope of work includes supply and installation.
10	Aluminum Storefront Windows and Doors	Division 1	General Requirements	All sections to be included in their entirety.
10	Aluminum Storefront Windows and Doors	084100	Aluminum Storefront Windows and Doors	Include storefront windows, doors & Pharmacy drive-thru window Type 'F'. Include membrane & metal sill flashings at each window / door opening, (REF: 1 / A9-4; Details 1, 2 & 3). Each opening must be wrapped all (4) sides, (or 3 sides re: doors).
10	Aluminum Storefront Windows and Doors	087100	Door Hardware	Door hardware for this scope of work only.
10	Aluminum Storefront Windows and Doors	088100	Glass Glazing	Supply and install for all wood doors and aluminum storefront locations.
10	Aluminum Storefront Windows and Doors	079000	Joint Sealants	Finish caulk joint at all interior and exterior joints between aluminum storefront system and the adjacent finished surface.
11	Gypsum Board Systems	Division 1	General Requirements	All sections to be included in their entirety.
11	Gypsum Board Systems	3 / A10-4	Bulk Head Framing Detail	This bulk head detail will be wood framed by Others.
11	Gypsum Board Systems	068200	Fiberglass Reinforced Plastic Panels (FRP)	Include in its entirety.
11	Gypsum Board Systems	072100	Building Insulation	Include all building insulation, both thermal & sound. Foundation insulation by others. Includes Vapor Barrier.
11	Gypsum Board Systems	079000	Joint Sealants	Sealants for this scope of work only.
11	Gypsum Board Systems	092900	Gypsum Board Assemblies	Include in its entirety. Includes cementitious backer board.
11	Gypsum Board Systems	095113	Acoustical Panel Ceilings	Include in its entirety.
11	Gypsum Board Systems	095323	Metal Acoustical Suspension Assemblies	Include in its entirety.
12	Flooring	Division 1	General Requirements	All sections to be included in their entirety.
12	Flooring	093000	Tile	Include in its entirety. Cementitious backer board by Others.
12	Flooring	096800	Carpet	Include in its entirety. Joint and crack filling, minor leveling, and sanding is included.
12	Flooring	097313	Acoustical Wall Carpeting	Include in its entirety.
12	Flooring	079000	Joint Sealants	Sealants for this scope of work only.
13	Painting	Division 1	General Requirements	All sections to be included in their entirety.
13	Painting	099120	Paints and Coatings	<b>ADD-01: 1). Include in its entirety. 2). Include painting of walls, ceilings, soffits, simulated wood trim, (FYPON), and hollow metal door frames. 3). Wood doors will be factory-finished. 4). NOTE: Interior and exterior concrete floor and sidewalk sealer by Others. 5). Include painting of 'steel' roof access ladder per ADD-01.</b>
13	Painting	079000	Joint Sealants	All interior sealants exclusive of concrete, aluminum storefront, and millwork. Includes caulking hollow metal frames prior to painting.
14	Specialties	Division 1	General Requirements	All sections to be included in their entirety.
14	Specialties	079000	Joint Sealants	Sealants for this scope of work only.
14	Specialties	101400	Signs	Includes interior signage, building address numbers and exterior signs, poles and bases.
14	Specialties	102600	Wall Surface Protection Systems	Include in its entirety.
14	Specialties	102812	Commercial Toilet Accessories	Include in its entirety.
14	Specialties	104416	Fire Extinguishers, Cabinets and Accessories	Include in its entirety.
14	Specialties	108000	Miscellaneous Specialties	Provide Knox Box as specified.
15	Window Blinds	Division 1	General Requirements	All sections to be included in their entirety.
15	Window Blinds	122100	Window Blinds	Include in its entirety.

16	Plumbing	Division 1	General Requirements	All sections to be included in their entirety.
16	Plumbing	220000	Plumbing Table of Contents	Information
16	Plumbing	220501	Common Plumbing Requirements	Includes all piping as defined on the plumbing drawings. This scope includes connection to site water and sewer piping at 5' from the building foundation. All excavation, trenching, backfill & compaction included for this scope of work.
16	Plumbing	220503	Pipe, Pipe Fittings, Pipe Hangers & Valves	Include in its entirety.
16	Plumbing	220553	Identification for Plumbing Pipes & Equipment	Include in its entirety.
16	Plumbing	220703	Mechanical Insulation & Fire Stopping	Include in its entirety.
16	Plumbing	220705	Underground Piping Insulation	Include in its entirety.
16	Plumbing	220710	Potable Water Pipe Insulation	Include in its entirety.
16	Plumbing	220711	Handicap Fixtures Insulation	Include in its entirety.
16	Plumbing	220800	Fire Stopping	Include in its entirety.
16	Plumbing	221007	Press Type Pipe Fittings	Include in its entirety.
16	Plumbing	221114	Natural Gas Systems	Include in its entirety. The natural gas piping to the point of connection at the main is included in this scope.
16	Plumbing	221116	Domestic Water Piping Systems (Copper)	Include in its entirety.
16	Plumbing	221117	Domestic Water Piping Systems (PEX)	Include in its entirety.
16	Plumbing	221118	Backflow Preventer Valve	Include in its entirety.
16	Plumbing	221219	Dental Gas Systems	Include in its entirety.
16	Plumbing	221313	Soil, Waste & Vent Piping Systems	Include in its entirety.
16	Plumbing	223330	Electric Storage Type Water Heaters	Include in its entirety.
16	Plumbing	224001	Plumbing Fixtures	Include in its entirety. <b>ADD-01:</b> Include Shower insert as described in Addendum-01 Narrative.
16	Plumbing	224703	Handicap Drinking Water Cooling System	Include in its entirety.
16	Plumbing	Per Plans	Henry Schein Drawings	Refer to equipment drawings for equipment utility hook up.
16	Plumbing	079000	Joint Sealants	Applicable to Plumbing Fixtures and Materials Only
17	HVAC	Division 1	General Requirements	All sections to be included in their entirety.
17	HVAC	230000	HVAC Table of Contents	Information
17	HVAC	230501	Common HVAC Requirements	Includes all HVAC equipment, materials and labor in accordance with the drawings.
17	HVAC	230553	Identification for HVAC Piping & Equipment	Include in its entirety.
17	HVAC	230593	Testing, Adjusting & Balancing	Include in its entirety.
17	HVAC	230712	Mechanical Insulation & Fire Stopping	Include in its entirety.
17	HVAC	230716	Ductwork Insulation	Include in its entirety.
17	HVAC	230717	Round Supply Duct Insulation	Include in its entirety.
17	HVAC	230718	Duct Lining	Include in its entirety.
17	HVAC	230720	Refrigerant Piping Insulation	Include in its entirety.
17	HVAC	230800	Fire Stopping	Include in its entirety.
17	HVAC	232300	Refrigerant Piping Systems	Include in its entirety.
17	HVAC	232310	Refrigerant Specialties	Include in its entirety.
17	HVAC	233114	Low-Pressure Steel Ductwork	Include in its entirety.
17	HVAC	233346	Flex Duct	Include in its entirety.
17	HVAC	233400	Exhaust Fans	Include in its entirety.
17	HVAC	233713	Air Outlets & Inlets	Include in its entirety.
17	HVAC	235166	Split System Heat Pump Units	Include in its entirety.
17	HVAC	236220	Rooftop Heating-Cooling Unit	Include in its entirety.
17	HVAC	079000	Joint Sealants	Applicable to HVAC Fixtures and Materials Only
18	Electrical	Division 1	General Requirements	All sections to be included in their entirety.
18	Electrical	260000	Electrical Table of Contents	Information
18	Electrical	260501	Common Electrical Requirements	Includes all site lighting, interior lighting, data, power distribution and final connections of equipment in accordance with the drawings. This scope includes light pole bases, excavation, backfill, forming, reinforcement and concrete placement plus all trenching associated with this scope of work.
18	Electrical	260503	Equipment Wiring Systems	Electrical connections to equipment specified under other sections or furnished by Owner.
18	Electrical	260504	Service Entrance	Includes But Not Limited To Furnish and install service as described in Contract Documents and as required by local serving agency.
18	Electrical	260519	Line-Voltage Conductors & Cables	Include in its entirety.
18	Electrical	260526	Grounding & Bonding for Electrical Systems	Include in its entirety.
18	Electrical	260533	Raceways & Boxes for Electrical Systems	Include in its entirety.
18	Electrical	260553	Electrical Identification	Include in its entirety.
18	Electrical	262417	Panelboards	Include in its entirety.
18	Electrical	262726	Wiring Devices	Include in its entirety.
18	Electrical	262816	Enclosed Switches & Circuit Breakers	Include in its entirety.
18	Electrical	264313	Surge Protection Devices for Panelboards	Include in its entirety.
18	Electrical	265100	Interior & Exterior Lighting	Include in its entirety. Includes exterior pole lights, concrete bases, excavation, backfill & compaction.
18	Electrical	266100	Auxiliary Systems	Include in its entirety.
18	Electrical	266210	Data System Cabling	Include in its entirety.
18	Electrical	266411	Addressable Fire Alarm System	Security & Fire Alarm System to be designed & provided by Owner's Sub-Contractor. E.C. shall coordinate with Owner's Security / Fire Alarm Contractor for all required rough-in & circuits to equipment.
18	Electrical	Per Plans	Henry Schein Drawings	Refer to equipment drawings for equipment utility hook up.
18	Electrical	079000	Joint Sealants	Applicable to Electrical Fixtures and Materials Only



134 3<sup>rd</sup> Ave E  
Twin Falls, ID 83301  
208.736.8050

## Addendum No. 2

PROJECT: A New Facility for Family Health Services Shoshone  
Date: March 3, 2023

To the General Contractor, Subcontractors and Suppliers:

The following items contain additions, deletions, or modifications to the Plans and Specifications. This Addendum forms a part of the Contract Documents and shall be bound inside the cover of the Project Manual.

General Contractor shall be responsible for contacting their sub-contractors as this addendum may affect them.

Bidders shall acknowledge receipt of this Addendum on the Contractor Bid Proposal.

### GENERAL NOTES:

1. At trash enclosure, 6" posts @ gates are required. All other posts can be 4".
2. Question: I see that you need blocking panels along the exterior (typical), which is shown on detail 4/S203. This detail does not show up on the Roof Framing Plan (sheet S102). Also, are there any panels needed over any of the interior bearing walls for sheer?  
*Response: Blocking panels are required at the exterior of the walls per detail 8/S203 which is referenced on the roof framing plan. Blocking panels are not required for shear transfer at interior bearing walls. However, if the truss design/manufacture requires blocking panels at these interior bearing points for bearing stability, then we take no issue with providing panels at these areas.*
3. Question: Request clarification regarding the interior bearing walls. I am unsure which trusses are hanging on or resting on bearing walls. The sections are not entirely clear. Clarify which trusses hang from bearing walls or Glu-Lam beams and which ones rest on bearing walls?  
*Response: Any truss supported by a bearing wall will be sitting on top of the bearing wall per detail 12/S203. All trusses supported by glu-lam beams will hung from the beam per detail 11/S203.*
4. Question: Regarding the hanging trusses, is there a specific hanger type needed for these trusses? I have calculated the strongest hanger needed is an HUS26, but could not tell if there was something specific the architect had in mind. Please verify?  
*Response: Truss hanger can be determined by the truss designer. There are no special architectural requirements other than the need for the hanger to meet or exceed the design capacities required to support the truss.*
5. Question: What is the tallest parapet required on these trusses? I currently have them all with 6'-0" parapets (allowing for the framers to adjust/cut them down as needed?)

# laughlin ricks architecture

*Response: Please coordinate the parapet heights with the architectural drawings. Structurally we take no issue with allowing the parapet heights to be adjusted in the field.*

## Specification Manual:

033000 – CONCRETE

074600 - PRE-FORMED, PRE-FINISHED METAL SIDING Replace in its entirety

084100 - ALUMINUM STORE-FRONT WINDOWS AND DOORS

2.1 at B, replace with the following:

B. Pharmacy window: Ready Access. 275-SC dark bronze finish, 1/4" bronze tinted and tempered glass w/ low-E coating. 6" Header and 1 3/4" Sill.

## Architectural Drawings:

Sheet A1-2 Added alternate gate hinge

Sheet A4-1 Revised soffit callout

Sheet A8-5 Indicated OFOI casework

Sheet A8-7 Updated locker elevation

Sheet A8-14 Added locker details

## Approved Substitutions:

075400 Single Ply Membrane Roofing

097313 Acoustic Wall Carpeting

Sika Sarnafil, Sikaplan 60 Mil PVC

Hytex Ozite Rib

## Summary of Attachments to Addendum No. 2

033000 – CONCRETE

074600 - PRE-FORMED, PRE-FINISHED METAL SIDING

Sheet A1-2

Sheet A4-1

Sheet A8-5

Sheet A8-7

Sheet A8-14

END OF ADDENDUM No. 2

SECTION 033000 - CONCRETE

PART 1 GENERAL

1.1 SUMMARY

- A. This Section includes but is not limited to the following:
  - 1. Cast-in place concrete, including formwork, reinforcing, mix design, placement procedures, curing, and finishes

1.2 DEFINITIONS

- A. Cementitious Materials: Portland cement alone or in combination with one or more of the following: blended hydraulic cement, fly ash, slag cement, other pozzolans, and silica fume; materials subject to compliance with requirements.
- B. w/cm: The ratio by mass of water to cementitious materials.

1.3

SUBMITTALS

- A. General: Submit the following in accordance with Conditions of Contract and Division 1 Specification Sections.
- B. Submit shop drawings for reinforcement steel: Indicate reinforcement sizes, spacing, diagrams of bent bars, wire fabric, bending and cutting schedules, splicing, supporting and spacing devices and arrangement of concrete reinforcement. Include special reinforcement required for openings.
- C. Material suppliers test reports for concrete materials and mix design.

1.4 PREINSTALLATION MEETING

Preinstallation Conference: Conduct conference at Project site

- 1. Before submitting design mixtures, review concrete design mixture and examine procedures for ensuring quality of concrete materials. Require representatives of each entity directly concerned with cast-in-place concrete to attend, including the following:
  - a. Contractor's superintendent.
  - b. Independent testing agency responsible for concrete design mixtures.
  - c. Ready-mixed concrete manufacturer.
  - d. Concrete Subcontractor.
  - e. Special Concrete finish Subcontractor
- 2. Review the following:
  - a. Special inspection and testing and inspecting agency procedures for field quality control.

- b. Construction joints, control joints, isolation joints, and joint-filler strips.
- c. Semirigid joint fillers.
- d. Vapor-retarder installation.
- e. Anchor rod and anchorage device installation tolerances.
- f. Cold and hot weather concreting procedures.
- g. Concrete finishes and finishing.
- h. Curing procedures.
- i. Forms and form-removal limitations.
- j. Shoring and reshoring procedures.
- k. Methods for achieving specified floor and slab flatness and levelness.
- l. Floor and slab flatness and levelness measurements.
- m. Concrete repair procedures.
- n. Concrete protection.
- o. Initial curing and field curing of field test cylinders (ASTM C31/C31M.)
- p. Protection of field cured field test cylinders.

### 1.3 QUALITY ASSURANCE

- A. Codes and Standards: Comply with provisions of following codes, specifications, and standards, except where more stringent requirements are shown or specified:
  - 1. ACI 301, "Specification of Structural Concrete for Buildings" and ACI 302.1R "Guide for Concrete Floor and Slab Construction," Current Edition.
  - 2. ACI 305R, "Hot Weather Concreting," Current Edition.
  - 3. ACI 306R, "Cold Weather Concreting," Current Edition
  - 4. ACI 308, "Standard Practice for Curing Concrete," Current Edition.
  - 5. ACI 309, "Standard Practice for Consolidation of Concrete," Current Edition.
  - 6. ACI 318, "Building Code Requirements for Reinforced Concrete," Current Edition.
  - 7. ACI 347, "Recommended Practice for Concrete Formwork," Current Edition.
  - 8. ACI 360R, "Design of Slabs on Grade," Current Edition.
  - 9. Concrete Reinforcing Steel Institute (CRSI), "Manual of Standard Practice," Current Edition.
- B. TESTING
  - 1. Tests: Testing for moisture control and the results of the tests will be required prior to installation of finish floor surfaces. The tests include the following:



2. ASTM F 710: "Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring." Schedule the referenced tests to be taken after the space to receive flooring is brought to "in-use" conditions through the use and operation of the permanent HVAC system.
3. ASTM F 1869 "Standard Test Method for Measuring Moisture Vapor Emission Rate of Concrete Subfloor Using Anhydros Calcium Chloride."
4. Alkalinity Tests: Alkalinity of the concrete surface shall not be less than pH 7.5, minimum, and shall not exceed pH 8.5, maximum. The test for alkalinity shall be taken at the floor surface only following completion of all abrasive removal operations (shot blasting, sanding, or grinding).

## PART 2 PRODUCTS

### 2.1 FORM MATERIALS

- A. Forms for Exposed Finish Concrete: Plywood, metal, metal-framed plywood faced, or other acceptable panel-type materials, to provide continuous, straight, smooth, exposed surfaces. Furnish in largest practicable sizes to minimize number of joints and to conform to joint system shown on drawings.
  1. Use overlaid plywood complying with U.S. Product Standard PS-1 "A-C or B-B High Density Overlaid Concrete Form," Class I.
- B. Form Ties: Factory-fabricated snap-off metal form ties.

### 2.2 REINFORCING MATERIALS

- A. Reinforcing Bars: ASTM A 615, Grade 60, deformed, unless otherwise indicated.
- B. Fiber Reinforcing at polished concrete: Product: Green Umbrella, FiberLite.**
  - a. Monofilament acrylic fiber compliant with ASTM C1116/C1116M, Section 4.1.3, and Note 3, and ICC ES AC 32, Sections 4.1.1 and 4.1.2.**
  - b. Flexural Strength: 60 psi at 2/3 lbs/yd.**
  - c. Specific Gravity: 1.17.**
  - d. Fiber Length: 6 mm.**

### 2.3 CONCRETE MATERIALS

- A. Portland Cement: ASTM C 150, for cast-in-place and pre-cast concrete.
- B. Fly Ash: Fly ash is not allowed in any concrete mixes used for slabs-on-grade or slabs on metal deck.

- C. Welded Steel Wire Fabric: ASTM A185 Plain type, fabricated into flat sheets, coiled rolls prohibited.
- D. Chairs, Bolters, Bar Supports, and Spacer: Sized and shaped for support of reinforcing, conforming to CRSI.
- E. Fabricate concrete reinforcing in accordance with ACI 315.
  - 1. Use one brand of cement throughout project unless otherwise acceptable to Architect.
    - a. Portland Cement ASTM C 150, Type II Preferred
    - b. Use cement that exhibits low shrinkage characteristics.
    - c. Type of cement (Type I, Type I/II, Type II, etc.) used will be at discretion of the batching plant in order to meet the specified criteria for low shrinkage, low alkalinity, low permeability, etc.
- F. Aggregates: ASTM C 33 and as herein specified.
  - 1. Local aggregates not complying with ASTM C 33 but that special tests or actual service have shown to produce concrete of adequate strength and durability may be used when acceptable to Architect.
  - 2. Provide aggregates that test low in alkalinity.
  - 3. Aggregate size shall be as indicated in ACI 301 for structural concrete and as indicated in ACI 302.1R and ACI 360R.
    - a. For structural concrete, maximum aggregate size shall not exceed  $\frac{2}{3}$  the spacing distance of the reinforcement, but not to exceed  $1\frac{1}{2}$ ".
    - b. For slab-on-grade construction and for concrete pavements, maximum aggregate sizing shall equal approximately  $\frac{1}{3}$  of the slab section but shall not exceed  $1\frac{1}{2}$ ". (Example: For 4" slabs, maximum aggregate size equals  $\pm 1\frac{1}{2}$ "; for 2" topping, maximum aggregate size equals  $\pm \frac{5}{8}$ ".)
- G. Water: Drinkable with low alkaline characteristics.
- H. Admixtures, General: Provide admixtures for concrete that contain not more than 0.1 percent chloride ions.
- I. Air-Entraining Admixture: ASTM C 260, certified by manufacturer to be compatible with other required admixtures.

1. Available Products: Subject to compliance with requirements, products that may be incorporated in the work include:
  - a. "Air-Tite," Cormix.
  - b. "Air-Mix" or "Perma-Air," Euclid Chemical Co.
  - c. "Darex AEA" or "Daravair," W.R. Grace & Co.
  - d. "MB-VR" or "Micro-Air," Master Builders, Inc.
  - e. "Sealtight AEA," W.R. Meadows, Inc.
  - f. "Sika AER," Sika Corp.
  - g. or Approved.

#### 2.4 RELATED MATERIALS

- A. Moisture-Retaining Cover for Interior Slabs-On-Grade: The following complies with ASTM C 171.
  1. Polyethylene film per ACI 302.1R.
- B. Vapor Retarder: Provide vapor retarder cover over prepared base material directly below all slabs on grade.
- C. Underlayment Compound: Free-flowing, self-leveling, pumpable, cement-based compound for applications from feathered edge to 1/2-inch or from feathered edge to 4-inch thick with sand extension.
  1. Available Products: Subject to compliance with requirements, products that may be incorporated in the work include, but are not limited to, the following:
    - a. "LevelLayer II," Dayton Superior Corp. (Design Standard).
    - b. "Flo-Top," Euclid Chemical Co.
    - c. "Pourcrete," Master Builders, Inc.
    - d. "Thoro Underlayment Self-Leveling," Thoro System Products.
    - e. "Raeco Self-Leveling Underlayment (SLU)," Raeco, Seattle, WA.
    - f. or Approved.

- D. Bonding Compound: Polyvinyl acetate or acrylic base.
1. Available Products: Subject to compliance with requirements, products that may be incorporated in the work include:
    - a. Acrylic or Styrene Butadiene:
      - 1) "Day-Chem Ad Bond," Dayton Superior Corp. (Design Standard)
      - 2) "SBR Latex," Euclid Chemical Co.
      - 3) "Daraweld C," W.R. Grace & Co.
      - 4) "Hornweld," A.C. Horn, Inc.
      - 5) "Acryl-Set," Master Builders Inc.
      - 6) "Intralok," W.R. Meadows, Inc.
      - 7) or Approved.
  2. Use recommended bonding compound for bonding new to new or new to old concrete.
- E. Non-Shrink Grout: Premixed compound with non-metallic aggregate cement, water reducing and plasticizing agents; capable of minimum compressive strength of 6,000 psi. Master Builders "Embeco" or approved.

## 2.5 PROPORTIONING AND DESIGNING CONCRETE MIXES

- A. Prepare design mixes for each type and strength of concrete by using methods as specified in ACI 301. Proportions shall be as necessary to obtain indicated strengths.
1. Note requirements for low alkaline component materials for concrete slabs-on-grade.
  2. No fly-ash will be allowed in the mix design.
- B. Submit written reports to Architect of each proposed mix for each class of concrete at least 15 days prior to start of work. Do not begin concrete production until proposed mix designs have been reviewed and approved.
- C. Design mixes to provide normal weight concrete with the properties as indicated on drawings and schedules. Light weight concrete is required at slab on metal deck as indicated on the drawings and schedules.

- D. Water-Cement Ratio for Low Shrink Concrete: Provide concrete for following conditions with maximum water-cement (W/C) ratios as follows:
  - 1. Interior Slabs: W/C: 0.48 or higher [air entrainment: not allowed].
    - a. Advise, confer with and coordinate these W/C ratios with the entity contracted to perform the concrete polishing work.
  - 2. Exterior Slabs subject to de-icers: W/C 0.45- [259 lbs. water/564 lbs. cement; air-entrainment: 6% (+/- 1%)].
- E. Slump Limits: Proportion and design mixes to result in concrete slump at point of placement as follows:
  - 1. Interior Slabs: 4 inches maximum. (Slump limit prior to introduction of water-reducing admixture).
    - a. Advise, confer with and coordinate these slump limits with the entity contracted to perform the concrete polishing work.
  - 2. Reinforced foundation systems: 4 inches maximum.
  - 3. Other concrete and exterior flat work: Not more than 4 inches maximum.

## 2.6 ADMIXTURES

- A. Provide high-range or medium range water-reducing admixture in interior slab-on-grade concrete for workability. Submit mix design with manufacturer's product information and specifications for review and approval.
- B. Provide accelerating admixture in concrete slabs placed at ambient temperatures below 50° F (10° C).
- C. Where used, admixtures for water reduction and set control shall be provided in strict compliance with manufacturer's directions.

## 2.7 CONCRETE MIXING

- A. Ready-Mix Concrete: Comply with requirements of ASTM C 94, and as specified.
  - 1. When air temperature is between 85° F (30° C) and 90° F (32° C), reduce mixing and delivery time from 1-1/2 hours to 75 minutes, and when air temperature is above 90° F (32° C), reduce mixing and delivery time to 60 minutes.
  - 2. Verify with Architect the procedures to be taken to comply with referenced standards regarding hot or cold weather delivery and placement of concrete.

### PART 3 EXECUTION

#### 3.1 GENERAL

- A. Coordinate the installation of joint materials insulation and vapor retarders with placement of forms and reinforcing steel.
- B. Comply with requirements of ACI 301, "Standard Specification for Structural Concrete."

#### 3.2 FORMS

- A. General: Design, erect, support, brace, and maintain formwork to support vertical and lateral, static and dynamic loads that might be applied until concrete structure can support such loads. Construct formwork so concrete members and structures are of correct size, shape, alignment, elevation, and position. Maintain formwork construction tolerances complying with ACI 347.
- B. Construct forms to sizes, shapes, lines, and dimensions shown and to obtain accurate alignment, location, grades, level, and plumb work in finished structures. Provide for openings, offsets, etc., required in work. Solidly butt joints and provide backup at joints to prevent leakage of cement paste.
- C. Fabricate forms for easy removal without hammering or prying against concrete surfaces.
- D. Chamfer exposed corners and edges using wood, metal, PVC, or rubber chamfer strips fabricated to produce uniform smooth lines and tight edge joints.
- E. Provisions for Other Trades: Provide openings in concrete formwork to accommodate work of other trades. Determine size and coordinate location of openings, recesses, locker bases and chases from trades providing such items. Accurately place and securely support items built into forms.
- F. Cleaning and Tightening: Thoroughly clean forms and adjacent surfaces to receive concrete. Remove chips, wood, sawdust, dirt, or other debris just before concrete is placed. Retighten forms and bracing before concrete placement as required to prevent mortar leaks and maintain proper alignment.

#### 3.3 PLACING REINFORCEMENT

- A. General: Comply with Concrete Reinforcing Steel Institute's recommended practice for "Placing Reinforcing Bars," for details and methods of reinforcement placement and supports and as herein specified.
- B. Clean reinforcement of loose rust and mill scale, earth, ice, and other materials that could reduce or destroy bond with concrete.

- C. Accurately position, support, and secure reinforcement against displacement. Locate and support reinforcing by metal chairs, runners, bolsters, spacers, and hangers, as approved.
- D. Place reinforcement to obtain at least minimum coverage for concrete protection. Arrange, space, and securely tie bars and bar supports to hold reinforcement in position during concrete placement operations. Set wire ties so ends are directed into concrete, not toward exposed concrete surfaces.

### 3.4 JOINTS

- A. Construction Joints: Locate and install construction joints as acceptable to Architect, unless indicated on drawings.
- B. Isolation Joints in Slabs-on-Ground: Construct isolation joints in slabs-on-ground at points of contact between slabs-on-ground and vertical surfaces, such as column pedestals, foundation walls, grade beams, and elsewhere as indicated.
- C. Contraction (Control) Joints in Slabs-on-Grade: Construct contraction joints in slabs-on-grade to form panels of patterns as shown. Use saw cuts 1/8-inch-wide on interior slabs as shown on drawings.
  - 1. Contraction joints in exposed floor slabs should be formed as soon as possible after slab finishing as may be safely done without dislodging aggregate to minimize shrinkage cracking.
  - 2. For joint patterns not shown, provide joints not exceeding 12 feet in either direction and located to conform to bay spacing wherever possible (at wall lines or column centerlines, half bays, third bays, etc.). Verify joint layout with Architect.
  - 3. Joint sealant material is specified in Division 7 Sections of these specifications.

### 3.5 INSTALLATION OF EMBEDDED ITEMS

- A. General: Set and build into work anchorage devices and other embedded items required for other work that is attached to or supported by cast-in-place concrete. Use setting drawings, diagrams, instructions, and directions provided by suppliers of items to be attached thereto.
- B. Forms for Slabs: Set edge forms, bulkheads, and intermediate screed strips for slabs to obtain required elevations and contours in finished surfaces. Provide and secure units to support screed strips using strike-off templates or compacting-type screeds.

### 3.6 PREPARATION OF FORM SURFACES

- A. General: Coat contact surfaces of forms with an approved, non-residual, low-VOC, form-coating compound before reinforcement is placed.

- B. Do not allow excess form-coating material to accumulate in forms or to come into contact with in-place concrete surfaces against which fresh concrete will be placed. Apply in compliance with manufacturer's instructions.
- C. Coat steel forms with a non-staining, rust-preventative material. Rust-stained steel formwork is not acceptable.
- D. Install expansion joint material when abutting to other construction.

### 3.7 CONCRETE PLACEMENT

- A. Inspection: Before placing concrete, inspect and complete formwork installation, reinforcing steel, and items to be embedded or cast in. Notify other crafts to permit installation of their work; cooperate with other trades in setting such work. Notify Building Official and Architect prior to placement of concrete.
- B. General: Comply with ACI 304, "Recommended Practice for Measuring, Mixing, Transporting, and Placing Concrete," and as herein specified.
- C. Deposit concrete continuously or in layers of such thickness that no concrete will be placed on concrete that has hardened sufficiently to cause the formation of seams or planes of weakness. If a section cannot be placed continuously, provide construction joints. Deposit concrete to avoid segregation at its final location.
- D. Placing Concrete in Forms: Consolidate placed concrete by mechanical vibrating equipment supplemented by hand-spading, rodding, or tamping. Use equipment and procedures for consolidation of concrete in accordance with ACI 309.
  - 1. Do not use vibrators to transport concrete inside forms. Insert and withdraw vibrators vertically at uniformly spaced locations not farther than visible effectiveness of machine.
- E. Placing Concrete Slabs: Deposit and consolidate concrete slabs in a continuous operation, within limits of construction joints, until the placing of a panel or section is completed.
  - 1. Consolidate concrete during placing operations so that concrete is thoroughly worked around reinforcement and other embedded items and into corners.
  - 2. Bring slab surfaces to correct level with straightedge and strike off. Use appropriate equipment to smooth surface, free of humps or hollows. Do not disturb slab surfaces prior to beginning finishing operations.
  - 3. Maintain reinforcing in proper position during concrete placement.
  - 4. Place expansion joint material.



5. Apply water and moisture retaining cover. Keep continuously wet for 7 to 10 days, depending on conditions.
- F. Cold-Weather Placing: Comply with provisions of ACI 306 and as follows. Protect concrete work from physical damage or reduced strength that could be caused by frost, freezing actions, or low temperatures.
- G. When air temperature has fallen to or is expected to fall below 40° F (4° C), uniformly heat water and aggregates before mixing to obtain a concrete mixture temperature of not less than 50° F (10° C) and not more than 80° F (27° C) at point of placement.
  1. Do not use frozen materials or materials containing ice or snow. Do not place concrete on frozen subgrade or on subgrade containing frozen materials.
- H. Hot-Weather Placing: When hot weather conditions exist that would seriously impair quality and strength of concrete, place concrete in compliance with ACI 305 and as herein specified.
  1. Cool ingredients before mixing to maintain concrete temperature at time of placement below 90° F (32° C).
  2. Cover reinforcing steel with water-soaked burlap if it becomes too hot, so that steel temperature will not exceed the ambient air temperature immediately before embodiment in concrete.
  3. Fog spray forms, reinforcing steel, and subgrade just before concrete is placed.
- I. Slab Tolerances:
  1. Interior flat slabs shall be plus or minus a maximum of 3/16" in 10'-0", without excessive changes in slope.
  2. Interior slabs that slope to drain shall be formed and the concrete shall be placed to conform to the indicated elevations for top of slope and at the drain. Finish the sloping planes to tolerances for flat slabs by minimizing surface variations.

### 3.8 FINISH OF FORMED SURFACES

- A. Rough Form Finish: For formed concrete surfaces not exposed to view in the finish work or concealed by other construction. This is the concrete surface having texture imparted by form-facing material used, with tie holes and defective areas repaired and patched and fins and other projections exceeding 1/4 inch in height rubbed down or chipped off.
- B. Smooth Form Finish: For formed concrete surfaces exposed to view or to be covered with a coating material applied directly to concrete, or a covering material applied directly to concrete, such as waterproofing, damp proofing, veneer plaster, painting, or other similar

system. This is an as-cast concrete surface obtained with selected form-facing material, arranged in an orderly and symmetrical manner with a minimum of seams. Repair and patch defective areas with fins and other projections completely removed and smoothed.

1. Perform “smooth rubbed finish” or “grout cleaned finish” (sack finish) per ACI 301 depending on timing when rubbed finish is applied.

C. Related Unformed Surfaces: At tops of walls, horizontal offsets, and similar unformed surfaces occurring adjacent to formed surfaces, strike-off smooth and finish with a texture matching adjacent formed surfaces. Continue final surface treatment of formed surfaces uniformly across adjacent unformed surfaces unless otherwise indicated.

### 3.9 MONOLITHIC SLAB FINISHES

A. Scratch Finish: Apply scratch finish to monolithic slab surfaces that are to receive concrete floor topping or mortar setting beds for tile, Portland cement terrazzo, and other bonded applied cementitious finish flooring material, and as otherwise indicated.

1. After placing slabs, plane surface so that depressions between high spots do not exceed 1/2” under a 10’ straightedge. Slope surfaces uniformly to drains where required. After leveling, roughen surface before final set, with stiff brushes, brooms or rakes.

B. Float Finish: Apply float finish to monolithic slab surfaces to receive trowel finish and other finishes as hereinafter specified, and to slab surfaces which are to be covered with membrane or elastic waterproofing, such as sub-slabs for wood gymnasium floors, and as otherwise indicated.

1. After screening and consolidating concrete slabs, do not work surface until ready for floating. Begin floating when surface water has disappeared or when concrete has stiffened sufficiently to permit operation of hand floats or power-driven floats, or both. Consolidate surface with power-driven floats or by hand-floating if area is small or inaccessible to power units. Check and level surface tolerances. Cut down high spots and fill low spots. Uniformly slope surfaces to drains. Immediately after leveling, refloat surface to a uniform, smooth, granular texture.

C. Hard Trowel Finish: Apply trowel finish to monolithic slab surfaces to be exposed-to-view, and slab surfaces to be covered with resilient flooring, carpet, thinset ceramic tile, paint or other thin film finish coating system and to slabs used as substrates for wood flooring systems.

1. After floating, begin first trowel finish operation using a power-driven trowel. Begin final troweling when surface produces a ringing sound as trowel is moved over surface. Consolidate concrete surface by final hand-troweling operation, free of trowel marks, uniform in texture and appearance. Grind smooth surface defects which would telegraph through applied floor covering system.

- a. Texture of concrete slabs-on-grade to receive adhesive applied finish. Finish of concrete shall be similar to 60 grit sandpaper.
  - b. Provide slab "soft-cuts" not to exceed 12'-0" in each direction or as indicated.
- D. Finish: Apply nonslip broom finish to exterior concrete platforms, steps and ramps, and elsewhere as indicated. Refer to Division 32 section "Concrete Walks" for finishing requirements for exterior concrete flatwork.
- 1. Immediately after trowel finishing, slightly roughen concrete surface by brooming with fiber-bristle broom perpendicular to main traffic route. Coordinate required final finish with Architect before application.

### 3.10 MISCELLANEOUS CONCRETE ITEMS

- A. Filling In: Fill in holes and openings left in concrete structures for passage of work by other trades after work of other trades is in place. Provide other miscellaneous concrete filling required to complete work.
- B. Curbs: Provide monolithic finish to interior curbs by stripping forms while concrete is still green and steel-troweling surfaces to a hard, dense finish with corners, intersections, and terminations slightly rounded.

### 3.11 CONCRETE CURING AND PROTECTION

- A. General: Concrete Cure Finishing System
  - 1. Product System: Green Umbrella, "GreenIce Cure System":
    - a. Curative / FinishAid / Fixative / Densifier System: Clear, penetrating, reactive VOC compliant compound designed to promote proper cure as well as mechanically, and chemically densified power troweled concrete surfaces.
      - a) Product: Green Umbrella, IceStart & IceStop.
      - b) Cure.
      - c) Fixative.
      - d) pH neutral.
    - 2) Mechanical:
      - a) Integral Mechanical Densification Finishing Trowel.
      - b) Black Pad High-Speed Propane Burnished.

1. Concrete with shrinkage cracks will be assumed to have been improperly cured and will not be accepted. Before forming, advise Architect of detailing or restraints that Contractor believes may cause shrinkage cracking.
- B. Provide curing and sealing compound to exposed exterior slabs, walks, parking lot light standard bases, and curbs as follows:
  1. Apply specified curing and sealing compound to concrete slabs as soon as final finishing operations are complete (within 2 hours and after surface water sheen has disappeared). Apply uniformly in continuous operation by power spray or roller in accordance with manufacturer's directions. Recoat areas subjected to heavy rainfall within 3 hours after initial application. Maintain continuity of coating and repair damage during curing period.
  2. Do not use membrane curing compounds that will affect surfaces to be covered with Division 9 specified finish materials applied directly to concrete. Curing compounds are not acceptable for use on interior slabs-on-grade.
- C. Provide moisture-retaining cover curing for interior slabs as follows:
  1. Follow GreenIce Manufacturer installation procedure.
- E. Curing Formed Surfaces: Cure formed concrete surfaces by moist curing with forms in place for the full curing period or until forms are removed. If forms are removed, continue curing by methods specified above, as applicable.

### 3.12 SHORES AND SUPPORTS

- A. General: Comply with ACI 347 for shoring concrete construction.
- B. Remove shores and reshore in a planned sequence to avoid damage to partially cured concrete. Locate and provide adequate reshoring to support work without excessive stress or deflection.

### 3.13 REMOVAL OF FORMS

- A. General: Formwork not supporting weight of concrete, such as sides of beams, walls, columns, and similar parts of the work, may be removed after cumulatively curing at not less than 50° F (10° C) for 24 hours after placing concrete, provided concrete is sufficiently hard to not be damaged by form-removal operations, and provided curing and protection operations are maintained.

- B. Formwork supporting weight of concrete and other structural elements, may not be removed in less than 14 days and until concrete has attained at least 75 percent of design minimum compressive strength at 28 days.

### 3.14 REUSE OF FORMS

- A. Clean and repair surfaces of forms to be reused in work. Split, frayed, delaminated, or otherwise damaged form-facing material will not be acceptable for exposed surfaces. Apply new form- coating compound as specified for new formwork.

### 3.15 CONCRETE SURFACE REPAIRS

- A. Patching Defective Areas: Repair and patch defective areas with cement mortar immediately after removal of forms as acceptable to Architect.
- B. Repair of Unformed Surfaces: Test unformed surfaces, such as monolithic slabs, for smoothness and verify surface plane to tolerances specified for each surface and finish. Correct low and high areas as herein specified. Test unformed surfaces sloped to drain for trueness of slope and smoothness.
  - 1. Repair finished unformed surfaces that contain defects that affect durability of concrete. Surface defects, as such, include crazing and cracks, spalling, pop-outs, honeycomb, rock pockets, and other objectionable conditions.
  - 2. Correct high areas in unformed surfaces by grinding after concrete has cured at least 14 days.
  - 3. Correct low areas in unformed surfaces during or immediately after completion of surface finishing operations by cutting out low areas and replacing with patching compound. Finish repaired areas to blend into adjacent concrete. Proprietary underlayment compounds may be used when acceptable to Architect.
- C. Perform structural repairs with prior approval of Architect for method and procedure, using specified epoxy adhesive and mortar.
- D. Repair methods not specified above may be used, subject to acceptance of Architect.

### 3.16 QUALITY CONTROL TESTING DURING CONSTRUCTION

- A. General: The Owner may employ a testing laboratory to perform tests and to submit test reports.
- B. Sampling and testing for quality control will occur during placement of concrete. Cooperate with the testing laboratory to provide cylinders for compressive tests, samples of the materials for slump tests, air content and temperature, and access to the work. Test results will be reported in writing to the Architect and the Contract Officer for distribution.

- C. Additional Tests: The testing service will make additional tests of in-place concrete when test results indicate specified concrete strengths and other characteristics have not been attained in the structure, as directed by Architect. Testing service may conduct tests to determine adequacy of concrete by cored cylinders complying with ASTM C 42, or by other methods as directed. Contractor shall pay for such tests when unacceptable concrete is verified.

### 3.17 STANDARD FF/FL SPECIFICATION

- A. Designation: The floor area bounded by the exterior foundation is designated the Random Traffic Floor. Any floor slab which comprises a portion of the Random Traffic Floor is designated a Random Traffic Slab.
- B. Local Flatness/Levelness: Except as set forth in Paragraph D below, the Random Traffic Floor shall conform to the following minimum F-number requirements:
  - 1. Specified Overall Values (resilient flooring areas): OAFF:35/OAFL25
  - 2. Specified Overall Values (carpeted areas): OAFF:21/OAFL15
- C. General Conformity to Design Grade: Except as set forth in Paragraph D below, the entire Random Traffic Floor shall fall within plus or minus 1/4" of its specified (matching existing floor) elevation.
  - 1. Floor level tolerance at base cabinets shall not exceed 1/4" along entire length of cabinet with no exception for elevation slab construction.
- D. Exception: Both the overall and minimum local FL levelness tolerances set forth in Paragraph B above shall not apply to any Random Traffic Slab that is to be inclined or cambered.
- E. Testing: All floor flatness, levelness, and grade conformity tests shall be made at the Owner's expense on each newly installed Random Traffic Slab within 72 hours after completion of the final troweling operation. FF and FL tests shall be conducted in accordance with ASTM E1155. Grade conformity tests shall be made using either an optical or laser level. Results of all floor tolerance tests (including a formal notice of acceptance or rejection of the work) shall be provided to the Contractor within 24 hours after data collection. Failure to adhere to the testing and reporting requirements set forth in this paragraph shall constitute *de facto* acceptance of the work. (Note: Weekends and holidays shall be ignored when computing specified testing and reporting deadlines.)
- F. Remedy for Out-of-Tolerance Work: The entire Random Traffic Floor shall be subdivided into Minimum Local Floor Sections bounded either by the column and half-column lines, or the construction and control joints, whichever subdivision yields the smaller areas.

1. All Minimum Local Floor Sections measuring at or above both the specified MLFF and MLFL numbers shall be accepted for F-number compliance as constructed. All Minimum Local Floor Section slabs-on-grade which fail to meet or exceed both specified minimum local F-numbers shall be ground and/or retopped, or in extreme cases, removed and replaced.

3.18 REMEDY FOR OUT-OF-TOLERANCE WORK FOR SLAB-ON-GRADE CONDITIONS

- A. Grind areas of slab-on-grade construction that have curled to out-of-tolerance condition. Bring the work into tolerance (or replace as indicated) at no cost to the Owner.
  1. Grind high points at construction joints to meet specified tolerance.
  2. Areas of slab-on-grade construction that have curled to being out-of-tolerance shall be ground to bring the work into tolerance.
- B. Fill low points in slabs that have finished flooring to a level that will properly meet the specified tolerance at no cost to the Owner.
  1. Slab areas that are excessively low that do not have finished flooring shall be removed and replaced.
- C. Repair shrinkage cracks by grinding cracks in a “vee groove” and fill with epoxy-based repair materials and grind the filled areas smooth at no cost to the Owner.

END OF SECTION 033000

SECTION 074600 – PRE-FORMED, PRE-FINISHED METAL SIDING

PART 1 GENERAL

1.1 SUMMARY

- A. Section includes sheathing paper, siding for walls, related trim, flashings, accessories, and fastenings.

1.2 SUBMITTALS

- A. Product Data: Submit data indicating materials, component profiles, fastening methods, jointing details, sizes, surface texture, and accessories.
- B. Samples: Submit two samples 4 x 8 inch in size illustrating surface texture and color.

1.3 QUALITY ASSURANCE

1.4 WARRANTY

- A. Furnish five (5) year manufacturer warranty for prefinished siding products deterioration of finish.

PART 2 - PRODUCTS

2.1 SIDING

**A. Manufacturers' Vertical Metal Siding**

1. **ALCO-Steel Siding**
2. **Alside**
3. **ABC Seamless**
4. **Metal Sales Manufacturing Corporation (Design Standard)**
4. **Or approved equal**

**B. Product Description: PBR Panel by Metal Sales Manufacturing. 0.0236-inch (0.60-mm)**

1. Material: Aluminum-zinc alloy-coated steel sheet, ASTM A 792, [AZ50] [AZ55] [G90] coating designation, structural quality, Grade 50, [0.018-inch (0.46-mm)] minimum thickness.
2. Attachment: Exposed direct fastened panel.
3. Application: Designed for application over open framing or solid substrate.
4. Rib Configuration: Trapezoidal.
5. Surface Finish: Kynar 500.
6. Color: As selected by Architect from manufacturer's standard colors.
7. Fire Resistance Rating: Comply with UL 263.

2.2 ACCESSORIES

- A. Fasteners as per manufacturer's recommendations to match siding finish.
- B. Building Paper: TYPE D Building Paper
- C. GreenGuard DC 14 Drainage mat



- C. Flashings: 20 gage thick metal to match siding.
- D. Accessory Components: Vented soffits, Non-vented soffits, facias, starter strips, trim and corner trim; of same material and finish as siding.

2.3 SHOP FINISHING

- A. Pre-finish Metal: Kynar 500 finish as selected per manufacturer colors and warranty of finish.**

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Install one layer of building paper horizontally on sheathed walls. Weather lap edges and ends. Nail in place. Install DC 14 Drainage mat per manufacturers recommendation.**
- B. Install siding using double course method.
- C. Nail siding as per manufacturer's recommendations.
- D. Install siding for natural watershed with all required trim flashing. Installation shall be as per manufacturer's recommendations.
- E. Align level, and plumb. Locate cut board edges and ends over bearing.
- F. Install metal flashing at, internal and external corners, sills, head of wall openings.
- G. Install corner strips, closures, and trim.
- H. Touch-up damaged pre-finished paint surfaces.

END OF SECTION

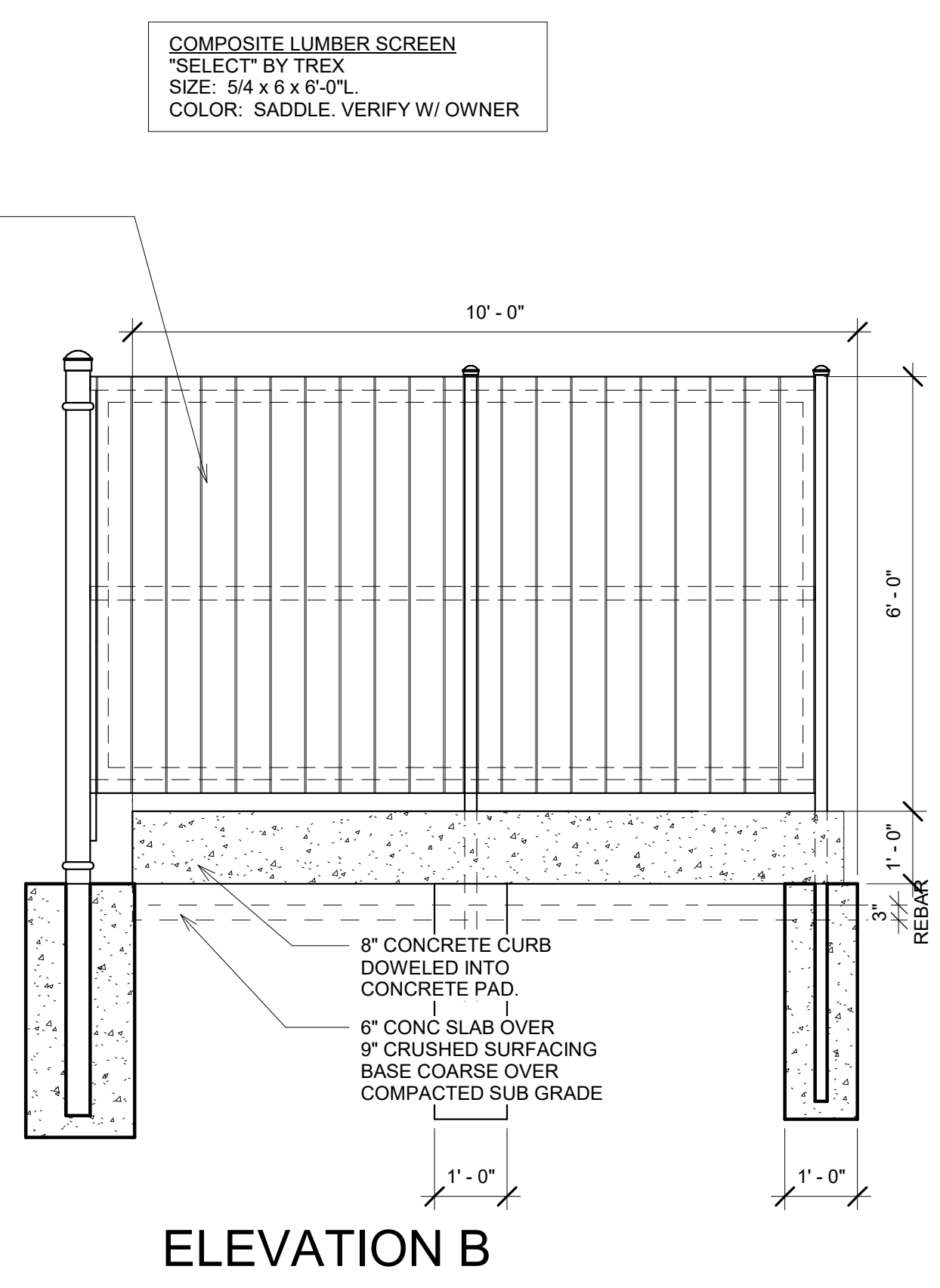
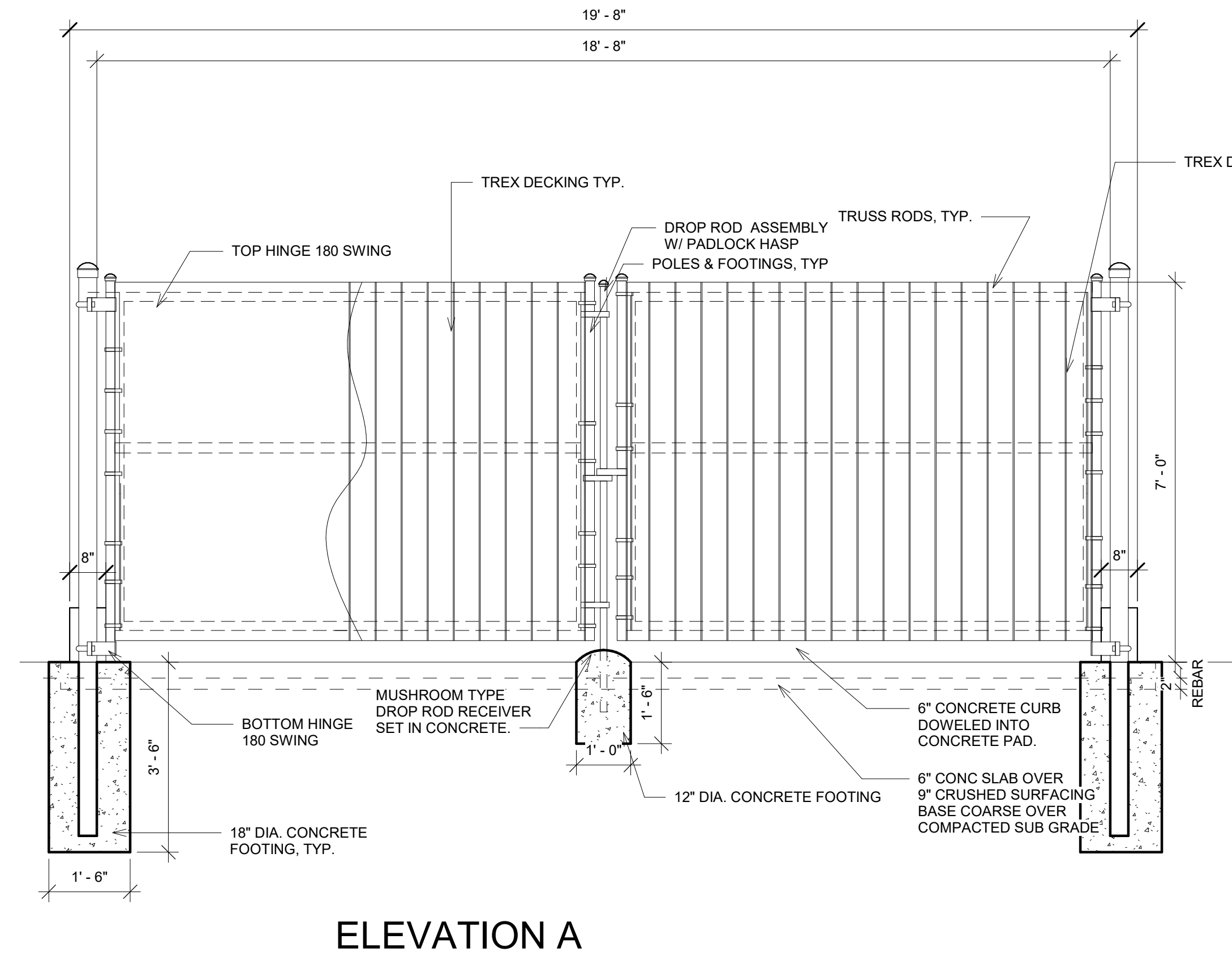
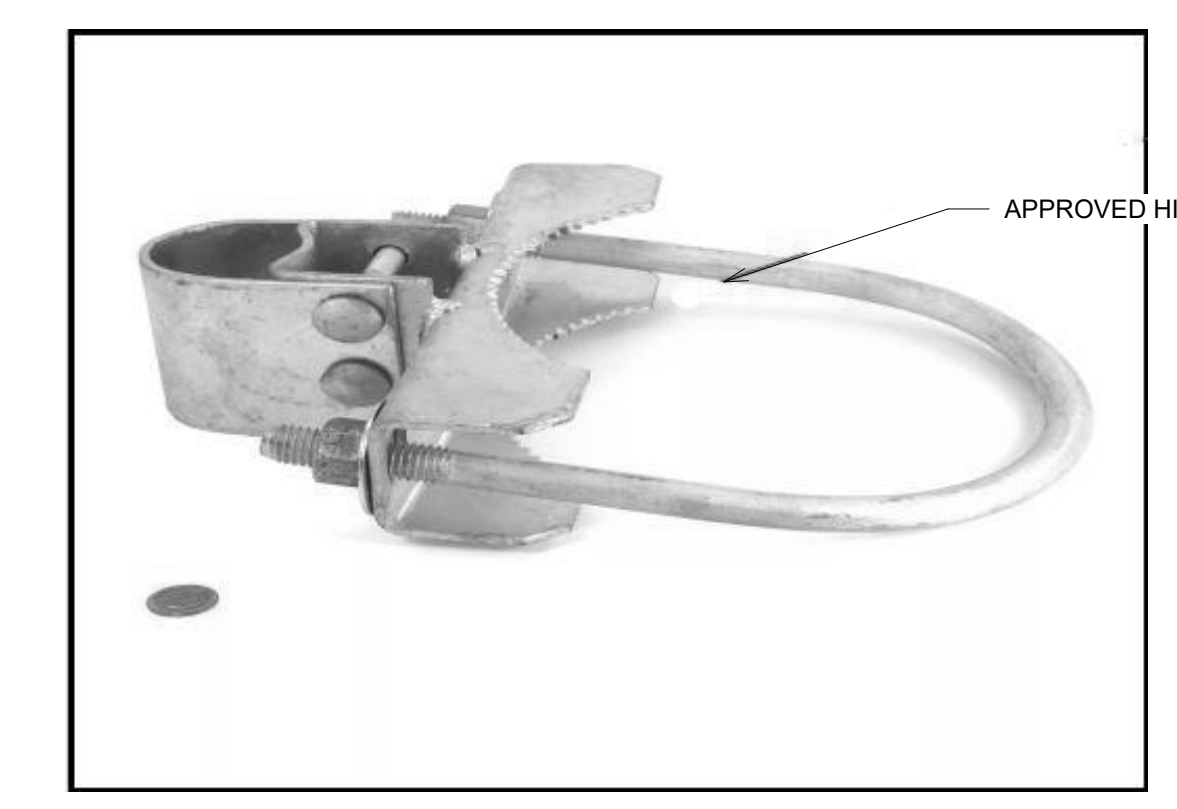
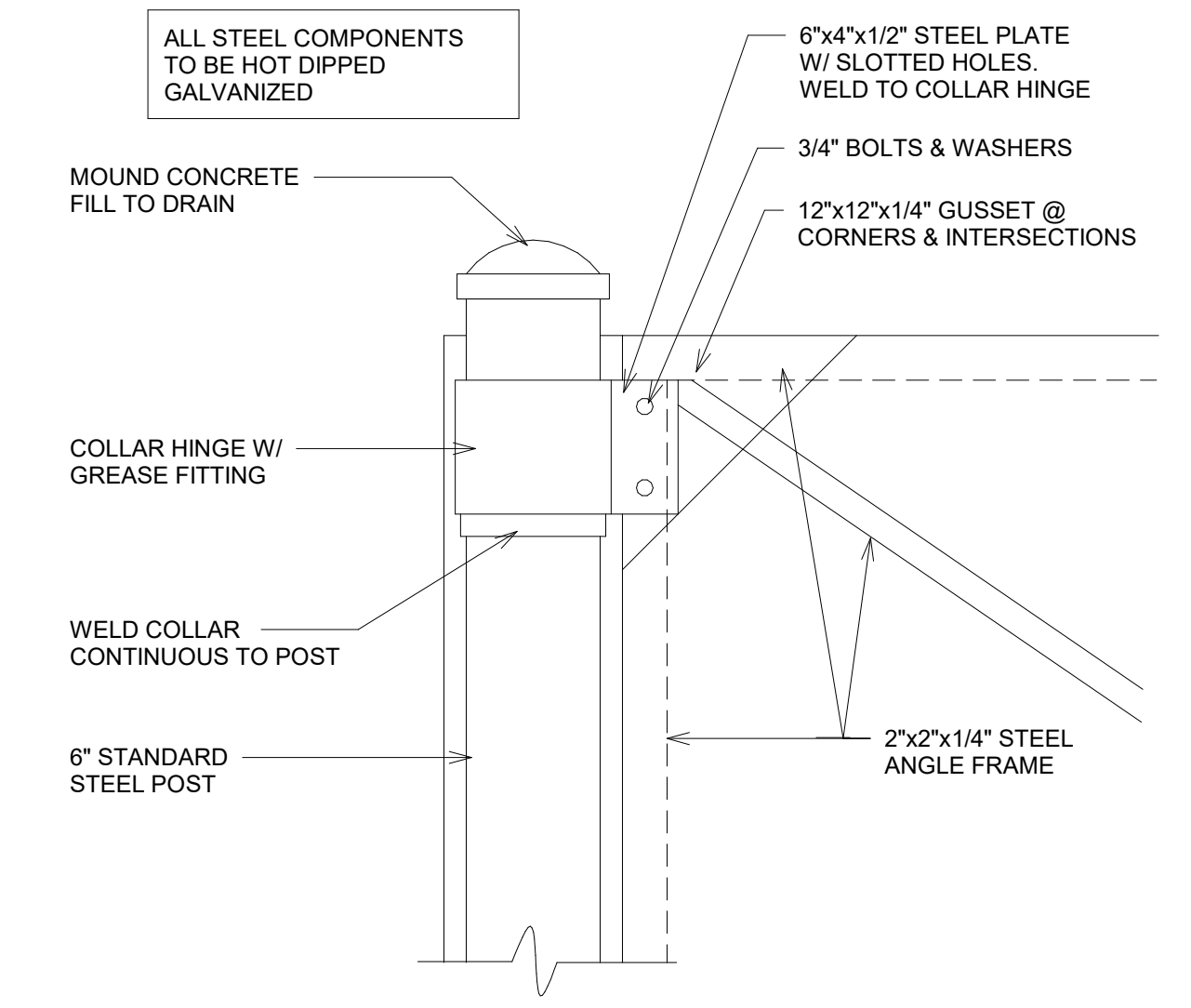
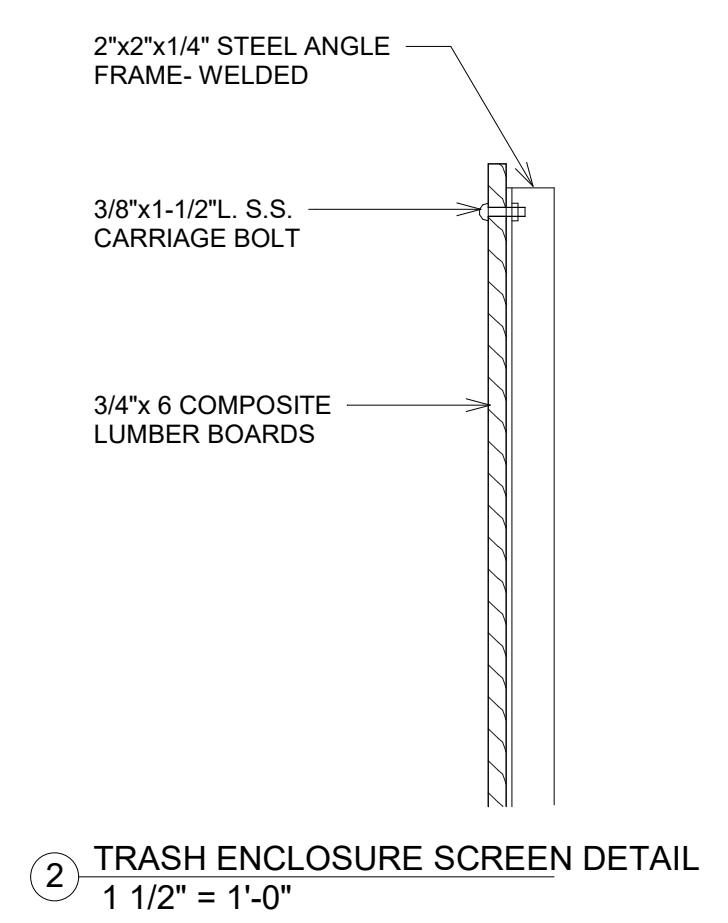
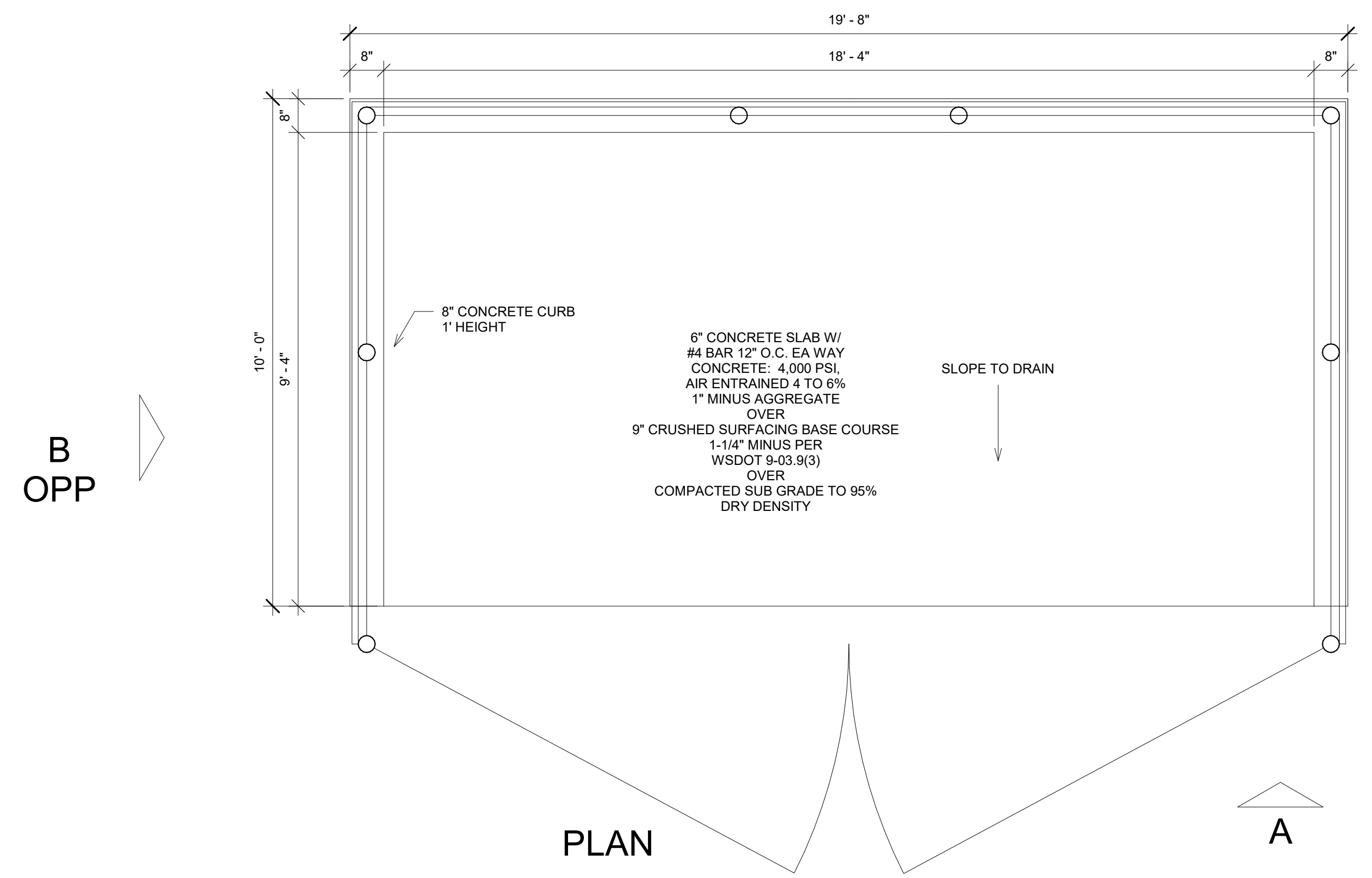
DATE	2/23/23	ADD 1 - PER CITY COMMENTS
	3/3/23	ADD 2

A NEW FACILITY FOR;  
**FAMILY HEALTH SERVICES**  
 SHOSHONE, IDAHO 83352  
**SITE DETAILS - TRASH ENCLOSURE**

**Laughlin Ricks Architecture**  
 architecture/planning  
 935 Shoshone Street North \* Twin Falls, Idaho 83301  
 (208) 736-8050 Fax: (208) 733-0950

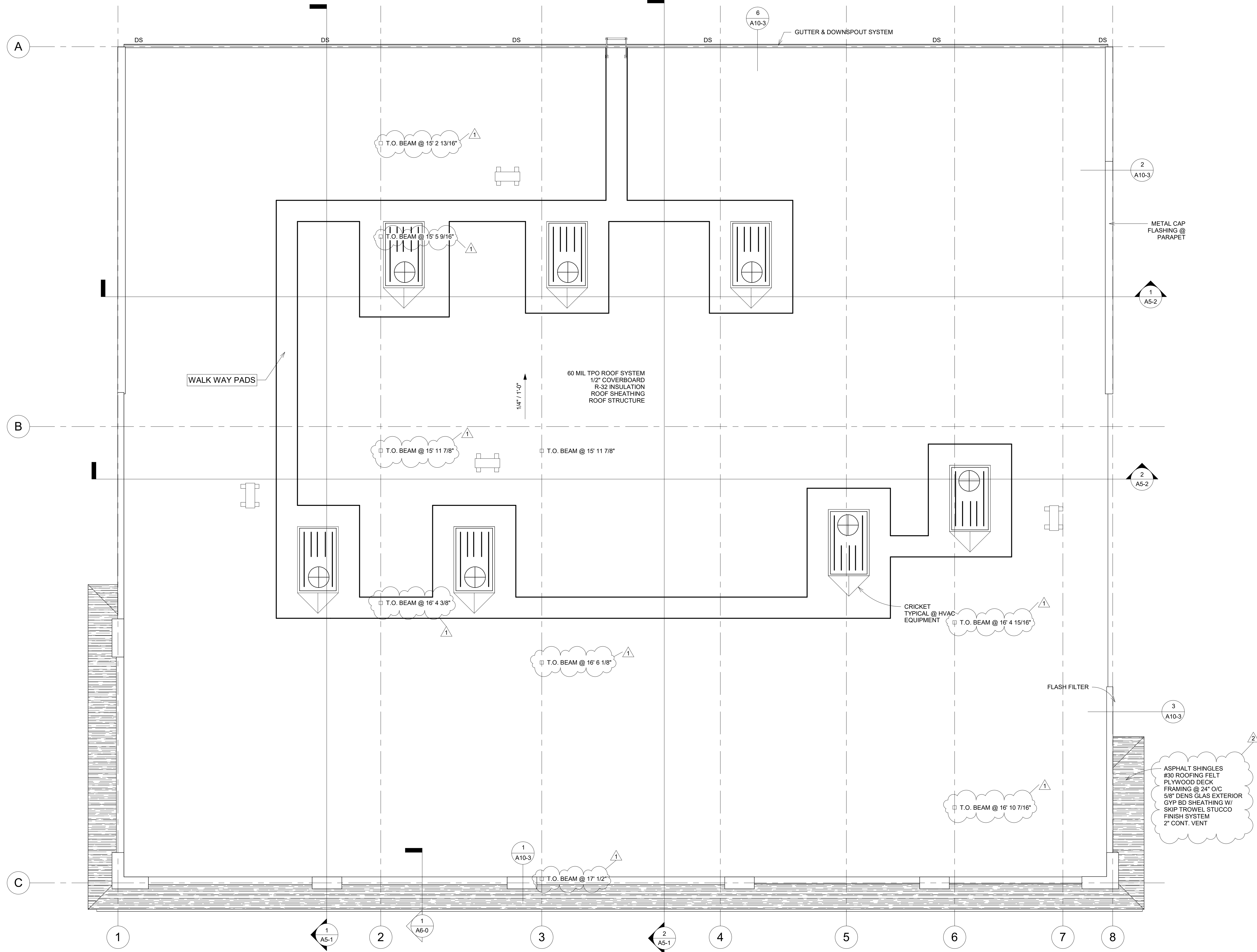
DATE:	12-2-22
NM	RCR
Drawn	Checked

**A1-2**



COMPOSITE LUMBER SCREEN  
 \*SELECT\* BY TREX  
 SIZE: 5/4 x 6 x 6'-0"  
 COLOR: SADDLE. VERIFY W/ OWNER

**1 SITE - GARBAGE/RECYCLE ENCLOSURE**  
1/2" = 1'-0"



1 ROOF PLAN  
3/16" = 1'-0"

LICENSED ARCHITECT  
AR-985708  
*R. Colby Ricks*  
R. COLBY RICKS  
STATE OF IDAHO  
12-2-22

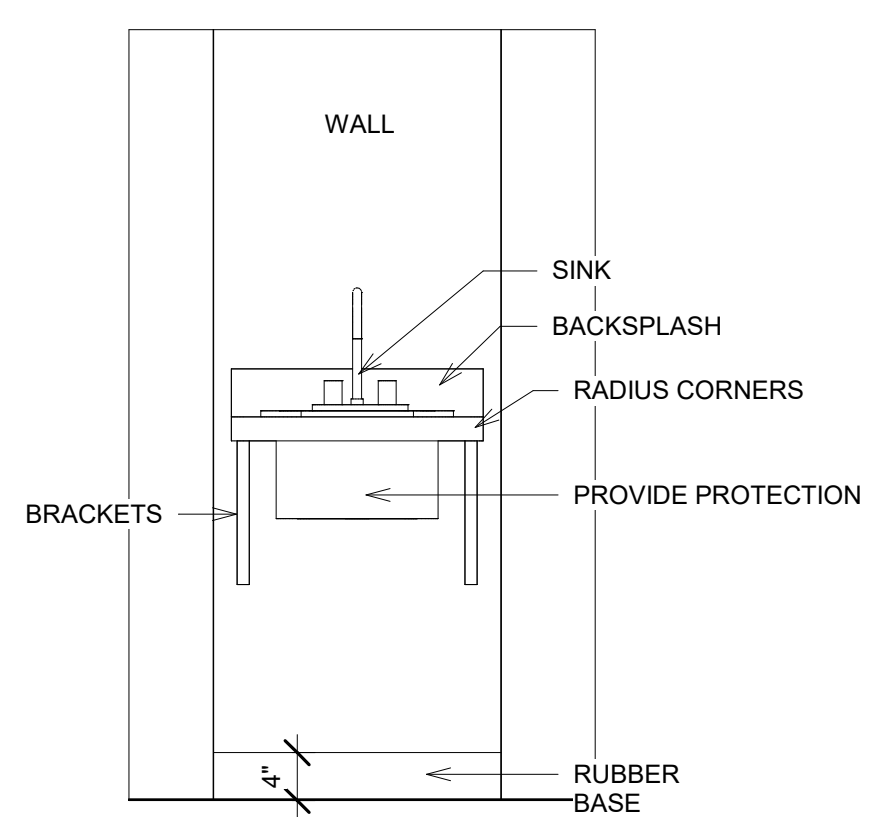
DATE	2/23/23	ADD 1 - PER CITY COMMENTS
	3/3/23	ADD 2

A NEW FACILITY FOR;  
**FAMILY HEALTH SERVICES**  
SHOSHONE, IDAHO 83352  
**ROOF PLAN**

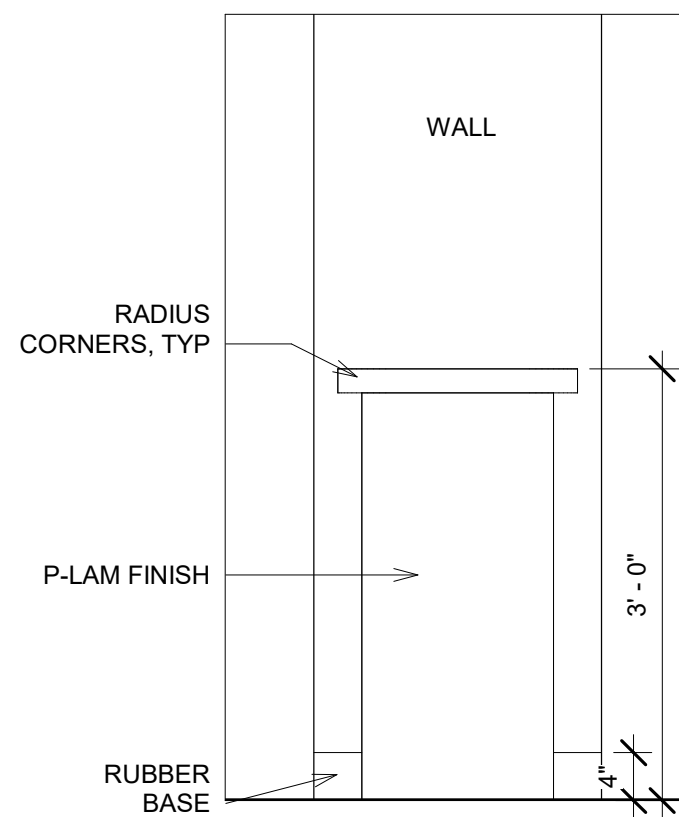
**Laughlin Ricks Architecture**  
architecture/planning  
935 Shoshone Street North \* Twin Falls, Idaho 83301  
(208) 736-8050 Fax: (208) 733-0950

DATE:	12-2-22
NM	RCR
Drawn	Checked

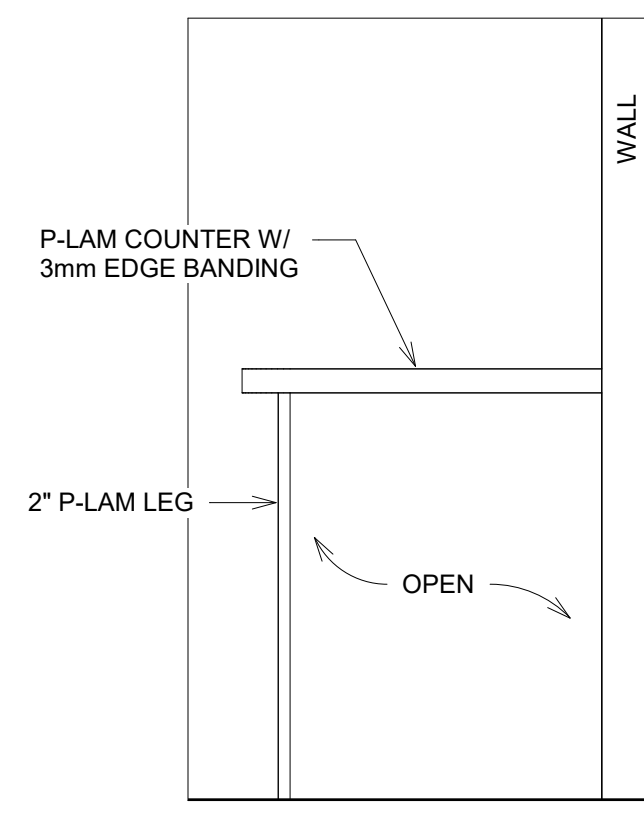
**A4-1**



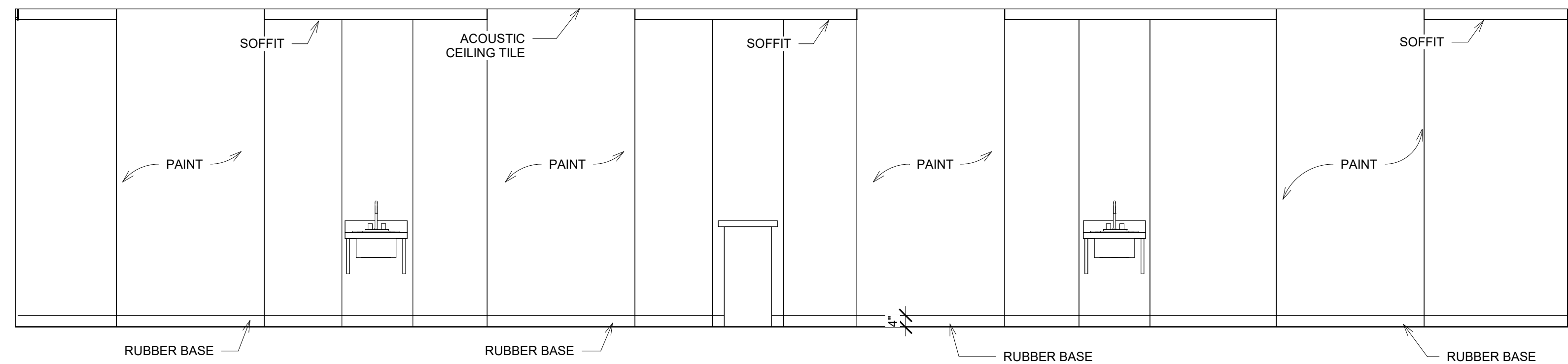
57 OPERATORY SINK CASEWORK  
3/4" = 1'-0"



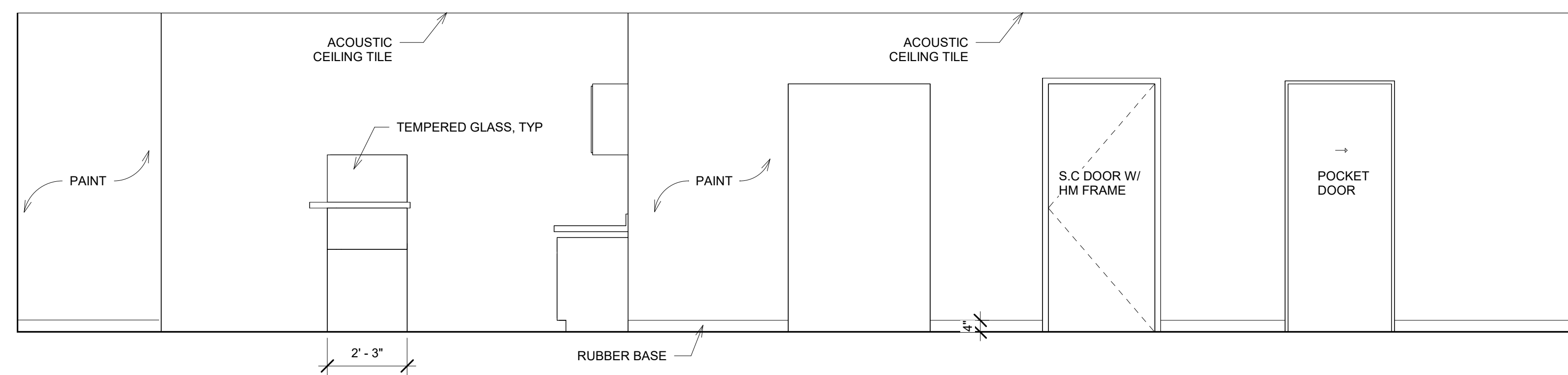
58 OPERATORY COUNTER (FRONT)  
3/4" = 1'-0"



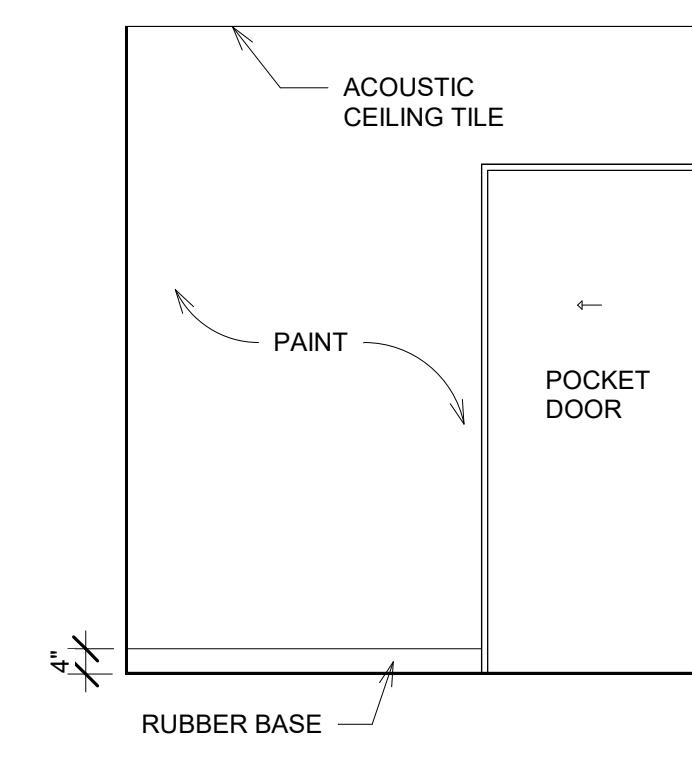
59 OPERATORY COUNTER (SIDE)  
3/4" = 1'-0"



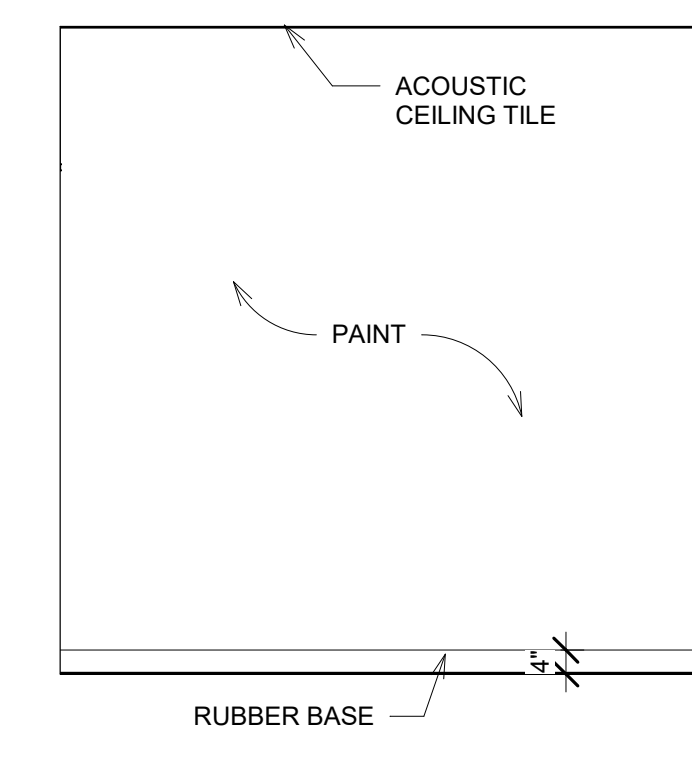
60 CORR 117 B  
3/8" = 1'-0"



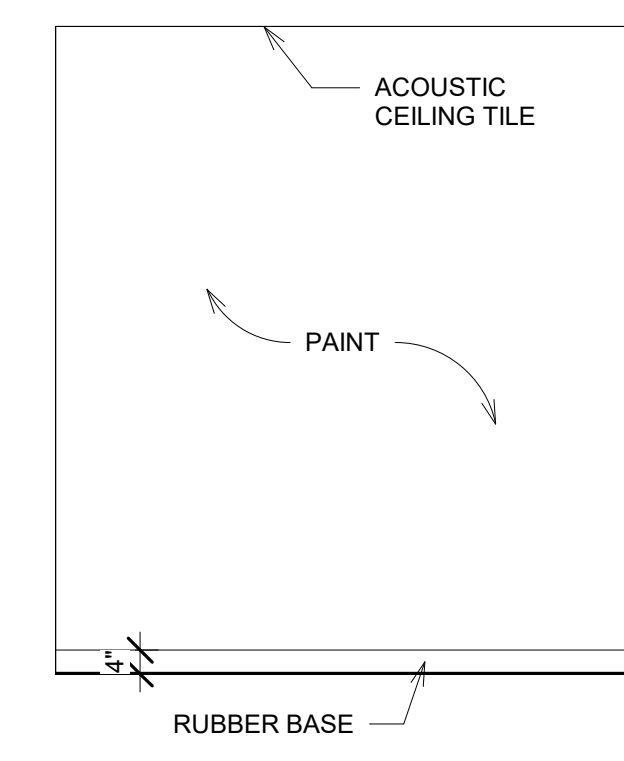
61 CORR 117 C  
3/8" = 1'-0"



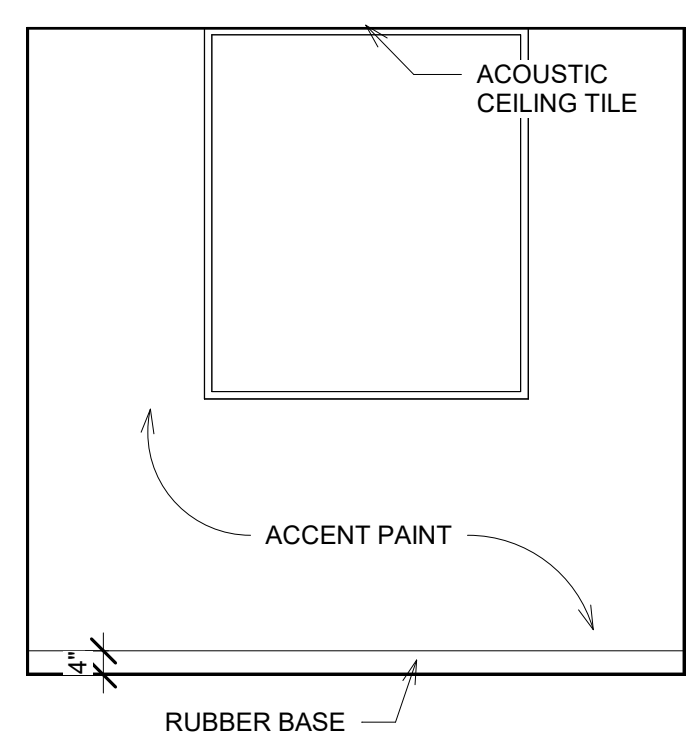
62 OFFICE 118 A  
3/8" = 1'-0"



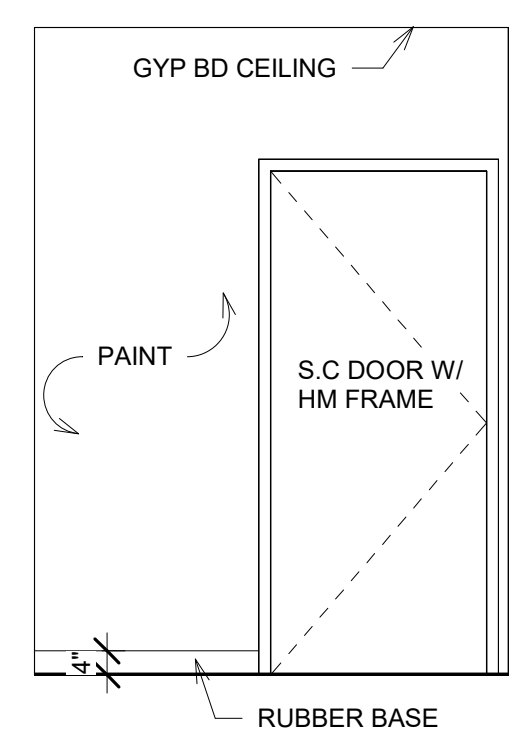
63 OFFICE 118 B  
3/8" = 1'-0"



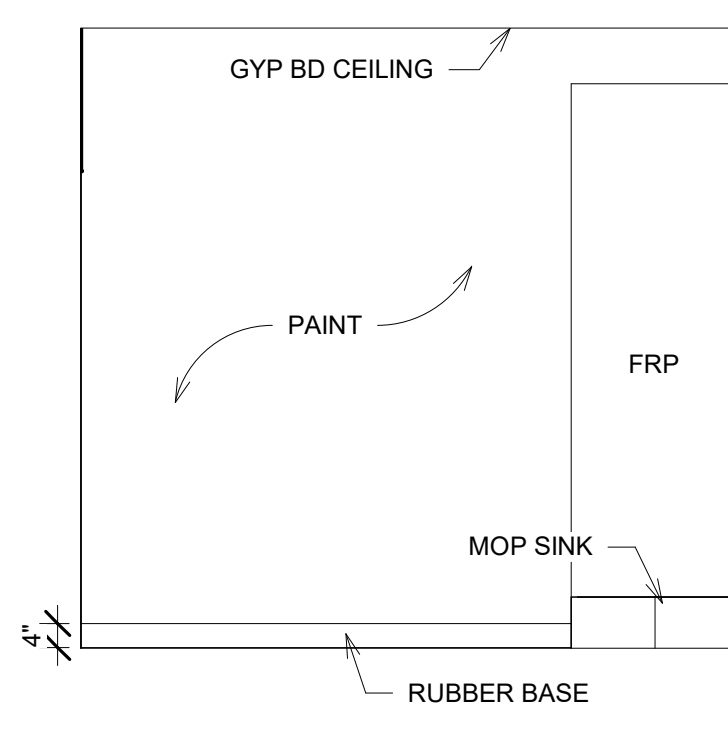
64 OFFICE 118 C  
3/8" = 1'-0"



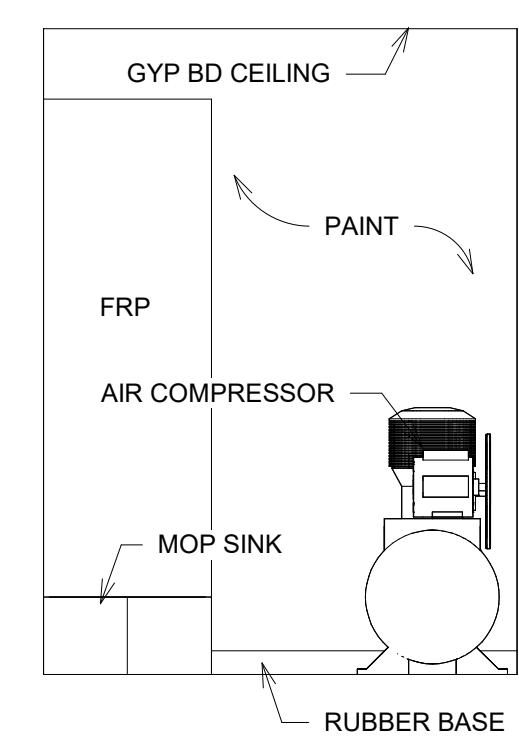
65 OFFICE 118 D  
3/8" = 1'-0"



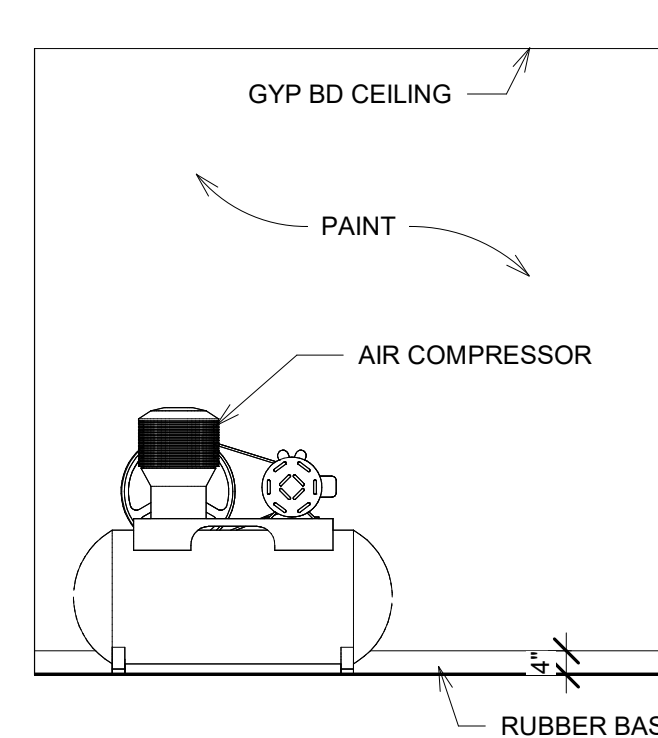
66 UTILITY A  
3/8" = 1'-0"



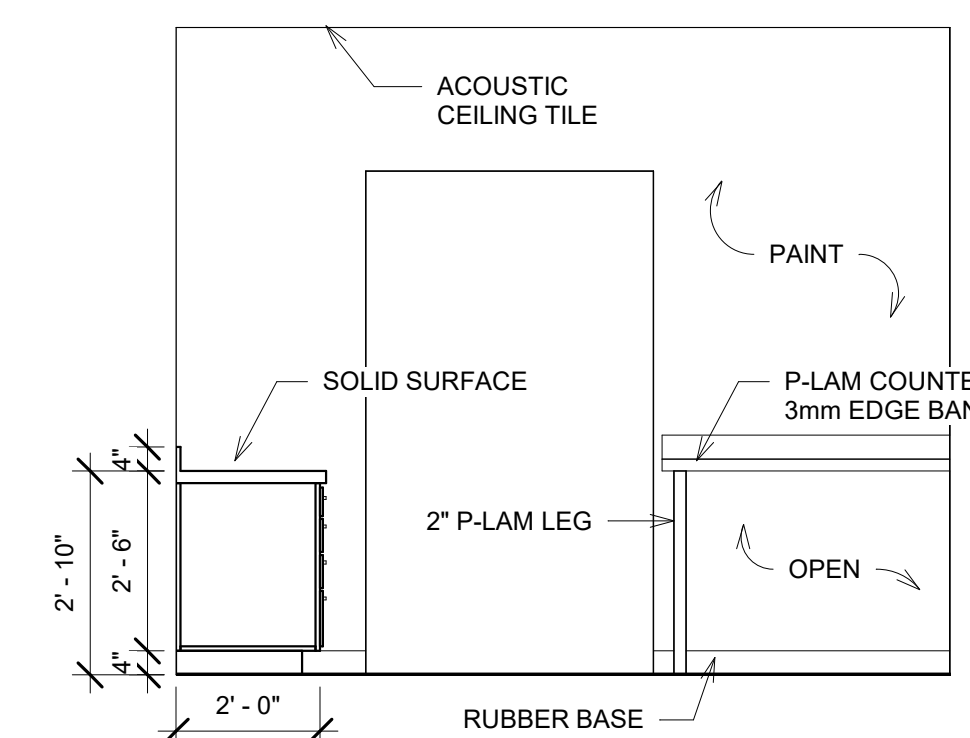
67 UTILITY B  
3/8" = 1'-0"



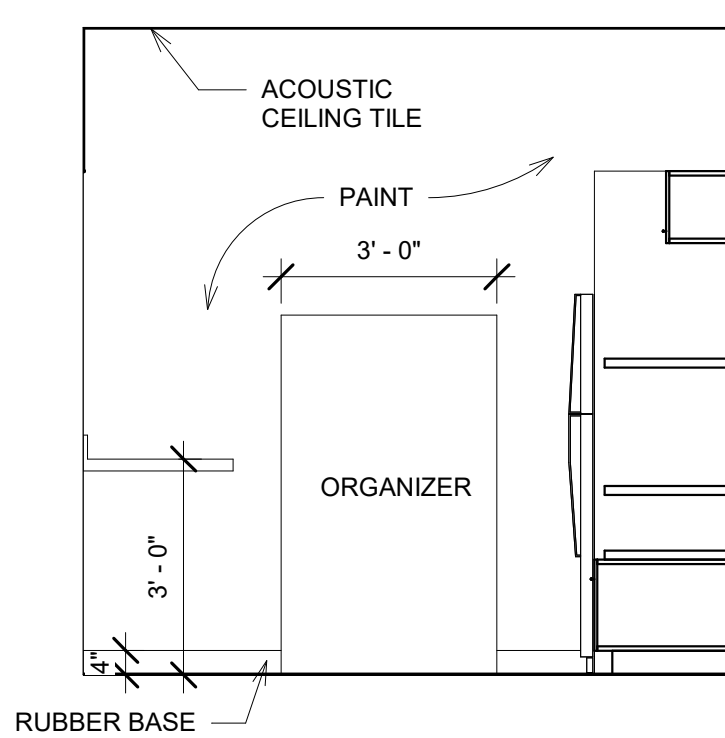
68 UTILITY C  
3/8" = 1'-0"



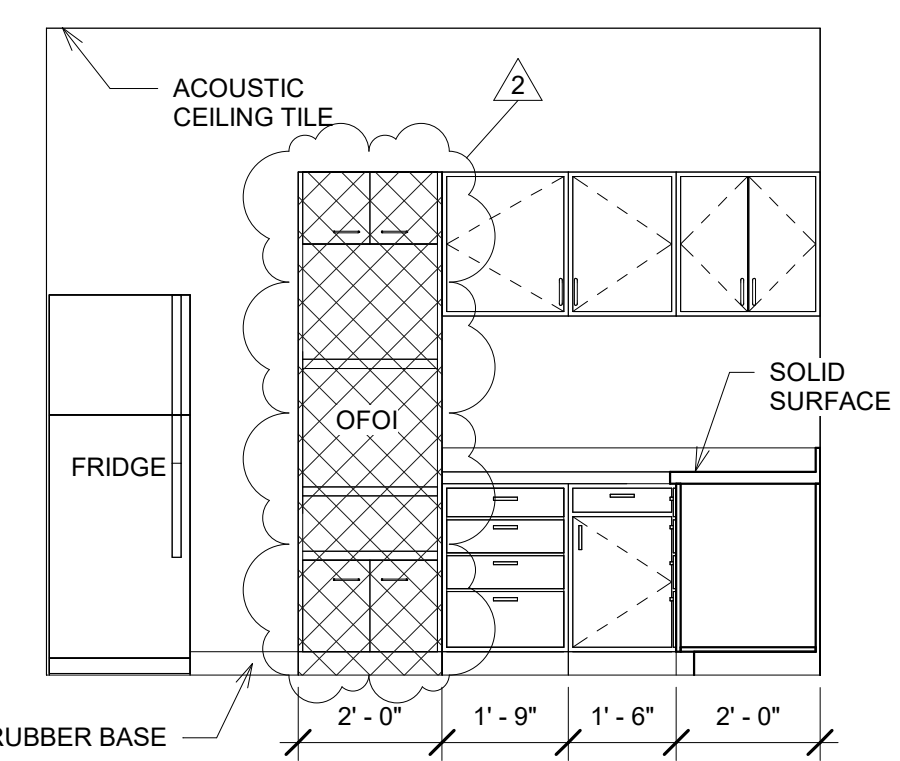
69 UTILITY D  
3/8" = 1'-0"



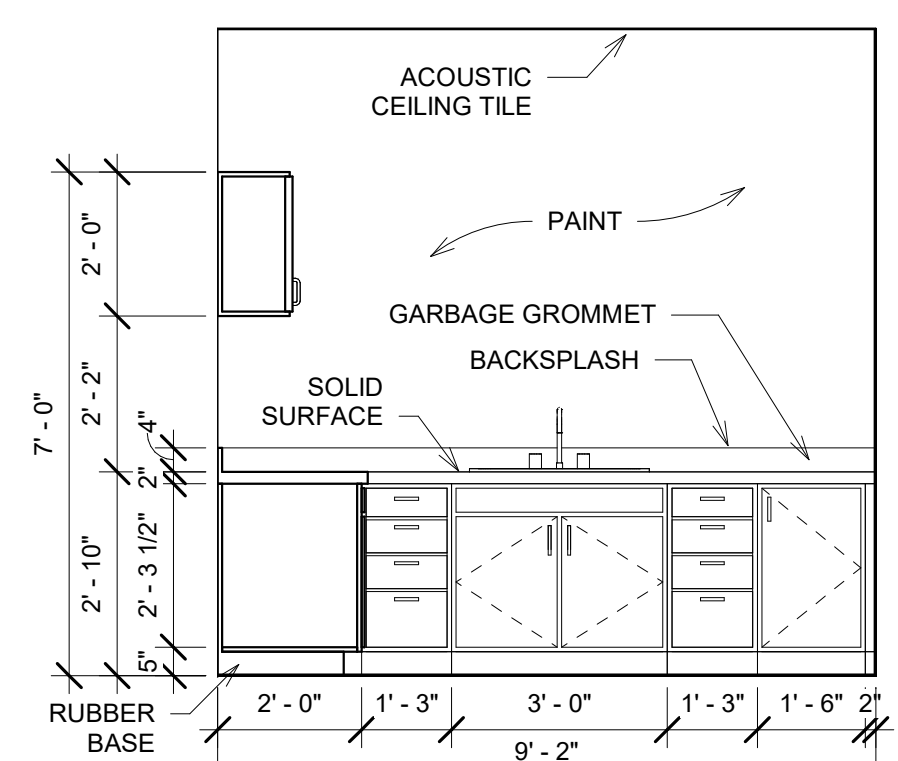
70 STERIL A  
3/8" = 1'-0"



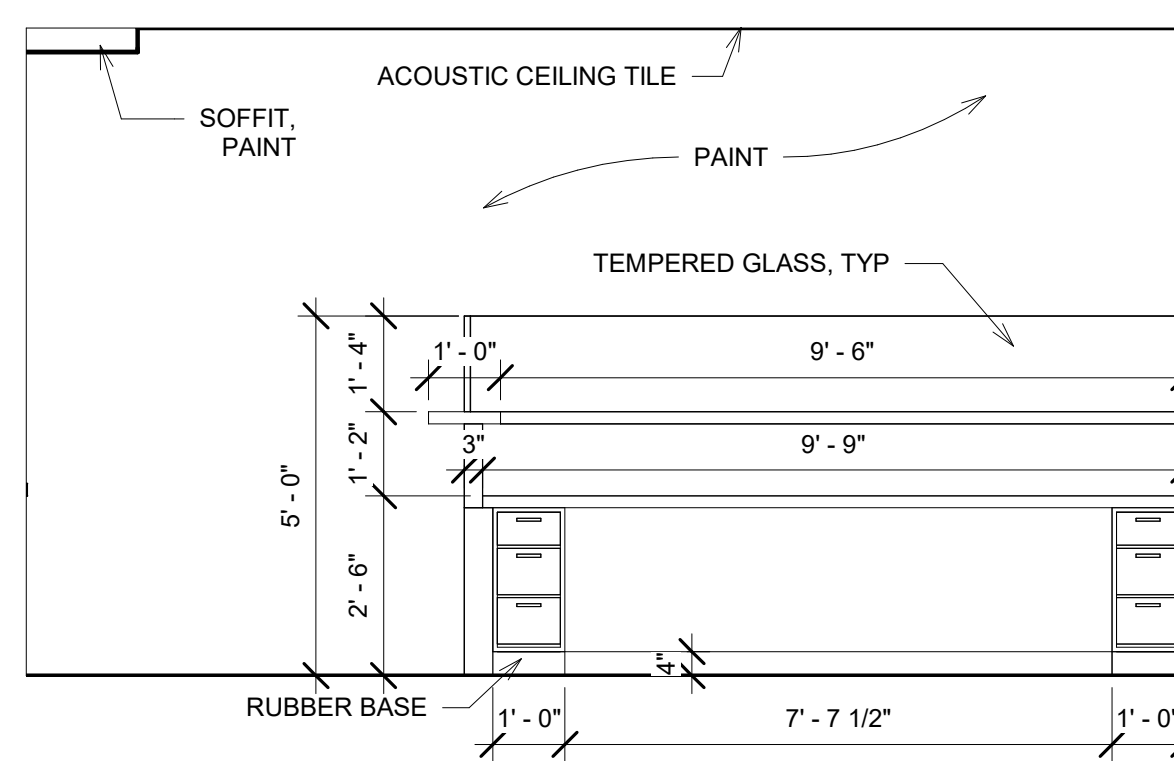
71 STERIL B  
3/8" = 1'-0"



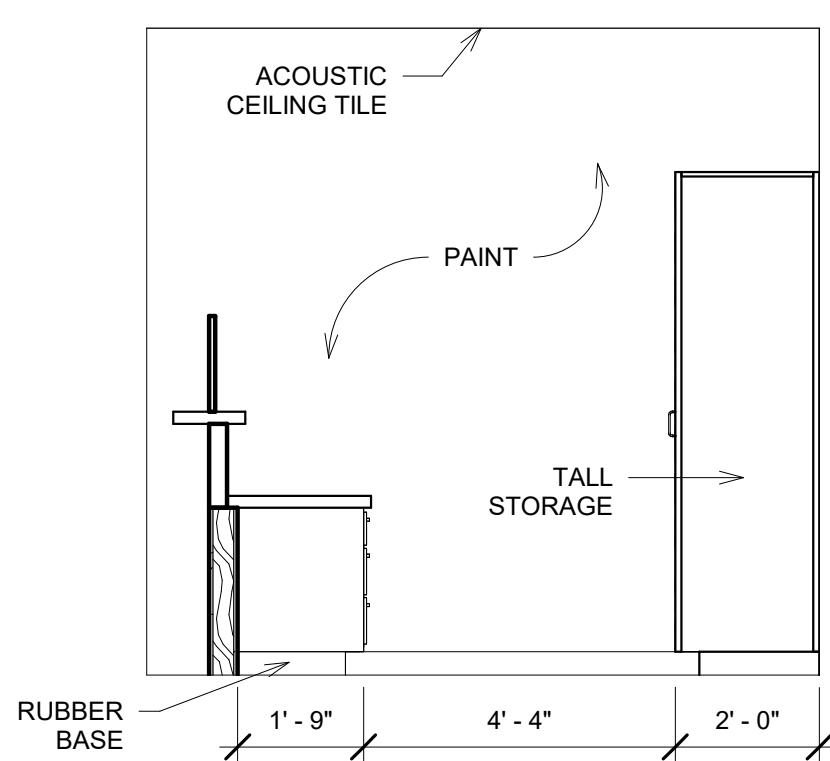
72 STERIL C  
3/8" = 1'-0"



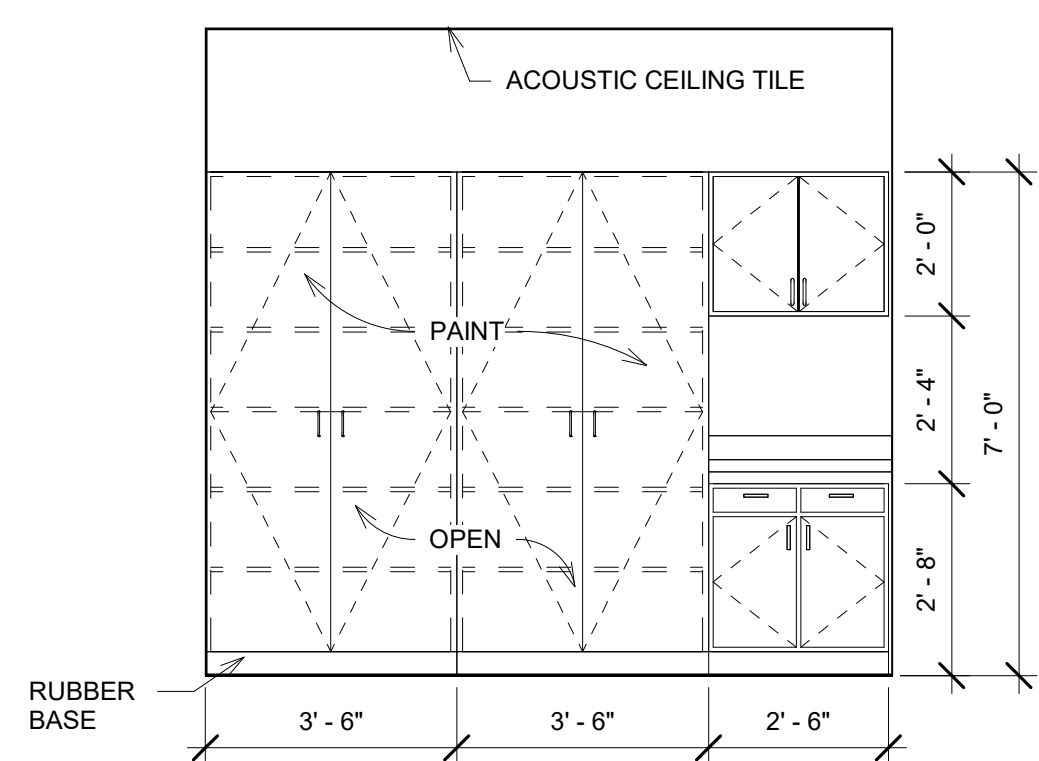
73 STERIL D  
3/8" = 1'-0"



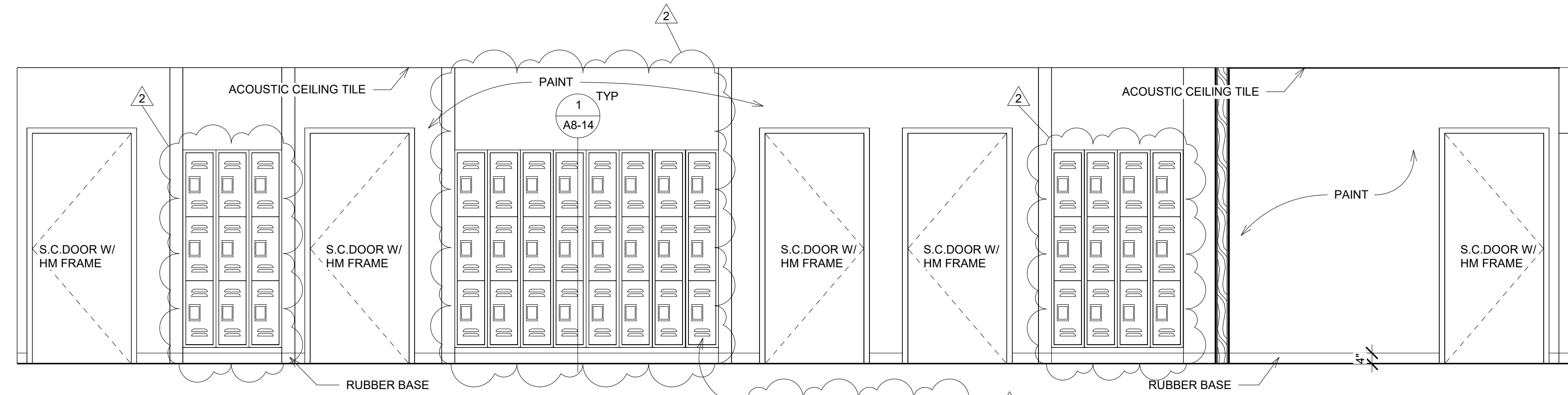
74 DENTAL A  
3/8" = 1'-0"



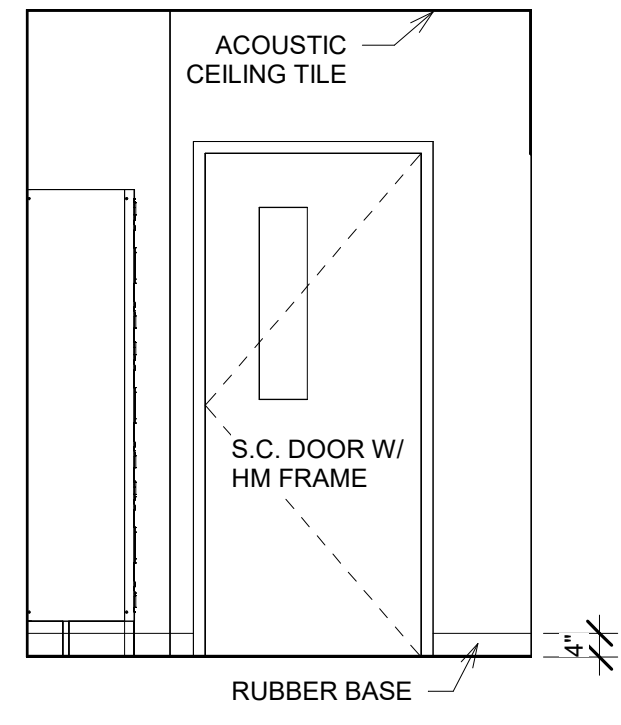
75 DENTAL B  
3/8" = 1'-0"



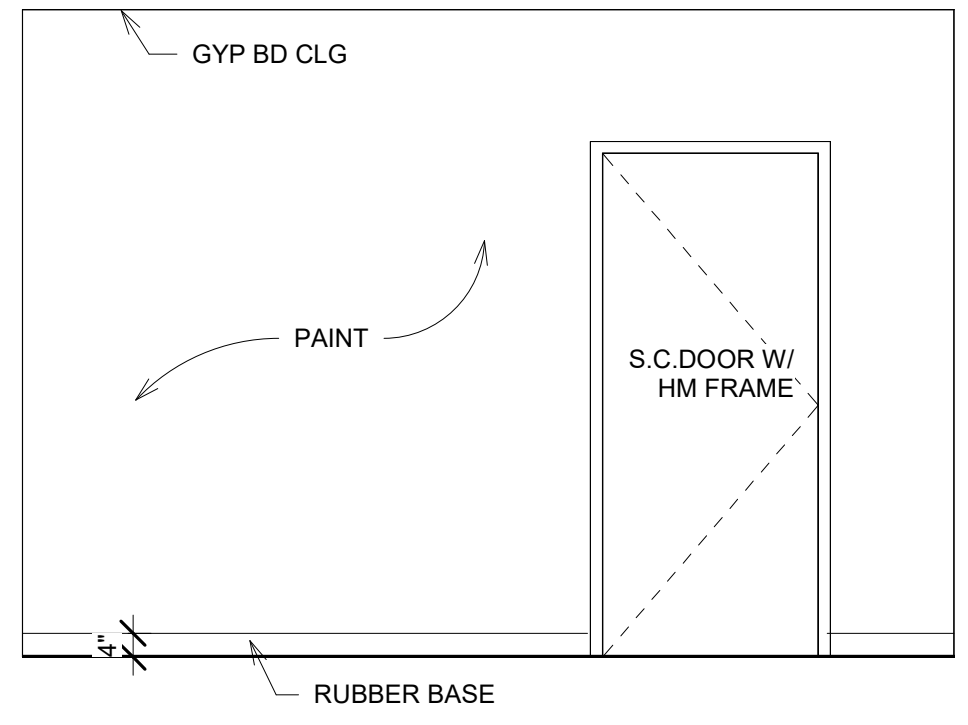
76 DENTAL C  
3/8" = 1'-0"



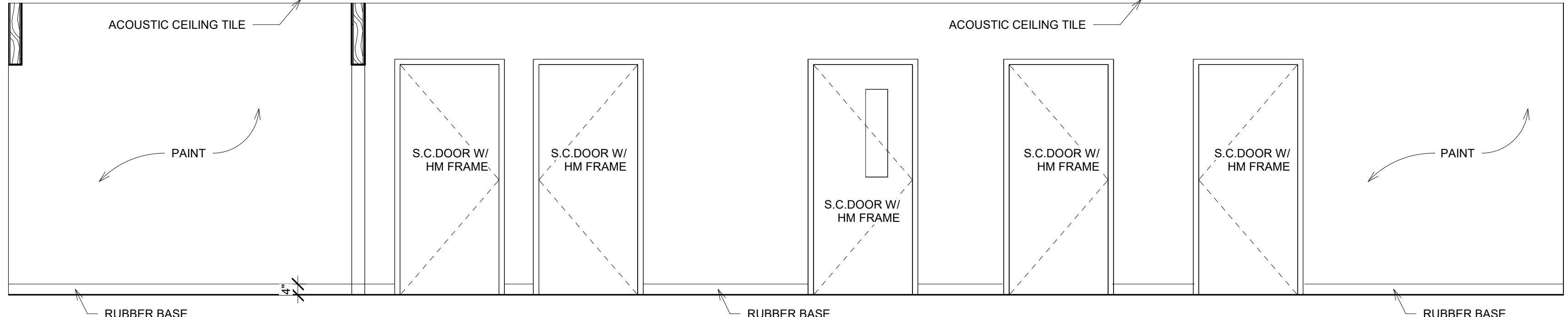
102 CORR 129 B  
3/8" = 1'-0"



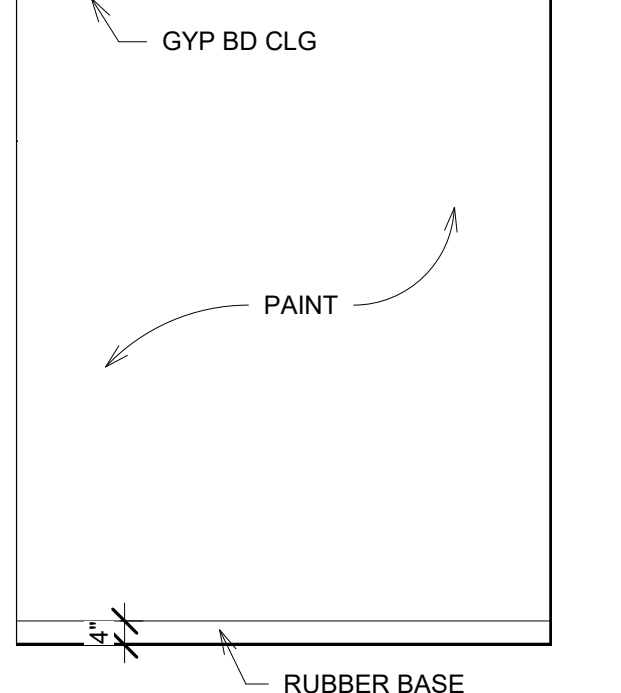
104 CORR 129 C  
3/8" = 1'-0"



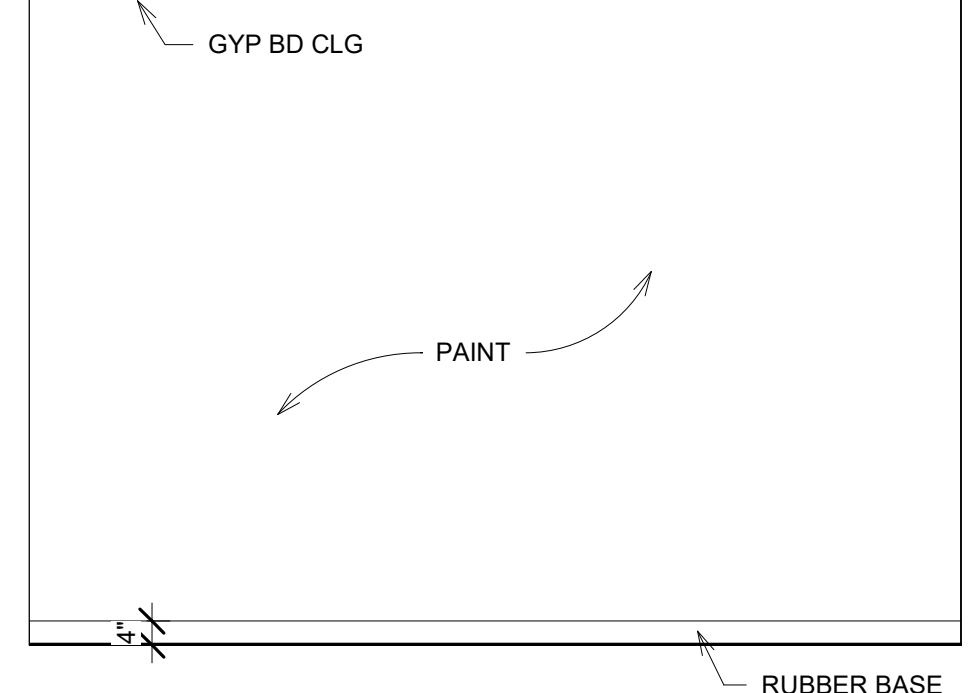
105 ELEC/DATA A  
3/8" = 1'-0"



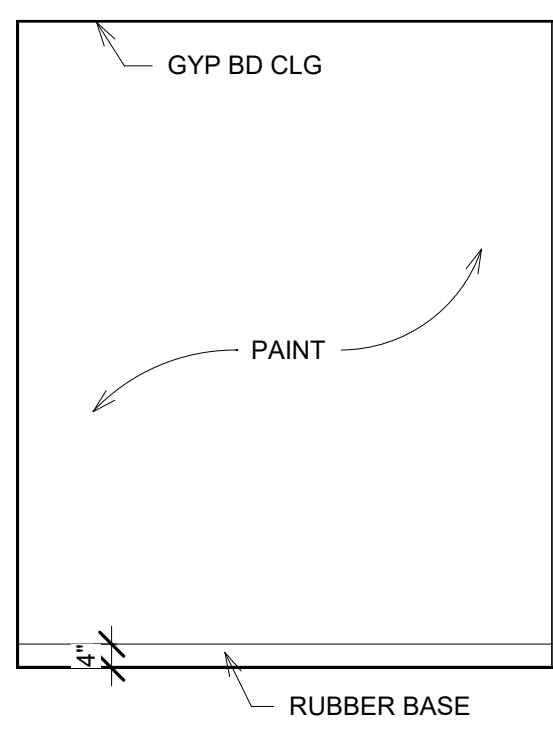
103 CORR 129 D  
3/8" = 1'-0"



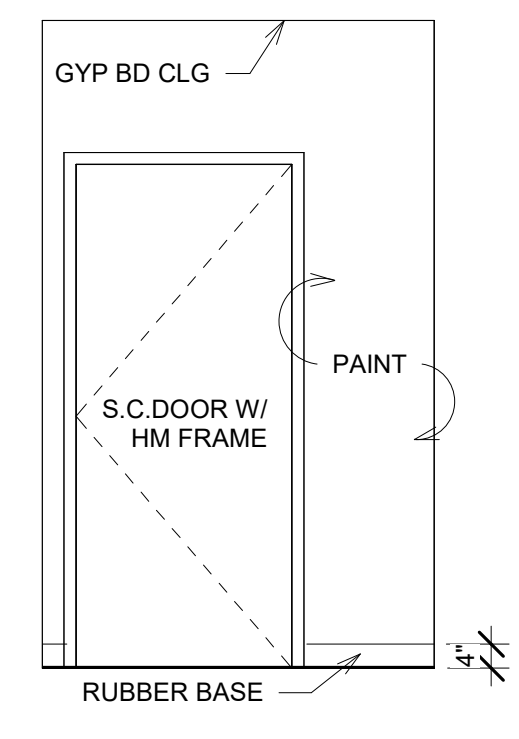
106 ELEC/DATA B  
3/8" = 1'-0"



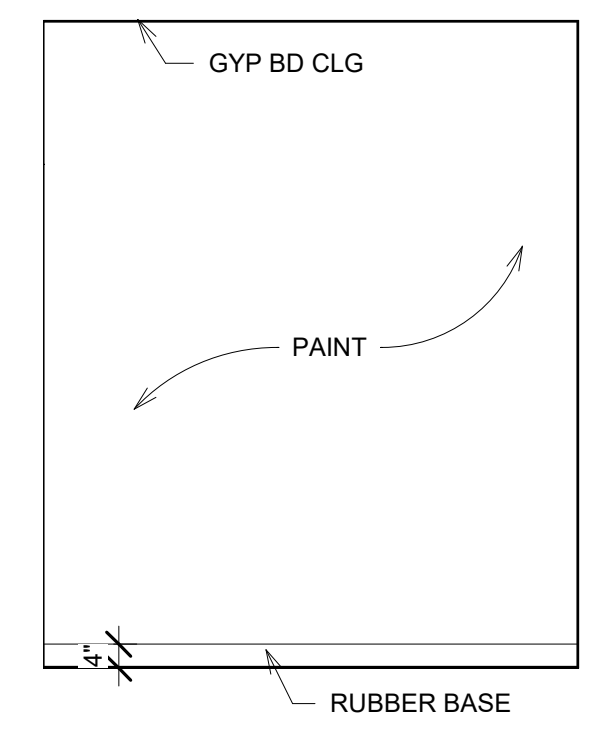
107 ELEC/DATA C  
3/8" = 1'-0"



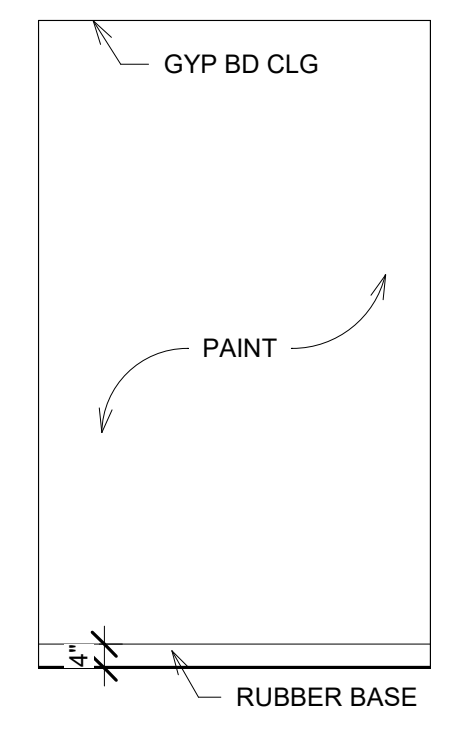
108 ELEC/DATA D  
3/8" = 1'-0"



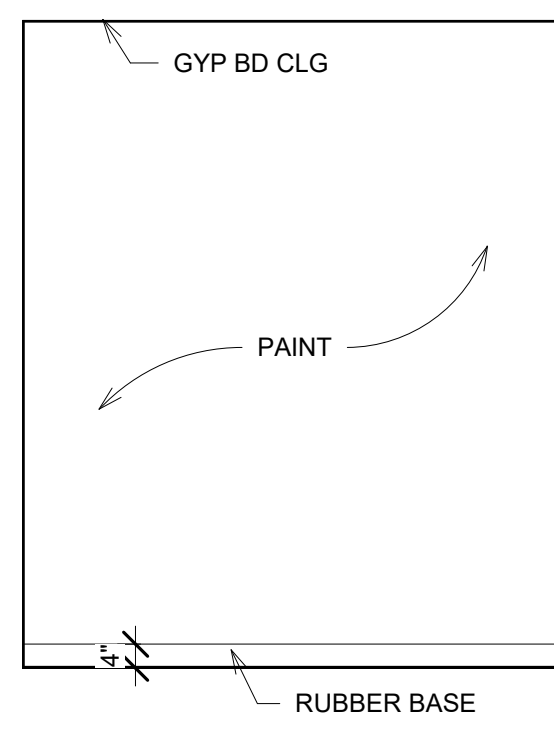
109 UTILITY 2 A  
3/8" = 1'-0"



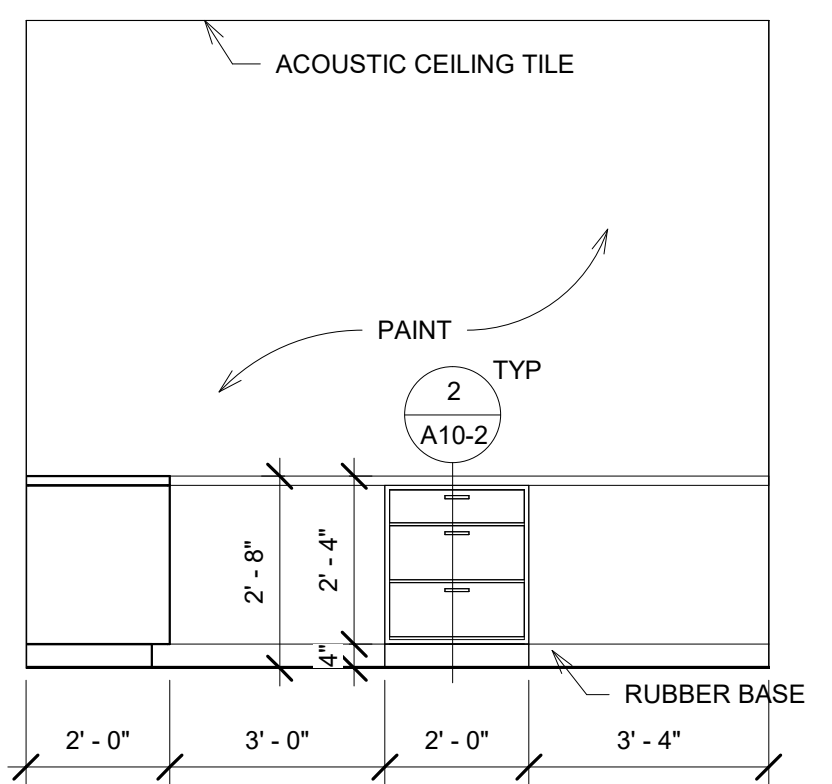
110 UTILITY 2 B  
3/8" = 1'-0"



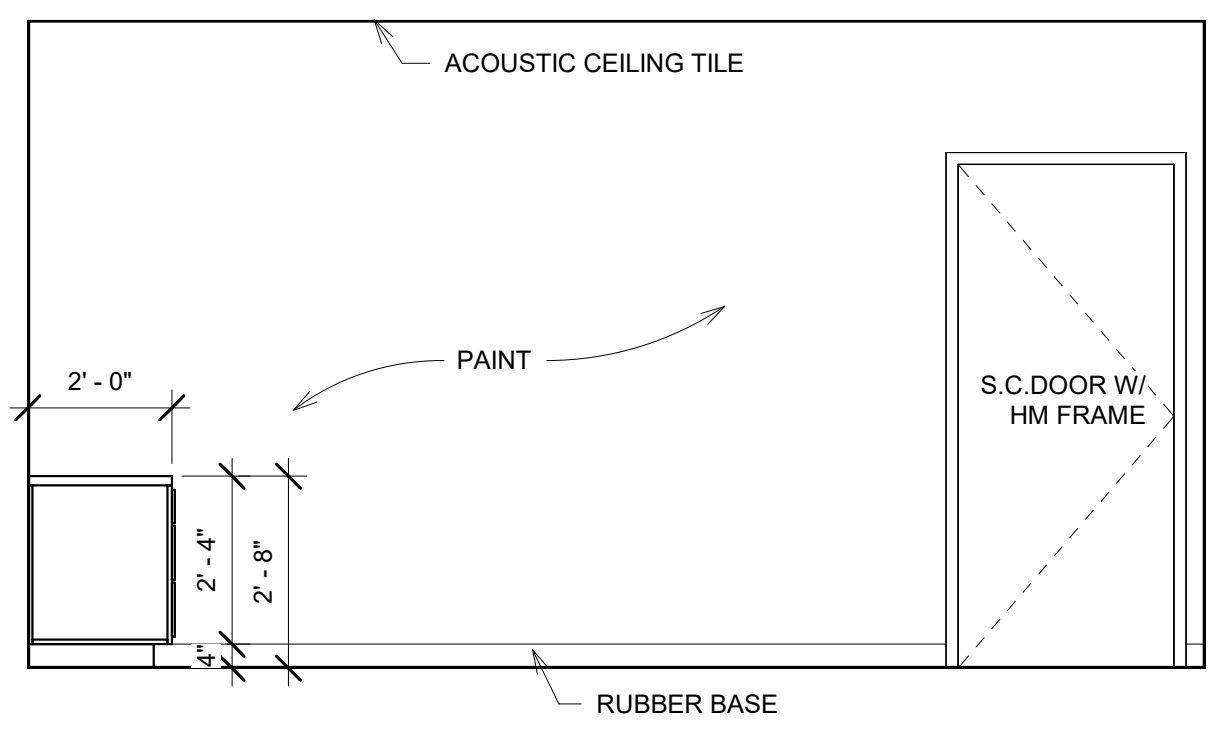
111 UTILITY 2 C  
3/8" = 1'-0"



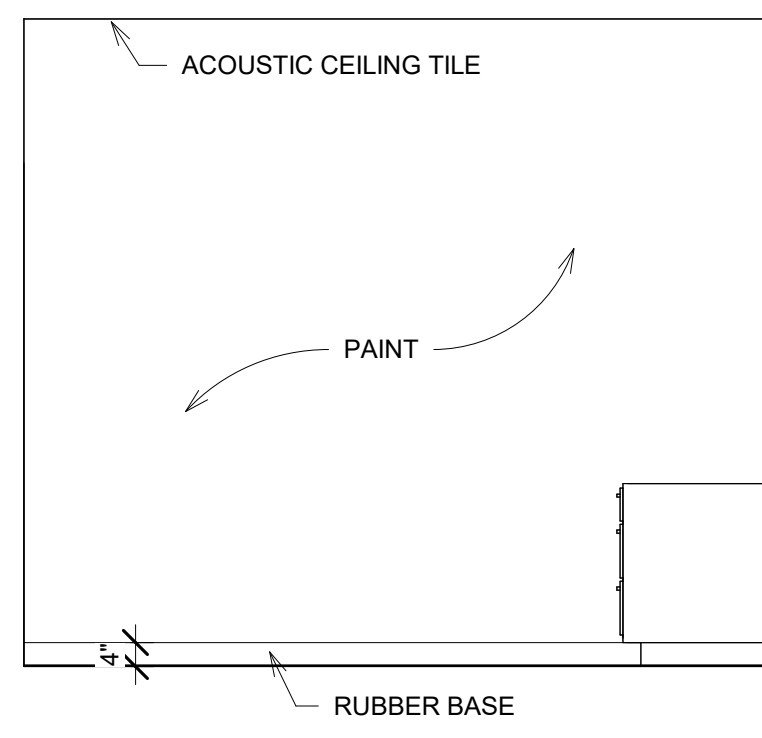
112 UTILITY 2 D  
3/8" = 1'-0"



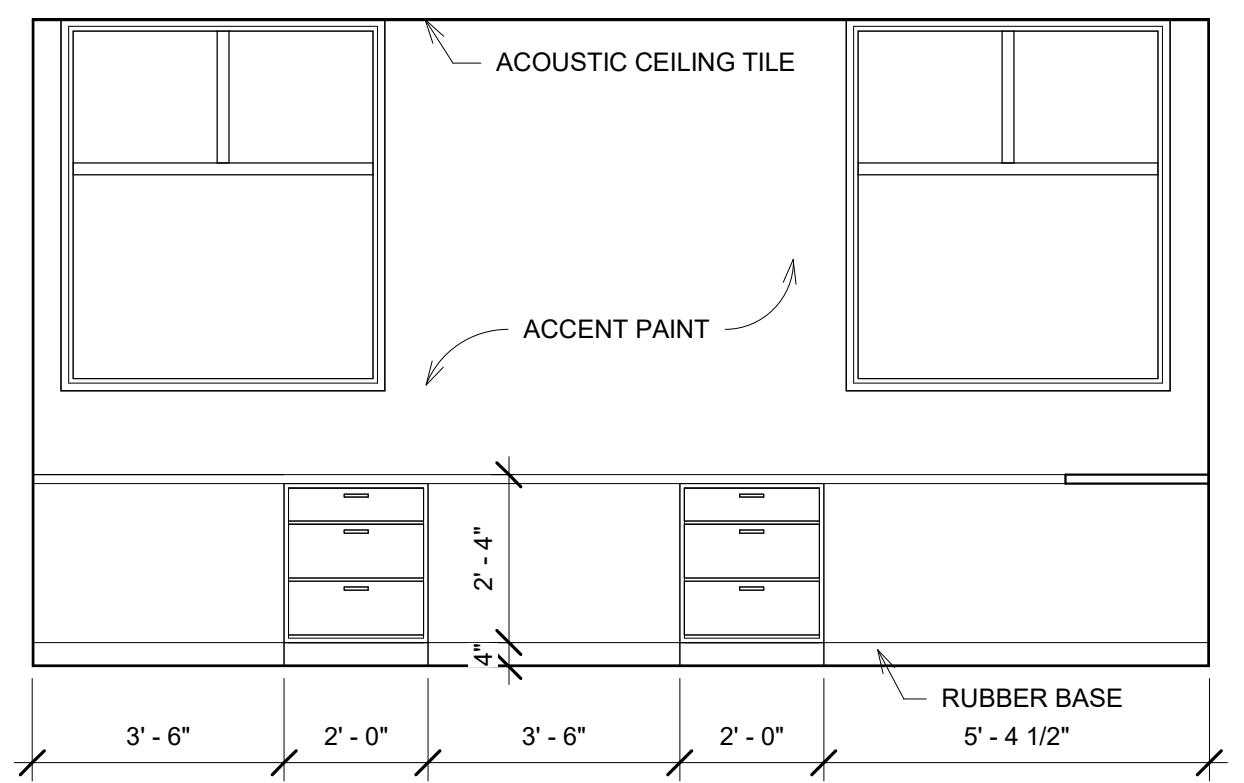
113 DOCTOR A  
3/8" = 1'-0"



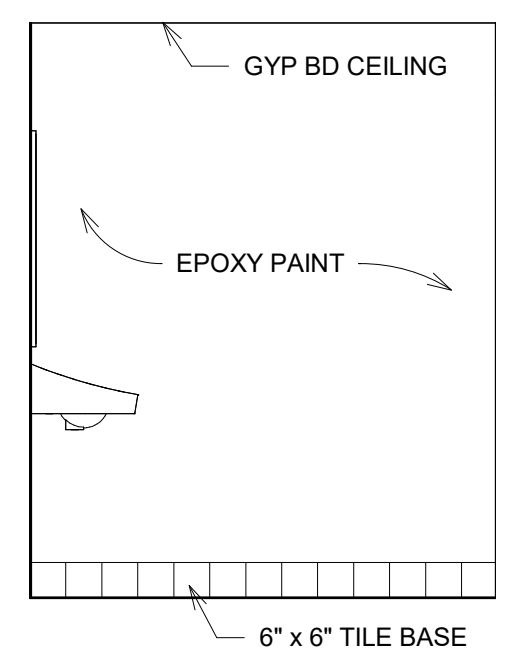
114 DOCTOR B  
3/8" = 1'-0"



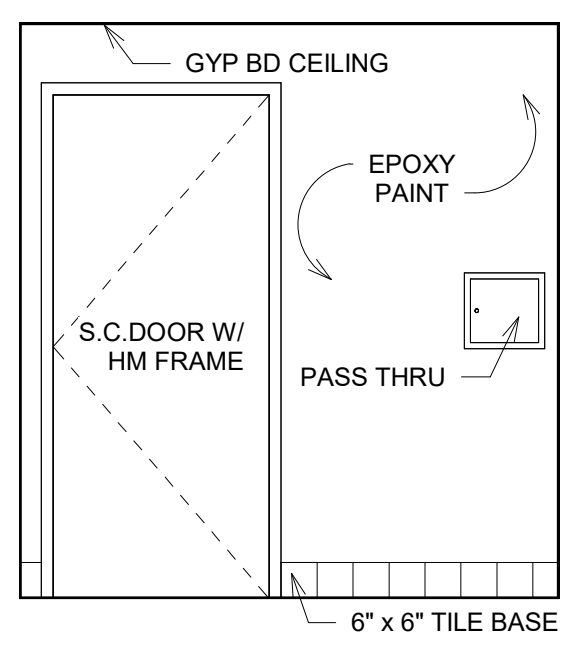
115 DOCTOR C  
3/8" = 1'-0"



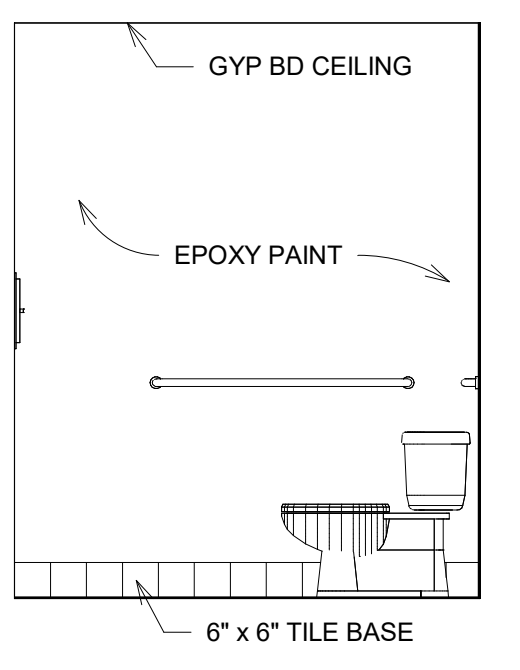
116 DOCTOR D  
3/8" = 1'-0"



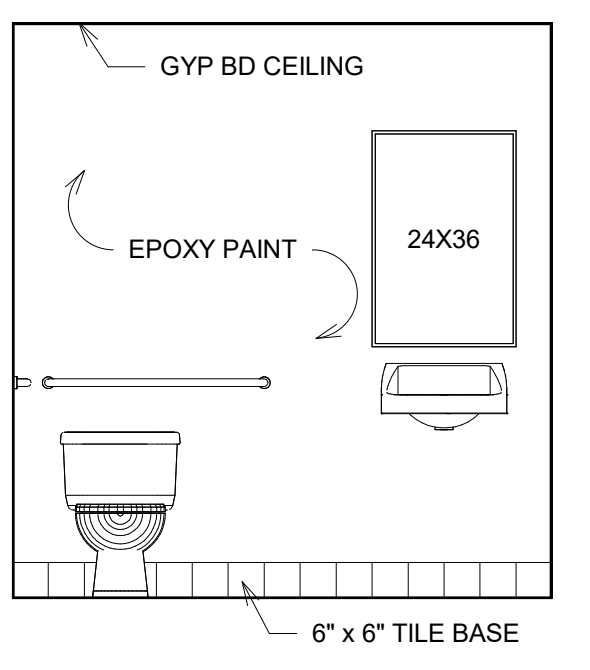
117 RR 137 A  
3/8" = 1'-0"



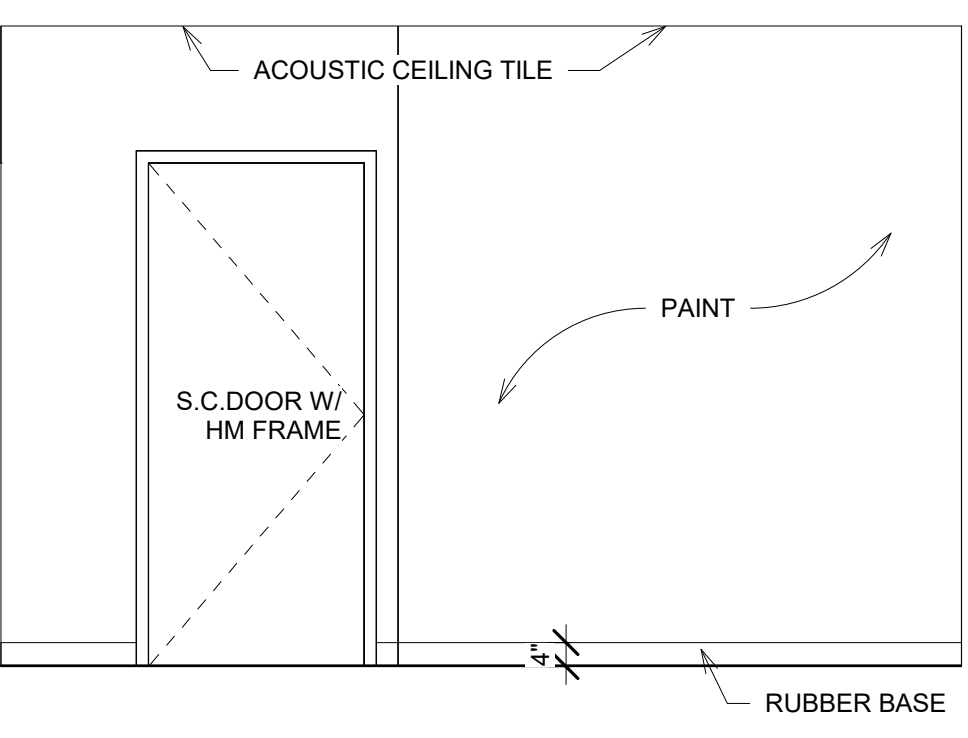
118 RR 137 B  
3/8" = 1'-0"



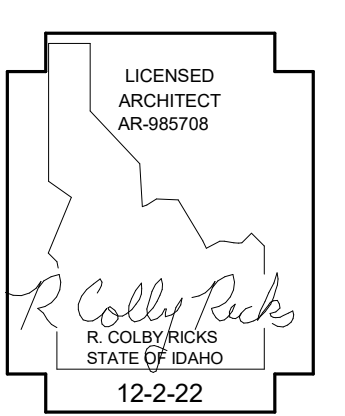
119 RR 137 C  
3/8" = 1'-0"



120 RR 137 D  
3/8" = 1'-0"



121 CORR 132 A  
3/8" = 1'-0"



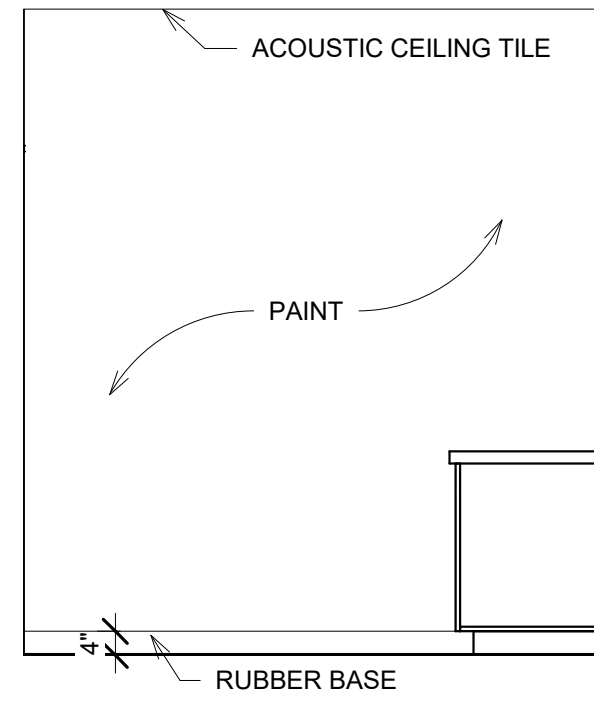
DATE	3/3/23
ADD 2	

A NEW FACILITY FOR;  
**FAMILY HEALTH SERVICES**  
 SHOSHONE, IDAHO 83352  
**INTERIOR ELEVATIONS**

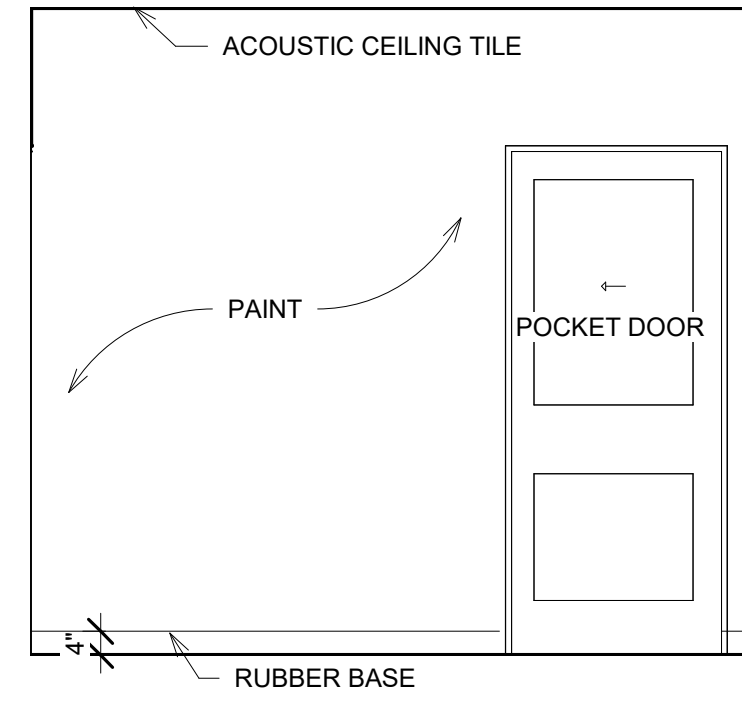
**Laughlin Ricks Architecture**  
 architecture/planning  
 935 Shoshone Street North \* Twin Falls, Idaho 83301  
 (208) 736-8050 Fax: (208) 733-0950

DATE:	12-2-22
NM	RCR
Drawn	Checked

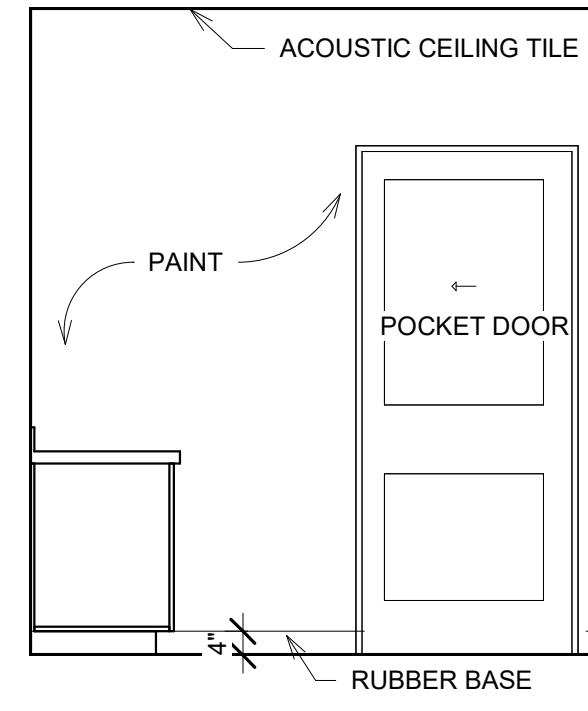
**A8-7**



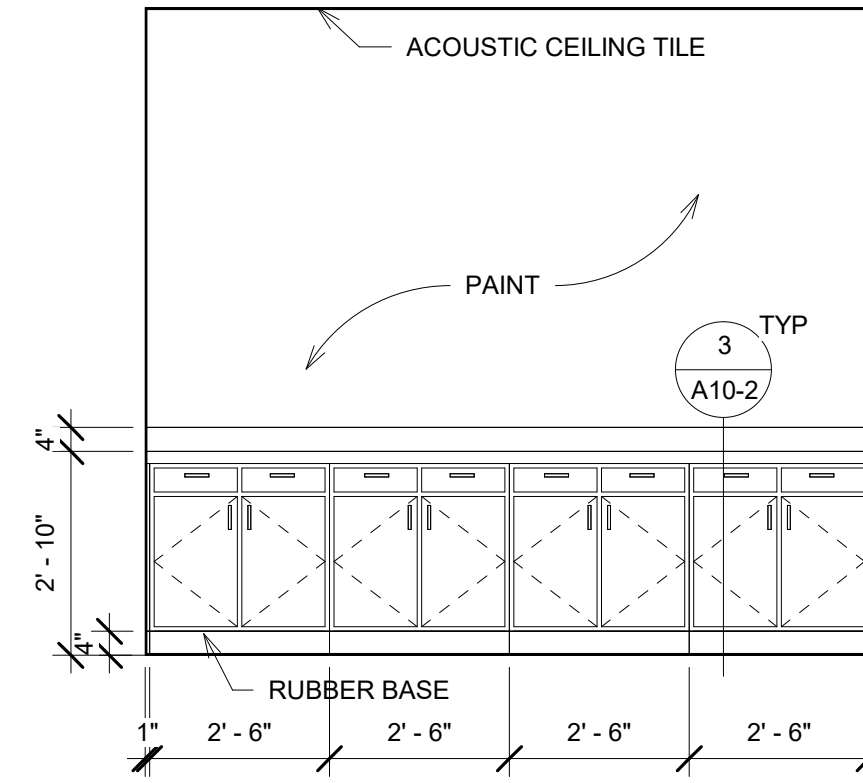
235 CONSULTING A  
3/8" = 1'-0"



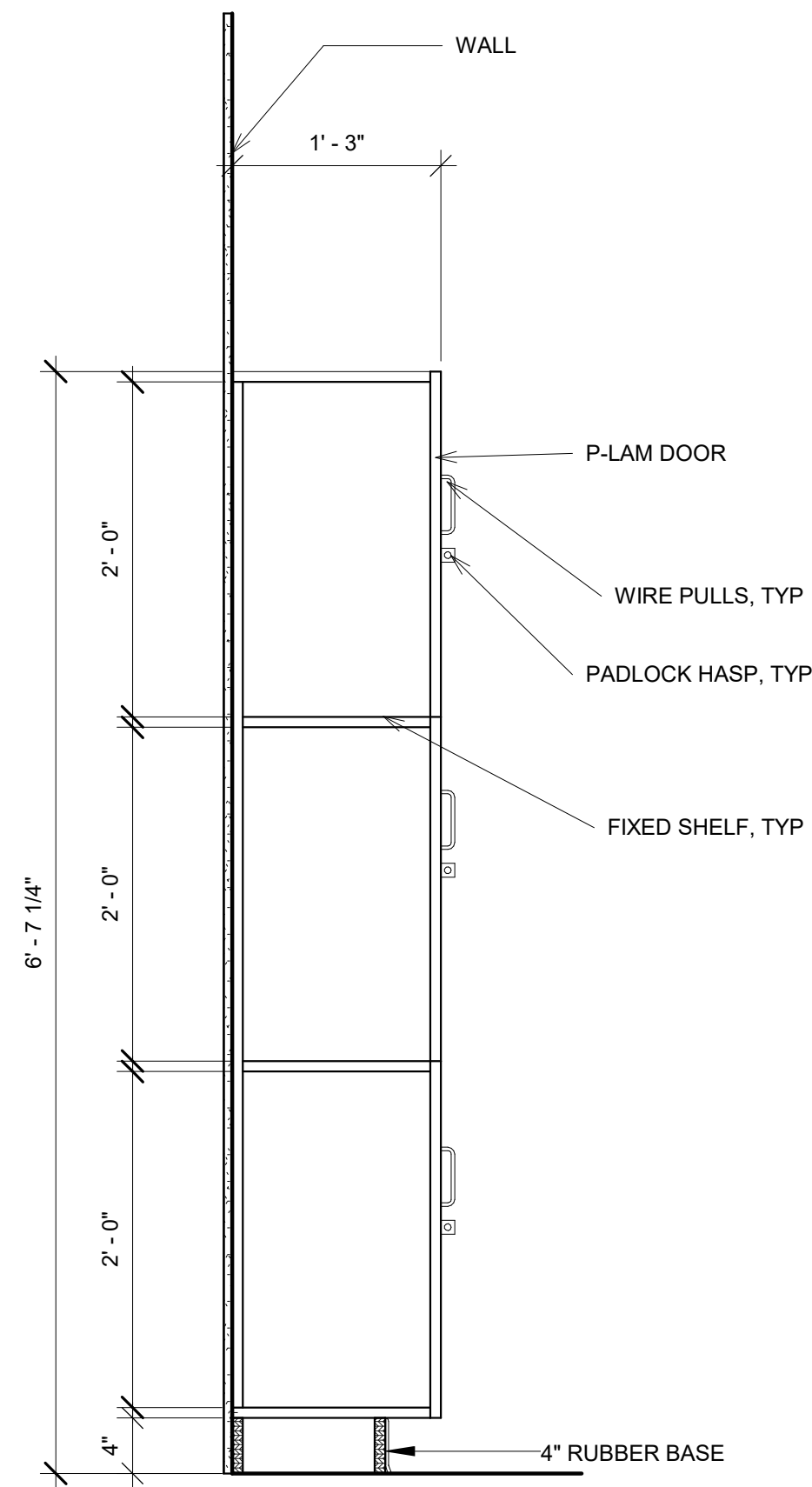
236 CONSULTING B  
3/8" = 1'-0"



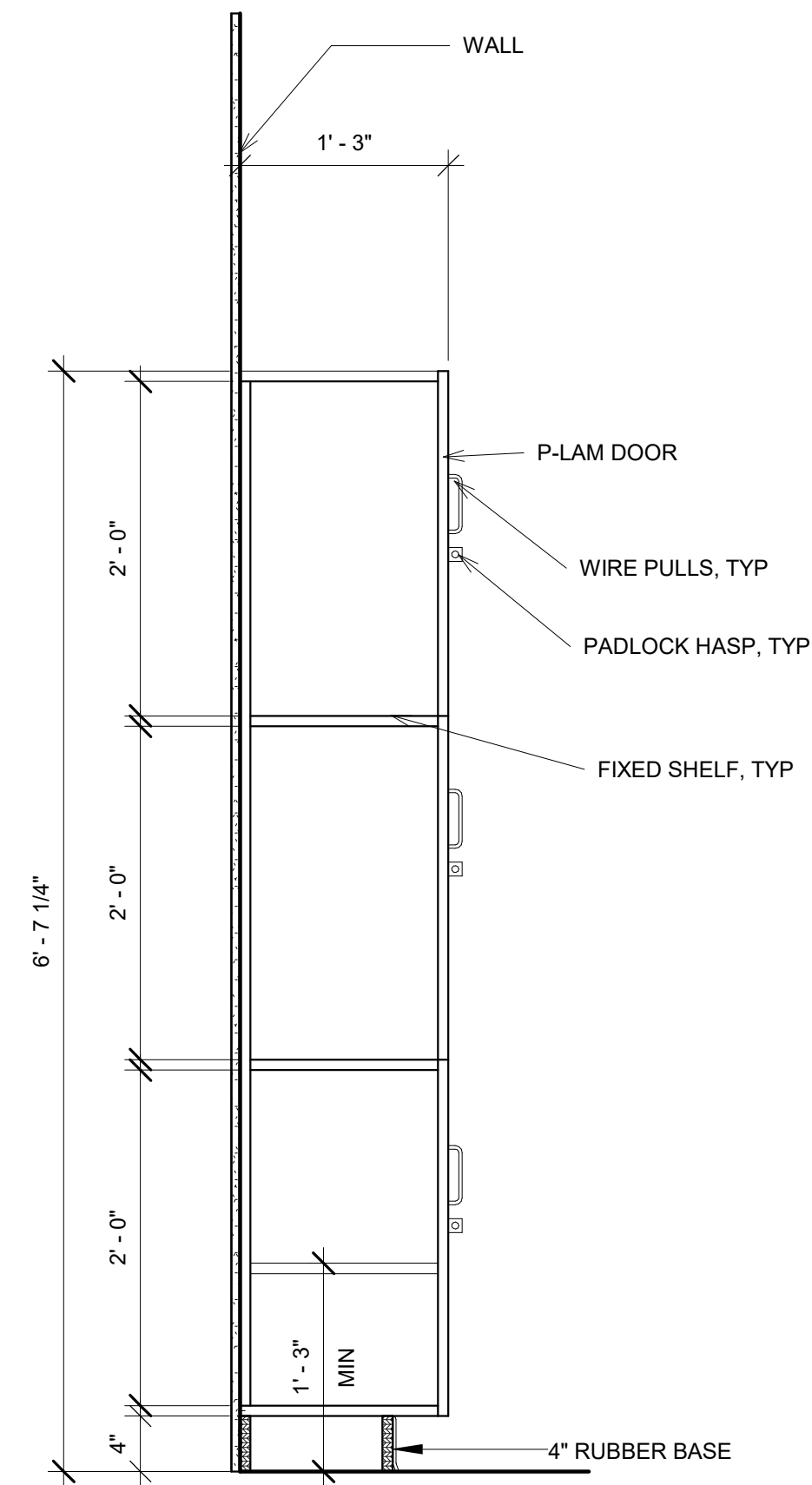
237 CONSULTING C  
3/8" = 1'-0"



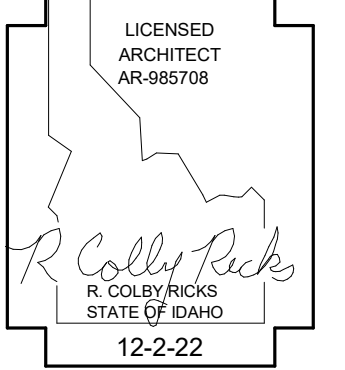
238 CONSULTING D  
3/8" = 1'-0"



1 CASEWORK - LOCKER DETAIL  
1" = 1'-0"



2 CASEWORK - ACCESSIBLE LOCKER  
DETAIL  
1" = 1'-0"



DATE	3/3/23	ADD 2

A NEW FACILITY FOR;  
**FAMILY HEALTH SERVICES**  
 SHOSHONE, IDAHO 83352  
**INTERIOR ELEVATIONS**

**Laughlin Ricks Architecture**  
 architecture/planning  
 935 Shoshone Street North \* Twin Falls, Idaho 83301  
 (208) 736-8050 Fax: (208) 733-0950

DATE:	12-2-22
NM	RCR
Drawn	Checked