



**Sudden Valley Community Association**  
360-734-6430  
4 Clubhouse Circle Bellingham, WA 98229  
www.suddenvalley.com

## MEMO

**To: Sudden Valley Community Association Board of Directors**  
**From: Jo Anne Jensen, General Manager**  
**Date: May 9, 2024**  
**Subject: Barn 8 – Summary of Information**

---

### **Purpose**

To summarize information about the current condition of Barn 8 and the proposed refurbishment project to provide context for discussion and decision making.

### **Background – Barn 8 Evaluations**

SVCA has commissioned several different evaluations of the barns in the recreational corridor over the past decade. The most recent engineering assessment was completed in 2020 by Kingworks Consulting Engineers (attached). This report relied on visual observation and review of earlier reports. It identified several structural issues and recommended several upgrades to the existing structure to maintain current use.

Another recent evaluation was completed in 2017 by Wilson Engineering (attached). This evaluation did not identify any serious issues and noted that, from a structural point of view, the barn was “capable of being revitalized and repurposed.”

PNW Services provided a letter (attached) in February 2020 describing the approach used by Kingworks in their 2020 assessment of the barn. This letter noted that a more extensive analysis might be necessary, depending on SVCA’s intended use of Barn 8. PNW provides an estimate of \$51,227 for the cost of such an analysis. SVCA did not choose to go forward with additional analysis in 2020.

Other information on Barn 8 is available in two reports that can be accessed online. Specifically:

- In 2013, AIRO completed a property condition assessment that included barns #6, #7, and #8.
- In 2014, a lengthy report on the history of SVCA’s barns was completed.

Links to these reports can be found at [suddenvalley.com/board/](http://suddenvalley.com/board/) (scroll down the page).

### **Background – Proposed Barn 8 Refurbishment Project**

On October 27, 2022, I put forward a memo (attached) asking the Board to approve \$39,792 for the design and permitting for the remodel of Barn 8. A project scope letter was provided by PNW outlining the improvements that would be included in the remodel. The improvements cited in the letter are:

- Replace existing flat roof

- Remove existing siding and install new siding
- Replace existing windows and exterior doors
- Install an Energy Recovery Ventilator (ERV) to improve ventilation in the second floor space
- Replace the second story entry bridge

On September 28, 2023, I put forward a memo (attached) asking the Board to approve funding for the estimated cost of the Barn 8 Refurbishment Project. Funding generally needs to be approved before a project can be put out to bid. The cost of the repairs was estimated to require \$768,991. At this time it was noted that replacement of the second story entry bridge had been separated from the rest of the work so that it could be handled as a stand-alone project for permitting. The cost of replacing the entry bridge was NOT included in the estimate.

On November 2, 2023, I put forward a memo (attached) asking the Board to approve \$15,747 for the purpose of replacing the wall heaters in the Dance Barn. The heaters were failing, and it seemed prudent to replace them before winter. Replacement of those heaters was included in the estimate of repairs brought forward in September 2023.

Currently, Capital Project 9722.09 – Barn 8 Refurbishment, has obligated capital funds of \$824,530. \$62,901 has been spent, leaving \$761,629 left in obligated funds for this project.

In the 2023 CRRRF Capital Budget, \$1,251,000 was set aside for these repairs to Barn 8:

- Building exterior repairs -- \$821,000
- Covered bridge entrance -- \$200,000
- Electrical system repair -- \$70,000
- Flat roof replacement -- \$50,000
- HVAC replacement -- \$110,000

The 2024 CRRRF Capital Budget assumed that these funds would be obligated for the Barn 8 project. Since \$824,530 was obligated, \$426,470 in additional funding is still available in the budget at this time.

### **Summary**

The most recent engineering evaluation of Barn 8 (Kingworks) recommended that the following repairs be made to Barn 8 to maintain its current use:

- Reinforce the first floor with adequate shear walls
- Add shear walls to the second floor
- Limit the second floor live load to 60 psf maximum
- Reinforce end walls of the second floor for basic wind loads
- Verify plywood sheathing on the roof and the attachment of a roof diaphragm
- Remove the existing CMU wall that was left as part of the Library barn demolition

None of these repairs are included in the planned Barn 8 Refurbishment Project.

March 20, 2017

Mitch Waterman  
Sudden Valley Community Association  
4 Clubhouse Circle  
Bellingham, WA 98229

Re: Structural Engineering Consulting Services  
Evaluation of Sudden Valley Dance

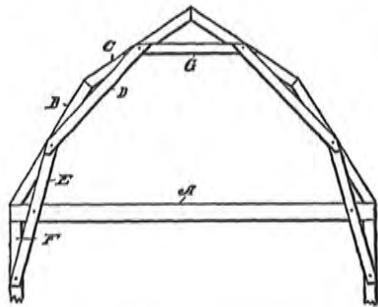
2017-021

Dear Mitch:

Wilson Engineering, LLC has been retained to evaluate the general condition of Barn 8, the "Dance Barn", in the recreational corridor. This is in conjunction with architectural and programming studies regarding whether to repurpose this building, or construct a new one.

### BRIEF DESCRIPTION

The building is of wood framed construction, with a main floor over a daylight basement. It has a gambrel roof, with columns and angled members that indicate a roof framing that is similar to the classic gambrel style truss shown in the diagram below.



Some of the bottom tie wood members have been removed, replaced by steel tie rods, as shown in the photo below. A horizontal steel angle distributes the thrust loading to the steel rods. No sag is visible.

The roof is covered by metal roofing, which along with the steep slopes, allows snow to shed easily. On the other hand, this does put the single story flat roofed addition in some danger of heavy drift loading.



The roof framing for the older building features columns at approximate 35' spacings, with an additional 9' to each wall. In the longitudinal direction, the columns are spaced at approximately 25'. The building is

approximately 180' long by 53' wide. What few joists that could be seen were a full 2" by 7 1/2", at 32" o.c. No decay in visible areas could be seen or smelled. In fact, the columns and the braces seemed to be exceptionally hard and tough.

### MAIN FLOOR SYSTEM

I did not sense any bounce or sag in the floor. I have also been on the floor during dance events, and did not sense undue vibrations at that time. However, Danielle Johnston and Sharon Robinson did note some (small) sags in the floor.

The floor framing is consistent with a barn structure. The sheathing is 2" (nominal) T&G, with 8x8 beams at 32" on center, supported by 12x12 beams at 12' centers. This is a system built to carry heavy loads.

### NOTABLE DAMAGE

The only damage that I noted was the plywood covering at the main level (front) entrance to the building, which has peeling paint and is curling up. This is minor, since the heavy framing below is in good condition.

### SEISMIC

The building should be covered, at least for structural aspects, by the International Existing Building Code (IEBC). This standard is less difficult to meet than the International Building Code (IBC). The force levels are lower, and certain prescriptive measures which would be difficult or impossible to implement are not required.

This means that the IEBC is intended to prevent loss of life and injury. It is not intended to prevent damage to the extent that the IBC is.

Given the relative lack of fenestration, and good condition of the materials, the building is better than most buildings of its age and construction. It could perform reasonably in an earthquake.

### FOUNDATIONS

No soils investigations have been performed. It is reasonable to expect that the building is supported by spread footings, as I am not aware of any wooden barns ever having been built on deep (pile) foundations.

Danielle Johnston has found a plan for a proposed building (not built) that shows foundations on piles 30' deep. This may indicate concern over settlement, or perhaps liquefiable soils that would perform poorly in an earthquake. In any case, since a new building would necessarily be covered by the IBC, the standards for a foundation would be more strict.

Given the stated purpose of the IEBC, these aspects are not of great concern. First, though some settlement may be occurring, given the age of the building, not much more settlement should be expected. Further, given the ductility of a wood building of this type, liquefaction may lead to extensive damage, but with low likelihood of greivous injuries.

### CONCLUSION

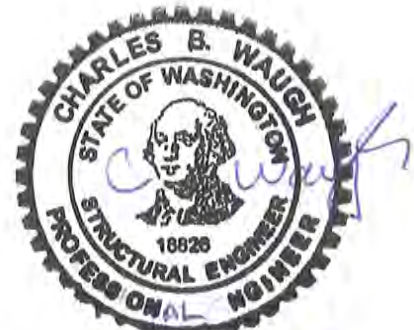
The building, from a structural point of view, is capable of being revitalized and repurposed. Architectural and other aspects will, of course, govern any decision.

We appreciate the opportunity to provide services to you.

Very truly yours,

WILSONENGINEERING, LLC

Charles Waugh, P.E., S.E.



23 MAR 2017



January 30, 2020

**PROJECT:** Sudden Valley Barn #8 Investigations **KW#19256**

**TO:** Tyler Andrews  
Sudden Valley Community Association  
4 Clubhouse Circle  
Bellingham, WA 98229

## **REPORT OF FINDINGS**

At the request of Tyler Andrews of PNW Services, INC. a review of the Sudden Valley Barn #8 was completed. This report addresses the Barn #8 structure and was limited to visual observation only. However, the framing and structure is similar to a previous report by Kingworks dated February 13, 2014 job # 13111 for the Library Barn. Our review of Barn #8 relied heavily on photos and previous observed framing for the Library Barn to evaluate framing and member sizes where calculations were completed in our review. At the time of our site visit on November 20, 2019, the "Library Barn" was demolished except for the foundation elements. The following sections describe our observations, and recommendations.

### **Barn #8:**

**Building Description:** The barn #8 is an early to mid-1900's timber framed barn structure that was probably built prior to the Sudden Valley community development for agricultural purposes. The structure is two stories tall with the first level constructed with a slab on ground and the upper floor constructed with timber joists and beams. The walls are constructed with siding over wood girts. The central roof vault is constructed with timber frames that are built up with sawn lumber members. The side roofs are supported with rafters. It appears that the central vault area was subjected to outward thrust forces and at some point in time a retrofit was completed. A steel rod and beam system is in place across the vault to resist these thrust forces and does not appear to be a part of the original building. The building's upper floor is currently an open assembly area that includes a dance floor and performance stage. The lower floor is used for office space, public meeting rooms, open public spaces, exercise room, and changing rooms for the pool.

**Available information:** Partial building drawings dated Nov 2017 were provided, it is unknown who prepared the drawings. Original building drawings were not available. Our review, analysis and recommendations are based on the previous report and our observations. Property

Condition Assessment by Airo dated October 14, 2013. Partial building drawings, engineering calculations, and a report Dated April 2012, prepared by Mats Harezlak P.E. were provided for the Library Barn.

Site observations were made on 11/20/19 and 1/20/2020. Our staff became generally familiar with the visible structural components of the building. The general floor framing sizes and spacing was taken from the previous engineering report by Kingworks. An area by the pool mechanical room and pool dry storage area was left exposed and was reviewed during our site visit. This area was framed with post and beam structure. Columns were heavy timber 12x12 columns. The 12X12 columns are placed on interior concrete piers approximately 2 ft above the finished floor slab on grade. Floor girders between columns were measured as rough sawn 12X12. However, a 12X10 beam was exposed in one location. Not enough area was exposed to determine a pattern for the girders, and it is unknown at this time if the beams were placed based on loads or what was available at the time when barn #8 was being built. Floor joists appear to be spaced at 30" oc. At the mechanical room visible member sizes varied and were 12x12, 6x12, 3x12, 8x12, 8x8, and what appeared to be 10x10 in the next bay over.

The other area that was exposed and available to be verified was at the 2<sup>nd</sup> floor. The serving room 202 on the second floor has access to the exterior eaves. At this location the roof rafters appears to be rough sawn 2x8 at approximately 30" oc spacing. The rafters are supported by a pony wall on the column line by the 6x12 girders. The floor framing was 6x12 spaced at 30" oc and beyond an 8x8 joist was visible. At Girders between columns a 6X12 was used as compared to the 12X12 visible in the pool mechanical area. At approximately 16 ft oc in the eaves additional diagonal members were framed similar to webs in a truss. The fastening of these members appeared to be limited to several nails in each member. In the eaves it appears several old beams were used to support the mechanical units. These rough sawn beams were supported by a combination of old wood and new 2x framing members with a combination of lag screws and nails as the fasteners. It is unlikely that this was part of the original construction.

**Observed condition issues:** The following conditions and structural issues were noted:

1. The existing structure appears to be significantly deficient in the lateral load capacity of the structure. To the best of our knowledge no additional plywood shear walls have been added in the first floor of the Barn #8 since it was constructed.
2. The 2<sup>nd</sup> floor open assembly area appears to be inadequate for gravity loading. Both the Kingworks and MJH, reports indicated that the 2<sup>nd</sup> floor of the Library Barn would be inadequate for 100 psf live loading. The current open dance hall or ballroom designation that would apply to this area would require a 100 psf loading.
3. The end walls at the east and west of the upper level space appear to be inadequately framed for wind loads. This was assumed to be framed similar to the Library Barn and has similar deficiencies in the framing. It appears an additional furring wall was used on barn #8 structure. It is unknown how this second wall was framed. It would require the wall to be opened up and reviewed to verify if the additional framing members are adequate for wind loads.
4. There are no plywood shear walls present between the upper level floor and the roof.
5. The roof framing appears to have no connection hardware to tie it to the rest of the building for uplift from wind.
6. At the exposed area in the pool storage area the post and beam structure was visible. It was not apparent that there is any positive connection between the post and beam or the post and foundations.

7. Based on the previous report for the Library Barn and the Airo report, there is the potential that there may be significant wood decay present that has been covered up. In our site visit there was areas that defiantly showed signs of staining from moisture buildup on the wood. In the roof eave a 5 gal bucket was present under one of the roof penetrations that were full of water and overflowing at the time of our visit on 1/20/2020. In the Mechanical room a beam was photographed that had significant visible dry rot on the bottom. There were multiple water stains on the wood in the mechanical room as well.
8. There is no plywood diaphragm at the existing roof structure. The metal roof may be adequate to provide some diaphragm capacity. However at the time of our report it is unknown what type of roof was used or the frequency of fasteners that were installed.
9. The existing CMU fire wall along gridline 8 of Library Barn per Kingworks KW-6 dated 2/18/2014 was tied into and braced at the Library barn structure as part of MJH recommendations. After the Library Barn was demolished it does not appear that any positive attachment was added from the wall to the existing barn 8 structure.
10. At the Library Barn, the westward lean of the central roof vault. It is our opinion that this issue occurred during construction of the barn and that it has not been an ongoing process. However, if the leaning is progressing, we feel that it will be arrested by the addition of plywood to the roof, which is necessary for seismic performance. It was observed in Barn #8 that the 2<sup>nd</sup> floor columns have a visible lean to the west of the structure as well.

**Existing structure analysis for “Library Building” from previous report:** The results of the previously report have been provide here with the assumption that similar deficiencies are present in the barn #8 building as well. No structural analysis has been performed at this time pending a request by the association to provide a proposal for this. If the association wants to provide specific upgrade recommendations Kingworks can provide a proposal to develop plans and details for the repairs to Barn # 8 specific to the items below.

1. *Gravity loads:*
  - a. *The existing central roof vault for Library Barn was modeled and determined to be inadequate when analyzed with appropriate wind and snow loads combined with the additional dead load from insulation, ceiling material and HVAC equipment. The majority of the truss members and connections are overstressed by a factor of 1.4 or more (the majority of overstressed conditions will also be present without the added dead loads mentioned, but to a lesser degree). This assumption is assumed to be similar construction and member sizes for Barn #8.*
  - b. *The existing Library Barn side roof rafters were checked for snow load combined with the additional dead load (similar to the central vault area item b). These rafters were overstressed by a factor of 1.8 and inadequate. This assumption is assumed to be similar construction and member sizes for Barn #8.*
  - c. *The Library Barn roof framing dead load was inadequate to resist the wind uplift loads and additional connection hardware will be required throughout. This assumption is assumed to be similar construction and member sizes for Barn #8.*
  - d. *The Library Barn flat 4x8 girders supporting the central roof vault and side roof rafters are grossly overstressed by a factor of 11.8. This assumption is assumed to be similar construction and member sizes for Barn #8.*

- e. *The Library Barn central 2<sup>nd</sup> floor columns supporting the central roof vaults are overstressed by a factor of 1.6. This assumption is assumed to be similar construction and member sizes for Barn #8.*

## 2. Lateral loads:

*The recommended upgrades for the Library Barn including significant shear walls added to the first floor and 2<sup>nd</sup> floor the buildings does not appear to have been completed on the Barn # 8 structure. Similar work would be required to upgrade the lateral including new foundation work and shear walls at the first and second floor.*

### Review recommendations:

Kingworks opinion is that this structure would require considerable renovation and repair to bring the existing structure up to code. This would include removing a significant amount of existing finishes to investigate further existing conditions. The finishes would most likely need to be demolished down to bare structure; significant upgrades would be recommended, after a full analysis of the existing structure. Then the finishes would need to be replaced back to the current condition. The upgrades would require new foundation elements for the 100 psf live load, new shear walls at 1<sup>st</sup> and 2<sup>nd</sup> floor. Additional positive connections at the existing post and beam structure, along with the end wall upgrades. A new roof diaphragm would most likely be required as well as unknown number of members being replaced due to corrosion or rot in the existing structure.

Another possible option is to leave the structure as is with limited changes as allowed by the 2015 IEBC. This would limit any change in occupancy and changes to the lateral or gravity loads to 10% or 5% respectively. Kingworks would still recommend several upgrades to the existing structure to maintain the current use. These upgrades include reinforcing the first floor with adequate shear walls. The 2<sup>nd</sup> floor should have additional shear walls added to provide a viable load path. The 2<sup>nd</sup> floor live load should be limited to 60 psf maximum. The end walls at the second floor should be reinforced for the basic wind loads. The roof needs to be verified for a plywood sheathing and attachment of a roof diaphragm. The existing CMU wall that was left as part of Library barn demolition should be removed or a permanent support provided for the wall for wind and seismic loads.

This concludes our recommendations for the barn #8 investigations. It is our opinion that if the community would like to have significant changes or change of occupancy with regard to Barn #8, the structure is most likely cheaper to demolish and rebuild rather than trying to bring the existing structure up to code compliant loads. If the structure is to be left as and occupied for the foreseeable future several repairs and maintenance are recommended to be addressed on the existing structure. Feel free to contact us if you have any questions or concerns. We would be happy to assist if the association would like to do amore in depth review of the existing structure.

Sincerely,

Quinn Hanks, P.E.  
Associate



kingworks  
CONSULTING ENGINEERS





2ND FLOOR COLUMNS  
WITH VISIBLE LEAN



ATTIC WATER FILLED  
BUCKET OVERFLOWING



EXPOSED VISIBLE DRY ROT AT BEAM IN MECHANICAL ROOM



EXPOSED BEAM IN MECHANICAL ROOM WITH WATER STAINS AND NO POSITIVE CONECTION AT BEAM TO COLUMN



EXPOSED COLUMN IN MECHANICAL ROOM NO POSITIVE CONNECTION TO CONCRETE PLINTH



EXPOSED JOIST FRAMING IN MECHANICAL ROOM



February 19, 2020

Sudden Valley Community Association  
Attn: General Manager  
4 Clubhouse Circle  
Bellingham, WA 98229

RE: Project Scope Letter  
**Barn 8 Structural Analysis**

PNW Services, Inc. is providing this project scope letter to SVCA for completing a full structural analysis of Barn 8. Previously, on 1-31-20, PNW submitted a preliminary structural analysis report completed by Kingworks Consulting Engineers on Barn 8. This initial report was intended to be a preliminary report based on site observations only to provide the SVCA's GM and Board Members an initial assessment of the structure without completing a full in-depth structural analysis. The Barn 8 structure is very similar in size, appearance, and framing style when compared to the Library Barn (Barn 7) that was taken down. While Barn 8 has received a lot of cosmetic upgrades that Barn 7 didn't, the overall characteristics of the 2 barns are very similar.

The preliminary structural analysis completed by Kingworks was based on 2 site visits to Barn 8, reviewing visible framing connections and the overall condition of the structure. No additional exploratory work was completed other than what could be visibly observed. Based on what was visible, Barn 8 appears to closely resemble Barn 7 and the findings from the full structural analysis that was completed on Barn 7 prior to being taken down. The site visits revealed similar framing style and size of members, structural connections (framing to foundation, roof to walls, etc.) rot was visible, a lean in the upper columns was visible, leaks, etc. Based on these similarities it appears the findings from Barn 7 for structural deficiencies will likely be found in Barn 8 as many of them were visible during the Barn 8 site visits; a full analysis would need to be conducted to be sure.

Based on this preliminary analysis there are different options for how to proceed. If it is desired to bring the building up to all current codes, and repair all deficiencies such as rot, leaks, framing, etc. then a full structural analysis would need to be conducted. If making general improvements to the structure are desired a less in-depth analysis could be provided. A full structural analysis to Barn 8 will be much more extensive than what was required at Barn 7, because Barn 7 was primarily an open structure with minimal finishes. Barn 8 is primarily finished with the framing and structural condition hidden requiring lots of exploratory work. The intended use of Barn 8 in the future should also be a consideration in this decision depending on if the existing layout and or use of Barn 8 is proposed to change.

After submitting the preliminary structural analysis PNW received an email with additional comments on the report dated 2-13-20. In response to the comments:



- PNW and Kingworks acknowledge the use of Barn 7 compared to Barn 8 is quite different. Barn 8 is finished throughout the interior, is heated, and is used on a regular basis by the SVCA community, all very different than Barn 7. Our preliminary analysis focused on the structural framing of the 2 Barns. Based on initial site observations the 2 Barns appear to be very similar even though their uses are very different. Both Barns 7 and 8 were built for agricultural purposes. Most of the service life of the both structures will have been in the same unheated condition. Barn 8 is currently heated; however, during most of its service life it was not. Most likely if the structure was exposed, many of the deficiencies found in Barn 7 would also be evident in Barn 8. This however is not possible to view in the current covered condition.
- The email references improvements completed in 2007 to Barn 8, including installation of the Health Club. PNW and Kingworks aren't familiar with the improvements completed other than what is visible, and haven't seen any drawings reflecting what structural improvements might have been completed. It is our understanding that none of the upgrades have structural plans or calculations provided for what was completed. Based on past experience with similar structures, the retrofit to bring a structure up to code compliance is extensive and will require that the structural elements be exposed for viewing and possible repair if they do not meet code.
- The email also references additional steel rods that were installed in the Dance Barn. We assume this is in reference to the 2<sup>nd</sup> floor open dance hall, and these are acknowledged on Page 1 in the Kingworks report. However, neither PNW or Kingworks have knowledge regarding this installation, and haven't seen any drawings or calculations to be able to verify if this improvement meets code. With regard to these tension rods at the roof, similar rods were installed in Barn 7 as well. The previous Kingworks analysis of the Barn 7 roof found the tension rods to be inadequate for the current code loads. A full analysis of Barn 8 would most likely result in a similar conclusion, that the tension rods are helpful, but their connections are inadequate for the current code loads.
- The email references a 2017 engineering study completed by Wilson Engineering. PNW and Kingworks aren't familiar with this study.
- The email references the entry to the Barn, and engineering reports. PNW and Kingworks aren't familiar with this study.

From the 2-13-20 email, the additional Engineering reports should be considered if they are available for review in addition to Kingworks preliminary structural analysis based on site observation only. If SVCA can provide copies of these reports Kingworks can review them, and provide additional responses based on any additional information that might be in them. The intent with Kingworks preliminary analysis was to provide an overview of the general structure based on site observation and acknowledgment of the similarities in Barn 7. Depending on SVCA's intent for Barn 8, additional analysis can be completed in a few different directions as Kingworks report mentioned. Below is a summary of the scope completed to date, and an estimated scope if a full structural analysis is required for Barn 8.



<b>Preliminary Structural Analysis Dated 1-30-20</b>	
- Kingworks Consulting Engineers – 2 Site visits and initial review of Barn 8 structure based on visible elements without completing additional exploratory work. Provide additional clarifications per email dated 2-13-20, and attend Board meeting on 2-27-20.	\$2,400.00
- PNW Services, Inc. – 2 site visits providing access for Kingworks, review of preliminary report, review previous reports provided by Kingworks from Airo and MJH on structures, additional clarifications per email dated 2-13-20, and attend Board meeting on 2-27-20.	\$2,295.00
Total Preliminary Structural Analysis Estimate	\$4,695.00
<b>Detailed Structural Analysis – Option</b>	
- Kingworks Consulting Engineers – Provide detailed structural analysis on Barn 8 at the community associations request once more direction is provided as to the goals and future use of the Barn 8 structure. Barn 7 analysis was approximately \$14,000 to provide a structural report on a very similarly framed/size/type of structure. Barn 8 is assumed to require similar time, but additional time is budgeted with Barn 8 not being fully open as Barn 7 was.	\$18,000.00
- Subcontractor – Create access holes to view structural connections, and patch upon completion. Scope includes removal of drywall, wood, etc. as necessary. Expected locations are all columns (top and bottom), exterior walls (top and bottom strips to review connections), remove strip of ceiling wood for full length of barn roof to view connections, first floor ceiling removal as necessary to view beams, etc. Scope also includes providing scaffolding / ladders for engineer’s access. Hourly estimate with 160 hours budgeted at \$65.00/HR plus materials allowance.	\$15,190.00  (\$14,000 + WSST)
- PNW Services, Inc. – Coordination with subcontractor and oversight for creating access holes and patching, coordination with engineer and review of report, and coordination with SVCA staff for access and area closures for work to take place.	\$8,100.00
- Miscellaneous Allowance – Allowance if any utilities are broken during access hole cutting. Possible example would be an electrical wire laying on the surface to be removed, and not attached to a beam or in a conduit, and as a result is accidentally cut.	\$3,255.00  (\$3,000 + WSST)
Total Detailed Structural Analysis Estimate	\$44,545.00
Contingency Allowance at 15%	\$6,681.75
Total Estimated Project Cost with Contingency	\$51,226.75



Please let me know if you have any questions on the above, and if you would like a more in-depth review of Barn 8. PNW and Kingworks would be happy to assist SVCA with any further analysis desired.

Sincerely,

Tyler Andrews  
President



# Sudden Valley Community Association

360-734-6430

4 Clubhouse Circle Bellingham, WA 98229

[www.suddenvalley.com](http://www.suddenvalley.com)

## CAPITAL REQUEST MEMO

**To:** Sudden Valley Community Association Board of Directors  
**From:** Jo Anne Jensen, Operations Manager / Deputy GM  
**Date:** October 27th, 2022  
**Subject:** Capital Request – Barn 8 Remodel

---

### Purpose

To request funding approval for design, and permitting to remodel Barn 8.

### Background

Barn 8 has numerous items needing repair as identified in PNW Services, Inc. proposal dated October 25, 2022. The siding is believed to be original on Barn 8, and has rot damage, bird damage, and needs replacement. With the siding being proposed to be replaced additional items should also be addressed as identified.

### Analysis

Sarah Brown Architecture & Design, Kingworks Structural Engineers, and Berona Engineering were contracted to provide design improvements, construction drawings, and contract documents for the remodel of Barn 8.

Upon project approval, design will be completed, and permitting will be submitted to Whatcom County. A separate capital project will be brought forward for Board review after design is complete requesting additional funds for construction. The overall project value is estimated to be approximately \$800,000.00, and construction would be anticipated to start spring of 2023 with an approximate six-month completion time.

### Proposal

Provide funding for remodeling Barn 8 per PNW's proposal dated October 25, 2022.

### Request

Request \$39,792.00 for the design and permitting for the remodel of the Barn 8.

### Motion

Move that the Board of Directors approve the allocation of \$39,792.00 from CRRRF to move forward with design and permitting for the remodel of Barn 8.



# Sudden Valley Community Association

360-734-6430

4 Clubhouse Circle Bellingham, WA 98229

[www.suddenvalley.com](http://www.suddenvalley.com)

## Board of Directors Approval

Approved: \_\_\_\_\_ Not Approved: \_\_\_\_\_ SVCA Board of Directors





October 25, 2022

Sudden Valley Community Association  
Attn: Jo Anne Jensen  
4 Clubhouse Circle  
Bellingham, WA 98229

RE: Project Scope Letter  
**Barn 8 Remodel**

PNW is providing this overall project scope letter to SVCA for the proposed Barn 8 Remodel. Overall scope of work assumes:

- Design, Permitting, & Contractor Bids
  - o Design by Sarah Brown Architecture & Design – Barn 8 Remodel.
  - o Permitting with Whatcom County.
  - o Prepare bid package, issue to contractors, and bid evaluation with recommendation to SVCA.
  
- Construction
  - o Existing flat roof will be replaced. During replacement the flat roof will be rebuilt to provide positive drainage. Currently the roof is too flat with the low point being in the middle not allowing water to drain. The existing roof membrane will be removed, new framing installed on top of the old framing, and a new membrane installed. It is unknown if any framing damage will be discovered when the existing membrane is removed. The budget below contains an allowance for repairs as required. Repairs will be at the direction of the structural engineer and architect.
  - o Existing siding will be removed, and new siding installed. Fiber cement siding is proposed, not wood, to minimize bird damage. The proposed layout of the siding will be similar to the existing barn as shown in the attached preliminary drawings, and the fiber cement siding has the appearance of wood. It is unknown if any structural damage will be found that needs replacing until after the existing siding is removed. The budget below contains an allowance for repairs as required. Repairs will be at the direction of the structural engineer and architect. Siding color options will be presented to the Board for selection after design completion. Siding replacement will be completed in stages by wall to maintain access to the barn. When the front is being completed access will be thru the back entry, and then the opposite.
  - o Existing windows and exterior doors will be replaced with new. New installations will be energy efficient, and meet current code requirements. Exterior lighting will be replaced as part of the project.
  - o An ERV, Energy Recovery Ventilator, will be installed to provide proper ventilation in the upstairs main room. Currently this room has inadequate ventilation, and is only heated by overhead propane heaters. The new system will



provide air flow per current code requirements, and supplement the existing heaters. Air conditioning is not being installed as part of this unit as this would require the entire building to be brought up to current energy code requirements, and be a much larger project. The existing electrical system will be updated to accommodate this additional load requirement. New louvers will be installed in the exterior wall prior to siding installation. New ducting as required will be installed inside.

- The 2<sup>nd</sup> story covered entry bridge will be replaced. The current bridge has rot damage, and is sloping towards the barn so rainwater is constantly trapped against the building. A new structure similar to the existing will be built at the same location. The new structure will be permitted meeting current code requirements, and be properly sloped to provide drainage away from the building.

This project scope letter addresses design and permitting anticipated to complete the above scope of work. Once design is complete a separate project scope letter will be prepared with an engineer’s estimate of proposed work prior to moving forward with construction. At this time the overall project value is estimated to be approximately \$800,000.00.

Design, Permitting, Contractor Bids	
- Sarah Brown Architecture & Design – Design & Permitting	\$6,800.00
- Kingworks Structural Engineers – Covered Bridge Design	\$8,500.00
- Berona Engineers Inc. – ERV Design	\$3,000.00
- Permit Fees Allowance	\$10,000.00
- PNW Services, Inc. – Oversight & Bid Package	\$4,860.00
Subtotal	\$33,160.00
20% Contingency	\$6,632.00
Total – Design, Permitting, Contractor Bids	\$39,792.00
Construction	
- Under separate proposal after design is complete.	

Please let me know if you have any questions, or if you would like any further information.

Sincerely,

Tyler Andrews  
President



May 27, 2022

Tyler Andrews  
PNW Services Inc.  
PO Box 30498  
Bellingham, WA 98228

Dear Tyler,

The following provides a summary of the work of residing the Sudden Valley Recreation Center, Barn 8. This document describes the Agreement for Services between PNW Services Inc. (Client), and Sarah Brown Architecture + Design, Architect (Consultant). By signing this Agreement for Services, Client accepts the scope, fees and timing as set forth herein, including the attached "CONSULTANT CONTRACT PROVISIONS" which is fully incorporated into this Agreement for Services.

#### **PROJECT SUMMARY DESCRIPTION**

The ownership group would like to remove and replace the existing low slope roofing, remove and replace the existing siding on all building elevations while maintaining the current character and locate any window replacements that may be required.

#### **SCOPE OF SERVICES TO BE PROVIDED**

As discussed over the phone, PNW will provide electronic CAD/Revit files of the building elevations.

The scope of work provided by Consultant will include:

- A siding scheme for the SVCA board to approve
- Preparation of Contract Documents consisting of Architectural Construction Drawings for the remodel and improvement in the subject projects.
- Assist the client with the submission to Whatcom County for the project's building permit and respond to city review comments. All other construction permit submissions are the responsibility of the project Contractors.

#### **SERVICES NOT PROVIDED**

- The Consultant is not providing nor is the Consultant responsible for the following services:
- Structural, Electrical, and Mechanical, Acoustical or Civil Engineering Design or their drawings for this Project.
- Fire suppression, Fire Alarm or Security System Design or their drawings for this Project.
- Construction budgets, cost estimates, or construction inspections
- Detailed Construction specifications.
- Fixtures or other equipment that have no permanent connection to the structure of the building.



**PROJECT FEES**

Fees for services provided will be billed on an hourly basis at the rate of \$150.00 per hour, plus reimbursable expense. Reimbursable expenses will be billed to the client at cost. Reimbursable expenses include but are not limited to computer downloads, photo charges, shipping, document printing and copying.

The estimated total fee for services under this agreement is \$6,800 but may vary depending on unforeseen issues (such as city questions or construction consulting) and the actual time required by the Consultant to complete this project.

Fees shall be invoiced monthly and will be paid by the Client within 30 days of receipt.

All additional costs associated with this project beyond the services described in this agreement, including but not limited to permit fees, application fees, contractor fees, etc. are the responsibility of Client, not the Consultant.

All limitations of liability, indemnifications, warranties and representations contained in this Agreement for Services shall survive the completion of this Agreement and shall remain in full force and effect.

Please indicate acceptance of this Agreement for Services where indicated below and return a signed copy to me.

Sincerely,

A handwritten signature in black ink that reads "Sarah Brown".

Sarah Brown

ACCEPTED:

By: \_\_\_\_\_

Date: \_\_\_\_\_



## CONSULTANT CONTRACT PROVISIONS

1. **CONTRACT** – These Contract Provisions and the accompanying Proposal constitute the full and complete Agreement between the parties and may be changed, amended, added to, superseded, or waived only if both parties specifically agree in writing to such amendment of the Agreement. In the event of any inconsistency between these Contract Provisions and any proposal, contract, purchase order, requisition, notice to proceed, or like document, these Contract Provisions shall govern.

2. **RIGHT OF ENTRY** – When entry to property is required for the CONSULTANT to perform its services, the Client agrees to obtain legal right-of-entry on the property.

3. **DOCUMENTS** – All reports, notes, drawings, specifications, data, calculations, and other documents, including those in electronic form, prepared by CONSULTANT are instruments of CONSULTANT's service that shall remain CONSULTANT's property. The Client agrees not to use CONSULTANT-generated documents for marketing purposes, for projects other than the project for which the documents were prepared by CONSULTANT, or for future modifications to this project, without CONSULTANT's express written permission.

Any reuse or distribution to third parties without such express written permission or project-specific adaptation by CONSULTANT will be at the Client's sole risk and without liability to CONSULTANT or its employees, subsidiaries, independent professional associates, subconsultants, and subcontractors. Client shall, to the fullest extent permitted by law, defend, indemnify, and hold harmless CONSULTANT from and against any and all costs, expenses, fees, losses, claims, demands, liabilities, suits, actions, and damages whatsoever arising out of or resulting from such unauthorized reuse or distribution.

4. **DISPOSAL OF SAMPLES** – CONSULTANT will discard samples upon completion of the work covered under this Agreement, unless the Client instructs otherwise in writing.

5. **HAZARDOUS MATERIALS** – The scope of CONSULTANT's services for this Agreement does not include any responsibility for detection, remediation, accidental release, or services relating to waste, oil, asbestos, lead, or other hazardous materials, as defined by Federal, State, and local laws or regulations.

6. **CONSTRUCTION PHASE SERVICES** – If CONSULTANT performs any services during the construction phase of the project, CONSULTANT shall not supervise, direct, or have control over Contractor's work. CONSULTANT shall not have authority over or responsibility for the construction means, methods, techniques, sequences, or procedures for safety precautions and programs in connection with the work of the Contractor. CONSULTANT does not guarantee the performance of the construction contract by the Contractor and does not assume responsibility for the Contractor's failure to furnish and perform its work in accordance with the Contract Documents.

7. **STANDARD OF CARE** – CONSULTANT and its employees, subsidiaries, independent professional associates, subconsultants, and subcontractors will exercise that degree of care and skill ordinarily practiced under similar circumstances by design professionals providing similar services. Client agrees that services provided will be rendered without any warranty, express or implied.

CONSULTANT shall exercise usual and customary professional care in its efforts to comply with applicable codes, regulations, laws rules, ordinances, and such other requirements in effect as of the date of execution of this Agreement.

8. **OPINION OF PROBABLE COSTS** – When required as part of its work, CONSULTANT will furnish opinions of probable cost, but does not guarantee the accuracy of such estimates. Opinions of probable cost, financial evaluations,



feasibility studies, economic analyses of alternate solutions, and utilitarian considerations of operations and maintenance costs prepared by CONSULTANT hereunder will be made on the basis of CONSULTANT's experience and qualifications and will represent CONSULTANT's judgment as an experienced and qualified design professional. However, users of the probable cost opinions must recognize that CONSULTANT does not have control over the cost of labor, material, equipment, or services furnished by others or over market conditions or contractors' methods of determining prices or performing the work.

9. SUSPENSION OF WORK – The Client may, at any time, by written notice, suspend further work by CONSULTANT. The Client shall remain liable for, and shall promptly pay CONSULTANT, for all services rendered to the date of suspension of services, plus suspension charges, which shall include the cost of assembling documents, personnel and equipment, rescheduling or reassignment, and commitments made to others on Client's behalf.

Client shall pay CONSULTANT pursuant to the rates and charges set forth in the Proposal. CONSULTANT will submit monthly invoices to Client for services rendered and expenses incurred. If Client does not pay invoices within thirty (30) days of submission of invoice, CONSULTANT may, upon written notice to the Client, suspend further work until payments are brought current. The Client agrees to indemnify and hold CONSULTANT harmless from any claim or liability resulting from such suspension.

Upon receipt of payment for services performed through the date of suspension, the CONSULTANT will provide copies of their draft work product, in electronic form, in the state of completion achieved prior to termination to the client.

10. CHANGES OR DELAYS – Unless the accompanying Proposal provides otherwise, the proposed fees constitute CONSULTANT's estimate to perform the services required to complete the Project. Required services often are not fully definable in the initial planning; accordingly, developments may dictate a change in the scope of services to be performed. Where this occurs, changes in the Agreement shall be negotiated and an equitable adjustment shall be made.

Costs and schedule commitments shall be subject to renegotiation for unreasonable delays caused by the Client's failure to provide specified facilities, direction, or information, or if CONSULTANT's failure to perform is due to any act of God, labor trouble, fire, inclement weather, act of governmental authority, failure of transportation, accident, power failure, or interruption or any other cause beyond the reasonable control of CONSULTANT. Temporary work stoppage caused by any of the above may result in additional cost beyond that outlined in the accompanying Proposal.

11. LIABILITY – To the fullest extent permitted by law, the total liability, in the aggregate, of CONSULTANT and CONSULTANT's officers, directors, employees, agents, and consultants to Client and anyone claiming by, through or under Client, for any and all injuries, claims, losses, expenses, or damages whatsoever arising out of or in any way related to CONSULTANT's services, the Project or this Agreement, from any cause or causes whatsoever, including but not limited to, negligence, strict liability, breach of contract or breach of warranty shall not exceed the total compensation received by CONSULTANT under this Agreement.

12. CONFLICTS OF INTEREST – This assignment may involve parties with adverse interests to clients with whom CONSULTANT has current or past relationships. It is CONSULTANT policy to make reasonable attempts to identify such relationships prior to acceptance of a professional assignment, but CONSULTANT cannot assure that conflicts or perceived conflicts will not arise, and CONSULTANT does not accept responsibility for such occurrences.



13. REIMBURSABLE EXPENSES – CONSULTANT will bill direct nonpayroll expenses at cost plus 10%. Direct expenses include all reasonable expenses resulting from required responses to subpoenas or court orders related to work under the Contract.

14. MISCELLANEOUS - Governing Law: The laws of the state in which the CONSULTANT office executing this Agreement is located shall govern the validity and interpretation of this Agreement.

Invalid Terms: In the event any of these Contract Provisions are found to be illegal or otherwise unenforceable, the unenforceable Contract Provision will be stricken. Striking such a Contract Provision shall have no effect on the enforceability of the remaining Contract Provisions and those remaining Contract Provisions shall continue in full force and effect as if the unenforceable Contract Provision were never included in the Agreement.

Mediation: The Client and CONSULTANT agree to submit all claims and disputes arising out of this Agreement to non-binding mediation prior to the initiation of legal proceedings. This provision shall survive completion or termination of this Agreement; however, neither party shall seek mediation of any claim or dispute arising out of this Agreement beyond the period of time that would bar the initiation of legal proceedings to litigate such claim or dispute under the applicable law.

CONSULTANT Reliance: CONSULTANT shall be entitled to rely, without liability, on the accuracy and completeness of any and all information provided by Client, Client's consultants and contractors, and information from public records, without the need for independent verification.

Certifications: CONSULTANT shall not be required to sign any documents, no matter by whom requested, that would result in CONSULTANT's having to certify, guaranty, or warrant the existence of conditions that CONSULTANT cannot ascertain.

Third Parties: Nothing contained in this Agreement shall create a contractual relationship with, or a cause of action in favor of, a third party against either the Client or CONSULTANT. CONSULTANT's services hereunder are being performed solely for the benefit of the Client, and no other entity shall have any claim against CONSULTANT because of this Agreement or CONSULTANT's performance of services hereunder.

Consequential Damages: Neither the Client nor the CONSULTANT shall be liable to the other or shall make any claim for any incidental, indirect or consequential damages arising out of, or connected in any way to the Project or this Agreement. This mutual waiver includes, but is not limited to, damages related to loss of use, loss of profits, loss of income, loss of reputation, unrealized savings or diminution of property value and shall apply to any cause of action including negligence, strict liability, breach of contract and breach of warranty.

# ENGINEERING SERVICES AGREEMENT with Kingworks Structural Engineers

**CLIENT:** PNW Services, INC. KW No: 22166  
P.O. Box 30498  
Bellingham, WA 98228

**PROJECT:** Sudden Valley Assoc. Barn 8 Bridge & Canopy  
Southern Ct Drive  
Bellingham, WA 98225

**CLIENT REPRESENTATIVE:** Tyler Andrews

## Description of Project:

Sudden valley is replacing the elevated walkway and adding a new canopy at barn 8. The existing walkway is on the east side of barn 8 and accesses the 2nd floor by spanning over an alley. The structure is enclosed with walls and a roof. The new replacement bridge will need to be 20ft in length 16ft wide and will also need to be enclosed. The structure will be a steel framed independent structure, with infill wood framing at the walls and roof. The floor will be concrete with pan deck. The new entry canopy for the west side of the barn will have plan dimensions of 18ft X 12ft. It will be constructed with heavy timber column frame with steel structure for the gable roof. Foundations for both structures are anticipated to be conventional shallow spread footings.

## KW Scope of Basic Services:

Design Phase: Provide structural engineering calculations and details for permit and construction of the new bridge and canopy structure.

Construction Phase: Respond to questions and review submittals and inspection reports as needed.

Assumptions:

-IBC presumptive soil bearing values will be utilized at the owners request.

A liability limit of \$100,000 is a condition of participation on this project, see the terms and conditions.

## List of Information Provided by CLIENT to Prepare this Agreement:

E-MAIL with Tyler Andrews 8/8/2022

## Engineering Services Fee:

Design Phase: Hourly with estimate of \$8,500

Construction Phase: To Be Determined

The attached Fee Schedule and the attached Statement of Terms and Conditions are incorporated into and made a part of this Engineering Service Agreement.

**Issued by:**

*K. Quinn Hanks*

Date: 8/22/2022

K. Quinn Hanks, PE/ Associate

**Accepted by:**

Date: \_\_\_\_\_

(Signature of the authorized representative of the client)



*Note: Each page of this Terms and Conditions and Fee Schedule shall be read and initialed by Client and shall be returned with the signed Agreement.*

## **STATEMENT OF TERMS AND CONDITIONS**

This Statement of Terms and Conditions is incorporated into and made part of the Engineering Services Agreement between Kingworks Structural Engineers (referred to hereinafter as "KW"), and "CLIENT" (as named in the attached Agreement) for the "PROJECT" (as named in the attached Agreement). The Engineering Services Agreement and the Fee Schedule referenced in it and this Statement of Terms and Conditions are collectively referred to hereinafter as "this Agreement."

### **1. RESPONSIBILITIES OF KW**

KW will perform the professional engineering services delineated in the Engineering Services Agreement ("the Basic Services"). Services beyond those delineated in the Engineering Services Agreement are defined as "Extra Services" and may be performed by subsequent written instrument. The Basic Services and any authorized Extra Services are collectively referred to hereinafter as "the Services."

### **2. RESPONSIBILITIES OF CLIENT**

CLIENT shall:

- A. Provide all criteria and full information as to requirements for the PROJECT. KW is entitled to rely upon the completeness and accuracy of the information and documents provided by CLIENT.
- B. Designate a person to act as the CLIENT's representative with respect to communications with KW. KW is entitled to rely upon all decisions, approvals and commitments communicated by the CLIENT's designated representative.
- C. Give prompt notice to KW of any development that affects the scope and/or timing of KW's services.
- D. Coordinate KW's design/services with those of CLIENT's other consultants.
- E. Retain a geotechnical engineer to provide project recommendations. KW does not practice geotechnical engineering and shall not be held responsible for any direct or indirect geotechnical issues related to the project. These issues include, but are not limited to: earthwork, excavations, bearing capacities, drainage considerations, settlement, liquefaction, and/or geologic hazards. KW recommends that a site-specific geotechnical investigation be performed by a licensed Geotechnical Engineer to provide recommendations for design and construction of foundations, slabs, and other earth-supported structures. In the case that the CLIENT forgoes such an investigation, KW will rely upon IBC Presumptive Soil parameters for design and the CLIENT acknowledges there is an increased risk of site-specific soil conditions that could be detrimental to the construction and/or structural integrity. In this case, as a minimum measure, KW recommends that a geotechnical engineer be retained before the foundation is constructed to observe the excavation and confirm that the Presumptive Soil parameters assumed for design are appropriate.

### **3. COMPENSATION**

- A. All charges for Reimbursable Expenses other than mileage, printing and communication shall bear a 10% handling charge unless stated otherwise in the attached Fee Schedule.
- B. Unless otherwise stated, CLIENT will be invoiced monthly. Payment is due upon receipt of the invoice. Interest is charged at the rate of twelve percent per annum on amounts not paid within thirty days of the invoice date. KW may suspend and/or terminate performance of Services in the event of a payment default. In that case, KW shall have no liability for any delays, costs or damages occasioned as a result of the suspension or termination.
- C. If the PROJECT is postponed, suspended, or abandoned, KW will be paid for all services performed and Reimbursable Expenses incurred prior to the date on which KW is notified of the postponement, suspension or abandonment.

### **4. CONSTRUCTION PHASE**

- A. KW shall not have control over and shall have no responsibility for construction means, methods, techniques, sequences or procedures.
- B. KW shall have no control over and shall have no responsibility for jobsite safety.
- C. KW shall have no responsibility for any failure on the part of any contractor to perform construction in accordance with drawings and/or specifications and shall have no responsibility for any act, error or omission committed by any contractor.
- D. KW will not perform inspections. Any site observations are conducted by KW only to become generally familiar with the progress of the construction work.

## 5. DISPUTES AND RESOLUTION

- A. KW and CLIENT agree that, as a prerequisite to commencing litigation, all disputes between them arising out of or related to this Agreement shall be submitted to mediation before the American Arbitration Association acting under its Construction Industry Mediation Rules. Any litigation that is commenced before completion of a mediation proceeding required by this provision shall be dismissed upon the motion of the party that did not commence the litigation.
- B. The sole venue for any litigation arising out of or related to this Agreement shall be Whatcom County Superior Court.
- C. Any litigation between the parties out of or related to this Agreement – whether commenced by complaint, third-party complaint or cross-claim – must be commenced within three years of the date on which KW last performs substantial services under this Agreement.
- D. KW waives all claims for damages against CLIENT and CLIENT's employees to the extent the damages are covered by insurance carried by or for the benefit of KW. CLIENT waives all claims for damages against KW and KW's employees to the extent the damages are covered by insurance carried by or for the benefit of CLIENT.
- E. Each party waives all claims for consequential damages against the other.
- F. The CLIENT agrees to limit the aggregate amount of damages and/or costs (including attorney fees and expert witness fees) that the CLIENT may recover against KW (together with its members, and employees) to One Hundred Thousand Dollars (\$100,000). CLIENT AGREES THIS IS A MUTUALLY NEGOTIATED LIMIT OF LIABILITY. The types of claims to which this limitation applies include, without limitation, claims based on negligence, professional errors or omissions, malpractice, indemnity or contribution, breach of contract, breach of expressed or implied warranty and strict liability.
- G. Before CLIENT may commence litigation or arbitration against KW based on professional negligence or failure to perform in accordance with this Agreement, the Owner shall furnish KW with a report written by, and bearing the professional seal of, a professional engineer who is licensed to practice in Washington and who has recent experience with projects similar to the Project. The report must describe in detail each respect in which KW, in the opinion of the author, performed negligently or breached this Agreement. Only those items described in the report may be the subject of any litigation or arbitration commenced by the Owner against KW. The report must be furnished to KW at least thirty days before the mediation called for in this Agreement is convened, and its author must, if requested by KW, meet with KW during the mediation to discuss the report. If CLIENT commences litigation or arbitration without having complied with this provision, the litigation or arbitration shall, upon motion of KW, be dismissed.

## 6. MISCELLANEOUS

- A. This Agreement may be terminated by either party on seven days written notice to the other party.
- B. In providing services under this Agreement, the Consultant will endeavor to perform in a manner consistent with that degree of care and skill ordinarily exercised by members of the same profession currently practicing under similar circumstances within Whatcom, Skagit, and Island Counties in Washington State. No warranty, expressed or implied, is made or intended by this Agreement, by the Services, by the documents prepared and issued by KW or by oral or written reports furnished by KW.
- C. Neither KW nor CLIENT may assign this Agreement or any rights arising under it, whether during or after performance, to any other person or entity without first receiving the written consent of the other party, which consent may be withheld for any reason.
- D. Drawings and specifications prepared by KW are instruments of service and are the property of KW whether the work for which they are prepared is executed or not. The instruments of service are not to be used on other projects, except by specific, written agreement. Copies of the instruments of service may be retained by the CLIENT for its reference in the use, maintenance and occupancy of the completed PROJECT. The instruments of service shall not be altered in any manner without the permission of KW. Any use of the instruments of service on another project, or on this PROJECT following a termination of this Agreement when KW is not in default, shall be at the CLIENT'S sole risk and without liability on the part of KW.
- E. Nothing contained in this Agreement shall create a contract relationship with, or a cause of action in favor of, any person or entity not a party hereto. There are no third party beneficiaries of this Agreement.
- F. This Agreement states all of the terms of the agreement between the parties respecting its subject matter and supersedes all prior and contemporaneous representations, negotiations, commitments and agreements respecting its subject matter. This Agreement shall not be modified or amended except by way of an instrument signed by both parties.



## **FEE SCHEDULE**

Services performed by Kingworks Structural Engineers (“KW”) on the basis of hourly rates will be charged at the following rates:

<b>CLASSIFICATION</b>	<b>HOURLY RATE</b>
Principal	\$161.00
Project Manager / Associate	145.00
Senior Engineer	134.00
Staff Engineer	105.00
EIT	95.00
Technician	85.00

The rates may be changed annually in accordance with KW's normal review practices.

**Reimbursable Expenses are in addition to compensation for Basic Services and Extra Services and include expenses incurred by KW directly related to the PROJECT, including the following:**

- 1 Outside consultant or testing services will be charged at cost plus 10%
- 2 Mileage in private or company vehicles will be charged at the current IRS Standard Mileage Rate for miles driven on PROJECT related business.
- 3 Actual travel and subsistence expenses incurred by KW personnel when away from the home office performing services related to the PROJECT will be charged at cost.
- 4 Delivery expenses, such as express shipment and postage will be charged at cost.
- 5 Other similar PROJECT-related expenses.

Reimbursable Expenses will be billed monthly. Except as specifically stated above, Reimbursable Expenses will be charged at cost.





## PROFESSIONAL SERVICES AGREEMENT

Aug 22, 2022

**CLIENT:** Tyler Andrews  
PNW Services  
PO Box 30498  
Bellingham, WA 98228  
(425)954-9614

**PROJECT:** Sudden Valley Recreation Center  
Bellingham, WA

**SUBJECT:** MECHANICAL ENGINEERING SERVICES FEE PROPOSAL

**Berona Engineers, Inc. (BEI)** is pleased to submit this proposal to provide Mechanical (HVAC) design services for this project. This proposal is a statement of intent by **PNW Services** (Client), to engage Berona Engineers, Inc. to perform the following mentioned services for this project.

The project consists of an existing barn in the Sudden Valley Community that is used for recreational activities. Our design will include adding ventilation only to the second floor Main Room via Energy Recovery Ventilator. The ERV will be located above the ceiling of the Kitchen, and ducted out towards the west end above the existing beams. Outside air and Exhaust air from the ERV shall be routed to louvers located above the east entry roof. Existing Entry roof will be lowered to accommodate new louvers. Electric duct heater will be included to provide 70 degree F air during cold winter days. Air conditioning will not be included in design as addition of cooling will trigger updating building construction to meet current energy code requirements.

Our basic scope will be to design through the Permit stages. We will respond to Permit questions, comments and make the necessary revisions to the documents. Then submit to the Client the final permit set for their use and at this submittal will indicate the completion and fulfillment of this agreement. The Client shall take full responsibility and full liability for any changes made to these permit documents, where BEI is not involved in and/or has not been authorized by BEI. These set of documents are for the sole purpose of this project and this project site, and shall not be used for any other site without BEI authorization. Changes developed by the contractor and changes to our design, if any, will become the Contractor's responsibility for those changes.

Construction administration will be additional and invoiced on an hourly basis, plus expenses.

Changes developed by the contractor and changes to our design, if any, will become the Contractor's responsibility for those changes.

**8021 State Ave, Marysville, WA 98270**  
**ph: (425)744-6033**  
**website: [www.beronaengineers.com](http://www.beronaengineers.com)**

**Fees and Billings:**

Our fee to perform this work will be a lump sum of **\$3000**.

Billings will be monthly based on our percent of completion of submittals.

Reimbursable expenses, if any, will be additional to our basic fee plus 15% and shall not exceed \$300. Payments for each invoice must be received within 30 calendar days of invoice date. A 1.5% finance charge or \$150, whichever is more will be assessed monthly on any balance remaining over 60 days after invoice date.

**Additional Services:**

Additional services will be any scope of work not listed above, scope changes by the Client. Additional services will be negotiated separately and either added to the basic agreement or performed under a separate agreement and will not proceed without written authorization.

**BEI Hourly rates are as follows:**

Principal: \$200/hr, Senior Engineer: \$ 180.00/hr, Project Engineer/Sr. Designer: \$ 160.00/hr  
Designer/Revit: \$ 140.00/hr, CAD Operator: \$ 120.00/hr, Administration: \$ 85.00/hr.

Work not included:

1. Building Envelope and Energy Modeling
2. Plumbing design
3. Air Conditioning design
4. Stairwell Pressurization
5. Fire and Life Safety Analysis Narrative
6. Fire sprinkler Design
7. Electrical Design
8. Seismic and structural design as it relates to mechanical & plumbing
9. Acoustic engineering
10. Testing, adjusting and balancing, including building pressure testing
11. Redesign based on value engineering
12. All fees, permits and inspections.

**Client to Provide and Responsible for:**

1. Take out all Permits and order site inspections
2. Architectural backgrounds in pdf, CAD and/or Revit formats.
3. Site Utilities
4. Equipment cut sheets for all owner or by others specified equipment.
5. Copying of our documents.
6. Distribution of our copied and original documents for each submittal.

**TERMINATION OF SERVICES**

The failure to make payment to BEI in accordance with the payment terms herein shall constitute a material breach of this Agreement and shall be cause for termination by Berona Engineers, Inc.

Either the Client or BEI may terminate this AGREEMENT without penalty at any time with or without cause upon giving the other party 30 calendar days prior written notice. Client shall within (15) fifteen calendar days of termination pay BEI for all services rendered and all costs incurred up to the date of termination, in accordance with the compensation provisions of this AGREEMENT. CLIENT shall also reimburse BEI termination expenses, including but not limited to, those associated with, reassignment of personnel, and space and equipment cost.

Our scope only covers reviewing documents to be submitted to the Jurisdiction Having Authority (JHA) for review and comment, of which we will respond and revise our documents accordingly. These documents will be used for the basis of the JHA to issue a construction permit for the Client. Our understanding is that your firm will be the builder and that you will have the last say on selected products for us to design around and that we will confirm selections through load calculations. Also, the Client will be responsible for the full means and methods for the construction of the work that we will provide design review for under this agreement.

#### **INDEMNIFICATION**

The Client shall indemnify and hold harmless Berona Engineers, Inc. and all of its personnel, agents, sub consultants from and against any and all claims, damages, losses and expenses (including reasonable attorney's fees) arising out of, or resulting from, the performances of these services, provided that any such claim, damage, loss or expenses is caused by the sole negligent act, errors, or omissions and/or strict liability of the Client, including, but not limited to anyone directly or indirectly employed by the Client or anyone or entity (other than BEI), associated with the Client whose acts may be liable.

**APPLICABLE LAW:** This agreement shall be governed by the laws of the State of Washington.

**This proposal is good to the end of the day, Sept 22, 2022.**

If this proposal is acceptable, please sign below and return a copy for our records. We look forward to working with you on this project. If you have any questions or require more information, please call.

Sincerely,

***Berona Engineers, Inc.***



Rob Russell, PE  
Principal

**ACCEPTABLE TO PNW Services:**

**By:** \_\_\_\_\_ **Date:** \_\_\_\_\_

Sudden Valley Community Association

**Barn 8 Remodel**

PNW Estimate - Bid Package, Permitting, and Construction Management

Task	Description	Hours	Estimated Cost
Design Oversight	Oversight of Sarah Brown Architecture & Design and Kingworks Structural Engineers, review drawings, and site visits as required.	20	
	<b>Total Estimated Design Oversight Hours</b>	20	<b>\$ 2,700.00</b>
Permitting	Oversight of permit applications, facilitate signatures / submittals / permit fees.	8	
	<b>Total Estimated Permitting Cost</b>	8	<b>\$ 1,080.00</b>
Contractor Bids	Prepare bid package, issue to contractors, and answer any bid questions.	6	
	Review construction bids, and provide recommendation to SVCA.	2	
	<b>Total Estimated Bid Package Hours</b>	8	<b>\$ 1,080.00</b>
Construction Management	Under separate proposal.		
	<b>Total Estimated Construction Management Hours</b>	0	<b>\$ -</b>
	<b>Total Estimated</b>		<b>\$ 4,860.00</b>

## GENERAL NOTES

### GENERAL NOTES

- IN GENERAL, PLAN DIMENSIONS SHOWN ARE TO FACE OF STUD OR FACE OF CONCRETE, UNLESS OTHERWISE NOTED. DO NOT SCALE THESE DRAWINGS. USE CALCULATED DIMENSIONS ONLY. VERIFY ALL DIMENSIONS, DATUM AND LEVELS PRIOR TO CONSTRUCTION. NOTIFY ARCHITECT IMMEDIATELY OF ANY DISCREPANCIES.
- PERSONS USING THE INFORMATION IN THESE CONSTRUCTION DOCUMENTS WITHOUT PERMISSION OF THE ARCHITECT DOES SO AT THEIR OWN RISK AND BY SUCH AGREES TO INDEMNIFY THE ARCHITECT AS WELL AS ARCHITECT'S EMPLOYEES AND CONSULTANTS, AND TO HOLD HARMLESS FOR ANY INJURY OR LOSS OF DAMAGE THAT MAY OCCUR.
- CONTRACTOR AGREES THAT HE SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS; AND THAT THE CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD THE OWNER AND ARCHITECT HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING FOR LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE OWNER OR THE ARCHITECT.
- THE CONTRACTOR SHALL HAVE AND MAINTAIN INSURANCE AS APPROVED BY THE BUILDING OWNER AND THE TENANT IF TENANT IS THE CONTRACTORS CLIENT.
- CONTRACTOR SHALL TAKE PRECAUTIONARY MEASURES TO ENSURE THAT ALL PROPERTY IS PROTECTED DURING THIS CONSTRUCTION. ANY DAMAGE OR CHANGED CONDITIONS SHALL BE REPAIRED AND RESTORED TO A CONDITION EQUAL TO THAT EXISTING AT THE COMMENCEMENT OF THE WORK. CONTRACTOR SHALL RESTORE ANY DAMAGE AT HIS OWN EXPENSE, WHERE EXISTING WORK IS DAMAGED, CUT OR DEFACED DUE TO PERFORMANCE OF NEW WORK, THE CONTRACTOR SHALL PATCH AND REPAIR SAME TO MATCH ADJOINING SURFACES. REPAIRED FINISHES SHALL BE EXTENDED TO THE NEAREST VISUAL BREAK LINES SUCH AS CORNER, CEILING LINES, TOP OF BASE OR SIMILAR.
- CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS PRIOR TO INITIATING THE WORK. NOTIFY ARCHITECT OF ANY DISCREPANCIES.
- WHERE A CONSTRUCTION DETAIL IS NOT SHOWN OR NOTED, THE DETAIL SHALL BE THE SAME AS FOR OTHER SIMILAR WORK.
- ALL WORK SHALL COMPLY WITH THE 2009 IBC, IFC, IPC, IMC AS AMENDED BY WASH. STATE. PROJECT SHALL ALSO COMPLY W/ JURISDICTIONAL CODE AMENDMENTS BY THE LOCAL AGENCY. CONTRACTOR IS RESPONSIBLE FOR OBTAINING NECESSARY PERMITS & INSPECTIONS TO COMPLETE THE WORK. CONTRACTOR TO HAVE CURRENT VALID CITY OR COUNTY BUSINESS LICENSE PRIOR TO ISSUANCE OF PERMIT. WHEN REQUIRED BY LAW.
- ERRORS, OMISSIONS AND DISCREPANCIES, IF ANY, SHALL BE REFERRED TO THE ARCHITECT IMMEDIATELY FOR DIRECTION OF HOW TO PROCEED.
- VERIFY ALL ROUGH-IN DIMENSIONS FOR EQUIPMENT PROVIDED IN THE CONTRACT BY OTHERS PROVIDE ALL BLOCK-OUTS, BLOCKING, BACKING AND JACKS REQUIRED FOR DUCTS, PIPES, CONDUITS, EQUIPMENT, FIXTURES AND CABINETS. VERIFY SIZE AND LOCATION.
- DO NOT SIGNIFICANTLY VARY OR MODIFY THE WORK SHOWN, EXCEPT UPON WRITTEN INSTRUCTIONS OF THE ARCHITECT.
- VERIFY LOCATION OF ALL EXISTING UTILITIES INCLUDING BUT NOT LIMITED TO SEWER, SEPTIC, WATER, GAS, POWER AND TELEPHONE. CAP, MARK AND PROTECT.
- DETAILS ARE INTENDED TO SHOW THE INTENT OF THE DESIGN. MINOR MODIFICATION MAY BE REQUIRED TO SUIT THE FIELD DIMENSIONS OR CONDITIONS AND SUCH MODIFICATIONS SHALL BE INCLUDED AS PART OF THE WORK OF THE CONTRACT.
- PROVIDE CLOSURE, MEETING THE REQUIREMENTS OF ALL GOVERNING AUTHORITIES, AT RATED PARTITIONS, FLOORS, CEILINGS, AND ROOF LOCATIONS. ALL REQUIRED FIRE-RATED PARTITIONS SHALL BE CONTINUOUS FROM FLOOR TO UNDERSIDE OF STRUCTURE ABOVE.
- BUILDING OR PORTION OF A BUILDING SHALL BE OCCUPIED OR USED FOR STORAGE PRIOR TO THE ISSUANCE OF A CERTIFICATE OF OCCUPANCY.
- THE CONTRACTOR SHALL CONSULT PLANS OF ALL TRADES, INCLUDING DESIGN-BUILD DOCUMENTS REQUIRED BY CONTRACT DOCUMENTS, TO VERIFY SIZE, WEIGHT, POWER, LOCATION AND OTHER REQUIREMENTS AND LOCATION OF THOSE ITEMS TO BE INSTALLED PRIOR TO COMMENCEMENT OF WORK.
- ELECTRICAL, MECHANICAL AND PLUMBING: GENERAL CONTRACTOR TO PROVIDE ALL REQUIRED ENGINEERING, CALCULATIONS, FORMS, APPLY, PAY FOR & OBTAIN ALL REQUIRED PERMITS.
- GENERAL CONTRACTOR SHALL BRING TO THE OWNER'S ATTENTION ANY DISCREPANCIES WITHIN THE CONTRACT DOCUMENTS, ACTUAL FIELD CONDITIONS AND ANY DESIGN AND LAYOUT CHANGES REQUIRED DUE TO ANY SPECIFIC EQUIPMENT SELECTIONS OR ANY OTHER REASON PRIOR TO PURCHASING EQUIPMENT AND MATERIAL.
- PROVIDE BARRIER FREE SIGNAGE AT RESTROOMS.
- MOUNT ALL SINKS AT 34" AFF. UNO. COUNTERS 34" AFF WHEN SINK COUNTER MOUNTED.
- EXTERIOR BUILDING SIGNAGE IS NIC. CONTRACTOR TO PROVIDE POWER TO SIGN LOCATIONS.
- THE ARCHITECT HAS NOT BEEN RETAINED OR COMPENSATED TO PROVIDE DESIGN AND/OR CONSTRUCTION REVIEW SERVICES RELATING TO THE CONTRACTOR'S SAFETY PRECAUTIONS OR TO MEANS, METHODS, TECHNIQUES OR PROCEDURES REQUIRED FOR THE CONTRACTOR TO PERFORM HIS WORK. THE UNDERTAKING OF PERIODIC SITE VISITS BY THE ARCHITECT SHALL NOT BE CONSTRUED AS SUPERVISION OF ACTUAL CONSTRUCTION NOR MAKE HIM RESPONSIBLE FOR THE PERFORMANCE OF WORK BY THE CONTRACTOR OR CONTRACTOR'S EMPLOYEES, OR EMPLOYEES OF SUPPLIERS OR SUBCONTRACTORS, OR FOR ACCESS, VISITS, USE, WORK, TRAVEL OR OCCUPANCY BY ANY PERSON.
- CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SAFETY PRECAUTIONS AND THE MEANS, METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES REQUIRED TO PERFORM THE WORK.
- THESE DRAWINGS ARE THE EXCLUSIVE PROPERTY OF THE ARCHITECT AND MAY BE REPRODUCED ONLY WITH THE WRITTEN PERMISSION OF THE ARCHITECT. AUTHORIZED REPRODUCTIONS MUST BEAR THE NAME OF THE ARCHITECT.
- PROVIDE FIRE BLOCKING, DRAFT STOPS AND FIRE STOPS IN ATTICS, FLOORS AND WALL CAVITIES AS REQUIRED PER THE IBC.
- CONTRACTOR SHALL RETAIN ONE SET OF THE PLANS TO NOTE AND DOCUMENT ALL CHANGES DURING CONSTRUCTION. THE SET SHALL BE A PART OF THE CONTRACTOR'S CLOSE-OUT PACKAGE TO THE OWNER. CLOSE-OUT PACKAGE SHALL INCLUDE (3) SET OF SHOP DRAWINGS, PRODUCT LITERATURE, EQUIPMENT WARRANTY MANUALS. CONTRACTOR SHALL PROVIDE SOLID BLOCKING, UNLESS NOTED OTHERWISE AS REQUIRED FOR NAILING OF ALL INTERIOR AND EXTERIOR TRIMS, FINISHES AND FIXTURES. THE CONTRACTOR SHALL PROVIDE FOR ALL THE NECESSARY FRAMING AND BRACING FOR THE INSTALLATION OF OWNER FURNISHED ITEMS.
- CONTRACTOR SHALL ONLY PROCEED WITH WORK WHERE HAZARDOUS MATERIALS ARE PRESENT AFTER RECEIPT OF THE BUILDING OWNERS HAZARDOUS MATERIALS GOOD FAITH REPORT REQUIRED BY THE STATE. PRIOR TO ANY DEMOLITION VERIFY & PERFORM ADDITIONAL HAZARDOUS MATERIAL TESTING AS REQUIRED. LEGALLY REMOVE HAZARDOUS MATERIALS. PROVIDE LEGAL DOCUMENTATION. CONTRACTOR SHALL COMPLY WITH FEDERAL AND STATE RULES AND REGULATIONS WHEN HANDLING, REMOVING OR ENCAPSULATING HAZARDOUS MATERIALS ON THE PROJECT.
- LEGALLY REMOVE & DISPOSE OF THE DEMOLITION AND CONSTRUCTION DEBRIS.
- DIMENSIONS TO STUD FACE UNLESS NOTED AS "CLEAR" OR "CLR" WHICH MEANS TO FACE OF WALL FINISH.

## ARCHITECTURAL ABBREVIATIONS

A.H.U.	AIR HANDLING UNIT
ALT.	ALTERNATE
A.V.	AUDIO / VISUAL
BLDG.	BUILDING
DIA.	DIAMETER
D.S.	DOWNSPOUT
ELEC.	ELECTRICAL
ELEV.	ELEVATOR
EXT.	EXTERIOR
F.E.	FIRE EXTINGUISHER
F.E.C.	FIRE EXTINGUISHER CABINET
F.F.	FINISH FLOOR
GA.	GAUGE
G.L.B.	GLUE LAMINATED BEAM
G.W.B.	GYPSUM WALLBOARD
HR.	HOUR
INSUL.	INSULATION
INT.	INTERIOR
MECH.	MECHANICAL
MISC.	MISCELLANEOUS
N.I.C.	NOT IN CONTRACT
O.C.	ON CENTER
OPP.	OPPOSITE
P.T.	PRESSURE TREATED
REF.	REFERENCE
RM.	ROOM
S.D.	SMOKE DETECTOR
SHT.	SHEET
SIM.	SIMILAR
SS.	STAINLESS STEEL
ST.	STREET
STRUCT.	STRUCTURAL
T.O.C.	TOP OF CONCRETE
TS.	TUBE STEEL
TYP.	TYPICAL
U.N.O.	UNLESS NOTED OTHERWISE
W/	WITH
@	AT
&	AND

## SYMBOLS

	DETAIL REFERENCE
	BLDG SECTION
	WALL SECTION
	INTERIOR ELEVATION
XXX	DOOR NUMBER
	ROOM NUMBER
	ELEVATION DATUM
	COLUMN GRID
	WALL TYPE
	POWER POLE
	CATCH BASIN
	STORM DRAIN MANHOLE
	SANITARY SEWER MANHOLE
	FIRE HYDRANT

## PROJECT ADDRESS

4 BARN VIEW DRIVE  
BELLINGHAM, WA 98229

## BUILDING OWNER

SUDDEN VALLEY COMMUNITY ASSOCIATION  
4 CLUBHOUSE CIRCLC  
BELLINGHAM, WA  
CONTACT:

## CONTRACTOR

PNW CIVIL INC.  
920 NORTSHORE DR  
BELLINGHAM, WA 98226  
CONTACT: TYLER ANDREWS  
PH: (360) 739-2072

## PROJECT NOTES

### DOOR NOTES:

- VERIFY ALL R.O. AND JAMB DEPTHS PRIOR TO ORDERING.
- ALL DOORS TO HAVE BARRIER FREE HARDWARE AS REQUIRED.
- DOORS SHALL HAVE LEVER HARDWARE WHICH WILL PERMIT OPERATION BY WRIST OR ARM PRESSURE.
- ALL POCKET DOORS TO HAVE ADA POCKET DOOR PULLS.

### DEMOLITION NOTES:

- LEGALLY REMOVE DEMOLITION DEBRIS FROM SITE.
- PROTECT ALL STRUCTURAL MEMBERS AND COLUMNS.
- DEMOLITION DEBRIS SHALL NOT BE ALLOWED TO DAMAGE OR OVERLOAD THE EXISTING STRUCTURE.

### FURNISHING NOTES:

- ALL FURNITURE NIC

## LAND USE INFORMATION

PARCEL No.: 3704083184570000

ABBREV. LEGAL DESCRIPTION:  
TR IN N 1/2 DAF-BEG AT MOST NLY COR ON ELY  
BNDRY OF SUDDEN VALLEY CLUBHOUSE CLUSTER  
CONDOMINIUM-TH USING SAME MERIDIAN  
SHOWN ON SD PLAT S 87 DEG 02'58" E 175.14 FT-  
TH N 25 DEG 48'04" E 32.49 FT-TH S 60 DEG 52'42"  
E 223.35 FT-TH N 32 DEG 19'26" E 246.79 FT

## BUILDING CODE REQUIREMENTS

2018 INTERNATIONAL BUILDING CODE, IEBC PRESCRIPTIVE  
COMPLIANCE METHOD & WA STATE AMENDMENTS.

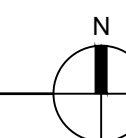
## PROPERTY CHARACTERISTICS

LAND USE:	74
TAX DIST:	1015 - 501 R L FSW LWWS
LEGAL ACRES:	11.77 ACRES



## VICINITY MAP

SCALE: NTS



## PROJECT DESCRIPTION

PROJECT DESCRIPTION:	THIS PROJECT CONSISTS OF NEW WINDOWS, DOORS ROOFING AND SIDING ON AN EXISTING COMMUNITY CENTER. A NEW GABLE ROOF WILL BE CONSTRUCTED OVER TWO EXTERIOR ENTRY POINTS. A SMALL TI WILL OCCUR IN THE NE CORNER OF THE GROUND FLOOR THAT WILL INCLUDE A STORAGE ROOM AND A NEW OFFICE.
CONSTRUCTION TYPE:	V-B
OCCUPANCY:	GROUP : B-BUSINESS
AREA:	GROUND FLOOR: 13,176 SQ FT SECOND FLOOR: 8,856 SQ FT
RESTROOMS:	NO WORK
FIRE SPRINKLERS:	NONE
FIRE ALARM:	PROVIDE & LOCATE FIRE ALARM NOTIFICATION APPLIANCE(S) STATION(S) AND SENSOR(S) AS REQUIRED BY FIRE DEPARTMENT

## DRAWING INDEX

A1.01 - TITLE PAGE & PROJECT INFORMATION
A2.01 - FIRST FLOOR PLAN
A2.02 - SECOND FLOOR PLAN
A3.01 - ELEVATIONS
A3.02 - ELEVATIONS
A4.01 - SECTIONS
A7.01 - EXTERIOR DETAILS

## DEFERRED SUBMITTAL

ELECTRICAL, DEFERRED SUBMITTAL  
MECHANICAL DEFERRED SUBMITTAL

## SUDDEN VALLEY REC CENTER EXT. REMODEL

### SVBARN 8

SB JOB NO: 202205.27  
DATE: 10.24.2022

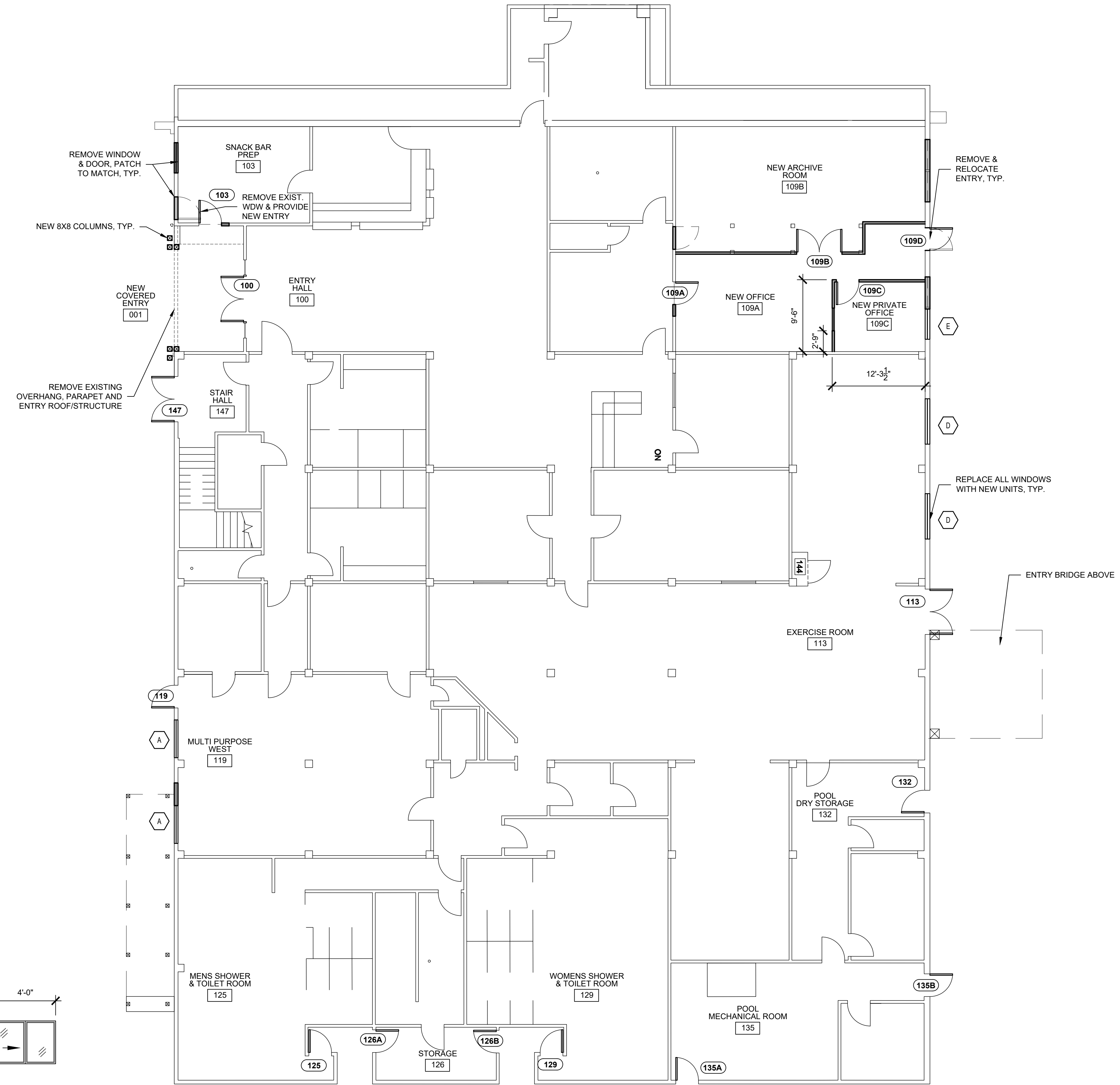
## CONSTRUCTION DOCUMENTS

No.	ISSUED FOR	DATE

## TITLE PAGE & PROJECT INFORMATION

# A1.01

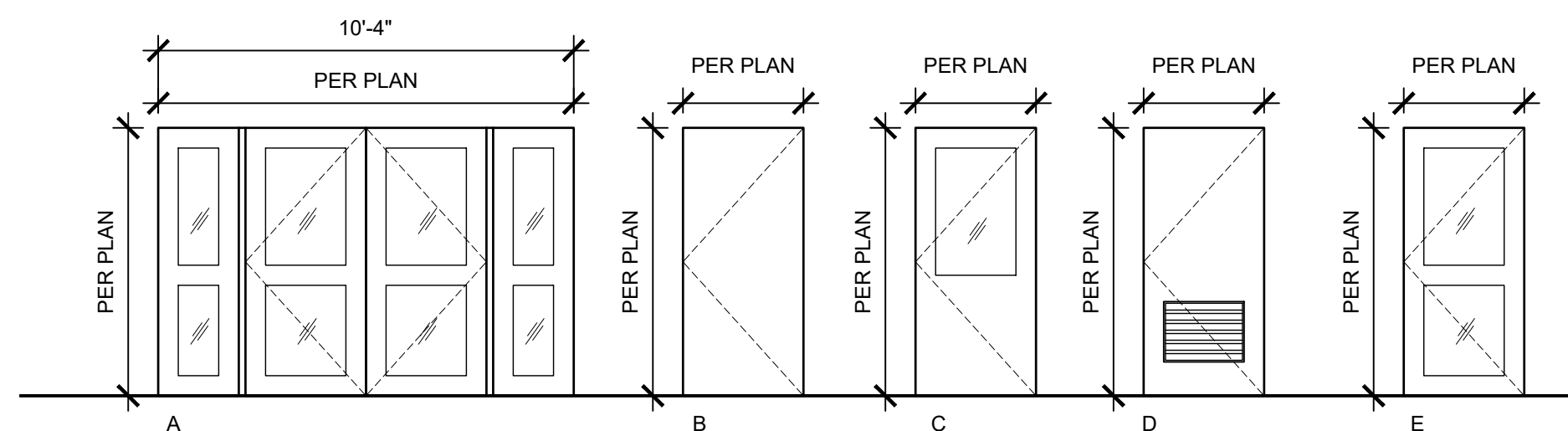




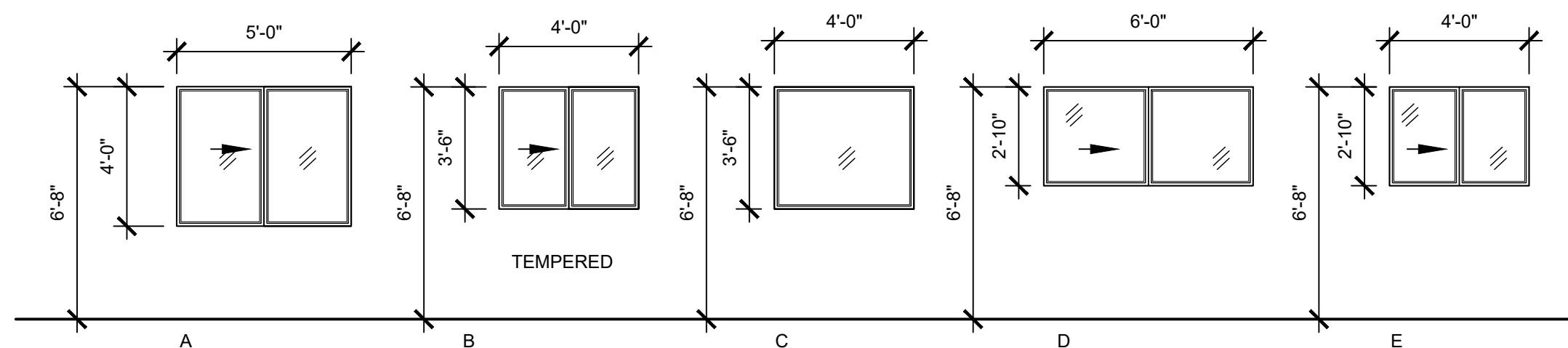
NOTES:

- NR NON RATED
- WD WOOD
- PT PAINT
- ST STAIN
- HM HOLLOW METAL
- SC SOLID CORE

SUDDEN VALLEY REC. CENTER - BARN 8 : DOOR SCHEDULE										
MARK	WIDTH	HEIGHT	ROOM TYPE	DOOR TYPE	CONSTRUCTION	FINISH	GLASS	FRAME TYPE	DOOR HARDWARE	COMMENTS
100	6'-0"	7'-0"	ENTRY HALL	A	STOREFRONT	ALUMINUM	TI	MFR.		KAWNEER/SOQ TUFFLINE
103	3'-0"	7'-0"	SNACK BAR	B	METAL INSULATED	PAINT		HM	LEVER	
109	3'-0"	7'-0"	CRAFT ROOM	B	METAL INSULATED	PAINT		HM	LEVER	
113	6'-0"	7'-0"	EXERCISE RM.	BB	METAL INSULATED	PAINT		HM	PANNIC HARDWARE	
119	3'-0"	7'-0"	MULTI-PURP.	C	METAL INSULATED	PAINT	TI	HM	LEVER	
125	3'-0"	7'-0"	MENS RM.	B	METAL INSULATED	PAINT		HM	LEVER	
126A	3'-0"	7'-0"	STORAGE	B	METAL INSULATED	PAINT		HM	LEVER	
126B	3'-0"	7'-0"	STORAGE	B	METAL INSULATED	PAINT		HM	LEVER	
129	3'-0"	7'-0"	WOMENS RM.	B	METAL INSULATED	PAINT		HM	LEVER	
132	3'-0"	7'-0"	POOL DRY RM.	D	METAL INSULATED	PAINT		HM	LEVER	
135A	3'-0"	7'-0"	POOL RM.	D	METAL INSULATED	PAINT		HM	LEVER	
135B	3'-0"	7'-0"	POOL RM.	D	METAL INSULATED	PAINT		HM	LEVER	
147	6'-0"	7'-0"	STAIR HALL	BB	METAL INSULATED	PAINT		HM	PANNIC HARDWARE	
201	6'-0"	7'-0"	DANCE HALL	A	STOREFRONT	ALUMINUM	TI	MFR.	PANNIC HARDWARE	KAWNEER/SOQ TUFFLINE
202	6'-0"	7'-0"	DANCE HALL	CC	STOREFRONT	ALUMINUM	TI	MFR.	PANNIC HARDWARE	KAWNEER/SOQ TUFFLINE



3 DOOR TYPES  
SCALE: 1/4"=1'-0"



2 WINDOW TYPES  
SCALE: 1/4"=1'-0"

1 FIRST FLOOR - EXISTING FLOOR PLAN  
SCALE: 1/8"=1'-0"

WALL KEY

- NEW WALL
- EXISTING WALL
- DEMO WALL

SUDDEN VALLEY REC CENTER  
EXT. REMODEL

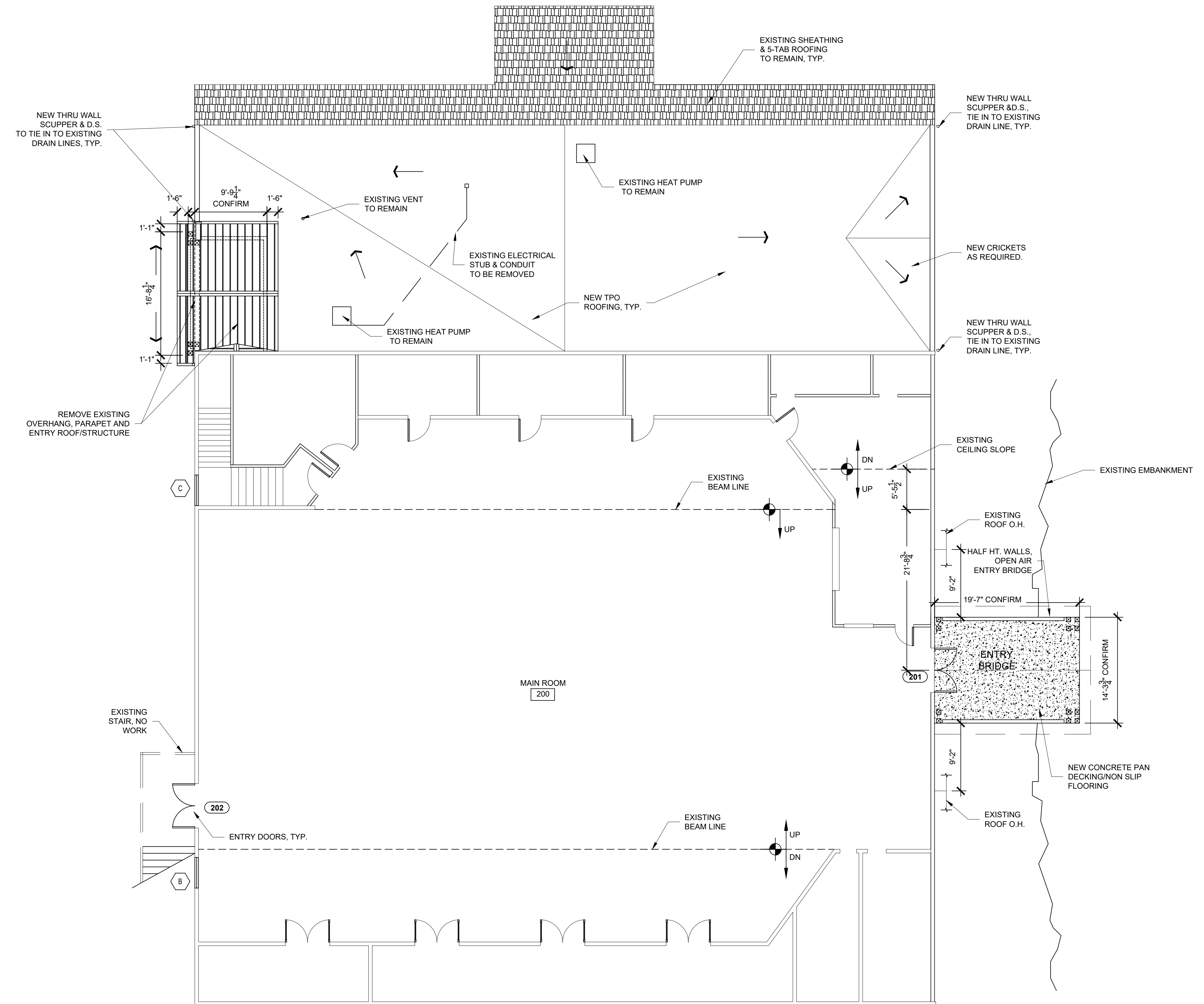
SVBARN 8

SB JOB NO: 202205.27  
DATE: 10.24.2022

CONSTRUCTION DOCUMENTS

No.	ISSUED FOR	DATE

FIRST FLOOR PLAN



WALL KEY

- NEW WALL
- EXISTING WALL
- DEMO WALL

SUDDEN VALLEY  
REC CENTER  
EXT. REMODEL

SVBARN 8

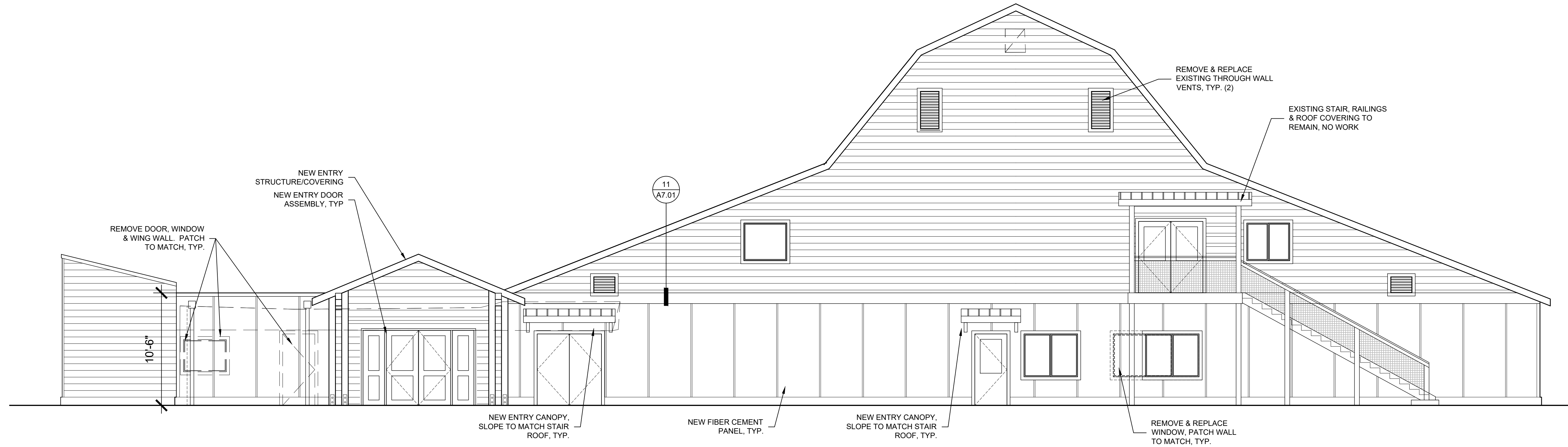
SB JOB NO: 202205.27  
DATE: 10.24.2022

CONSTRUCTION  
DOCUMENTS

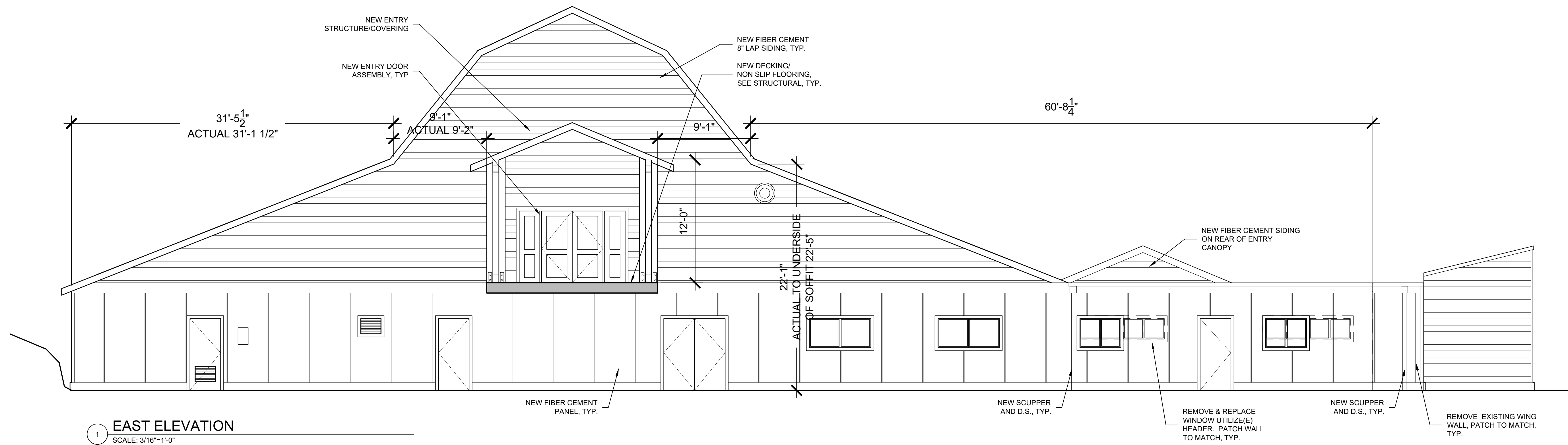
No.	ISSUED FOR	DATE

SECOND FLOOR PLAN

2 SECOND FLOOR/ROOF PLAN  
SCALE: 1/8"=1'-0"



2 WEST ELEVATION  
SCALE: 3/16"=1'-0"



1 EAST ELEVATION  
SCALE: 3/16"=1'-0"

SUDDEN VALLEY  
REC CENTER  
EXT. REMODEL

SVBARN 8

SB JOB NO: 202205.27

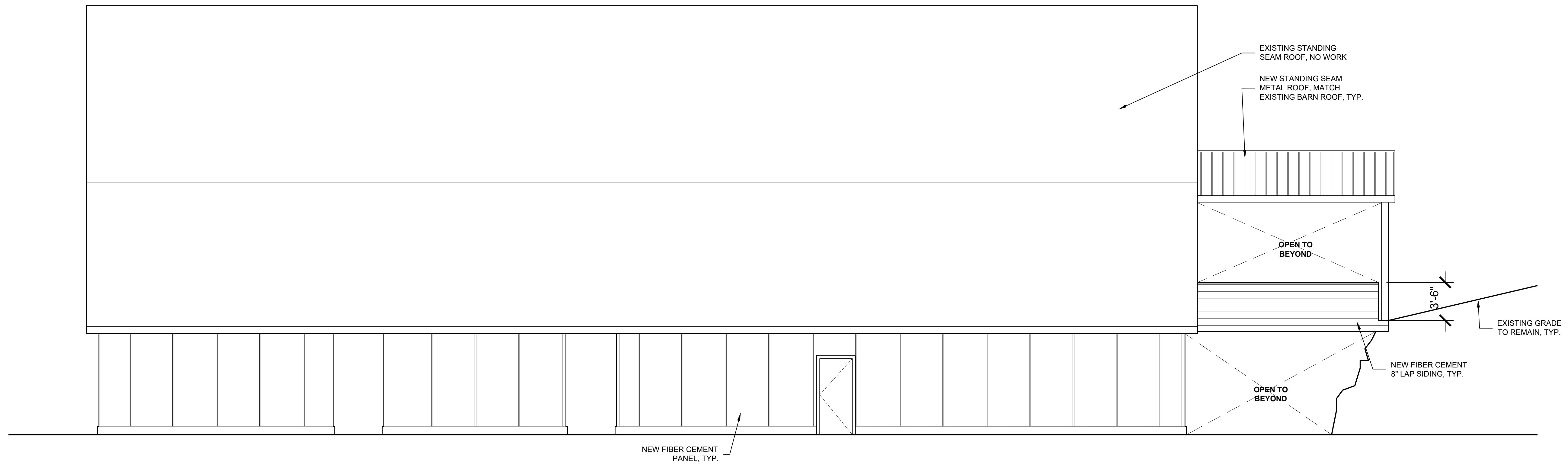
DATE: 10.24.2022

CONSTRUCTION  
DOCUMENTS

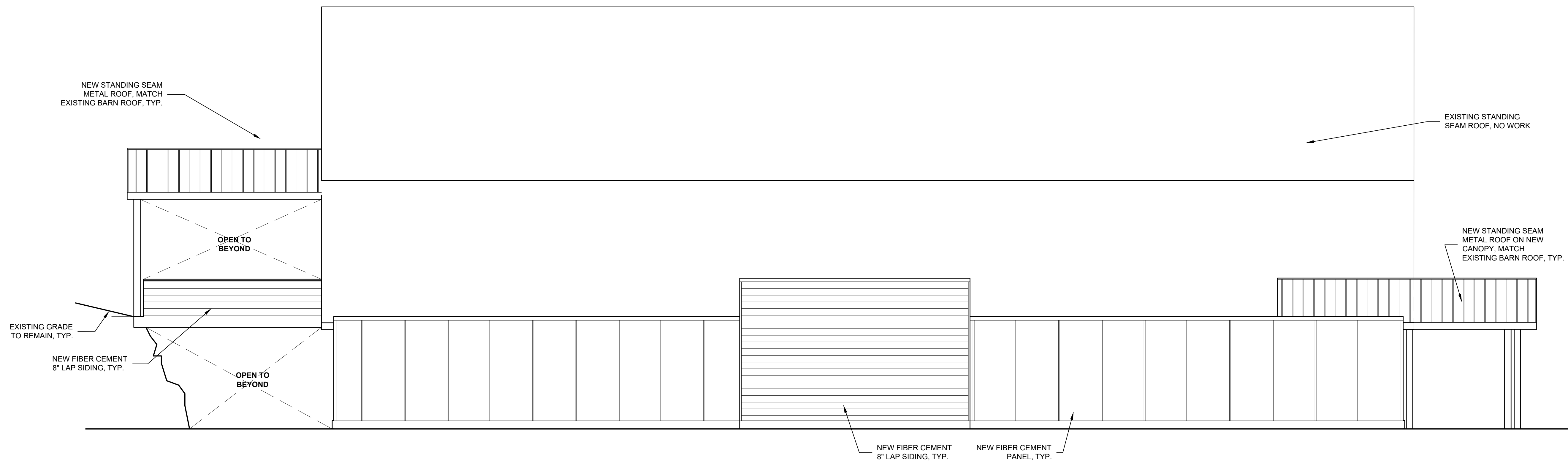
No.	ISSUED FOR	DATE

ELEVATIONS

A3.01



2 SOUTH ELEVATION  
SCALE: 1/8"=1'-0"



1 NORTH ELEVATION  
SCALE: 1/8"=1'-0"

SUDDEN VALLEY  
REC CENTER  
EXT. REMODEL

SVBARN 8

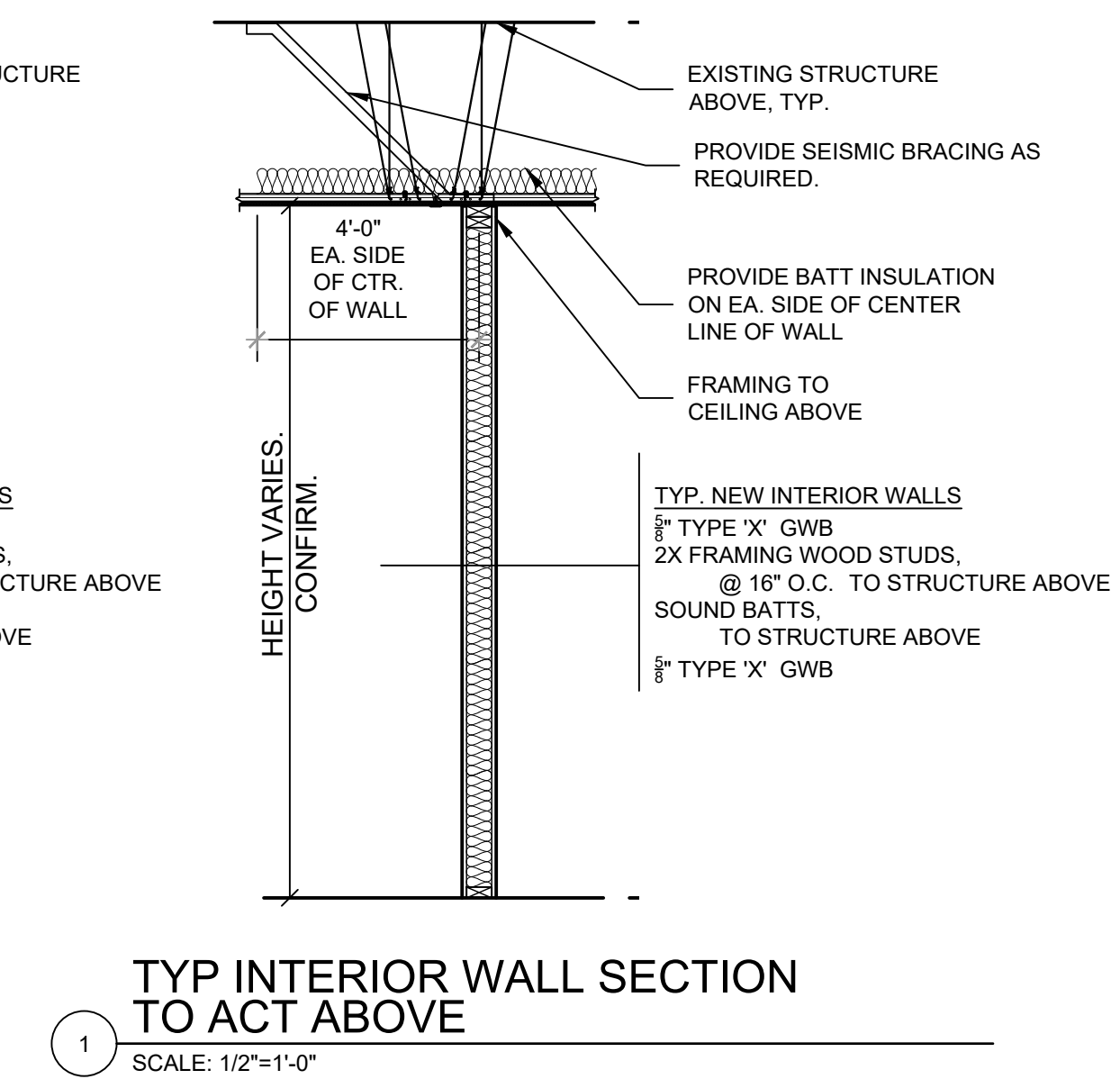
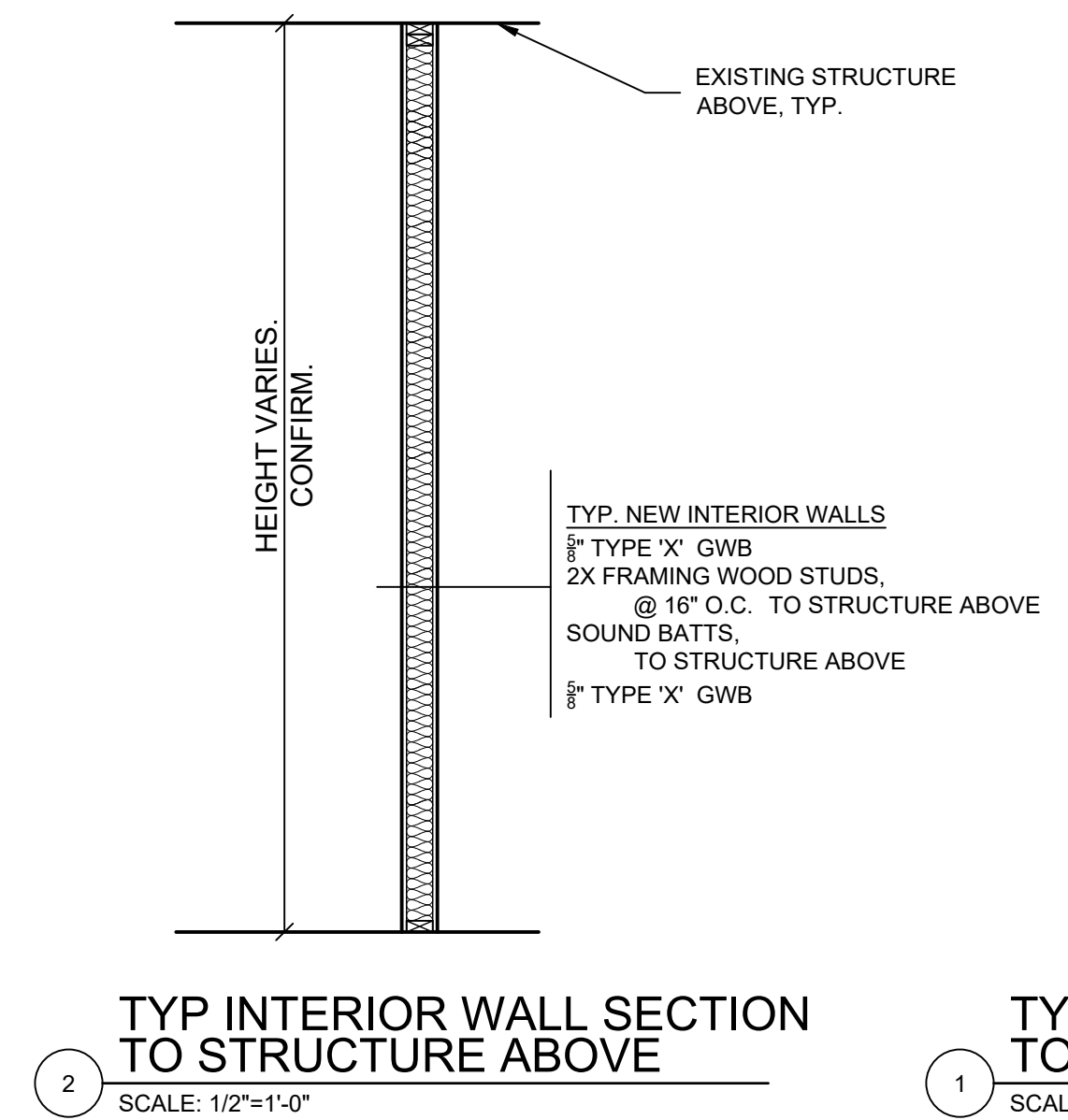
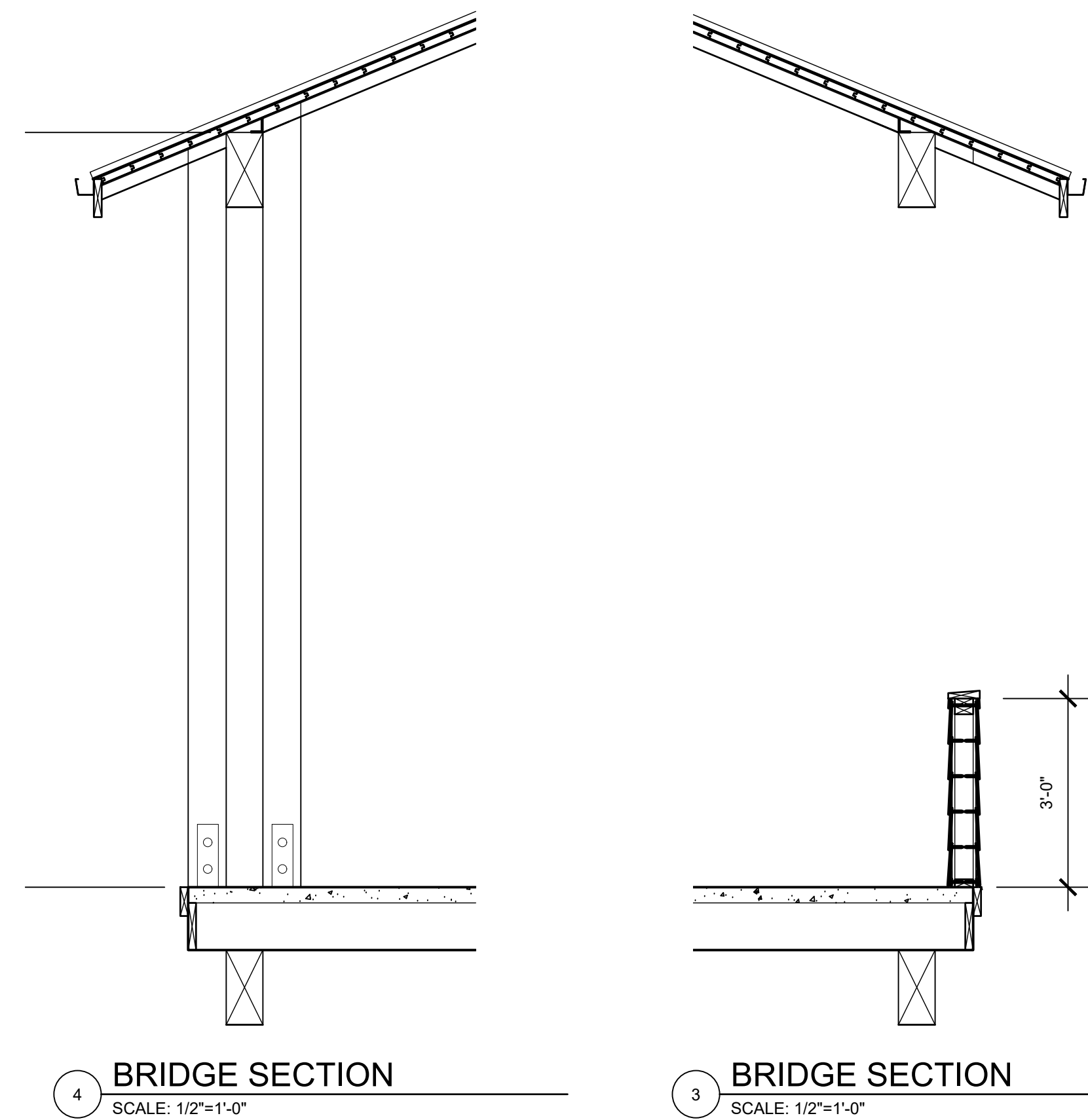
SB JOB NO: 202205.27

DATE: 10.24.2022

CONSTRUCTION  
DOCUMENTS

No.	ISSUED FOR	DATE

ELEVATIONS



**SUDDEN VALLEY  
REC CENTER  
EXT. REMODEL**

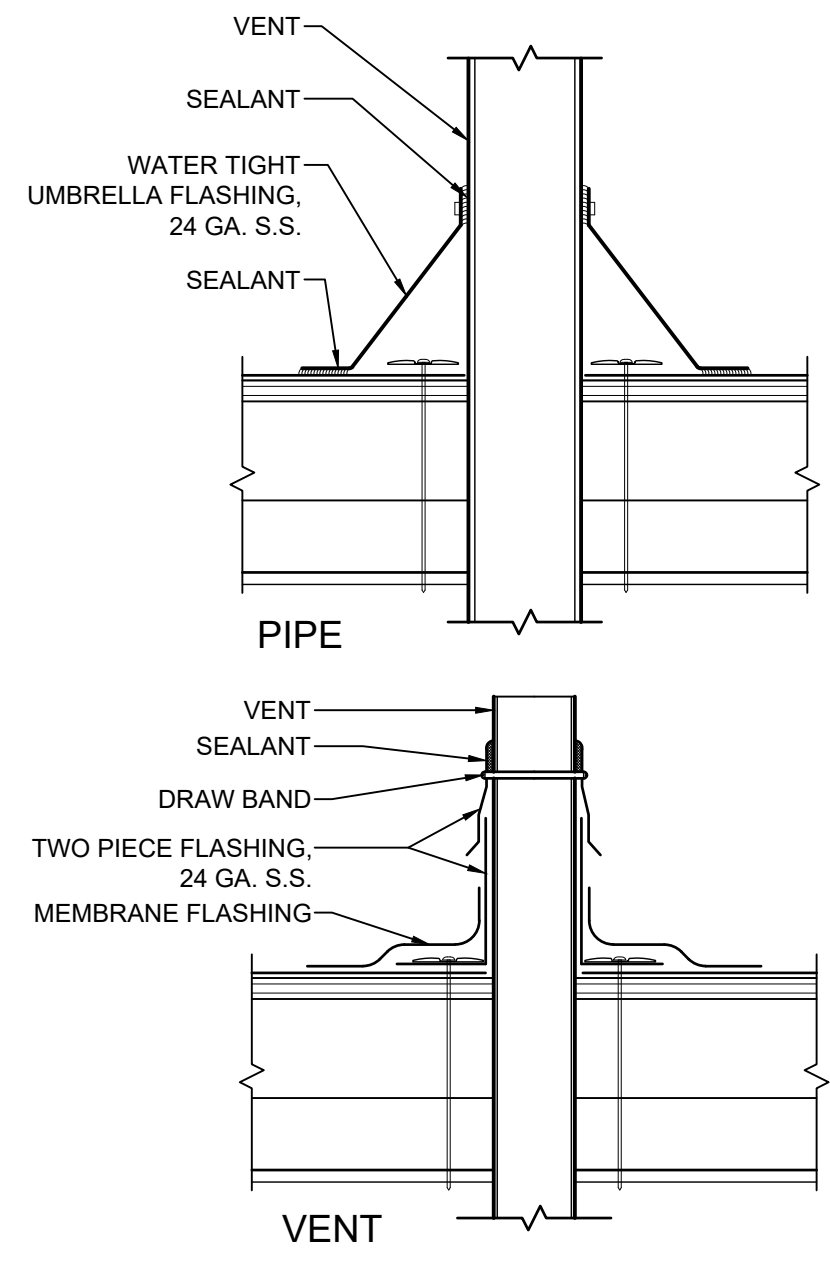
SVBARN 8

SB JOB NO: 202205.27  
DATE: 10.24.2022

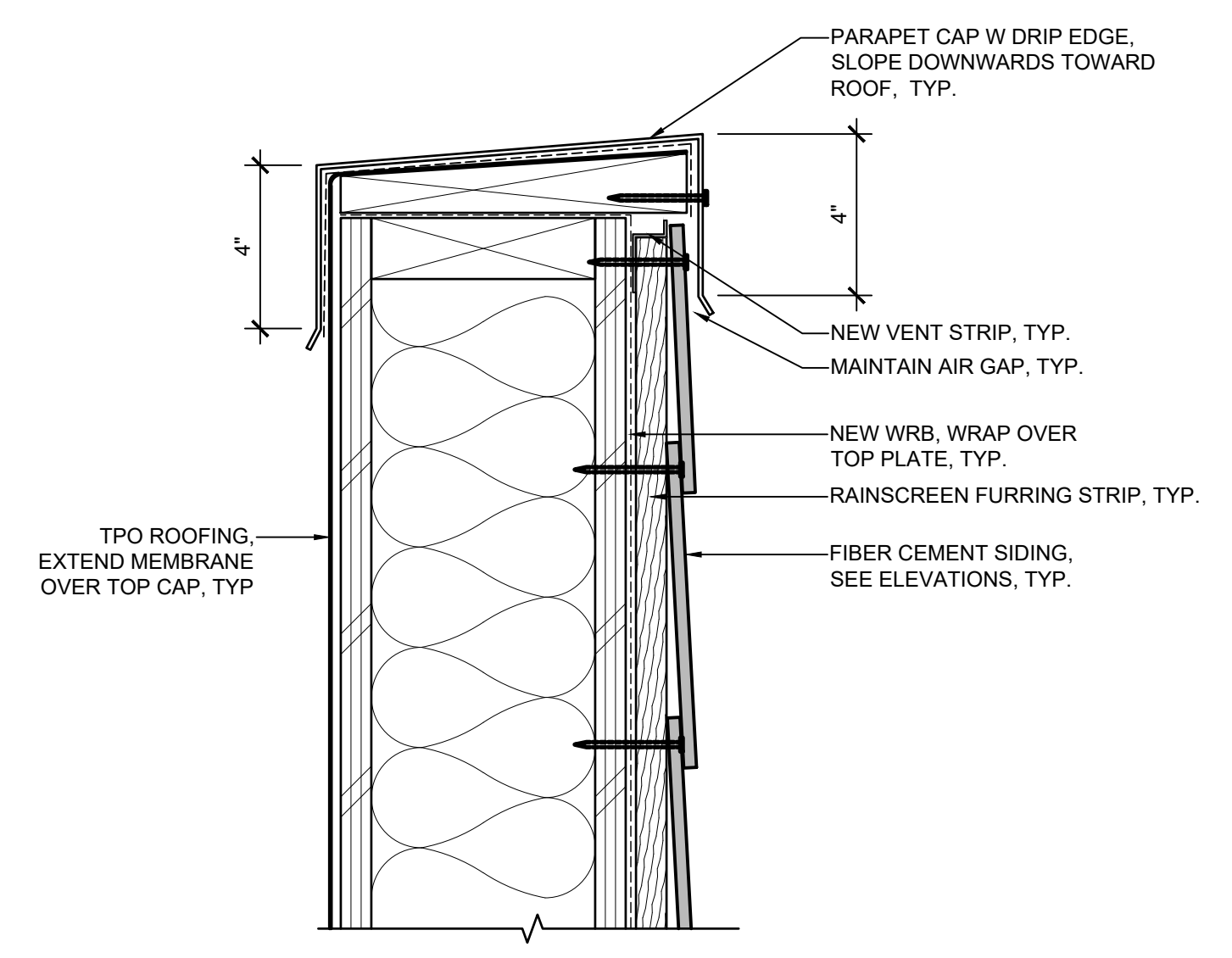
**CONSTRUCTION  
DOCUMENTS**

No.	ISSUED FOR	DATE

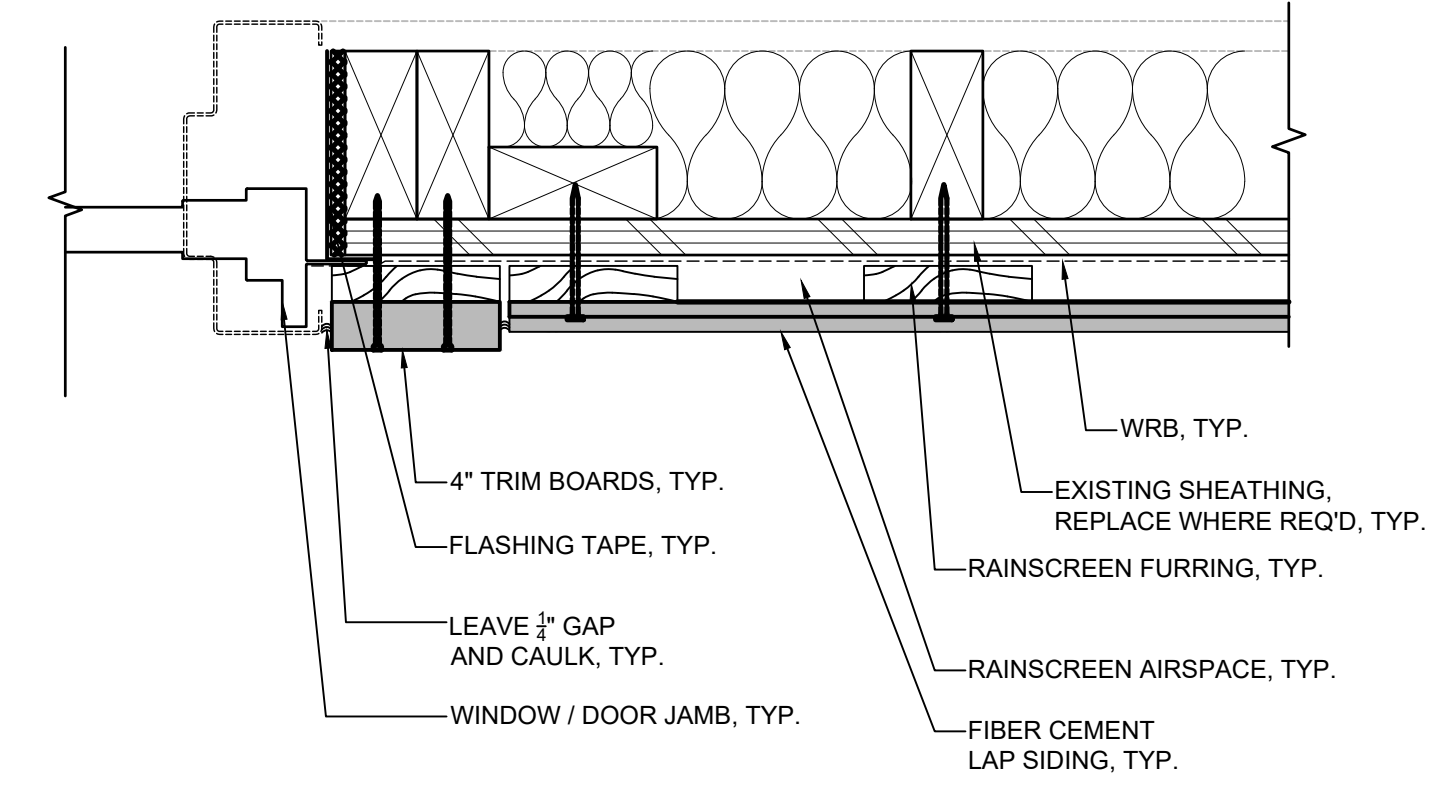
**SECTIONS**



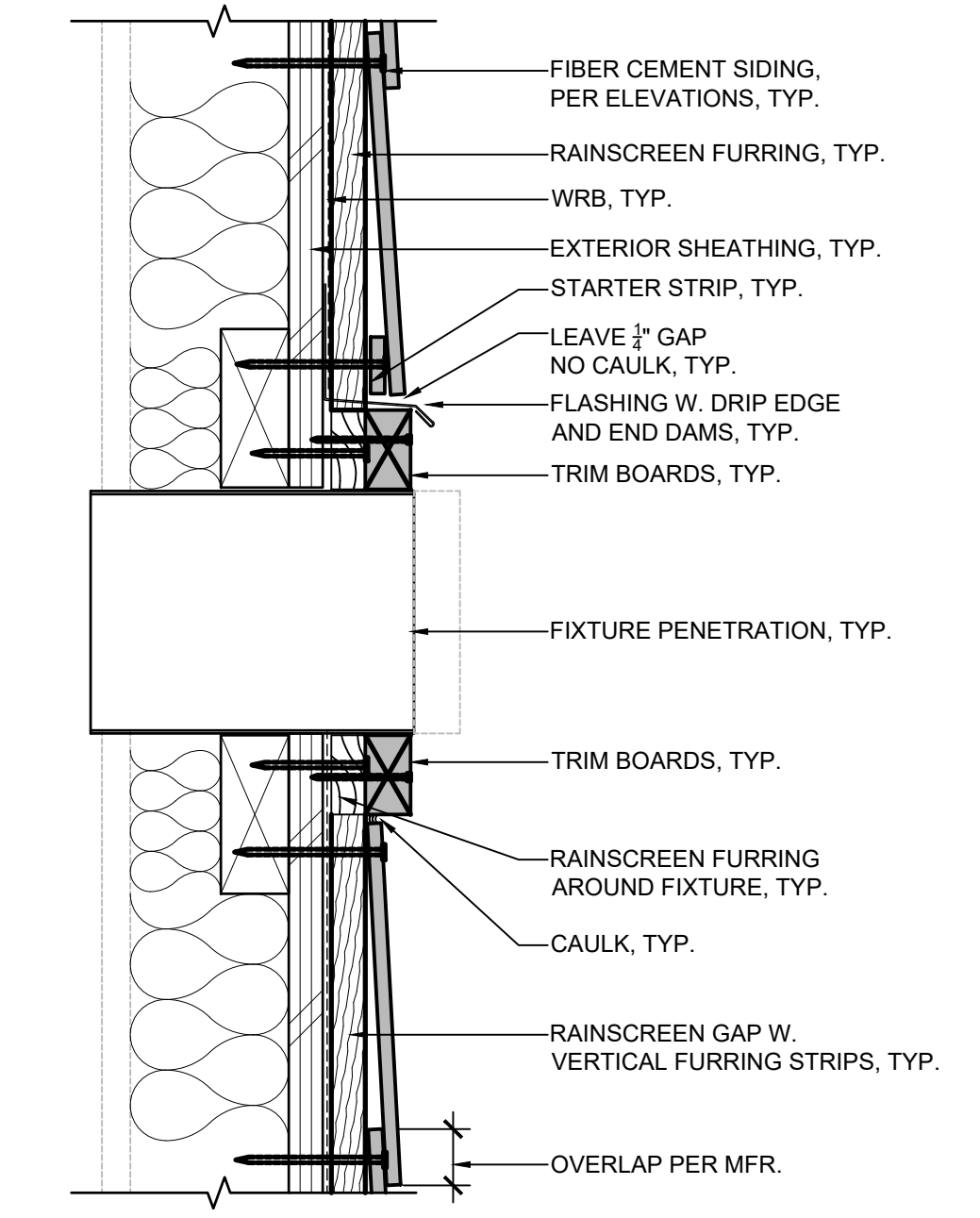
**12** FLAT ROOF PENETRATIONS  
SCALE: 3"=1'-0"



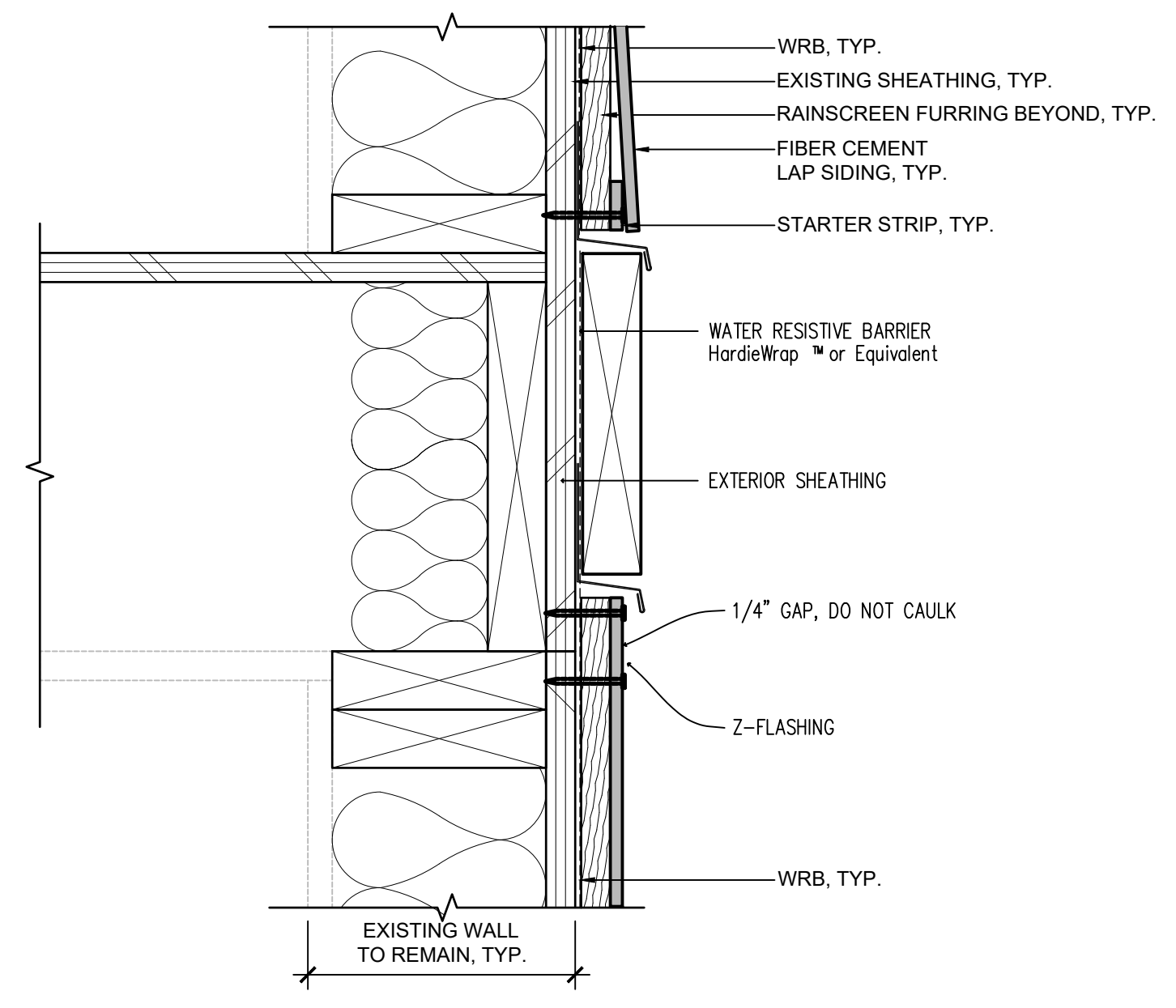
**9** PARAPET - RAINSCREEN  
SCALE: 3"=1'-0"



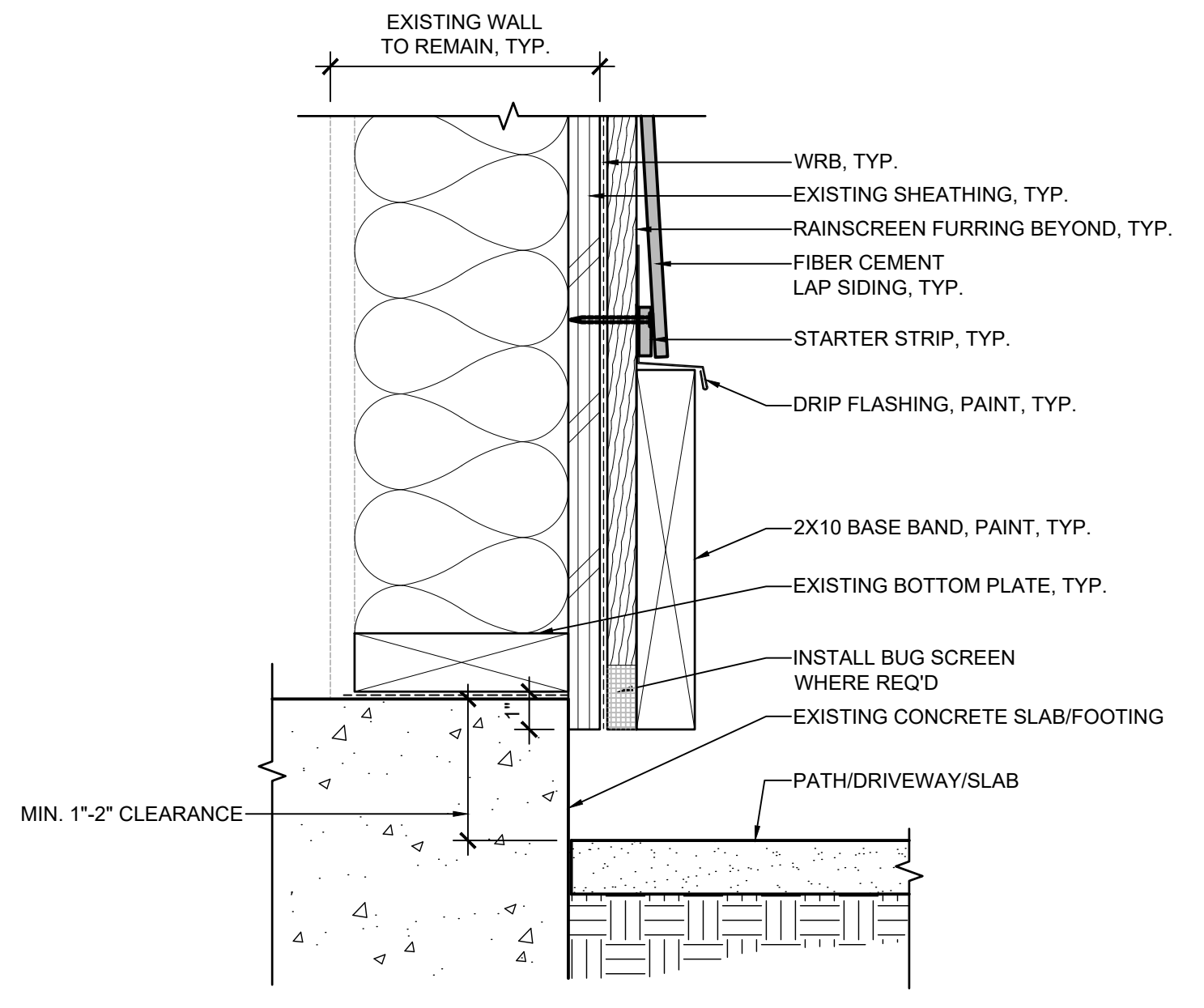
**6** WINDOW/DOOR JAMB - RAINSCREEN  
SCALE: 3"=1'-0"



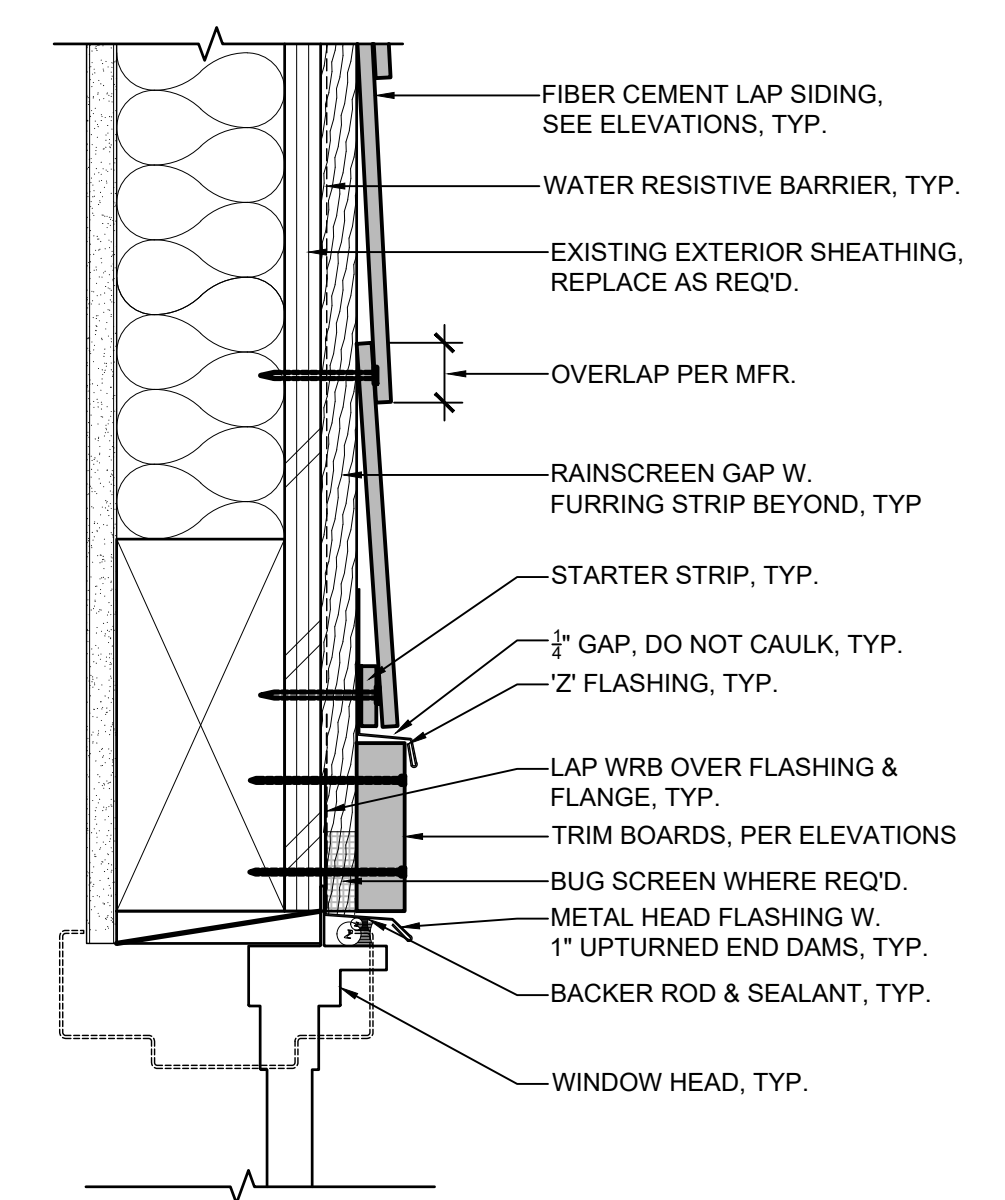
**3** FIXTURE PENETRATION - RAINSCREEN  
SCALE: 3"=1'-0"



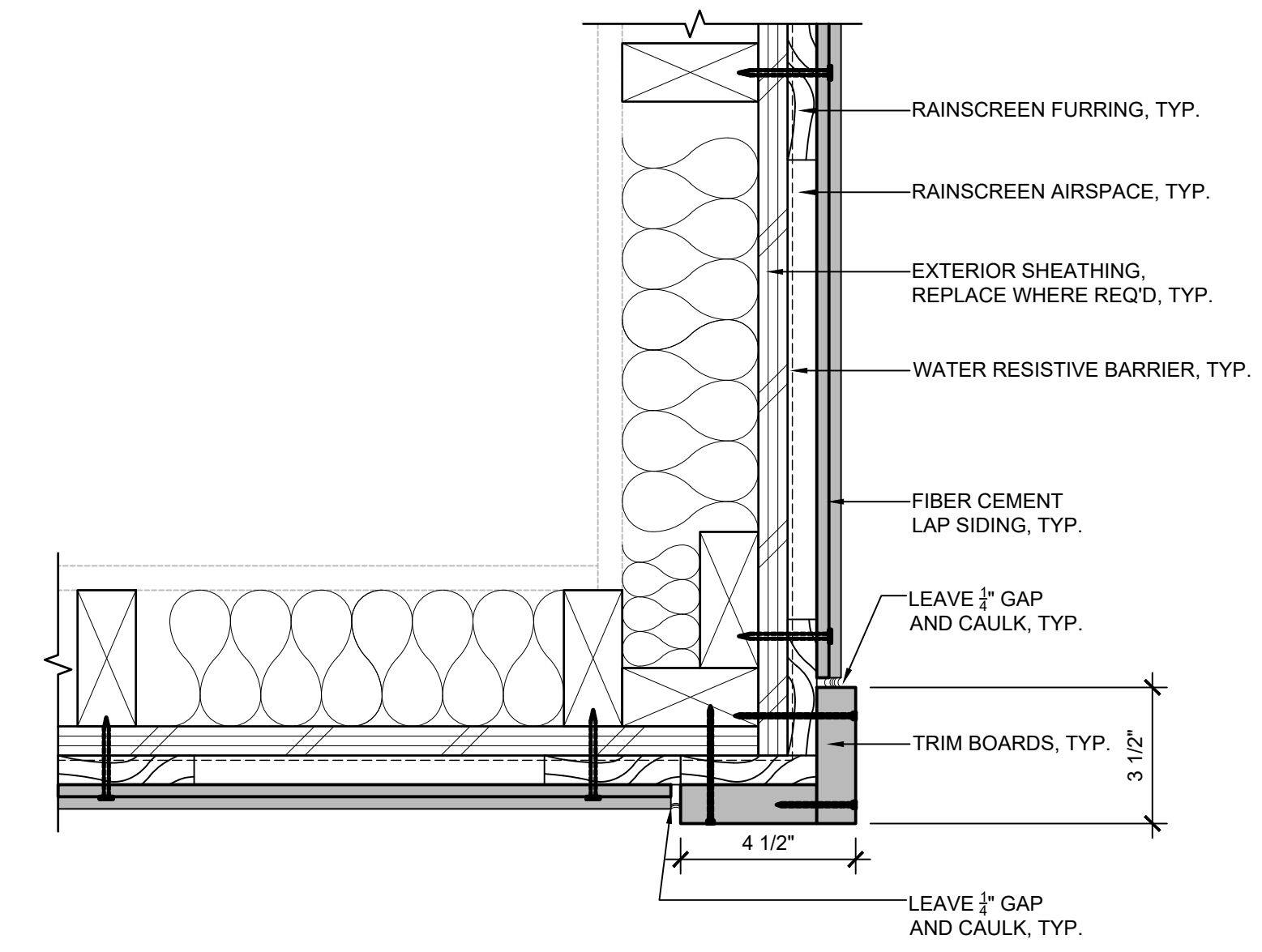
**11** MID WALL BAND DETAIL  
SCALE: 3"=1'-0"



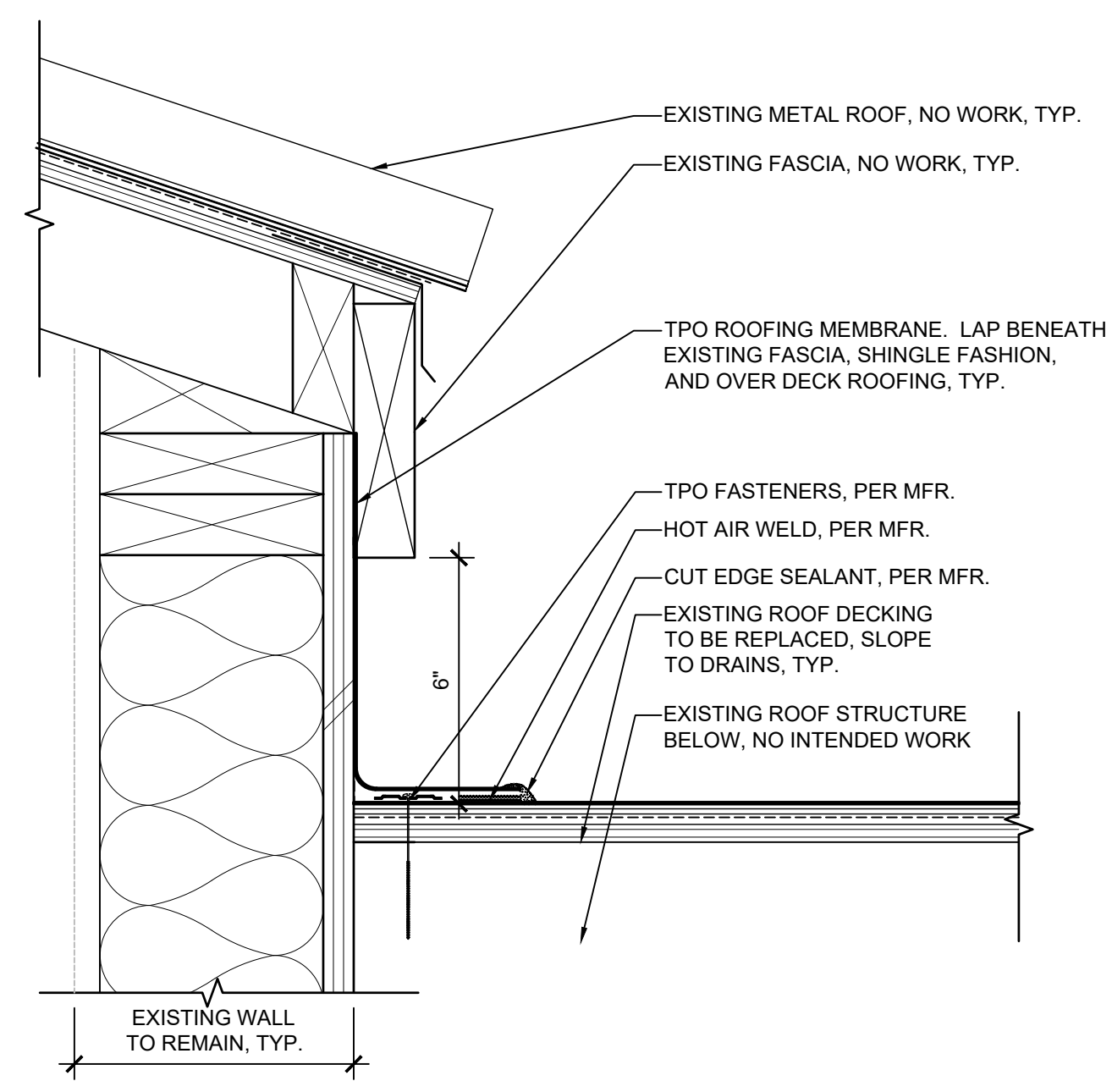
**8** HARDSCAPE CLEARANCES - RAINSCREEN  
SCALE: 3"=1'-0"



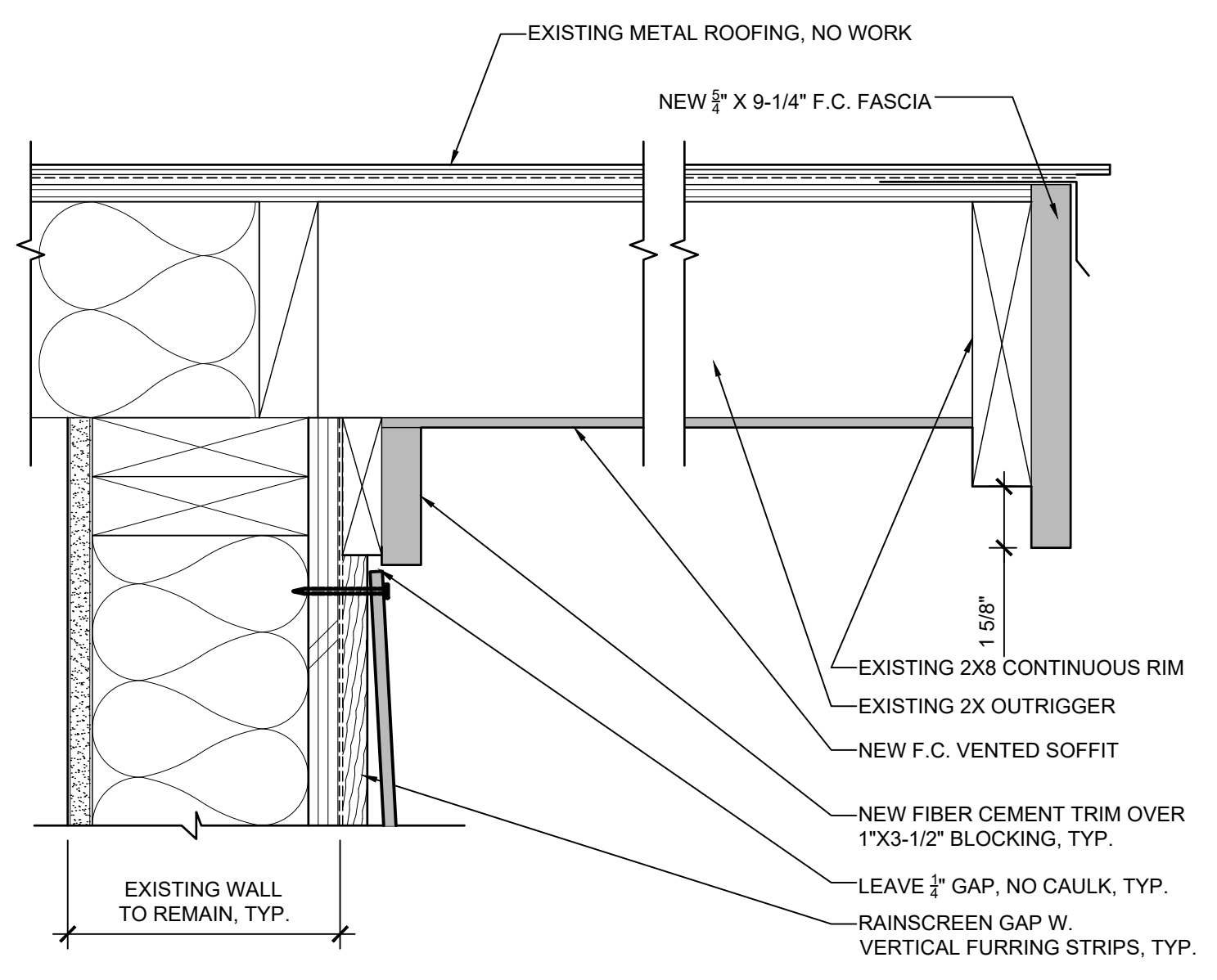
**5** WINDOW/DOOR HEAD - RAINSCREEN  
SCALE: 3"=1'-0"



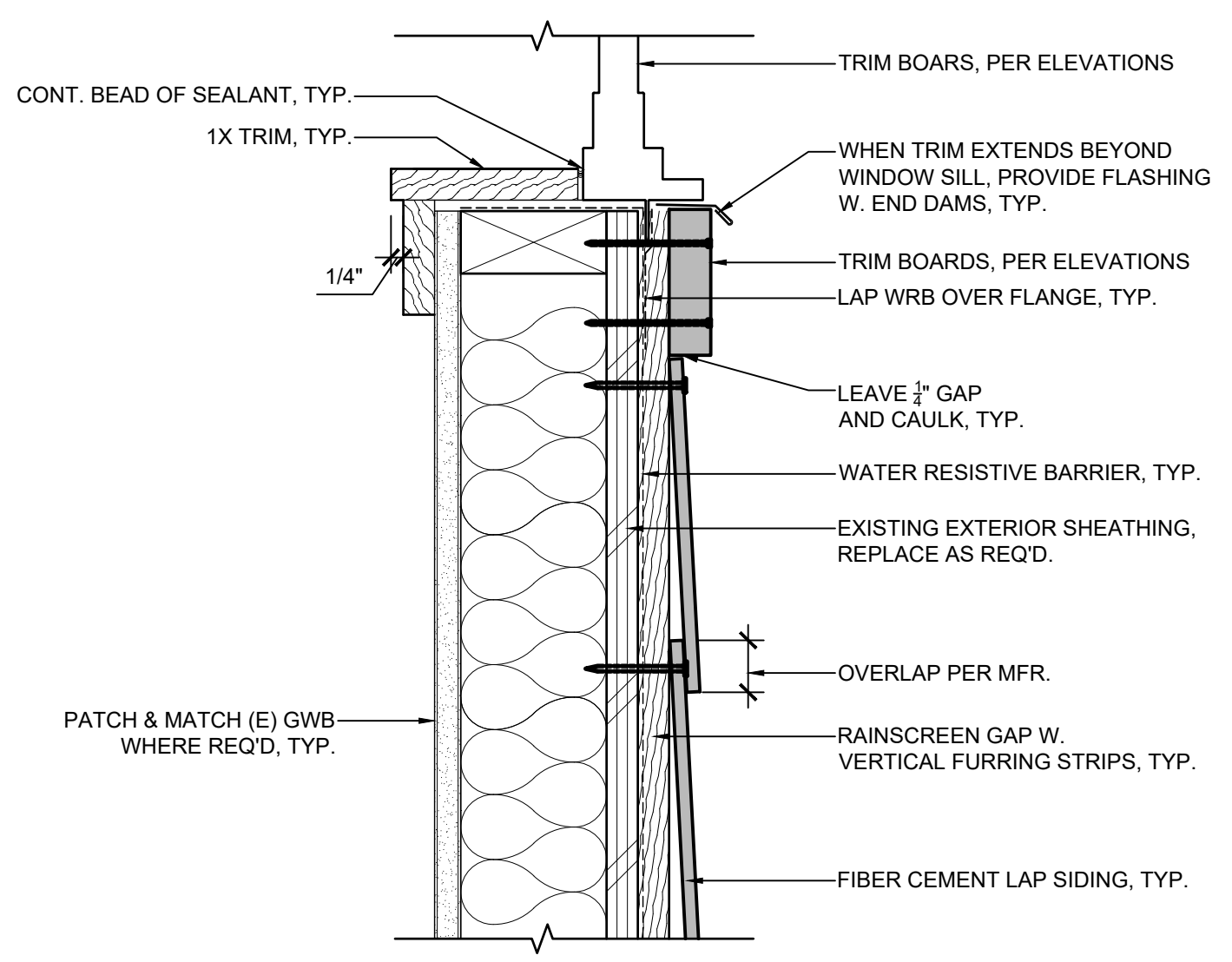
**2** OUTSIDE CORNER - RAINSCREEN  
SCALE: 3"=1'-0"



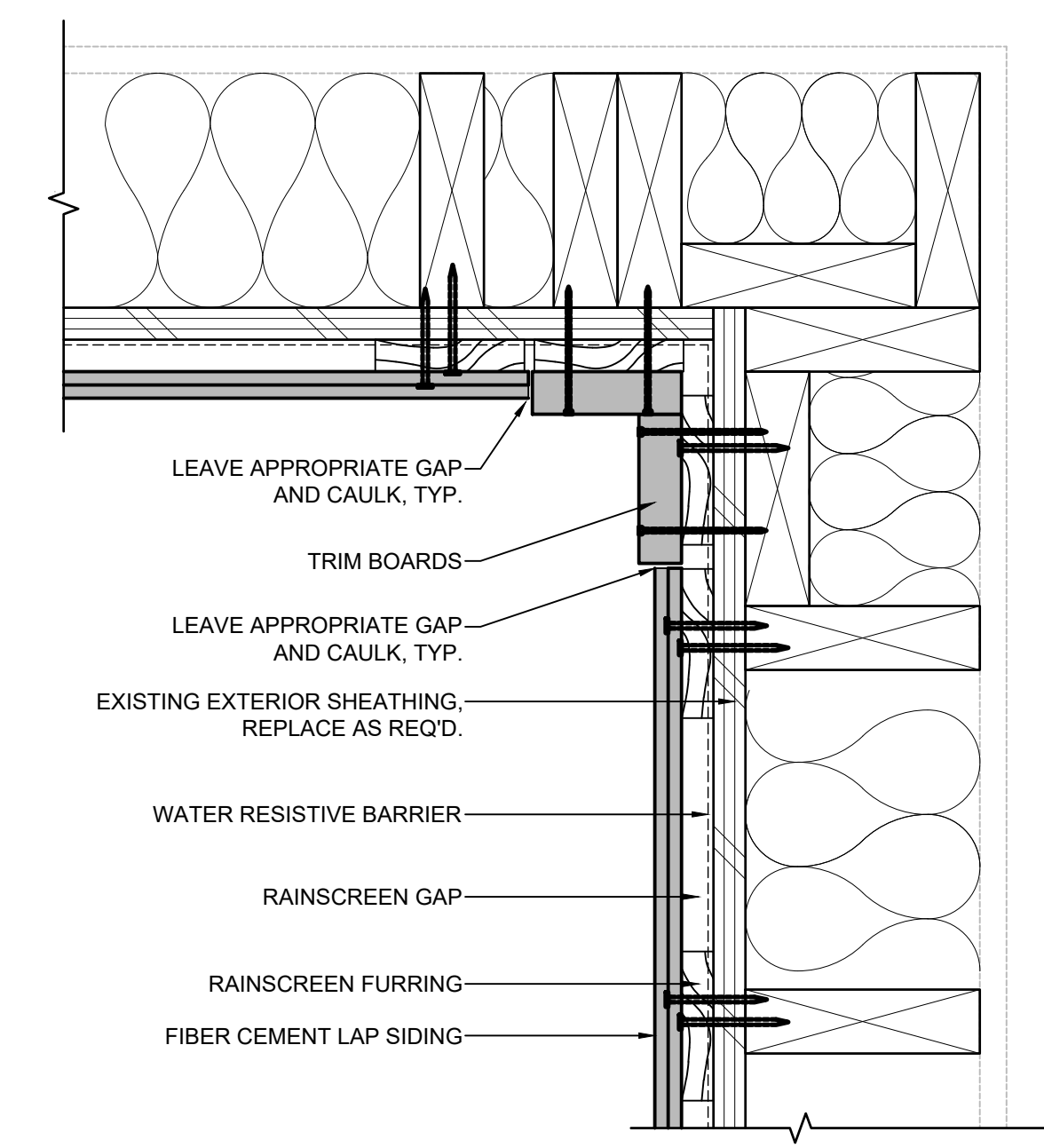
**10** HEADWALL @ LOW SLOPE ROOF  
SCALE: 3"=1'-0"



**7** TYP. RAKE - RAINSCREEN  
SCALE: 3"=1'-0"



**4** WINDOW SILL - RAINSCREEN  
SCALE: 3"=1'-0"



**1** INSIDE CORNER - RAINSCREEN  
SCALE: 3"=1'-0"

**SUDDEN VALLEY REC CENTER EXT. REMODEL**

SVBARN 8

SB JOB NO: 202205.27  
DATE: 10.24.2022

**CONSTRUCTION DOCUMENTS**

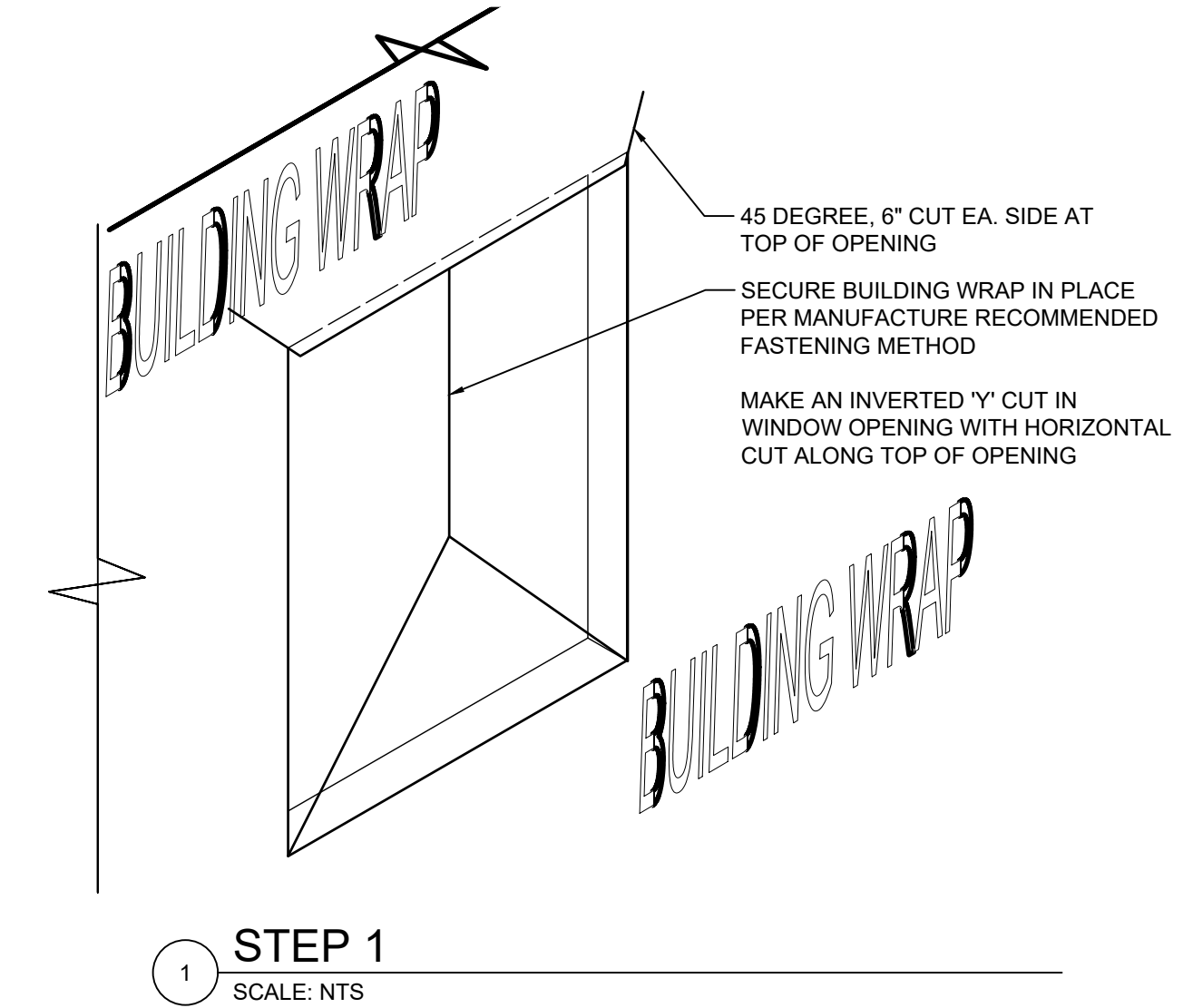
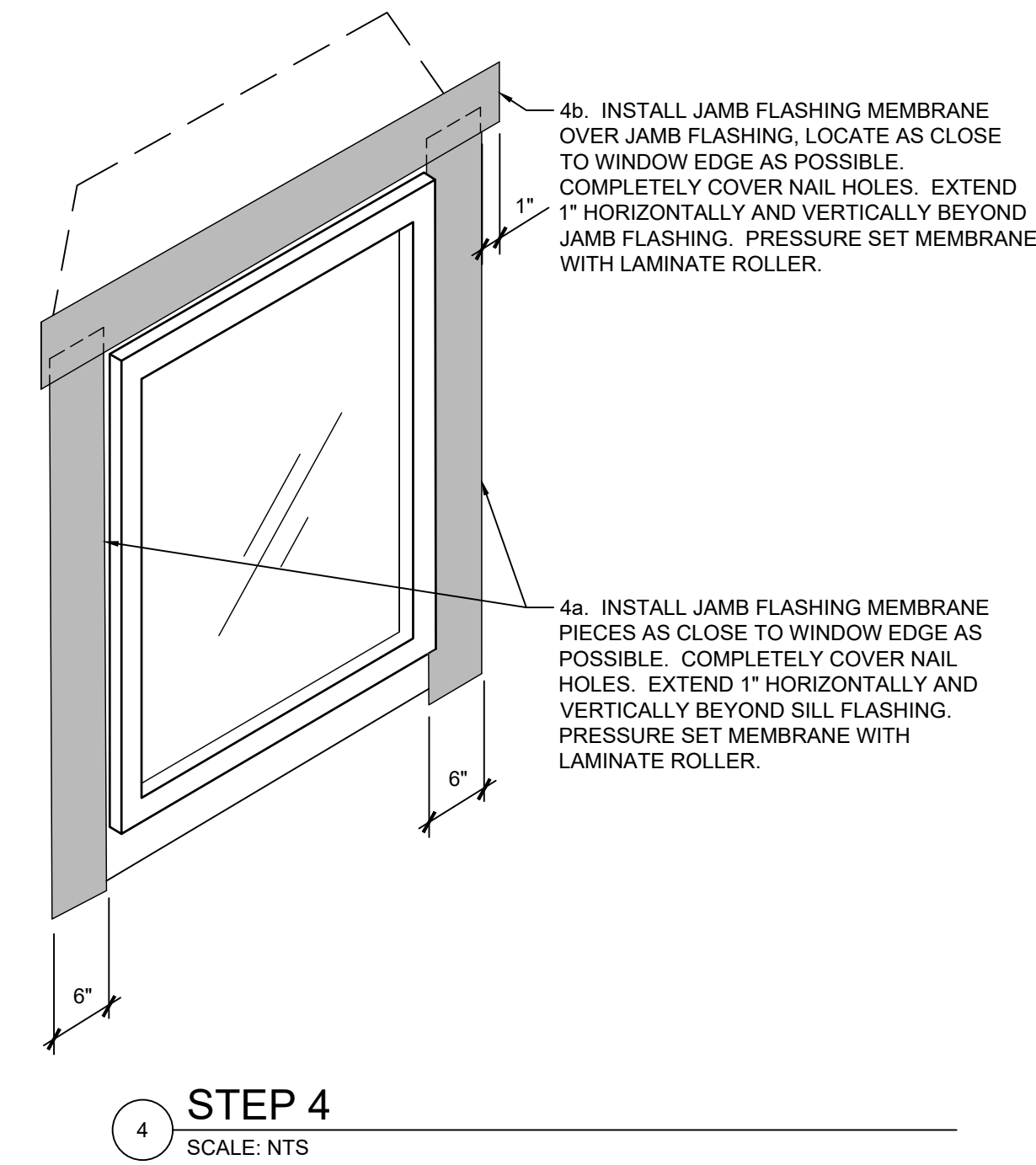
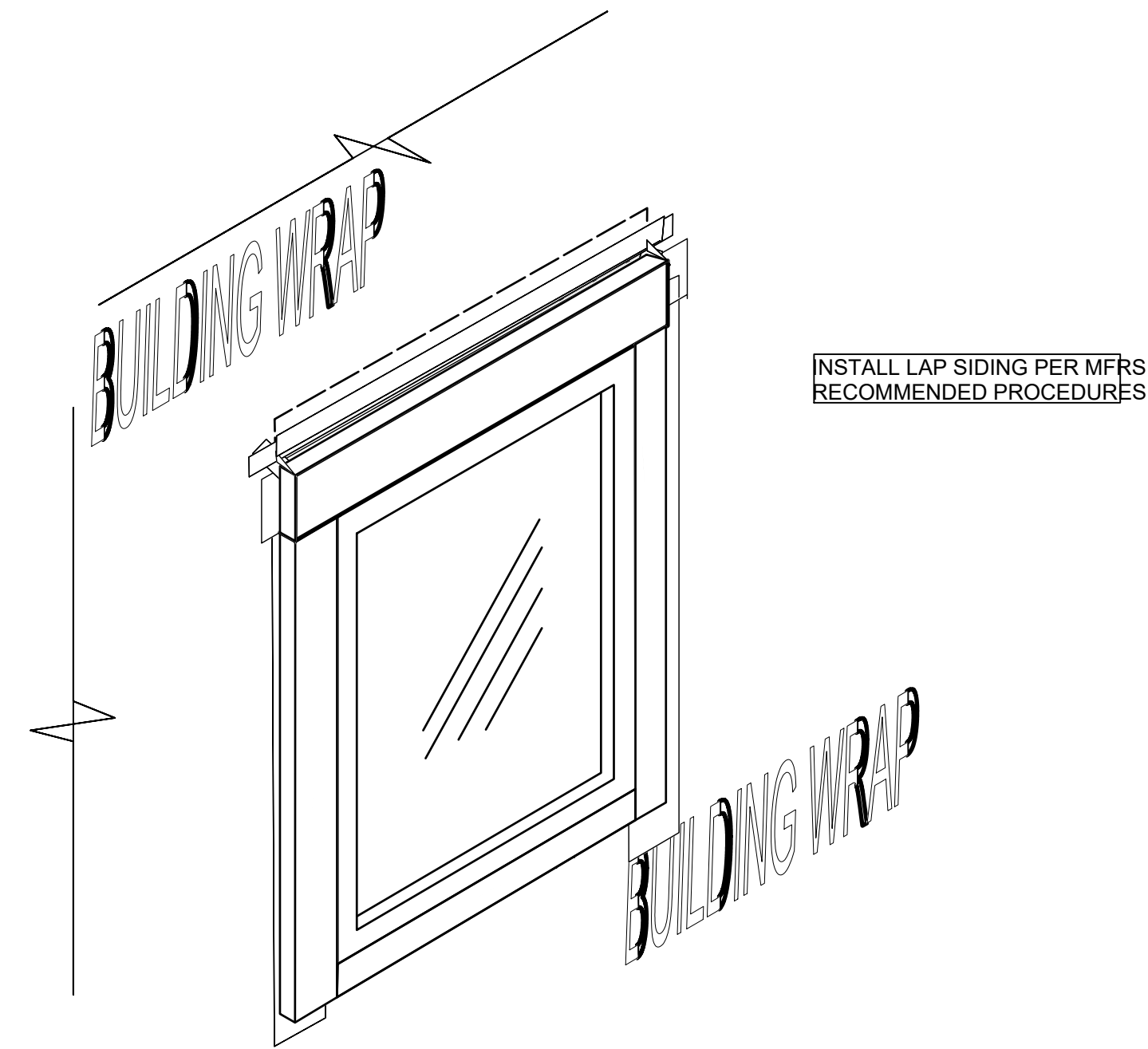
No.	ISSUED FOR	DATE

**EXTERIOR DETAILS**

**A 7.01**

THE UNDERSIGNED HAS PROVIDED BUILDING ENCLOSURE DOCUMENTS THAT IN MY PROFESSIONAL JUDGMENT ARE APPROPRIATE TO SATISFY THE REQUIREMENTS OF RCW 64.55.055 THROUGH 64.55.090. DETAILS INCORPORATE USE OF EXISTING WIDELY USED BUILDING ENVELOPE PROTECTION TECHNOLOGIES. DETAILS SUBJECT TO REVIEW AND UPDATE AS SYSTEMS ADVANCE.

THIRD PARTY INSPECTION AND CERTIFICATION REQUIRED FOR WEATEHR ENVELOPE SYSTEM



STEP 7  
SCALE: NTS

GENERAL WEATHERPROOFING INSTALLATION NOTES:

INSTALL FLASHING, MEMBRANES AND SEALANT DURING FAVORABLE WEATHER CONDITIONS. INSURE PROPER ADHESION, CONTACT AND SEAL PRIOR TO COVERING

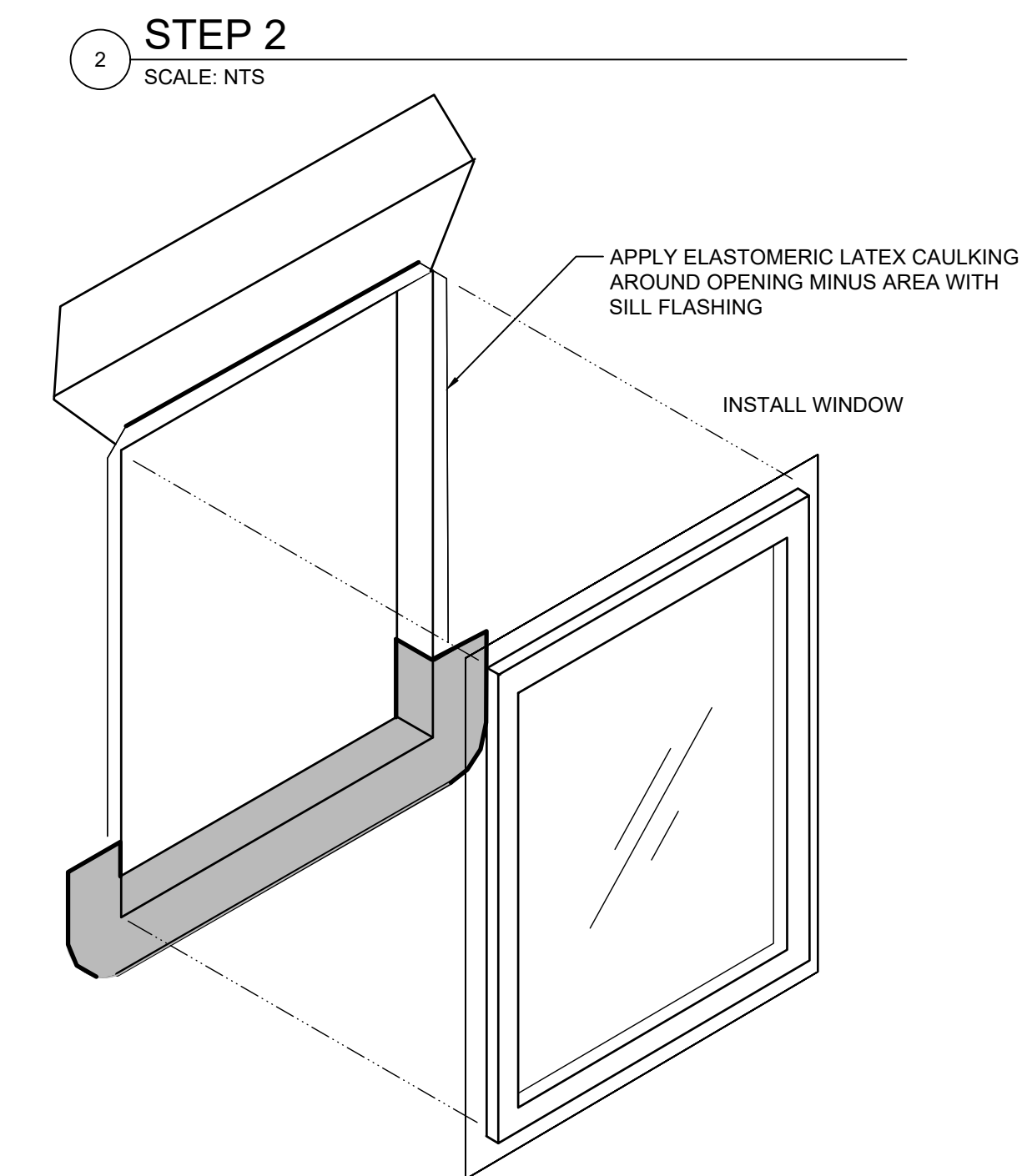
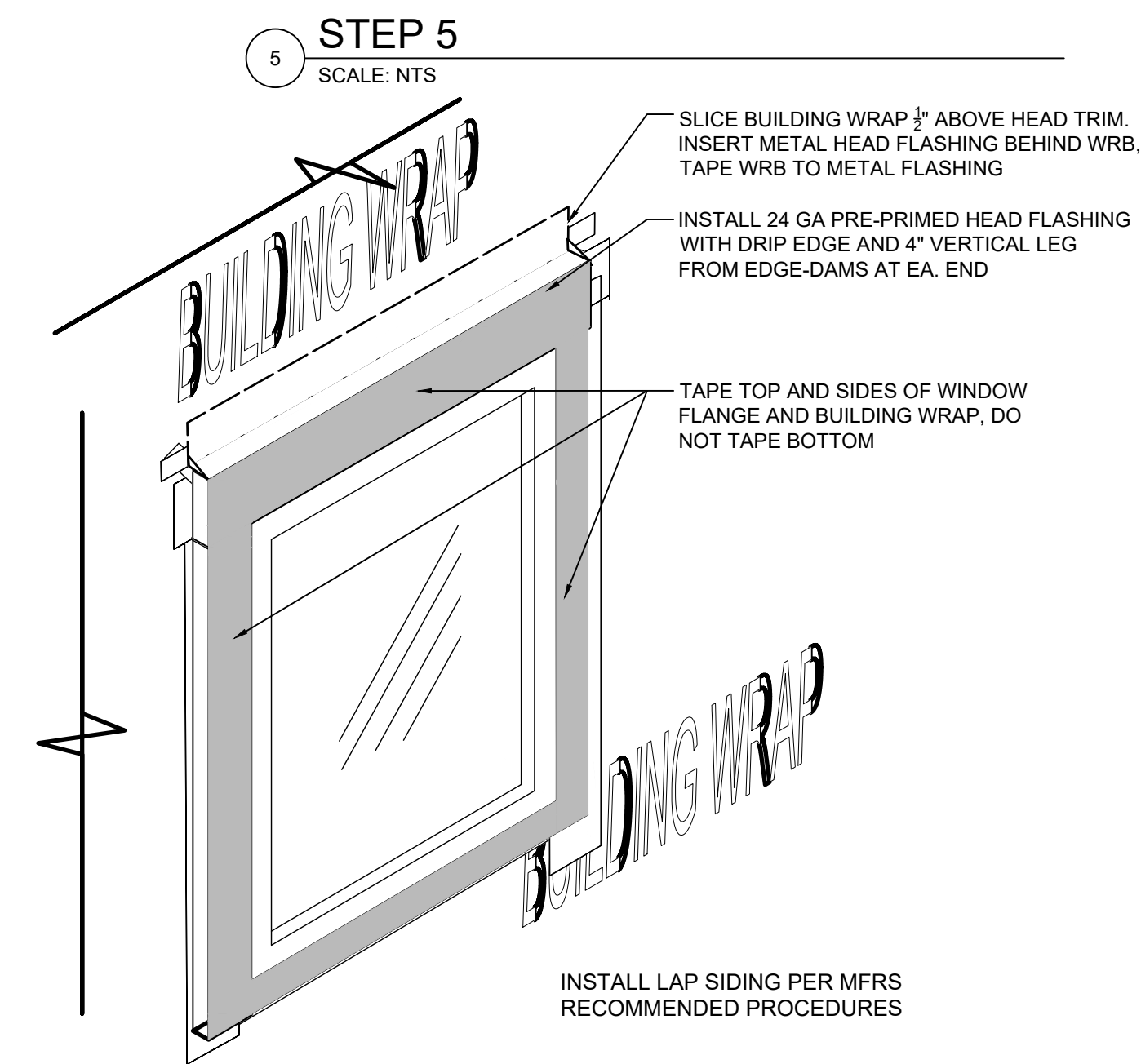
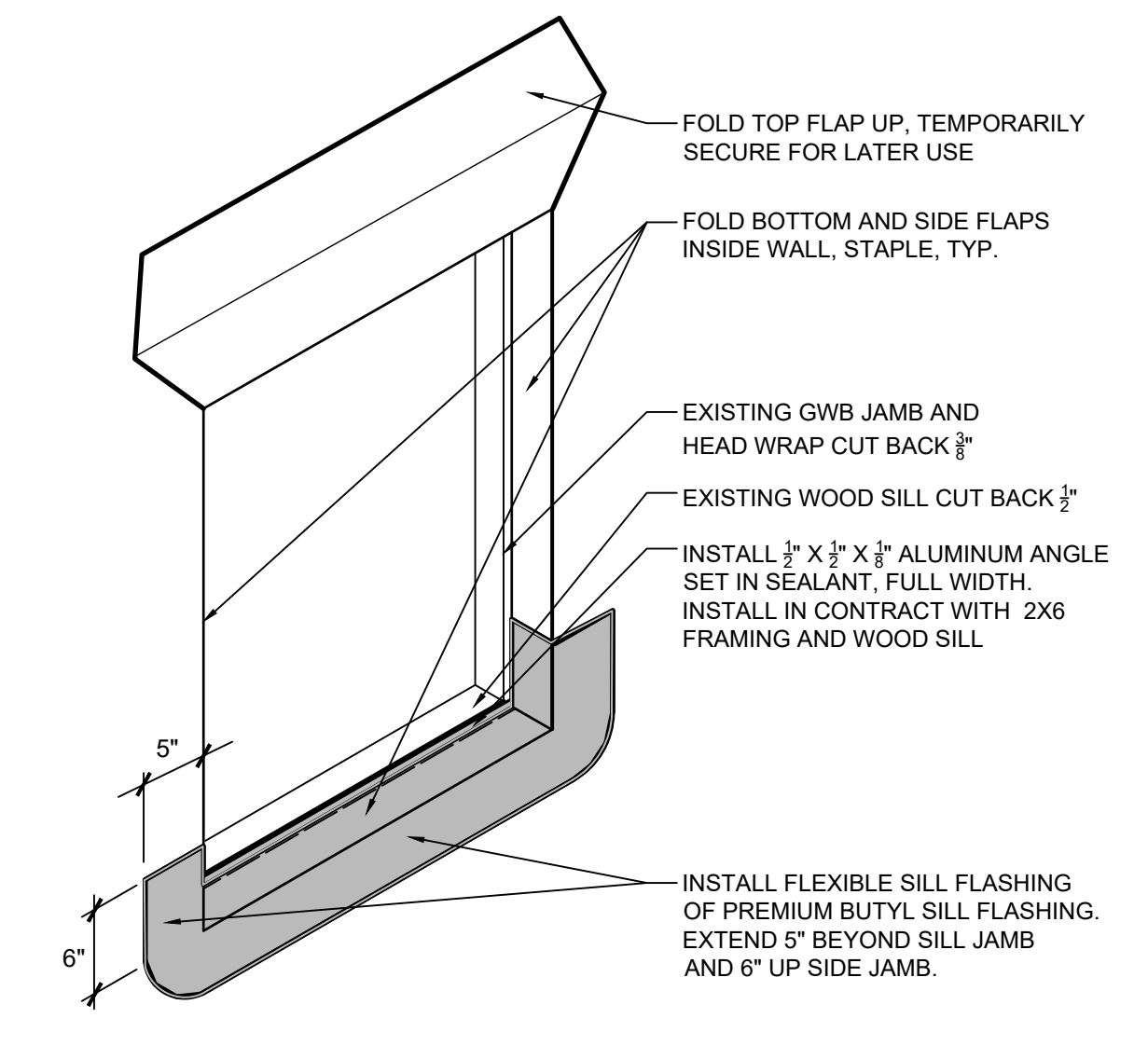
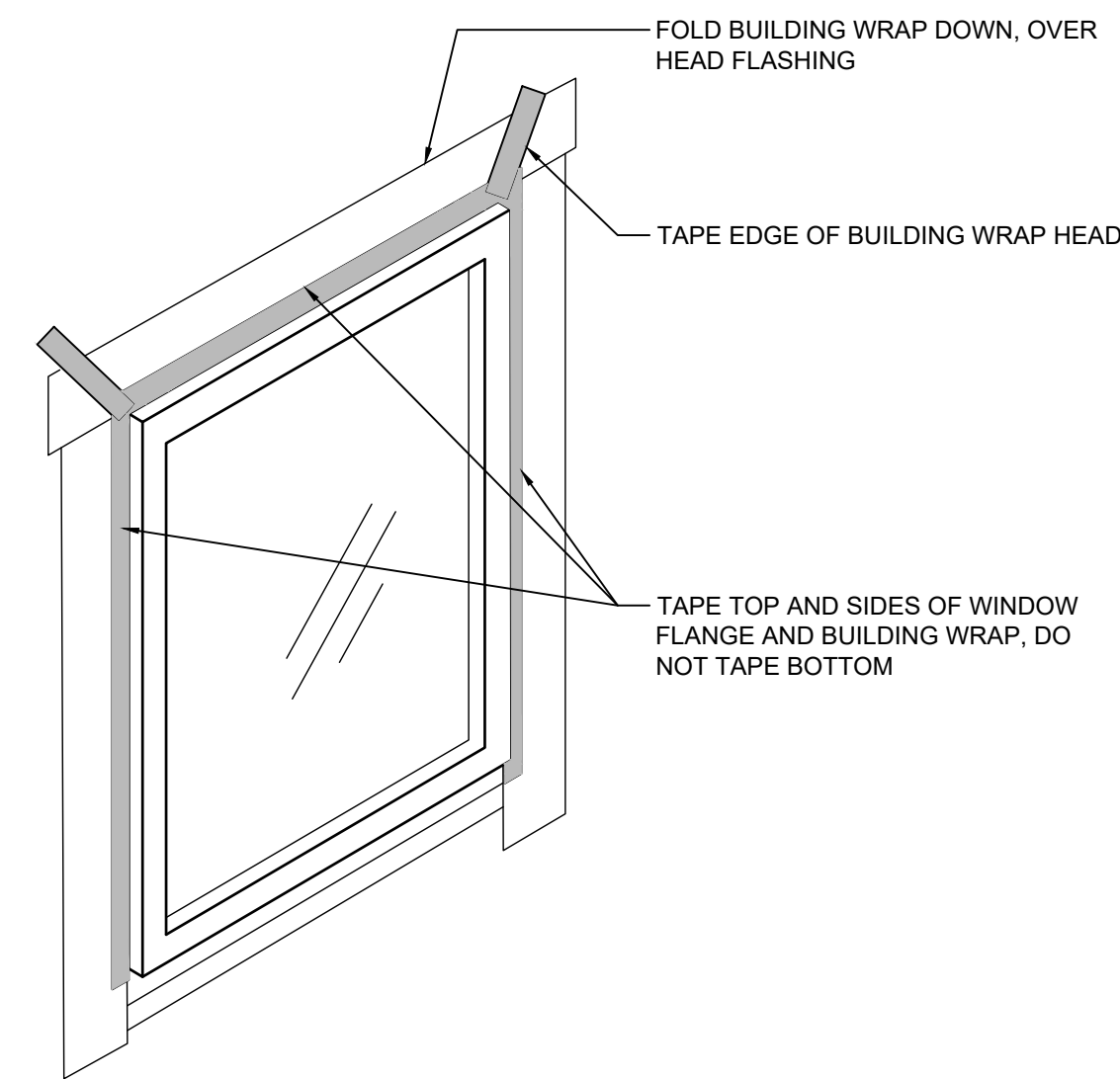
VERIFY COMPATIBILITY WITH DISSIMILAR MATERIALS. CONFIRM EXPANSION TOLERANCES WITH MANUFACTURE PRIOR TO INSTALLATION.

INSTALL LIKE PRODUCTS ACCORDING TO MANUFACTURES GUIDELINES.

DO NOT COVER SUBSTANDARD OR SUSPECT INSTALLATION OF ANY OTHER TRADE.

ALL EXTERIOR WALL & ROOF OPENINGS, FLASHING, COUNTER-FLASHING, EXPANSION JOINTS, BACKER-ROD, SEALANT AND FASTENERS TO BE CONSTRUCTED IN IN A WORKMAN LIKE MANNER REQUIRED TO MAKE THEM WEATHERPROOF AND WATERTIGHT.

WARRANTY ALL WORK FOR ONE YEAR MINIMUM.



SUDDEN VALLEY  
REC CENTER  
EXT. REMODEL

SVBARN 8

SB JOB NO: 202205.27

DATE: 10.24.2022

CONSTRUCTION  
DOCUMENTS

No.	ISSUED FOR	DATE

EXTERIOR DETAILS

A7.02



# Sudden Valley Community Association

360-734-6430

4 Clubhouse Circle Bellingham, WA 98229

[www.suddenvalley.com](http://www.suddenvalley.com)

## CAPITAL REQUEST MEMO

**To:** Sudden Valley Community Association Board of Directors  
**From:** Jo Anne Jensen, General Manager  
**Date:** September 28<sup>th</sup>, 2023  
**Subject:** Capital Request – Barn 8 Repairs  
Change Order to Capital Code 9722.09

---

### Purpose

To request funding for repairs to Barn 8 as per PNW's summary dated September 26, 2023.

### Background

On October 27, 2022, this project was brought to the Board for approval to start design and permitting. This scope has been completed as identified in PNW's summary and is now ready to be issued for bid with construction proposed to start in April 2024. After design work began, it was identified that the existing HVAC system in Barn 8 was due for replacement per the reserve study. The equipment was inspected by Berona Engineering and confirmed to be at or near the end of its lifecycle. This additional scope has been added to the project.

### Analysis

The design has been completed, and the permit was approved by Whatcom County on September 8, 2023. The permit will be issued after contract award, when we notify the county which contractor has been chosen. Construction has been proposed for 2024 with an anticipated start in April. PNW incurred additional design and permitting fees because of the addition of the HVAC replacement. Also, the design and permitting process took longer than anticipated because the project had to be submitted to Whatcom County under 3 separate packages that were then combined into 1 permit. We are now requesting funding approval to cover the additional design, as well as funding to move the project forward to bid. After bidding the project will be brought back to the Board for contract award approval.

### Proposal

I am asking the board to provide funding for remodeling Barn 8 per PNW's proposal dated September 26, 2023. This includes:

- Additional funding for design, permitting, and bid process in the amount of \$17,725.00.
- Construction funding in the amount of \$751,265.90.

Approval of this request will result in a change order to the funding of project 9722.09 in the amount of \$768,990.90.

### Request

Request \$768,990.90 from CRRRF for project change order funding to move project 9722.09 forward to bid.





# Sudden Valley Community Association

360-734-6430

4 Clubhouse Circle Bellingham, WA 98229

[www.suddenvalley.com](http://www.suddenvalley.com)

## **Motion**

Move that the Board of Directors approve the allocation of \$768,990.90 from CRRRF to SVCA Capital Code 9722.09.

## **Board of Directors Approval**

Approved: \_\_\_\_\_ Not Approved: \_\_\_\_\_SVCA Board of Directors



September 26, 2023

Sudden Valley Community Association  
Attn: Jo Anne Jensen  
4 Clubhouse Circle  
Bellingham, WA 98229

RE: Project Scope Letter  
**Barn 8 Remodel – Construction Estimate**

PNW is providing this overall project scope letter to SVCA for the proposed Barn 8 Remodel. On 10-27-22 this project was brought to the Board for approval to start design and permitting. Design has been completed, and the permit application was approved by Whatcom County on 9-8-23. The permit will be issued upon contract award, and Whatcom County being notified of who the contractor is to list on the permit. Summary of the project:

- Design, Permitting, & Contractor Bids
  - o Design and permitting was updated to include replacement of Barn 8's existing HVAC system that was identified for replacement per the reserve study. This additional design and permitting scope is identified below.
  - o The coordination with Whatcom County thru design and permitting took longer than anticipated with additional work required beyond what was anticipated in 2022. The permitting process required the project to be submitted in 3 separate submittals (siding and flat roof replacement, HVAC, and covered bridge) that was then combined into 1 permit package from Whatcom County. Below is a summary of anticipated costs to finish bid documents, and complete the bidding process.
  
- Construction
  - o Construction is proposed to start in April of 2024. Construction is anticipated to take approximately 5 months to complete. The permitting timeline on this project has been unknown for when the final review would be completed by Whatcom County, and thus construction was planned for 2024. Lead and asbestos testing has been completed, and those results will be included with the bid package.
  - o Existing flat roof will be replaced. This is proposed to be completed during summer 2024. During replacement the flat roof will be rebuilt to provide positive drainage. Currently the roof is too flat with the low point being in the middle not allowing water to drain. The existing roof membrane will be removed, new framing installed on top of the old framing, and a new membrane installed. It is unknown if any framing damage will be discovered when the existing membrane is removed. The budget below contains an allowance for some repairs. Repairs will be at the direction of the structural engineer and architect.
  - o Existing siding will be removed, and new siding installed. Fiber cement siding is proposed, not wood, to minimize bird damage. It is unknown if any structural damage will be found that needs replacing until after the existing siding is



removed. The budget below contains some allowance for repairs. Repairs will be at the direction of the structural engineer and architect. Siding replacement will be completed in stages by wall to maintain access to the barn. When the front is being completed access will be through the back entry, and then the opposite. The south and west sides (pool and playground sides) are proposed to be completed before the pool opening Memorial Day Weekend 2024.

- Existing windows and exterior doors will be replaced with new. New installations will be energy efficient, and meet current code requirements. Exterior lighting will be replaced as part of the project.
- An ERV, Energy Recovery Ventilator, will be installed to provide proper ventilation in the upstairs main room. Currently this room has inadequate ventilation, and is only heated by overhead propane heaters. The new system will provide air flow per current code requirements. Air conditioning is not being installed as part of this unit as this would require the entire building to be brought up to current energy code requirements, and be a much larger project. The existing electrical system will be updated to accommodate this additional load requirement. New louvers will be installed in the exterior wall prior to siding installation. New ducting as required will be installed inside.
- Replacement of existing HVAC system. All HVAC elements in Barn 8 are at or near the end of their lifecycle. Each unit will be replaced in kind with a new unit. This was identified on the reserve study, and confirmed by Berona Engineers.
- The 2<sup>nd</sup> story covered entry bridge will be replaced. This scope of the project is deferred to 2024. The current bridge has rot damage, and is sloping towards the barn so rainwater is constantly trapped against the building. A new structure similar to the existing will be built at the same location. The new design meets current code requirements, and is properly sloped to provide drainage away from the building. In addition, the project will replace the asphalt entry, concrete approach, trench drainage, fence/railing, and provide minor landscaping improvements. This scope of work is anticipated to cost approximately \$225,000.00.
- Interior remodel of upstairs kitchenette. The upstairs kitchenette is being reduced in size to accommodate the ERV system being installed, and with this new cabinets will be installed. Drawing A2.02 refers to this room as New Kitchen, but it is only a kitchenette as confirmed by Whatcom County in the permit approval.



Summary of anticipated costs:

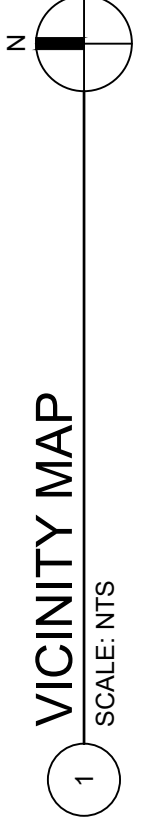
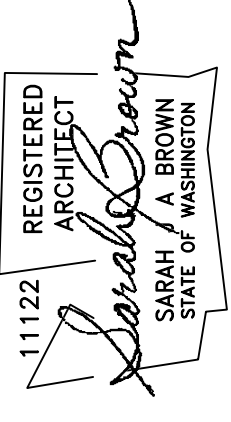
<b>Additional HVAC Scope – Design &amp; Permitting</b>	
- Berona Engineers Inc. – Design & Permitting for Existing HVAC Replacement	\$3,000.00
- Sarah Brown Architecture & Design – Incorporate HVAC Replacement into Drawings & Permit Package	\$3,000.00
- PNW Services, Inc. – Per Attached	\$1,080.00
Subtotal	\$7,080.00
<b>Bid Package – Final Design Review &amp; Contract Documents</b>	
- Sarah Brown Architecture & Design	\$2,000.00
- Kingworks Structural Engineers	\$1,000.00
- Berona Engineers Inc.	\$1,000.00
- Lead and Asbestos Sampling	\$3,000.00
- PNW Services, Inc. – Per Attached	\$3,645.00
Subtotal	\$10,645.00
<b>Total – Additional Design, Permitting, Contractor Bids</b>	<b>\$17,725.00</b>
<b>Construction Oversight</b>	
- Sarah Brown Architecture & Design – Assumes 20 Week Construction Period at 4 Hours per Week.	\$14,800.00
- Kingworks Structural Engineers – Assumes 20 Week Construction Period at 3 Hours per Week.	\$9,660.00
- PNW Services Inc. – Per Attached	\$27,000.00
Subtotal – Construction Oversight	\$51,460.00
<b>Construction Estimate</b>	
- Flat Roof Removal, Reframing, and New Roof	\$77,500.00
- Siding Removal and Replacement	\$219,000.00
- Exterior Doors and Windows	\$60,000.00
- New Ventilation System on 2 <sup>nd</sup> Floor – ERV System, Electrical, and Framing Modifications	\$115,000.00
- Existing HVAC System Replacement	\$80,000.00
- Covered Bridge Replacement – Deferred to 2024	N/A
- Interior Remodel – Upstairs Kitchenette	\$30,000.00
Subtotal Construction Estimate	\$581,500.00
WSST @ 8.6%	\$50,009.00
Total Construction Estimate w/ WSST	\$631,509.00
Total Construction Oversight & Construction	\$682,969.00
Contingency @ 10%	\$68,296.90
<b>Total Construction with Contingency</b>	<b>\$751,265.90</b>



Please let me know if you have any questions, or if you would like any further information.

Sincerely,

Tyler Andrews  
President



**PROJECT DESCRIPTION**

THIS PROJECT CONSISTS OF THE REPLACEMENT OF WINDOWS, DOORS AND SIDING ON AN EXISTING COMMUNITY CENTER. THE EXISTING SECOND FLOOR ENTRY BRIDGE WILL BE REPLACED WITH A NEW STRUCTURE. THERE WILL BE NEW VENTILATION WITH HVAC REPAIRS THROUGHOUT. THE ONE STORY PORTION OF THE BUILDING WILL BE RE-ROOFED. NO NEW FLOOR AREA, MINIMAL TENANT IMPROVEMENT MODIFICATIONS MADE ON THE FIRST AND SECOND FLOOR.

NOTE: UPDATES TO THE EXISTING BRIDGE STRUCTURE WILL IMPROVE THE FACILITY FOR COMMUNITY USE. ADA NOTIFICATION WILL OCCUR OUTSIDE OF THIS SCOPE WITH DEDICATED ADA IMPROVEMENTS GOING INTO THE SUDDEN VALLEY DOCK UPGRADES (SEPARATE PERMIT)

CODE:	2018 IEBC, 2018 IBC & ALL APPLICABLE CODES
ALTERATION LEVEL:	LEVEL II
CONSTRUCTION TYPE:	VB, NON SPRINKLERED
FLOOR AREAS:	GROUND FLOOR: 13,176 SQ FT SECOND FLOOR: 8,656 SQ FT
OCCUPANCY:	GROUP : A-3 ASSEMBLY
OCCUPANCY LOAD	EXERCISE 2385 SQFT /50 = 48 OCCUPANTS OFFICE 1400 SQFT /150 = 9 OCCUPANTS ASSEMBLY 803 SQFT /15 = 54 OCCUPANTS LOCKER ROOMS 809 SQFT /50 = 16 OCCUPANTS
ALTERED TI AREA:	SECOND FLOOR: -460 OCCUPANTS (POSTED) ARCHIVE ROOM 109 - 981 SQFT MECHANICAL/KITCHENETTE 202 - 591 SQFT TOTAL 1,572 SQFT
RESTROOMS:	NO WORK
FIRE SPRINKLERS:	NONE
FIRE ALARM:	PROVIDE & LOCATE FIRE ALARM NOTIFICATION APPLIANCE(S) STATION(S) AND SENSOR(S) PER CODE AND AS REQUIRED BY FIRE DEPARTMENT

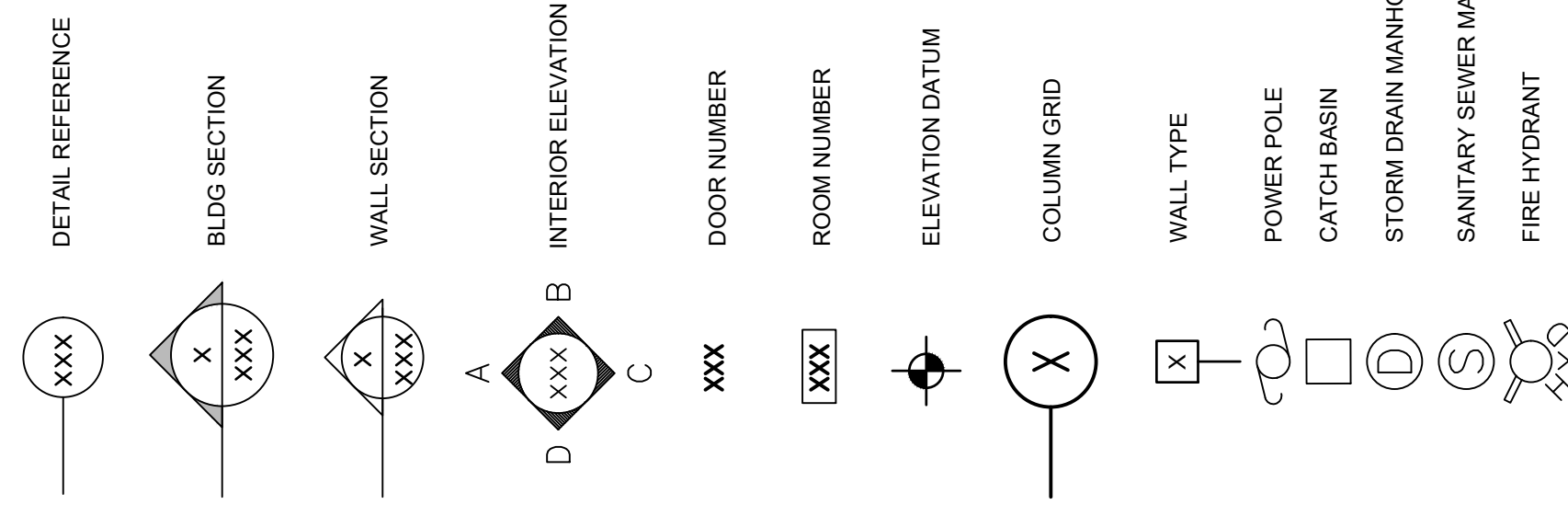
**WSEC - ALTERATION COMPLIANCE**

WINDOWS:	U=30 AND SHGC=0.45
OPAOQUE MAN DOORS:	U=37
NEW WALL CAVITIES:	R21, U=0.04
NEW LIGHTING:	SHALL COMPLY WITH THE WSEC PROVIDE EXTERIOR PHOTOCELL ON NORTH SIDE OF BUILDING AND TIME CLOCK FOR EXTERIOR LIGHTING CONTROL. PHOTOCELL TO ENERGIZE EXTERIOR LUMINAIRES AT SUNSET AND TIME CLOCK TO SHED HALF OF THE EXTERIOR LUMINAIRES AT MIDNIGHT. COORDINATE LOCATION OF TIME CLOCK WITH ARCHITECT PRIOR TO ROUGH IN. TIME CLOCK SHALL BE INTERMATIC NO. T101P OR APPROVED EQUAL.
NEW HVAC:	SHALL COMPLY WITH THE WSEC
NEW VENTILATION:	SHALL COMPLY WITH THE IMC

**DRAWING INDEX**

ARCHITECTURAL DRAWINGS	STRUCTURAL DRAWINGS
A1.01 - TITLE PAGE & PROJECT INFORMATION	S1.1 - STRUCTURAL NOTES
A1.02 - SITE PLAN	S1.1 - LOW ROOF & UPPER FLOOR FRAMING PLAN
A2.01 - FIRST FLOOR PLAN	S2.1 - PEDESTRIAN BRIDGE FRAMING PLANS
A2.02 - SECOND FLOOR PLAN	S2.1 - PEDESTRIAN BRIDGE FRAMING DETAILS
A3.01 - ELEVATIONS	S4.2 - PEDESTRIAN BRIDGE STRUCTURAL ROOF DETAILS
A3.02 - ELEVATIONS	MECHANICAL DRAWINGS
A4.01 - SECTIONS	M0.0 - LEGENDS AND NOTES
A4.02 - EXTERIOR DETAILS	M1.00 - MECHANICAL SPECIFICATIONS
A7.01 - EXTERIOR DETAILS	M2.0 - SPECIFICATIONS
A7.02 - EXTERIOR DETAILS	M3.0 - SPECIFICATIONS
	M1.0A - SCHEDULES
	M2.0A - HVAC FLOOR PLAN
	M3.0 - HVAC SECTION

**SYMBOLS**



**LAND USE INFORMATION**

PARCEL No.: 3704083184570000

ABBREY, LEGAL DESCRIPTION:  
TR IN N 1/2 DAF-BEG AT MOST NLY COR ON ELY  
BNDRY OF SUDDEN VALLEY CLUBHOUSE CLUSTER  
COMMUNUM-TH USING SAME MERIDIAN 14. FT.  
TH N 28 DEG 48'04" E 32.49 FT-TH S 60 DEG 52'42"  
E 228.38 FT-TH N 32 DEG 19'26" E 245.79 FT

**BUILDING CODE REQUIREMENTS**

2018 INTERNATIONAL BUILDING CODE, IEBC PRESCRIPTIVE COMPLIANCE METHOD & WA STATE AMENDMENTS.

**PROPERTY CHARACTERISTICS**

LAND USE: 74  
TAX DIST: 1015 - 501 R L FSW LWMS  
LEGAL ACRES: 11.77 ACRES  
WATER DIST: LAKE WHATCOM WATERSEWER

**DEFERRED SUBMITTAL**

ELECTRICAL, DEFERRED SUBMITTAL

**ARCHITECTURAL ABBREVIATIONS**

A.H.U.	AIR HANDLING UNIT
ALT.	ALTERNATE
A.V.	AUDIO /VISUAL
BLDG.	BUILDING
DIA.	DIAMETER
D.S.	DOWNSPOUT
ELEC.	ELECTRICAL
ELEV.	ELEVATOR
EXT.	EXTERIOR
F.E.	FIRE EXTINGUISHER
F.E.C.	FIRE EXTINGUISHER CABINET
F.F.	FINISH FLOOR
GA.	GAUGE
G.L.B.	GLUE LAMINATED BEAM
G.W.B.	GYPSUM WALLBOARD
HR.	HOUR
INSUL.	INSULATION
INT.	INTERIOR
MECH.	MECHANICAL
MISC.	MISCELLANEOUS
N.I.C.	NOT IN CONTRACT
O.C.	ON CENTER
OPP.	OPPOSITE
P.T.	PRESSURE TREATED
REF.	REFERENCE
RM.	ROOM
S.D.	SMOKE DETECTOR
SHT.	SHEET
SIM.	SIMILAR
SS.	STAINLESS STEEL
ST.	STREET
STRUCT.	STRUCTURAL
T.O.C.	TOP OF CONCRETE
TS.	TUBE STEEL
TYP.	TYPICAL
U.N.O.	UNLESS NOTED OTHERWISE
W/	WITH
@	AT
&	AND

**PROJECT ADDRESS**

4 BARN VIEW DRIVE  
BELLINGHAM, WA 98229

**BUILDING OWNER**

SUDDEN VALLEY COMMUNITY ASSOCIATION  
4 CLUBHOUSE CIRCLE  
BELLINGHAM, WA  
PH: 360.734.6430

**CONTRACTOR**

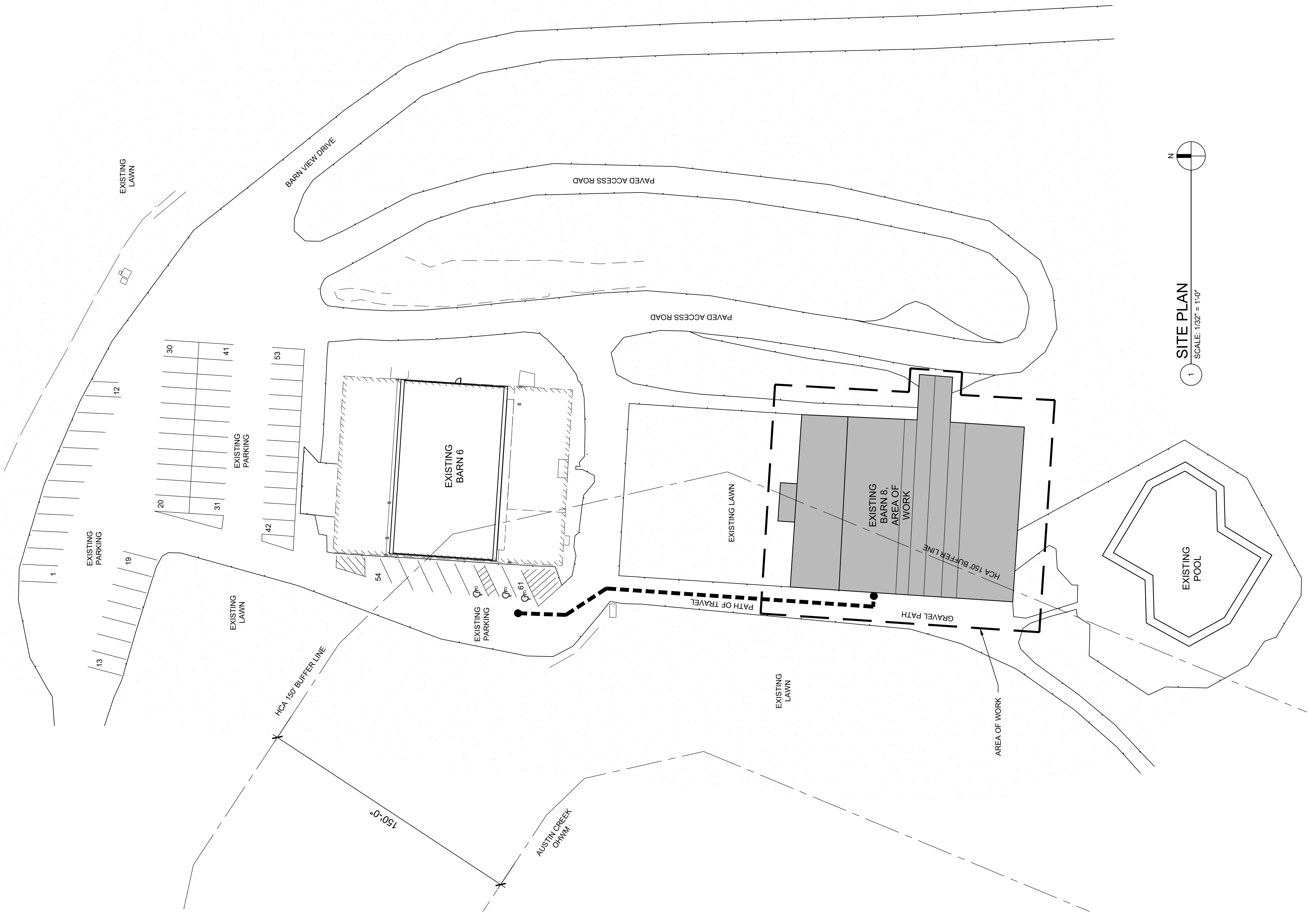
BID SELECTION

**PROJECT NOTES**

- DOOR NOTES:**
1. VERIFY ALL R.O. AND JAMB DEPTHS PRIOR TO ORDERING.
  2. ALL DOORS TO HAVE BARRIER FREE HARDWARE AS PER ADA.
  3. DOORS SHALL HAVE LEVER HARDWARE WHICH WILL PERMIT OPERATION BY WRIST OR ARM PRESSURE.
  4. ALL POCKET DOORS TO HAVE ADA POCKET DOOR PULLS.
- DEMOLITION NOTES:**
1. LEGALLY REMOVE DEMOLITION DEBRIS FROM SITE
  2. PROTECT ALL STRUCTURAL MEMBERS AND COLUMNS.
  3. DEMOLITION DEBRIS SHALL NOT BE ALLOWED TO DAMAGE OR OVERLOAD THE EXISTING STRUCTURE.
- FURNISHING NOTES:**
1. ALL FURNITURE NIC

**GENERAL NOTES**

- GENERAL NOTES**
1. IN GENERAL, PLAN DIMENSIONS SHOWN ARE TO FACE OF STUD OR FACE OF CONCRETE UNLESS OTHERWISE NOTED. DO NOT SCALE THESE DRAWINGS. USE CALCULATED DIMENSIONS ONLY. VERIFY ALL DIMENSIONS, DATUM AND LEVELS PRIOR TO CONSTRUCTION. NOTIFY ARCHITECT IMMEDIATELY OF ANY DISCREPANCIES OR CONFLICTS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING PERMISSON OF THE ARCHITECT DOES AS AT THEIR OWN RISK AND BY SUCH AGREES TO INDEMNIFY THE ARCHITECT AS WELL AS ARCHITECTS EMPLOYEES AND CONSULTANTS, AND TO HOLD HARMLESS FOR ANY INJURY OR LOSS OF DAMAGE THAT MAY OCCUR.
  2. CONTRACTOR AGREES THAT HE SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPLY CONSIDERABLY AND NOT BE LIMITED TO NORMAL WORKING HOURS, AND THAT THE CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD THE OWNER AND ARCHITECT HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT EXCEPTING FOR LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE OWNER OR THE ARCHITECT.
  3. THE CONTRACTOR SHALL MAINTAIN INSURANCE COVERAGE FOR THE ENTIRE DURATION OF THE PROJECT. THE CONTRACTOR SHALL TAKE PRECAUTIONARY MEASURES TO ENSURE THAT ALL PROPERTIES IS PROTECTED DURING THIS CONSTRUCTION. ANY DAMAGE OR CHANGED CONDITIONS SHALL BE REPAIRED AND RESTORED TO A CONDITION EQUAL TO THAT EXISTING AT THE COMMENCEMENT OF THE WORK. CONTRACTOR SHALL RESTORE ANY DAMAGE AT HIS OWN EXPENSE. WHERE EXISTING WORK IS DAMAGED, CUT OR DEFACTED DURING THE COURSE OF CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE TO SAME TO MATCH ADJOINING SURFACES. REPAIRED FINISHES SHALL BE EXTENDED TO THE NEAREST VISUAL BREAK LINES SUCH AS CORNER, CEILING LINES, TOP OF BASE OR SIMILAR.
  4. CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS PRIOR TO INITIATING THE WORK. NOTIFY ARCHITECT OF ANY DISCREPANCIES.
  5. ALL WORK SHALL COMPLY WITH THE 2009 IBC, IFC, IPC, IMC AS AMENDED BY WASH. STATE. PROJECT SHALL ALSO COMPLY W/ JURISDICTIONAL CODE AMENDMENTS BY THE LOCAL AGENCY. CONTRACTOR IS RESPONSIBLE FOR OBTAINING NECESSARY PERMITS & INSPECTIONS TO COMPLETE THE WORK. CONTRACTOR TO HAVE CURRENT VALID CITY OR COUNTY BUSINESS LICENSE PRIOR TO ISSUANCE OF PERMIT. WHEN REQUIRED BY PERMITS, CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS PRIOR TO INITIATING THE WORK. ARCHITECT IMMEDIATELY FOR DIRECTION OF HOW TO PROCEED.
  6. VERIFY ALL ROUGH-IN DIMENSIONS FOR EQUIPMENT PROVIDED IN THE CONTRACT BY OTHERS PROVIDE ALL BLOCK-OUTS, BLOCKING, BACKING AND JACKS REQUIRED FOR DUCTS, PIPES, CONDUITS, EQUIPMENT, FIXTURES AND CABINETS. VERIFY SIZE AND DO NOT SIGNIFICANTLY VARY OR MODIFY THE WORK SHOWN, EXCEPT UPON WRITTEN INSTRUCTIONS OF THE ARCHITECT.
  7. VERIFY LOCATION OF ALL EXISTING UTILITIES INCLUDING BUT NOT LIMITED TO SEWER, SEPTIC, WATER, GAS, POWER AND TELEPHONE. CAP, MARK AND PROTECT. DETAILS ARE INTENDED TO SHOW THE INTENT OF THE DESIGN, MINOR MODIFICATION TO THE WORK SHALL BE NOTED AS PART OF THE WORK OF THE CONTRACT.
  8. MODIFICATIONS SHALL BE INCLUDED AS PART OF THE WORK OF THE CONTRACT. PROVIDE CLOSURE, MEETING THE REQUIREMENTS OF ALL GOVERNING AUTHORITIES, AT RATED PARTITIONS, FLOORS, CEILINGS, AND ROOF LOCATIONS. ALL REQUIRED FIRE-RATED PARTITIONS SHALL BE CONTINUOUS FROM FLOOR TO UNDERSIDE OF STRUCTURE ABOVE.
  9. NO BUILDING PORTION OF A BUILDING SHALL BE OCCUPIED OR USED FOR STORAGE OF MATERIALS OR EQUIPMENT, INCLUDING BUT NOT LIMITED TO, MATERIALS, EQUIPMENT OR TOOLS, UNTIL THE CONTRACTOR SHALL CONSULT PLANS OF ALL TRADES, INCLUDING DESIGN/BUILD DOCUMENTS AND OTHER REQUIREMENTS AND LOCATION OF THOSE ITEMS TO BE INSTALLED PRIOR TO COMMENCEMENT OF WORK.
  10. ELECTRICAL, MECHANICAL AND PLUMBING: GENERAL CONTRACTOR TO PROVIDE ALL REQUIRED PERMITS, CALCULATIONS, FORMS, APPLY, PAY FOR & OBTAIN ALL NECESSARY INSURANCE.
  11. GENERAL CONTRACTOR SHALL BRING TO THE OWNER'S ATTENTION ANY DISCREPANCIES WITHIN THE CONTRACT DOCUMENTS, ACTUAL FIELD CONDITIONS AND ANY DESIGN AND LAYOUT CHANGES REQUIRED DUE TO ANY SPECIFIC EQUIPMENT SELECTIONS OR ANY OTHER REASON PRIOR TO PURCHASING EQUIPMENT AND MATERIAL.
  12. EXTERIOR BUILDING SIGNAGE IS NIC. CONTRACTOR TO PROVIDE POWER TO SIGN LOCATIONS.
  13. THE ARCHITECT HAS NOT BEEN RETAINED OR COMPENSATED TO PROVIDE DESIGN AND/OR CONSTRUCTION REVIEW SERVICES RELATING TO THE CONTRACTOR'S SAFETY PROCEDURES OR TO MEANS, METHODS, TECHNIQUES OR PROCEDURES REQUIRED FOR THE CONSTRUCTION OF THIS PROJECT. THE ARCHITECT SHALL NOT BE RESPONSIBLE FOR THE ARCHITECT SHALL NOT BE CONSIDERED AS SUPERVISION OF ACTUAL CONSTRUCTION NOR MAKE HIM RESPONSIBLE FOR THE PERFORMANCE OF WORK BY THE CONTRACTOR OR CONTRACTOR'S EMPLOYEES OR EMPLOYEES OF SUPPLIERS OR SUBCONTRACTORS, OR FOR ACCESS, VISITS, USE, WORK, TRAVEL OR OCCUPANCY BY ANY PERSON.
  14. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SAFETY PRECAUTIONS AND THE MEANS, METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES REQUIRED TO PERFORM THE WORK.
  15. THESE DRAWINGS ARE THE EXCLUSIVE PROPERTY OF THE ARCHITECT AND MAY BE REPRODUCED ONLY WITH THE WRITTEN PERMISSION OF THE ARCHITECT. AUTHORIZED REPRODUCTIONS MUST BEAR THE NAME OF THE ARCHITECT.
  16. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND CAVITIES AS REQUIRED PER THE IBC, LOCAL CODES AND FIRE STOPS IN ATTICS, FLOORS AND WALL CHANGES DURING CONSTRUCTION. THE SET SHALL BE A PART OF THE CONTRACTOR'S CLOSE-OUT PACKAGE TO THE OWNER. CLOSE-OUT PACKAGE SHALL INCLUDE (3) SET OF SHOP DRAWINGS, PRODUCT LITERATURE, EQUIPMENT WARRANTEE MANUALS, PHOTOGRAPH OR SHALL PROVIDE SOLID BLOCKING, UNLESS NOTED OTHERWISE AS SHOWN ON DRAWINGS.
  17. THE CONTRACTOR SHALL PROVIDE FOR ALL THE NECESSARY FRAMING AND BRACING FOR THE INSTALLATION OF OWNER FURNISHED ITEMS.
  18. CONTRACTOR SHALL ONLY PROCEED WITH WORK WHERE HAZARDOUS MATERIALS ARE FOUND AFTER RECEIPT OF THE BUILDING OWNERS HAZARDOUS MATERIALS GOOD FAITH REPORT REQUIRED BY THE STATE. PRIOR TO ANY DEMOLITION VERIFY & PERFORM ALL NECESSARY TESTING AND DOCUMENTATION. CONTRACTOR SHALL COMPLY WITH FEDERAL AND STATE RULES AND REGULATIONS WHEN HANDLING HAZARDOUS MATERIALS. PROVIDE LEGAL DOCUMENTATION. CONTRACTOR SHALL REMOVING OR ENCAPSULATING HAZARDOUS MATERIALS ON THE PROJECT.
  19. LEGALLY REMOVE & DISPOSE OF THE DEMOLITION AND CONSTRUCTION DEBRIS. DIMENSIONS TO STUD FACE UNLESS NOTED AS "CLEAR" OR "CLR" WHICH MEANS TO FACE OF WALL FINISH.



1 SITE PLAN  
SCALE: 1/32" = 1'-0"

**SUDDEN VALLEY  
REC CENTER**

4 BARN VIEW CT  
BELLINGHAM, WA

SB JOB NO: 202205.27  
DATE: 06.09.2023

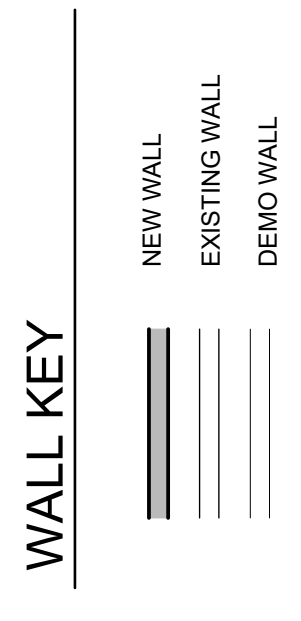
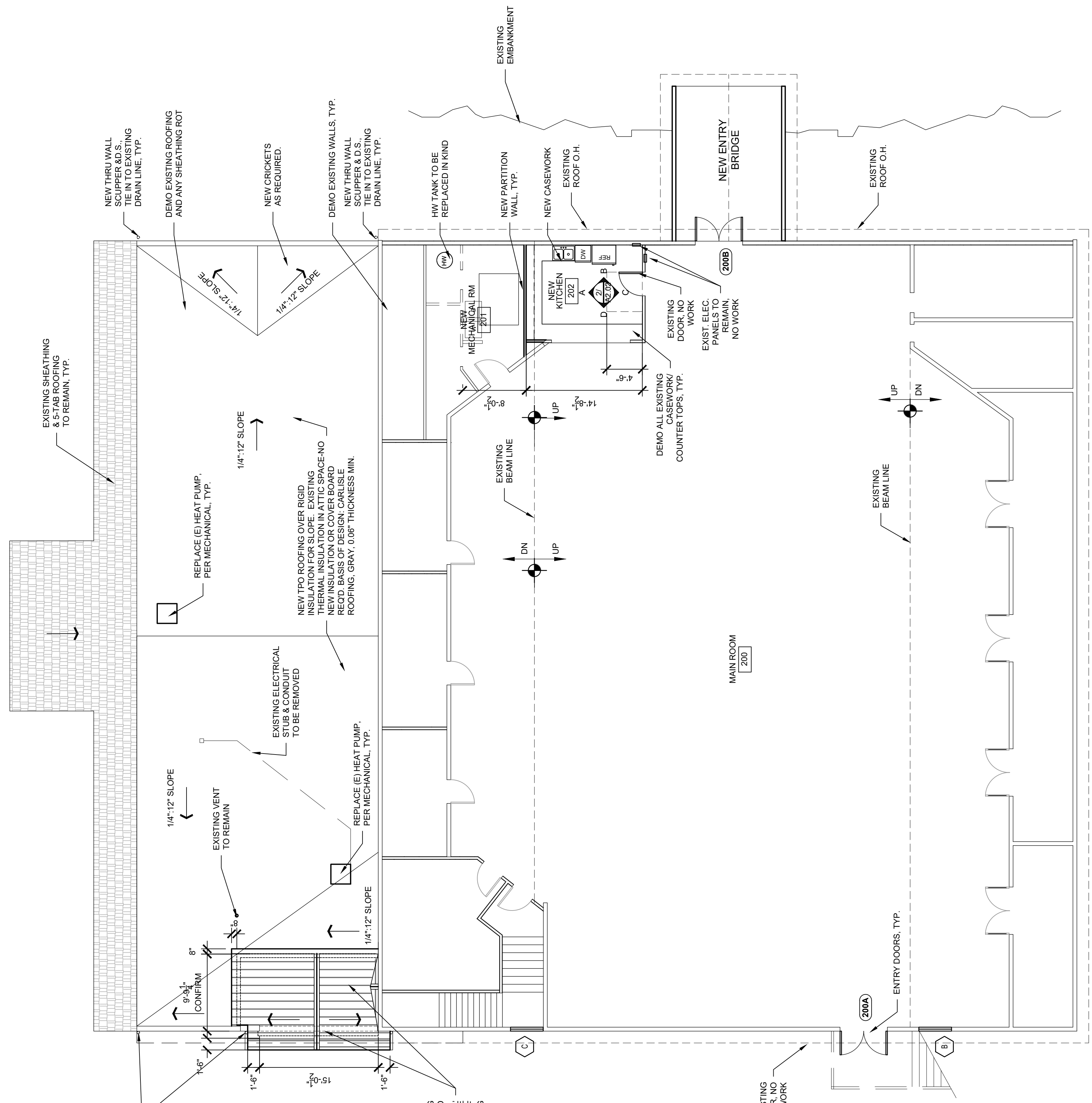
**BID SET**

No.	ISSUED FOR	DATE

**SITE PLAN**







**SUDDEN VALLEY  
REC CENTER**

4 BARN VIEW CT  
BELLINGHAM, WA

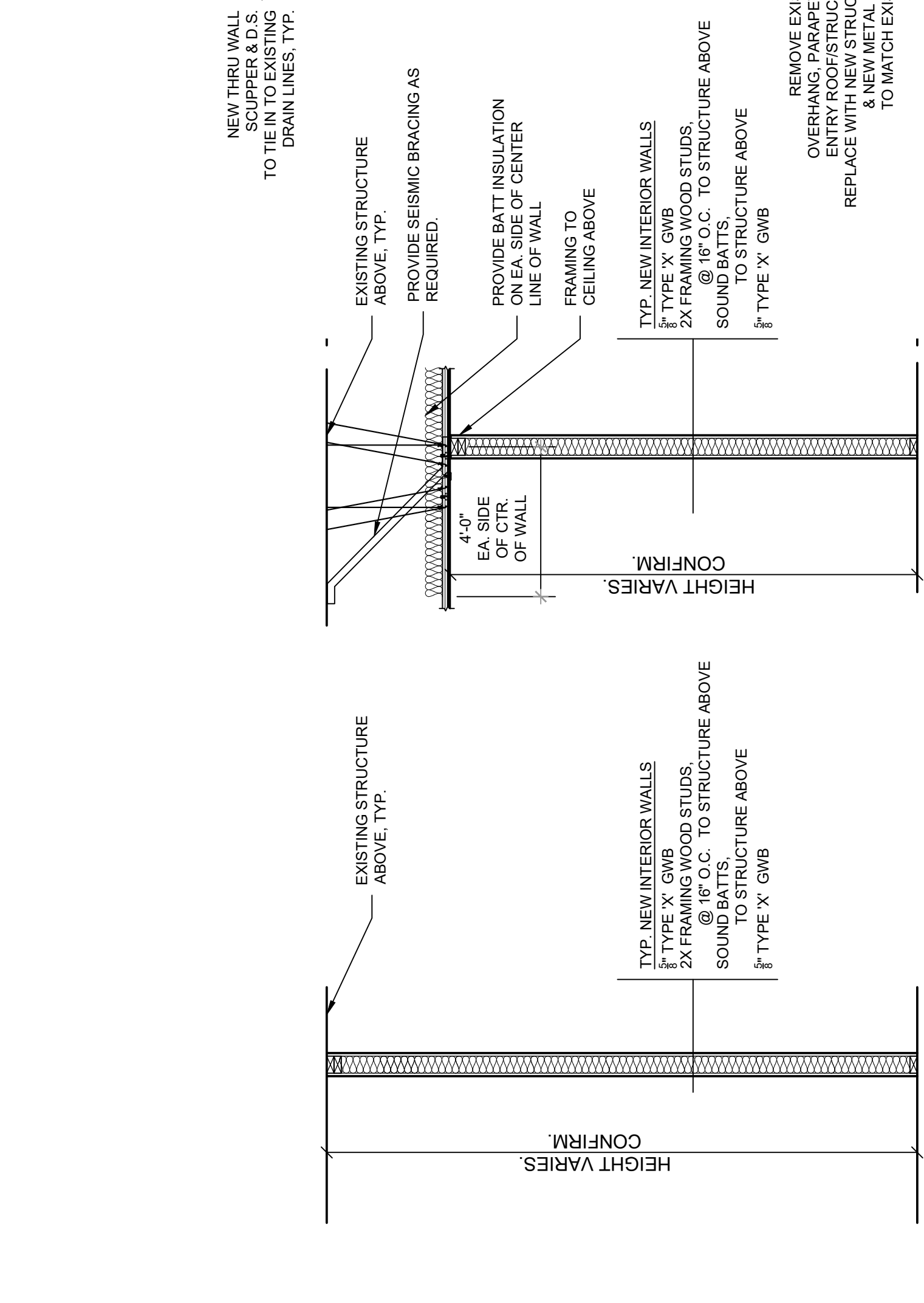
SB JOB NO: 202205.27  
DATE: 06.09.2023

**BID SET**

No.	ISSUED FOR	DATE

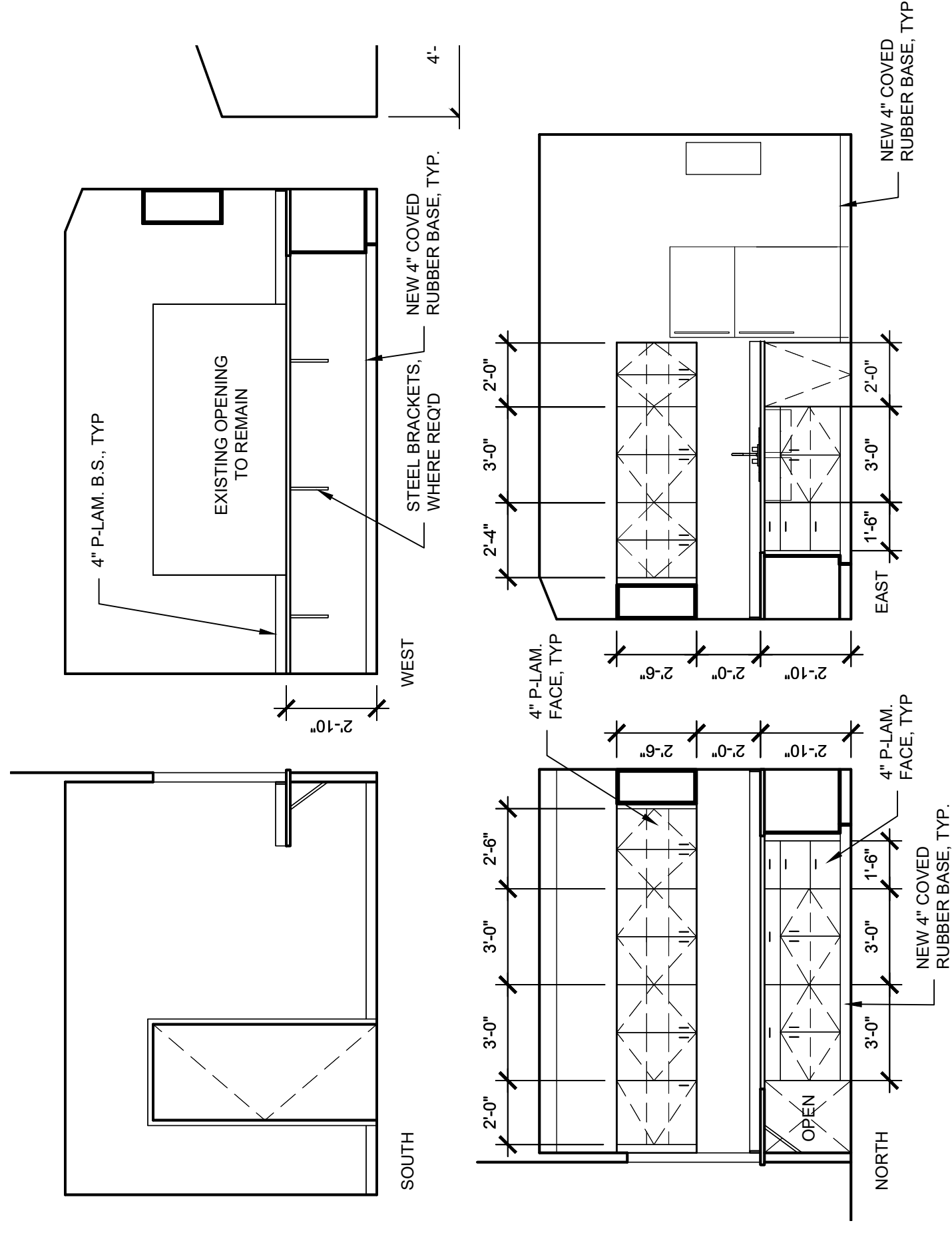
**SECOND FLOOR PLAN**

**A2.02**



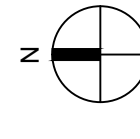
**3** TYP. INTERIOR WALL SECTION TO STRUCTURE ABOVE  
SCALE: 1/2"=1'-0"

**4** TYP. INTERIOR WALL SECTION TO ACT ABOVE  
SCALE: 1/2"=1'-0"



**2** NEW KITCHEN-INTERIOR ELEVATIONS  
SCALE: 1/4"=1'-0"

**1** SECOND FLOOR/ROOF PLAN  
SCALE: 1/8"=1'-0"



**SUDDEN VALLEY  
REC CENTER**

4 BARN VIEW CT  
BELLINGHAM, WA

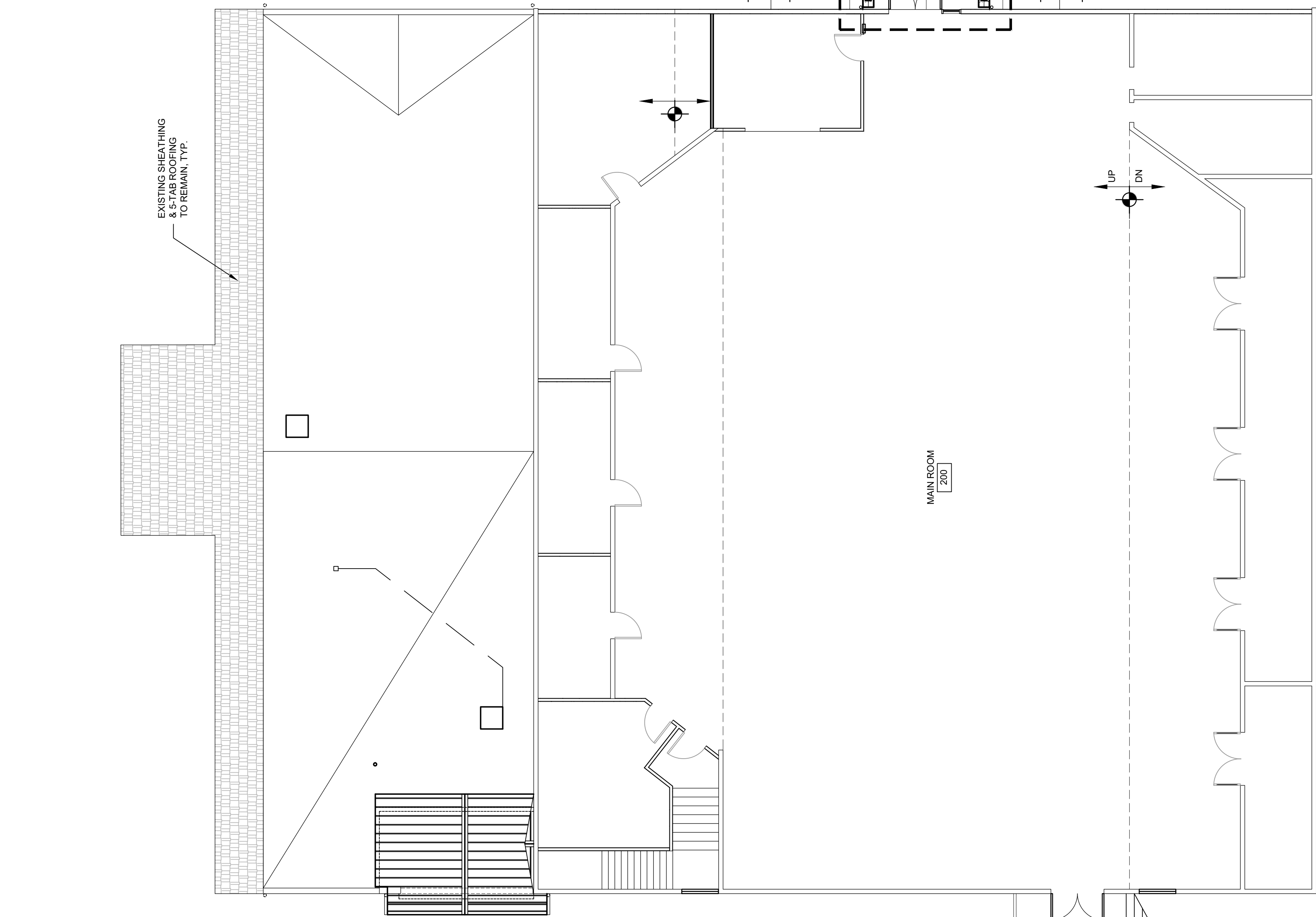
SB JOB NO: 202205.27  
DATE: 06.09.2023

**BID SET**

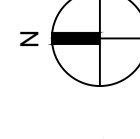
No.	ISSUED FOR	DATE

**SECOND FLOOR  
BRIDGE PLAN**

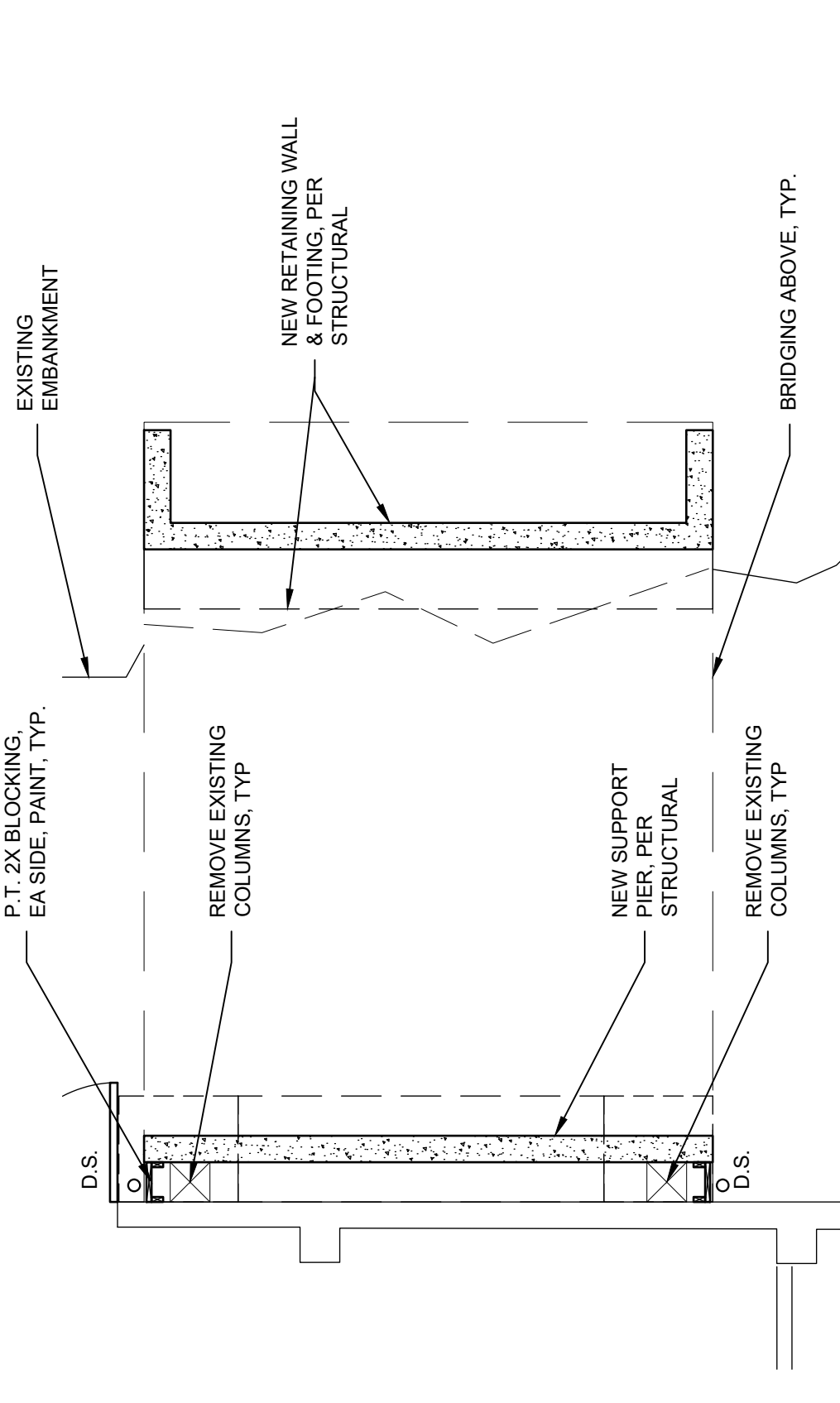
**A2.03**



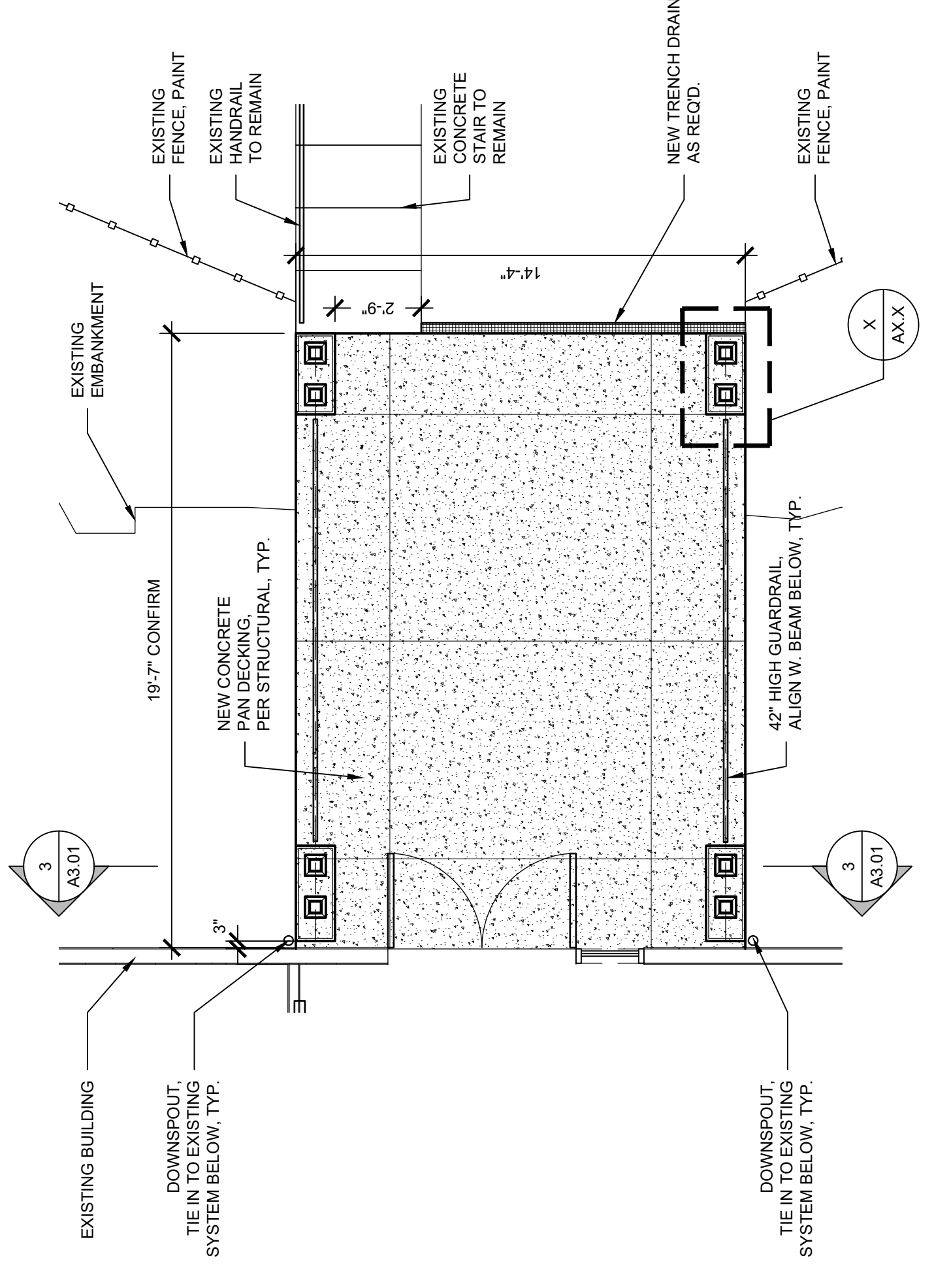
NOTE: ANY EXPOSED PIPE ON SLOPE TO BE SCHEDULE 40 PVC AND BE PROPERLY ANCHORED



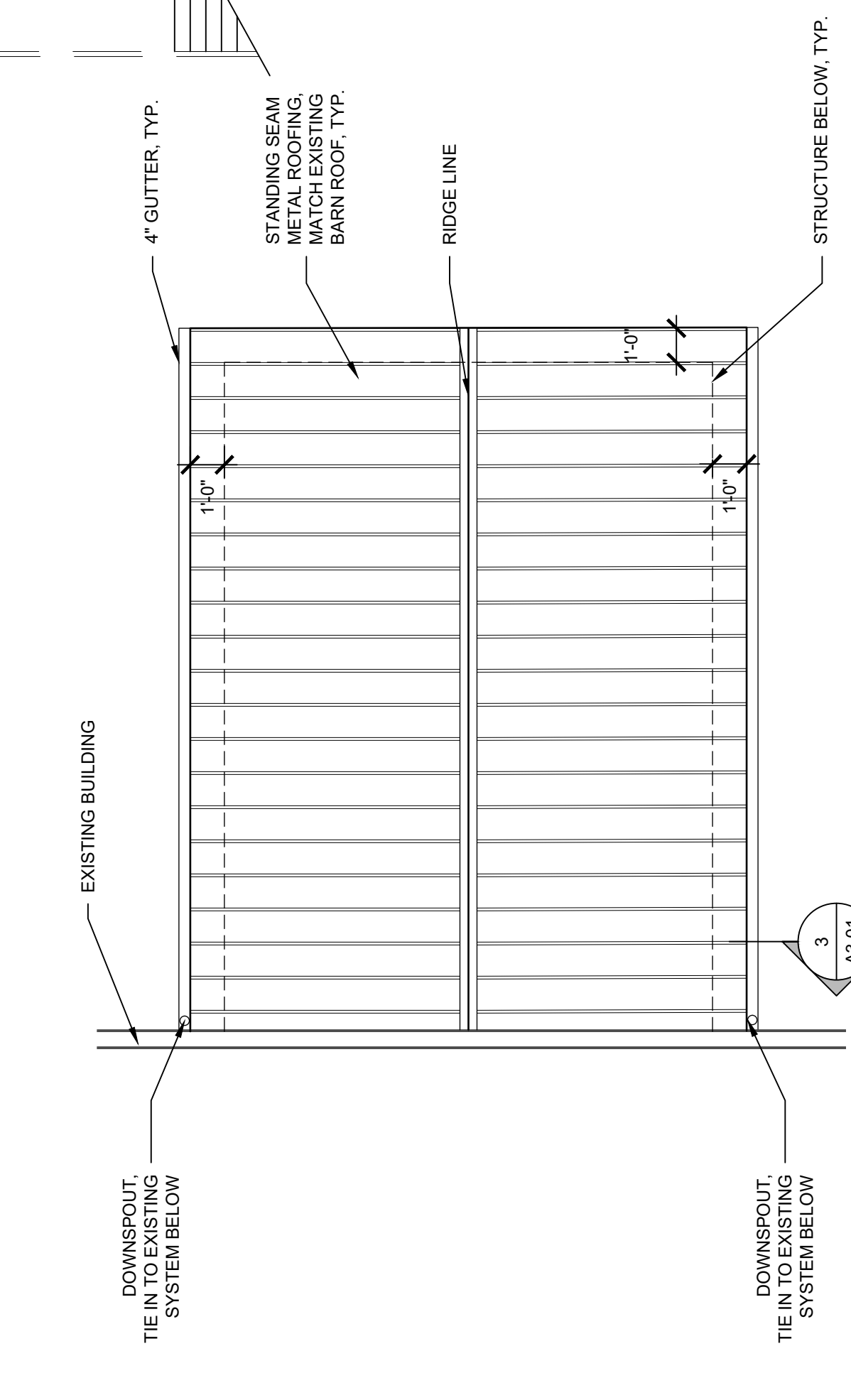
1 SECOND FLOOR PLAN  
SCALE: 1/8"=1'-0"



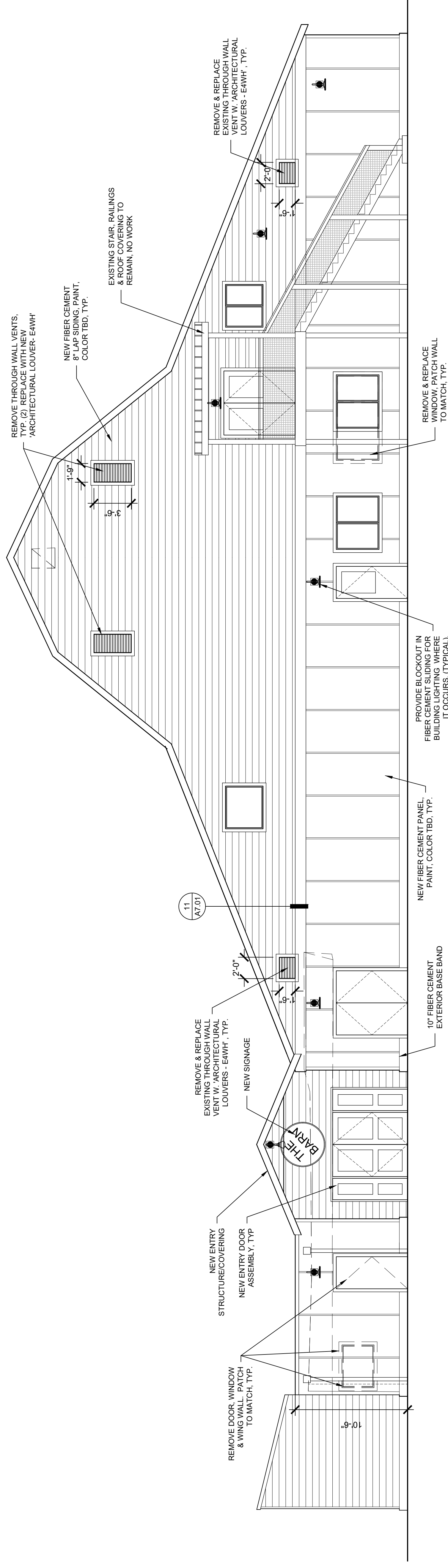
2 FIRST FLOOR BRIDGE PLAN  
SCALE: 1/8"=1'-0"



3 SECOND FLOOR BRIDGE PLAN  
SCALE: 1/8"=1'-0"

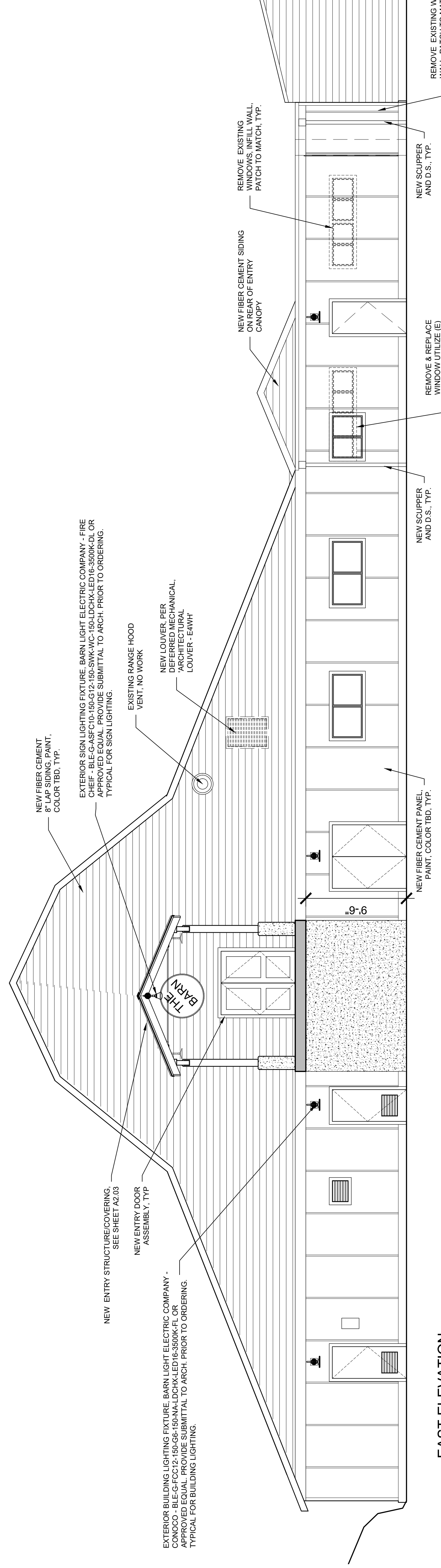


4 BRIDGE ROOF PLAN  
SCALE: 1/8"=1'-0"



2 WEST ELEVATION

SCALE: 3/16"=1'-0"



1 EAST ELEVATION

SCALE: 3/16"=1'-0"

**SUDDEN VALLEY  
REC CENTER**

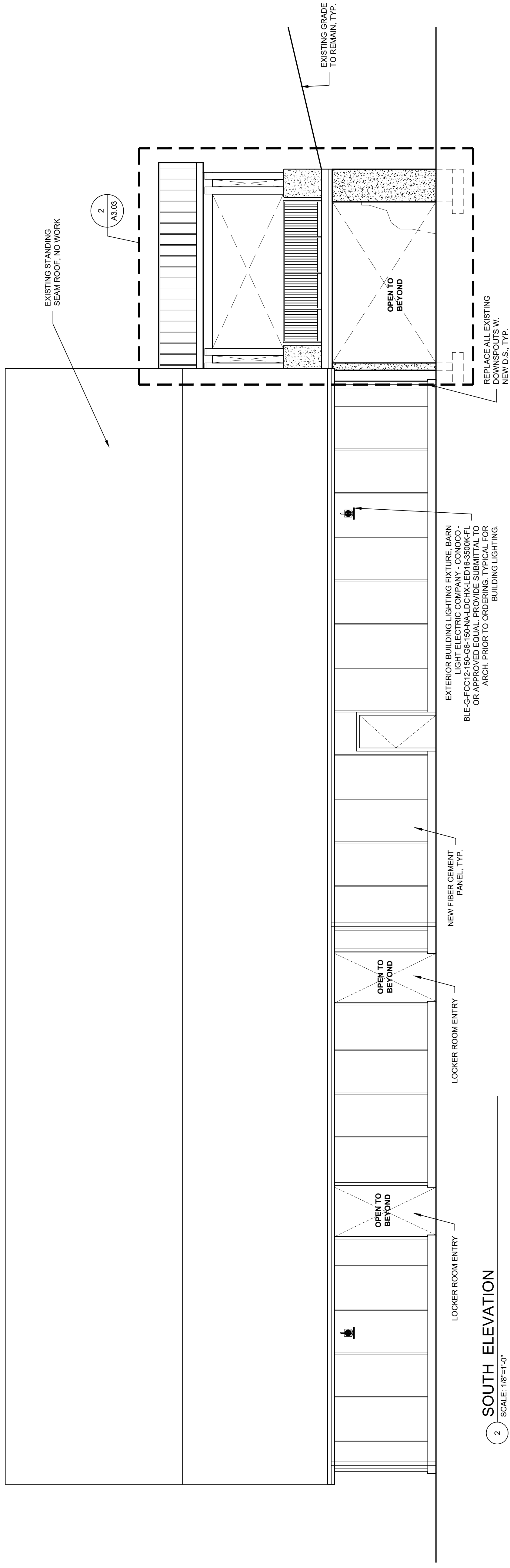
4 BARN VIEW CT  
BELLINGHAM, WA

SB JOB NO: 20220527  
DATE: 06.09.2023

**BID SET**

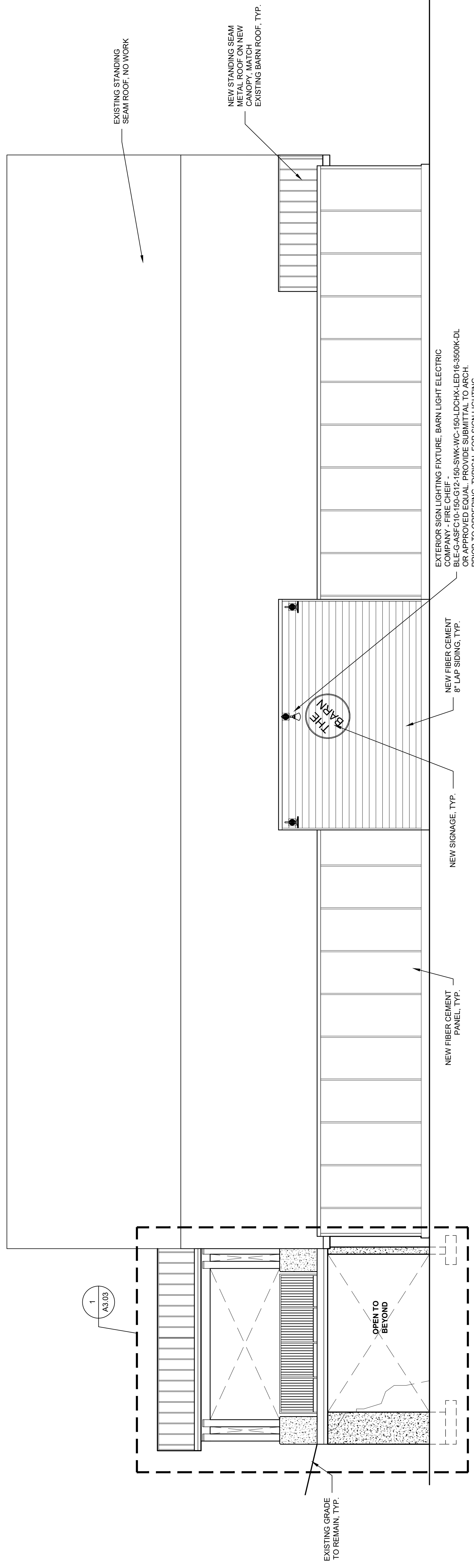
No.	ISSUED FOR	DATE

**ELEVATIONS**



2 SOUTH ELEVATION

SCALE: 1/8"=1'-0"



1 NORTH ELEVATION

SCALE: 1/8"=1'-0"

**SUDDEN VALLEY  
REC CENTER**

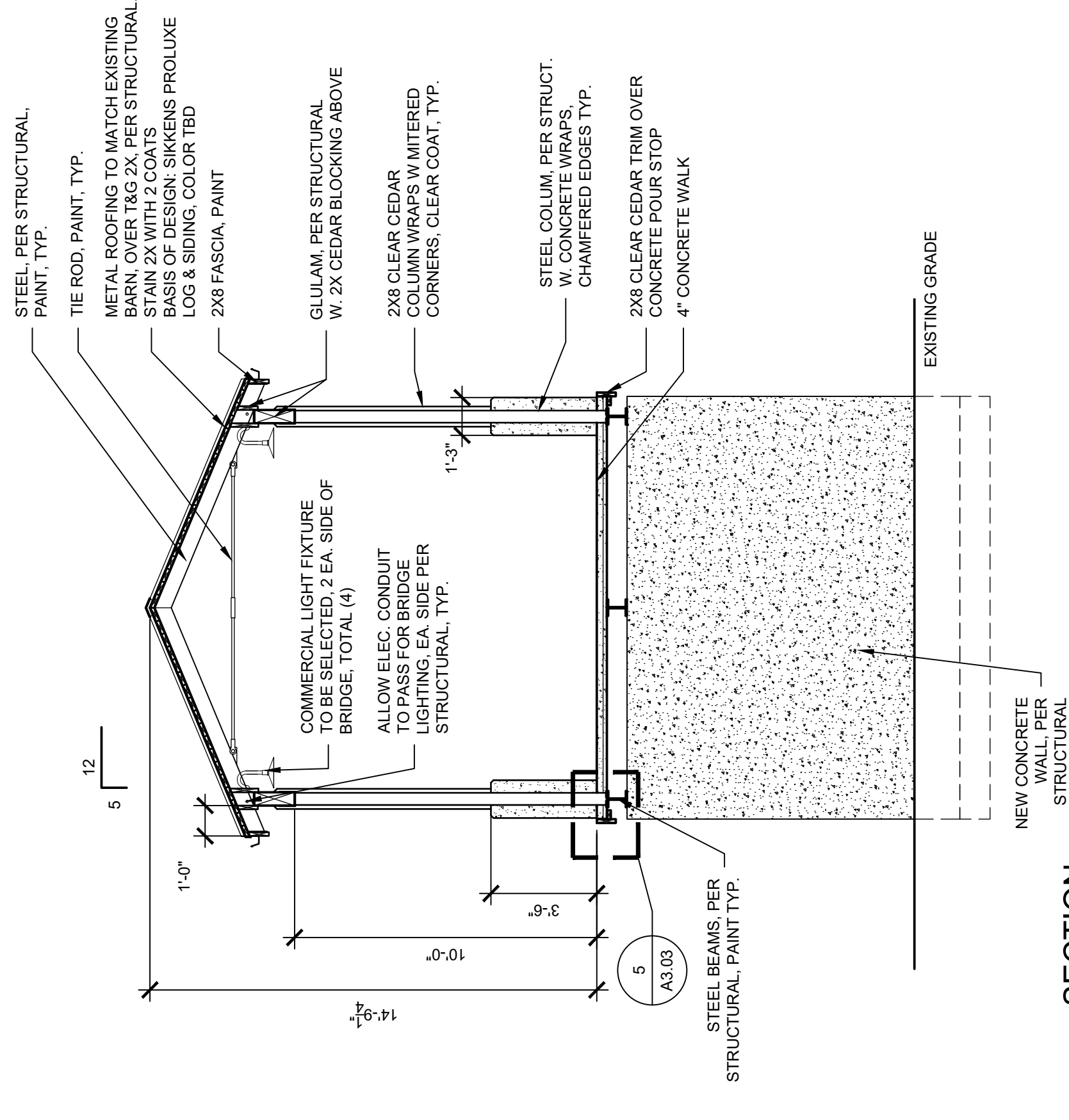
4 BARN VIEW CT  
BELLINGHAM, WA

SB JOB NO: 20220527  
DATE: 06.09.2023

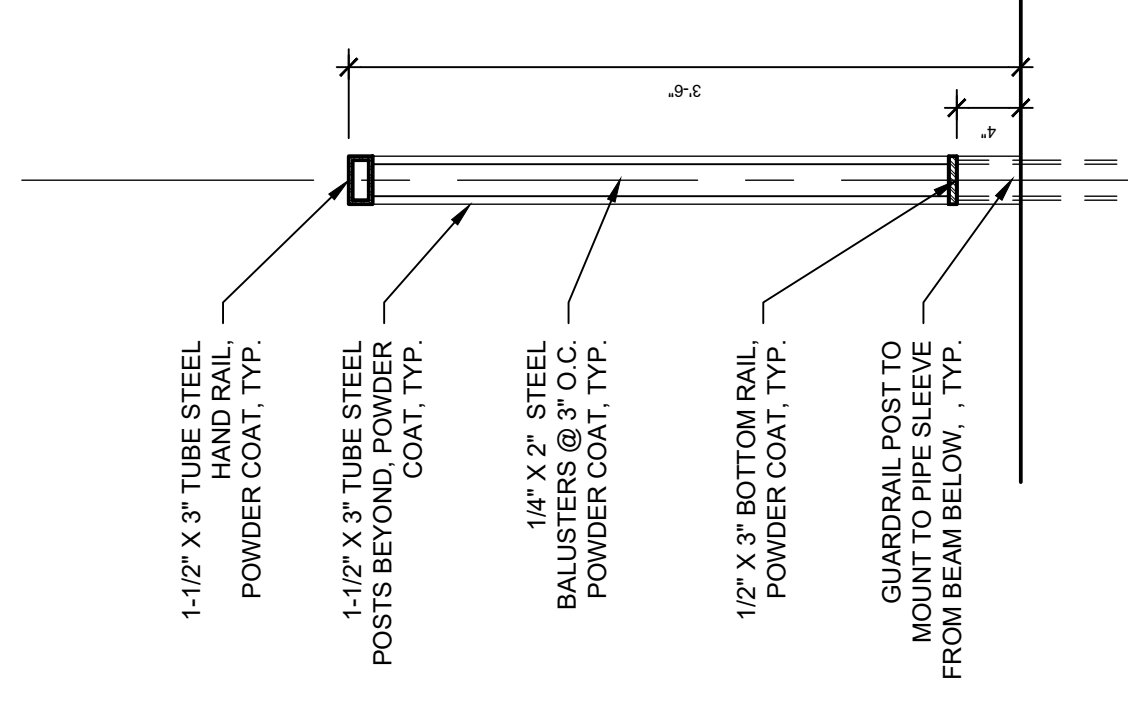
**BID SET**

No.	ISSUED FOR	DATE

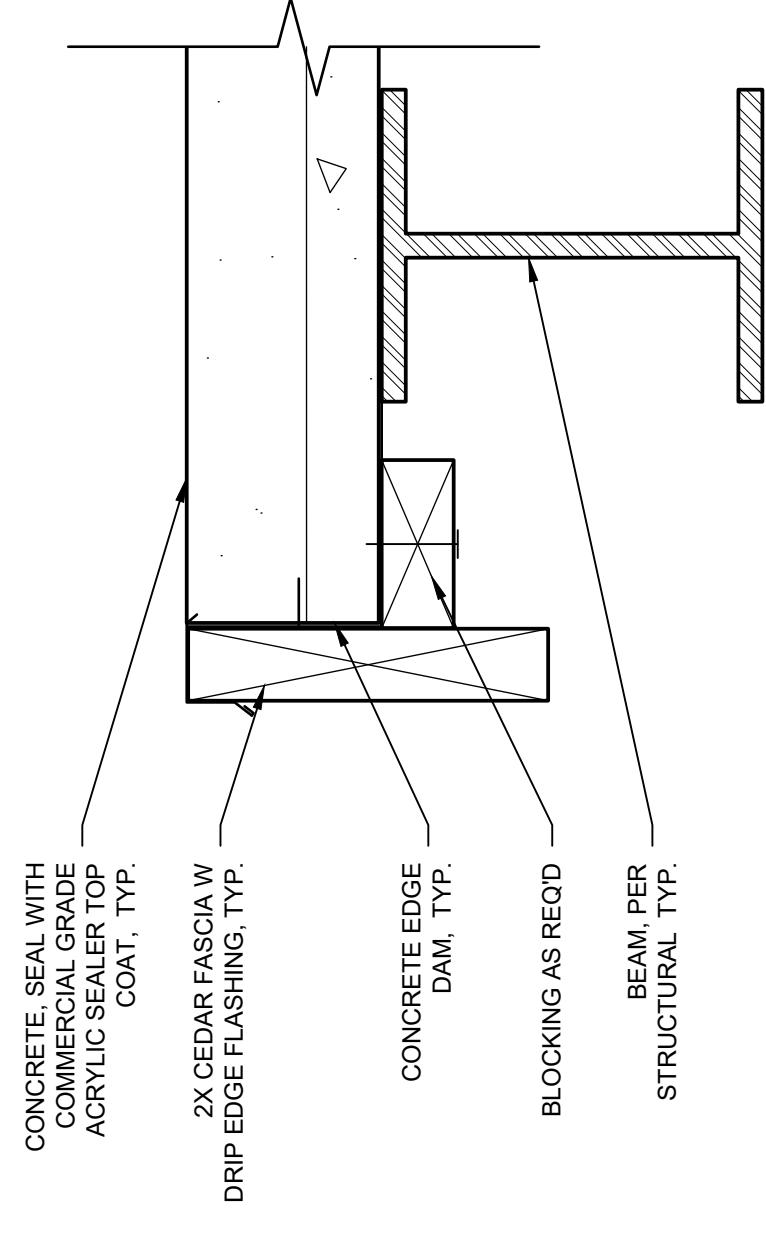
**ELEVATIONS**



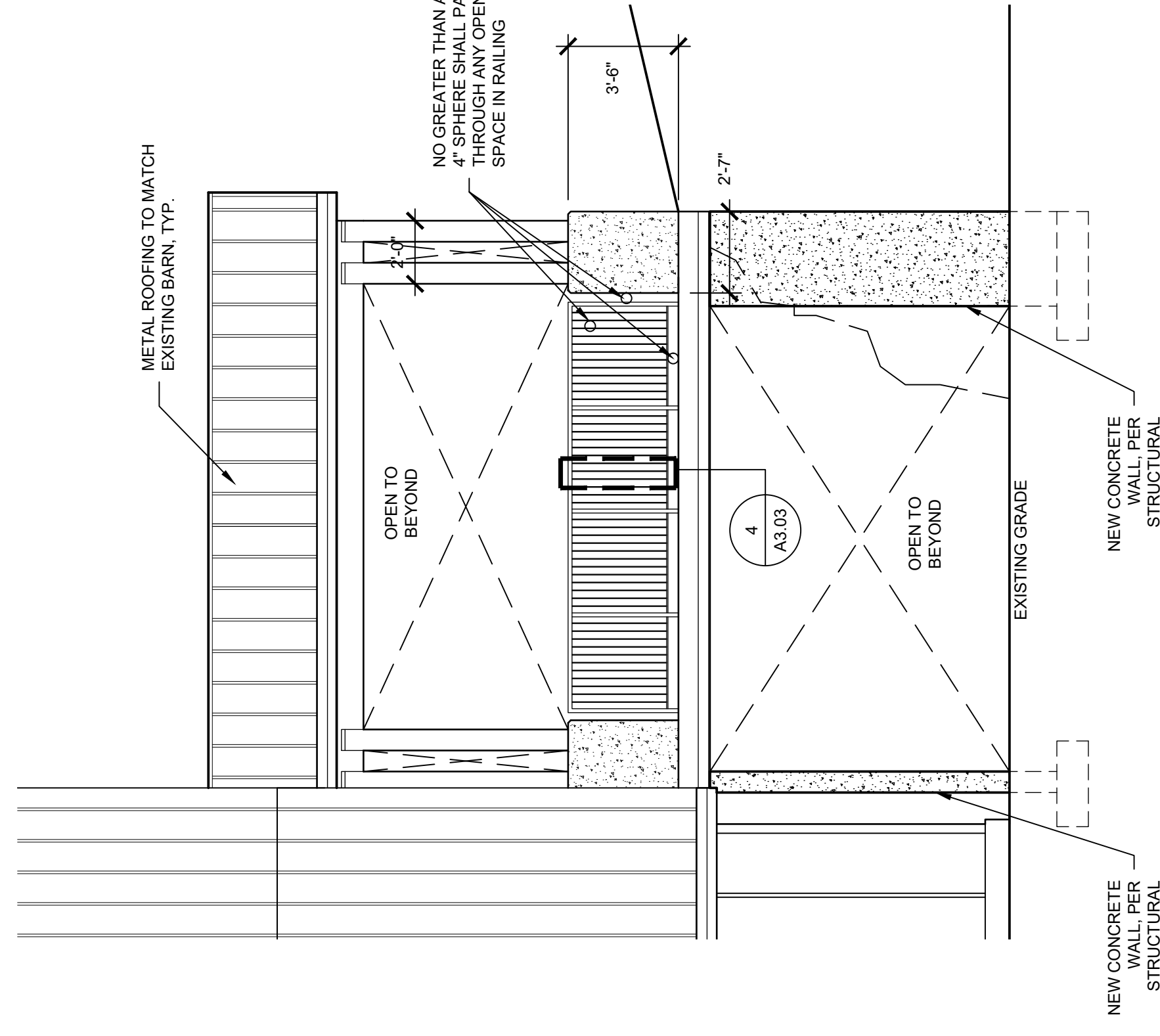
3 SECTION  
 SCALE: 1/4"=1'-0"



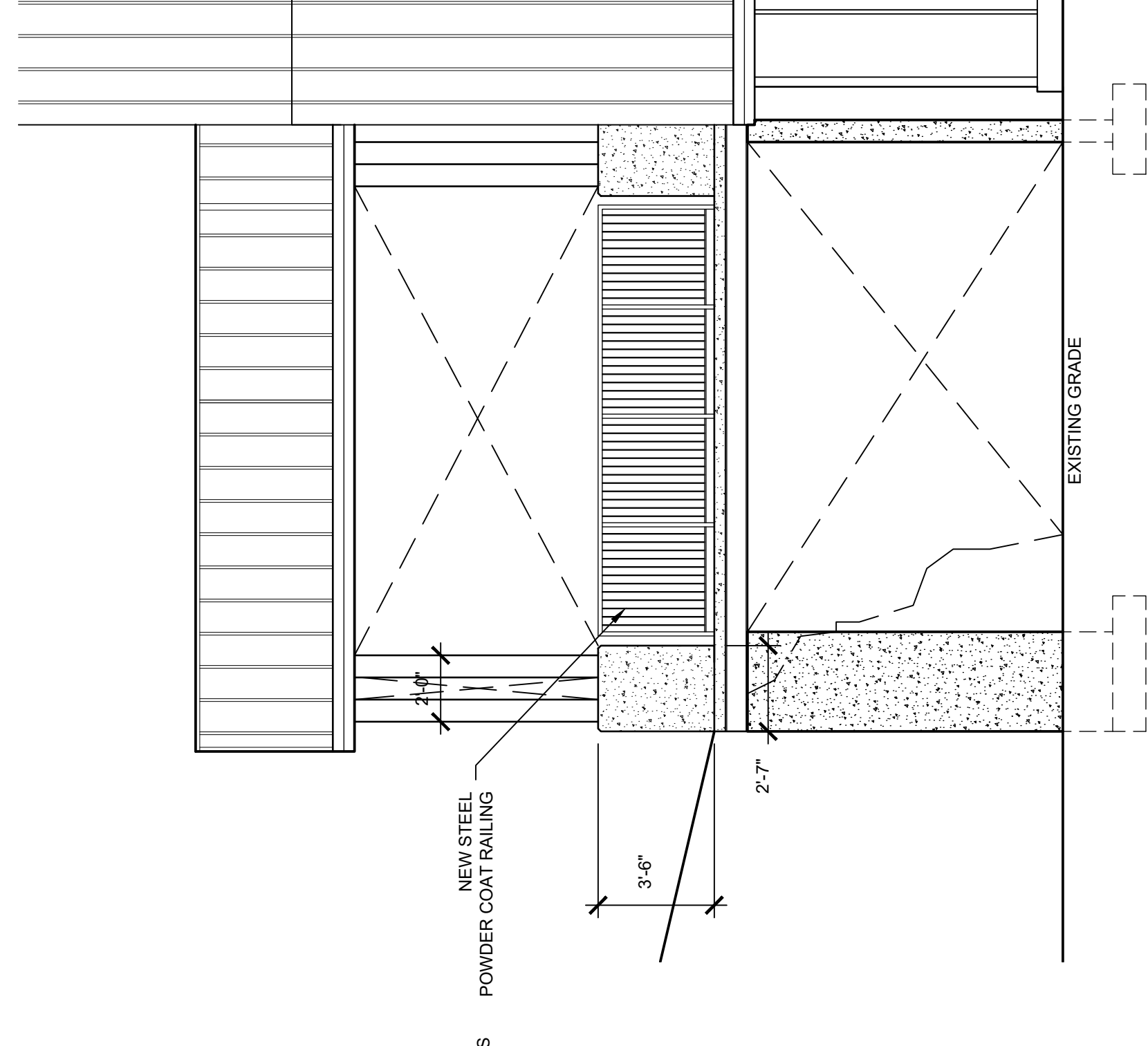
4 GUARDRAIL DETAIL  
 SCALE: 1/4"=1'-0"



5 DECKING FASCIA DETAIL  
 SCALE: 3/8"=1'-0"



2 SOUTH ELEVATION  
 SCALE: 1/4"=1'-0"



1 NORTH ELEVATION  
 SCALE: 1/4"=1'-0"

**SUDDEN VALLEY  
 REC CENTER**

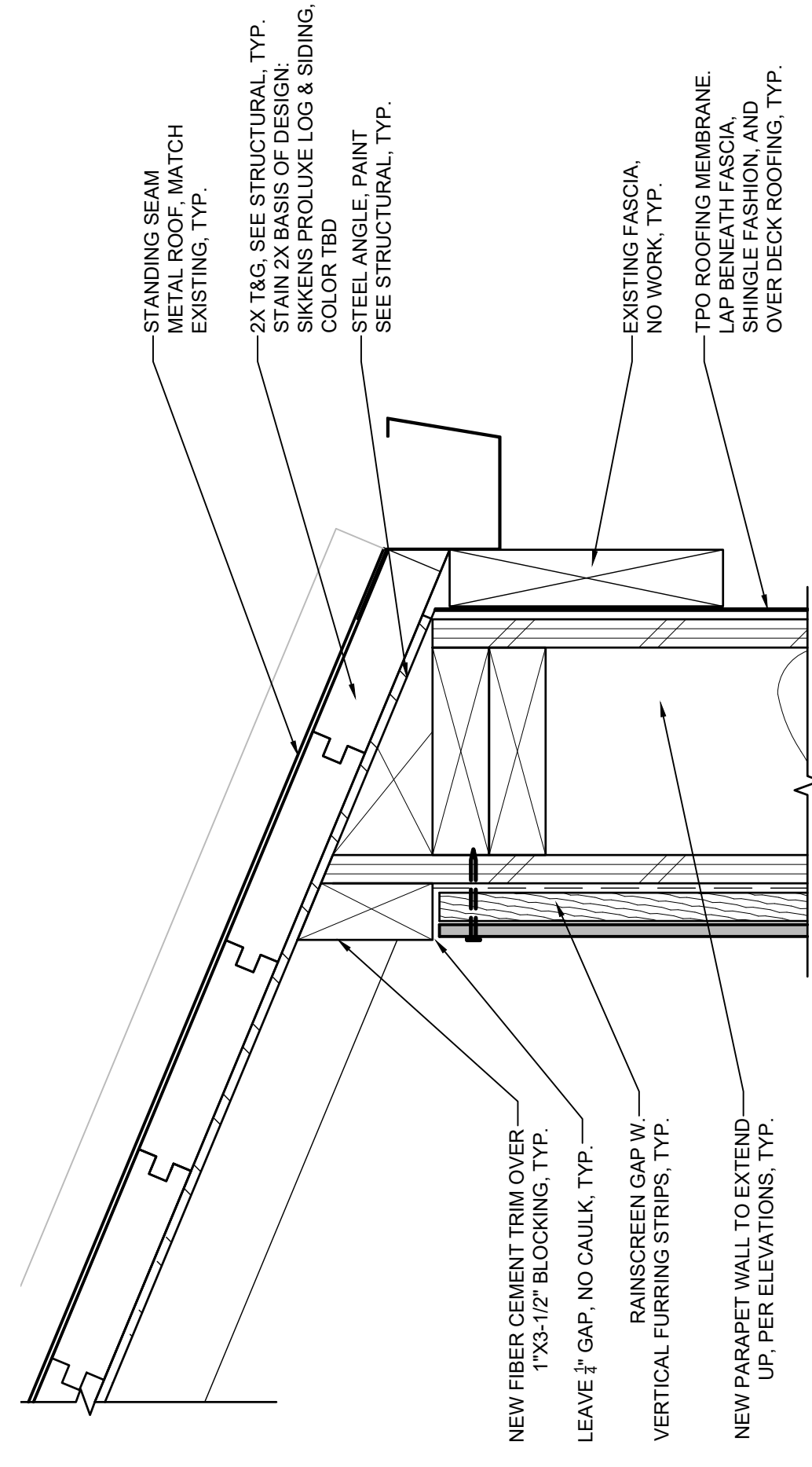
4 BARN VIEW CT  
 BELLINGHAM, WA

SB JOB NO: 20220527  
 DATE: 06.09.2023

**BID SET**

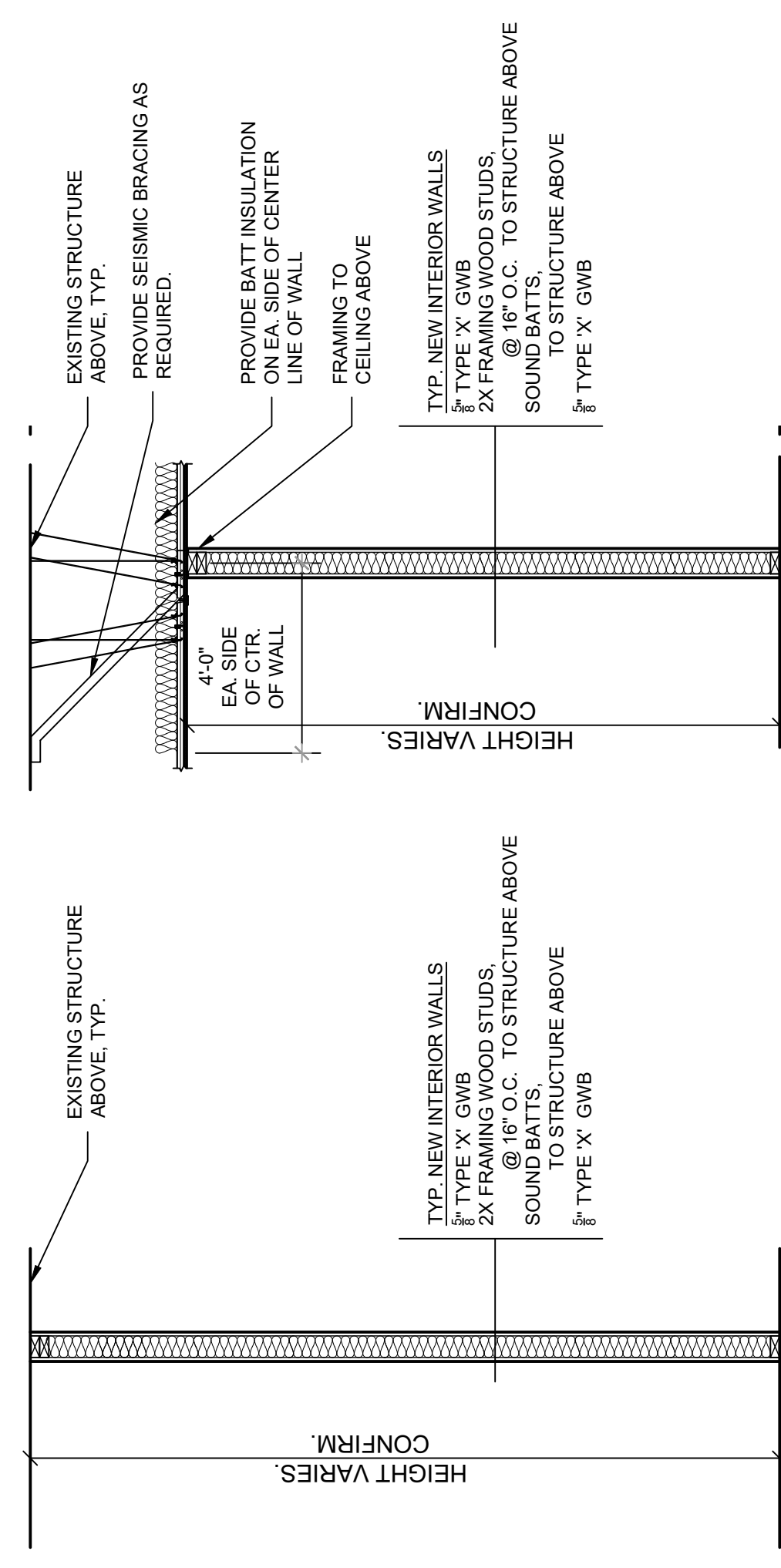
No.	ISSUED FOR	DATE

**BRIDGE ELEVATIONS  
 & SECTION**



3 MAIN ENTRY CANOPY DETAIL

SCALE: 3/8"=1'-0"



2 TYP INTERIOR WALL SECTION TO STRUCTURE ABOVE

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

1 TYP INTERIOR WALL SECTION TO ACT ABOVE

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

**SUDDEN VALLEY  
REC CENTER**

4 BARN VIEW CT  
BELLINGHAM, WA

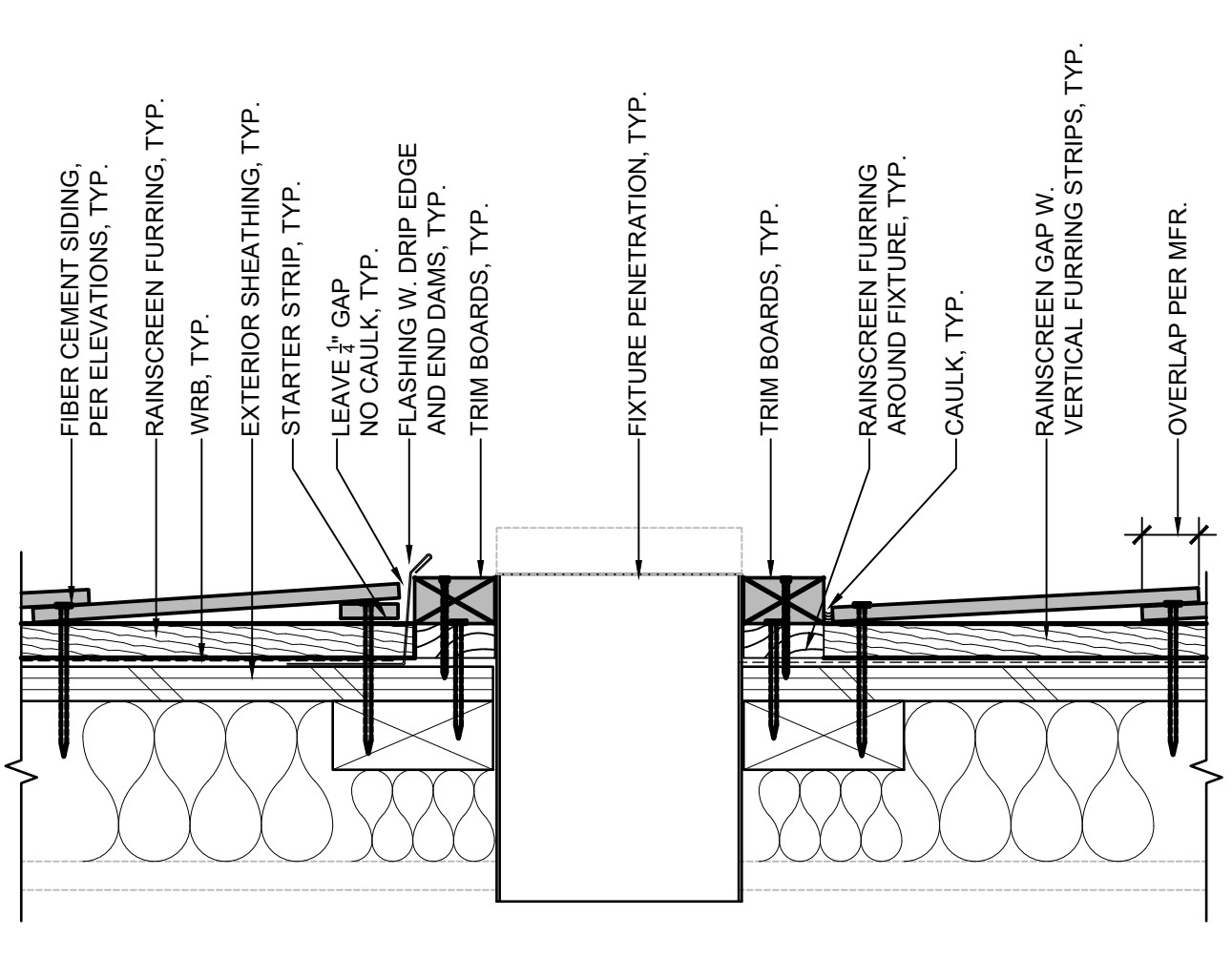
SB JOB NO: 202205.27  
DATE: 06.09.2023

**BID SET**

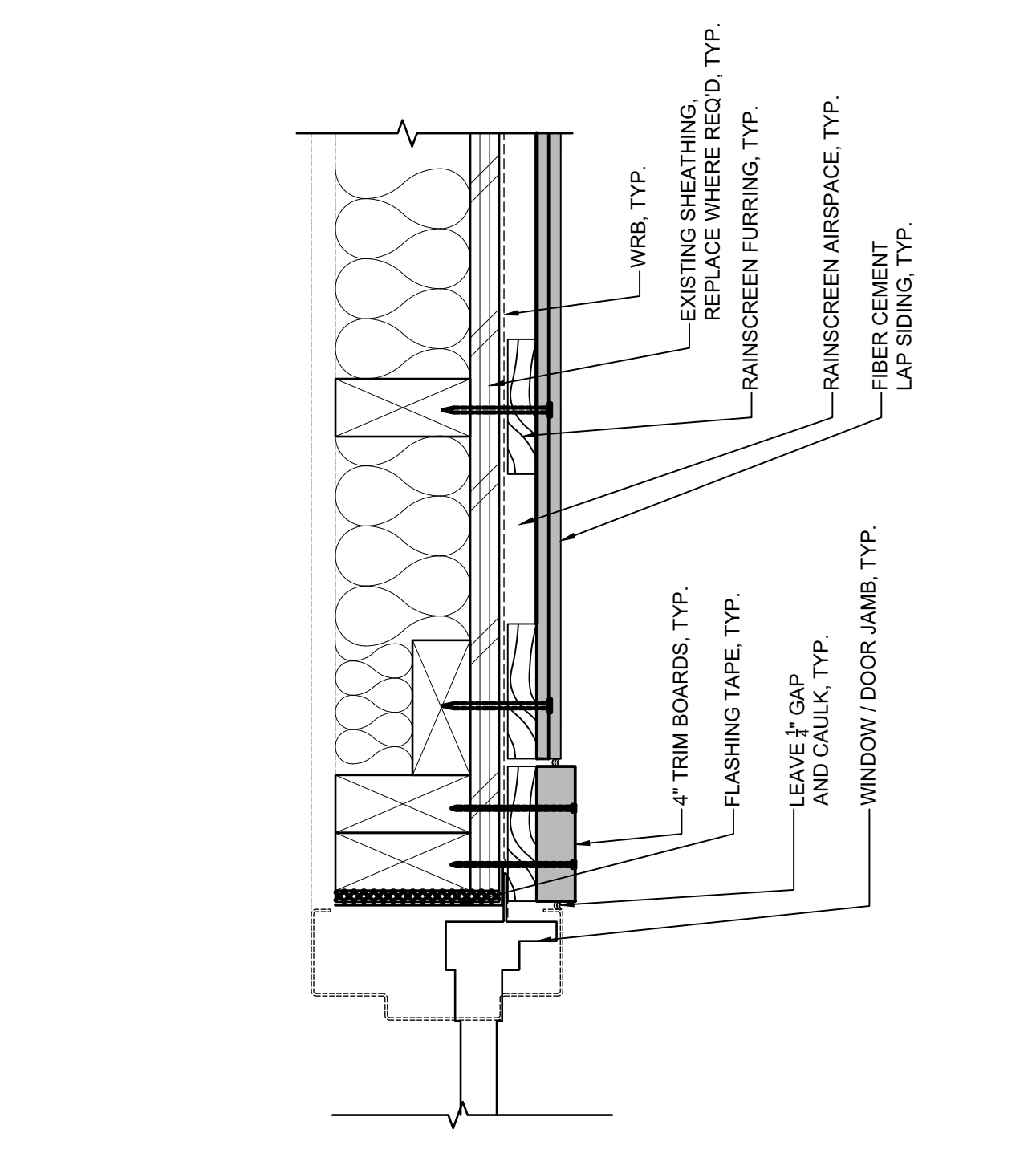
No.	ISSUED FOR	DATE

**SECTIONS**

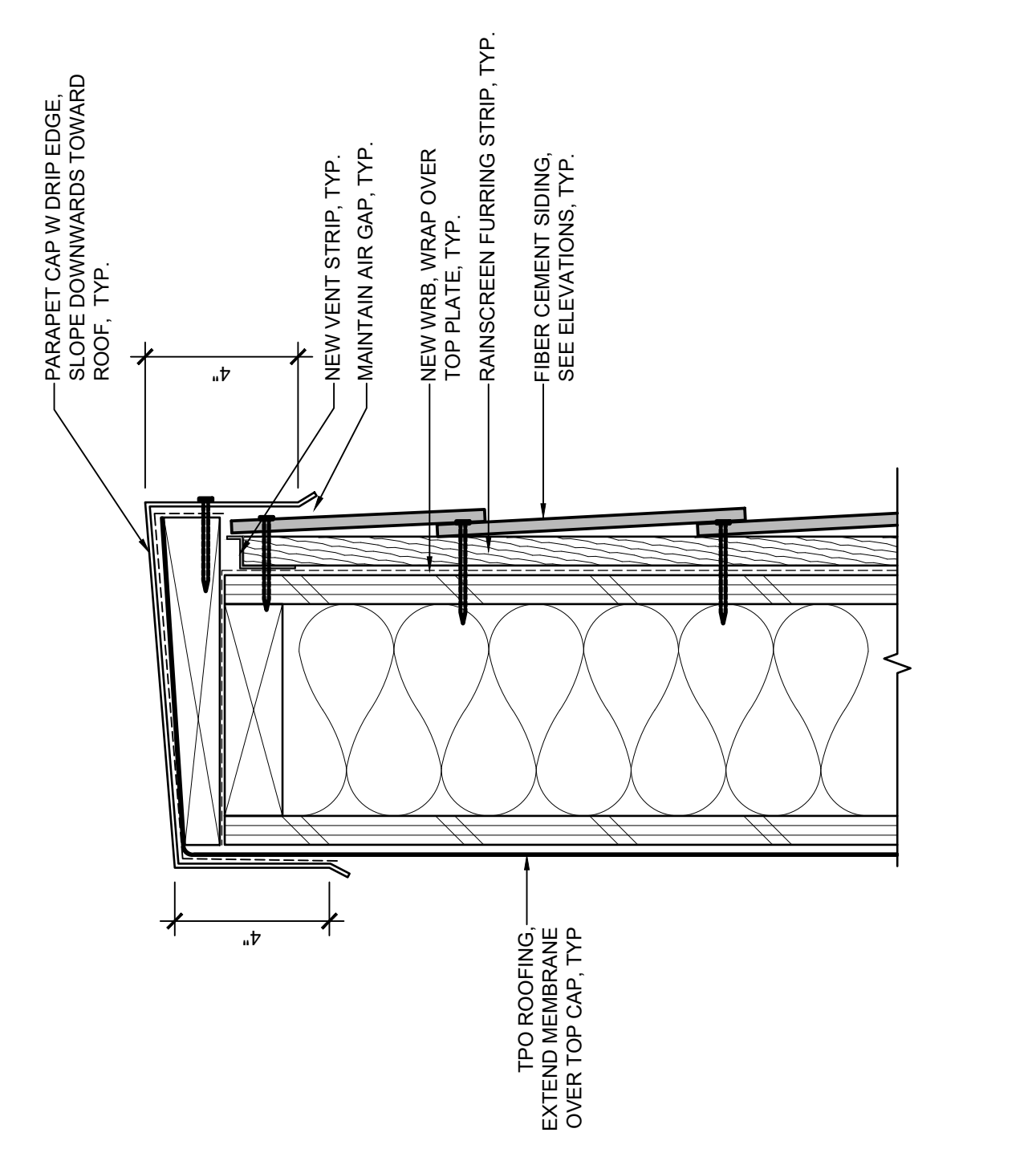




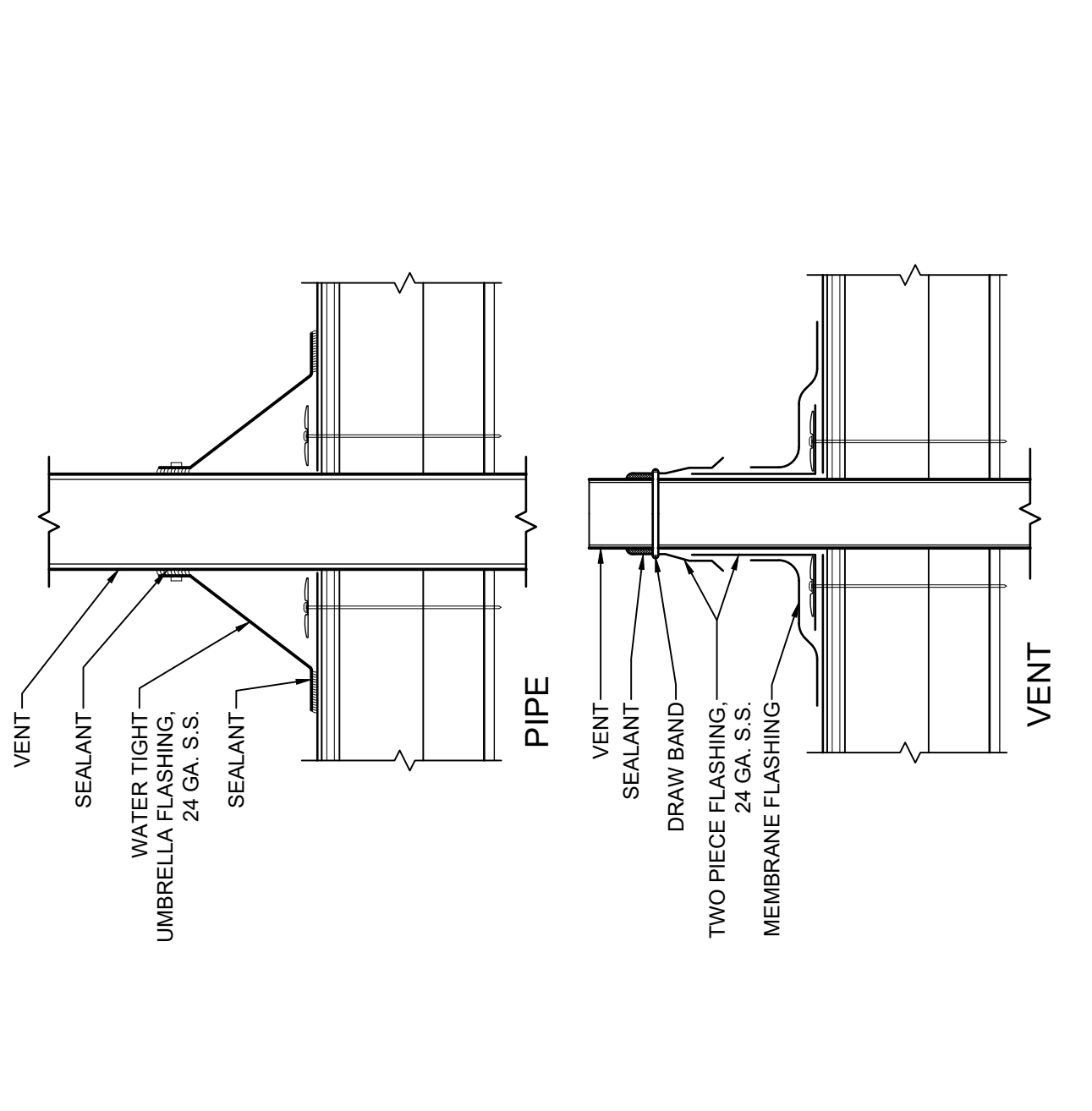
**3** FIXTURE PENETRATION - RAINSCREEN  
SCALE: 3"=1'-0"



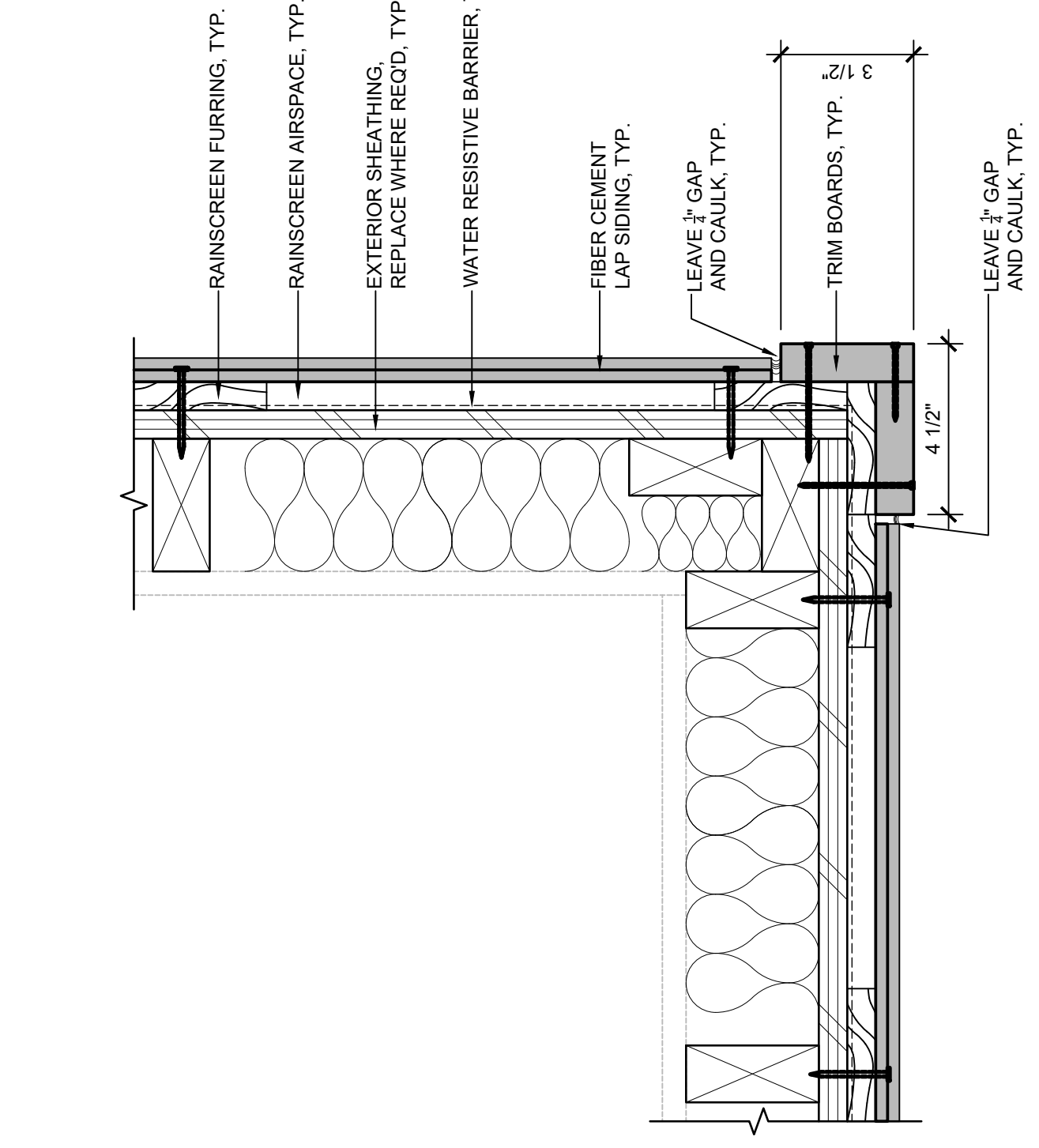
**6** WINDOW/DOOR JAMB - RAINSCREEN  
SCALE: 3"=1'-0"



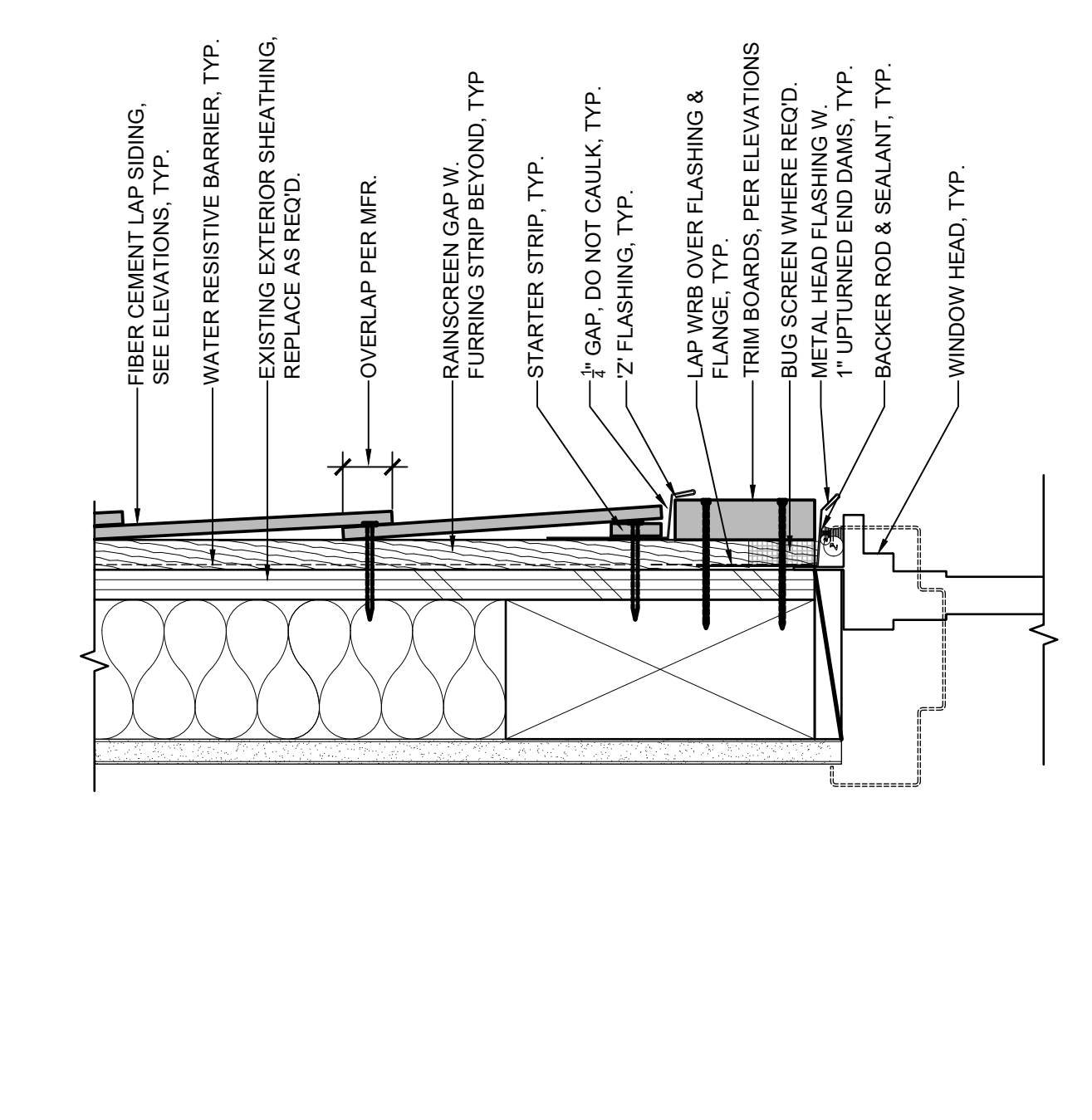
**9** PARAPET - RAINSCREEN  
SCALE: 3"=1'-0"



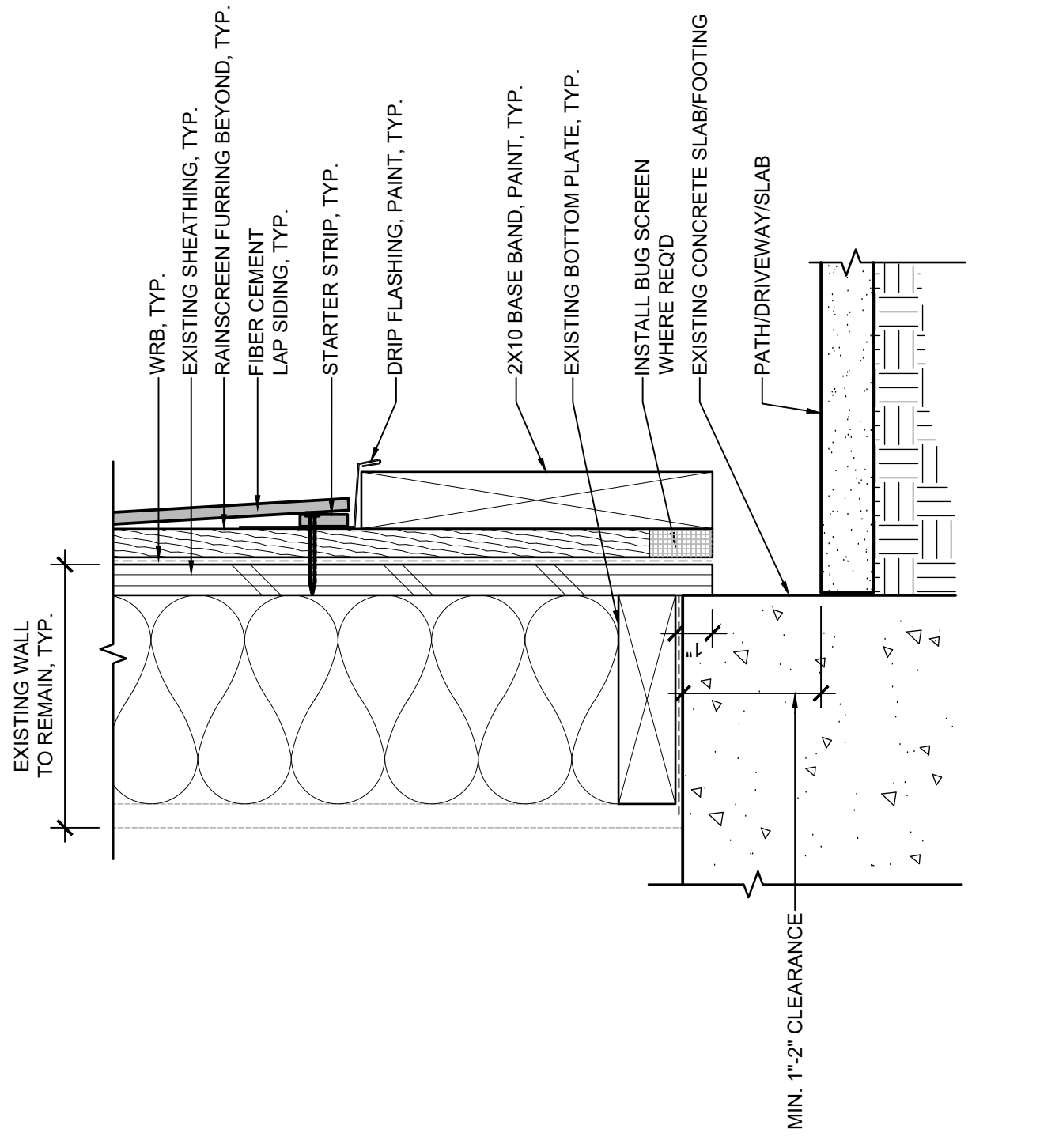
**12** FLAT ROOF PENETRATIONS  
SCALE: 3"=1'-0"



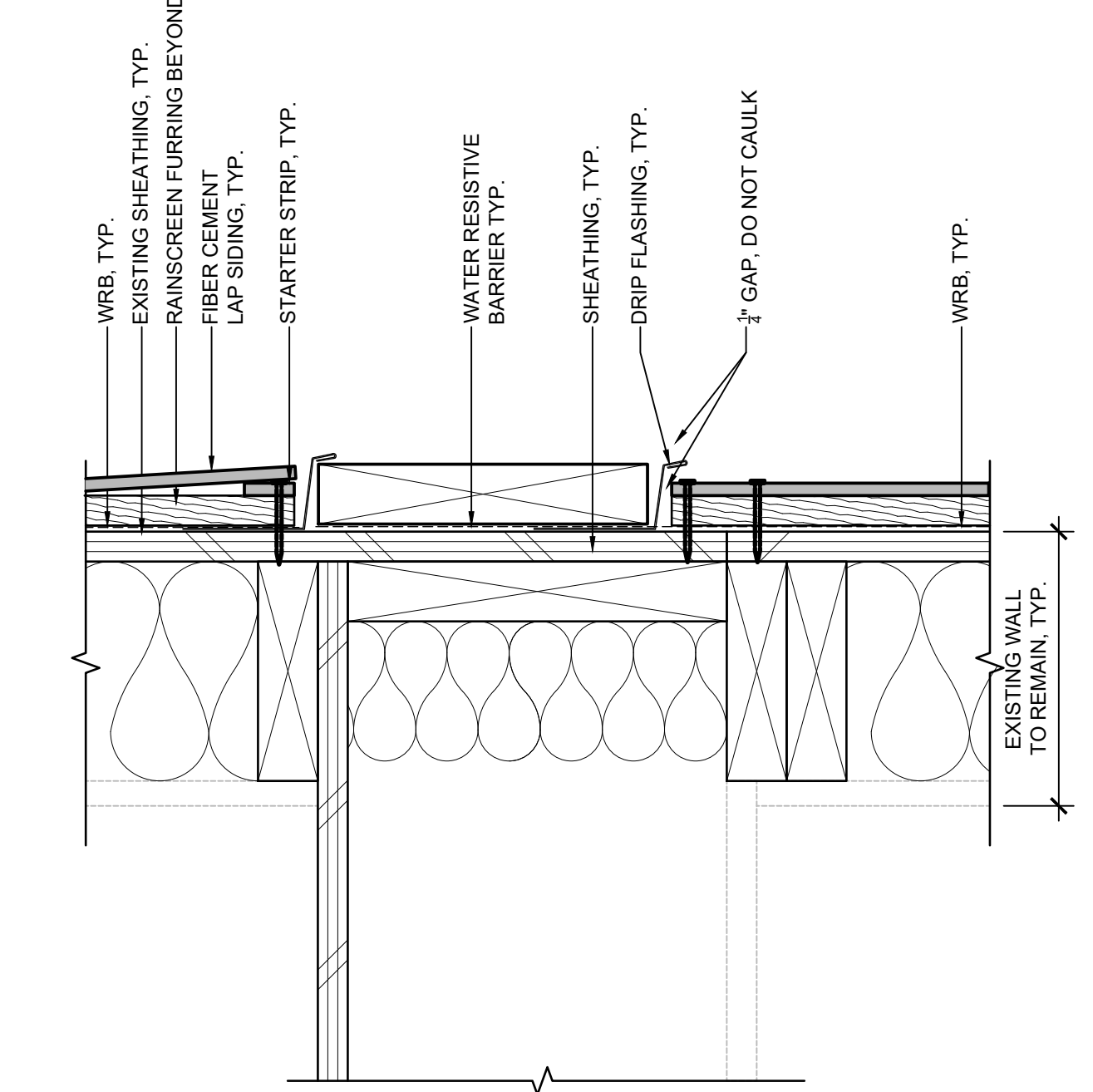
**2** OUTSIDE CORNER - RAINSCREEN  
SCALE: 3"=1'-0"



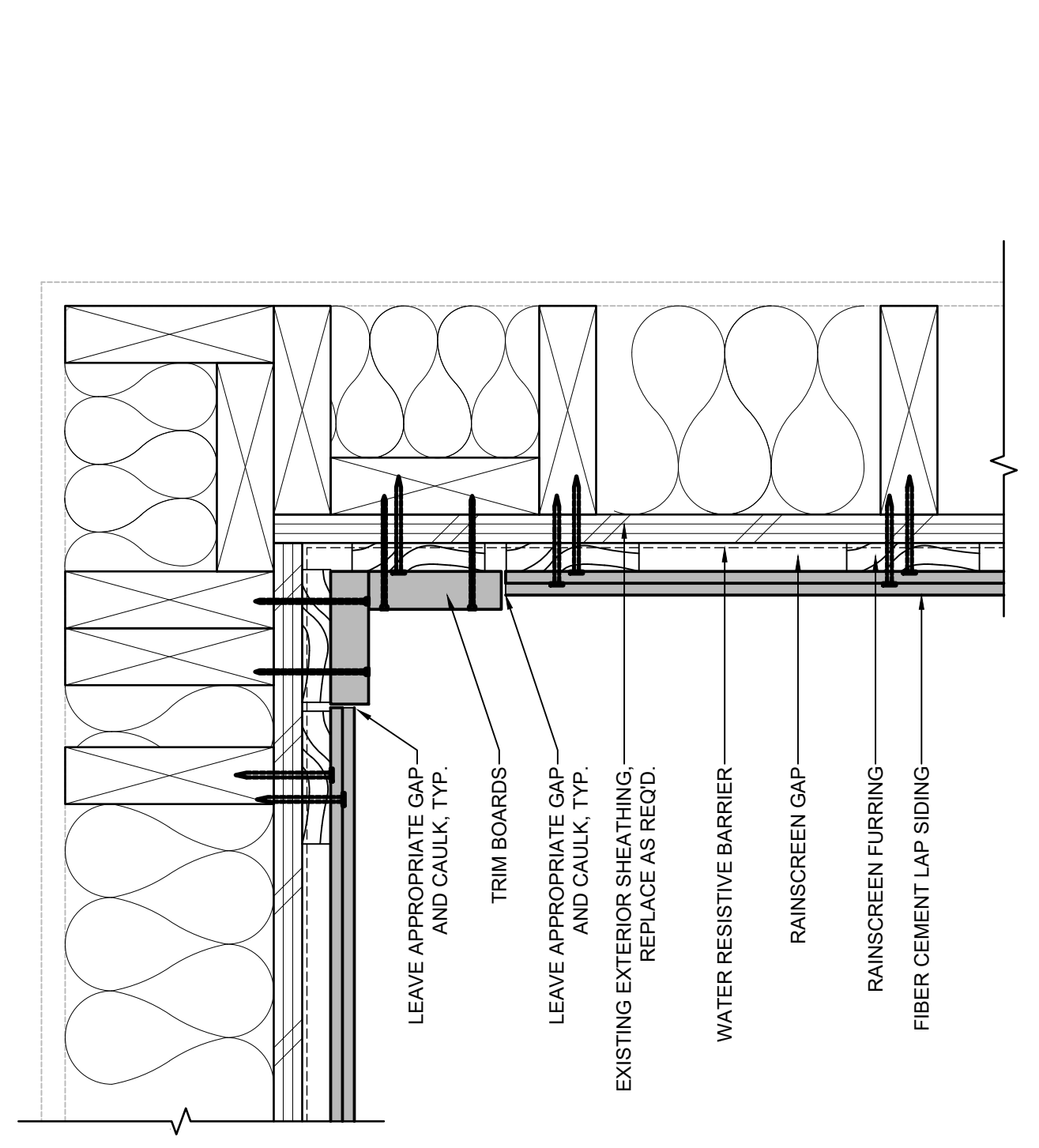
**5** WINDOW/DOOR HEAD - RAINSCREEN  
SCALE: 3"=1'-0"



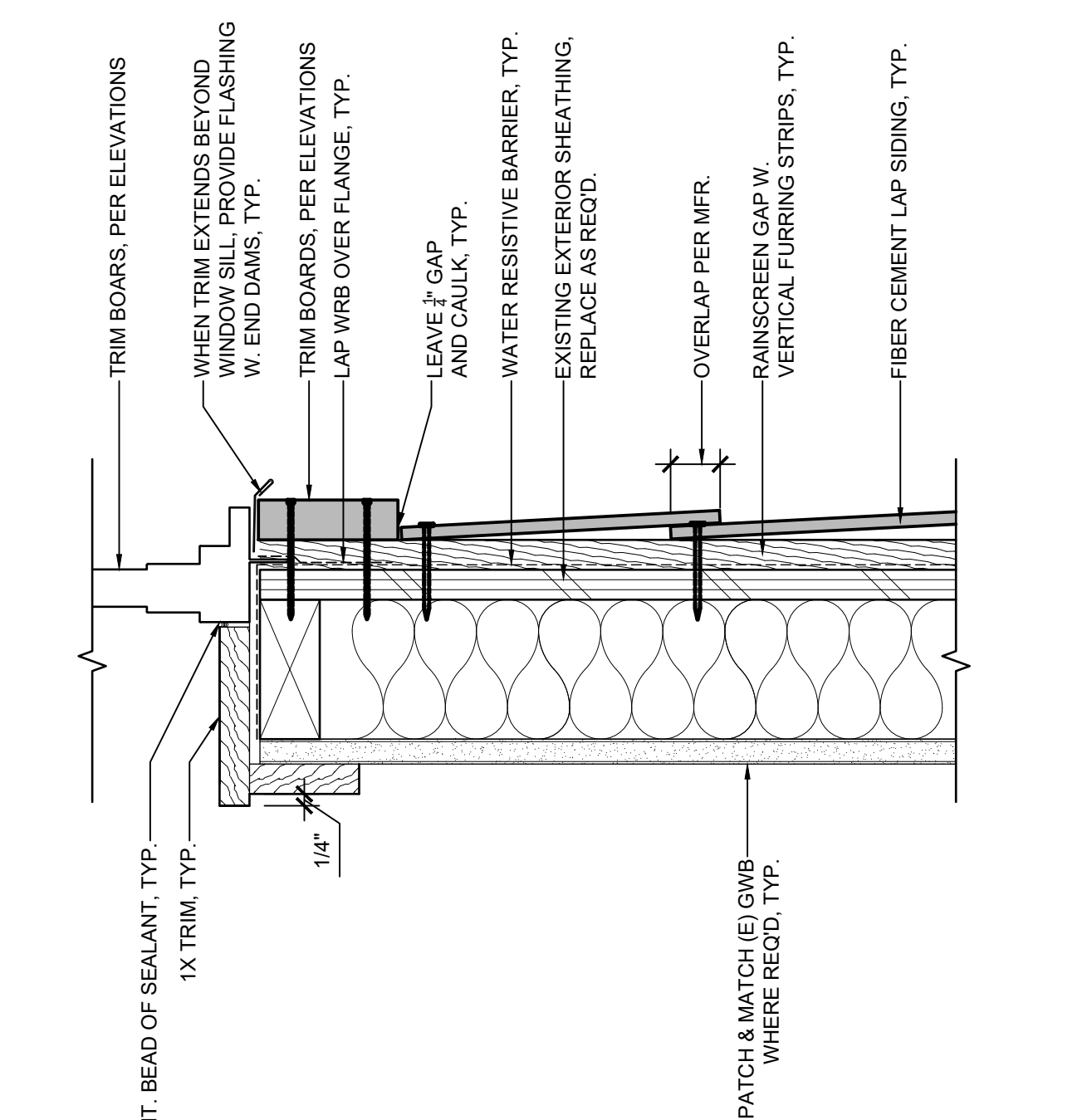
**8** HARDSCAPE CLEARANCES - RAINSCREEN  
SCALE: 3"=1'-0"



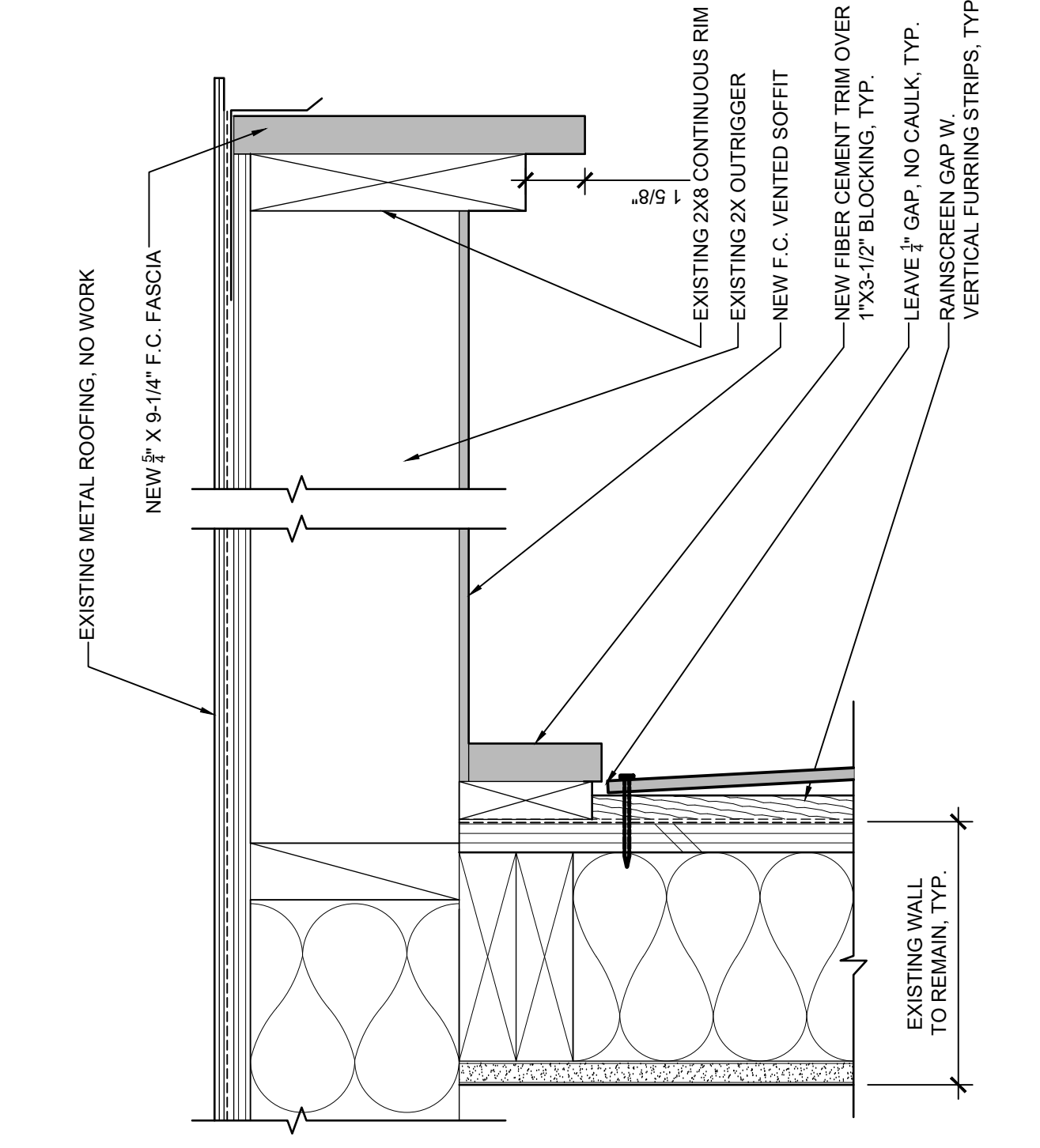
**11** MID WALL BAND DETAIL  
SCALE: 3"=1'-0"



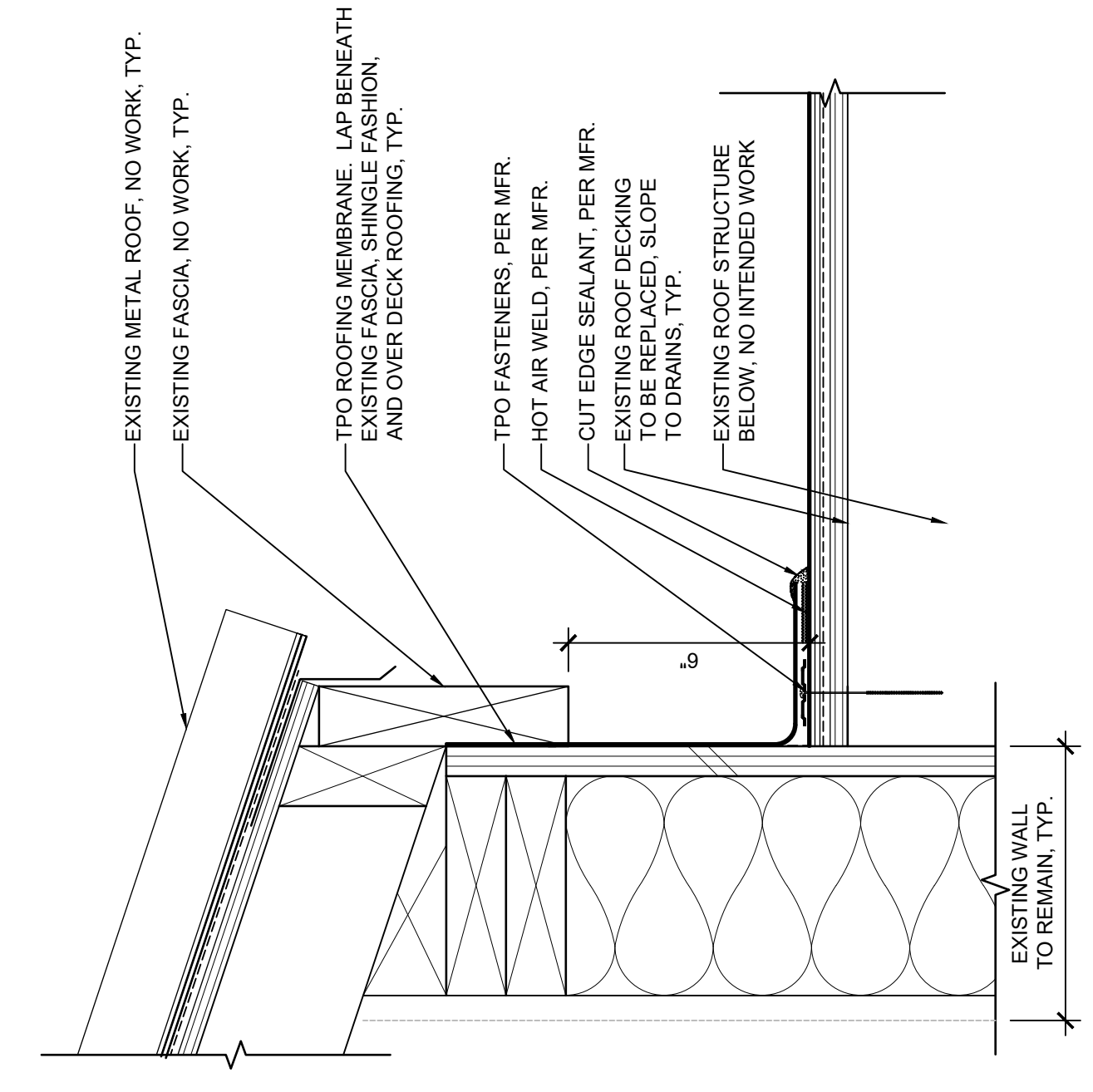
**1** INSIDE CORNER - RAINSCREEN  
SCALE: 3"=1'-0"



**4** WINDOW SILL - RAINSCREEN  
SCALE: 3"=1'-0"



**7** TYP. RAKE - RAINSCREEN  
SCALE: 3"=1'-0"



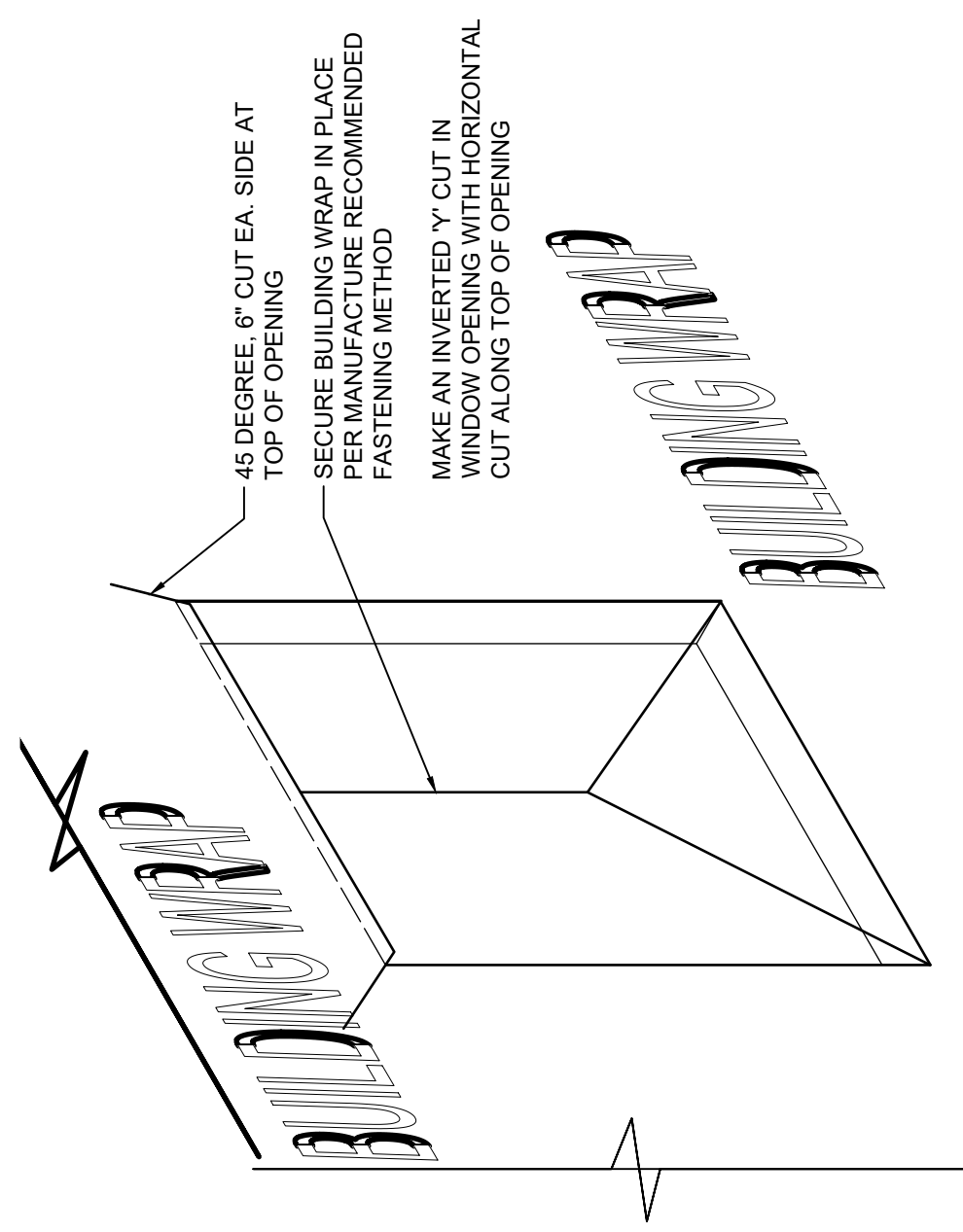
**10** HEADWALL @ LOW SLOPE ROOF  
SCALE: 3"=1'-0"

No.	ISSUED FOR	DATE

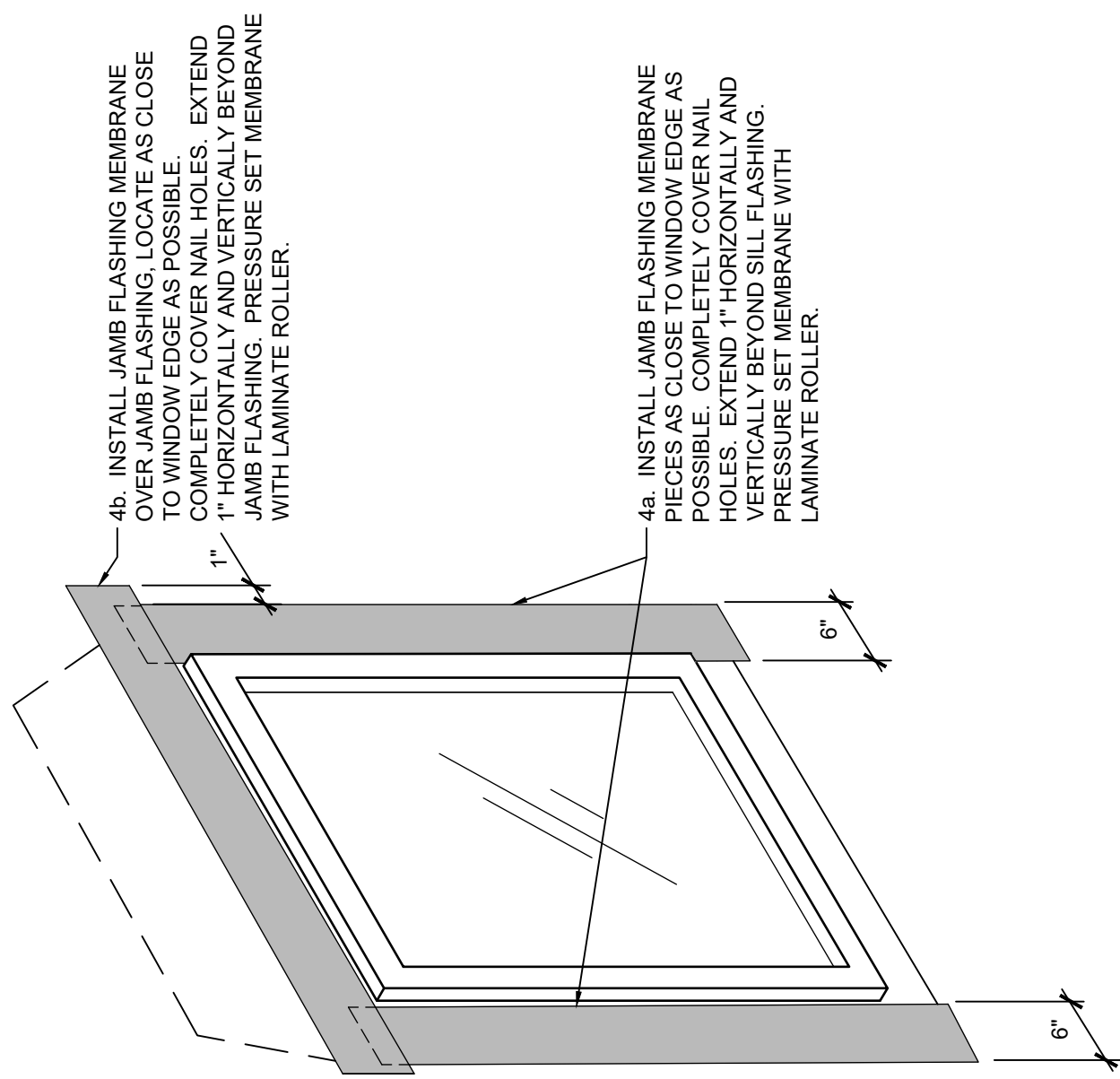


THE UNDERSIGNED HAS PROVIDED BUILDING ENCLOSURE DOCUMENTS THAT IN MY PROFESSIONAL JUDGMENT ARE APPROPRIATE TO SATISFY THE REQUIREMENTS OF RCW 64.55.055 THROUGH 64.55.090. DETAILS INCORPORATE USE OF EXISTING WIDELY USED BUILDING ENVELOPE PROTECTION TECHNOLOGIES. DETAILS SUBJECT TO REVIEW AND UPDATE AS SYSTEMS ADVANCE.

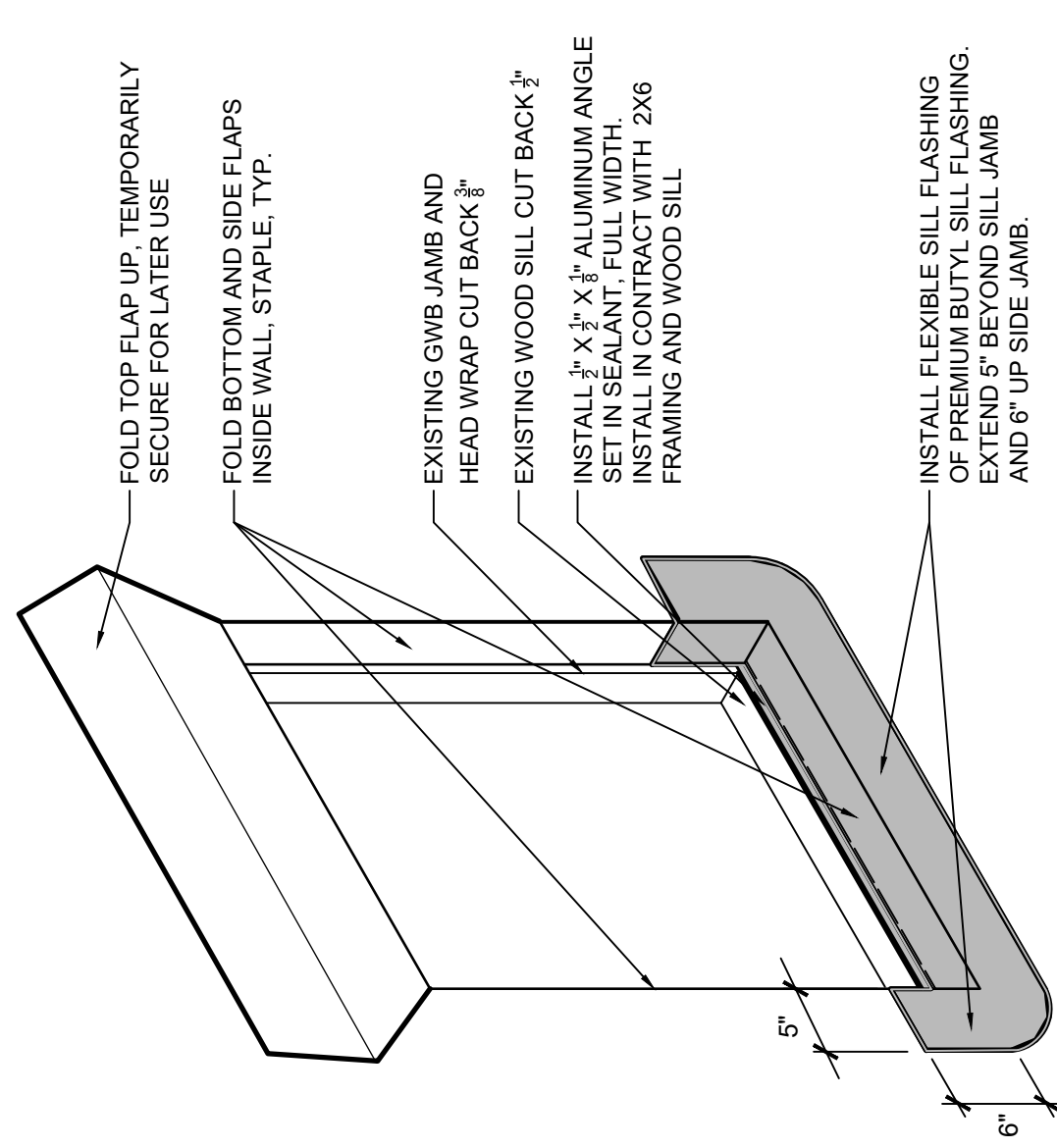
THIRD PARTY INSPECTION AND CERTIFICATION REQUIRED FOR WEATHER ENVELOPE SYSTEM



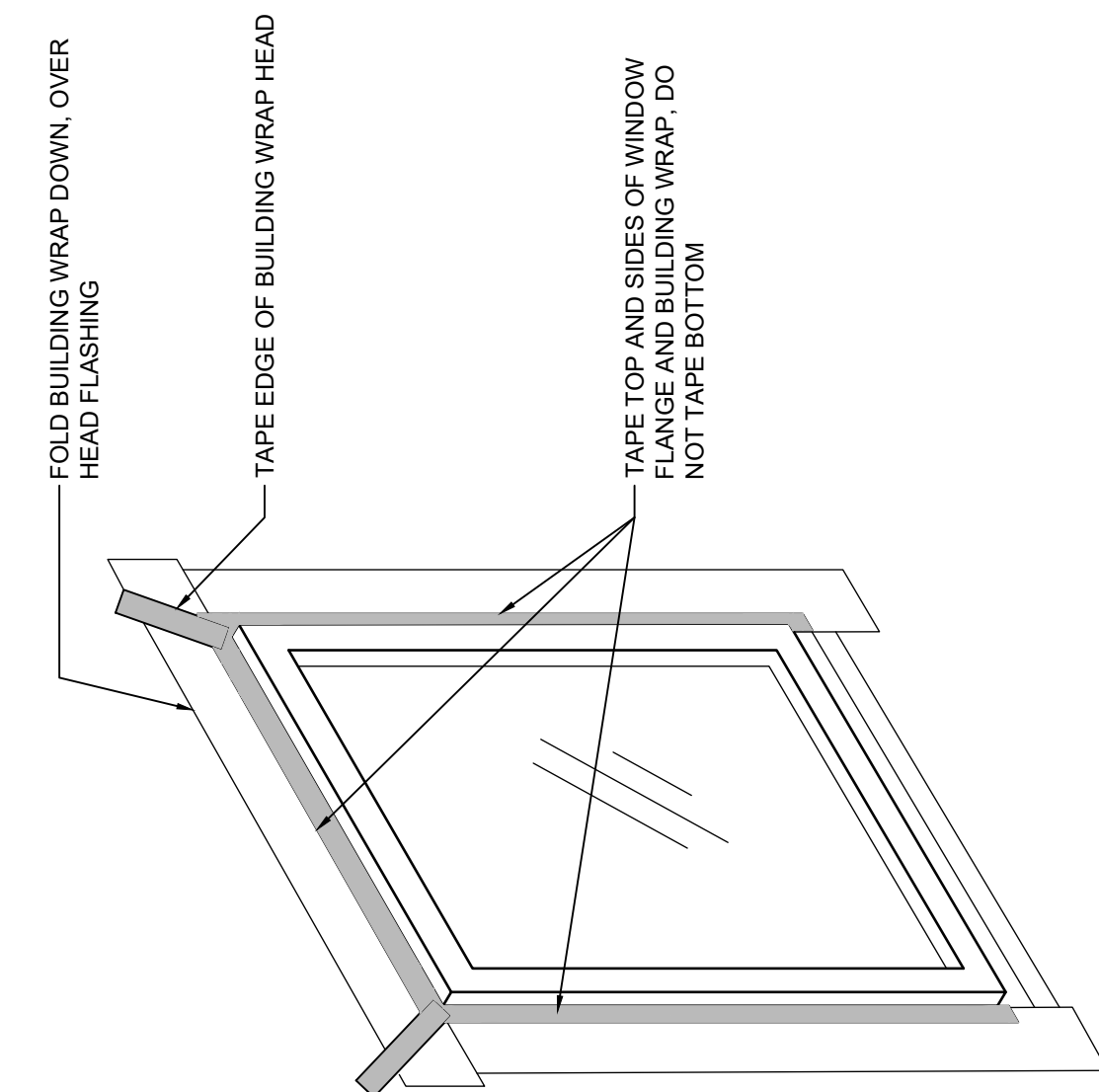
1 STEP 1  
SCALE: NTS



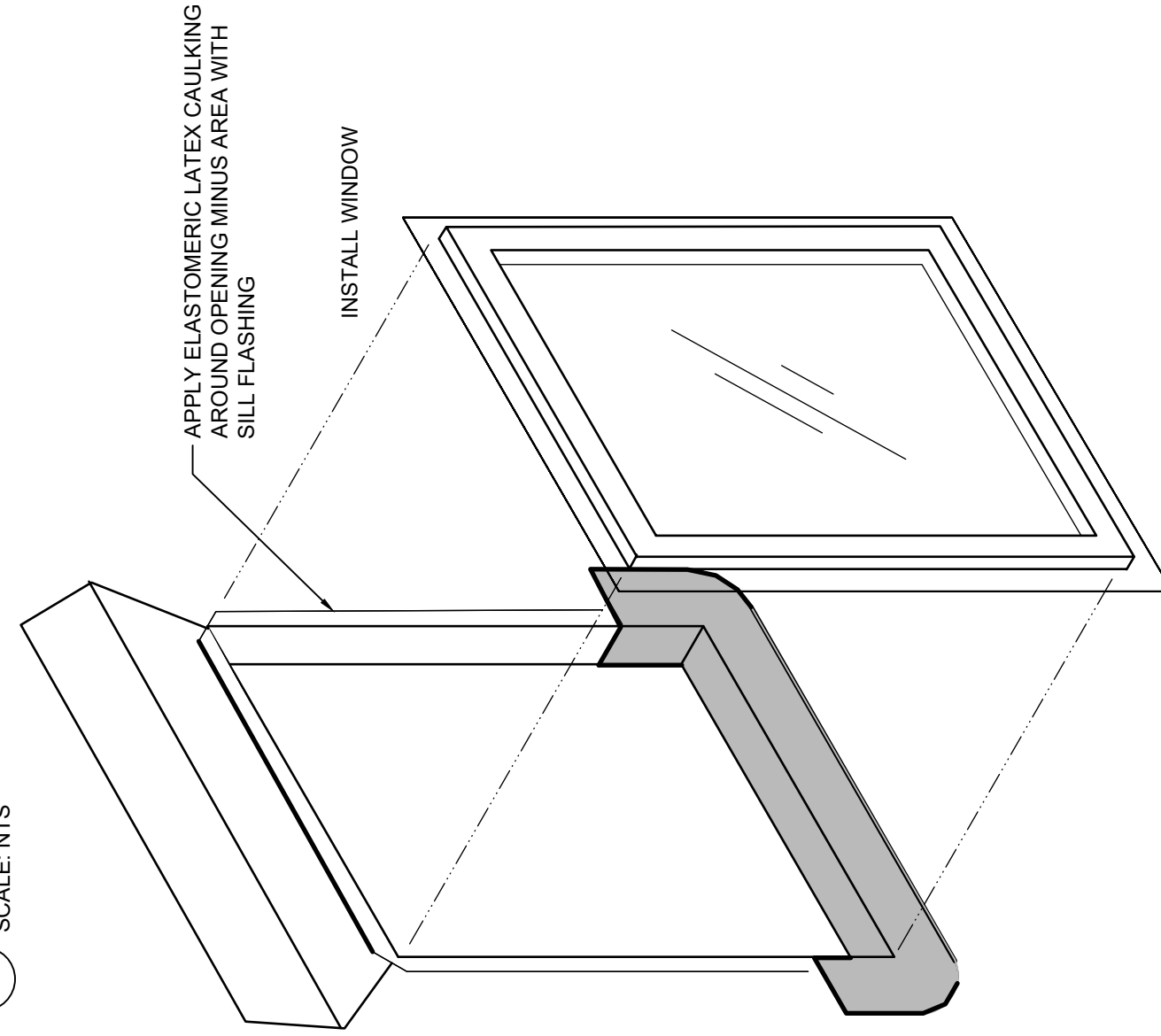
4 STEP 4  
SCALE: NTS



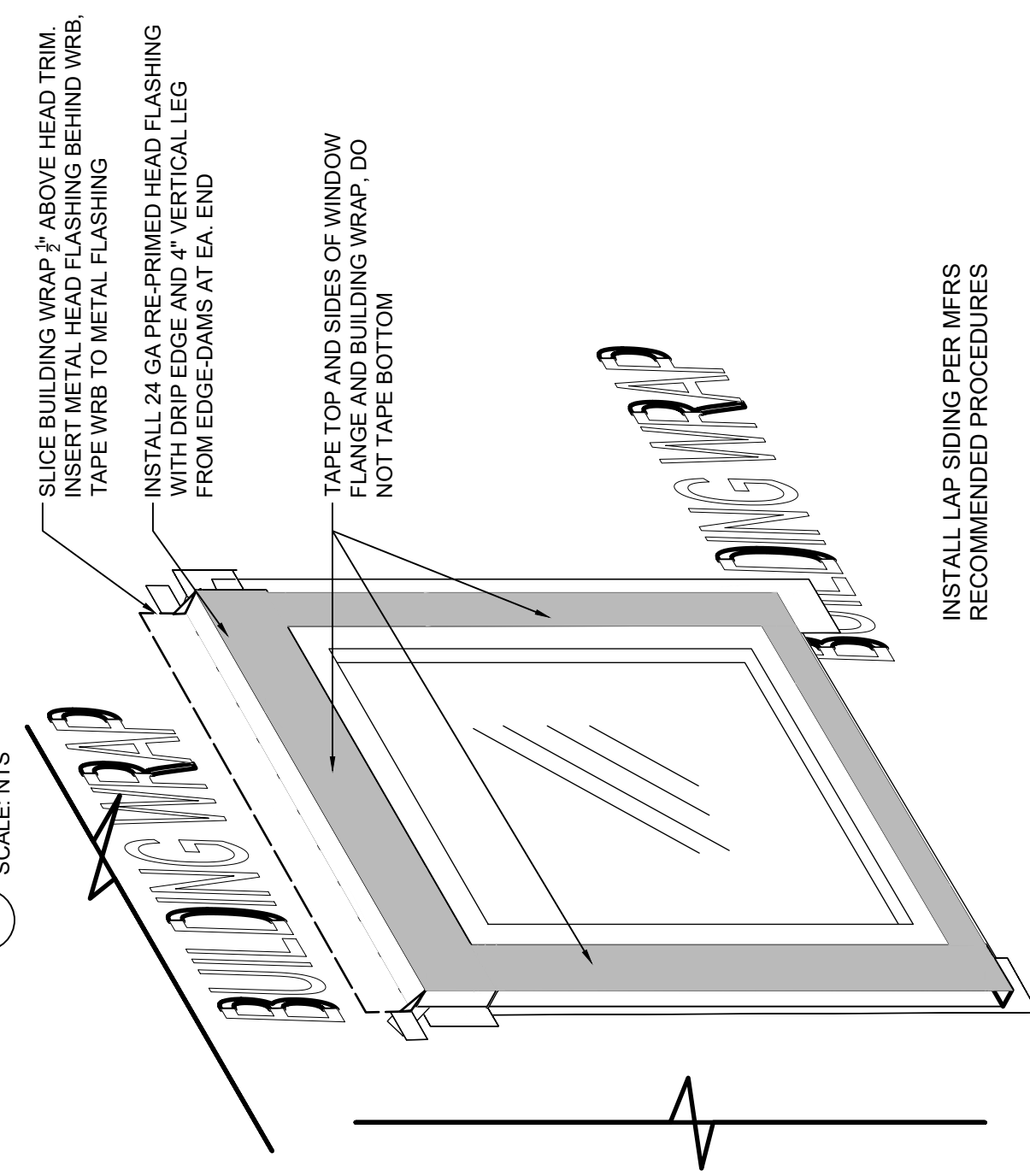
2 STEP 2  
SCALE: NTS



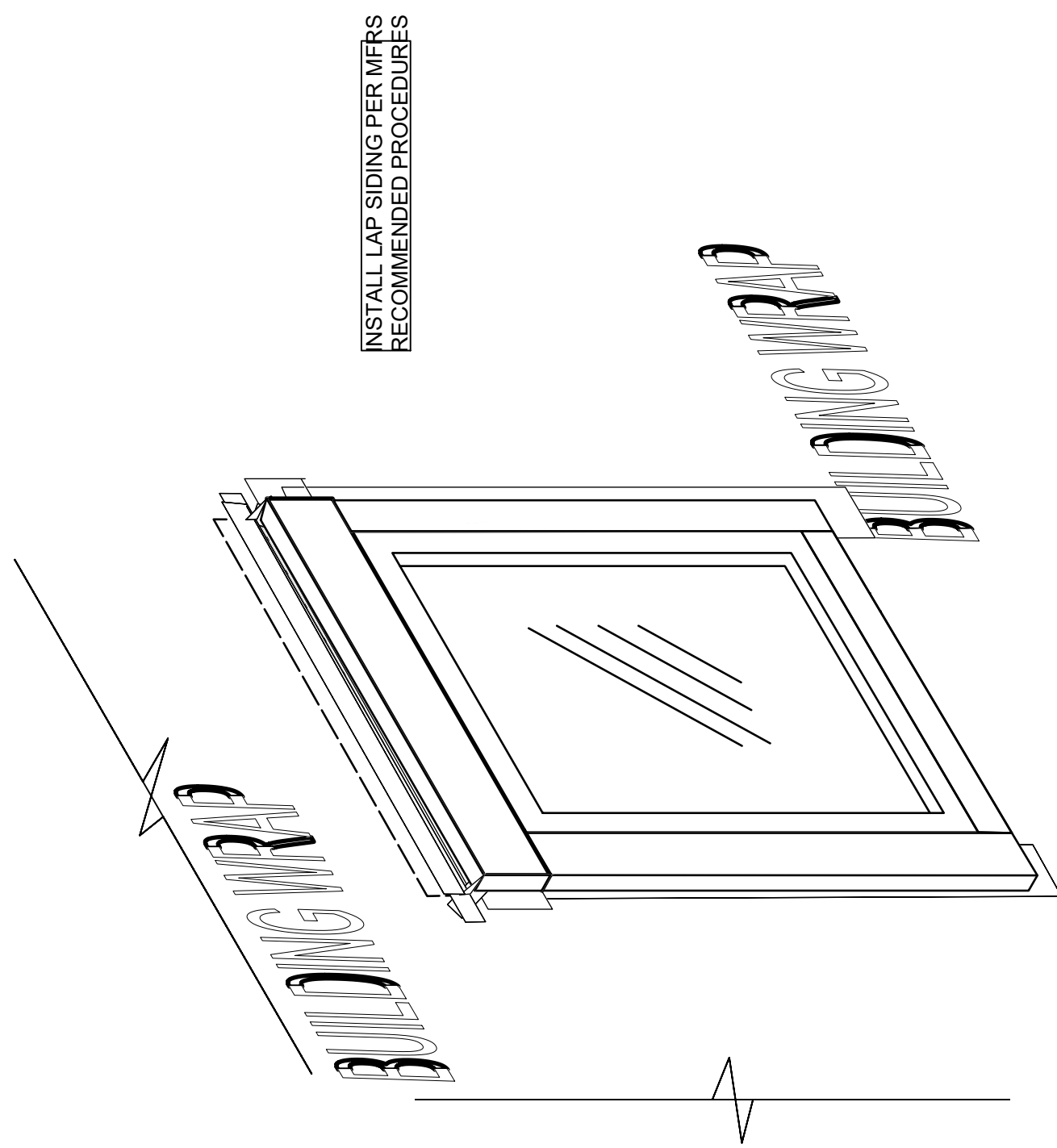
5 STEP 5  
SCALE: NTS



3 STEP 3  
SCALE: NTS



5 STEP 6  
SCALE: NTS



5 STEP 7  
SCALE: NTS

**GENERAL WEATHERPROOFING INSTALLATION NOTES:**

- INSTALL FLASHING, MEMBRANES AND SEALANT DURING FAVORABLE WEATHER CONDITIONS. INSURE PROPER ADHESION, CONTACT AND SEAL PRIOR TO COVERING
- VERIFY COMPATIBILITY WITH DISSIMILAR MATERIALS. CONFIRM EXPANSION TOLERANCES WITH MANUFACTURE PRIOR TO INSTALLATION.
- INSTALL LIKE PRODUCTS ACCORDING TO MANUFACTURES GUIDELINES.
- DO NOT COVER SUBSTANDARD OR SUSPECT INSTALLATION OF ANY OTHER TRADE.
- ALL EXTERIOR WALL & ROOF OPENINGS, FLASHING, COUNTER-FLASHING, EXPANSION JOINTS, BACKER-ROD, SEALANT AND FASTENERS TO BE CONSTRUCTED IN IN A WORKMAN LIKE MANNER REQUIRED TO MAKE THEM WEATHER-PROOF AND WATERTIGHT.
- WARRANTY ALL WORK FOR ONE YEAR MINIMUM.

**SUDDEN VALLEY  
REC CENTER**

4 BARN VIEW CT  
BELLINGHAM, WA

SB JOB NO: 202205.27  
DATE: 06.09.2023

**BID SET**

No.	ISSUED FOR	DATE

EXTERIOR DETAILS



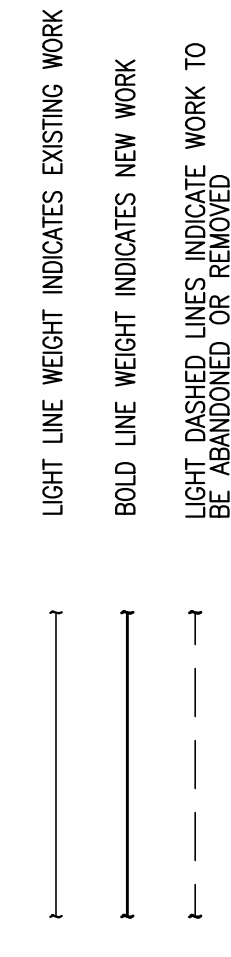
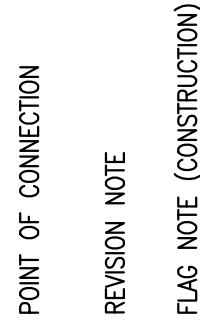
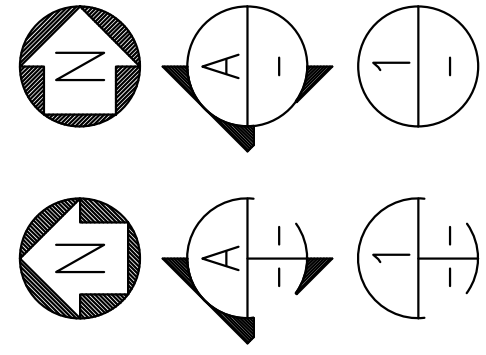




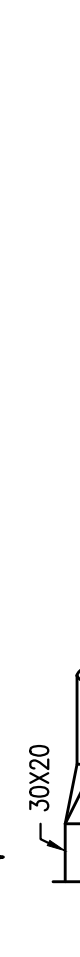
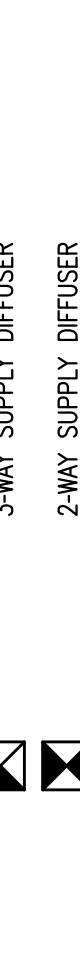
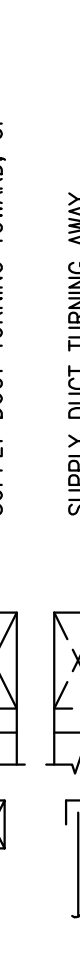
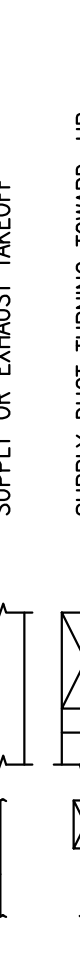




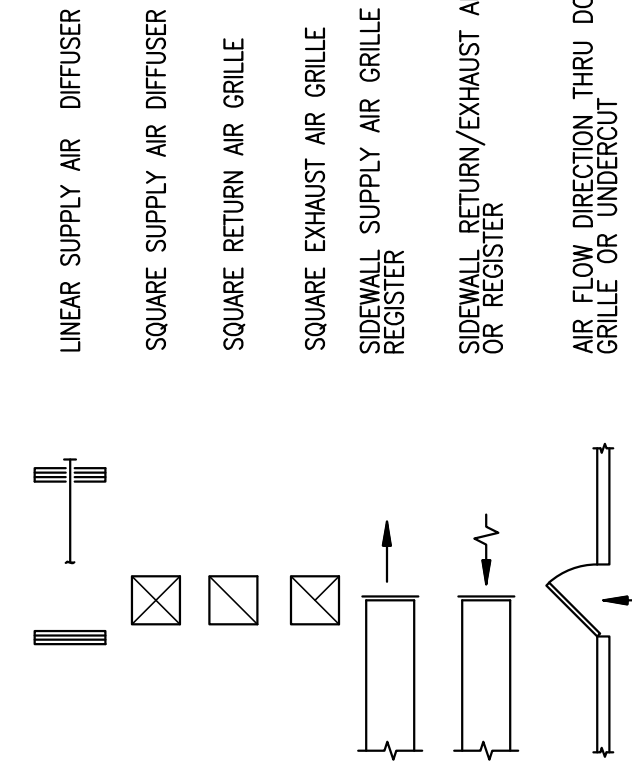
GENERAL



HVAC



HVAC (CONT.)



ABBREVIATIONS

- AC AIR CONDITIONING
ADT AIR CURTAIN FAN
ADA AMERICAN DISABILITIES ACT
ADJ ADJACENT, ADJUST, ADJUSTABLE, ADJUSTMENT
AFF ABOVE FINISHED FLOOR
ALGN ALIGNMENT
AP ACCESS PANEL
APPR APPROX
ARCH ARCHITECTURAL
ASME AMERICAN SOCIETY OF MECHANICAL ENGINEERS
AVE AVERAGE
BFF BELOW FINISH FLOOR
BHP BRAKE HORSEPOWER
BLDG BUILDING
BDD BOTTOM OF DUCT
BPD BACKFLOW PREVENTION DEVICE
BTU BRITISH THERMAL UNIT
BTUH BRITISH THERMAL UNITS PER HOUR
BALV BALANCING VALVE
CD CEILING DIFFUSER
CFM CUBIC FEET PER MINUTE
CI CAST IRON
CG CEILING
CLG CLEANOUT
CONN CONNECTED, CONNECTION
CONSTR CONSTRUCTION
CONT CONTINUOUS, CONTINUATION
COORD COORDINATE
CORR CORRIDOR
COTG CLEANOUT TO GRADE
CUBI CUBIC INCHES
CU IN CUBIC INCHES
CW COLD WATER
DB DRY BULB TEMPERATURE
DCV DEMAND CONTROL VENTILATION
DEP DEGREE
DET DETAIL
DFU DRAINAGE FIXTURE UNIT
DIA DIAMETER
DIFF DIFFERENTIAL, DIFFERENT, DIFFUSER
DISCH DISCHARGE
DN DOWN
DOM DOMESTIC
DR DRAIN
DS DOWNSPOUT
DWD DRAIN WARE
DWG DRAWING
EA EACH
EAT ENTERING AIR TEMPERATURE
EF EXHAUST FAN
EG EXHAUST GRILLE
ELECT ELECTRICAL
ELEV ELEVATION
EMERG EMERGENCY
ENT ENTERING
EXIST EXISTING
EXP EXPANSION
F FAHRENHEIT
FC FANCOIL CLEANOUT
FD FIRE DAMPER FLOOR DRAIN
FDC FIRE DEPARTMENT CONNECTION
FIO FURNISHED AND INSTALLED BY OWNER
FLA FULL LOAD AMP
FLEX FLEXIBLE
FIB FIBER
FIBR FINISHED BY OWNER INSTALLED BY CONTRACTOR
FOT FLAT ON TOP
FPM FEET PER MINUTE
FSS FEET PER SECOND
FSD FEET PER SECOND
FT FLOOR TO FLOOR
FU FIXTURE UNITS
G GAS
GALV GALVANIZED
GC GENERAL CONTRACTOR
GEN GENERAL
GND GROUND
GPH GALLONS PER HOUR
GW GREASE WASTE
H HEIGHT, HIGH
HP HORSEPOWER
HSP HORSEPOWER
HTG HEATING
HW HEATING VENTILATING AND AIR CONDITIONING
HWC HOT WATER
HWR HOT WATER HEATING RETURN
HTS HOT WATER HEATING SUPPLY
HL HEAVY

ABBREVIATIONS (CONT.)

- IBC INTERNATIONAL BUILDING CODE
ID INDIRECT DRAIN
IE INVERT ELEVATION
IMC INTERNATIONAL MECHANICAL CODE
IN INCH
INSUL INSULATION
INDW INDIRECT WASTE
KW KILOWATT
KWH KILOWATT HOUR
L LENGTH
LAV LAVATORY
LAT LEAVING AIR TEMPERATURE
LBS POUNDS
LF FOOT
LWG LEAVING
MA MAXIMUM
MBH THOUSAND BRITISH THERMAL UNITS PER HOUR
MCC MOTOR CONTROL CENTER
MOTR MOTORIZED DAMPER
MECH MECHANICAL
MFR MANUFACTURER
MIN MINIMUM, MINUTE
MOD MOTOR OPERATED DAMPER
MOUNT MOUNTING
MTG MOUNTING
NA NOT APPLICABLE
NAC ACCESS DOORS IN THE RATED STRUCTURE SHALL BE FIRE RATED, COORDINATE LOCATIONS WITH ARCHITECT, CONTRACTOR TO PROVIDE ACCESS DOORS.
NCS NOT IN CONTRACT
NCS NOT TO SCALE
OAC OUTDOOR AIR CONDITIONER
OAT OUTSIDE AIR TEMPERATURE
OH OVERHEAD
ORD OVERFLOW ROOF DRAIN
OSA OUTSIDE AIR
P PUMP
PDR PRESSURE DROP, PIT DRAIN
PH PHASE
POC POINT OF CONNECTION
PRELIM PRELIMINARY
PRESS PRESSURE
PRV PRESSURE REDUCING VALVE
PSIG POUNDS PER SQUARE INCH GAGE
PSIG POUNDS PER SQUARE INCH GAGE
RA RETURN AIR
RD ROOF DRAIN
RECUR RECIRCULATING
REGR REGRASS
REF REFERENCE
REG REGULATOR
REQ REQUIRED
RND ROUND
RND REDUCED PRESSURE BACKFLOW PREVENTER
RPM REVOLUTIONS PER MINUTE
RELV RELIEF VALVE
SAN SANITARY
SCHED SCHEDULE
SD SUPPLY DIFFUSER
SFE SQUARE FEET
SG SUPPLY GRILLE
SOP SCREENED OPENING
SOV SHUT OFF VALVE
SP STATIC PRESSURE
SPEC SPECIFICATION
SSD SCHEDULED
SST STAINLESS STEEL
SS SOIL STACK, SANITARY SEWER STRUCTURAL
STRUC STRUCTURAL
SUPW SUPPLY WALL REGISTER
SWR SWIRL
TBD TO BE DETERMINED
TEMP TEMPERATURE, TEMPORARY
THERM THERMOSTAT
THRU THROUGH
TOP TOP OF DUCT
TAP TAP
TAP PRM TAP PRIMER
TS TEMPERATURE SENSOR
TV TURNING VANE
TW TEMPERED WATER
TWK TEMPERED WATER RECIRCULATE TYPICAL
UPC UNIFORM PLUMBING CODE
UTR UP THRU ROOF
V VENT
VAV VARIABLE AIR VOLUME
VB VACUUM BREAKER
VD VOLUME DAMPER
VEL VELOCITY
VERT VERTICAL
VOL VOLUME
VTR VENT TO ROOF
W WASTE
WCO WALL CLEAN OUT
WB MET BULB TEMPERATURE
WBT WET BULB TEMPERATURE
WG WATER GAGE
WH WATER HAMMER ARRESTOR
W/ WITH
W/O WITHOUT
WS WASTE STACK
WT WEIGHT
WSPU WATER SUPPLY FIXTURE UNIT

GENERAL NOTES:

- 1. COMPLETE INSTALLATION OF THE MECHANICAL SYSTEM SHALL BE PER THE LATEST ADOPTED VERSION OF INTERNATIONAL BUILDING CODE (IBC), INTERNATIONAL MECHANICAL CODE (IMC), WASHINGTON STATE ENERGY CODE (WSEC), UNIFORM PLUMBING CODE (UPC), INTERNATIONAL FUEL GAS CODE (IFGC), INTERNATIONAL FIRE CODE (IFC), NFPA AND HEALTH CODES AND REGULATIONS AS ADOPTED BY THE LOCAL JURISDICTIONS.
2. CONTRACTOR SHALL COORDINATE DIFFUSER, GRILLE AND REGISTER LOCATIONS AND DUCT ROUTING CLEARANCES WITH THE STRUCTURAL, REFLECTED CEILING AND LIGHTING PLANS.
3. MAKE ACCEPTABLE ACCESS PROVISIONS FOR REMOVAL OF FILTER AND MAINTENANCE FOR ALL INDOOR UNITS. REFER TO MANUFACTURER'S INSTALLATION GUIDE.
4. ALL CONTROL WIRE AND CONDUIT SHALL COMPLY WITH THE NATIONAL ELECTRIC CODE.
5. WHEN MECHANICAL WORK (HVAC, PLUMBING, SWEET METAL, FIRE PROTECTION, ETC.) IS SUBCONTRACTED, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE WITH ALL OTHER TRADES AND ALL ASSOCIATED CONTRACTS. WHEN DISCREPANCIES ARISE PERTAINING TO WHICH CONTRACTOR PROVIDES A PARTICULAR ITEM OF THE MECHANICAL CONTRACT OR WHICH CONTRACTOR PROVIDES FINAL CONNECTIONS FOR A PARTICULAR ITEM OF THE MECHANICAL CONTRACT, IT SHALL BE BROUGHT TO THE ATTENTION OF THE MECHANICAL CONTRACTOR.
6. THE LOCATIONS OF ALL ITEMS SHOWN ON THE DRAWINGS OR CALLED FOR IN THE DOCUMENTS THAT ARE NOT DEFINITELY FIXED BY DIMENSIONS ARE APPROXIMATE ONLY. THE EXACT LOCATIONS NECESSARY TO SECURE THE BEST CONDITIONS AND RESULTS MUST BE DETERMINED BY THE PROJECT SITE CONDITIONS AND SHALL HAVE THE APPROVAL OF THE ENGINEER BEFORE BEING INSTALLED. DO NOT SCALE DRAWINGS.
7. ALL GAS EQUIPMENT SHALL BE INSTALLED PER THEIR LISTINGS, IMC, UPC, IFGC AND LOCAL CODES.
8. ALL ROOF PENETRATIONS SHALL BE MINIMUM OF 5 FEET AWAY FROM THE AREA/OCCUPATION SEPARATION WALLS. ALL PIPE, DUCT AND CONDUIT PENETRATIONS THROUGH RATED ASSEMBLIES SHALL BE FIRE AND SMOKE STOPPED PER CODE.
9. ALL EQUIPMENT, DAMPERS, PIPING, AND ACCESSORIES IN CONCEALED SPACES REQUIRING ACCESS SHALL HAVE ACCESS DOORS. ALL ACCESS DOORS IN THE RATED STRUCTURE SHALL BE FIRE RATED, COORDINATE LOCATIONS WITH ARCHITECT, CONTRACTOR TO PROVIDE ACCESS DOORS.
10. ALL EQUIPMENT SHALL BE FREE FROM DEFECTS IN MATERIAL, WORKMANSHIP, AND SHALL BE OF THE KIND AND QUALITY DESCRIBED HEREIN.
11. COORDINATE WITH THE STRUCTURAL ENGINEER AND GENERAL CONTRACTOR TO PROVIDE STRUCTURAL SUPPORT AND SEISMIC RESTRAINTS FOR ALL EQUIPMENT.
12. ALL EQUIPMENT SHALL BE APPROVED FOR INSTALLATION IN THE STATE OF WASHINGTON, AND SHALL HAVE ALL CERTIFICATIONS AND RATINGS REQUIRED TO MEET ALL ENERGY, POLLUTION, ENVIRONMENTAL, SEISMIC, ETC. CODES AND REGULATIONS.
13. VERIFY ALL THE MECHANICAL EQUIPMENT'S ELECTRICAL LOADS VOLTAGE/PHASE, ETC. WITH ELECTRICAL CONTRACTOR PRIOR TO ORDERING.
14. WHERE MULTIPLE RISERS OR HORIZONTAL LOOPS ARE USED, BALANCING VALVES IN THE RETURN LINES ARE REQUIRED. A CHECK VALVE SHALL BE PROVIDED IN EACH RETURN TO PREVENT TEMPORARY REVERSAL OF FLOW.
15. PROVIDE ALL MATERIALS AND EQUIPMENT AND PERFORM ALL LABORS REQUIRED TO INSTALL COMPLETE AND OPERABLE MECHANICAL SYSTEMS AS INDICATED ON THE DRAWINGS, AS SPECIFIED AND AS REQUIRED BY IMC, UPC, IBC, WASHINGTON STATE ENERGY CODE AND ALL APPLICABLE LOCAL AMENDMENTS.
16. INSTALL ALL MECHANICAL EQUIPMENT AND APPURTENANCES IN ACCORDANCE WITH MANUFACTURERS' RECOMMENDATIONS, CONTRACT DOCUMENTS, AND APPLICABLE CODES AND REGULATIONS.
17. COORDINATE CONSTRUCTION OF ALL MECHANICAL WORK WITH ARCHITECTURAL, STRUCTURAL, ELECTRICAL WORK, ETC., SHOWN ON CONTRACT DOCUMENT DRAWINGS.
18. ALL TESTS SHALL BE COMPLETED BEFORE ANY MECHANICAL EQUIPMENT OR PIPING INSULATION IS APPLIED.
19. TESTING, ADJUSTING, AND BALANCING AGENCY SHALL BE A MEMBER OF NATIONAL ENVIRONMENTAL, BALANCING BUREAU (NEBB). TESTING, ADJUSTING, AND BALANCING SHALL BE PERFORMED IN ACCORDANCE WITH THE NEBB STANDARDS. ABC ACCEPTABLE PENDING AGENCY APPROVAL.
20. WHERE TWO OR MORE ITEMS OF THE SAME TYPE OF EQUIPMENT ARE REQUIRED, THE PRODUCT OF ONE MANUFACTURER SHALL BE USED.
21. LOCATIONS AND SIZES OF ALL FLOOR, WALL, AND ROOF OPENINGS SHALL BE COORDINATED WITH ALL OTHER TRADES INVOLVED.
22. REFER TO TYPICAL DETAILS FOR DUCTWORK, PIPING, AND EQUIPMENT INSTALLATION.
23. AIR AND FLUID FLOW RATES SHALL BE TESTED AND BALANCED WITHIN THE TOLERANCES DEFINED IN SPECIFICATIONS OF SHOW ON PLANS. SYSTEMS SHALL BE WASHED IN A MANNER TO FIRST MINIMIZE THROTTLING LOSSES, THEN ADJUSTED TO MEET DESIGN FLOW CONDITIONS.
24. RECORD DRAWINGS SHALL BE PROVIDED TO THE OWNER WITHIN 90 DAYS AFTER THE DATE OF SYSTEM ACCEPTANCE AS REQUIRED BY SECTION C103.6 OF THE WSEC. THE DRAWINGS SHALL INDICATE THE LOCATION AND ACCEPTANCE OF ALL EQUIPMENT, GENERAL PIPING, AND DISTRIBUTION SYSTEMS, INCLUDING FLOW RATES, PRESSURES, AND TEMPERATURES. RECORDS SHALL BE MAINTAINED AND MADE ACCESSIBLE TO OWNER AND ENGINEER.

GENERAL HVAC NOTE:

- 1. CONTRACT DOCUMENT DRAWINGS FOR MECHANICAL WORK (HVAC) ARE DIAGRAMMATIC AND ARE INTENDED TO CONVEY SCOPE AND GENERAL ARRANGEMENT ONLY.
2. LOCATE ALL TEMPERATURE DEVICES IN DUCTWORK LOCATIONS WITH STRAIGHT SECTION OF DUCT UP AND DOWNSTREAM AS RECOMMENDED BY THE MANUFACTURER FOR GOOD ACCURACY.
3. COORDINATE AND PROVIDE ALL DUCT TRANSITIONS REQUIRED FOR FINAL EQUIPMENT CONNECTIONS TO FURNISHED EQUIPMENT. FIELD VERIFY AND COORDINATE ALL DUCT DIMENSIONS BEFORE FABRICATION.
4. ALL EQUIPMENT, DUCTWORK, ETC., SHALL BE SUPPORTED AS REQUIRED TO PROVIDE A VIBRATION FREE INSTALLATION, AND SEISMICALLY BRACED AS REQUIRED, PROVIDE VIBRATION ISOLATION FOR ALL MECHANICAL EQUIPMENT TO PREVENT TRANSMISSION OF VIBRATION TO BUILDING STRUCTURE.
5. CERTAIN ITEMS SUCH AS RISERS AND DROPS IN DUCTWORK, ACCESS DOORS, VOLUME DAMPERS, ETC. ARE INDICATED ON THE CONTRACT DOCUMENT DRAWINGS FOR CLARITY FOR A SPECIFIC LOCATION REQUIREMENT AND SHALL NOT BE INTERPRETED AS THE EXTENT OF THE REQUIREMENTS FOR THESE ITEMS.
6. UNLESS OTHERWISE SHOWN, LOCATE ALL ROOM THERMOSTATS 4'-0" (SATURNED) ABOVE FINISHED FLOOR. NOTIFY THE ENGINEER OF ANY ROOMS WHERE THE ABOVE LOCATION CANNOT BE MAINTAINED OR WHERE THERE IS A QUESTION ON LOCATION.
7. ALL DUCTWORK SHALL CLEAR DOORS AND WINDOWS.
8. PROVIDE ALL 90 DEGREE SQUARE ELBOWS WITH DOUBLE RADIUS TURNING VANES UNLESS OTHERWISE INDICATED. PROVIDE ACCESS DOORS UPSTREAM OF ALL ELBOWS WITH TURNING VANES.
9. UNLESS OTHERWISE NOTED, ALL DUCTWORK IS OVERHEAD, TIGHT TO THE UNDERSIDE OF THE STRUCTURE (WITHIN TRUSSES), WITH SPACE FOR INSULATION IF REQUIRED.
10. MAXIMUM LENGTH OF FLEXIBLE DUCTS LOCATED ABOVE HARD CEILING SHALL BE AS CODE PERMITS BUT NO LONGER THAN 4 FEET.
11. ALL DUCTWORK SHALL BE COORDINATED WITH ALL TRADES INVOLVED. OFFSETS IN DUCTS, INCLUDING DIVIDED DUCTS AND TRANSITIONS AROUND OBSTRUCTIONS, SHALL BE PROVIDED AT NO ADDITIONAL COST TO THE OWNER.

DRAWING LIST

- MO.0 HVAC LEGEND & NOTES
MO.1 HVAC SPECIFICATIONS
MO.2 HVAC SCHEDULES
MO.3 HVAC SCHEDULES- VENTILATION
MO.4 HVAC SCHEDULES- HVAC REFINISHMENT
MO.5 HVAC FLOOR PLAN- HVAC EQUIPMENT
MO.6 HVAC SECTION- VENTILATION

2018 WASHINGTON STATE ENERGY CODE (WSEC) NOTES

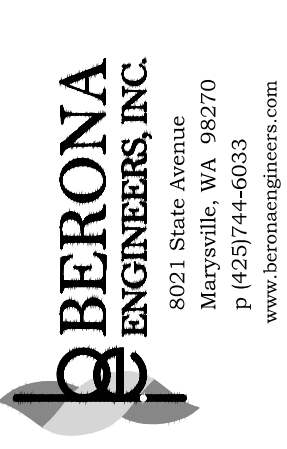
- 1. HVAC EQUIPMENT SHALL HAVE MINIMUM PERFORMANCE AT SPECIFIED RATING CONDITIONS NOT LESS THAN THE VALUES INDICATED IN TABLE C403.3.2(1) THRU C403.3.2(12) OF THE WSEC AND AS INDICATED ON THE CONTRACT DOCUMENTS.
2. PROVIDE BARBOARD BETWEEN HEATING/COOLING SPACE SENSOR SETPOINTS OF 5 DEGREES AS REQUIRED BY SECTION C403.4.1.2 OF THE WSEC OR AS DESCRIBED IN THE TEMPERATURE CONTROL SEQUENCES, IF PROVIDED.
3. HVAC SYSTEMS SHALL BE EQUIPPED WITH AUTOMATIC CONTROLS CAPABLE OF ACCOMPLISHING SETBACK OR SHUTDOWN SEQUENCES AND TESTED PERFORMED BY SECTION C403.4.2 OF THE WSEC AND AS DESCRIBED IN THE TEMPERATURE CONTROL SEQUENCES, IF PROVIDED.
4. PROVIDE BALANCING DEVICES IN ALL BRANCH DUCTS AND PIPE RUNS TO TERMINAL DEVICES AS REQUIRED BY SECTION C408.2.2 AND C408.2.2.1 OF THE WSEC AND AS INDICATED ON THE CONTRACT DOCUMENTS.
5. ALL DUCTWORK SHALL COMPLY WITH SMACNA STANDARDS FOR CONSTRUCTION OF GALVANIZED DUCTWORK. ALL DUCTWORK SHALL BE SEALED AS REQUIRED BY SECTION C403.10.1 "DUCT AND PLENUM INSULATION AND SEALING" OF THE WSEC. DUCT TAPE NOT ALLOWED.
6. ALL DUCTWORK SHALL BE INSULATED AS REQUIRED BY SECTION C403.10.1 "DUCT AND PLENUM INSULATION AND SEALING" OF THE WSEC.
7. ALL PIPING SHALL BE INSULATED AS REQUIRED BY SECTION C403.10.3 OF THE WSEC.
8. HEATING AND COOLING EQUIPMENT FANS, CIRCULATION PUMPS, AND TERMINAL UNIT FANS SHALL BE SHUT OFF DURING UNOCCUPIED PERIODS AS REQUIRED BY SECTION C403.3.5.2 OF THE WSEC AND AS DESCRIBED IN THE TEMPERATURE CONTROL SEQUENCES, IF PROVIDED.
9. SUPPLY AIR AND WATER TEMPERATURES SHALL BE AUTOMATICALLY RESET AS REQUIRED IN SECTION C403.4.4 AND C403.4.4 OF THE WSEC OR AS DESCRIBED IN THE TEMPERATURE CONTROL SEQUENCES, IF PROVIDED.
10. ALL AIR SYSTEMS SHALL BE PROVIDED WITH A 100% CAPABLE AIR ECONOMIZER CAPABILITY AS REQUIRED BY THE SECTION C403.5 OF THE WSEC AND AS DESCRIBED IN THE TEMPERATURE CONTROL SEQUENCES, IF PROVIDED.
11. AIR ECONOMIZERS SHALL BE CAPABLE OF PROVIDING PARTIAL COOLING EVEN WHEN ADDITIONAL MECHANICAL COOLING IS REQUIRED TO MEET THE REMAINDER OF THE COOLING LOAD, AS REQUIRED IN SECTION 403.5.1 OF THE WSEC.
12. SIMULTANEOUS HEATING AND COOLING TO INDIVIDUAL ZONES SHALL BE PROHIBITED AS DESCRIBED IN THE TEMPERATURE CONTROL SEQUENCES EXCEPT WHERE PERMITTED IN SECTION C403.4.1, EXCEPTIONS 1 THROUGH 3 OF THE WSEC.
13. MOTOR EFFICIENCY SHALL NOT BE LESS THAN THE MINIMUM CALLOUTS PER SECTION C405.8 OF THE WSEC FOR FULL LOAD EFFICIENCIES.
14. HVAC SYSTEMS SHALL BE BALANCED AS REQUIRED BY SECTION C408.2 OF THE WSEC.
15. OPERATION AND MAINTENANCE MANUALS SHALL BE PROVIDED TO THE OWNER AS REQUIRED BY SECTION C103.6.2 OF THE WSEC. AS A MINIMUM, THE MANUALS SHALL INCLUDE:
A. SUBMITTAL DATA.
B. OPERATION AND MAINTENANCE DATA FOR EQUIPMENT.
C. HAZARD AND EMERGENCY PROCEDURES.
D. HVAC CONTROL SYSTEM MAINTENANCE AND CALIBRATION INFORMATION.
16. THE MECHANICAL SYSTEM SHALL COMPLY WITH ALL THE REQUIREMENTS OF SECTION C403.6 "DEDICATED OUTDOOR AIR SYSTEMS (DOAS)" OF THE WSEC.
17. IF NOT SPECIFICALLY STATED ABOVE, CONTRACTOR SHALL COMPLY WITH THE WSEC ITEMS THAT DO APPLY TO THIS PROJECT.

APPLICABLE CODES

- 2018 INTERNATIONAL BUILDING CODE W/ WA STATE AMENDMENTS
2018 INTERNATIONAL MECHANICAL CODE W/ WA STATE AMENDMENTS
2018 WA STATE ENERGY CODE
2018 UNIFORM PLUMBING CODE

GENERAL HVAC NOTES (CONT.)

- 12. LOCATED ACCESS DOORS IN DUCTWORK TO PROVIDE ACCESS FOR ALL VOLUME DAMPERS AND OTHER ITEMS PROVIDED IN THE DUCTWORK WHICH REQUIRE SERVICE AND/OR INSPECTION.
13. ALL DUCTS SHALL BE GROUNDED ACROSS FLEXIBLE CONNECTIONS WITH FLEXIBLE COPPER GROUNDING STRIPS SHALL BE BOLTED OR SOLDERED TO BOTH THE EQUIPMENT AND THE DUCT.
14. ALL OSA RELIEF/EXHAUST AIR, AND RETURN AIR DAMPERS SHALL BE MOTORIZED CONTROL AND SHALL HAVE A MAX LEAKAGE OF 4CFM/FT² @ 1.0" WG IN ACCORDANCE W/ AMCA 5000-ACCEPTABLE ACCESS PROVISIONS FOR REMOVAL OF FILTER AND MAINTENANCE FOR ALL INDOOR UNITS.
15. ALL AIR DISTRIBUTION SUPPLY OUTLETS AND RETURN/EXHAUST INLETS SHALL HAVE VOLUME CONTROL DEVICES.
16. ALL 90 DEGREE TRUNK DUCT ELBOWS SHALL BE SMOOTH-ROUND OR SQUARE WITH TURNING VANES.
17. CONTRACTOR SHALL LOCATE AND COORDINATE EXACT LOCATION OF DUCTWORK WITHIN THE STRUCTURE AT SITE.
18. ALL FAN SYSTEMS WITH OVER 2000 CFM SHALL HAVE SMOKE/DOCT DETECTORS TO SHUT-DOWN FAN UPON DETECTION. DUCT/SMOKE DETECTORS FURNISHED AND INSTALLED BY ELECTRICAL AND WIRED BY ELECTRICAL. DUCT/SMOKE DETECTORS SHALL BE LISTED BY AN APPROVED AGENCY AND FOR INSTALLATION IN AIR DUCTS PER IMC.
19. ALL DUCT PENETRATIONS THROUGH RATED ENCLOSURES SHALL BE FIRE DAMPERED AND/OR SMOKE DAMPERED AS REQUIRED.
20. ALL MECHANICAL HEATING AND VENTILATION EQUIPMENT SHALL CONFORM TO SMACNA, LOCAL AND STATE REGULATIONS FOR SEISMIC RESTRAINT (INCLUDING PIPING AND DUCTWORK). COORDINATE WITH STRUCTURAL.
21. ALL RECTANGULAR DUCTWORK SIZES SHOWN ARE INSIDE CLEAR DIMENSIONS. SUPPLY AND RETURN DUCTWORK FOR HVAC TO HAVE 1" SOUNDING FOR THE FIRST 10 FEET FROM UNIT DISCHARGE OUTLET. ALL DUCT UNITS TO MEET AND EXCEED WILD, HUMIDITY, EROSION, RESISTANT, ETC. TO MEET IMC CHAPTER 6. ALL DUCTWORK TO BE CLASS 1 AIR DUCTS. CLASS-II DUCTS SHALL NOT BE USED.
22. PROVIDE COMPLETE REFRIGERATION PIPING, INSULATION AND CONTROLS TO ALL MECHANICAL REFRIGERANT EQUIPMENT.



SUDEN VALLEY RECREATIONAL CENTER VENTILATION & HVAC REPLACEMENT 4 CLUBHOUSE CIR BELLINGHAM, WA 98229

Table with 3 columns: NO, DATE, BY, DESCRIPTION, PERMIT SET. Row 1: 04/20/23, RR, PERMIT SET.

LEGENDS AND NOTES

Table with 2 columns: DESIGNED, DRAWN, CHECKED, DATE, CADD FILE, JOB NUMBER. Values: RR, RR, RR, 8/29/2023, 2022.37 MO.0.DWG, 2022.37

MO.0

BID SET 8-29-2023











REVISIONS			
NO.	DATE	BY	DESCRIPTION
-	04/20/23	RR	PERMIT SET

TITLE

**SCHEDULES**

DESIGNED	RR
DRAWN	RR
CHECKED	RR
DATE	8/29/2023
CADD FILE	2022.37 M1.0.DWG
JOB NUMBER	2022.37

DUCT AND PLENUM FUNCTION	FROM BUILDING EXTERIOR TO EXTERIOR TO SHUT-OFF DAMPER OR HEATING OR COOLING EQUIPMENT	DUCT SERVING INDIVIDUAL SUPPLY AIR UNITS WITH LESS THAN 2,800 CFM OR TOTAL SUPPLY AIR CAPACITY	UNHEATED ROOMS WITH EQUIPMENT COMBUSTION AIR LOUVERS, PROVIDED THEY ARE ISOLATED FROM CONDITIONED SPACE AT SIDES, TOP, AND BOTTOM OF THE ROOM WITH R-11 NOMINAL INSULATION	WHERE LOCATED WITHIN A BUILDING ENVELOPE ASSEMBLY, THE DUCT OR PLENUM SHALL BE SEPARATED FROM THE BUILDING EXTERIOR OR UNCONDITIONED SPACES BY A MINIMUM INSULATION VALUE OF:	WHERE LOCATED IN UNCONDITIONED SPACES	LOCATED OUTSIDE THE BUILDING IN CLIMATE ZONE 4	LOCATED OUTSIDE THE BUILDING IN CLIMATE ZONE 5	WHERE LOCATED WITHIN THE BUILDING ENVELOPE ASSEMBLY	WHERE LOCATED WITHIN CONDITIONED SPACE AND CONVERTING AIR AT TEMPERATURES LESS THAN 55 DEG. F OR GREATER THAN 105 DEG. F	WHERE LOCATED WITHIN EQUIPMENT	WHERE THE DESIGN TEMPERATURE DIFFERENCE BETWEEN THE INTERIOR AND EXTERIOR OF THE DUCT OR PLENUM DOES NOT EXCEED 15 DEG. F
OUTSIDE AIR	PER WSEC C402.1.4 FOR FRAMED METAL WALL	R-7	NONE REQUIRED	NA	NA	NA	NA	NA	NA	NA	NA
SUPPLY AIR	NA	NA	NA	PER WSEC C402.1.4 FOR FRAMED METAL WALL	R-7	R-8	R-12	PER WSEC C402.1.3 FOR EXTERIOR WALL	R-3-3	NONE REQUIRED	NONE REQUIRED
RETURN AIR	NA	NA	NA	PER WSEC C402.1.4 FOR FRAMED METAL WALL	R-7	R-8	R-12	PER WSEC C402.1.3 FOR EXTERIOR WALL	R-3-3	NONE REQUIRED	NONE REQUIRED

TAG	MANUFACTURER	MODEL	SERVES	TYPE	EXCHANGE EFFICIENCY (%) TOTAL	SUPPLY CFM	EXTERNAL SP (IN.W.C.)	UNIT POWER	VOLT/PHASE	MCA (AMPS)	MOCP (AMPS)	WEIGHT	DIMENSIONS (HxWxD INCHES)	NOTES
ERV-1	CONSERV	N4XH	MAIN FLOOR	CORE	67.40%	3000	1	7.4 KW	208/3	25	30	780	34"x80"x60"	1,2,3,4,5,6,7

- NOTES:  
1. POWER WIRING, CONDUIT AND DISCONNECT BY E.C.  
2. WITH (A) C750A CORES.  
3. FLOW ARRANGEMENT IS 100% OUTSIDE AIR.  
4. CONTROL WITH OCCUPANCY SCHEDULE.  
5. PROVIDE WITH 15 KW ELECTRIC DUCT HEATER, SET AT 70 DEGREE F.  
6. MOUNT ON FLOOR.  
7. PROVIDE MAINTENANCE ACCESS TO EQUIPMENT PER MANUFACTURER'S RECOMMENDATIONS.

ROOM ID	AREA (FT2) (AZ)	OCCUP. LOAD (#P/1000 FT2)	FIXTURES	OCCUPANTS (# PEOPLE)	CFM/FIXT CFM/P (RP)	CFM/FT2 (RA)	BREATHING ZONE OSA (VBZ)	OUTSIDE AIR REQ'D	
								ZONE EFFECT. (EZ)	ZONE OSA (VOZ)
MAIN FLOOR	6100	100	0	400	5	0.06	2366	0.8	2958
									SUPPLY AIRFLOW (PPZ) 3000
									EXHAUST AIRFLOW AIR SYSTEM 3000
									ERV-1

TAG	MANUF	SERVES	CFM	HEAT (KW)	VOLTAGE	PHASE	STAGES	CONTROL VOLTAGE	DIMENSIONS (WxL)	WEIGHT (LBS)	NOTES
EDH-1	BRASCH	ERV-1	3000	15	208	3	1	24	34"x14"	100	1,2,3,4,5

- NOTES:  
1. POWER WIRING, CONDUIT AND DISCONNECT BY E.C.  
2. INTERLOCK WITH ERV-1.  
3. SELECT MODEL FOR INDOOR USE.  
4. PROVIDE ACCESS PER CODE AND INSTALL PER MANUFACTURER'S GUIDELINES.  
5. PROVIDE W/ DUCT MOUNTED T-STAT, SET FOR 70 DEGREES F.



**SUDDEN VALLEY**  
**RECREATIONAL CENTER**  
**HVAC EQUIPMENT REPLACEMENT**  
**4 CLUBHOUSE CIR**  
**BELLINGHAM, WA 98229**

REVISIONS			
NO.	DATE	BY	DESCRIPTION
-	-	+	PERMIT SET

**SCHEDULES**

DESIGNED	RR
DRAWN	RR
CHECKED	RR
DATE	8/29/2023
CADD FILE	2023.14 M1.0.DWG
JOB NUMBER	2023.14

**M1.0B**

**BID SET 8-29-2023**

EXIST GAS FURNACE (FC) SCHEDULE																		
TAG	BUILDING	MANUF.	MODEL	CFM	MIN. O.A. (CFM)	INPUT (MBH)	OUTPUT (MBH)	(AFUE)	COOLING COIL	CLG COIL MANUF	CLG COIL MODEL	CORRESPONDING COND UNIT	MOTOR (HP)	VOLTY/PHASE	MCA	ARRANGEMENT	WEIGHT (LBS)	NOTES
GF-1	ATTIC	CARRIER	58MBC100-20	2000	-	100	93	93%	YES	CARRIER	CNPHP4821ACA	CU-1	3/4	120/1	14.8	HORIZONTAL	-	1
GF-2	CAFÉ	TRANE	TUD2C100A	2000	-	100	80	80%	YES	CARRIER	CNPPV4821ACA	CU-2	1/2	120/1	0.87 FLA	VERTICAL	-	1
GF-3	GYM	CARRIER	58MBC100-20	2000	-	100	93	93%	YES	CARRIER	CNPPV4821ACA	CU-3	3/4	120/1	14.8	VERTICAL	-	1
GF-4	LOCKER ROOM	PAYNE	PG9MAB048080	1600	-	80	74	92%	NO	-	-	-	1/2	120/1	-	VERTICAL	-	-

- NOTES:
- WITH COOLING COILS.

EXISTING CONDENSING UNIT SCHEDULE															
TAG	SERVES	LOCATION	MANUF.	MODEL	CAPACITY COOL (BTUH)	VOLTY	PHASE	ELECTRICAL PHASE	MCA	BREAKER	EER (SEER)	WEIGHT	SOUND POWER (dBA)	DIMENSIONS (H"xW"xD")	NOTES
CU-1	GF-1	ROOF	CARRIER	24ACA348A300	48,000	208	1	26.2	40	40	(13)	156	74	30"x32"x32"	1.2
CU-2	GF-2	ROOF	CARRIER	24ACA348A300	48,000	208	1	26.2	40	40	(13)	156	74	30"x32"x32"	1.2
CU-3	GF-3	POOLSIDE	CARRIER	24ACA348A300	48,000	208	1	26.2	40	40	(13)	156	74	30"x32"x32"	1.2

- NOTES:
- POWER WIRING, CONDUIT AND DISCONNECT BY E.C.
  - WITH R-410A REFRIGERANT.

NEW GAS FURNACE (GF) SCHEDULE																		
TAG	BUILDING	MANUF.	MODEL	INPUT (MBH)	OUTPUT (MBH)	AFUE	CFM	MIN. O.A. (CFM)	ESP	MOTOR (HP)	VOLTY/PHASE	MCA	MOCP	COOLING COIL	CORRESPONDING COND UNIT	ARRANGEMENT	WEIGHT (LBS)	NOTES
GF-1	ATTIC	TRANE	S9X1C100	100	97.4	95%	2000	-	0.5"	1	120/1	13.3	15	YES	CU-1	HORIZONTAL	145	1.2,3,4
GF-2	CAFÉ	TRANE	S8X1C100	100	80	80%	2000	-	0.5"	1	120/1	14.1	15	YES	CU-2	VERTICAL	145	1.2,3,4
GF-3	GYM	TRANE	S9X1C100	100	97.4	95%	2000	-	0.5"	1	120/1	13.3	15	YES	CU-3	VERTICAL	145	1.2,3,4
GF-4	LOCKER ROOM	TRANE	S9X1B080	80	77.6	96%	1600	-	0.5"	3/4	120/1	10.3	15	NO	-	VERTICAL	127	1.2

- NOTES:
- POWER WIRING, CONDUIT AND DISCONNECT BY E.C.
  - WITH PROGRAMMABLE 7-DAY THERMOSTAT.
  - WITH COOLING COILS.
  - FIELD ROUTE CONDENSATE TO NEAREST APPROVED DRAIN.

NEW HEAT PUMP UNIT SCHEDULE																
TAG	SERVES	LOCATION	MANUF.	MODEL	CAPACITY COOL (BTUH)	VOLTY	PHASE	ELECTRICAL PHASE	MCA	BREAKER	SEER	(HSPF)	WEIGHT	SOUND POWER (dBA)	DIMENSIONS (H"xW"xD")	NOTES
CU-1	GF-1	ROOF	TRANE	4TWR4048N1000A	48,000	208	1	26	40	40	(14)	(8.2)	250	72	47"x34"x37"	1.2,3
CU-2	GF-2	ROOF	TRANE	4TWR4048N1000A	48,000	208	1	26	40	40	(14)	(8.2)	250	72	47"x34"x37"	1.2,3
CU-3	GF-3	POOLSIDE	TRANE	4TWR4048N1000A	48,000	208	1	26	40	40	(14)	(8.2)	250	72	47"x34"x37"	1.2,3

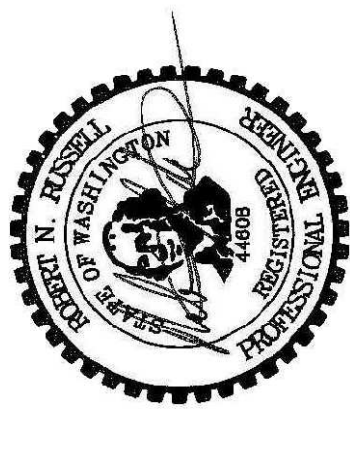
- NOTES:
- POWER WIRING, CONDUIT AND DISCONNECT BY E.C.
  - WITH R-410A REFRIGERANT.
  - PROVIDE WITH DX COILS TO MEET EFFICIENCY LISTED

EXIST UNIT HEATER (UH) SCHEDULE															
TAG	BUILDING	MANUF.	MODEL	INPUT (MBH)	OUTPUT (MBH)	AFUE	CFM	MIN. O.A. (CFM)	ESP	MOTOR (HP)	VOLTY/PHASE	MCA	MOCP	WEIGHT (LBS)	NOTES
UH-1	2ND FLOOR AREA	REZNOR	F75-E-3	75	60	80%	-	-	-	-	120/1	2	15	88	1.2
UH-2	2ND FLOOR AREA	REZNOR	F75-E-3	75	60	80%	-	-	-	-	120/1	2	15	88	1.2
UH-3	2ND FLOOR AREA	REZNOR	F75-E-3	75	60	80%	-	-	-	-	120/1	2	15	88	1.2
UH-4	2ND FLOOR AREA	REZNOR	F75-E-3	75	60	80%	-	-	-	-	120/1	2	15	88	1.2

- NOTES:
- POWER WIRING, CONDUIT AND DISCONNECT BY E.C.
  - WITH PROGRAMMABLE 7-DAY THERMOSTAT.

NEW GAS-FIRED UNIT HEATER (UH) SCHEDULE															
TAG	BUILDING	MANUF.	MODEL	INPUT (MBH)	OUTPUT (MBH)	AFUE	CFM	MIN. O.A. (CFM)	ESP	MOTOR (HP)	VOLTY/PHASE	MCA	MOCP	WEIGHT (LBS)	NOTES
UH-1	2ND FLOOR AREA	REZNOR	UDX-75	75	62.25	83%	960	-	-	0.06	120/1	3.7	15	76	1.2,3
UH-2	2ND FLOOR AREA	REZNOR	UDX-75	75	62.25	83%	960	-	-	0.06	120/1	3.7	15	76	1.2,3
UH-3	2ND FLOOR AREA	REZNOR	UDX-75	75	62.25	83%	960	-	-	0.06	120/1	3.7	15	76	1.2,3
UH-4	2ND FLOOR AREA	REZNOR	UDX-75	75	62.25	83%	960	-	-	0.06	120/1	3.7	15	76	1.2,3

- NOTES:
- POWER WIRING, CONDUIT AND DISCONNECT BY E.C.
  - WITH PROGRAMMABLE 7-DAY THERMOSTAT.
  - CONNECT TO EXISTING 4" FLUE, OR REPLACE WITH NEW FLUE AS NEEDED.



SUDDEN VALLEY  
RECREATIONAL CENTER  
VENTILATION & HVAC REPLACEMENT  
4 CLUBHOUSE CIR  
BELLINGHAM, WA 98229

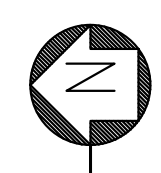
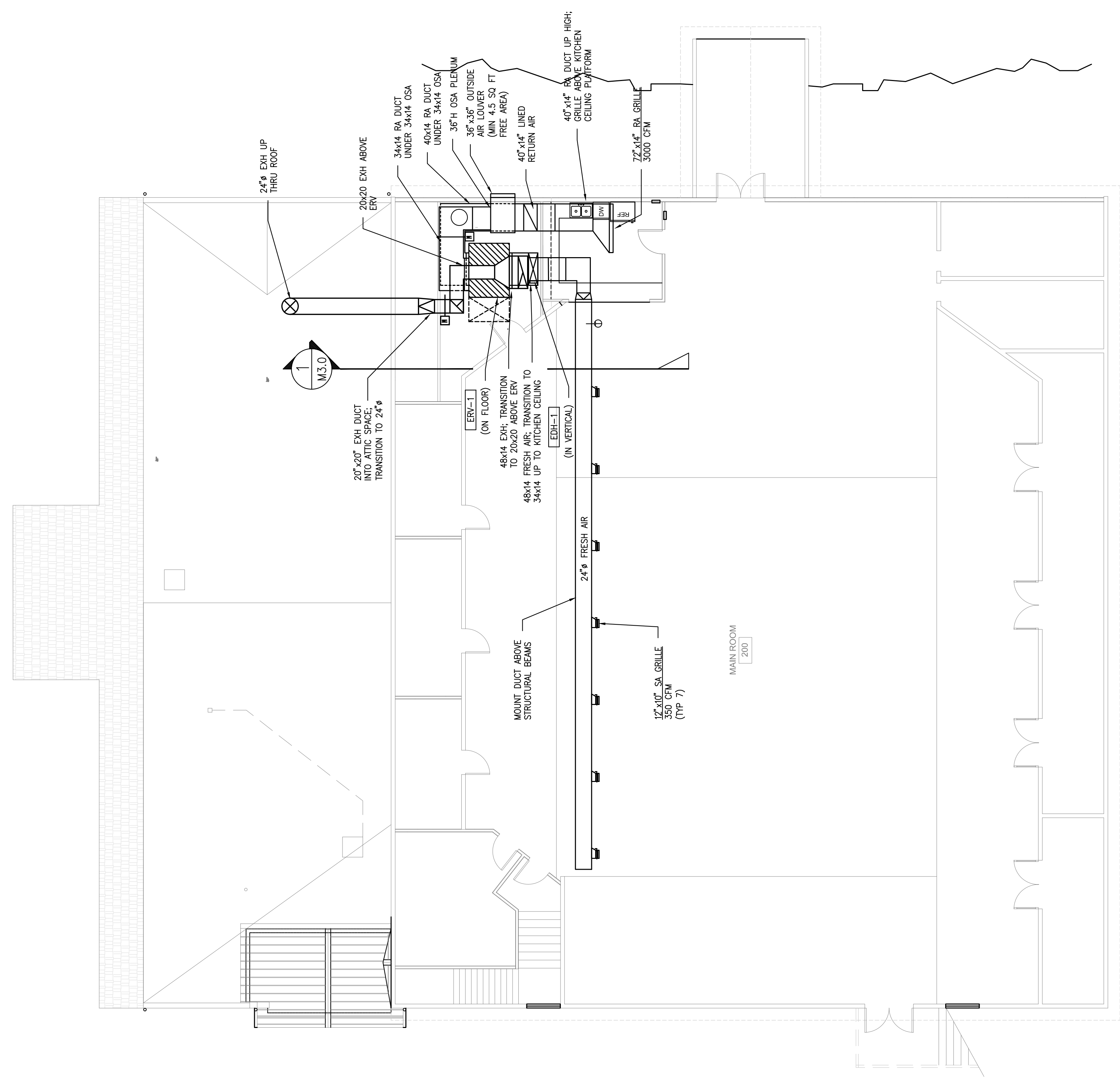
NO.	DATE	BY	DESCRIPTION
-	04/2023	RR	PERMIT SET

**HVAC FLOOR  
PLAN**

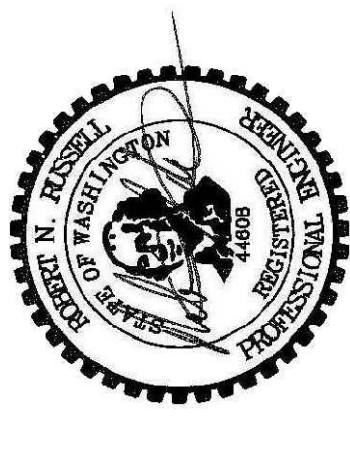
DESIGNED	RR
DRAWN	RR
CHECKED	RR
DATE	8/29/2023
CADD FILE	2022.37 M2.0.DWG
JOB NUMBER	2022.37

**M2.0A**

BID SET 8-29-2023



HVAC FLOOR PLAN  
SCALE: 1/8" = 1'-0"



SUDDEN VALLEY  
RECREATIONAL CENTER  
4 CLUBHOUSE CIR  
BELLINGHAM, WA 98229

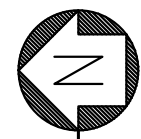
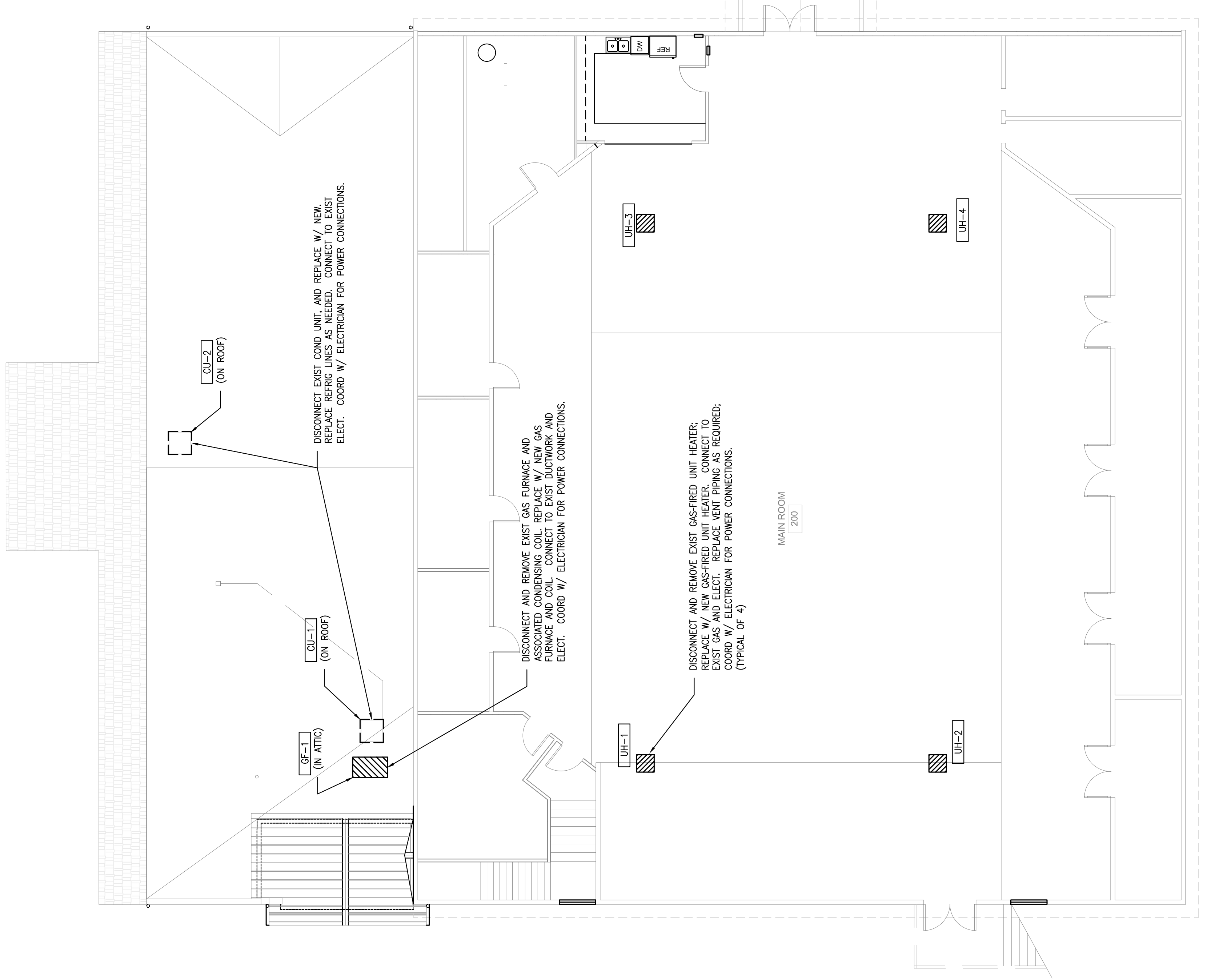
REVISIONS			
NO.	DATE	BY	DESCRIPTION
-	-	++	PERMIT SET.

**HVAC FLOOR  
PLANS**

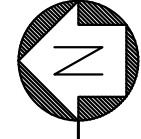
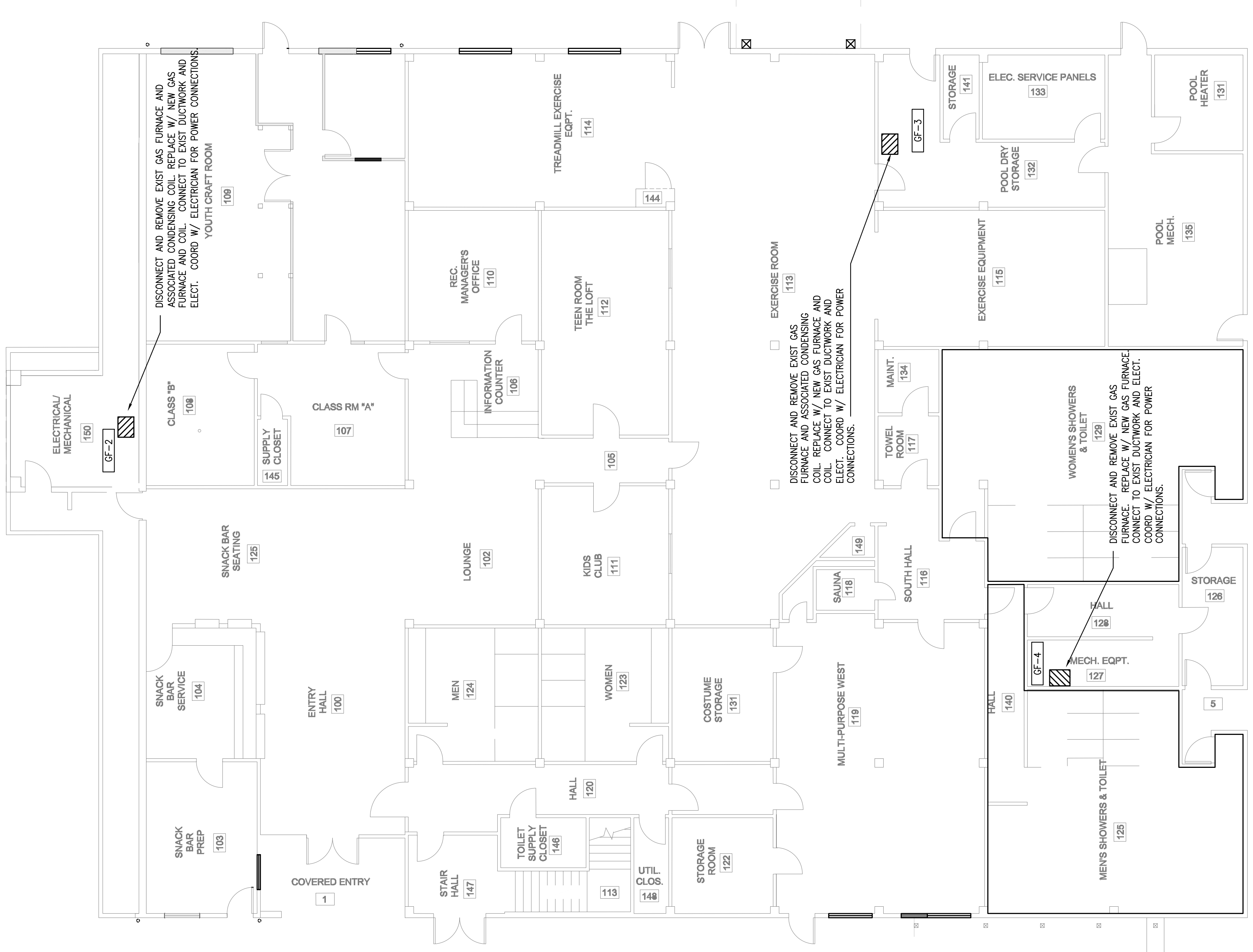
DESIGNED	RR
DRAWN	RR
CHECKED	RR
DATE	8/29/2023
CADD FILE	2023.14 M2.0.DWG
JOB NUMBER	2023.14

**M2.0B**

BID SET 8-29-2023



UPPER FLOOR HVAC PLAN  
SCALE: 1/8"=1'-0"



LOWER FLOOR HVAC PLAN  
SCALE: 1/8"=1'-0"



**SUDDEN VALLEY  
RECREATIONAL CENTER  
VENTILATION & HVAC REPLACEMENT  
4 CLUBHOUSE CIR  
BELLINGHAM, WA 98229**

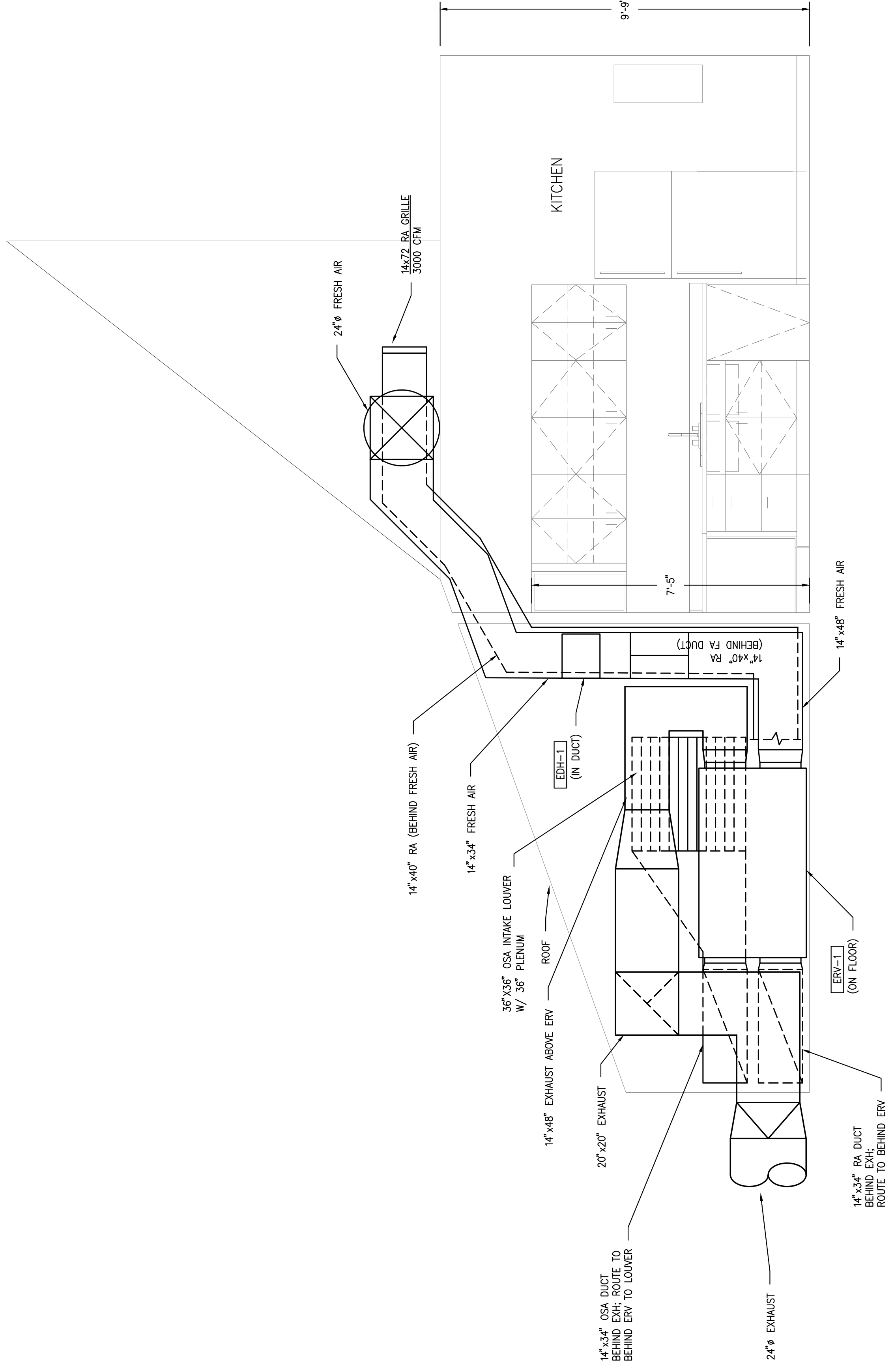
REVISIONS NO.	DATE	BY	DESCRIPTION
-	04/20/23	RR	PERMIT SET

**BID SET 8-29-2023**

**HVAC SECTION**

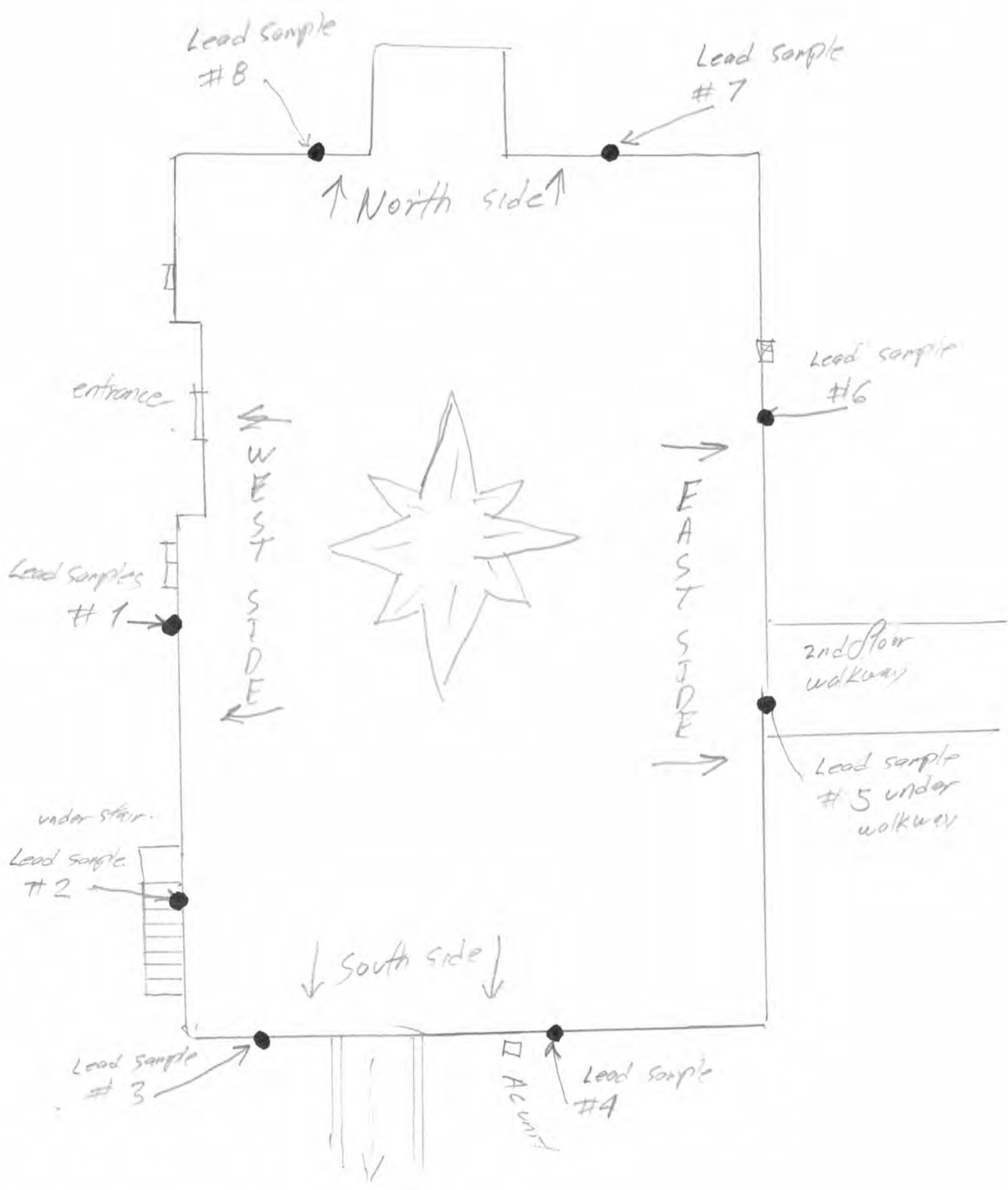
DESIGNED	RR
DRAWN	RR
CHECKED	RR
DATE	8/29/2023
CADD FILE	2022.37 M3.0.DWG
JOB NUMBER	2022.37

**M3.0**



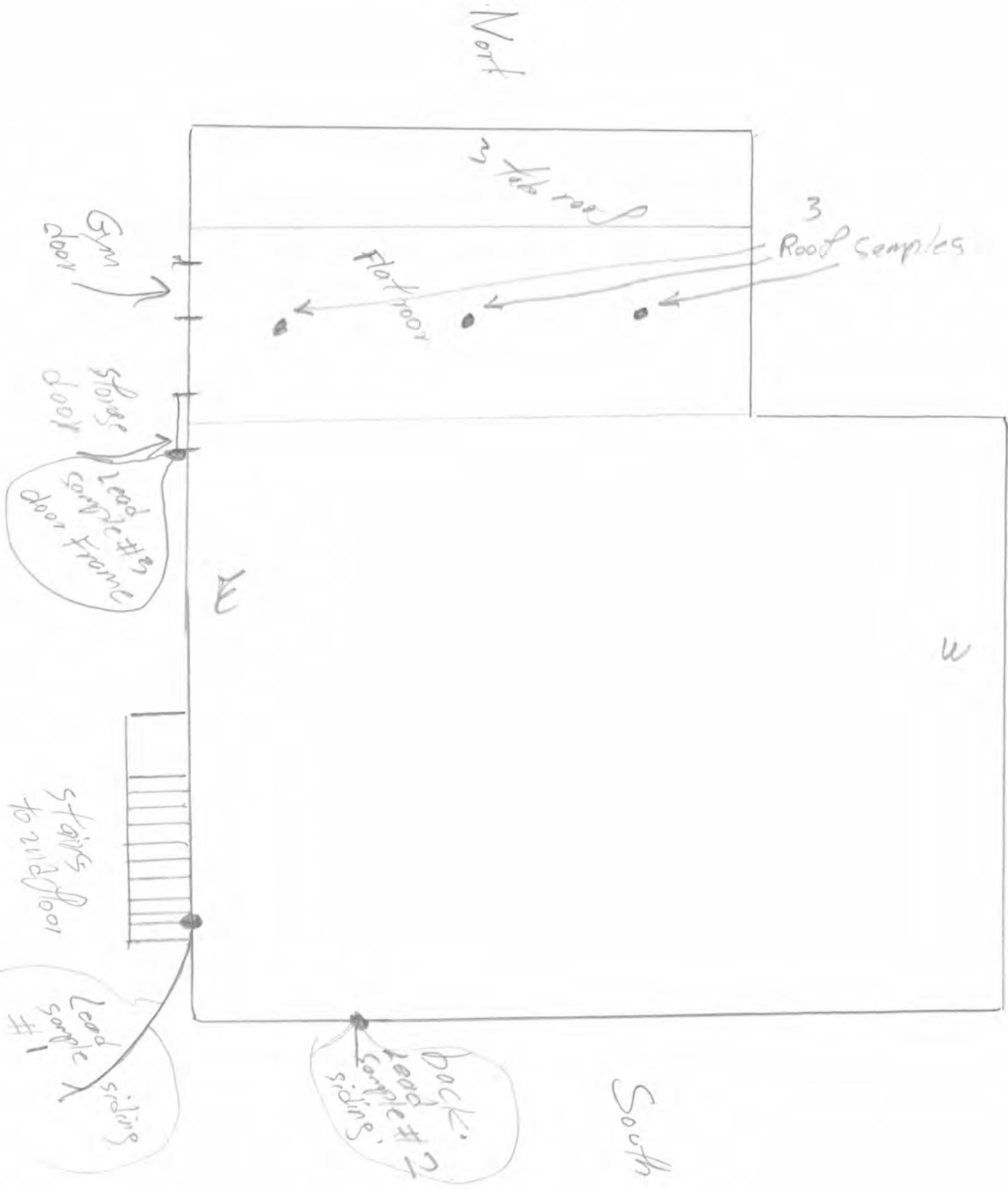
**HVAC SECTION**  
SCALE: 1/2" = 1'-0"

# ⊙ Barnview Samples 2nd time.





# 6 samples first time



# Certificate of Completion

This is to certify that

**Alfonso Mazcorro**

has satisfactorily completed  
4 hours of online refresher training as an

**AHERA Building Inspector**

to comply with the training requirements of

**TSCA Title II, 40 CFR 763 (AHERA)**

EPA Provider # 1085

188091  
Certificate Number



Instructor: Andre Zwanenburg

- Facilities
- Environmental
- Geotechnical
- Material

**Terracon**  
Explore with us

Mar 1, 2023 Expires in 1 year.

Date(s) of Training

Exam Score: N/A  
(if applicable)

August 28, 2023

Catherine Marquez

**Environmental Abatement Svcs, Inc.**

P.O.Box 2503

Mt. Vernon, WA 98273



**NVL Batch # 2313609.00**

**RE: Total Metal Analysis**  
**Method: EPA 7000B Lead by FAA <paint>**  
**Item Code: FAA-02**

Client Project: N-A

Location: 8 Barnview Ct. Sudden Valley

Dear Ms. Marquez,

NVL Labs received 8 sample(s) for the said project on 8/25/2023. Preparation of these samples was conducted following protocol outlined in EPA 3051/7000B, unless stated otherwise. Analysis of these samples was performed using analytical instruments in accordance with EPA 7000B Lead by FAA <paint>. The results are usually expressed in mg/Kg and percentage (%). Test results are not blank corrected.

For recent regulation updates pertaining to current regulatory levels or permissible exposure levels, please call your local regulatory agencies for more detail.

At NVL Labs all analyses are performed under strict guidelines of the Quality Assurance Program. This report is considered highly confidential and will not be released without your approval. Samples are archived after two weeks from the analysis date. Please feel free to contact us at 206-547-0100, in case you have any questions or concerns.

Sincerely,

A handwritten signature in black ink, appearing to read "Shalini Patel".

Shalini Patel, Manager Metals Lab

Enc.: Sample results



Phone: 206 547.0100 | Fax: 206 634.1936 | Toll Free: 1.888.NVL.LABS (685.5227)  
4708 Aurora Avenue North | Seattle, WA 98103-6516

# Analysis Report

## Total Lead (Pb)

Client: Environmental Abatement Svcs, Inc.  
Address: P.O.Box 2503  
Mt. Vernon, WA 98273

Attention: Ms. Catherine Marquez  
Project Location: 8 Barnview Ct. Sudden Valley



# NVL

Batch #: 2313609.00

Matrix: Paint  
Method: EPA 3051/7000B  
Client Project #: N-A  
Date Received: 8/25/2023  
Samples Received: 8  
Samples Analyzed: 8

Lab ID	Client Sample #	Sample Weight (g)	RL in mg/Kg	Results in mg/Kg	Results in percent
23082902	AM82423-01	0.2022	49	130	0.013
23082903	AM82423-02	0.2068	48	220	0.022
23082904	AM82423-03	0.1818	55	< 55	<0.0055
23082905	AM82423-04	0.2053	49	900	0.090
23082906	AM82423-05	0.1897	53	310	0.031
23082907	AM82423-06	0.2052	49	200	0.020
23082908	AM82423-07	0.1832	55	< 55	<0.0055
23082909	AM82423-08	0.2079	48	< 48	<0.0048


Sampled by: Client

Analyzed by: Yasuyuki Hida

Reviewed by: Shalini Patel

Date Analyzed: 08/28/2023

Date Issued: 08/28/2023

  
Shalini Patel, Manager Metals Lab

RL = Reporting Limit

'<' = Below the reporting Limit

mg/ Kg =Milligrams per kilogram

Percent = Milligrams per kilogram / 10000

Note : Method QC results are acceptable unless stated otherwise.

Unless otherwise indicated, the condition of all samples was acceptable at time of receipt.

Bench Run No: 2023-0828-02

FAA-02

# LEAD LABORATORY SERVICES



# NVL

**Company** Environmental Abatement Svcs, Inc.

**NVL Batch Number** 2313609.00

**Address** P.O.Box 2503  
Mt. Vernon, WA 98273

**TAT** 2 Days **AH** No

**Rush TAT**

**Project Manager** Ms. Catherine Marquez

**Due Date** 8/29/2023 **Time** 8:00 AM

**Phone** (360) 755-1085

**Email** asbestoseas@aol.com

**Cell:** (360) 421-0806

**Fax** (360) 588-4180

**Project Name/Number:** N-A

**Project Location:** 8 Barnview Ct. Sudden Valley

**Subcategory** Flame AA (FAA)

**Item Code** FAA-02 EPA 7000B Lead by FAA <paint>

**Total Number of Samples** 8

**Rush Samples**

Lab ID	Sample ID	Description	A/R
1	23082902	AM82423-01	A
2	23082903	AM82423-02	A
3	23082904	AM82423-03	A
4	23082905	AM82423-04	A
5	23082906	AM82423-05	A
6	23082907	AM82423-06	A
7	23082908	AM82423-07	A
8	23082909	AM82423-08	A

	Print Name	Signature	Company	Date	Time
<b>Sampled by</b>	Client				
<b>Relinquished by</b>	Drop Box				

Office Use Only	Print Name	Signature	Company	Date	Time
<b>Received by</b>	Rachelle Miller		NVL	8/25/23	800
<b>Analyzed by</b>	Yasuyuki Hida		NVL	8/28/23	
<b>Results Called by</b>					
<input type="checkbox"/> <b>Faxed</b>	<input type="checkbox"/> <b>Emailed</b>				

**Special Instructions:**

Date: 8/25/2023  
Time: 7:48 AM  
Entered By: Rachelle Miller

206.547.0100 Emerg. Cell: 206.914.4646  
 206.634.1936 1.888.NVLLABS (685.5227)

Client Environmental Abatement Svcs. Inc.  
 Street P.O. Box 2503  
Mt. Vernon, WA 98273

NVL Batch Number \_\_\_\_\_

Client Job Number \_\_\_\_\_

Total Samples 8

Turn Around Time  1 Hr  6 Hrs  3 Days  10 Days  
 2 Hrs  1 Day  4 Days  
 4 Hrs  2 Days  5 Days

Please call for TAT less than 24 Hrs

Project Manager Ms. Catherine Marquez

Project Location 8 Barnview Ct. Sudden Valley

Email address asbestoseas@aol.com

Phone: (360) 755-1085 Fax: (360) 588-4180

Cell: (360) 421-0806

Asbestos Air  PCM (NIOSH 7400)  TEM (NIOSH 7402)  TEM (AHERA)  TEM (EPA Level II)  Other

Asbestos Bulk  PLM (EPA/600/R-93/116)  PLM (EPA Point Count)  PLM (EPA Gravimetry)  TEM BULK

Mold/Fungus  Mold Air  Mold Bulk  Rotometer Calibration

**METALS**  
 Total Metals  ICP  Cr 6  
 Det. Limit:  FAA (ppm)  ICP (ppm)  GFAA (ppl)  
 Matrix:  Air Filter  Drinking water  Dust/wipe (Area)  Soil  
 RCRA Metals:  Arsenic (As)  Barium (Ba)  Cadmium (Cd)  Chromium (Cr)  
 All 8  Lead (Pb)  Mercury (Hg)  Selenium (Se)  Silver (Ag)  
 Other Metals:  All 3  Copper (Cu)  Nickel (Ni)  Zinc (Zn)

Other Types of Analysis:  Fiberglass  Silica  Nuisance Dust  Respirable Dust  Other (Specify) \_\_\_\_\_

Condition of Package:  Good  Damaged (no spillage)  Severe damage (spillage)

Seq. #	Lab ID	Client Sample Number	Comments (e.g. Sample area, Sample Volume, etc)	A/R
1		AMB2423-01	west side of Bldg. next to storage door	
2		AMB2423-02	west side of Bldg. under stairs	
3		AMB2423-03	South side of Bldg. next to pool walkway	
4		AMB2423-04	South side of Building next to AC unit	
5		AMB2423-05	East side of Bldg under walk way indoor	
6		AMB2423-06	East side of Bldg. Next to windows Flat roof	
7		AMB2423-07	North side of Building E.	
8		AMB2423-08	North side of Building E.	
9				
10				
11				
12				
13				
14				
15				

	Print Below	Sign Below	Company	Date	Time
Sampled by	<u>Antonio Marzocco</u>	<u>[Signature]</u>	<u>E.A.S</u>	<u>8-24-23</u>	<u>2:00 pm</u>
Relinquished by	<u>Antonio Marzocco</u>	<u>[Signature]</u>	<u>E.A.S</u>	<u>8-24-23</u>	
Received by	<u>Rachelle Miller</u>	<u>[Signature]</u>	<u>NVL</u>	<u>8/25/23</u>	<u>800 DB</u>
Analyzed by					
Results Called by					
Results Faxed by					

Special Instructions: Unless requested in writing, all samples will be disposed of two (2) weeks after analysis.

August 15, 2023

Catherine Marquez

**Environmental Abatement Svcs, Inc.**

P.O.Box 2503

Mt. Vernon, WA 98273



**NVL Batch # 2312887.00**

**RE: Total Metal Analysis  
Method: EPA 7000B Lead by FAA <paint>  
Item Code: FAA-02**

Client Project: N-A

Location: 8 Barnview Court Sudden Valley

Dear Ms. Marquez,

NVL Labs received 3 sample(s) for the said project on 8/15/2023. Preparation of these samples was conducted following protocol outlined in EPA 3051/7000B, unless stated otherwise. Analysis of these samples was performed using analytical instruments in accordance with EPA 7000B Lead by FAA <paint>. The results are usually expressed in mg/Kg and percentage (%). Test results are not blank corrected.

For recent regulation updates pertaining to current regulatory levels or permissible exposure levels, please call your local regulatory agencies for more detail.

At NVL Labs all analyses are performed under strict guidelines of the Quality Assurance Program. This report is considered highly confidential and will not be released without your approval. Samples are archived after two weeks from the analysis date. Please feel free to contact us at 206-547-0100, in case you have any questions or concerns.

Sincerely,

A handwritten signature in black ink, appearing to read "Shalini Patel".

Shalini Patel, Manager Metals Lab

Enc.: Sample results



Phone: 206 547.0100 | Fax: 206 634.1936 | Toll Free: 1.888.NVL.LABS (685.5227)  
4708 Aurora Avenue North | Seattle, WA 98103-6516

# Analysis Report

## Total Lead (Pb)

Client: Environmental Abatement Svcs, Inc.  
Address: P.O.Box 2503  
Mt. Vernon, WA 98273

Attention: Ms. Catherine Marquez  
Project Location: 8 Barnview Court Sudden Valley



Batch #: 2312887.00

Matrix: Paint  
Method: EPA 3051/7000B  
Client Project #: N-A  
Date Received: 8/15/2023  
Samples Received: 3  
Samples Analyzed: 3

Lab ID	Client Sample #	Sample Weight (g)	RL in mg/Kg	Results in mg/Kg	Results in percent
23077930	AM81423-01	0.1974	51	380	0.038
23077931	AM81423-02	0.1914	52	< 52	<0.0052
23077932	AM81423-03	0.1929	52	< 52	<0.0052

Sampled by: Client

Analyzed by: Yasuyuki Hida

Reviewed by: Shalini Patel

Date Analyzed: 08/15/2023

Date Issued: 08/15/2023

  
Shalini Patel, Manager Metals Lab

RL = Reporting Limit

'<' = Below the reporting Limit

mg/ Kg =Milligrams per kilogram

Percent = Milligrams per kilogram / 10000

Note : Method QC results are acceptable unless stated otherwise.

Unless otherwise indicated, the condition of all samples was acceptable at time of receipt.

Bench Run No: 2023-0815-06

FAA-02



# LEAD LABORATORY SERVICES



# NVL

**Company** Environmental Abatement Svcs, Inc.  
**Address** P.O.Box 2503  
 Mt. Vernon, WA 98273  
**Project Manager** Ms. Catherine Marquez  
**Phone** (360) 755-1085  
**Cell:** (360) 421-0806

**NVL Batch Number** **2312887.00**  
**TAT** 2 Days **AH** No  
**Rush TAT**  
**Due Date** 8/17/2023 **Time** 8:00 AM  
**Email** asbestoseas@aol.com  
**Fax** (360) 588-4180

**Project Name/Number:** N-A **Project Location:** 8 Barnview Court Sudden Valley

**Subcategory** Flame AA (FAA)

**Item Code** FAA-02 EPA 7000B Lead by FAA <paint>

**Total Number of Samples** 3

**Rush Samples** \_\_\_\_\_

	Lab ID	Sample ID	Description	A/R
1	23077930	AM81423-01		A
2	23077931	AM81423-02		A
3	23077932	AM81423-03		A

	Print Name	Signature	Company	Date	Time
<b>Sampled by</b>	Client				
<b>Relinquished by</b>	Drop Box				
<b>Office Use Only</b>	<b>Print Name</b>	<b>Signature</b>	<b>Company</b>	<b>Date</b>	<b>Time</b>
<b>Received by</b>	Kelly AuVu		NVL	8/15/23	800
<b>Analyzed by</b>	Yasuyuki Hida		NVL	8/15/23	
<b>Results Called by</b>					
<input type="checkbox"/> <b>Faxed</b>	<input type="checkbox"/> <b>Emailed</b>				

**Special Instructions:**

Date: 8/15/2023  
 Time: 8:46 AM  
 Entered By: Kelly AuVu



## SEATTLE ASBESTOS TEST, LLC

Lynnwood Laboratory: 19701 Scriber Lake Road, Suite 103, Lynnwood, WA 98036, Tel: 425.673.9850, Fax: 425.673.9810, NVLAP Lab Code: 200768-0

[www.seattleasbestostest.com](http://www.seattleasbestostest.com), [admin@seattleasbestostest.com](mailto:admin@seattleasbestostest.com)

Project Manager: Alfonso Mazcorro  
Client: Environmental Abatement Services, Inc.  
Address: P. O. Box 2503, Mount Vernon, WA 98273  
Tel: 360.755.1085  
Date Report Issued: 8/14/2023

Date Analyzed: 8/14/2023  
Client Job#: N/A  
Project Location: 8 Barnview  
Laboratory batch#: 202212886  
Samples Received: 3

Enclosed please find the test results for the bulk samples submitted to our laboratory for asbestos analysis. Analysis was performed using polarized light microscopy (PLM) in accordance with Test Method US EPA - 40 CFR Appendix E of Part 763, Interim Method of Determination of Asbestos in Bulk Insulation Samples and Test Method US EPA/600/R-93/116.

Percentages for this report are done by visual estimate and relate to the suggested acceptable error ranges by the method. Since variation in data increases as the quantity of asbestos decreases toward the limit of detection, the EPA recommends point counting for samples containing between <1% and 10% asbestos (NESHAP, 40 CFR Part 61). Statistically, point counting is a more accurate method. If you feel a point count might be beneficial, please feel free to call and request one.

The test results refer only to the samples or items submitted and tested. The accuracy with which these samples represent the actual materials is totally dependent on the acuity of the person who took the samples. This report must not be used by the client to claim product certification, approval, or endorsement by Seattle Asbestos Test, LLC, NVLAP, NIST, or any agency of the Federal government. The test report or calibration certificate shall not be reproduced except in full, without written approval of the laboratory. If the sample is inhomogeneous the sub-samples of the components are analyzed separately as layers. This report in its entirety consists of this cover letter, the customer sampling COC or data sheet, and the analytical report which is page numbered.

This report is highly confidential and will not be released without your consent. Samples are archived for 30 days after the analysis, and disposed of as hazardous waste thereafter.

Thank you for using our service and let us know if we can further assist you.

Sincerely

*SZhang*

Steve (Fanyao) Zhang  
Approved Signatory

# Certificate of Completion

This is to certify that

**Alfonso Mazcorro**

has satisfactorily completed  
4 hours of online refresher training as an  
**AHERA Building Inspector**  
to comply with the training requirements of  
**TSCA Title II, 40 CFR 763 (AHERA)**  
EPA Provider # 1085

188091  
Certificate Number



Instructor: Andre Zwanenburg

Mar 1, 2023 Expires in 1 year.

Date(s) of Training

Exam Score: N/A  
(if applicable)

- Facilities
- Environmental
- Geotechnical
- Material

**ferracon**  
Explore with us

# SEATTLE ASBESTOS TEST

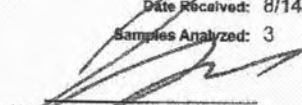
Lynnwood Laboratory: 19701 Scriber Lake Road, Suite 103, Lynnwood, WA 98036, Tel: 425.673.9850, Fax: 425.673.9810, NVLAP Lab Code: 200765-0


Disclaimer: This report must not be used by the client to claim product certification, approval, or endorsement by Seattle Asbestos Test, LLC, NVLAP, NIST, or any agency of the Federal government.

## ANALYTICAL LABORATORY REPORT

[PLM] EPA - 40 CFR Appendix E to Subpart E of Part 763, Interim Method of the Determination of Asbestos in Bulk Insulation Samples;  
 [PLM] EPA 600/R-93/116: Method for the Determination of Asbestos in Bulk Building Materials

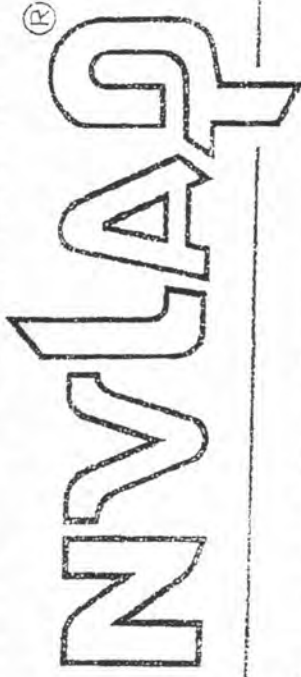
Attn.: Alfonso Mazcorro      Client: Environmental Abatement Services, Inc.      Address: P. O. Box 2503, Mount Vernon, WA 98273  
 Job#: N/A      Batch#: 202212886      Date Received: 8/14/2023  
 Samples Rec'd: 3      Date Analyzed: 8/14/2023      Samples Analyzed: 3  
 Project Loc.: 8 Barnview

Analyzed by:  Steve (Fanyao) Zhang

Approved Signatory:  Steve (Fanyao) Zhang, President

Lab ID	Client Sample ID	Layer	Description	%	Asbestos Fibers	Non-fibrous Components	%	Non-asbestos Fibers
1	AM81423-01	1	White/black soft/elastic material with woven fibrous material		None detected	Binder, Filler	20	Synthetic fibers
		2	Clear mastic		None detected	Mastic/binder	4	Cellulose
		3	White chalky material with paper		None detected	Binder/filler, Gypsum/binder	24	Cellulose, Glass fibers
2	AM81423-02	1	White/black soft/elastic material with woven fibrous material		None detected	Binder, Filler	19	Synthetic fibers
		2	Clear mastic		None detected	Mastic/binder	3	Cellulose
		3	White chalky material with paper		None detected	Binder/filler, Gypsum/binder	26	Cellulose, Glass fibers
3	AM81423-03	1	White/black soft/elastic material with woven fibrous material		None detected	Binder, Filler	18	Synthetic fibers
		2	Clear mastic		None detected	Mastic/binder	3	Cellulose
		3	White chalky material with paper		None detected	Binder/filler, Gypsum/binder	24	Cellulose, Glass fibers

United States Department of Commerce  
National Institute of Standards and Technology



---

# Certificate of Accreditation to ISO/IEC 17025:2017

---

NVLAP LAB CODE: 200768-0

**Seattle Asbestos Test, LLC**  
Lynnwood, WA

is accredited by the National Voluntary Laboratory Accreditation Program for specific services,  
listed on the Scope of Accreditation, for:

## **Asbestos Fiber Analysis**

*This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017.  
This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality  
management system (refer to joint ISO-ILAC-IAF Communiqué dated January 2009).*

---

2019-10-01 through 2020-09-30

Effective Dates



For the National Voluntary Laboratory Accreditation Program



**SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017**

**Seattle Asbestos Test, LLC**  
19701 Scriber Lake Road, Suite 103  
Lynnwood, WA 98036  
Mr. Fanyao (Steve) Zhang  
Phone: 425-673-9850 Fax: 425-673-9810  
Email: [admin@seattleasbestostest.com](mailto:admin@seattleasbestostest.com)  
<http://www.seattleasbestostest.com>

**ASBESTOS FIBER ANALYSIS**

**NVLAP LAB CODE 200768-0**

**Bulk Asbestos Analysis**

<u>Code</u>	<u>Description</u>
18/A01	EPA -- 40 CFR Appendix E to Subpart E of Part 763, Interim Method of the Determination of Asbestos in Bulk Insulation Samples
18/A03	EPA 600/R-93/116: Method for the Determination of Asbestos in Bulk Building Materials

*For the National Voluntary Laboratory Accreditation Program*



# Sudden Valley Community Association

360-734-6430

4 Clubhouse Circle Bellingham, WA 98229

www.suddenvalley.com

## CAPITAL REQUEST MEMO

**To:** Sudden Valley Community Association Board of Directors  
**From:** Mike Brock, Maintenance & Facilities Manager  
**Date:** November 2nd, 2023  
**Subject:** Capital Request/Contract Award - Barn 8 Gas Furnace Replacement, Project 9722.09

---

### Purpose

To request contract award for replacing four gas heating units located upstairs in Barn 8 (Dance Barn).

### Background

On October 11, 2023, Barron Heating inspected four gas heating units in the Dance Barn as part of their routine service contract. During inspection, they noted that all four heating units are at the end of their serviceable lifespan, and recommended replacement as soon as possible to ensure reliable service.

### Analysis

The four gas heaters identified are included in the approved Barn 8 renovation project that is scheduled for this spring. As part of the analysis for the renovation project, specifications were provided for replacing these heating units. With winter approaching, and the heaters at the end of their lifespan, it is prudent to replace these heaters prior to the start of the rest of the project. Quotes were solicited from four vendors using the specifications outlined. The four vendors contacted were Barron Heating, Marr's Heating, Lynden Sheet Metal, and Angar Mechanical. Two of the vendors, Barron Heating and Marr's Heating, had the capacity to quote the project within the timeframe given. Both vendors quoted installation of the same units and have similar workmanship warranties. Marr's Heating's quote of \$15,747.00 is the most competitive and is \$6,549.67 less than Barron Heating, making it the preferred option.

### Proposal

Approve contract award to Marr's Heating to replace four gas heating units in the Dance Barn as part of capital project 9722.09 in the amount of \$15,747.00.

### Motion 1

Move that the SVCA Board of Directors approve the allocation of \$15,747.00 from CRRRF to Capital Code 9722.09, and authorize the General Manager to execute the standard SVCA construction contract with Marr's Heating to replace four gas heating units in the Dance Barn.

### Board of Directors Approval

Approved: \_\_\_\_\_ Not Approved: \_\_\_\_\_





**BILL TO**

Mike Brock  
8 Barn View Drive  
Bellingham, WA 98229 USA

<b>ESTIMATE</b> 45769281	<b>ESTIMATE DATE</b> Oct 20, 2023
-----------------------------	--------------------------------------

**JOB ADDRESS**

Mike Brock  
8 Barn View Drive  
Bellingham, WA 98229 USA

**Job:** 45739329

**ESTIMATE DETAILS**

- Reznor UDX-75 Heating Units (Scope of work): -Removal of 4 gas overhead heating units
- Clean area thoroughly in preparation for new units
  - These systems come with swivel brackets to direct airflow to desired locations
  - Install seismic brackets for each unit
  - New flex gas lines will be installed for each unit
  - Sediment traps will be installed for each unit
  - Adjustment of gas pressure (3.5'WC to factory setting)
  - Install 26 gauge metal venting to ceiling
  - Line voltage electrical included in the estimate

\*Free Programmable Thermostat with These Units\*

TASK	DESCRIPTION	QTY
1	Reznor Model: UDX-75  -Heating BTUs: 75,000 -83% AFUE Efficiency -TCORE2 Titanium-Stabilized Aluminized Steel Heat Exchanger -Multi-Try Direct Spark Ignition with Time Lockout -Status-Indicating LED Lights -Low Noise Operation with Vibration-Isolated Fan Venter Motors -7-Segment Display Board for Simple Troubleshooting -Includes 3 Horizontal Louvers -Air Throw- 57ft. -Maximum CFM- 961cfm  Warrantee: 9 Year Heat Exchanger and Flue Collection Box Assembly; 4 Year All Electrical and	4.00

Mechanical Components  
Lifetime Workmanship Guarantee through Marrs Heating  
1 Free Year, Parts Labor

---

2	Basic permit city/county single unit	4.00
---	--------------------------------------	------

---

<b>POTENTIAL SAVINGS</b>	\$0.00
<b>SUB-TOTAL</b>	\$14,500.00
<b>TAX</b>	\$1,247.00
<b>TOTAL</b>	\$15,747.00
<b>EST. FINANCING</b>	\$207.86

Thank you for choosing Marr's Heating & Air Conditioning

**CUSTOMER AUTHORIZATION**

**Warranty:** All materials, parts and equipment are warranted by the manufacturers' or the suppliers' written certification only. Warranties listed above are guidelines, but the Manufacturer warranty certification is the only true way to know what warranty equipment and/or materials will carry. Equipment used in a commercial application for example will typically only have a 1 yr. warranty once the equipment is registered. All labor performed by Marr's Heating & Air Conditioning inc (Marr's) is warranted for a term of 1 year from the installation date. Marr's makes no other warranties, express or implied, and it's agents or technicians are not authorized to make such warranties on behalf of the Company. No warranty is expressed or implied on problems or comfort issues caused by existing equipment or materials, i.e. wires, pipes, ductwork, etc. The Marr's material and labor warranty does not cover damage to equipment caused by water, electrical power surges, abuse, neglect, misuse or acts of God.

**Registration:** New equipment must be registered by purchaser to obtain full manufacturer warranty. Marr's will try to assist you in registration, but registration and verification of registration is the responsibility of the purchaser

**Payments Options, Terms, & Financing:** Cash, Check, or Credit Card: Marr's Heating and Air Conditioning inc requires a 50% down payment, with final 50% payment due upon the day of installation. All accounts with an outstanding balance will be charged 2.0% monthly interest. All accounts with an outstanding balance after 30 days may be turned over to an outside collections agency and/or subject to other legal actions. Purchaser will be responsible for any and all legal or collection fees associated with an outstanding balance.

**Exclusions:** Carpentry, Cutting, patching, sheet-rock or painting is excluded from any and all work performed by Marr's Heating and Air Conditioning inc unless explicitly stated in the contract of services. Clearing the work area is the responsibility of the purchaser and shall be done before the installation. Unless explicitly included in the contract of services, any electrical circuit changes or modifications are not included.

**Comfort:** Marr's Heating and Air Conditioning inc does not express or imply that multi-story homes will be able to maintain a consistent temperature between floors without a Marr's prescribed addition of zoning in some capacity. Ductless heating and cooling systems are zonal by nature and Marr's does not express or imply that a ductless system in any capacity will be able to keep any rooms conditioned beyond the room in which the indoor unit is located. Marr's does not express or imply that air conditioning or heating systems will be able to maintain comfortable indoor temperatures in extreme temperatures, with extreme as defined by any temperature outside of the designated local ACCA design temperatures. Marr's does not express or imply that equipment which is sized for the future addition of air sealing or insulation upgrades will be able to maintain comfortable indoor temperatures. Marr's does not express or imply that the heating and cooling load calculation for equipment sizing is 100% accurate due to the amount of variability between structures, construction types, and climate variations.

**Equipment substitutions:** The equipment quoted meets 2022 efficiency standards. Marr's reserve the right to substitute equipment made for the new 2023 efficiency standards which may state a lower efficiency, but will in fact be of equal or greater efficiency (will deliver more heating or cooling per watt) than the equipment quoted.

**Hazardous Materials:** Asbestos and other hazardous materials, visible or unforeseen, which may be distributed during the proposed scope of work, shall be the sole responsibility of the customer.

**Contractor registration no.** MARRSHA070B7

**This offer is valid for a period of 7 Days. Marr's will make every effort to hold costs down. However, if upon delivery, the**

manufacturer has increased their price, then this additional increase will be reflected in the purchaser's final invoice.  
**PROPOSALS WITHOUT SITE VISIT:** Any proposal given without a site visit (i.e. preliminary quotes, sales events, home shows, etc.) is to be considered preliminary and is subject to pending site visit with a final design consultation and an updated contract of services.

**NOTICE OF INTENT TO FILE LABOR AND/OR MATERIAL LIEN: TO PURCHASER:** Please take note that Marr's Heating and Air Conditioning inc will furnish materials, and/or equipment in the amount and of the value set forth on the face hereof, and/or will furnish labor at the value set forth on the face hereof, which will be used to improve the real property set forth under LOCATION on the face hereof, and that a LIEN MAY BE CLAIMED FOR ALL MATERIALS, SUPPLIES, EQUIPMENT OR LABOR FURNISHED:

All work will be completed in a workman like manner according to standard Company practices. Any pre-existing or unforeseen electrical, ductwork or venting issues could result in a change order above and beyond the proposal price and will only be executed upon written orders by customer and Marr's representative.

**Cancellations:** If customer cancels the job, customer will be responsible for paying for expenses incurred by Marr's at the rate of \$150 per hr. for administration and/or labor plus the cost of any materials that are not recoverable i.e. special duct fabrication, special order equipment, permits, restock fees, etc.

Sign here

Date

---



5100 Pacific Hwy #103, Ferndale WA 98248 Phone (800) 328-7774 (360) 676-1131 <https://barronheating.com>

**BILL TO**

Sudden Valley Community Association  
4 Clubhouse Circle  
Bellingham, WA 98229 USA

<b>ESTIMATE</b> 182436738	<b>ESTIMATE DATE</b> Oct 23, 2023
------------------------------	--------------------------------------

**JOB ADDRESS**

Dance Barn / 8 Barnview Drive  
8 Barn View Drive  
Bellingham, WA 98229 USA

**Job:** 182434903

**ESTIMATE DETAILS**

Commercial Estimate (Commercial):

BARRON HEATING IS PLEASED TO PROVIDE THE FOLLOWING INSTALLATION:

- Four Reznor Unit Heaters UDX 75 82%-83% Efficiency, Model: REZ UDX 75
- Four T4 Pro Programmable Thermostats, TH4110U2005/U
- Gas Piping connection to new Reznor Heaters
- Venting modifications as required/roof vent cap as required/seismic strapping/hanging kit
- Scissor Lift Rental (2 days)
- Low volt permit
- Mechanical permit

**WORK NOT INCLUDED BY BARRON**

- Electrical work/Electrical permit by Others
- Any work regarding wall/building envelope/roofing work and sealing/exterior wall/alterations/patches/drywall patches/insulation/painting/ finish work/relocation of security cameras and signage changes if required
- Engineering of or installation for Economizer/DOAS/Outside Air System, if required by AHJ (Authority Having Jurisdiction)
- Mechanical Engineering Fees/Design (if required, can be obtained at additional cost)
- Electrical Engineering Fees/Design (if required, can be obtained at additional cost)
- Structural Engineering Fees/Design (if required, can be obtained at additional cost)
- Mechanical/Electrical/Structural Plan Review Fees/Design (if required, can be obtained at additional cost)

**WARRANTIES**

In addition to manufacturers warranties Barron Heating provides a 1 year Parts and Labor Warranty with a Lifetime Workmanship Guarantee on installed ductwork, sheet metal and piping.

Payment to be made as follows: 50% DEPOSIT, BALANCE DUE ON COMPLETION

TASK	DESCRIPTION	QTY
SUMMARY	Thank you for choosing Barron Heating & Air Conditioning Our Mission: Improving Lives	1.00

<b>SUB-TOTAL</b>	\$20,531.00
<b>TAX</b>	\$1,765.67
<b>TOTAL</b>	\$22,296.67

Thank you for choosing Barron. We sincerely appreciate your business and hope that we exceeded your expectations.

Barron Heating provides a 1-year Parts and Labor Warranty.

No warranty expressed or implied on existing system and materials (i.e., ductwork, wiring, piping, etc.)

This invoice is agreed and acknowledged. Payment is to be made as follows: 50% DEPOSIT due upon acceptance with the BALANCE UPON COMPLETION. A service fee will be charged for any returned checks, and a financing charge of 1% per month shall be applied for overdue amounts.

[Pay Now](#)

NOTE: All Estimates subject to a pre-install Layout. Changes to Estimate at Owner approval and expense. The expiration date of Barron Heating's Contractor Registration No. BARROHA179D7: October 23, 2024.

This estimate shall expire if not accepted within 30 days of estimate date.

[Terms & Conditions](#)

**CUSTOMER AUTHORIZATION**

This invoice is agreed and acknowledged. Payment is due upon receipt. A service fee will be charged for any returned checks, and a financing charge of 1% per month shall be applied for overdue amounts.

**Did you know Barron offers a variety of energy solutions? From Energy Monitoring Services to Solar by Barron, our team can help you understand AND lower your energy costs.**

**Call our office or talk to your Barron technician for more information.**

Barron Authorized Signature: \_\_\_\_\_ Date: \_\_\_\_\_

The expiration date of Barron Heating's Contractor Registration No. BARROHA179D7: October 23, 2022.

Sign here \_\_\_\_\_ Date \_\_\_\_\_

EXIST GAS FURNACE (FC) SCHEDULE																		
TAG	BUILDING	MANUF.	MODEL	CFM	MIN. O.A. (CFM)	INPUT (MBH)	OUTPUT (MBH)	(AFUE)	COOLING COIL	CLG COIL MANUF	CLG COIL MODEL	CORRESPONDING CONDUNIT	MOTOR (HP)	VOLT/ PHASE	MCA	ARRANGEMENT	WEIGHT (LBS)	NOTES
GF-1	ATHIC	CARRIER	58MCB100-20	2000		100	93	93%	YES	CARRIER	CNPHP4821ACA	CU-1	3/4	120/1	14.8	HORIZONTAL		
GF-2	CAF	TRANE	TUD2C100A	2000		100	80	80%	YES	CARRIER	CNPVP4821ACA	CU-2	1/2	120/1	0.87 FLA	VERTICAL		
GF-3	GYM	CARRIER	58MCB100-20	2000		100	93	93%	YES	CARRIER	CNPVP4821ACA	CU-3	3/4	120/1	14.8	VERTICAL		
GF-4	LOCKER ROOM	PAYNE	PG9M AB048080	1600		80	74	92%	NO				1/2	120/1		VERTICAL		

NOTES:  
 1. WITH COOLING COILS.

EXISTING CONDENSING UNIT SCHEDULE														
TAG	SERVES	LOCATION	MANUF.	MODEL	CAPACITY	ELECTRICAL	EER (SEER)	WEIGHT	SOUND POWER (dBA)	DIMENSIONS (H"xW"xD")	NOTES			
					48,000	VOLTAGE PHASE MCA BREAKER								
CU-1	GF-1	ROOF	CARRIER	24 ACA348 A300	48,000	208 26.2 40		156	74	30"x32"x32"	1, 2			
CU-2	GF-2	ROOF	CARRIER	24ACA348A300	48,000	208 26.2 40 (13)		156	74	30"x32"x32"	1, 2			
CU-3	GF-3	POOLSIDE	CARRIER	24ACA348A300	48,000	208 26.2 40		156	74	30"x32"x32"	1, 2			

NOTES:  
 1. POWER WIRING, CONDUIT AND DISCONNECT BY E.C.  
 2. WITH R-410A REFRIGERANT.

NEW GAS FURNACE (GF) SCHEDULE																			
TAG	BUILDING	MANUF.	MODEL	INPUT (MBH)	OUTPUT (MBH)	(AFUE)	CFM	MIN. O.A. (CFM)	ESP	MOTOR (HP)	VOLT/ PHASE	MCA	MOCP	COOLING COIL	CORRESPONDING COND UNIT	ARRANGEMENT	WEIGHT (LBS)	NOTES	
GF-1	ATHIC	TRANE	S9X1C100	100	97.4	95%	2000		0.5"		120/1	13.3	15	YES	CU-1	HORIZONTAL	145	1, 2, 3, 4	
GF-2	CAF	TRANE	S8X1C100	100	80	80%	2000		0.5"		120/1	14.1	15	YES	CU-2	VERTICAL	145	1, 2, 3, 4	
GF-3	GYM	TRANE	S9X1C100	100	97.4	95%	2000		0.5"	1	120/1	13.3	15	YES	CU-3	VERTICAL	145	1, 2, 3, 4	
GF-4	LOCKER ROOM	TRANE	S9X1B080	80	77.6	96%	1600		0.5"	3/4	120/1	10.3	15	NO		VERTICAL	127	1, 2	

NOTES:  
 1. POWER WIRING, CONDUIT AND DISCONNECT BY E.C.  
 2. WITH PROGRAMMABLE 7-DAY THERMOSTAT.  
 3. WITH COOLING COILS.  
 4. FIELD ROUTE CONDENSATE TO NEAREST APPROVED DRAIN.

NEW HEAT PUMP UNIT SCHEDULE														
TAG	SERVES	LOCATION	MANUF.	MODEL	CAPACITY	ELECTRICAL	(SEER)	(HSPF)	WEIGHT	SOUND POWER (dBA)	DIMENSIONS (H"xW"xD")	NOTES		
					COOL(BTUH)	VOLTAGE PHASE MCA BREAKER								
CU-1	GF-1	ROOF	TRANE	4TWR4048N1000A	48,000	208 26 40	(14)	(8.2)	250	72	47"x34"x37"	1, 2, 3		
CU-2	GF-2	ROOF	TRANE	4TWR4048N1000A	48,000	208 26 40	(14)	(8.2)	250	72	47"x34"x37"	1, 2, 3		
CU-3	GF-3	POOLSIDE	TRANE	4TWR4048N1000A	48,000	208 26 40	(14)	(8.2)	250	72	47"x34"x37"	1, 2, 3		

NOTES:  
 1. POWER WIRING, CONDUIT AND DISCONNECT BY E.C.  
 2. WITH R-410A REFRIGERANT.  
 3. PROVIDE WITH DX COILS TO MEET EFFICIENCY LISTED.

EXIST UNIT HEATER (UH) SCHEDULE															
TAG	BUILDING	MANUF.	MODEL	INPUT (MBH)	OUTPUT (MBH)	(AFUE)	CFM	MIN. O.A. (CFM)	ESP	MOTOR (HP)	VOLT/PHASE	MCA	MOCP	WEIGHT (LBS)	NOTES
UH-1	2ND FLOOR AREA	REZNOR	F75-E-3	75	60	80%					120/1		15	88	1, 2
UH-2	2ND FLOOR AREA	REZNOR	F75-E-3	75	60	80%					120/1		15	88	1, 2
UH-3	2ND FLOOR AREA	REZNOR	F75-E-3	75	60	80%					120/1		15	88	1, 2
UH-4	2ND FLOOR AREA	REZNOR	F75-E-3	75	60	80%					120/1		15	88	1, 2

NOTES:  
 1. POWER WIRING, CONDUIT AND DISCONNECT BY E.C.  
 2. WITH PROGRAMMABLE 7-DAY THERMOSTAT.

NEW GAS-FIRED UNIT HEATER (UH) SCHEDULE															
TAG	BUILDING	MANUF.	MODEL	INPUT (MBH)	OUTPUT (MBH)	(AFUE)	CFM	MIN. O.A. (CFM)	ESP	MOTOR (HP)	VOLT/PHASE	MCA	MOCP	WEIGHT (LBS)	NOTES
UH-1	2ND FLOOR AREA	REZNOR	UDX-75	75	62.25	83%	960			0.06	120/1	3.7	15	76	1, 2, 3
UH-2	2ND FLOOR AREA	REZNOR	UDX-75	75	62.25	83%	960			0.06	120/1	3.7	15	76	1, 2, 3
UH-3	2ND FLOOR AREA	REZNOR	UDX-75	75	62.25	83%	960			0.06	120/1	3.7	15	76	1, 2, 3
UH-4	2ND FLOOR AREA	REZNOR	UDX-75	75	62.25	83%	960			0.06	120/1	3.7	15	76	1, 2, 3

NOTES:  
 1. POWER WIRING, CONDUIT AND DISCONNECT BY E.C.  
 2. WITH PROGRAMMABLE 7-DAY THERMOSTAT.  
 3. CONNECT TO EXISTING 4" FLUE, OR REPLACE WITH NEW FLUE AS NEEDED.



SUDDEN VALLEY  
 RECREATIONAL CENTER  
 HVAC EQUIPMENT REPLACEMENT  
 4 CLUBHOUSE CIR  
 BELLINGHAM, WA 98229

NO.	DATE	BY	DESCRIPTION
1		RR	PERMIT SET

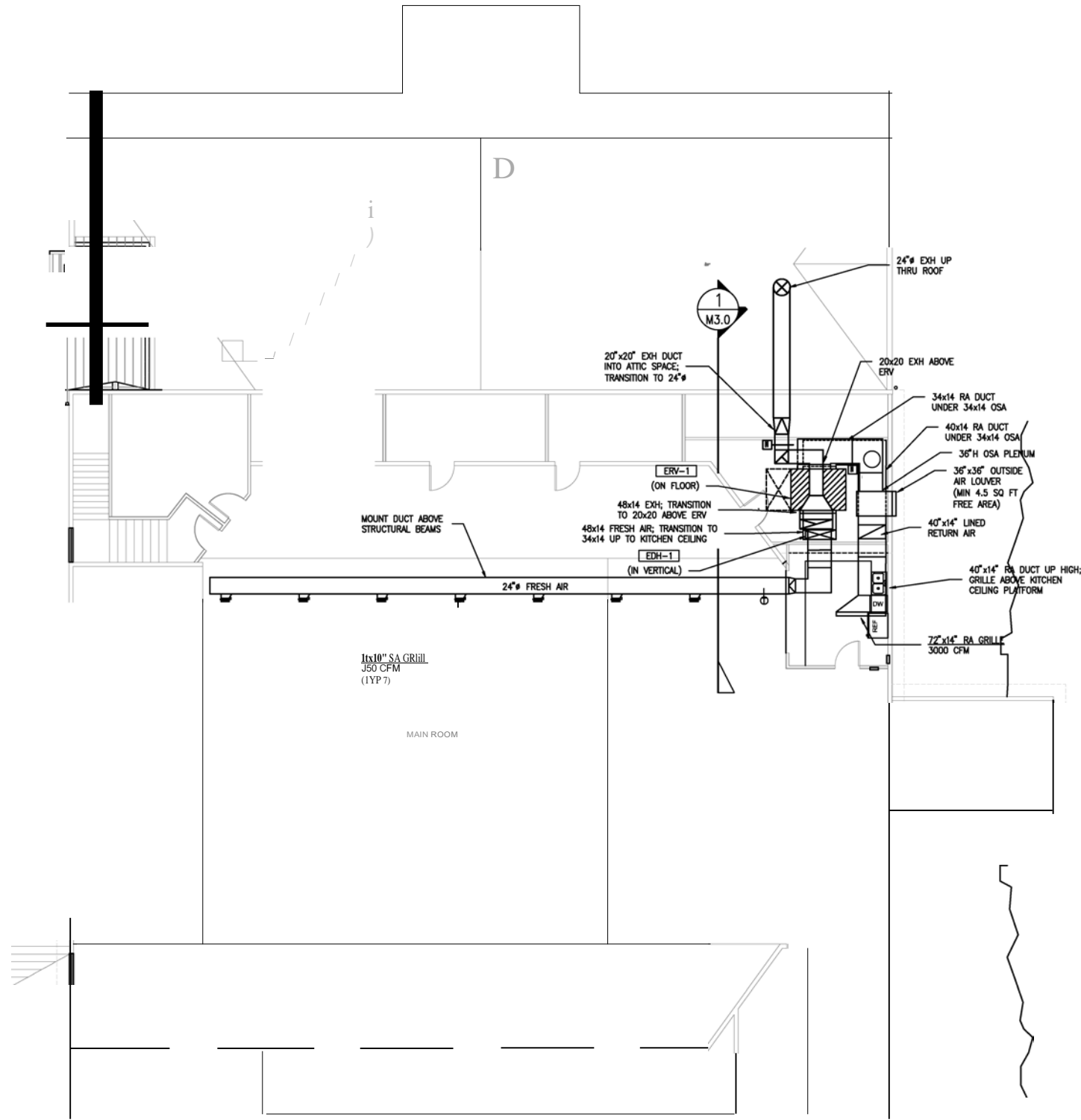
SCHEDULES	
DESIGNED	RR
DRAWN	RR
CHECKED	RR
DATE	8/29/23
CAD FILE	2023.14 M1.0B.DWG
JOB NUMBER	2023.14

NON-CONNECTION

M1.0B



SUDDEN VALLEY  
RECREATIONAL CENTER  
VENTILATION & HVAC REPLACEMENT  
4 CLUBHOUSE CIR  
BELLINGHAM, WA 98229



**HVAC FLOOR PLAN**

SCALE: 1/8"=1'-0"



REVISIONS	BY	DESCRIPTION
.....	04/20/23	PERMIT SET
.....		
.....		
.....		
.....		
.....		

**HVAC FLOOR  
PLAN**

DESIGNED	RR
DRAWN	RR
CHECKED	RR
DATE	8/29/2023
CADD FILE	2023 37 M2.0.DWG
JOB NUMBER	2023.3.7

0  
ca  
en  
I.  
cc  
N  
z  
C

**M2.0A**



**SUDDEN VALLEY RECREATIONAL CENTER  
 HVAC EQUIPMENT REPLACEMENT  
 4 CLUBHOUSE CIR  
 BELLINGHAM, WA 98229**

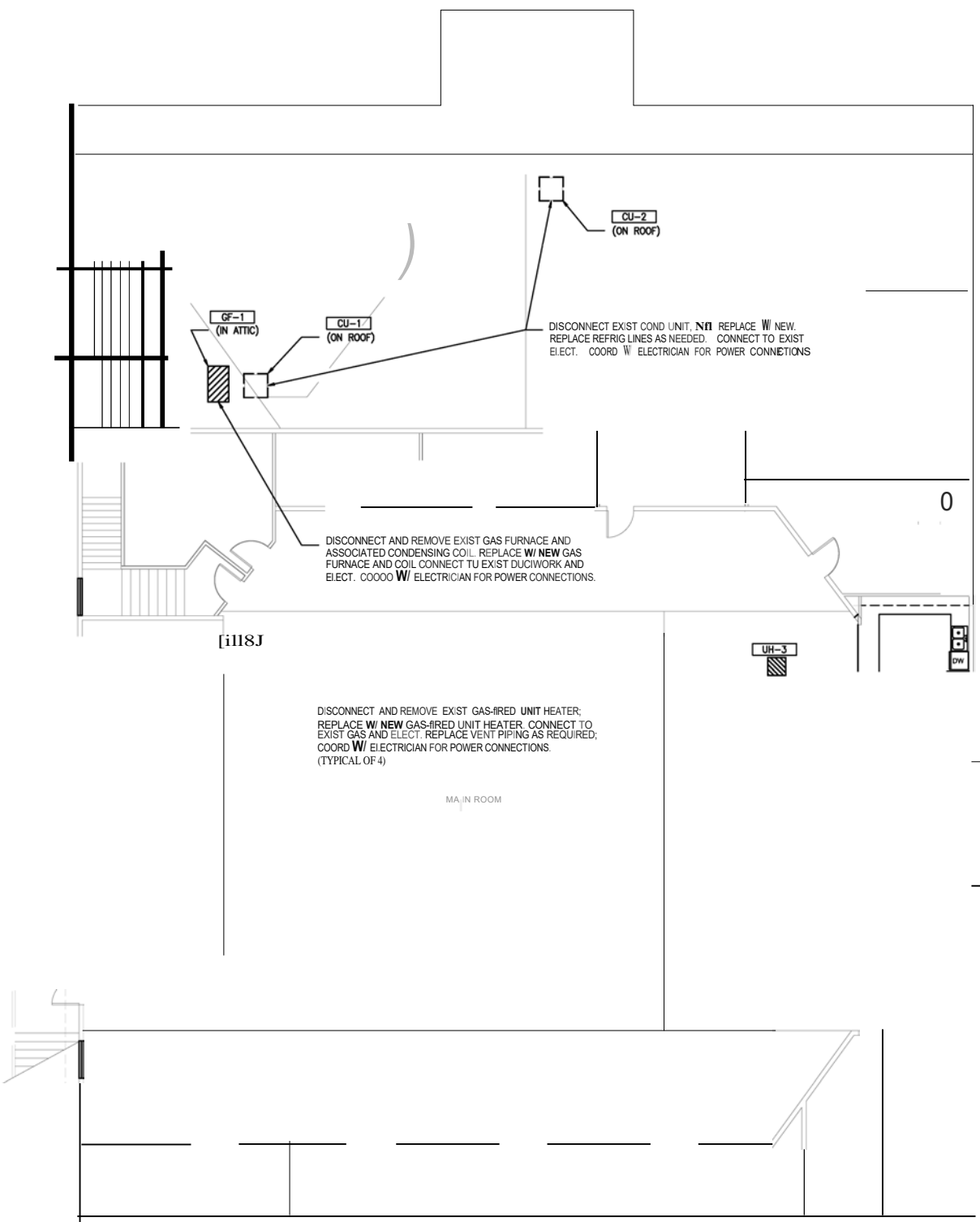
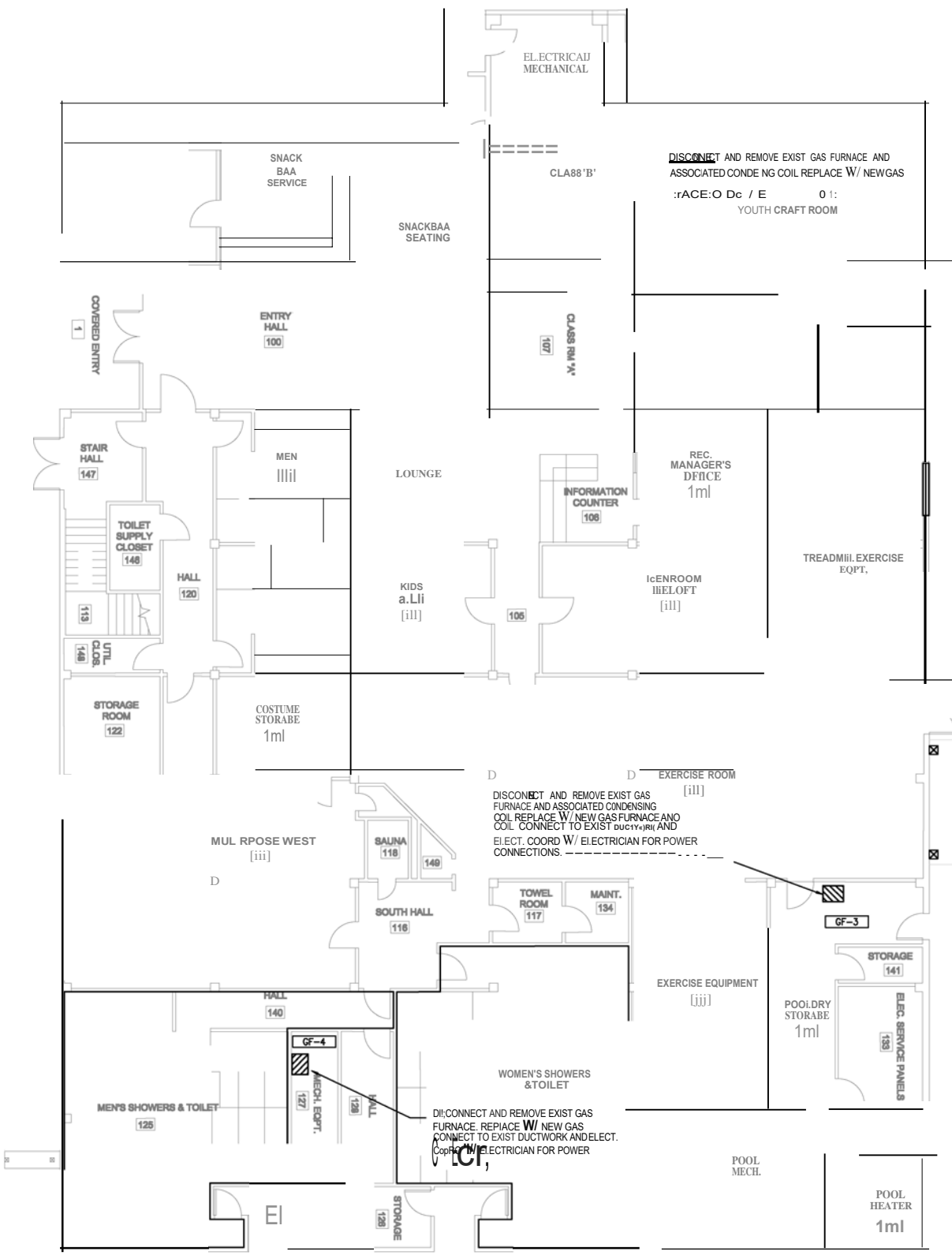
REVISIONS

NO.	DATE	BY	DESCRIPTION
1		RR	PERMIT SET

**HVAC FLOOR PLANS**

DESIGNED	RR
DRAWN	RR
CHECKED	RR
DATE	8/29/2023
CADD FILE	2023.14M2.0.DWG
JOB NUMBER	2023.14

**M2.0B**



0 OR HVAC PLAN @

0 OR HVAC PLAN @

0  
N  
9  
N  
I  
C  
C  
1  
W  
0  
ca