

# TOWN OF GLASTONBURY FOUNDATION REPAIRS TO TOWN BARN

177 Bailey Street, Glastonbury, CT

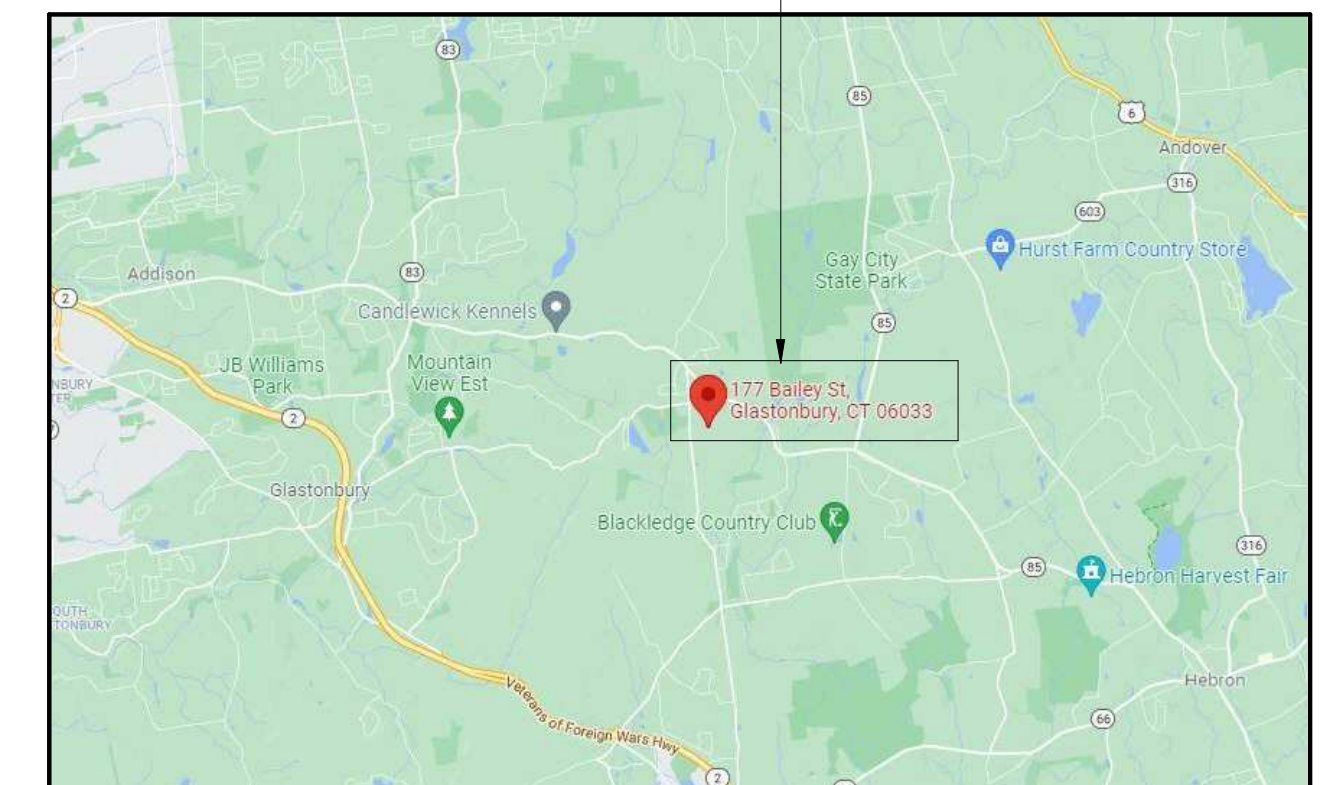
Town Project No.  
**GL-2022-18**



*Structural Engineer*

**MACCHI ENGINEERS, LLC**  
44 Gillett Street  
Hartford, Connecticut 06105  
860-549-6190

PROJECT LOCATION



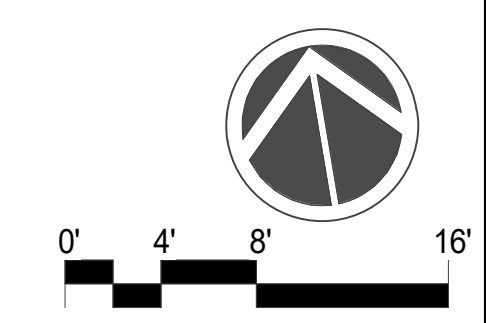
#### DRAWING LIST:

- S1.1 EXTERIOR ELEVATIONS LOCATION PLAN
- S1.2 EXTERIOR ELEVATIONS
- S1.3 EXTERIOR ELEVATIONS
- S2.1 INTERIOR ELEVATIONS LOCATION PLAN
- S2.2 INTERIOR ELEVATIONS
- S2.3 INTERIOR ELEVATIONS
- S3.1 TYPICAL REPAIR DETAILS
- S3.2 TYPICAL NOTES

MPN Project Number: 2021134.10  
MPN File Location: M:\Glastonbury\_One-Call\_2021\Horse Barn\_Fix-Macchi\_Plan\_Thin\DWG\Glastonbury\_Horse Barn\_v2.1.rvt



**EXTERIOR ELEVATIONS LOCATION PLAN**  
1/8" = 1'-0"



REVISIONS

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GL-2022-18

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**FOUNDATION REPAIRS TO TOWN BARN**  
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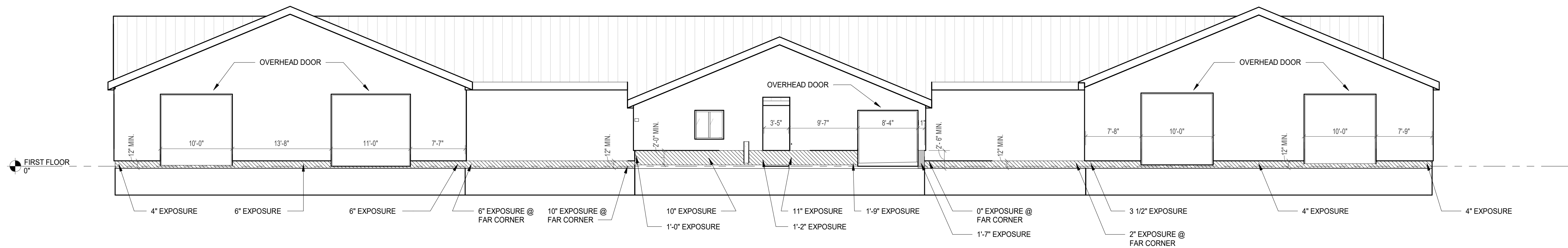
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**MOSER PILON NELSON ARCHITECTS**  
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WETHERSFIELD, CT, 06109  
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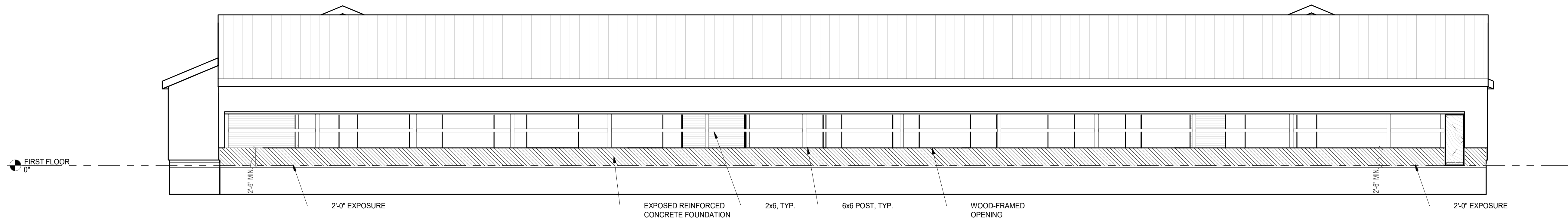
TITLE  
EXTERIOR ELEVATIONS LOCATION PLAN

DATE 11/10/2021  
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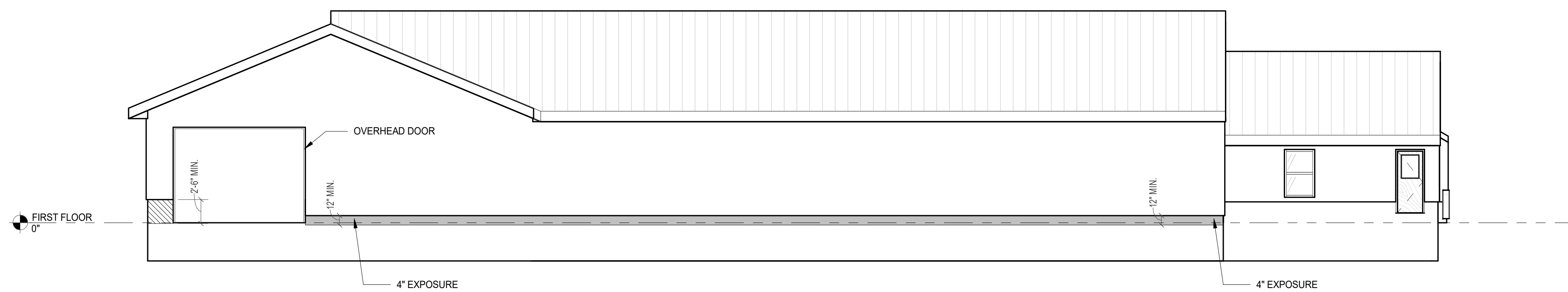
DWG. NO.  
**S1.1**



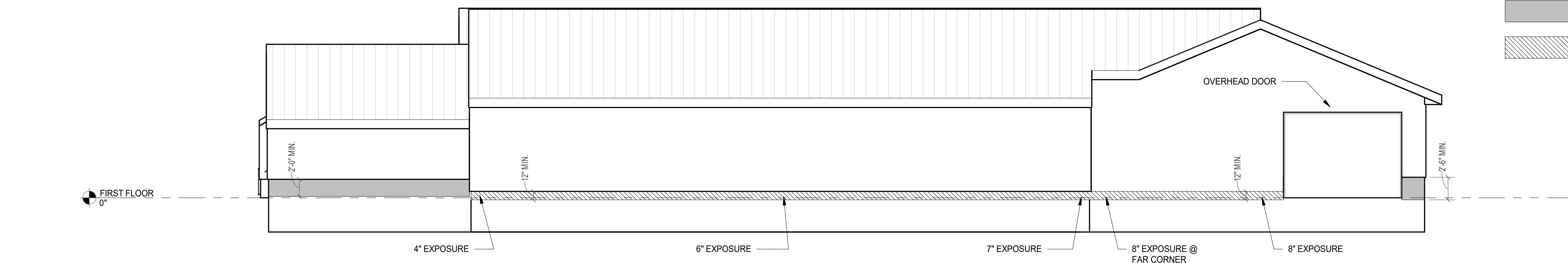
**1**  
S1.2 **NORTH ELEVATION**  
1/8" = 1'-0"



**2**  
S1.2 **SOUTH ELEVATION**  
1/8" = 1'-0"





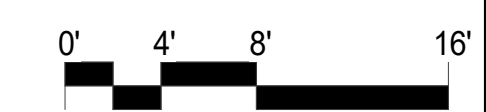
**3**  
S1.2 **EAST ELEVATION**  
1/8" = 1'-0"



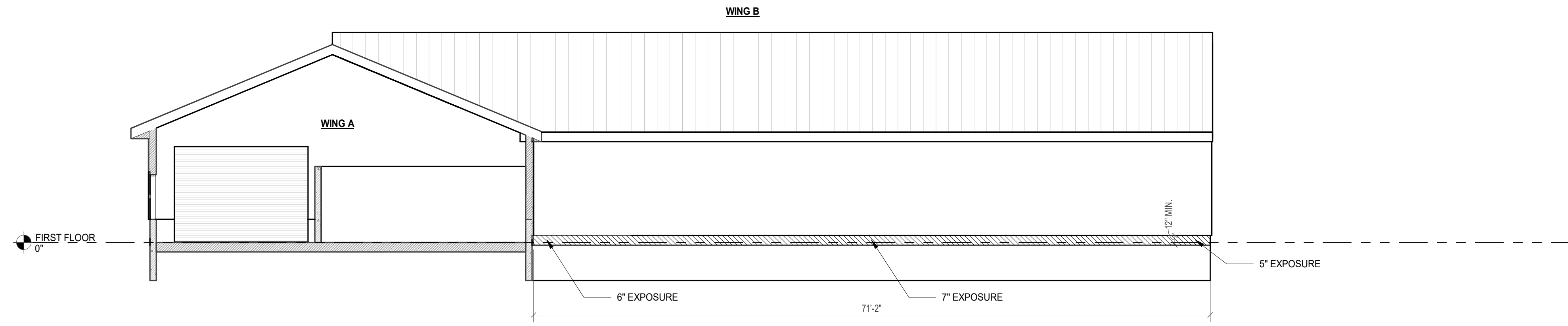
**4**  
S1.2 **WEST ELEVATION**  
1/8" = 1'-0"

**REPAIR KEY:**

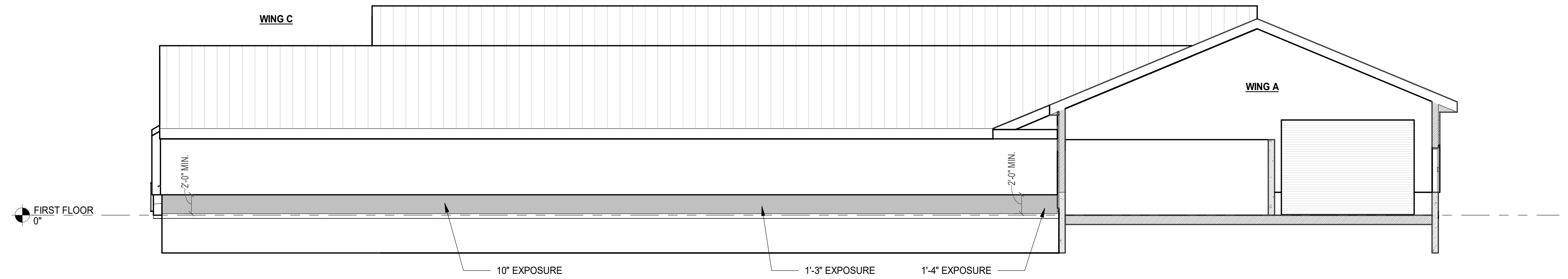
-  INDICATES LOCATIONS OF CONCRETE SPALL REPAIRS [ SIKACRETE - 211 ] AND WALL COATING APPLICATION [ SIKA-FERROGARD - 903 ] RE: DETAIL 1/S3.1
-  INDICATES LOCATIONS OF WALL COATING APPLICATION [ SIKA-FERROGARD - 903 ] RE: DETAIL 2/S3.1



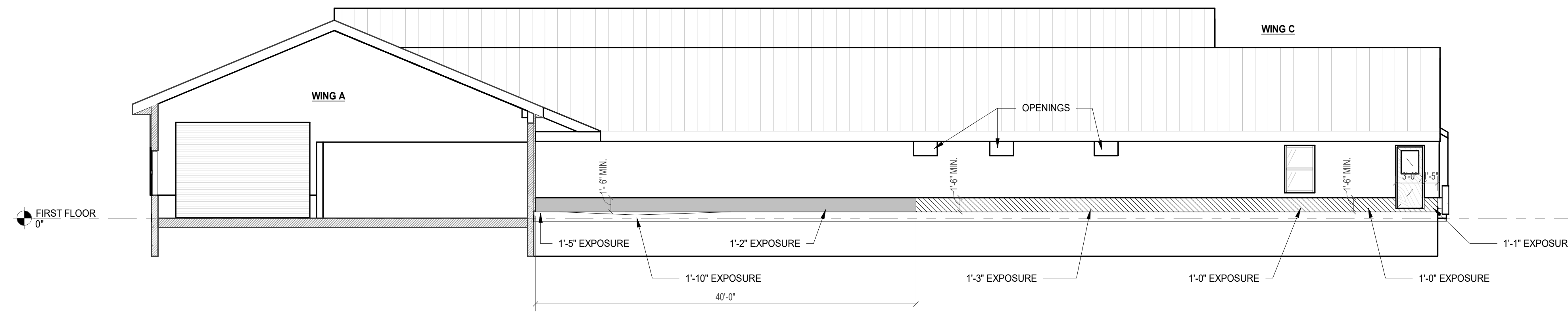




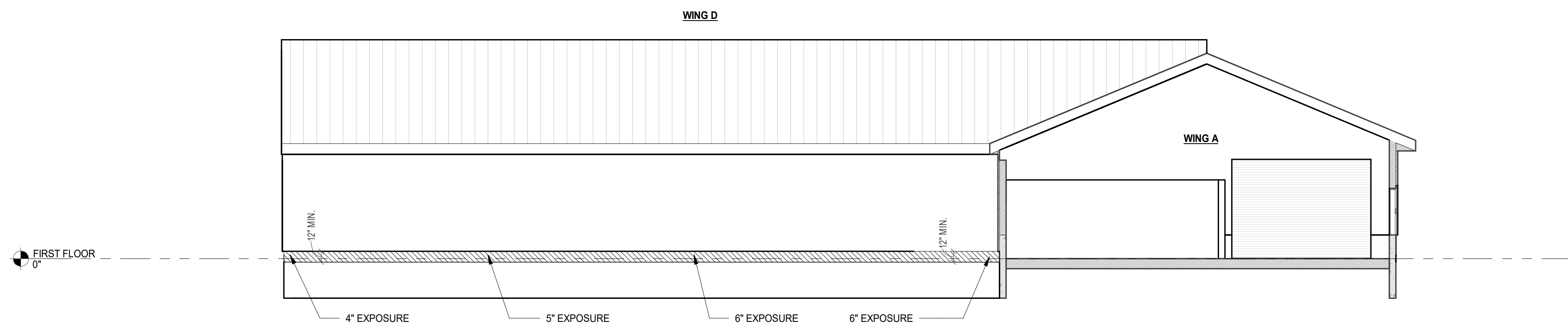
1  
S1.3  
**EAST ELEVATION - A**  
1/8" = 1'-0"



2  
S1.3  
**WEST ELEVATION - A**  
1/8" = 1'-0"


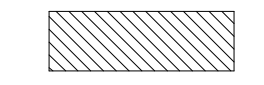


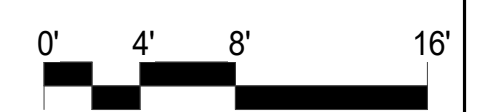
3  
S1.3  
**EAST ELEVATION - B**  
1/8" = 1'-0"



4  
S1.3  
**WEST ELEVATION - B**  
1/8" = 1'-0"

REPAIR KEY:

-  INDICATES LOCATIONS OF CONCRETE SPALL REPAIRS [ SIKACRETE - 211 ] AND WALL COATING APPLICATION [ SIKA-FERROGARD - 903 ] RE: DETAIL 1/S3.1
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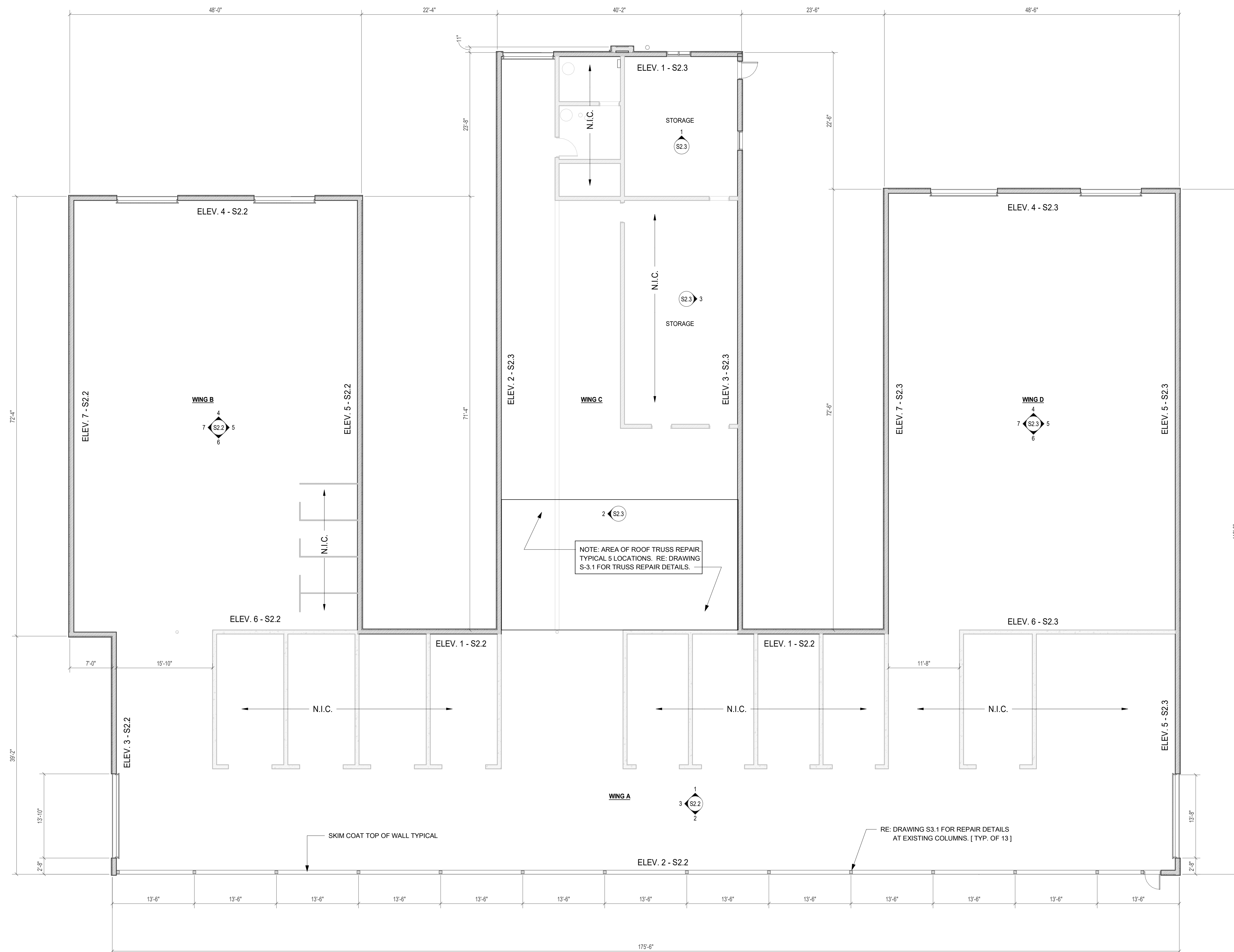
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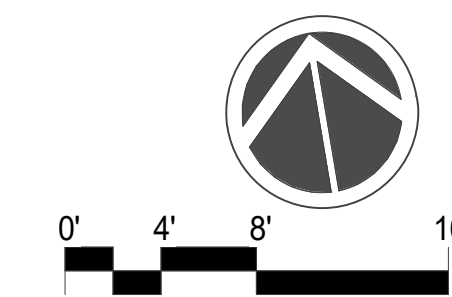
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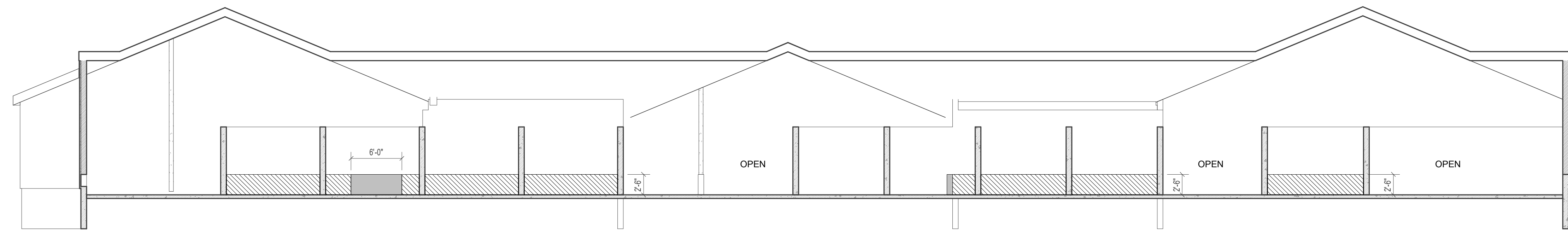
DATE 11/10/2021  
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 DWG. NO.

**S2.1**

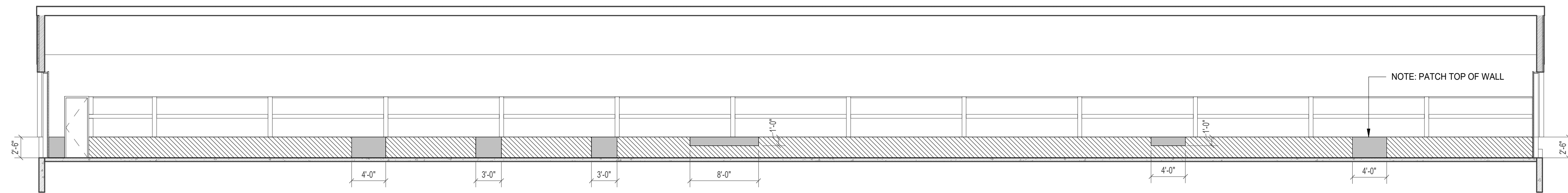


**INTERIOR ELEVATIONS LOCATION PLAN**  
 1/8" = 1'-0"

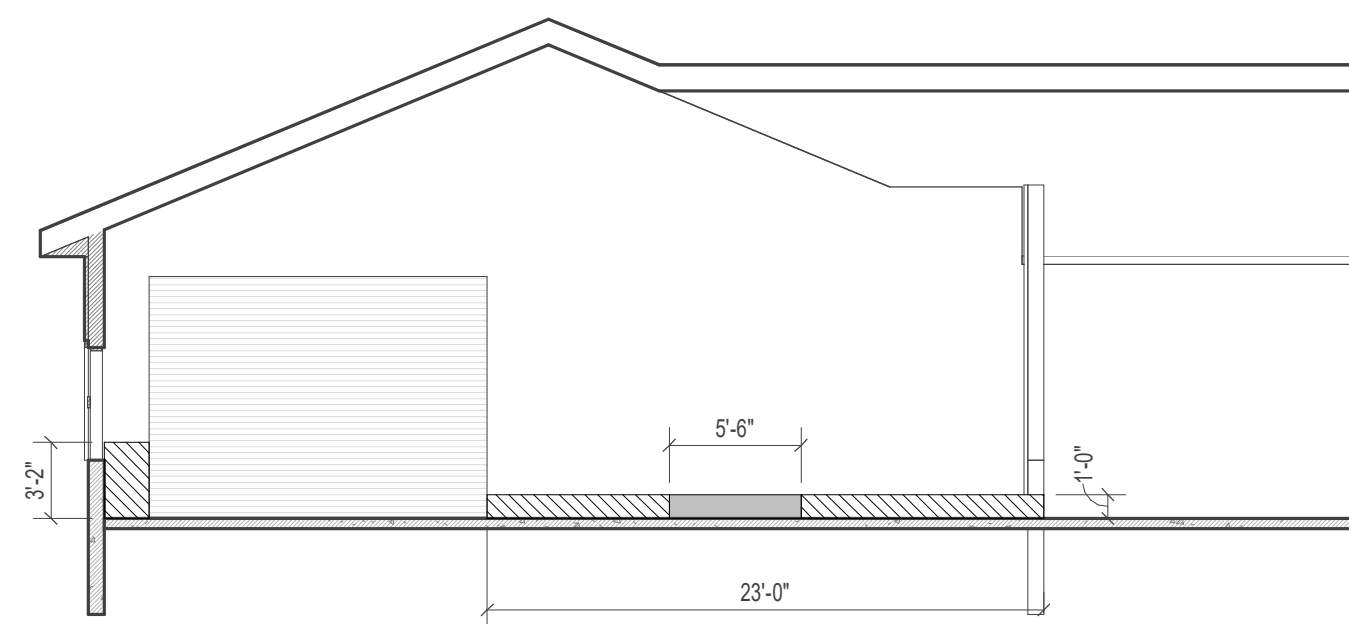




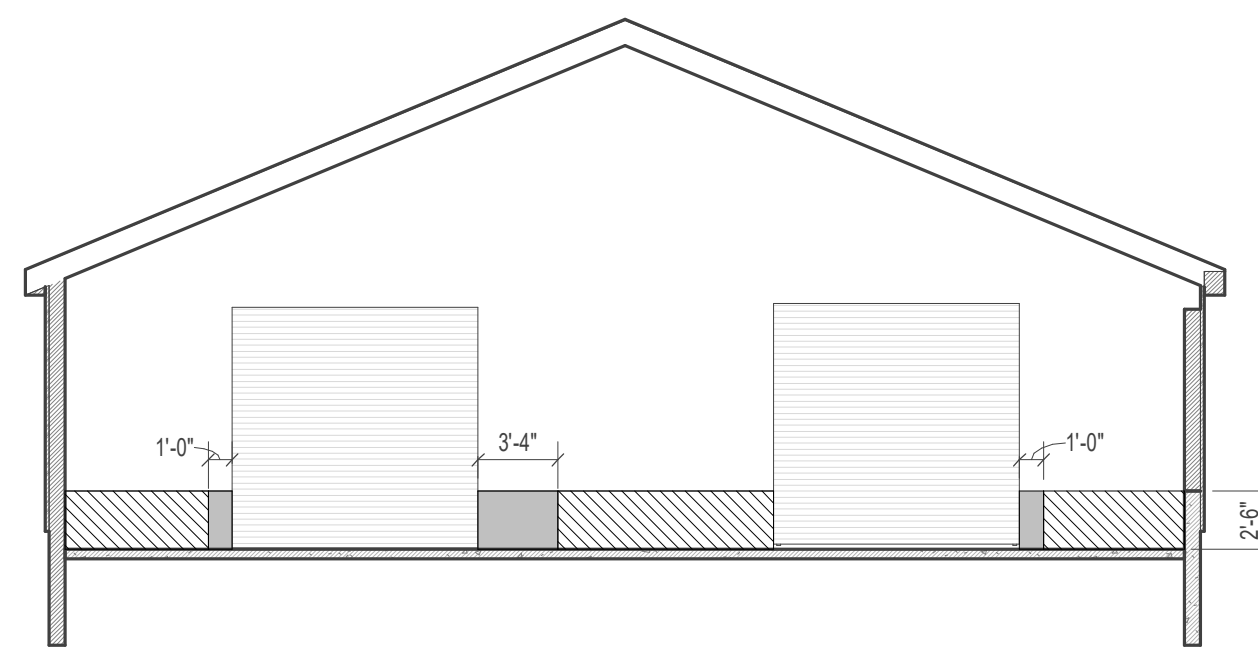
1  
S2.2  
INTERIOR ELEVATION  
1/8" = 1'-0"



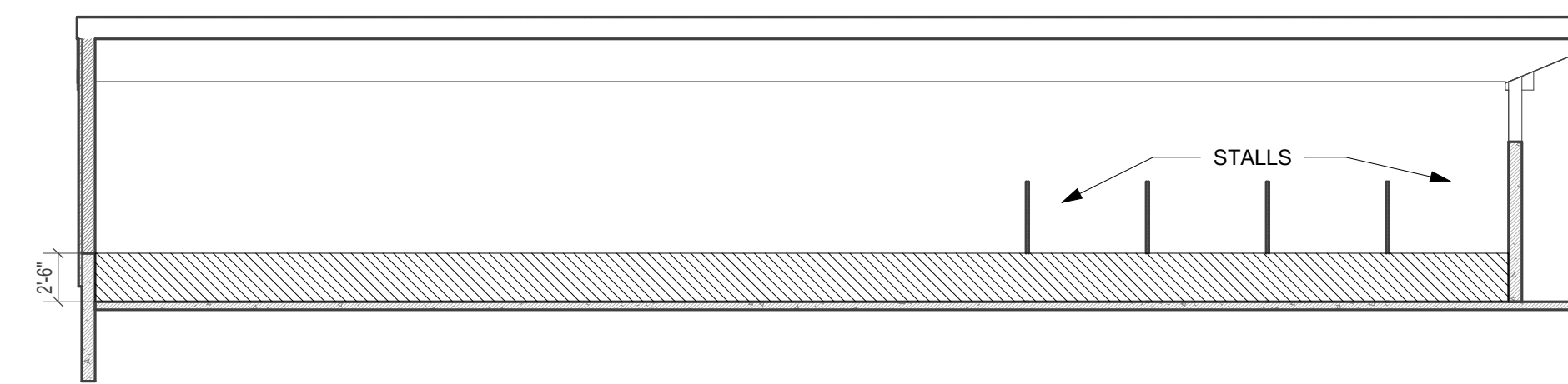
2  
S2.2  
INTERIOR ELEVATION  
1/8" = 1'-0"



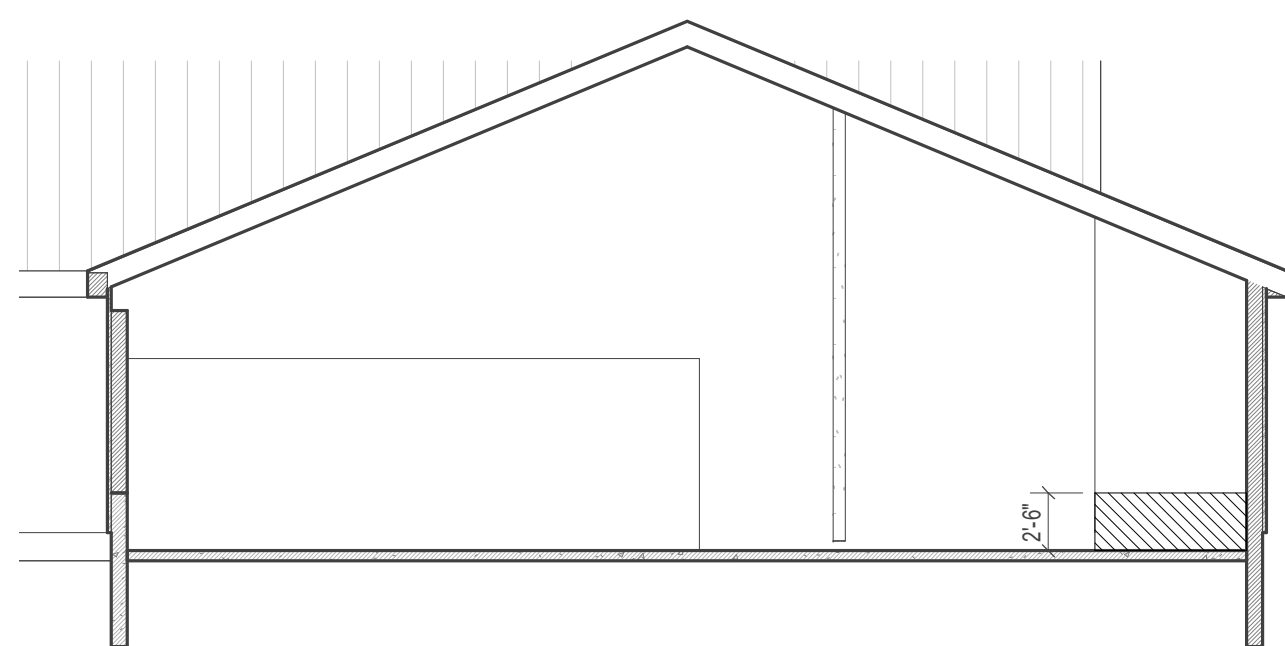
3  
S2.2  
INTERIOR ELEVATION  
1/8" = 1'-0"



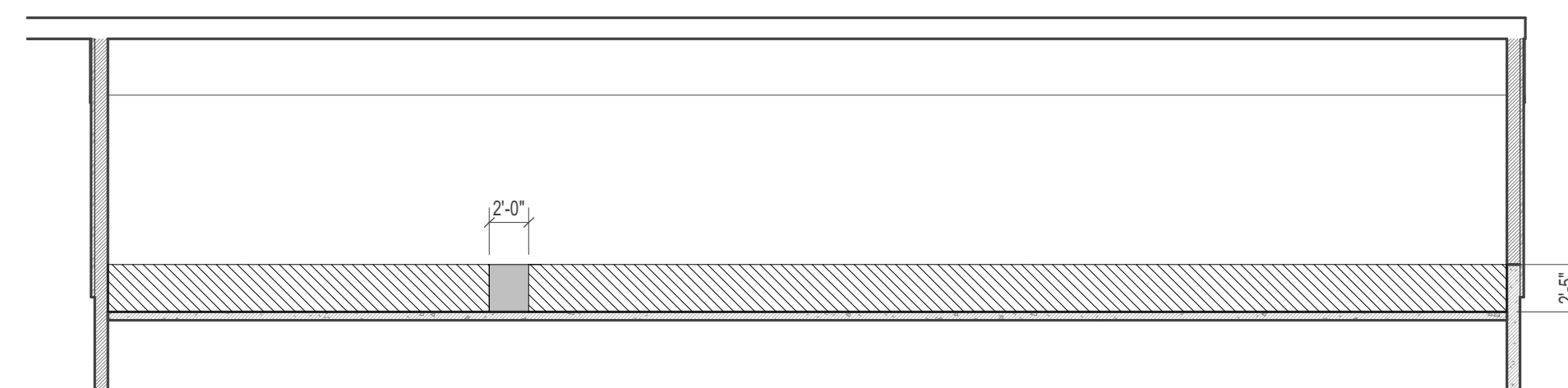
4  
S2.2  
INTERIOR ELEVATION  
1/8" = 1'-0"



5  
S2.2  
INTERIOR ELEVATION  
1/8" = 1'-0"


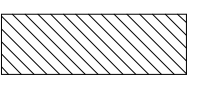


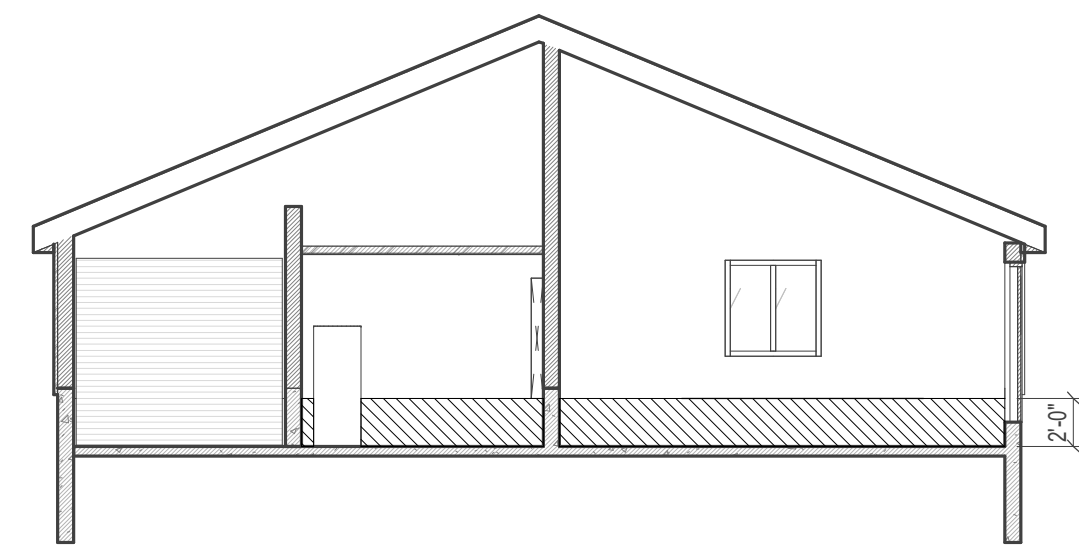
6  
S2.2  
INTERIOR ELEVATION  
1/8" = 1'-0"



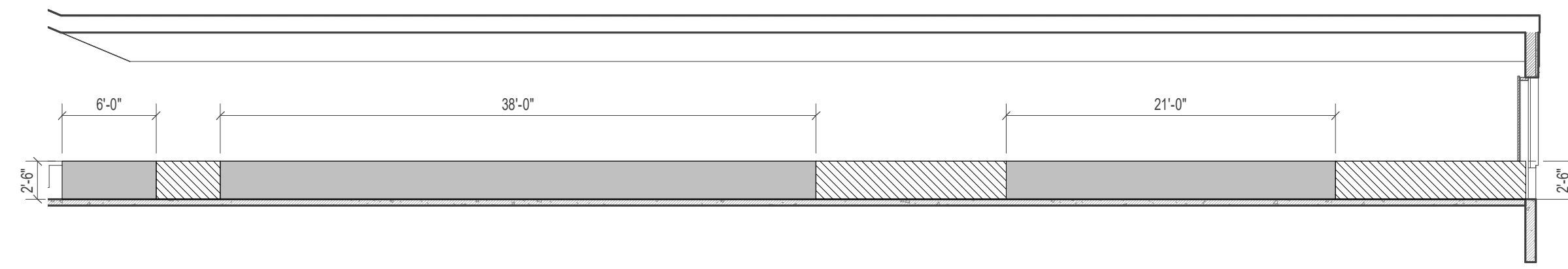
7  
S2.2  
INTERIOR ELEVATION  
1/8" = 1'-0"

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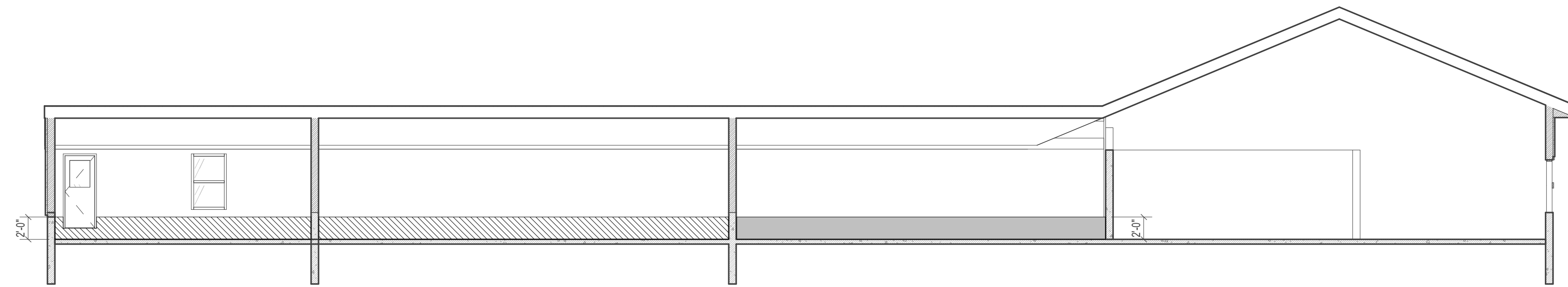
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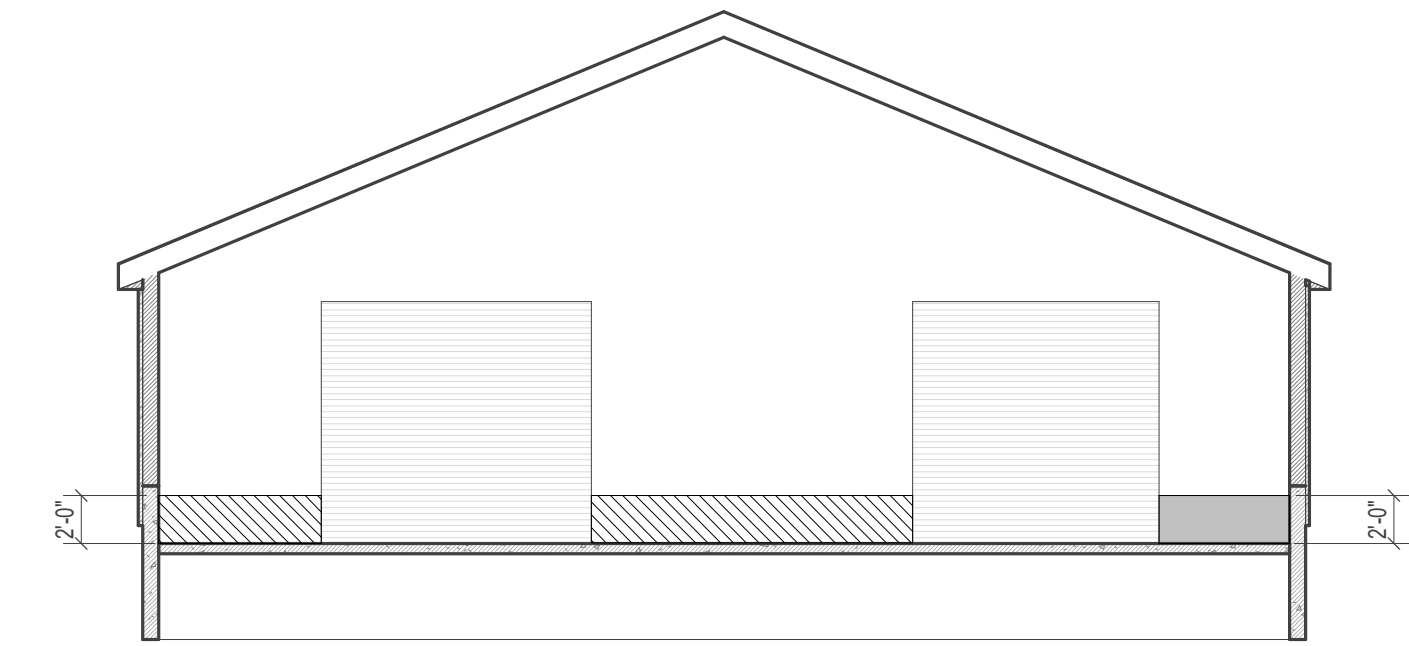
1  
S2.3  
**INTERIOR ELEVATION**  
1/8" = 1'-0"



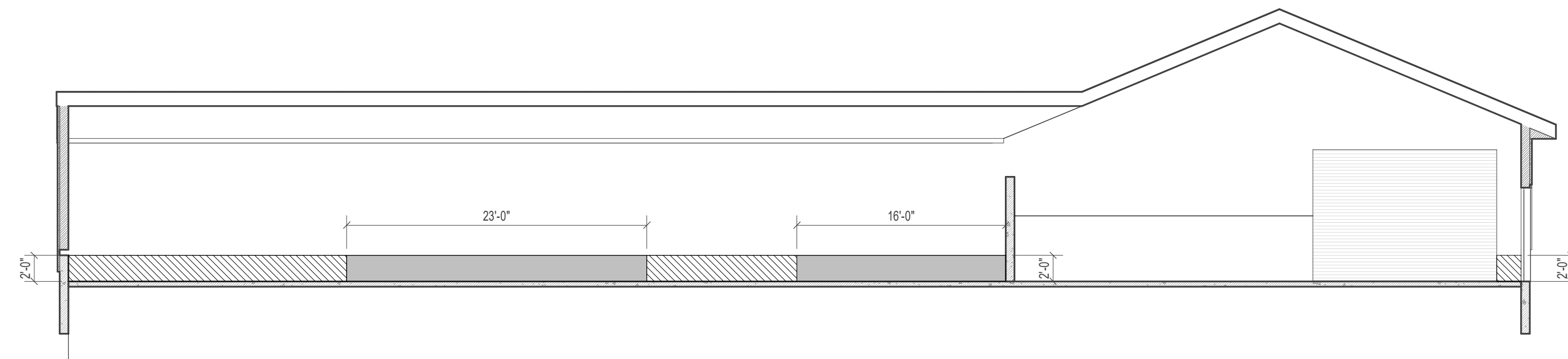
2  
S2.3  
**INTERIOR ELEVATION**  
1/8" = 1'-0"



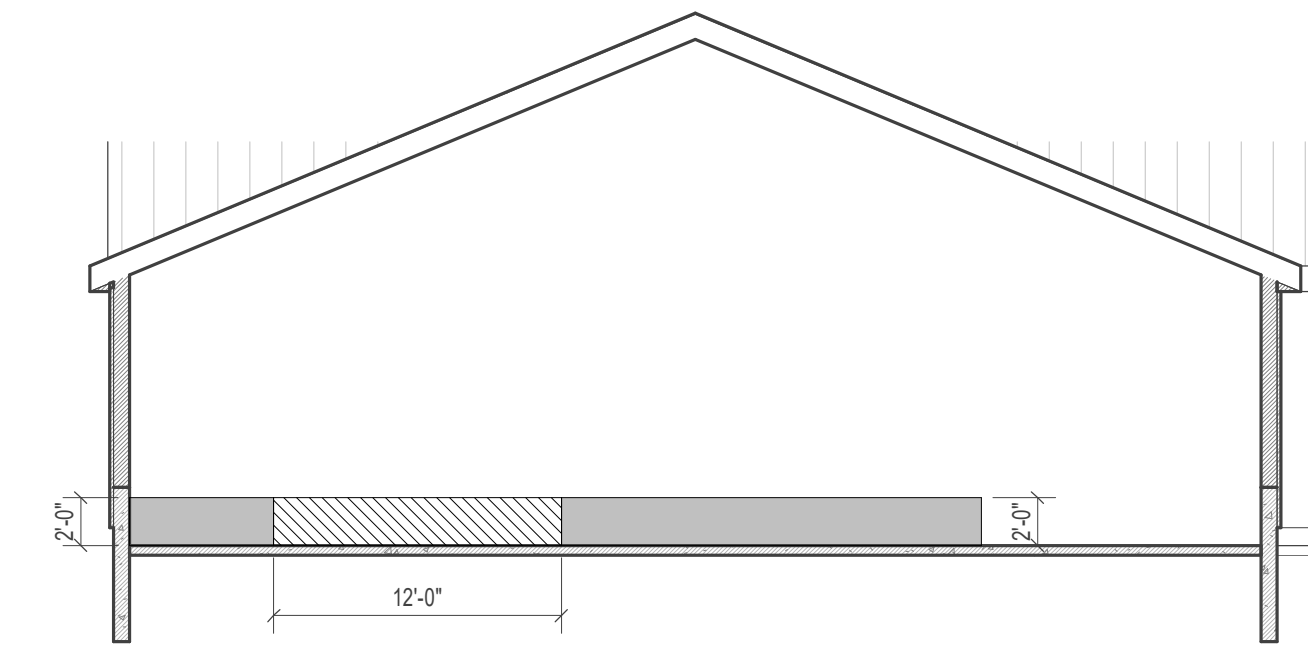
3  
S2.3  
**INTERIOR ELEVATION**  
1/8" = 1'-0"



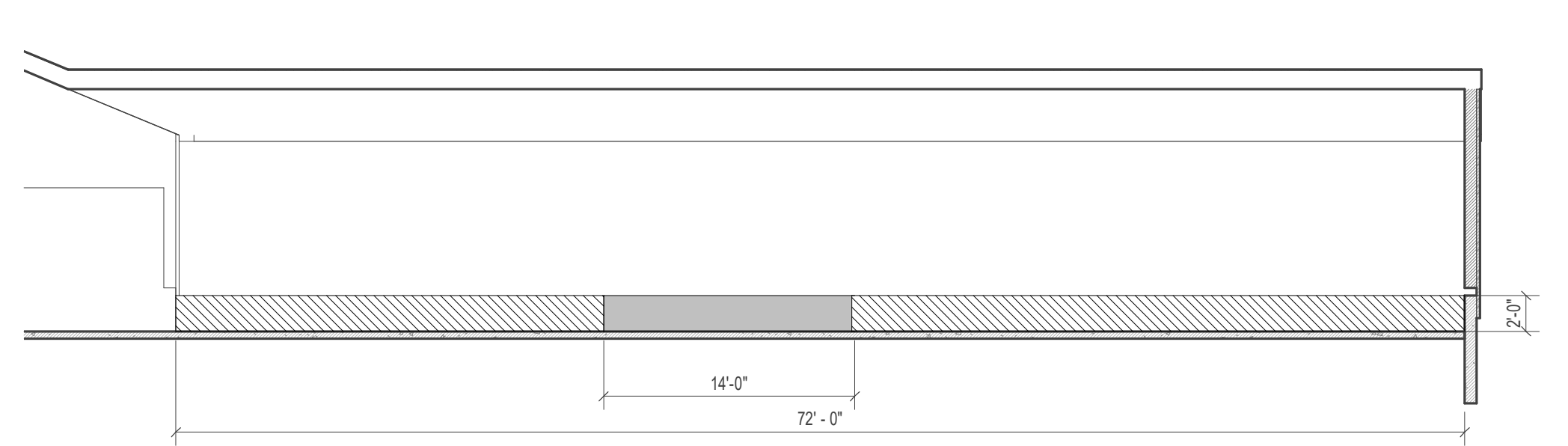
4  
S2.3  
**INTERIOR ELEVATION**  
1/8" = 1'-0"



5  
S2.3  
**INTERIOR ELEVATION**  
1/8" = 1'-0"





6  
S2.3  
**INTERIOR ELEVATION**  
1/8" = 1'-0"



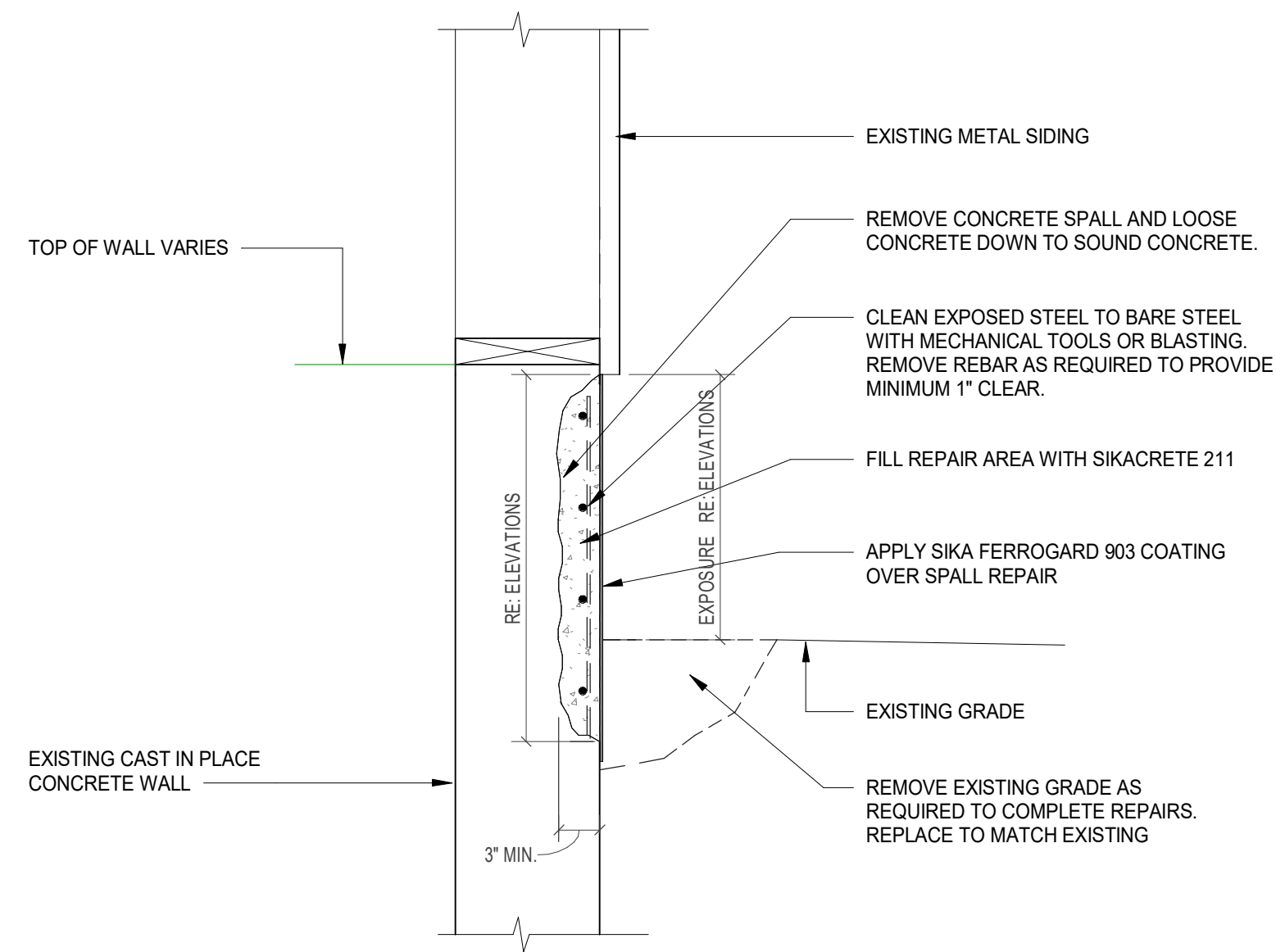
7  
S2.3  
**INTERIOR ELEVATION**  
1/8" = 1'-0"

REPAIR KEY:

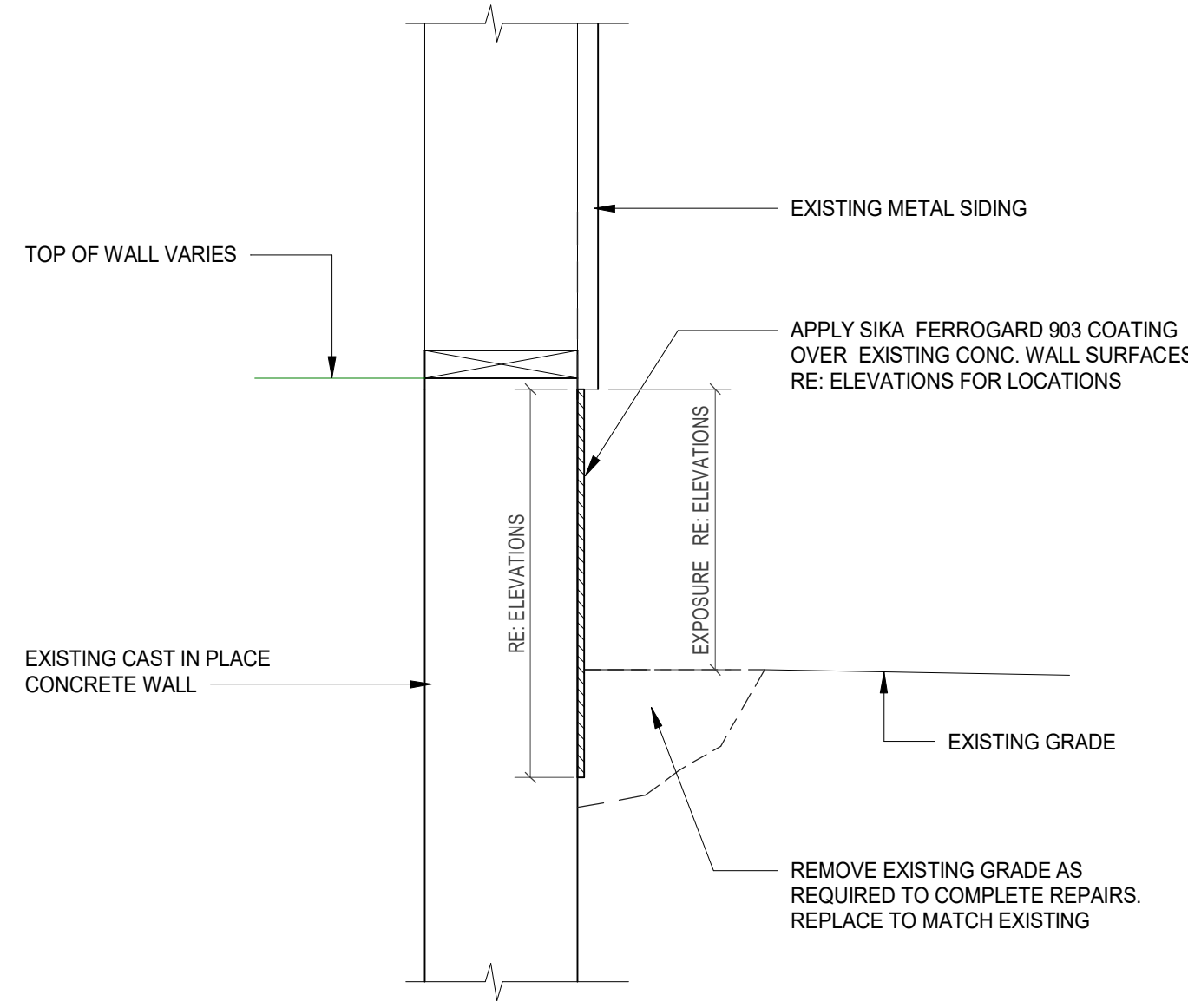
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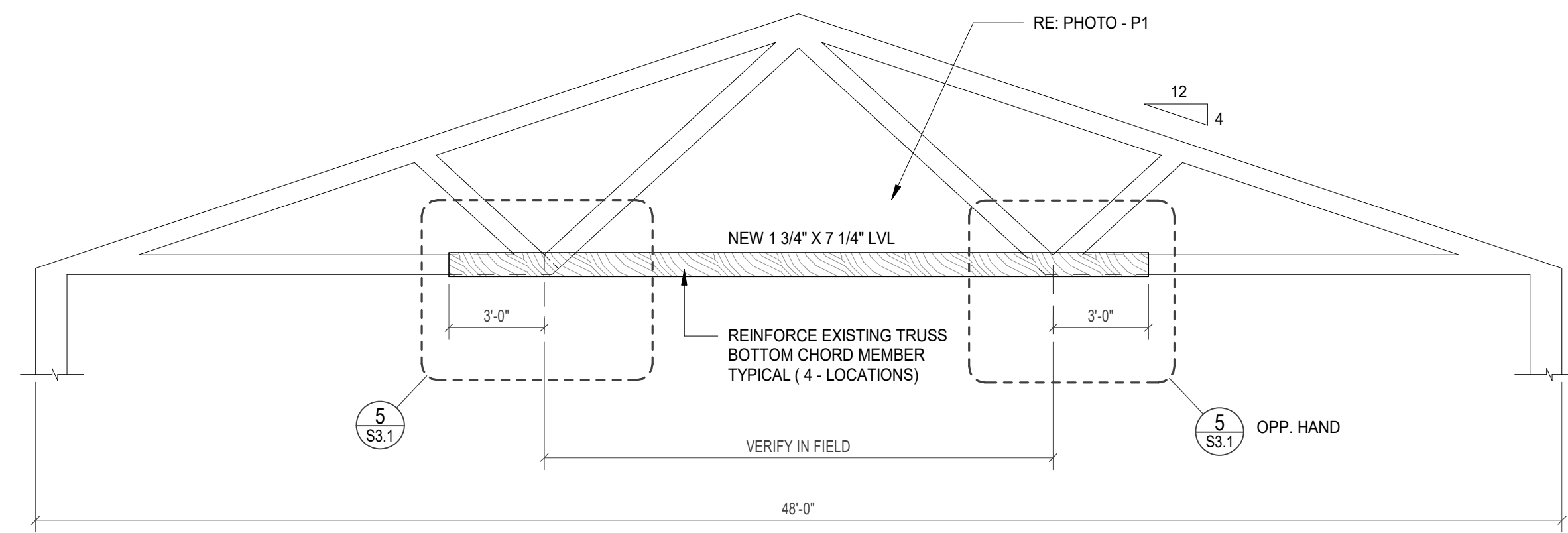
- GENERAL NOTES:**
1. CONTRACTOR TO SUBMIT PROPOSED WORK SEQUENCE SCHEDULE FOR REVIEW AND APPROVAL. BARN IS TO REMAIN OCCUPIED DURING WORK. COORDINATE SEQUENCE OF CONSTRUCTION WITH TOWN.
  2. INSTALLATION OF REPAIR MATERIALS SHALL BE IN STRICT CONFORMANCE WITH THE MANUFACTURERS REQUIREMENTS. SEE S3.2 FOR ADDITIONAL INFORMATION.
  3. OWNER WILL PROVIDE WATER FOR CONTRACTORS USE. ELECTRICITY SHALL BE PROVIDED BY CONTRACTOR.
  4. ALL DIMENSIONS AND ELEVATIONS ARE TO BE FIELD VERIFIED.
  5. SEE S3.2 FOR INFORMATION AND PREPARATION OF REPAIR MATERIALS.



**1**  
S3.1  
**TYPICAL SPALL REPAIR DETAIL**  
1" = 1'-0"



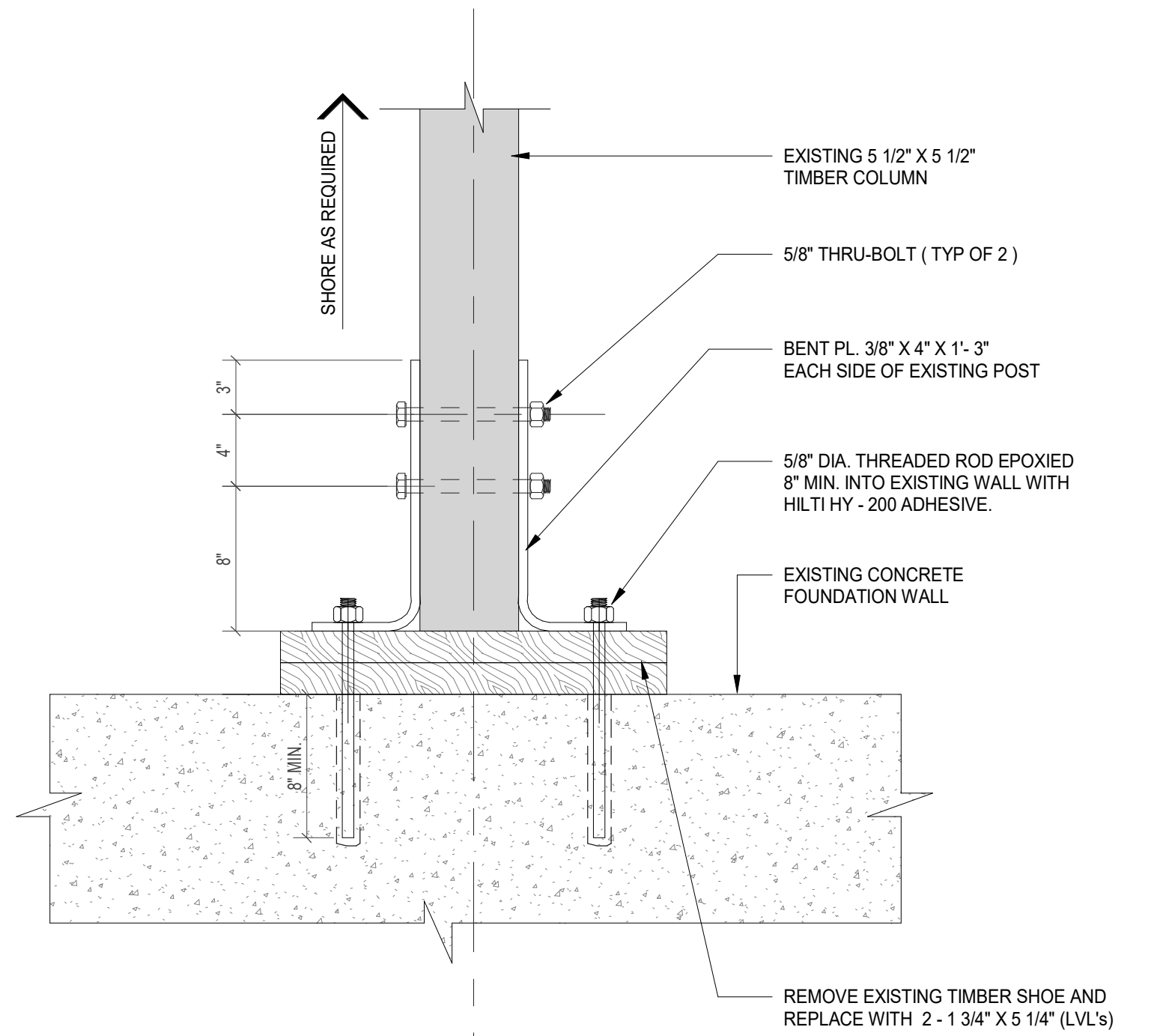
**2**  
S3.1  
**TYPICAL WALL COATING DETAIL**  
1" = 1'-0"



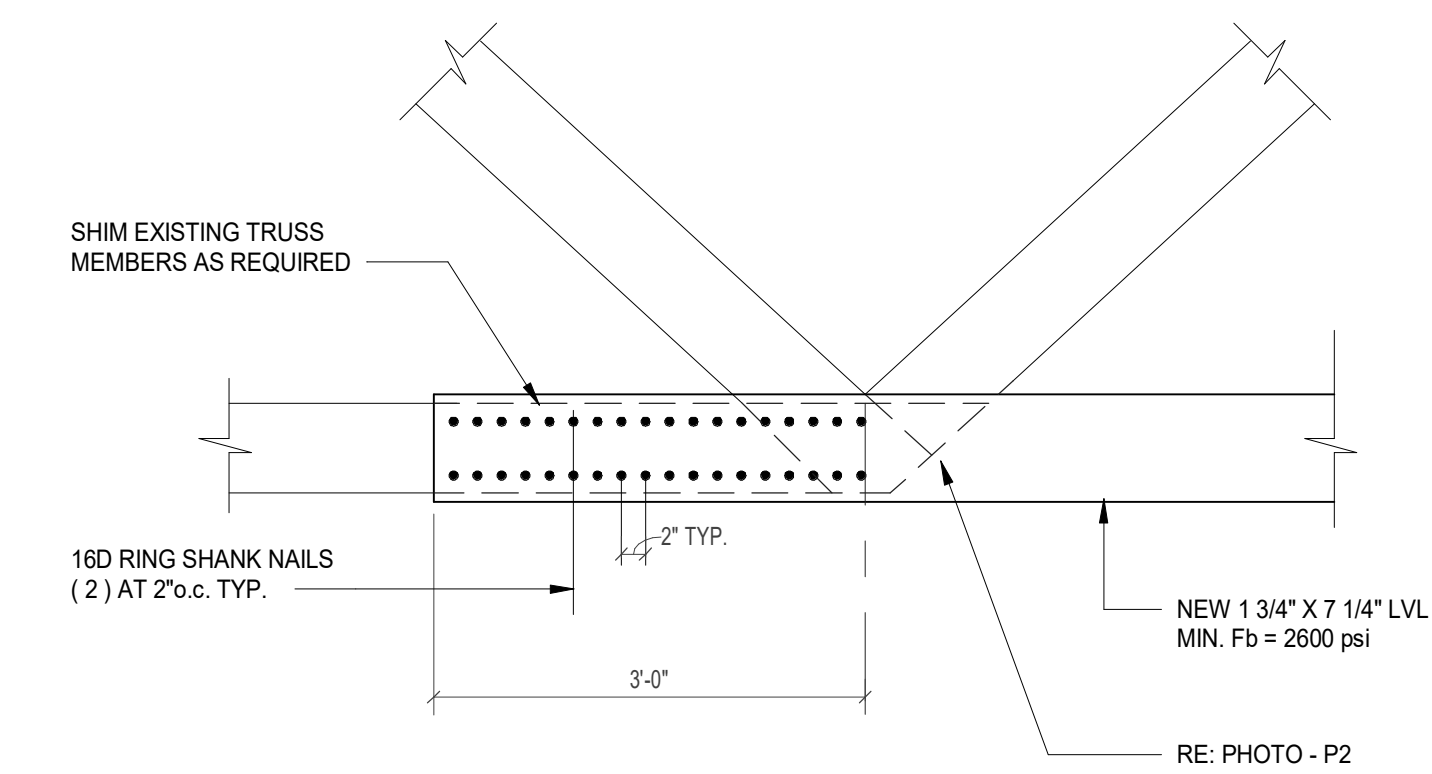
**4**  
S3.1  
**TRUSS REPAIR ELEVATION**  
1/4" = 1'-0"



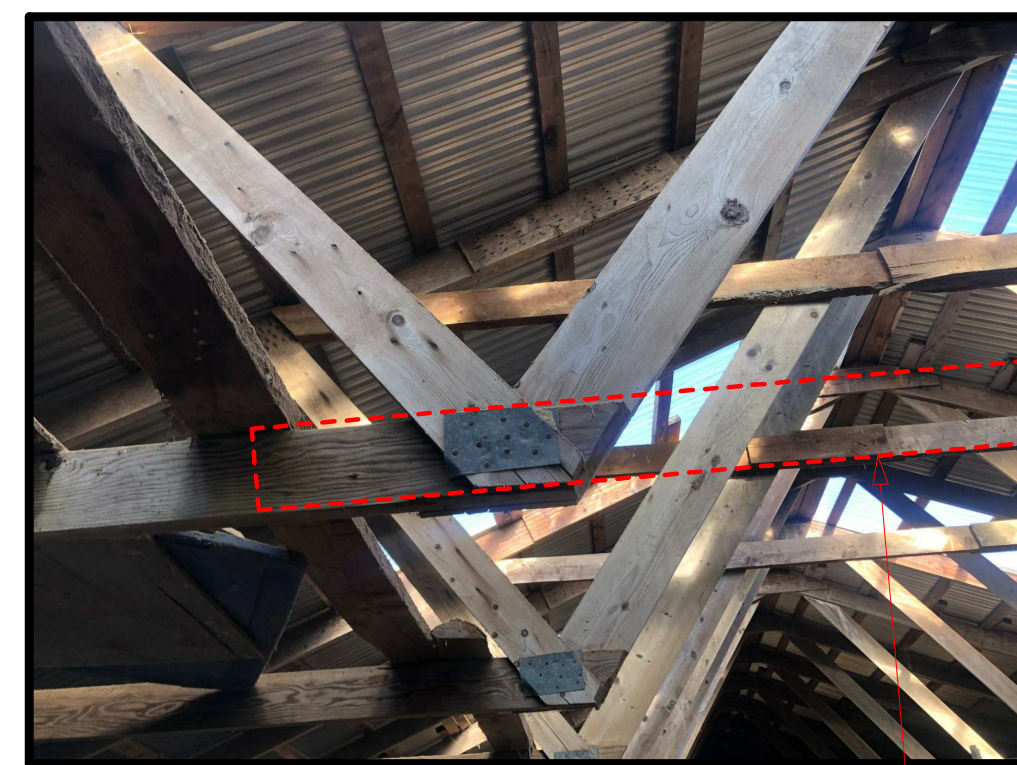
**PHOTO - P1**



**6**  
S3.1  
**EXISTING BASE DETAIL REPAIR**  
1 1/2" = 1'-0"



**5**  
S3.1  
**TRUSS REPAIR DETAIL**  
3/4" = 1'-0"

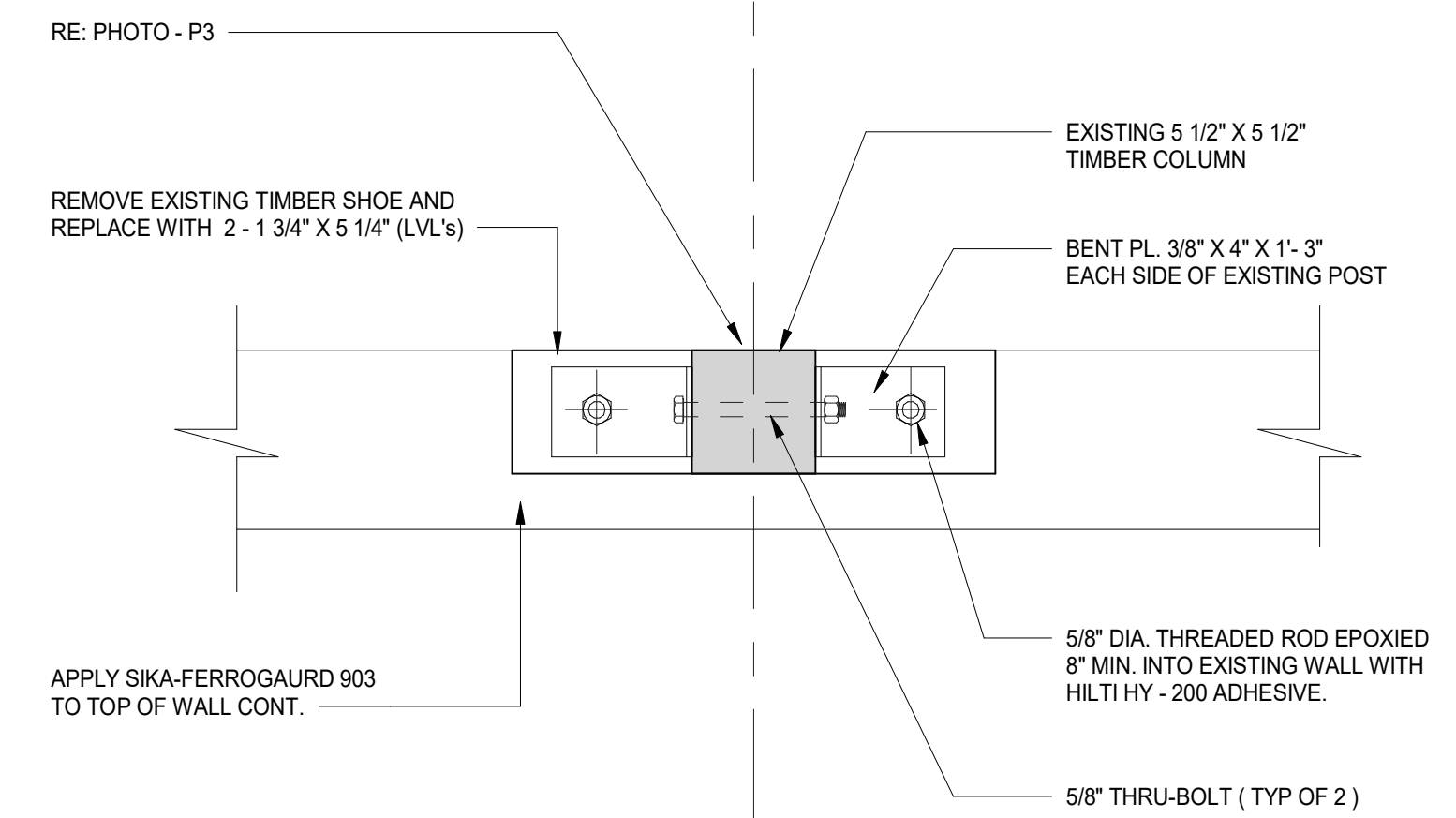


**PHOTO - P2**

LOCATION NEW LVL BOTTOM CHORD REINFORCING MEMBER



**PHOTO - P3**







PRODUCT DATA SHEET

Sika® FerroGard®-903 Plus

CORROSION INHIBITING IMPREGNATION (IMPROVED FORMULATION)

DESCRIPTION

Sika® FerroGard®-903 Plus is a surface applied mixed corrosion inhibitor, designed for use as an impregnation of steel reinforced concrete.

USES

- For the corrosion protection of steel reinforced concrete structures above and below the ground
As a corrosion control treatment for undamaged reinforced concrete where reinforcing steel is corroding, or is at risk from corrosion due to the effects of carbonated or chloride contaminated concrete

CHARACTERISTICS / ADVANTAGES

- Suitable for method 11.3 (applying inhibitor to the concrete) defined by EN 1504-9 for Principle 11 (anodic control)
Does not change the appearance of the concrete structure
Does not alter the water vapour diffusion properties of concrete

Product Data Sheet Sika® FerroGard®-903 Plus June 2019, Version 02.02 02030304010000016

PRODUCT INFORMATION

Table with 2 columns: Property (Composition, Packaging, Appearance / Colour, Shelf life, Storage conditions, Density, pH-Value, Viscosity) and Value.

TECHNICAL INFORMATION

Penetration Depth Site surveys and experimental tests have shown that Sika® FerroGard®-903 Plus can penetrate through concrete at a rate of a few millimetres per day and to a depth of approximately 25 to 40 mm in 1 to 2 months.

SYSTEMS

Table with 2 columns: System Structure and Details (Repair system, Reinforcement corrosion control, Concrete protection).

APPLICATION INFORMATION

Consumption Generally 0.500 kg/m² (~480 ml/m²). For very dense concrete with low permeability, the rate of application of Sika® FerroGard®-903 Plus can be reduced but must not be lower than 0.300 kg/m² (290 ml/m²).

Product Data Sheet Sika® FerroGard®-903 Plus June 2019, Version 02.02 02030304010000016

APPLICATION INSTRUCTIONS

SUBSTRATE QUALITY / PRE-TREATMENT

The concrete shall be free from dust, loose material, surface contamination, existing renders, laitance, coatings, oil and other materials which reduce or prevent penetration.

APPLICATION

Sika® FerroGard®-903 Plus is supplied ready for use and must not be diluted. Do not shake the material prior to use.

Number of coats: This is dependent on the porosity and moisture content of the substrate and the weather conditions.

Vertical surfaces: Normally, 2 to 3 coats are necessary to achieve the required consumption.

Horizontal Surfaces: Saturate surface by 1 to 2 coats, take care to avoid ponding.

Overcoating: If the application is carried out as described above, no further treatment is required before over-coating with Sikagard® hydrophobic impregnations, Sikagard® breathable coatings or Sikafloor® products.

Product Data Sheet Sika® FerroGard®-903 Plus June 2019, Version 02.02 02030304010000016

tion of compatibility with Sika® FerroGard®-903 Plus or undertake compatibility and adhesion site trials. When Sika® FerroGard®-903 Plus is used within a patch repair or before a cementitious overlay, Sika repair or overlay system can be used.

CLEANING OF EQUIPMENT

Use water to clean application equipment.

IMPORTANT CONSIDERATIONS

Do not apply when rain or frost is expected. The following construction materials have to be protected from splashes of Sika® FerroGard®-903 Plus during application:

- aluminium
copper
galvanised steel
If the product is applied next to natural stones, it may be necessary to protect them from splashes as some discoloration may occur.

Visible concrete defects (spalling, cracks etc) must be repaired using conventional repair methods (removal of delaminating or loose concrete, treatment of reinforcement, reprofiling etc.).

If chlorides are already present near the reinforcement bars, concentration of Sika® FerroGard®-903 Plus at rebar level shall be minimum 100 ppm when measured by ionic chromatography to provide efficient protection.

Product Data Sheet Sika® FerroGard®-903 Plus June 2019, Version 02.02 02030304010000016

LEGAL NOTES

The information, and, in particular, the recommendations relating to the application and end-use of Sika products, are given in good faith based on Sika's current knowledge and experience of the products when properly stored, handled and applied under normal conditions.

BASIS OF PRODUCT DATA

All technical data stated in this Data Sheet are based on laboratory tests. Actual measured data may vary due to circumstances beyond our control.

LOCAL RESTRICTIONS

Note that as a result of specific local regulations the declared data and recommended uses for this product may vary from country to country.

ECOLOGY, HEALTH AND SAFETY

For information and advice on the safe handling, storage and disposal of chemical products, users shall refer to the most recent Safety Data Sheet (SDS) containing physical, ecological, toxicological and other safety-related data.

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Product Data Sheet Sika® FerroGard®-903 Plus June 2019, Version 02.02 02030304010000016



REVISIONS

TOWN PROJECT NO. GL-2022-18

TOWN OF GLASTONBURY FOUNDATION REPAIRS TO TOWN BARN 177 Bailey Street, Glastonbury, CT



PRODUCT DATA SHEET

Sikacrete®-211 SCC Plus

ONE-COMPONENT, CEMENTITIOUS, POLYMER-MODIFIED, SELF CONSOLIDATING CONCRETE MIX WITH AN INTEGRAL MIGRATING CORROSION INHIBITOR

PRODUCT DESCRIPTION

Sikacrete®-211 SCC Plus is a one-component, self consolidating concrete containing factory blended coarse aggregate. This self consolidating concrete bag is silica fume and polymer modified and also contains a migrating corrosion inhibitor.

USES

- Full depth repairs
On grade, above and below grade on concrete
On horizontal surfaces
Vertical and overhead surfaces when formed and pumped or poured
As a structural repair material for parking facilities, industrial plants, walkways, bridges, tunnels, dams, and balconies
Filler for voids and cavities

PRODUCT INFORMATION

Table with 2 columns: Property (Packaging, Appearance / Color, Shelf Life, Storage Conditions) and Value.

Product Data Sheet Sikacrete®-211 SCC Plus March 2020, Version 03.04 02030202010000040

CHARACTERISTICS / ADVANTAGES

- Self Consolidating Concrete - Excellent placement characteristics
Polymer-modified
Integral penetrating corrosion inhibitor
Silica fume enhanced
Prepackaged coarse aggregate. Eliminates the need to extend material in the field. Eliminates the risk of reactive aggregate
Can be pumped or poured into forms and gets excellent consolidation without vibrating

TECHNICAL INFORMATION

Table with 3 columns: Property (Compressive Strength, Flexural Strength, Splitting Tensile Strength, Tensile Adhesion Strength, Slant Shear Strength, Shrinkage, Freeze-Thaw Stability, Freeze Thaw De-icing Salt Resistance, Sulfate Resistance, Rapid Chloride Permeability) and Value.

APPLICATION INFORMATION

Table with 2 columns: Property (Mixing Ratio, Coverage, Layer Thickness, Consistency, Product Temperature, Ambient Air Temperature, Substrate Temperature, Pot Life) and Value.

Product Data Sheet Sikacrete®-211 SCC Plus March 2020, Version 03.04 02030202010000040



APPLICATION INSTRUCTIONS

SURFACE PREPARATION

- Surface must be clean and sound. Remove all deteriorated concrete, dirt, oil, grease, and other bond-inhibiting materials from the area to be repaired.
Be sure repair area is not less than 1" (25 mm) deep.
Preparation work should be done by appropriate means. Obtain an exposed aggregate surface with a minimum surface profile of 1.8" (3 mm) (CSP-3-8) on clean, sound concrete.
Substrate should be Saturated Surface Dry (SSD) with clean water prior to application. No standing water should remain during application.

Reinforcing Steel

- Steel reinforcement should be thoroughly prepared by mechanical cleaning to remove all traces of rust.
Where corrosion has occurred, the steel should be high-pressure washed with clean water after mechanical cleaning.
For priming and protection of reinforcing steel use Sika® Armatex® 110 EpoCem (consult PDS).

MIXING

- Start mixing with 5.5 pints (2.6 L) of water. An additional 0.5 pint (0.2 L) can be added if needed.
Do not over water as excess water will cause segregation.
Add Sikacrete®-211 SCC Plus while continuing to mix.
Mechanically mix to a uniform consistency, for 3 minutes with a low-speed drill (400-600 rpm) and paddle or in appropriate-size mortar mixer or concrete mixer.

APPLICATION

- Pre-wet surface to SSD.
Ensure good intimate contact with the substrate is achieved. To accomplish this, material should be scrubbed into the substrate or other suitable means should be employed such as vibration of the material or pumping under pressure.
Vibrate form while pouring or pumping.
Pump with a variable pressure pump.
Continue pumping until a 3 to 5 psi increase in normal line pressure is evident then STOP pumping.
Form should not deflect.
Vent to be capped when steady flow is evident, and forms stripped when appropriate.

CURING TREATMENT

- As per ACI recommendations for Portland cement concrete, curing is required.
Moist cure with wet burlap and polyethylene, a fine mist of water or Sika® Antisol®-250 W\*.
Curing compounds adversely affect the adhesion of following layers of mortar, leveling mortar or

Product Data Sheet Sikacrete®-211 SCC Plus March 2020, Version 03.04 02030202010000040

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MIXING

- Start mixing with 5.5 pints (2.6 L) of water. An additional 0.5 pint (0.2 L) can be added if needed.
Do not over water as excess water will cause segregation.
Add Sikacrete®-211 SCC Plus while continuing to mix.
Mechanically mix to a uniform consistency, for 3 minutes with a low-speed drill (400-600 rpm) and paddle or in appropriate-size mortar mixer or concrete mixer.

APPLICATION

- Pre-wet surface to SSD.
Ensure good intimate contact with the substrate is achieved. To accomplish this, material should be scrubbed into the substrate or other suitable means should be employed such as vibration of the material or pumping under pressure.
Vibrate form while pouring or pumping.
Pump with a variable pressure pump.
Continue pumping until a 3 to 5 psi increase in normal line pressure is evident then STOP pumping.
Form should not deflect.
Vent to be capped when steady flow is evident, and forms stripped when appropriate.

CURING TREATMENT

- As per ACI recommendations for Portland cement concrete, curing is required.
Moist cure with wet burlap and polyethylene, a fine mist of water or Sika® Antisol®-250 W\*.
Curing compounds adversely affect the adhesion of following layers of mortar, leveling mortar or

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TITLE TYPICAL NOTES

DATE 11/10/2021

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