

# **BUILDINGENERGY BOSTON**

---

## **Heads in Beds: the Colby College Hyper-Speed Dormitory Project**

**Christina Consigli (Consigli Construction)**

**Sasha Halupowski (Consigli Construction)**

**Jesse Thompson (Kaplan Thompson Architects)**

**Emily Greene (Kaplan Thompson Architects)**

**Curated by Lauren Baumann and Nat May**

---

**Northeast Sustainable Energy Association (NESEA)**

**March 29, 2023**

NESEA  
Building Energy 2023

# Heads in Beds

## Colby College Hyper-speed Dormitories

Christina Consigli | Senior Project Manager, Consigli Construction

Sasha Halupowski | Project Manager, Consigli Construction

Jesse Thompson | Principal, Kaplan Thompson Architects

Emily Greene | Project Manager, Kaplan Thompson Architects



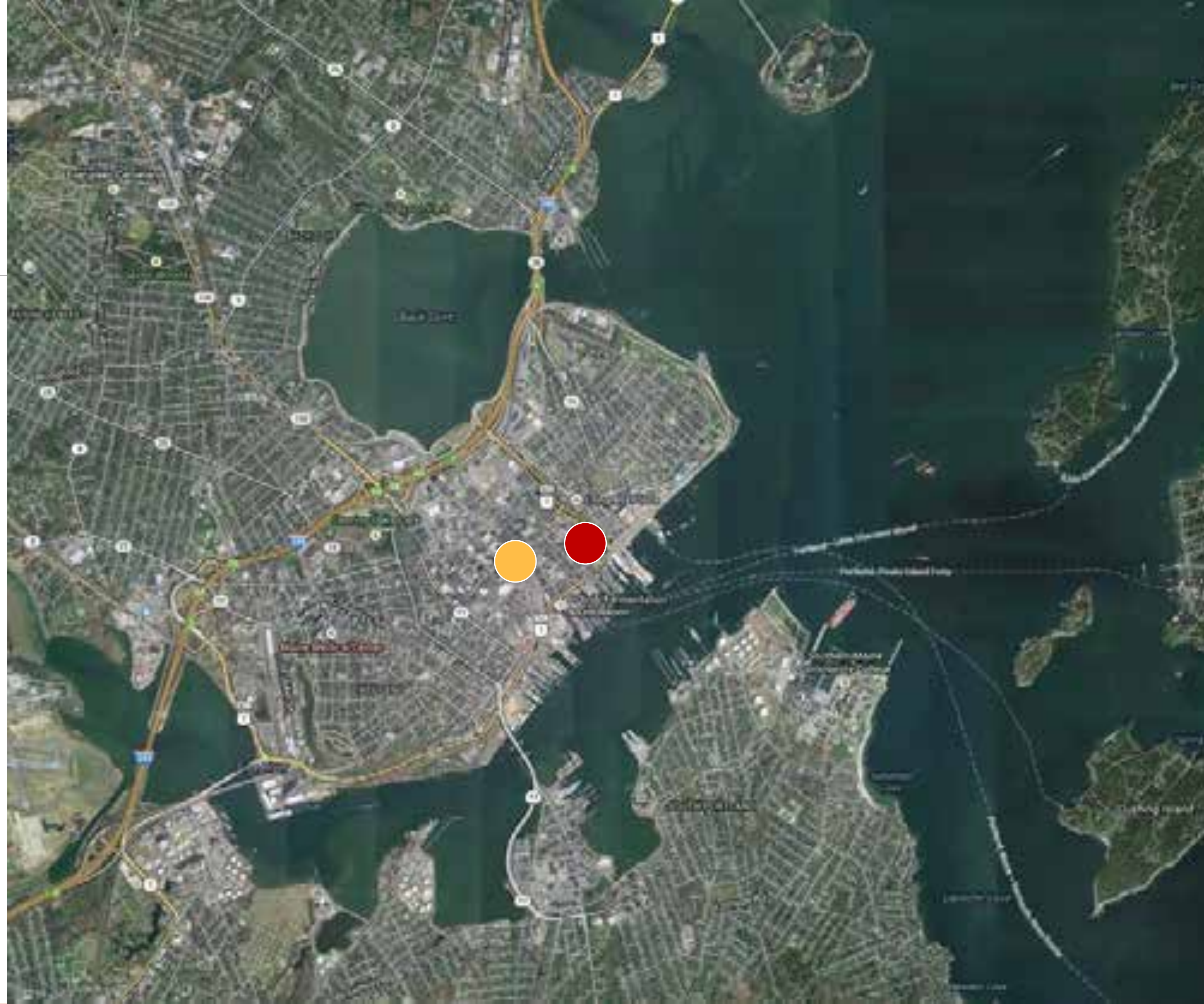




Johnson Pond  
House 1



# Portland, ME





# Consigli Construction Co., Inc.



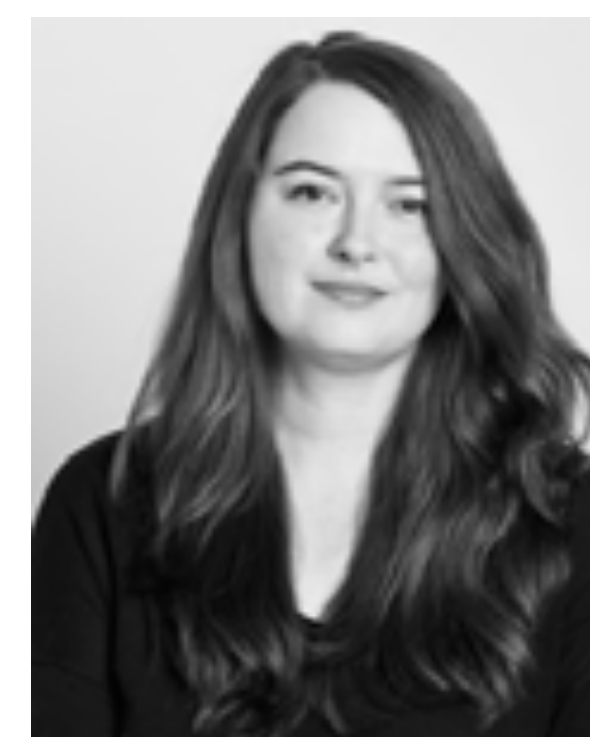




Beautiful  
Sustainable  
Attainable

---









# A Better Way to a Better Home

**BRIGHT\***  
**BUILT**  
HOME





**BRIGHT<sup>®</sup>  
BUILT**  
HOME



**KBS**  
Builders Inc.





**BRIGHT<sup>®</sup>**  
**BUILT**  
HOME



# DESIGN-BUILD TEAM

OWNER  
Colby College

# MANUFACTURING & CONSTRUCTION

CM  
Consigli

MODULAR  
KBS Homes

# DESIGN TEAM

ARCHITECT  
KTA

STRUCTURAL  
Trillium

LANDSCAPE  
KMDG

CIVIL  
VHB

MECHANICAL &  
PLUMBING  
Design Day

ELECTRICAL  
Enterprise  
Electric

FIRE  
PROTECTION  
High Tech

SELF-PERFORM  
Riggs

SUBCONTRACTORS



---

# Project Beginnings









2021

2022

JUL

AUG

SEPT

OCT

NOV

DEC

JAN

FEB

MAR

APR

MAY

JUN

JUL

AUG

SEPT

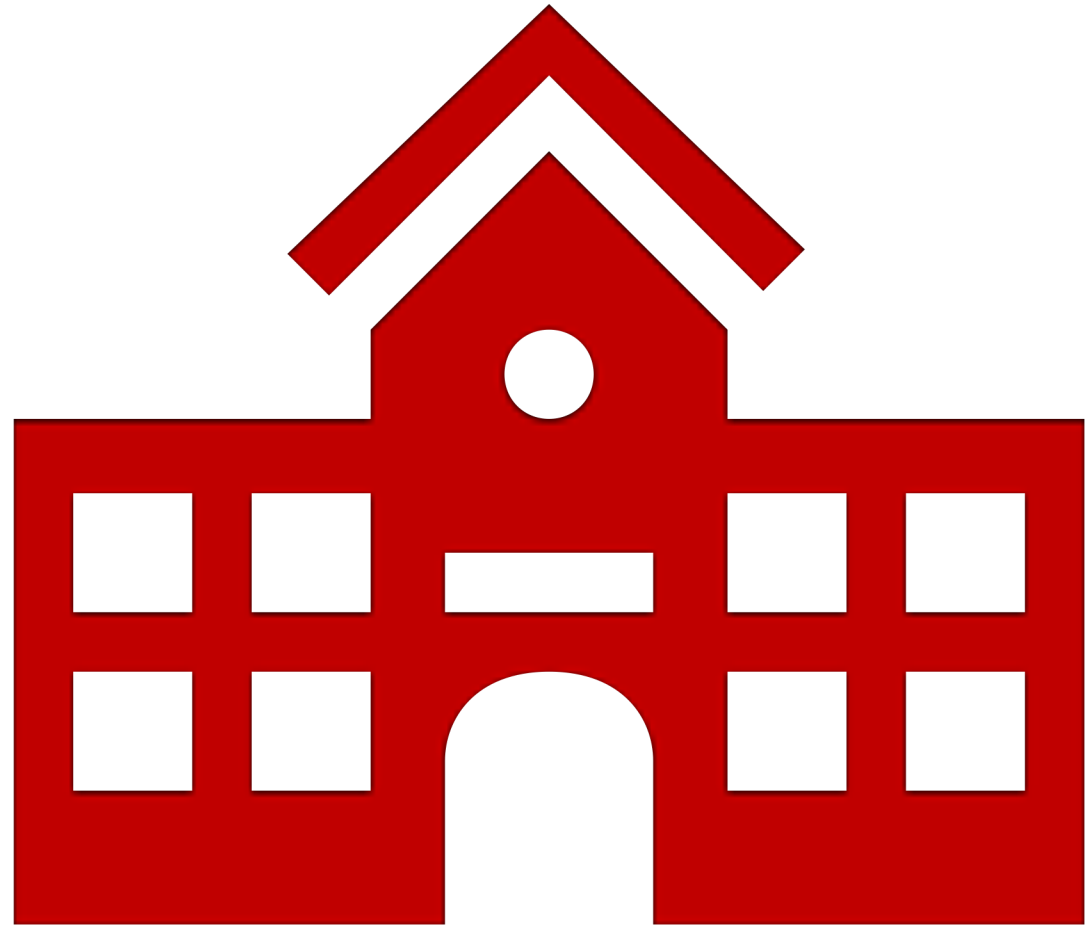
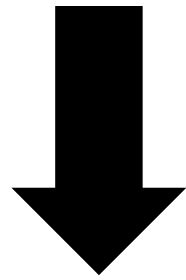
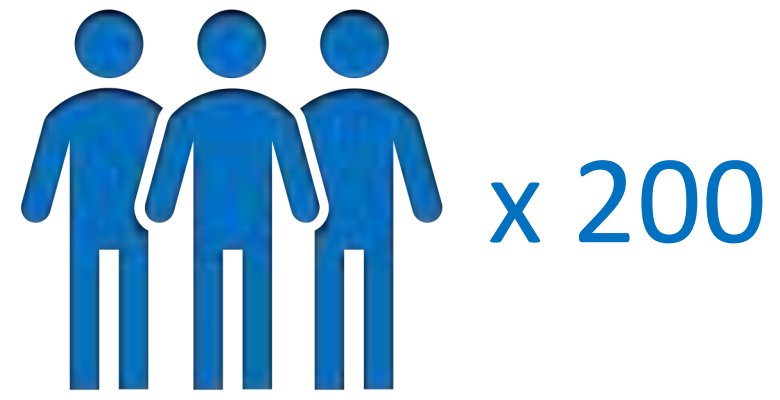
OCT

NOV

DEC

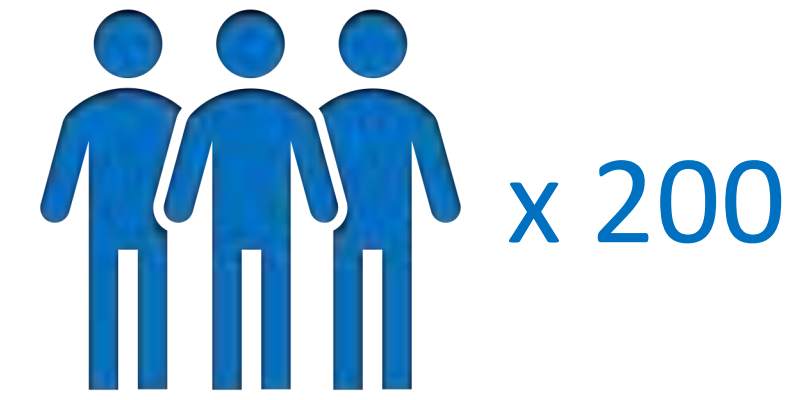






x 200

- TRADITIONAL CONSTRUCTION
- HEAVY FRAME CONSTRUCTION
  - SLOW



x 50



x 50



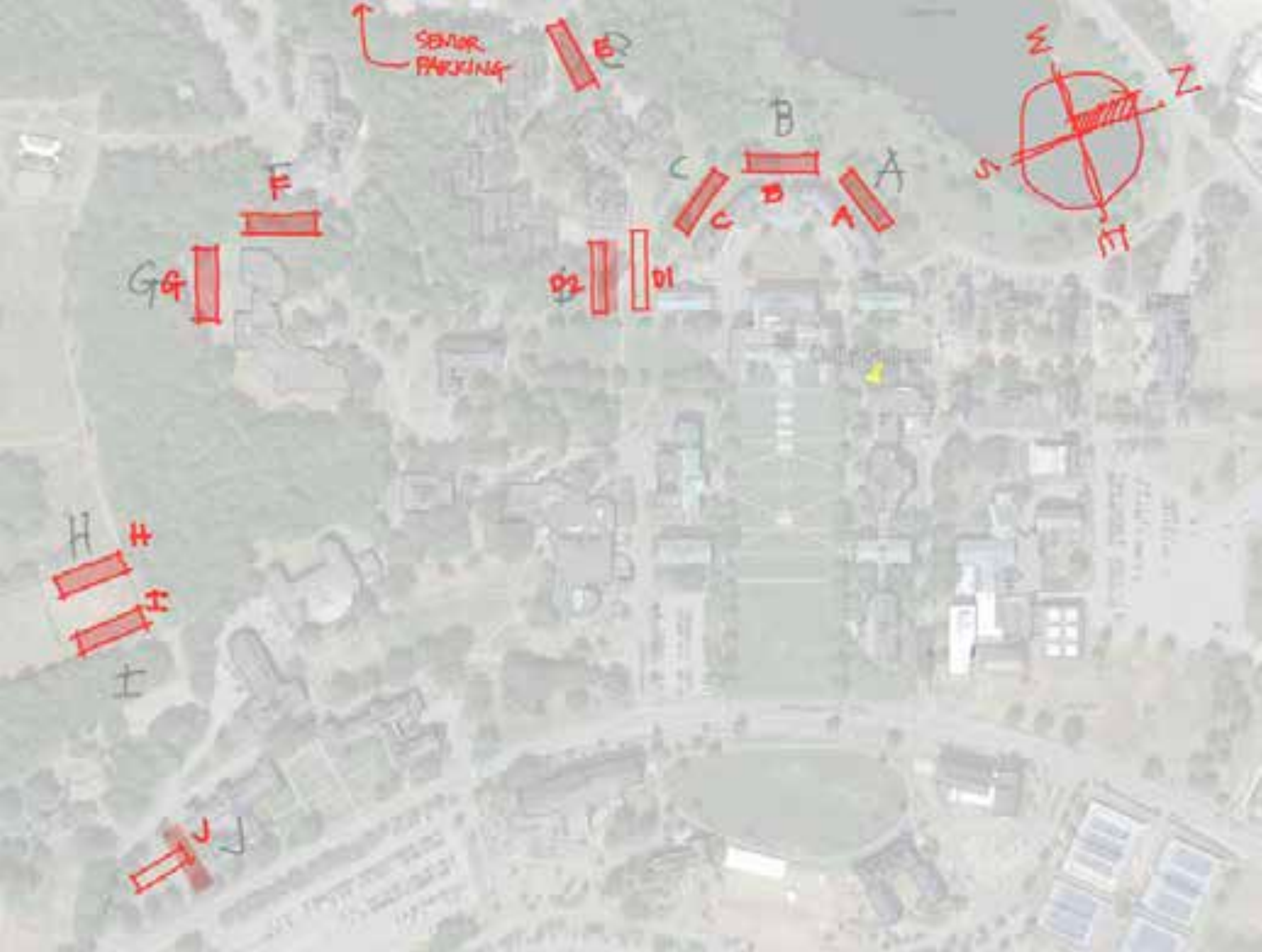
x 50



x 50

- MODULAR CONSTRUCTION
- LIGHT STUD CONSTRUCTION
  - FAST





# SITE SELECTION



2021

2022

JUL AUG SEPT **OCT** NOV DEC

JAN FEB MAR APR MAY JUN JUL AUG SEPT OCT NOV DEC







JOHNSON ROAD

SITE 1

SITE 2

SITE 3

EAST DOWNS

WIDE LEAF

DREEMOND

EDGE

PURVIS WILSON

JOHNSON

MUDCO

KEYES

ABBY

ART B MUSIC

ART STUDIO

ANNEX





MILLER LIBRARY

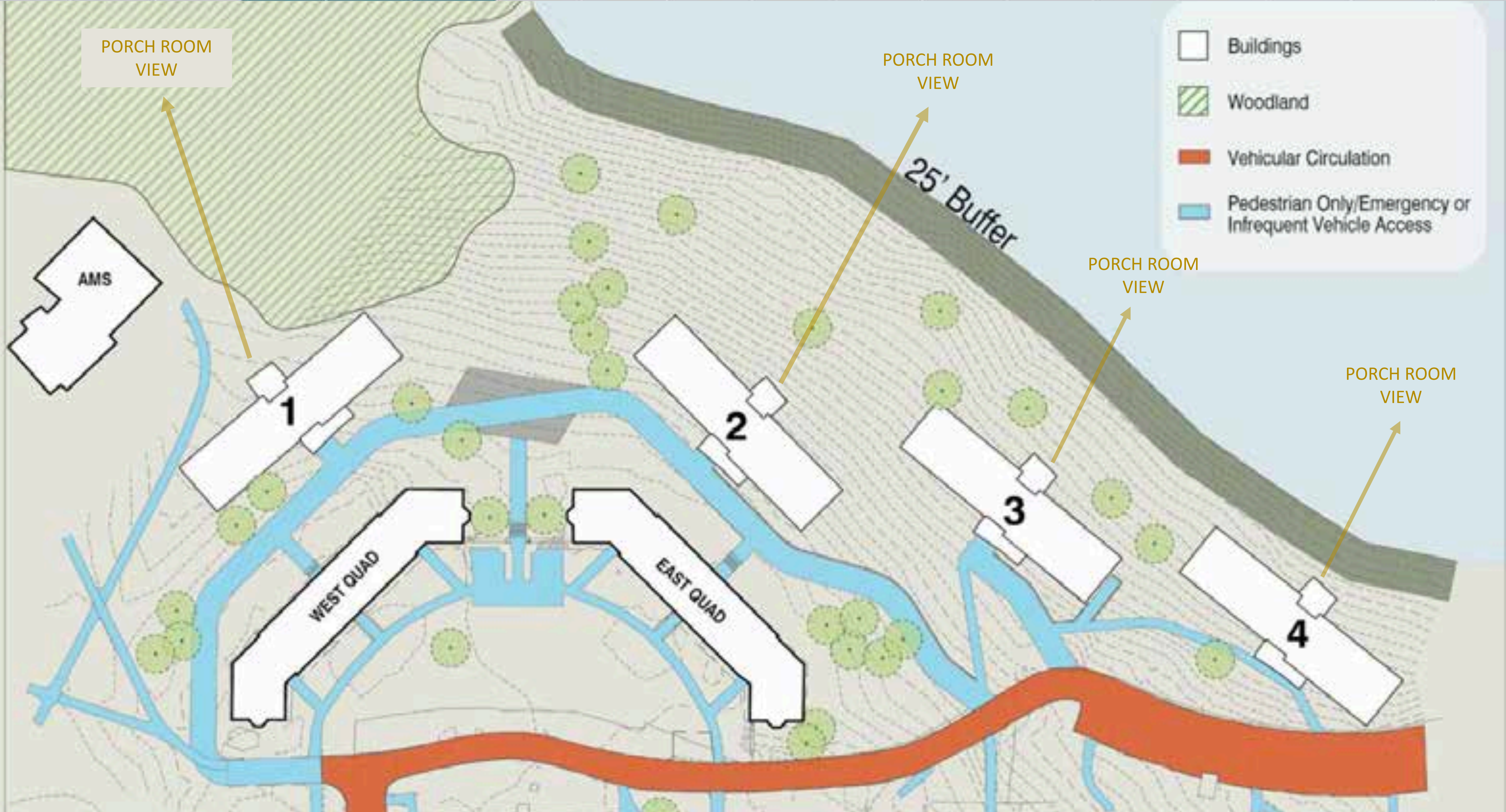
AYERHILL

ANNEX

TREMPER



-  Buildings
-  Woodland
-  Vehicular Circulation
-  Pedestrian Only/Emergency or Infrequent Vehicle Access



PORCH ROOM VIEW

PORCH ROOM VIEW

PORCH ROOM VIEW

PORCH ROOM VIEW

25' Buffer

AMS

1

2

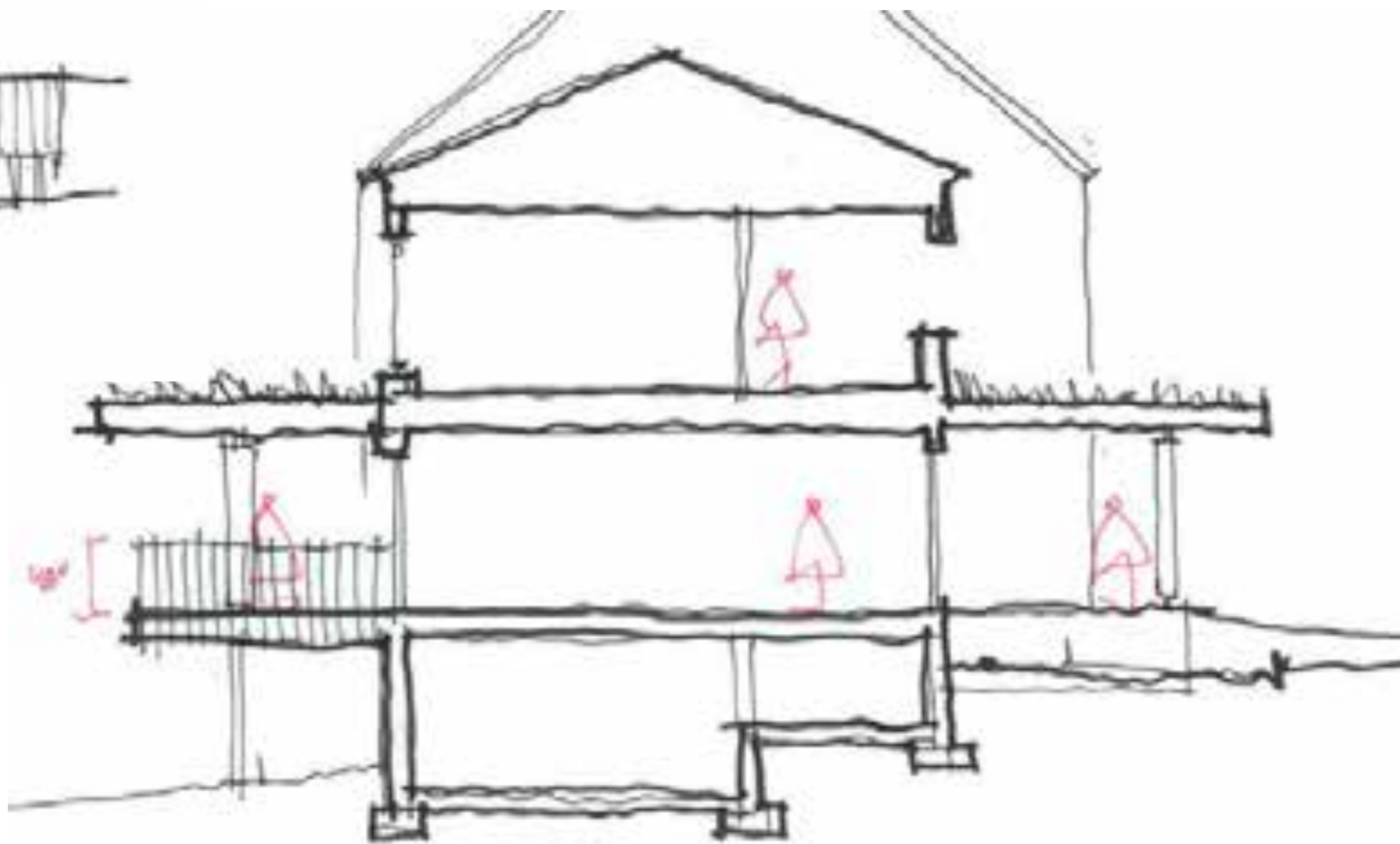
3

4

WEST QUAD

EAST QUAD





SCHEMATIC DESIGN





# CONSTRUCTION DOCUMENTS



2021

2022

JUL

AUG

SEPT

OCT

NOV

DEC

JAN

FEB

MAR

APR

MAY

JUN

JUL

AUG

SEPT

OCT

NOV

DEC



CONSTRUCTION DOCUMENTS





C. F. HATHAWAY







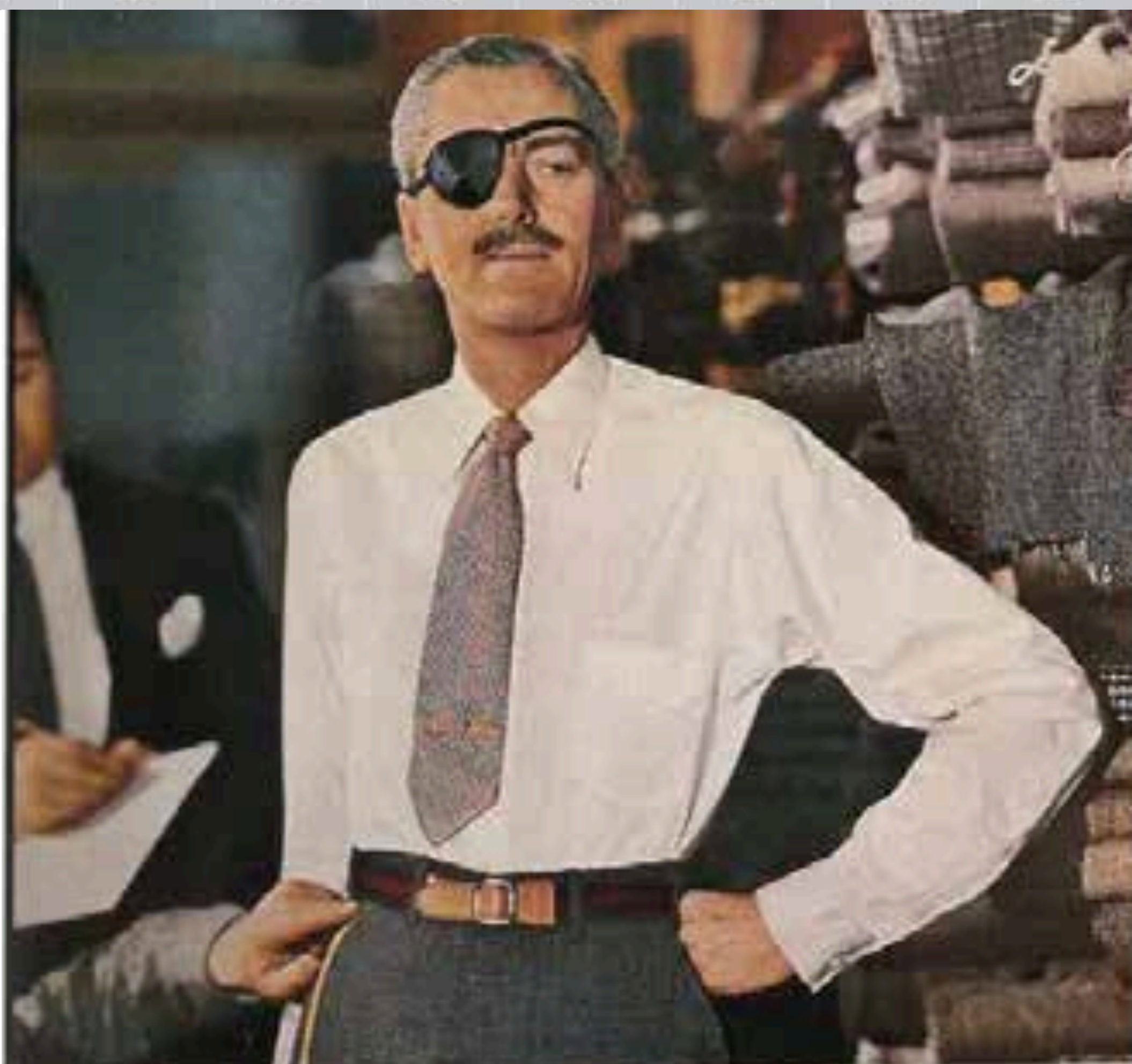
6-1876



4-1876



Above & Right: 1876.  
White shirt with blue stripes.



## The man in the Hathaway shirt

AMERICAN MEN are beginning to realize that it is ridiculous to put good men and their good offices by wearing an ordinary, mass-produced shirt. Hence the growing popularity of HATHAWAY shirts, which are in a class by themselves. HATHAWAY shirts were actually long-erly made of years. They made men look younger and more distinguished, because of the subtle way HATHAWAY cut them. The white shirt is valued more particularly, and is therefore more popular. The collar is longer, and one of the

features. The buttons are mother-of-pearl. Even the stitching has an unobtrusive elegance about it.

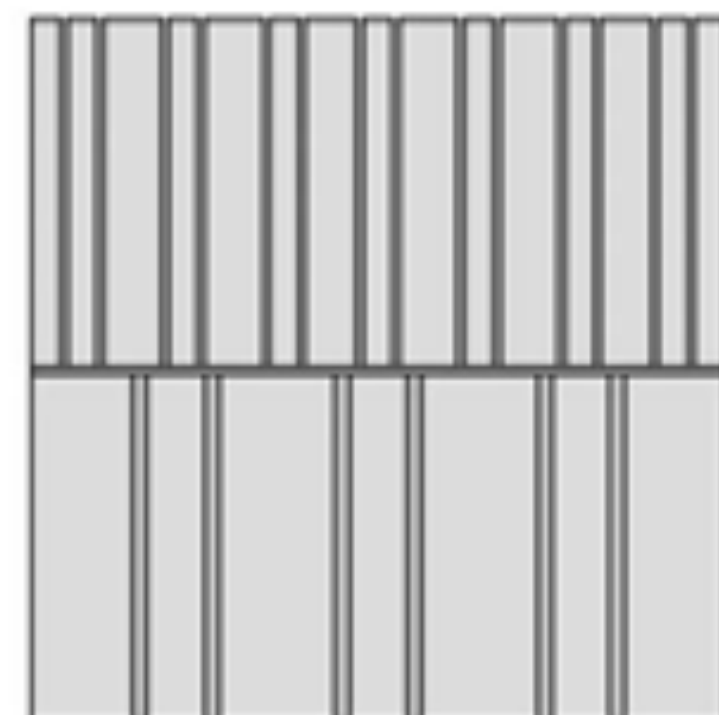
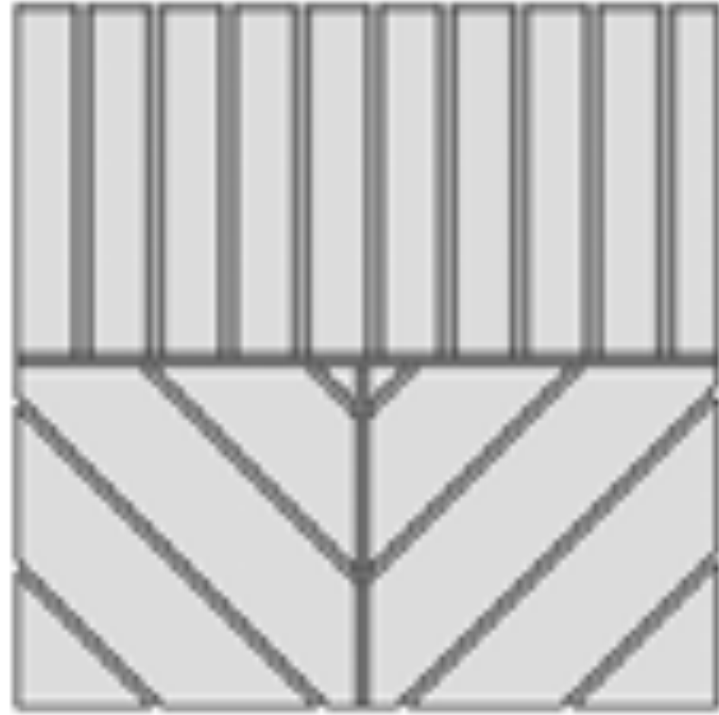
Most of HATHAWAY shirts are made of the finest materials, selected from the best sources of the world—Vivian and Harris from England, modern cottons from Scotland, the finest wools from the West Indies, hand-woven linens from India, broadcloth from Massachusetts, finer than Paris, hand-bleached silks from England, and heavy cottons from the best weavers in America. You will get a

great deal of pure satisfaction out of wearing shirts which are in such respectable form.

HATHAWAY shirts are made by a small company of dedicated craftsmen in the town of Waterville, Maine. They have been at it, first and last, for over 100 years.

Get better value anywhere, or write C. F. HATHAWAY, Waterville, Maine, for the name of your nearest store. In New York, telephone MU 9-1127. Prices from \$4.25 to \$24.00.





BUILDING 1

BUILDING 2

BUILDING 3

BUILDING 4



2021

2022

JUL AUG SEPT OCT NOV DEC

JAN FEB MAR APR MAY JUN JUL AUG SEPT OCT NOV DEC



Johnson Park  
Hotel



2021

2022

APR | AUG | SEPT | **OCT** | NOV | DEC

JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEPT | OCT | NOV | DEC







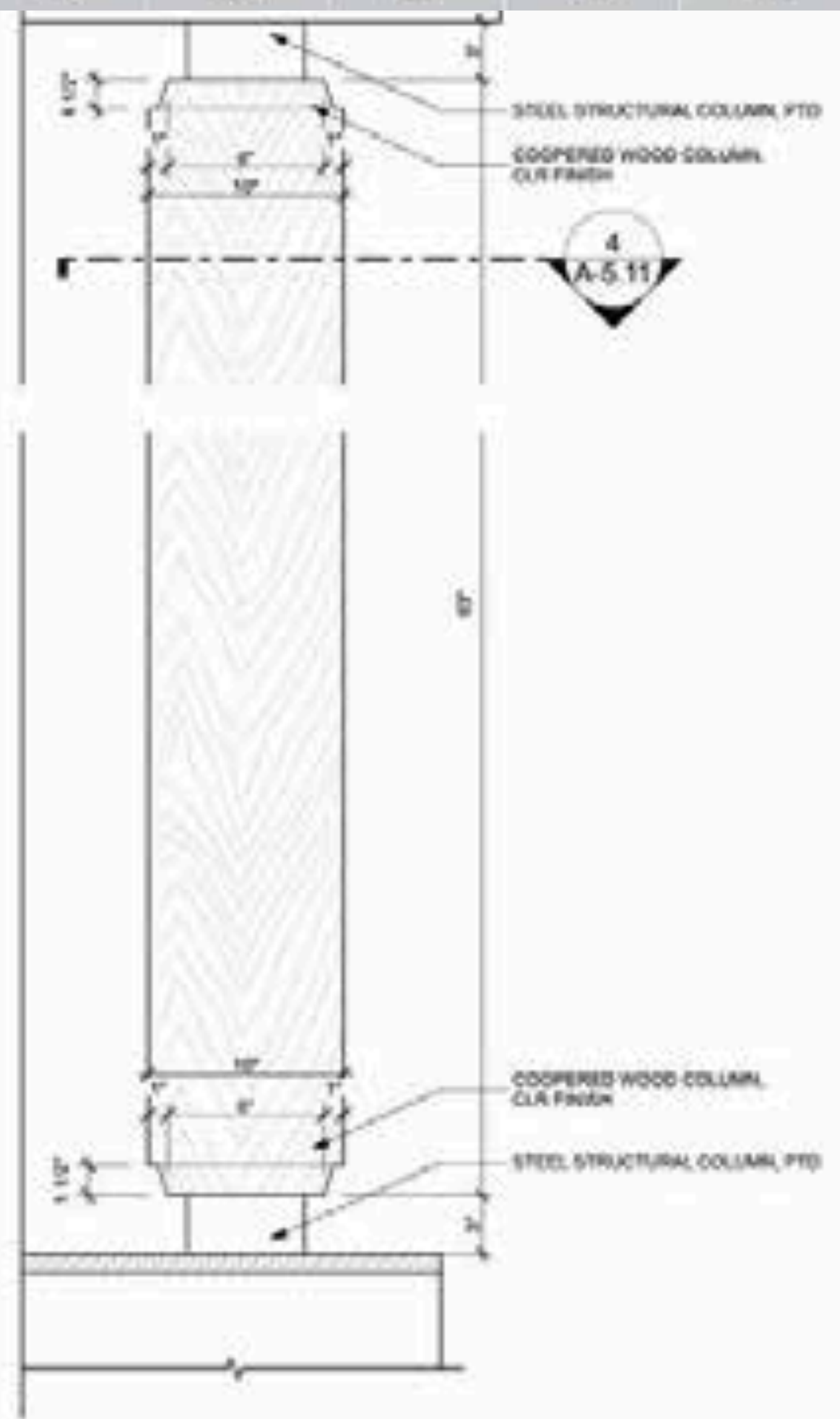
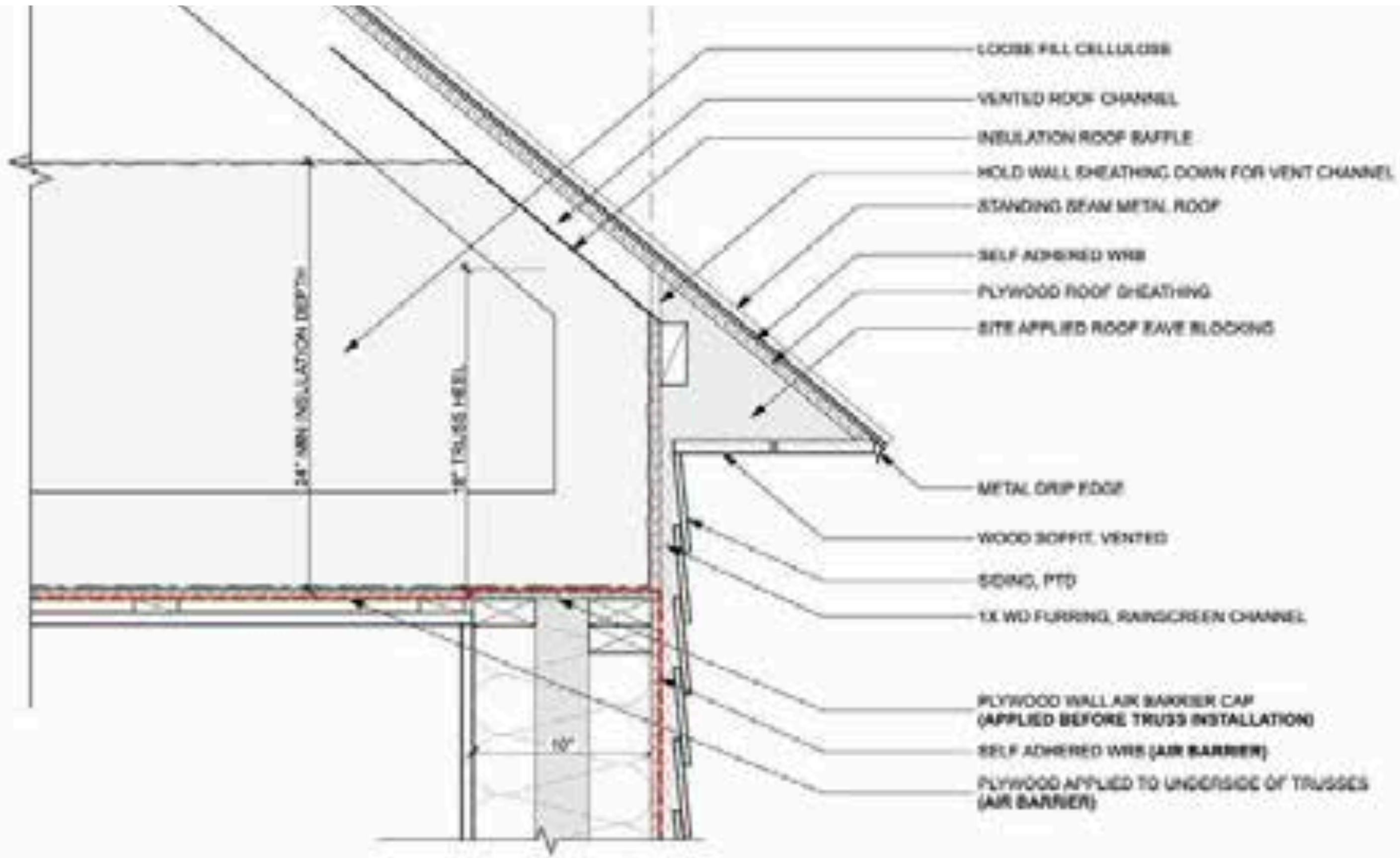
# SCHEMATIC DESIGN





# CONSTRUCTION DOCUMENTS





1 TYPICAL ROOF EAVE  
SCALE: 1/12" = 1'-0"



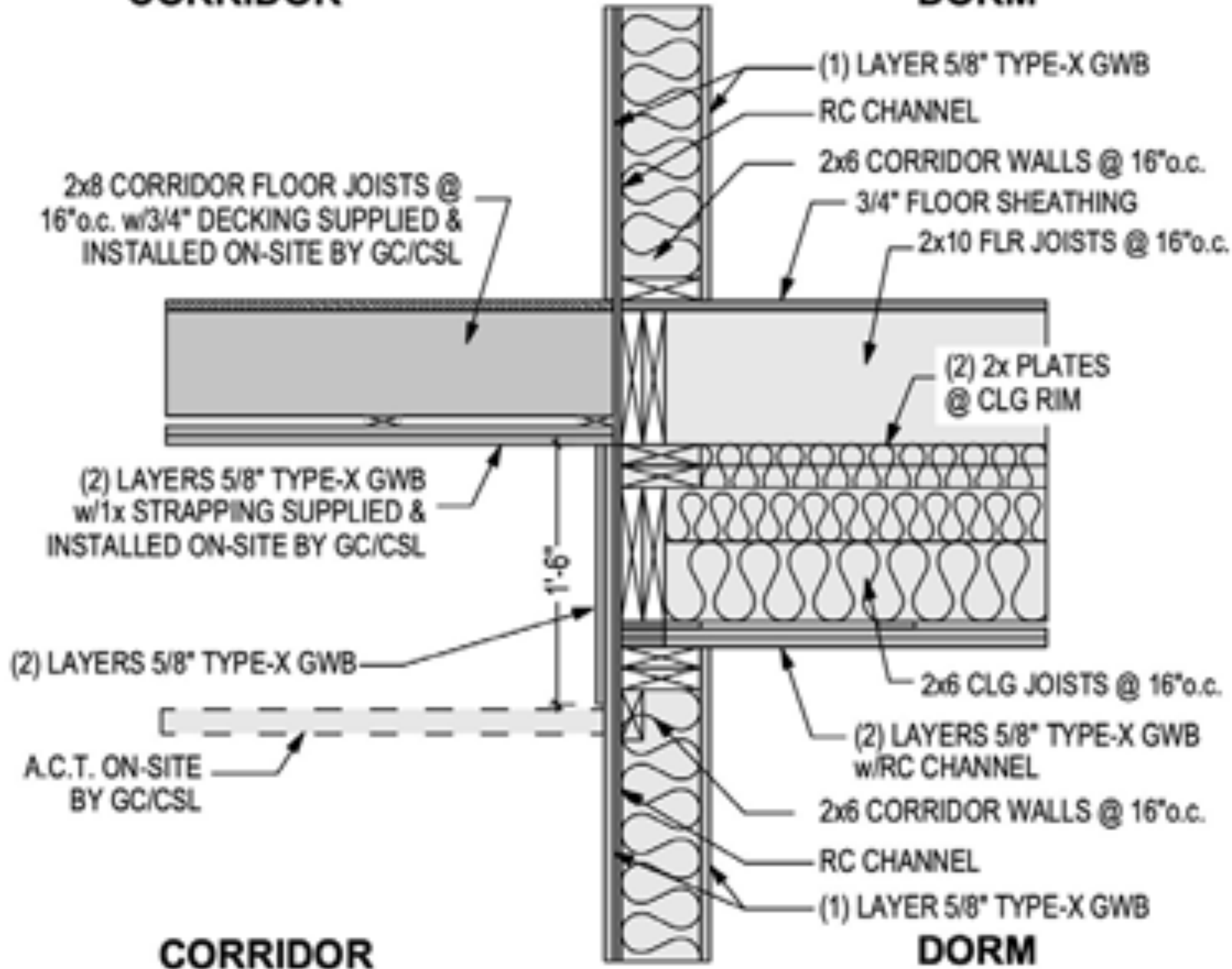
5 COOPERED COLUMN ELEV  
SCALE: 1/12" = 1'-0"





**CORRIDOR**

**DORM**



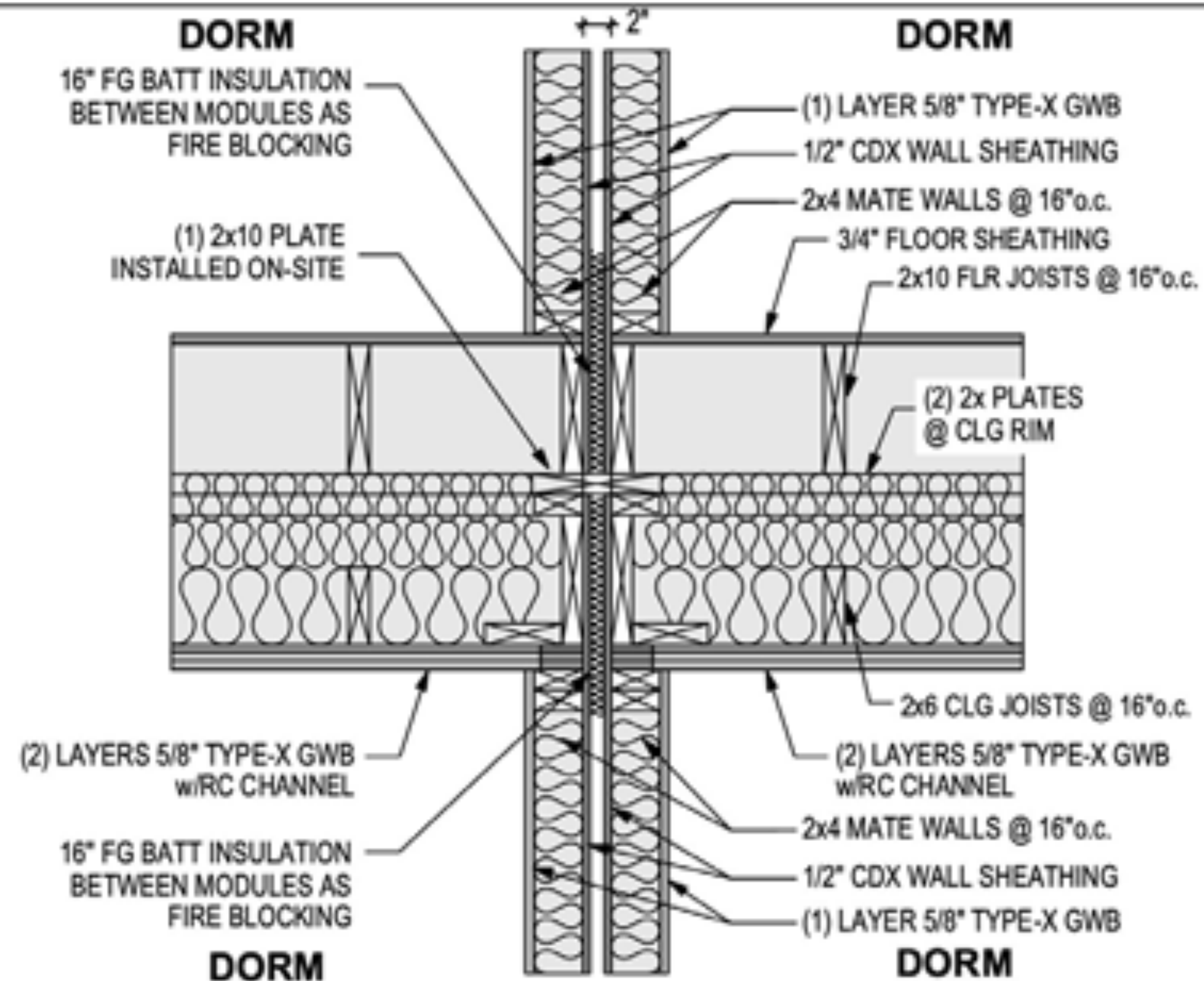
**CORRIDOR**

**DORM**

**2** CORRIDOR TO DORM: SECTION  
SCALE : 1/2" = 1'-0"

**DORM**

**DORM**



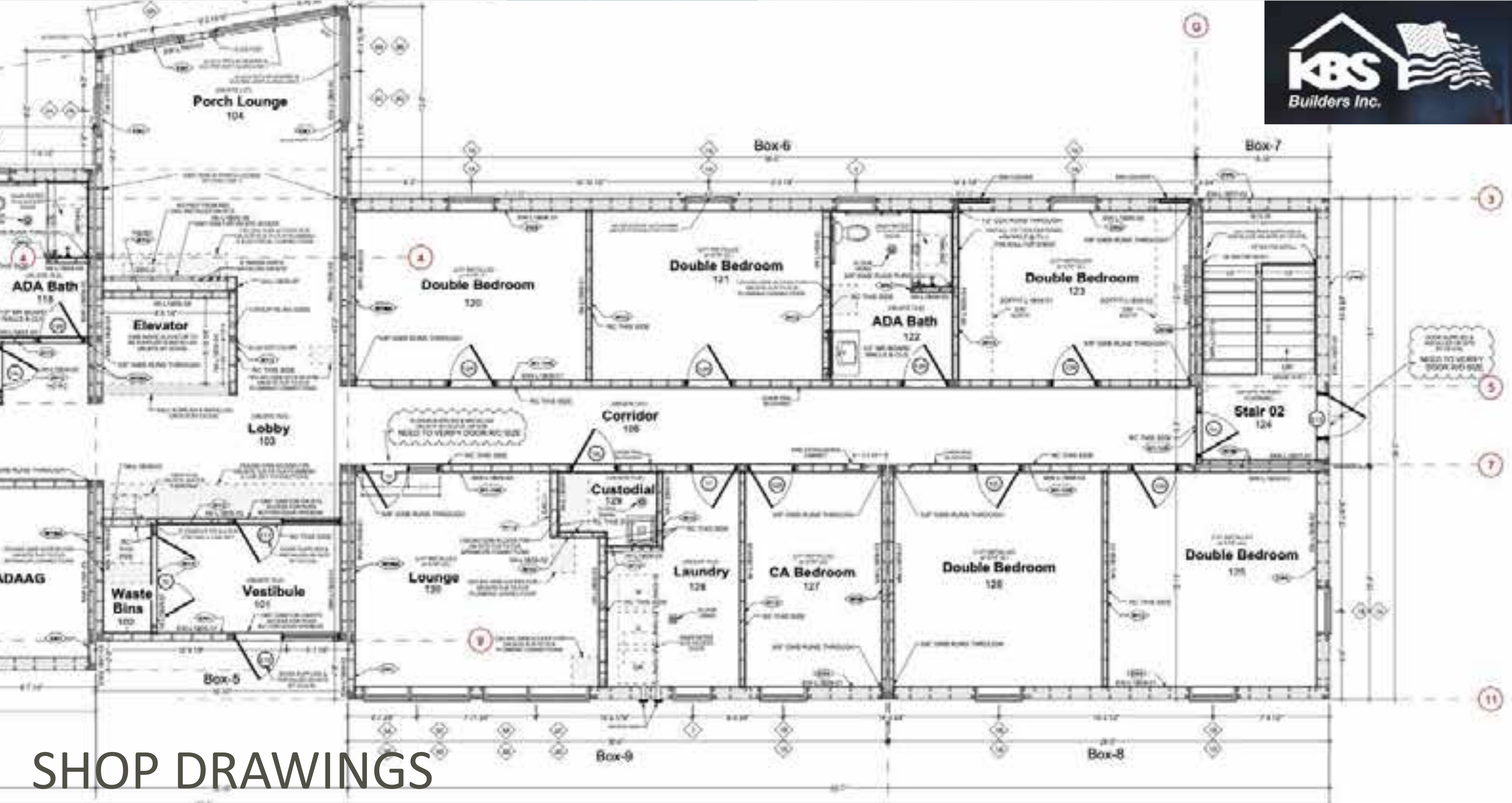
**DORM**

**DORM**

**6** DEMISING WALL: 2nd FLR: MATE V  
SCALE : 1/2" = 1'-0"







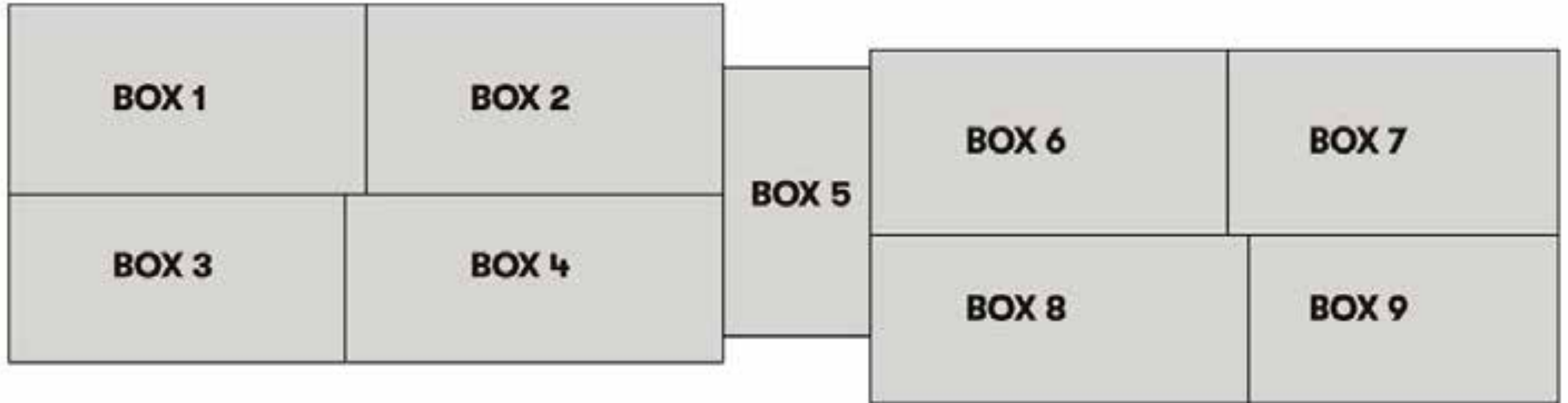
SHOP DRAWINGS



---

# Field vs. Factory

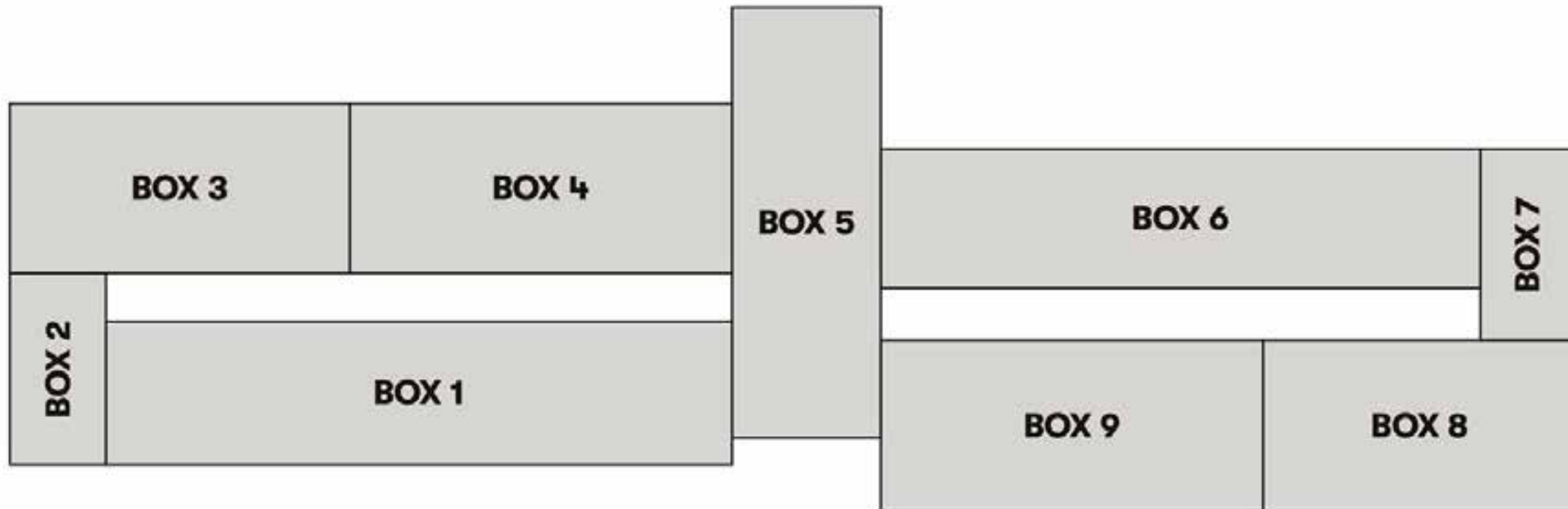




**TWO BOXES WIDE**

**SCHEMATIC DESIGN**

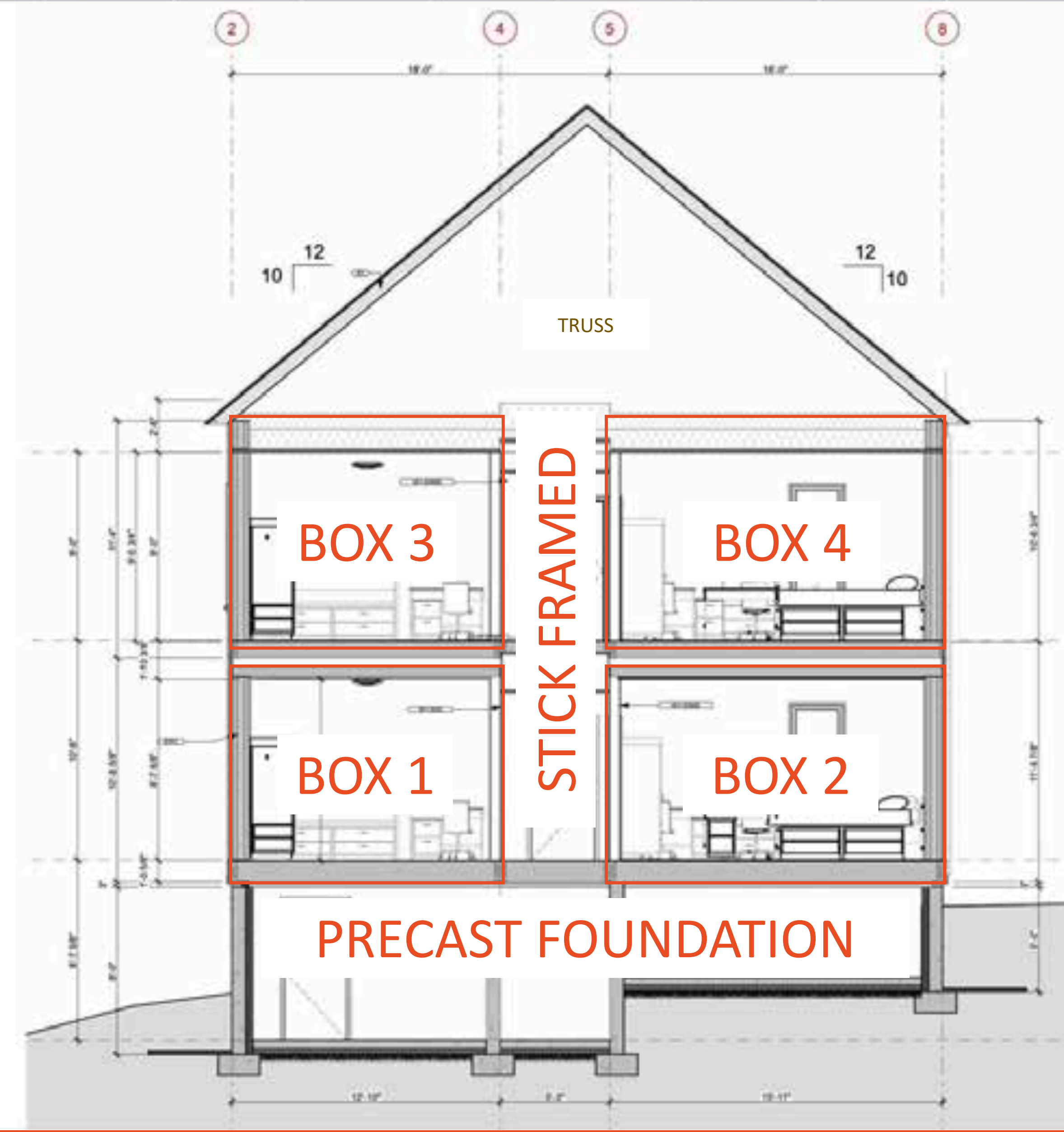




**TWO BOXES WIDE** with stick framed corridor

CONSTRUCTION DOCUMENTS



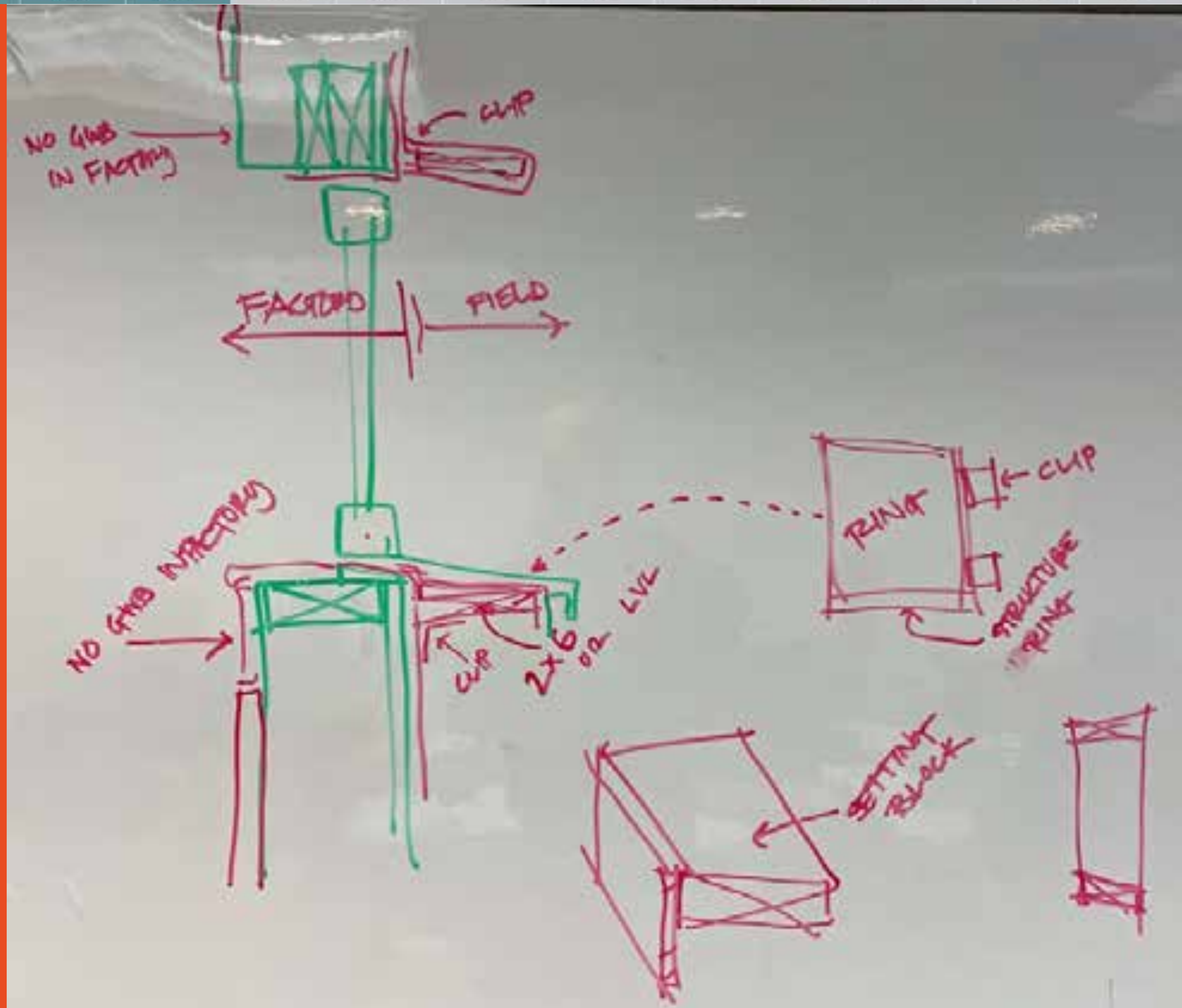






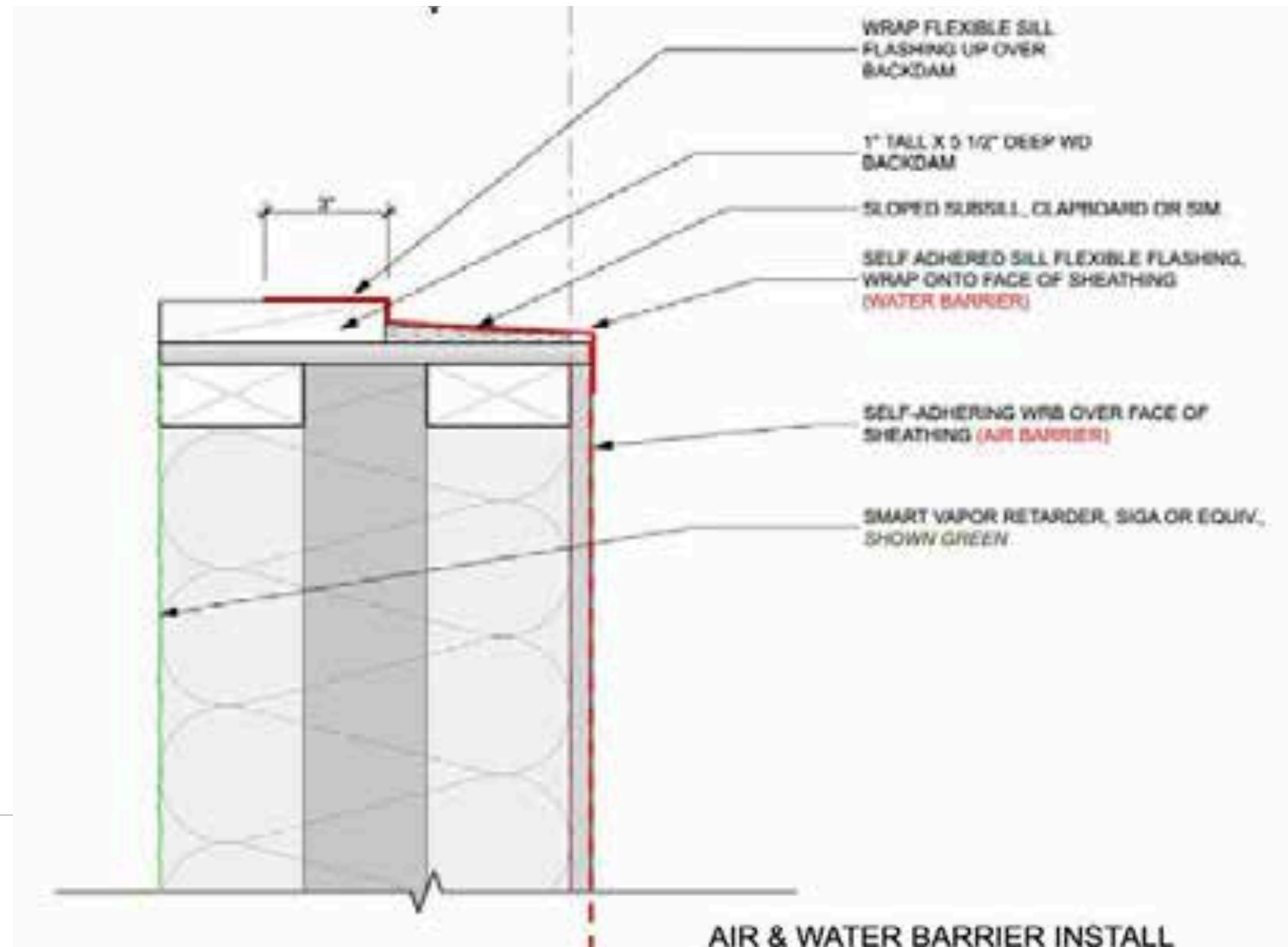


# FACTORY - FIELD COORDINATION





# STEP 1: FACTORY



## AIR & WATER BARRIER INSTALL

### EXTERIOR

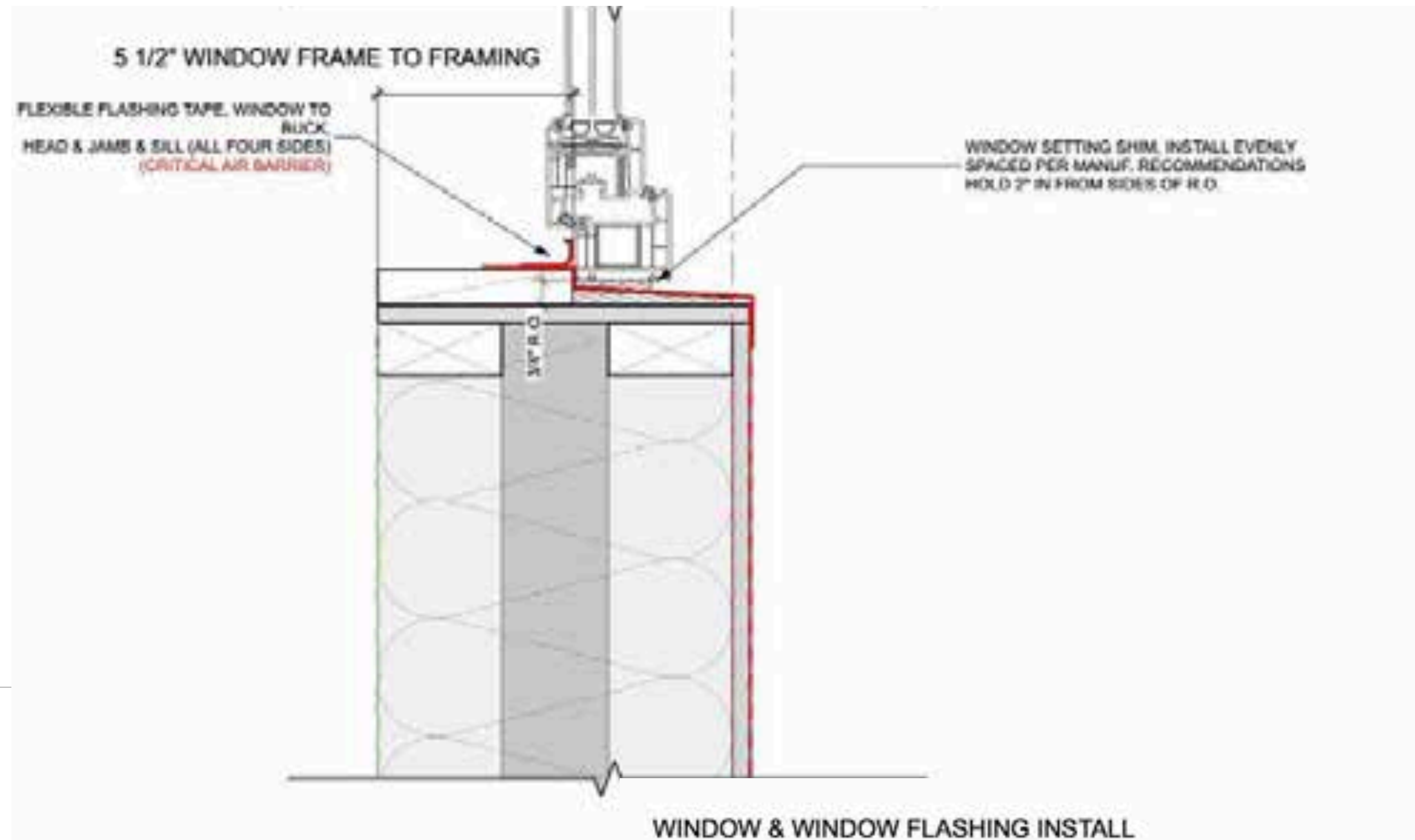
1. INSTALL EXTERIOR FULL ADHERED WRB
2. INSTALL BACK DAM, 5 1/2" DEEP
3. INSTALL SLOPING CLAPBOARD SILL
4. WATERPROOF WITH FLEXIBLE FLASHING UP OVER SLOPING SILL & OVER BACK DAM 2" MIN

### INTERIOR

1. INSTALL INTERIOR VAPOR RETARDER MEMBRANE



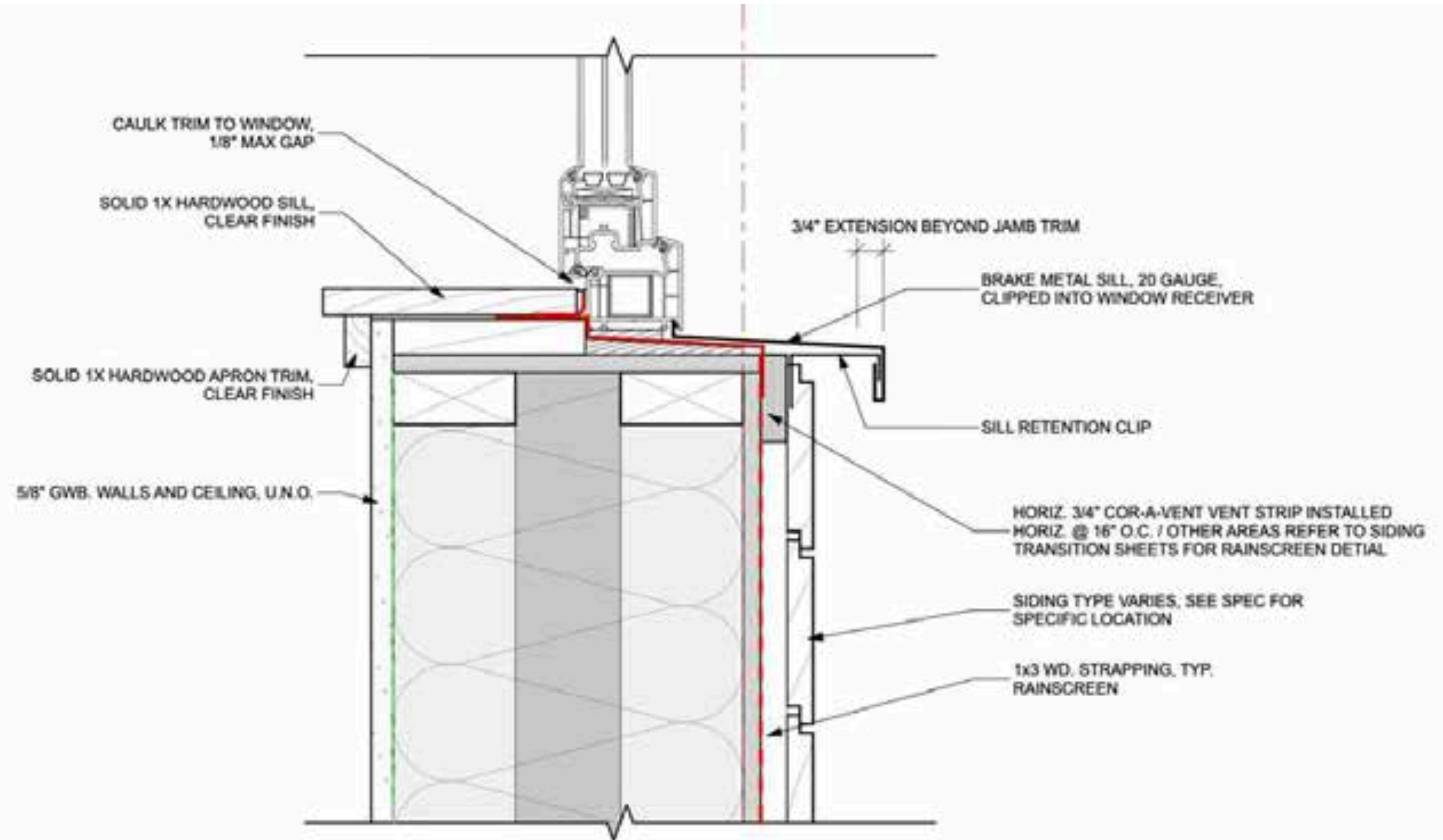
# STEP 2: FACTORY



1. INSTALL TEMPORARY 2X6 SETTING BLOCKS @ INTERIOR FACE OF FRAMING
2. SET WINDOW SETTING SHIMS
3. INSTALL WINDOW TIGHT AGAINST SETTING BLOCKS WITH MASONRY METAL CLIPS
4. REMOVE TEMPORARY WINDOW SETTING BLOCKS
5. INSTALL EXTERIOR FLASHING TAPE 3 SIDES  
HEAD & JAMBS ONLY, NO SILL TAPING ON EXTERIOR
6. INSTALL LOW EXPANSION SPRAY FOAM IN WINDOW R.O
7. INSTALL INTERIOR FLASHING TAPE ALL FOUR SIDES  
ENSURE TAPE EDGE WILL BE CONCEALED BY INTERIOR FINISHES



# STEP 3: FIELD



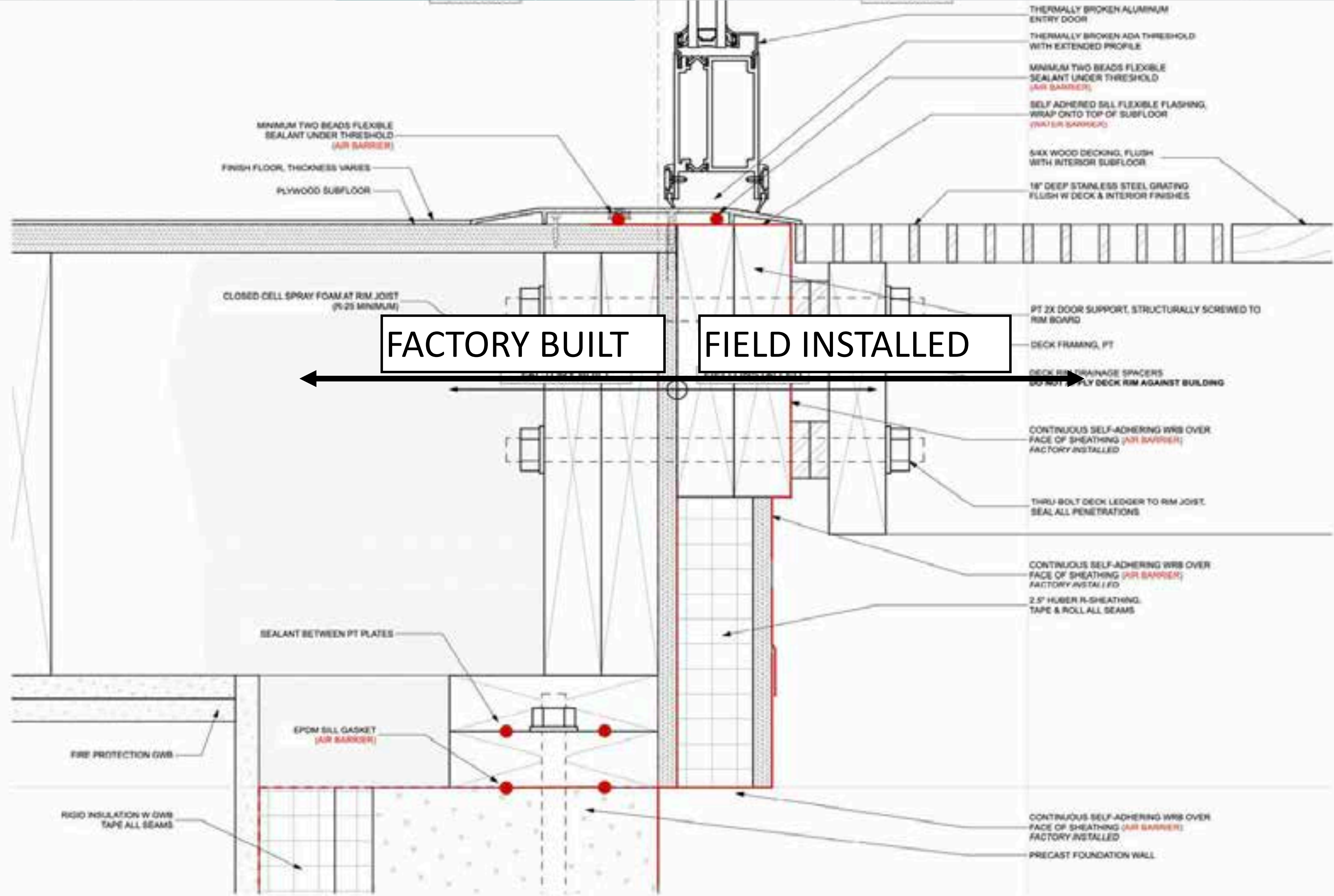
### EXTERIOR (SITE BUILT)

1. INSTALL 1X FURRING ON EXTERIOR
2. INSTALL BUG SCREEN / COR-A-VENT AT ALL HORZ GAPS TOP & BOTTOM
3. INSTALL METAL WINDOW SILL PAN
4. INSTALL HEAD & JAMB TRIM WITH SIMPSON CLIPS TO FACE OF SHEATHING
5. HOLD JAMB TRIM UP 1/4" FROM SILL PAN TO PREVENT CAPILLARY ACTION
6. INSTALL METAL HEAD FLASHING
7. INSTALL EXTERIOR SIDING

### INTERIOR (FACTORY BUILT)

1. INSTALL TEAR-AWAY DRYWALL BEAD
2. INSTALL DRYWALL
3. INSTALL PAINTED PINE JAMB & HEAD INTERIOR TRIM
4. INSTALL WOOD SILL
5. INSTALL WOOD APRON TRIM

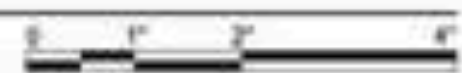




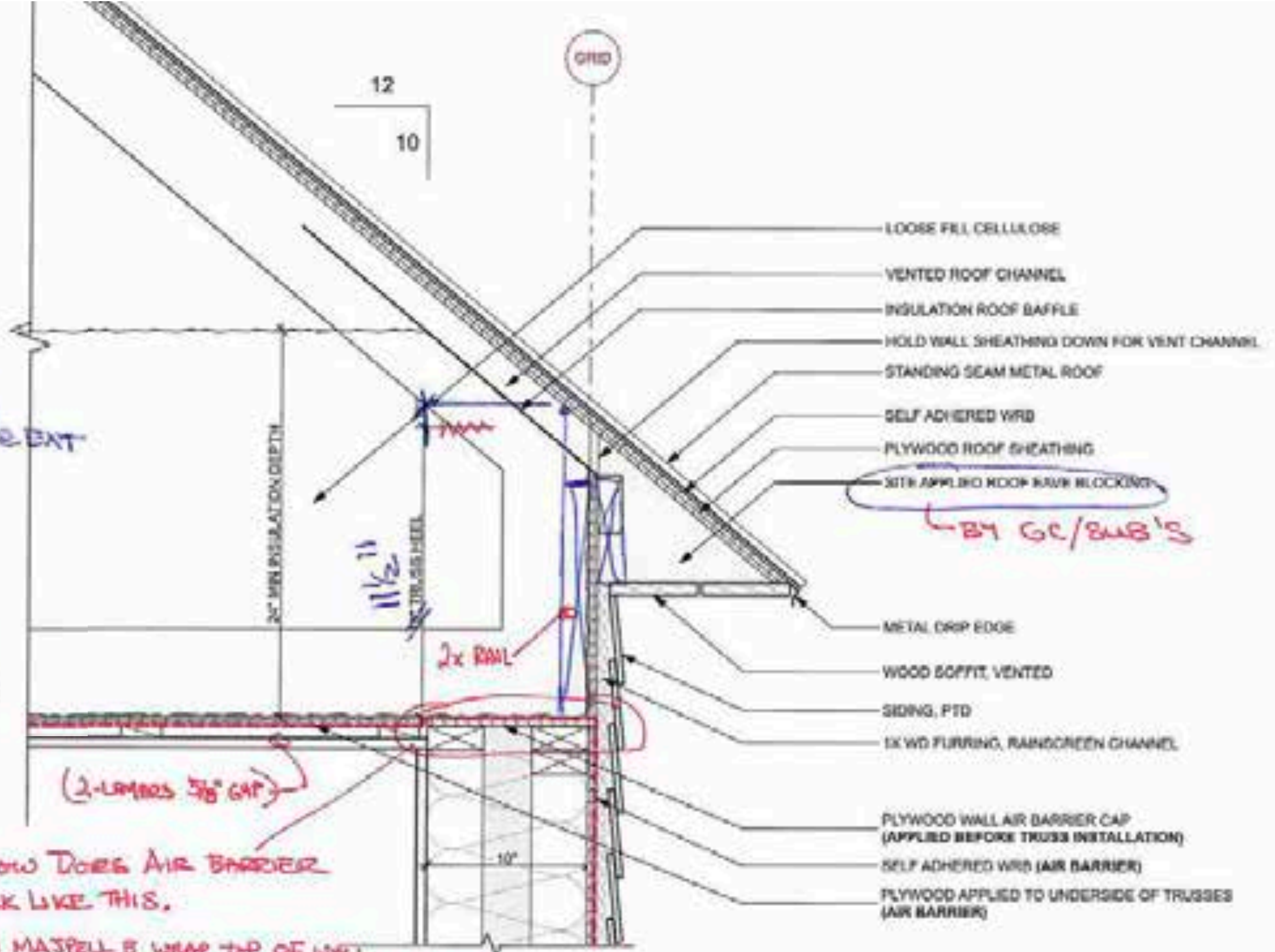
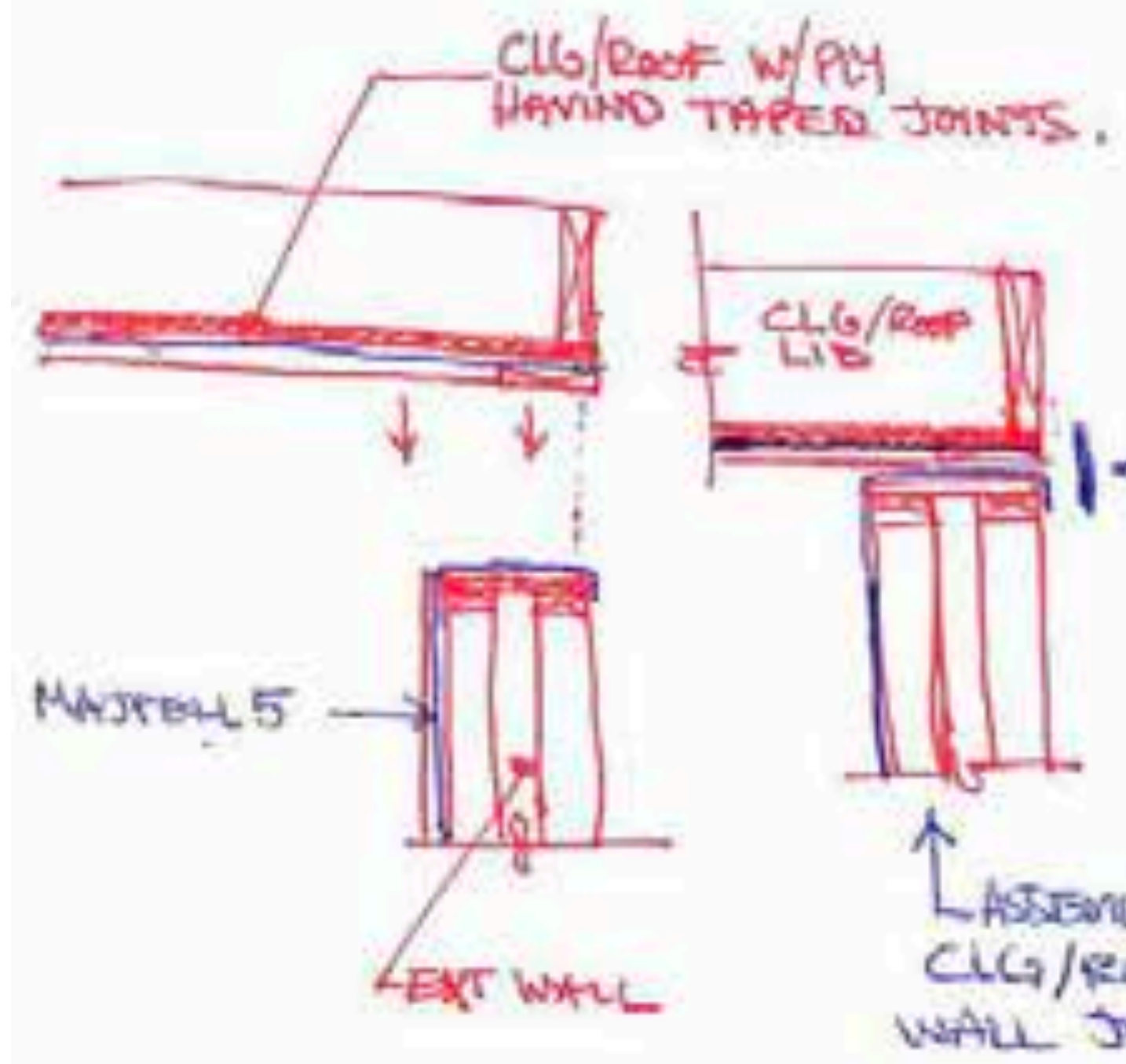
FACTORY BUILT

FIELD INSTALLED

1 DOOR HEAD & SILL DETAILS: STOREFRONT  
SCALE 6" = 1'-0"



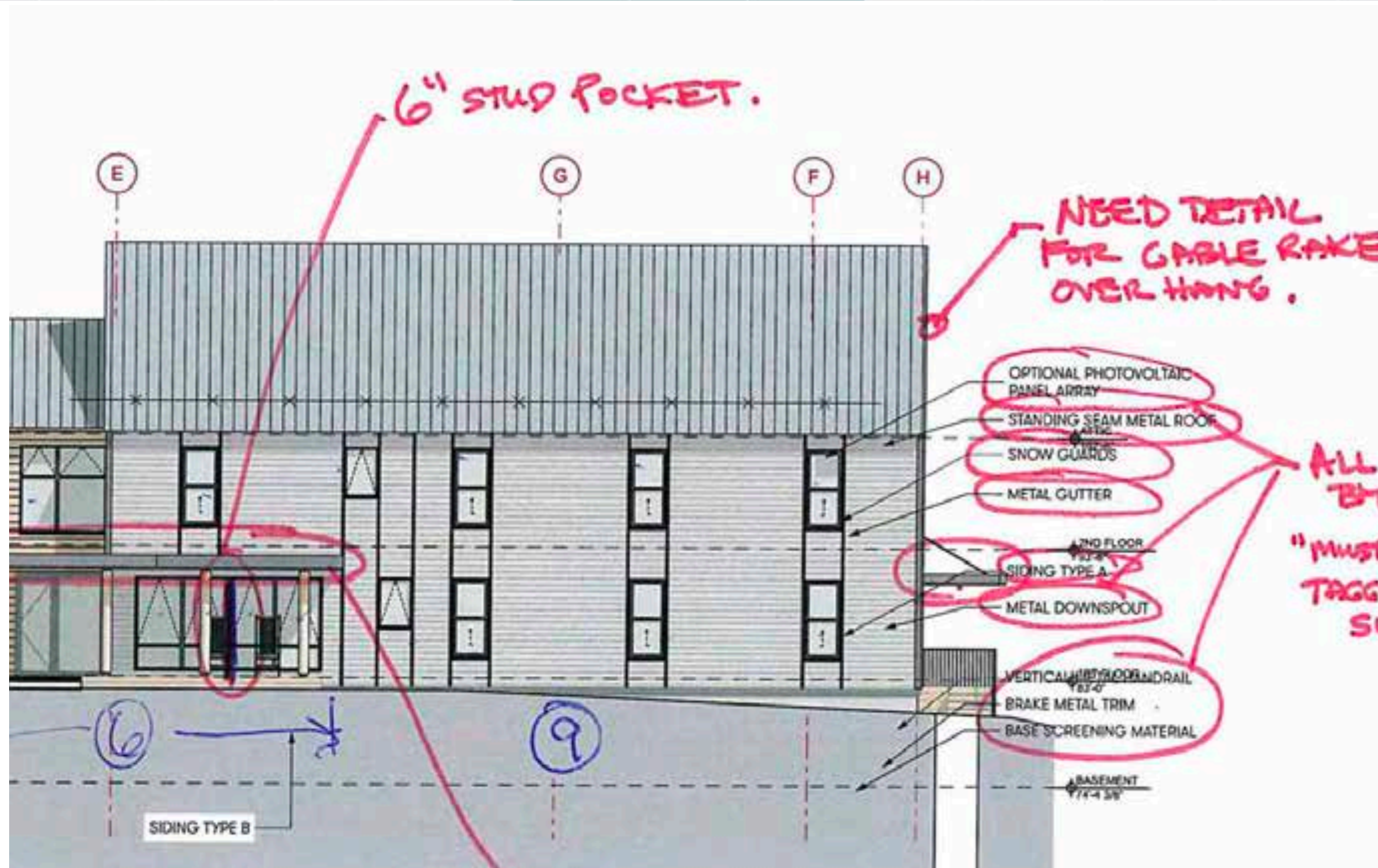




- ① How Does Air Barrier Work Like This.
- ② CAN MAJFEL 5 WRAP TOP OF WALL AND THEN BE TAPED W/ 3M BOLT TAP AT EXT PART. LINE TO SEAL CEILING?

(2-LAYERS 5/8" GAP)





6" STUD POCKET.

NEED DETAIL FOR GABLE RAKE OVER HANG.

- OPTIONAL PHOTOVOLTAIC PANEL ARRAY
- STANDING SEAM METAL ROOF
- SNOW GUARDS
- METAL GUTTER

ALL ON-SITE BY G.C.

"MUST BE TAGGED AS SUCH"

- 2ND FLOOR SIDING TYPE A
- METAL DOWNSPOUT
- VERTICAL WOOD RAIL
- BRAKE METAL TRIM
- BASE SCREENING MATERIAL

SIDING TYPE B

24

WHAT DOES KBS NEED TO DO TO PREP FOR PORCH ROOF?

**Kaplan Thompson Architects**  
 104 Tech Portland  
 1000 Main High

PROJECT  
**Colby College Johnson Pond House**

Colby College  
 Waterville, ME 04117

STRUCTURAL  
**Trillum Engineering Co**  
 189 Main Street, Suite 100  
 Yarmouth, ME 04096  
 p: 207-897-6371

CIVIL  
**VHB**  
 500 South Berwick Dr., Suite 105P  
 South Portland, ME 04106  
 p: 207-889-7190

LANDSCAPE ARCHITECTURE  
**KMDG**  
 69 Canal St., 2nd Floor  
 Boston, MA 02114  
 p: 617-227-2560

MECHANICAL & PLUMBING  
**DESIGN DAY MECHANICAL**  
 PO Box 447  
 New Ipswich, NH 03071  
 p: 207-887-0471

ELECTRICAL  
**ENTERPRISE ELECTRIC**  
 46 Capital Ave  
 Lisbon Falls, ME 04152  
 p: 207-933-6117

MODULAR  
**KBS BUILDERS, INC.**  
 100 Park Street

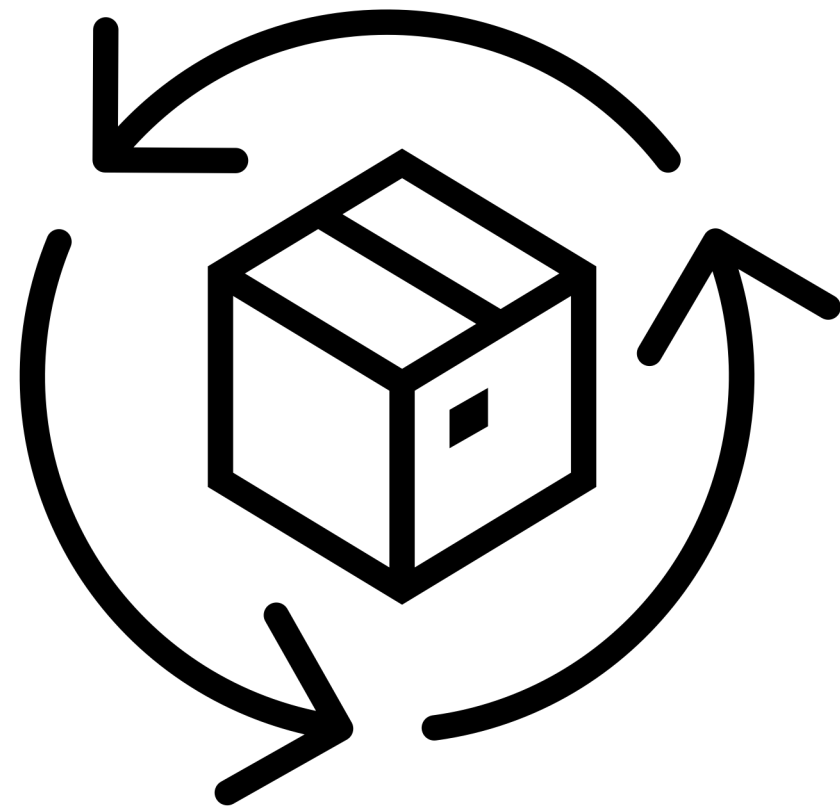


---

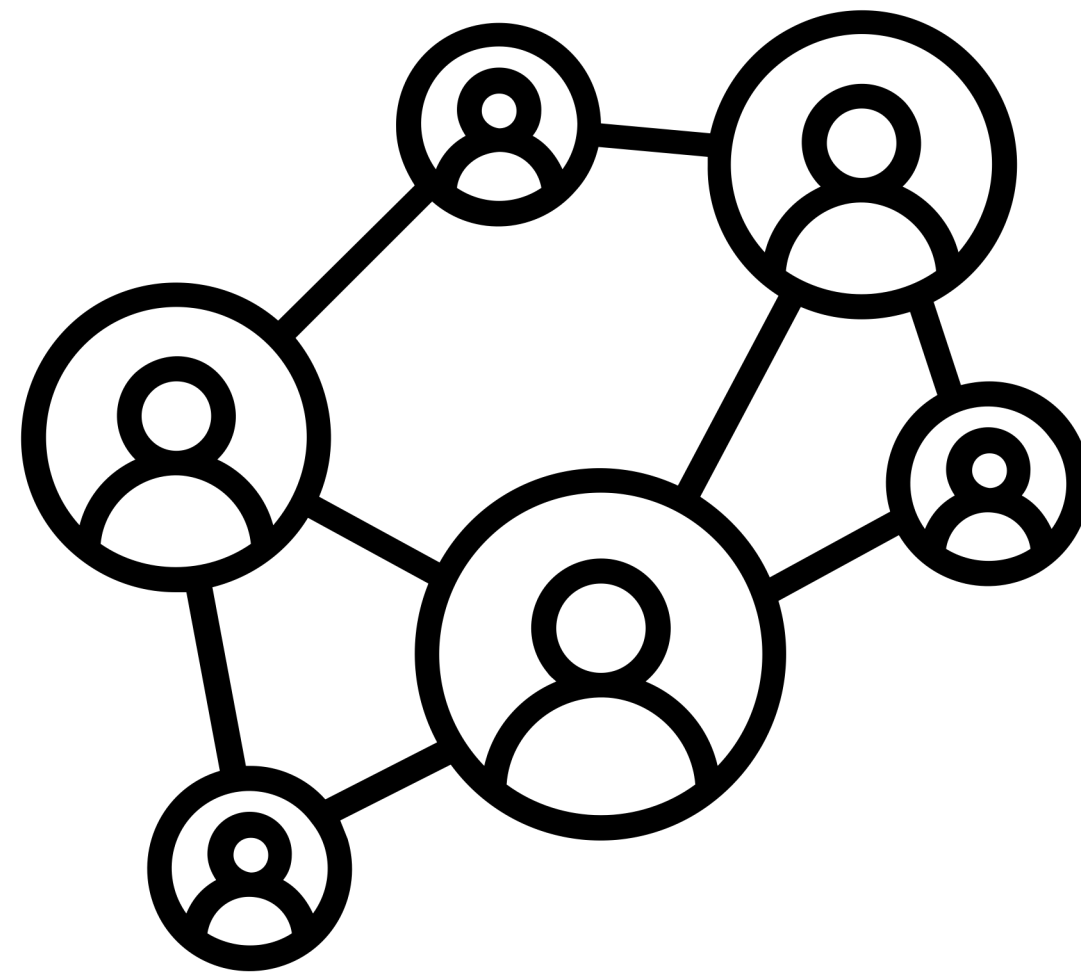
# Schedule & Supply Chain



What



Who



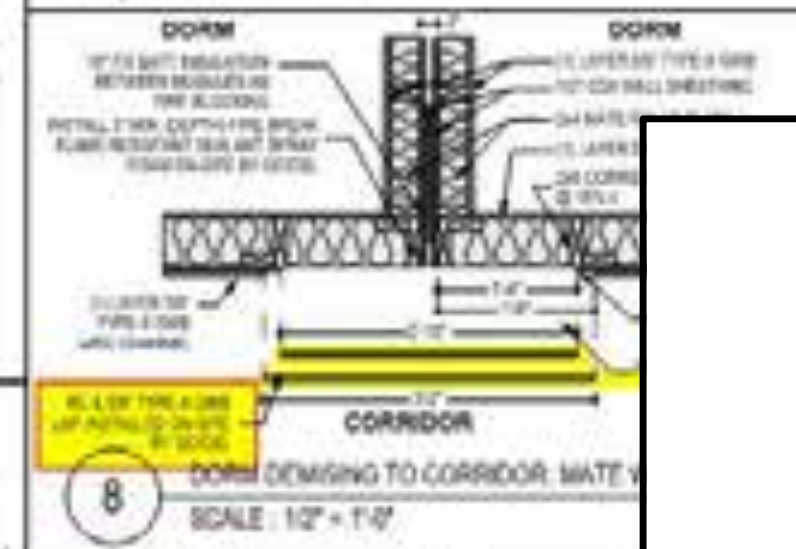
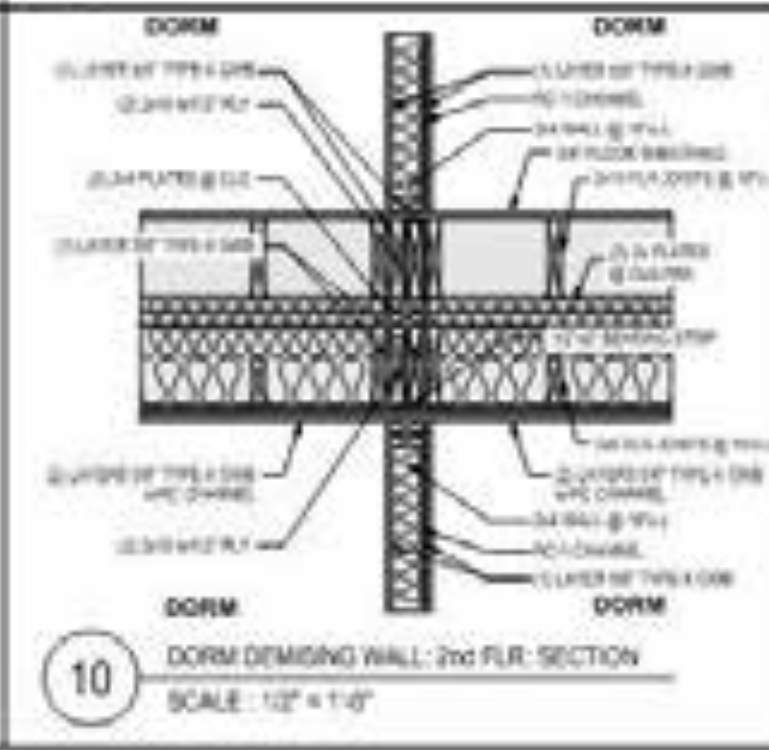
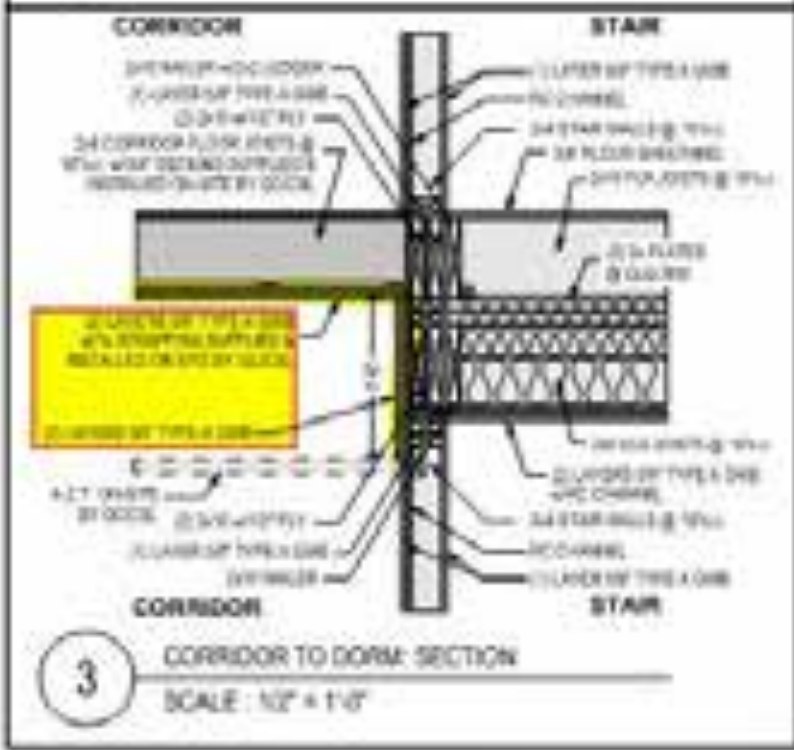
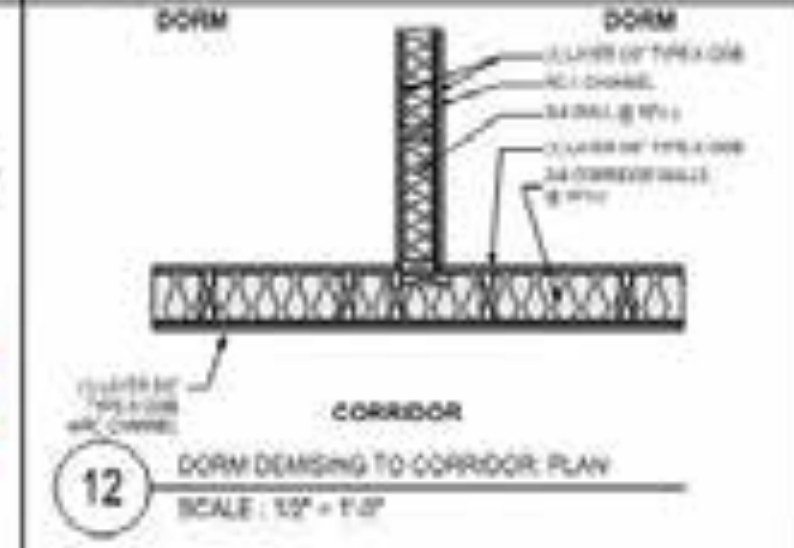
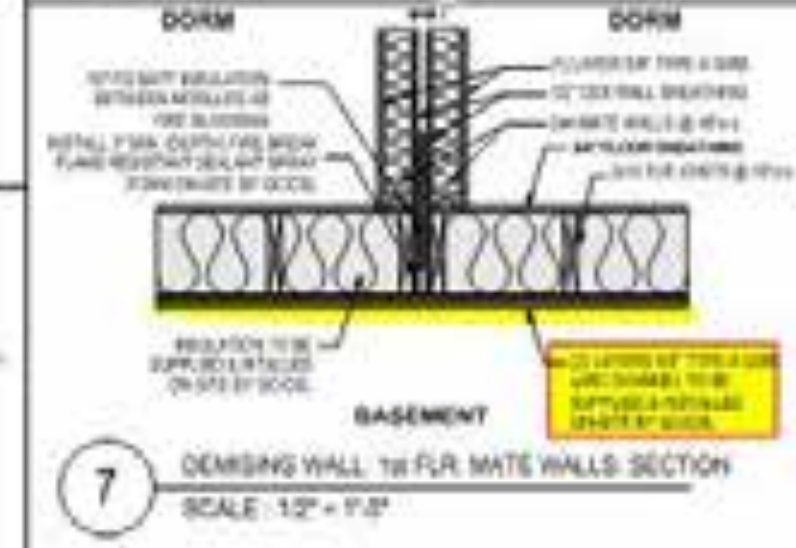
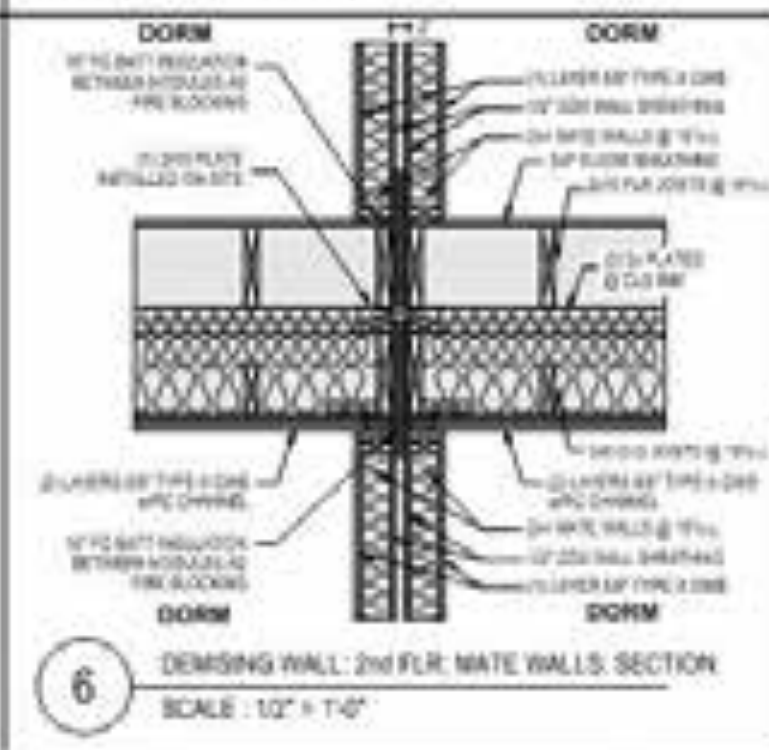
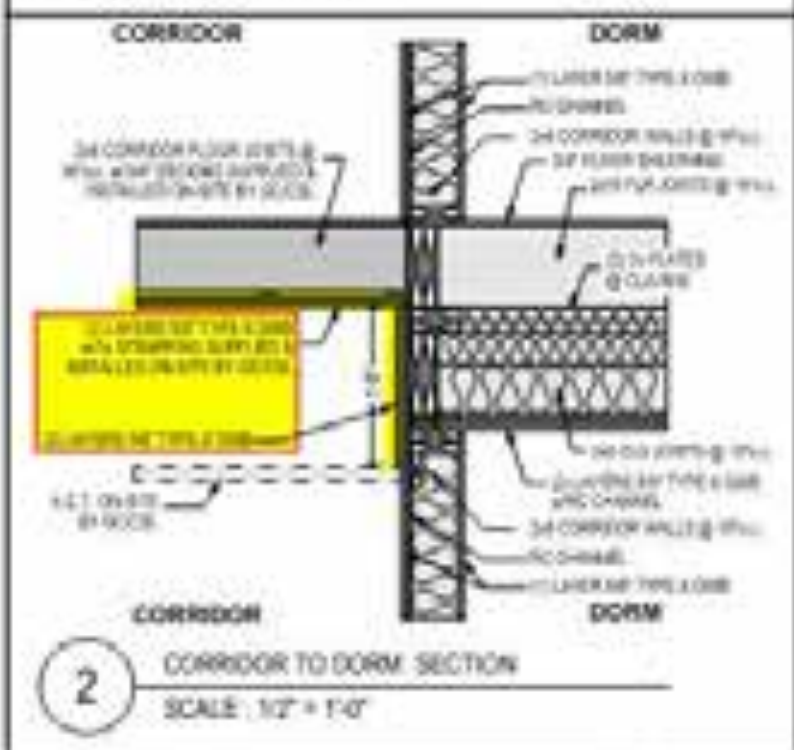
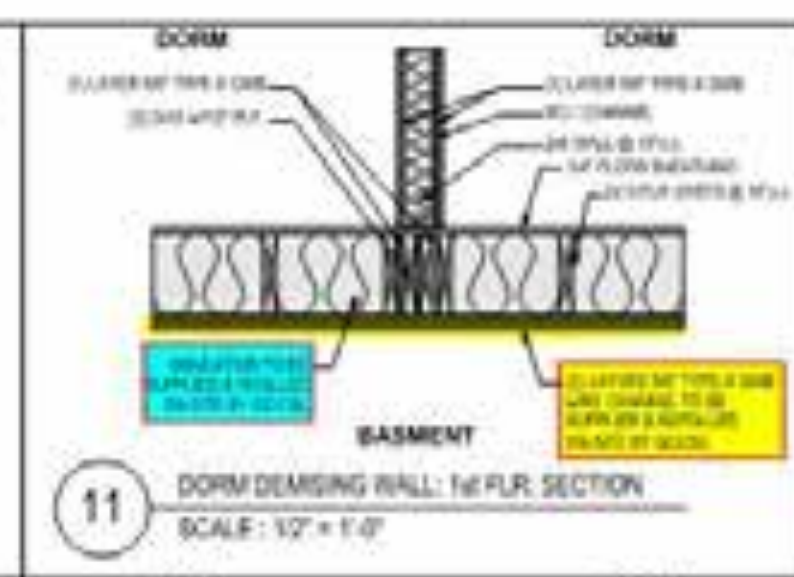
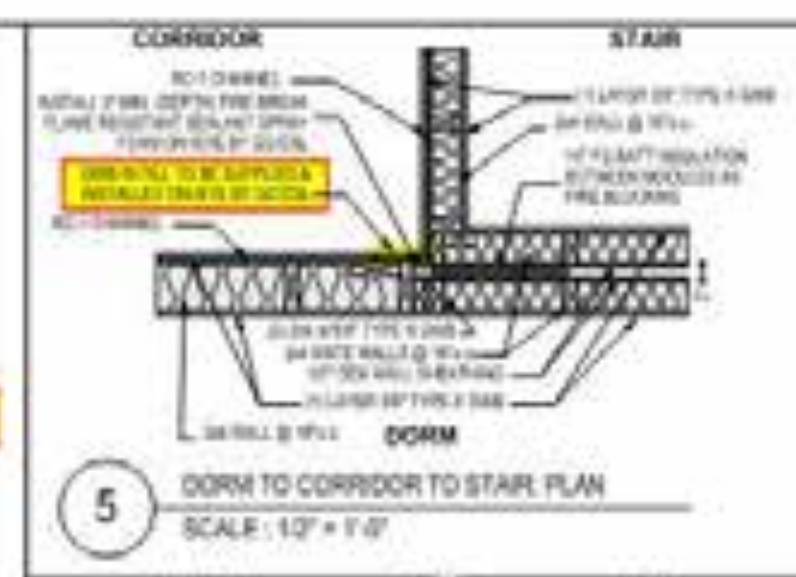
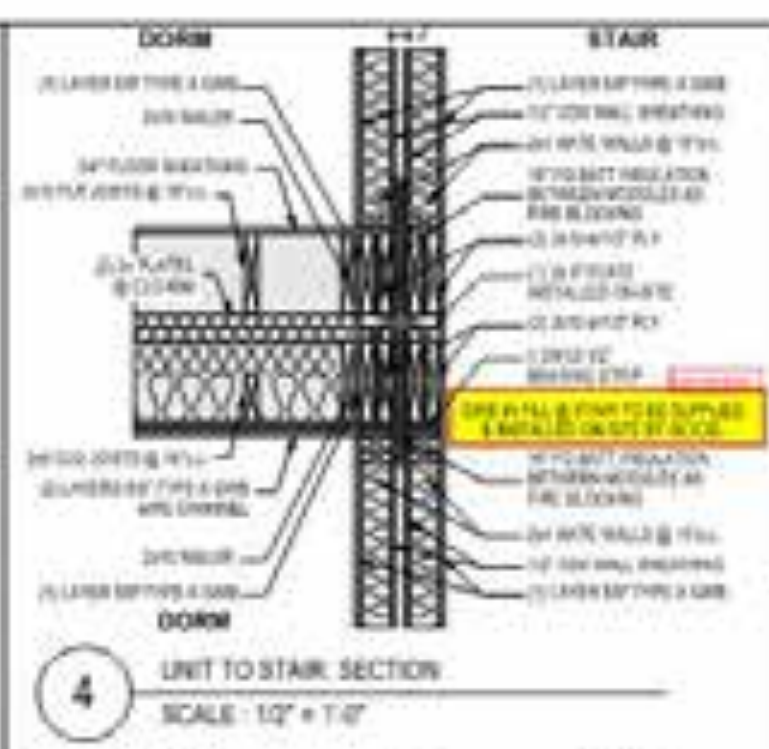
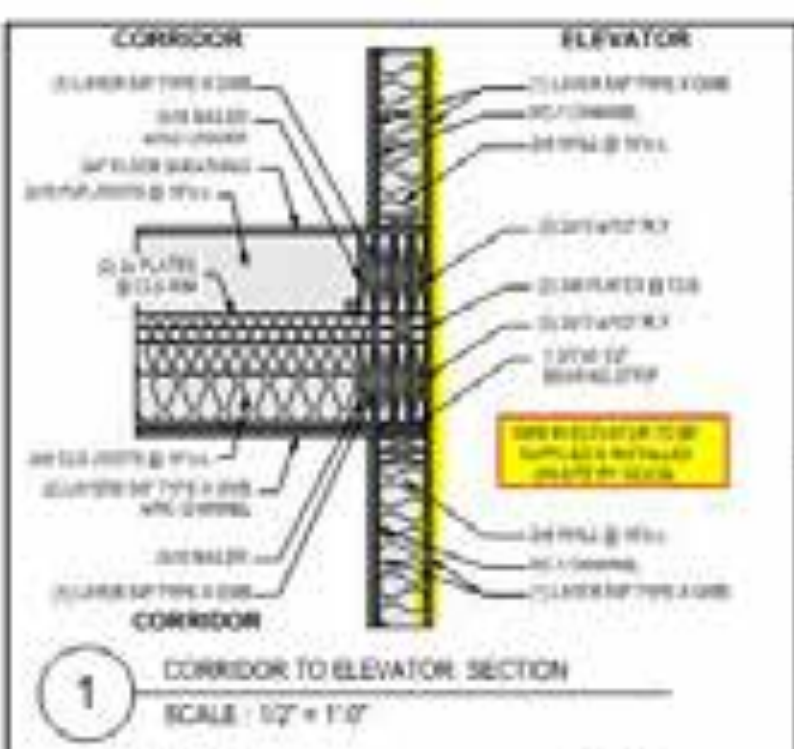
How



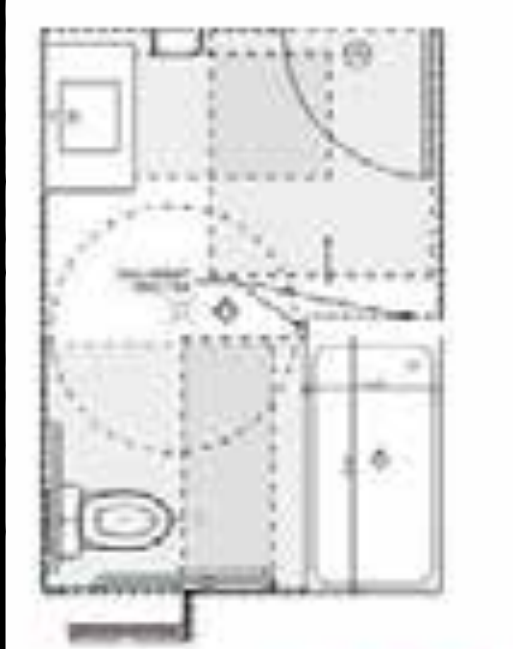


| JUL  | AUG  | SEPT | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG                       | SEPT | OCT | NOV | DEC |
|--|--|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|---------------------------|------|-----|-----|-----|
| >  | Weather Barrier: Siga Majvest 500 SA (ILO STD)   |      |     |     |     |     |     |     |     |     |     |     |                           |      |     |     |     |
| >  | Tyvek joints and overlaps secured on site <b>By Set Crew</b>   |      |     |     |     |     |     |     |     |     |     |     |                           |      |     |     |     |
| >  | Flashing System:   |      |     |     |     |     |     |     |     |     |     |     |                           |      |     |     |     |
| .  | <b>Windows:</b> SIGA Wigluv sill pans and Pre Flashing with SIGA Fentrim Flashing applied at sides and top                 |      |     |     |     |     |     |     |     |     |     |     |                           |      |     |     |     |
| .  | <b>Doors:</b> Jamsill Guard sill pans with SIGA Fentrim Flashing applied at sides and top                                  |      |     |     |     |     |     |     |     |     |     |     |                           |      |     |     |     |
| .  | <b>Penetrations:</b> SIGA Fentrim Flashing applied at all penetrations through the wall                                    |      |     |     |     |     |     |     |     |     |     |     |                           |      |     |     |     |
| .  | <b>Seams:</b> N/A  |      |     |     |     |     |     |     |     |     |     |     |                           |      |     |     |     |
| .  | All Box to Box overlaps/seams to be completed by the Set Crew in the field   |      |     |     |     |     |     |     |     |     |     |     |                           |      |     |     |     |
| .  | <b>SHEETROCK:</b>  |      |     |     |     |     |     |     |     |     |     |     |                           |      |     |     |     |
| <b>WALLS:</b>                              |  |      |     |     |     |     |     |     |     |     |     |     |                           |      |     |     |     |
| >  | 5/8" Thick Sheetrock Throughout  |      |     |     |     |     |     |     |     |     |     |     |                           |      |     |     |     |
|  | Resilient Channel for Corridor Walls   |      |     |     |     |     |     |     |     |     |     |     |                           |      |     |     |     |
| >  | Double Layer 5/8" Sheetrock at Stairwell Locations   |      |     |     |     |     |     |     |     |     |     |     |                           |      |     |     |     |
| >  | Sheetrock Infill at the Stairwells is to be installed on site <b>By General Contractor</b>                                 |      |     |     |     |     |     |     |     |     |     |     |                           |      |     |     |     |
| <b>CEILINGS:</b>                           |  |      |     |     |     |     |     |     |     |     |     |     |                           |      |     |     |     |
| >  | 5/8" Thick Type "C" Sheetrock at Ceilings  |      |     |     |     |     |     |     |     |     |     |     |                           |      |     |     |     |
| >  | 5/8" Thick Type "C" Moisture Resistant Sheetrock at Ceilings in Bathrooms  |      |     |     |     |     |     |     |     |     |     |     |                           |      |     |     |     |
|  | 2 Layers of 5/8" Sheetrock at Corridor Ceilings  |      |     |     |     |     |     |     |     |     |     |     |                           |      |     |     |     |
|  | Corridor Ceiling Sheetrock Infill at Box Connections to be supplied, installed and Fire Taped <b>By General Contractor</b> |      |     |     |     |     |     |     |     |     |     |     |                           |      |     |     |     |
|  | 1st and 2nd Layer Marriage Wall Seam completion at Corridor Ceiling to be completed on site <b>By General Contractor</b>   |      |     |     |     |     |     |     |     |     |     |     |                           |      |     |     |     |
|  | ####   |      |     |     |     |     |     |     |     |     |     |     |                           |      |     |     |     |
|  | Suspended Ceilings to be installed in Stairwells, Corridors and Common Areas <b>By General Contractor</b>                  |      |     |     |     |     |     |     |     |     |     |     |                           |      |     |     |     |
| <b>FINISH: Level 3 Finish from Factory</b> |  |      |     |     |     |     |     |     |     |     |     |     |                           |      |     |     |     |
| >  | Primer: Sherwin Williams "Builders Solution" Interior Latex  |      |     |     |     |     |     |     |     |     |     |     | Color: <b>White</b>       |      | STD |     |     |
| >  | Wall and Ceiling Paint: Sherwin Williams "Promar 400" Interior Latex Flat  |      |     |     |     |     |     |     |     |     |     |     | Color: <b>Dover White</b> |      | STD |     |     |
| >  | All seams and screws taped and mudded with two coats   |      |     |     |     |     |     |     |     |     |     |     |                           |      |     |     |     |
| >  | Repair all stress cracks due to shipping and set <b>By General Contractor</b>  |      |     |     |     |     |     |     |     |     |     |     |                           |      |     |     |     |
| >  | Repair all plumbing and electrical access holes at walls and/or ceilings <b>By General Contractor</b>                      |      |     |     |     |     |     |     |     |     |     |     |                           |      |     |     |     |
| >  | Additional access holes required/created by on site subs to be made and completed <b>By General Contractor</b>             |      |     |     |     |     |     |     |     |     |     |     |                           |      |     |     |     |
| >  | All walls and ceilings are primer only (may see paint flashing)  |      |     |     |     |     |     |     |     |     |     |     |                           |      |     |     |     |
| >  | Prime coat all areas repaired <b>By General Contractor</b> (may see paint flashing)  |      |     |     |     |     |     |     |     |     |     |     |                           |      |     |     |     |
| >  | Finish coat of paint for <b>All Areas</b> supplied and installed on site <b>By General Contractor</b>                      |      |     |     |     |     |     |     |     |     |     |     |                           |      |     |     |     |

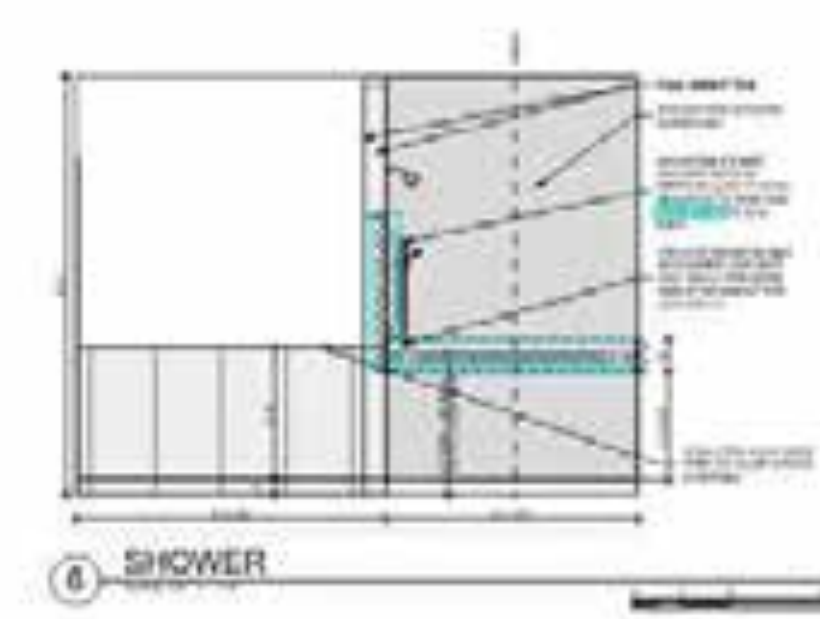
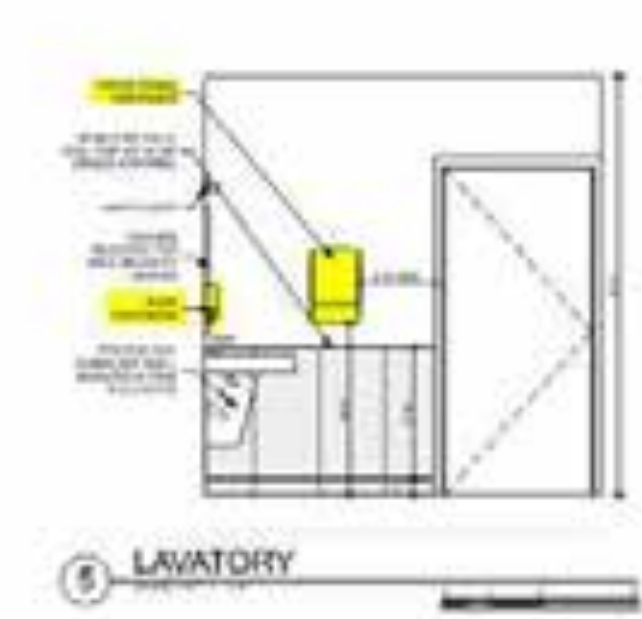




- Supplied by K&S, INSTALLED on-site by Specialties Sub
- Supplied by K&S and installed in Factory
- Supplied by Owner and installed on-site by Specialties Sub
- Furnished & installed on-site by Specialties Sub



ADAAG BATH x7 / Building





 Furnished & Installed by KBS in Factory

 Furnished by Others - Installed in the Field by Flooring Sub

 Furnished & Installed by Floor Sub

Clouded Transitions Installed On-site & Furnished by Flooring Sub

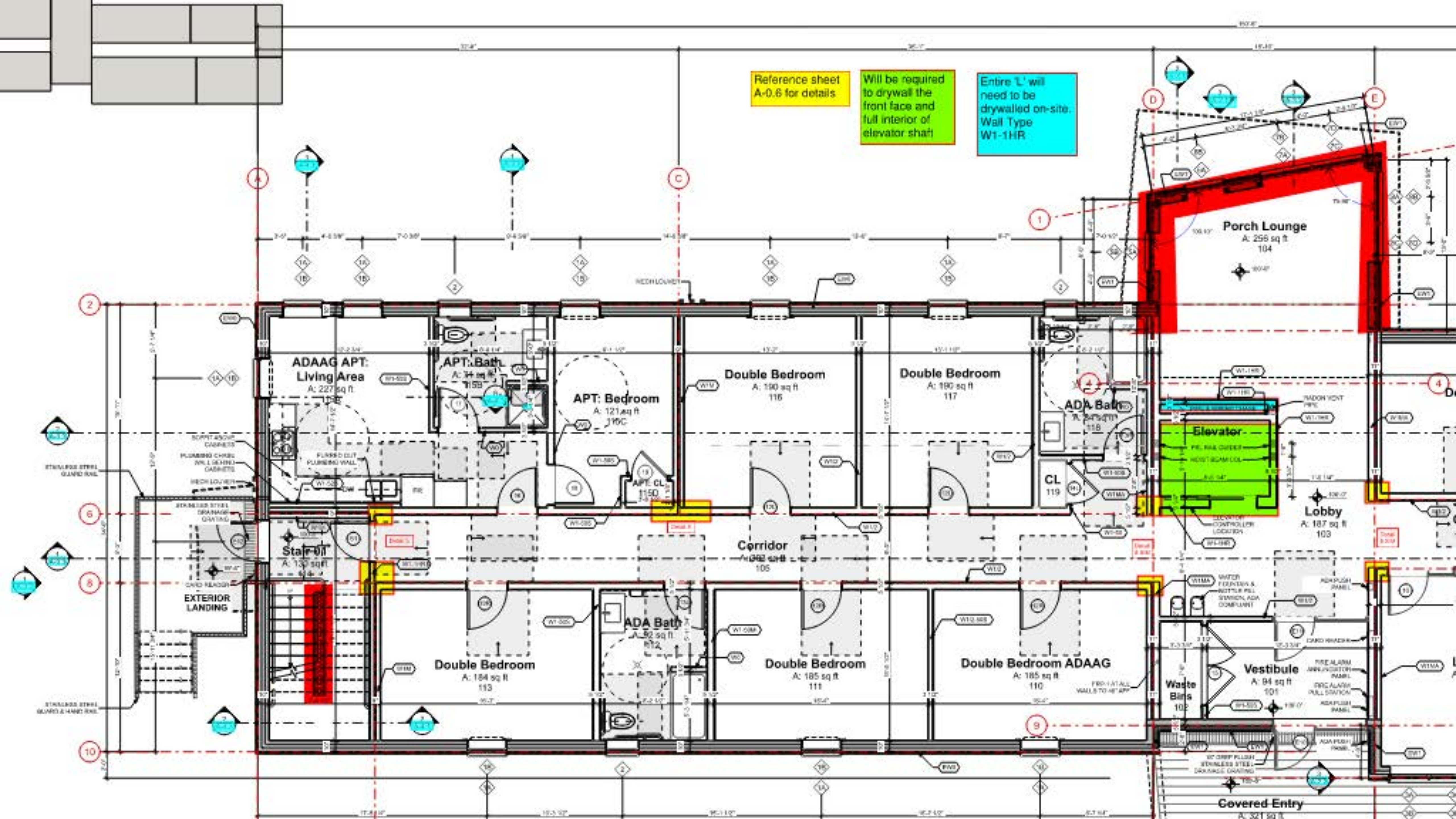




Reference sheet  
A-0.6 for details

Will be required  
to drywall the  
front face and  
full interior of  
elevator shaft

Entire 'L' will  
need to be  
drywalled on-site.  
Wall Type  
W1-1HR





| Online:                              |  | Offline:  |                                      |  |
|--------------------------------------|--|-----------|--------------------------------------|--|
| WEEK 16                              |  | Mon       | 4/11/2022                            |  |
|                                      |  | Tues      | 4/12/2022                            |  |
|                                      |  | Tues      | 4/12/2022                            |  |
|                                      | KBS-3560 - Colby College - Box 1-1-1         | Wed       | 4/13/2022                            |  |
|                                      | KBS-3560 - Colby College - Box 1-1-2/ 1-1-7  | Wed       | 4/13/2022                            |  |
|                                      | KBS-3560 - Colby College - Box 1-1-3 / 1-1-8 | Thur      | 4/14/2022                            |  |
|                                      | KBS-3560 - Colby College - Box 1-1-4         | Thur      | 4/14/2022                            |  |
| KBS-3560 - Colby College - Box 1-1-5 | Fri  | 4/15/2022 |                                      |  |
| WEEK 17                              | KBS-3560 - Colby College - Box 1-1-6         | Mon       | 4/18/2022                            |  |
|                                      | KBS-3560 - Colby College - Box 1-1-9         | Tues      | 4/19/2022                            |  |
|                                      | KBS-3560 - Colby College - Box 1-2-1         | Tues      | 4/19/2022                            |  |
|                                      | KBS-3560 - Colby College - Box 1-2-2/ 1-2-7  | Wed       | 4/20/2022                            |  |
|                                      | KBS-3560 - Colby College - Box 1-2-3 / 1-2-8 | Wed       | 4/20/2022                            |  |
|                                      | KBS-3560 - Colby College - Box 1-2-4         | Thur      | 4/21/2022                            |  |
|                                      | KBS-3560 - Colby College - Box 1-2-5         | Thur      | 4/21/2022                            |  |
| KBS-3560 - Colby College - Box 1-2-6 | Fri  | 4/22/2022 |                                      |  |
| WEEK 18                              | KBS-3560 - Colby College - Box 1-2-9         | Mon       | 4/25/2022                            |  |
|                                      | KBS-3582 - Colby College - Box 2-1-1         | Tues      | 4/26/2022                            |  |
|                                      | KBS-3582 - Colby College - Box 2-1-2/ 2-1-7  | Tues      | 4/26/2022                            | KBS-3560 - Colby College - Box 1-1-1         |
|                                      | KBS-3582 - Colby College - Box 2-1-3 / 2-1-8 | Wed       | 4/27/2022                            | KBS-3560 - Colby College - Box 1-1-2/ 1-1-7  |
|                                      | KBS-3582 - Colby College - Box 2-1-4         | Wed       | 4/27/2022                            | KBS-3560 - Colby College - Box 1-1-3 / 1-1-8 |
|                                      | KBS-3582 - Colby College - Box 2-1-5         | Thur      | 4/28/2022                            | KBS-3560 - Colby College - Box 1-1-4         |
|                                      | KBS-3582 - Colby College - Box 2-1-6         | Thur      | 4/28/2022                            | KBS-3560 - Colby College - Box 1-1-5         |
| KBS-3582 - Colby College - Box 2-1-9 | Fri  | 4/29/2022 | KBS-3560 - Colby College - Box 1-1-6 |  |
| WEEK 19                              | KBS-3582 - Colby College - Box 2-2-1         | Mon       | 5/2/2022                             | KBS-3560 - Colby College - Box 1-1-9         |
|                                      | KBS-3582 - Colby College - Box 2-2-2/ 2-2-7  | Tues      | 5/3/2022                             | KBS-3560 - Colby College - Box 1-2-1         |
|                                      | KBS-3582 - Colby College - Box 2-2-3 / 2-2-8 | Tues      | 5/3/2022                             | KBS-3560 - Colby College - Box 1-2-2/ 1-2-7  |
|                                      | KBS-3582 - Colby College - Box 2-2-4         | Wed       | 5/4/2022                             | KBS-3560 - Colby College - Box 1-2-3 / 1-2-8 |
|                                      | KBS-3582 - Colby College - Box 2-2-5         | Wed       | 5/4/2022                             | KBS-3560 - Colby College - Box 1-2-4         |
|                                      | KBS-3582 - Colby College - Box 2-2-6         | Thur      | 5/5/2022                             | KBS-3560 - Colby College - Box 1-2-5         |
|                                      | KBS-3582 - Colby College - Box 2-2-9         | Thur      | 5/5/2022                             | KBS-3560 - Colby College - Box 1-2-6         |
|                                      | Fri  | 5/6/2022  | KBS-3560 - Colby College - Box 1-2-9 |  |
| WEEK 20                              |  | Mon       | 5/9/2022                             | KBS-3582 - Colby College - Box 2-1-1         |
|                                      |  | Tues      | 5/10/2022                            | KBS-3582 - Colby College - Box 2-1-2/ 2-1-7  |
|                                      |  | Tues      | 5/10/2022                            | KBS-3582 - Colby College - Box 2-1-3 / 2-1-8 |
|                                      |  | Wed       | 5/11/2022                            | KBS-3582 - Colby College - Box 2-1-4         |
|                                      |  | Wed       | 5/11/2022                            | KBS-3582 - Colby College - Box 2-1-5         |
|                                      |  | Thur      | 5/12/2022                            | KBS-3582 - Colby College - Box 2-1-6         |
|                                      |  | Thur      | 5/12/2022                            | KBS-3582 - Colby College - Box 2-1-9         |
|                                      | Fri  | 5/13/2022 | KBS-3582 - Colby College - Box 2-2-1 |  |
| WEEK 21                              |  | Mon       | 5/16/2022                            | KBS-3582 - Colby College - Box 2-2-2/ 2-2-7  |
|                                      |  | Tues      | 5/17/2022                            | KBS-3582 - Colby College - Box 2-2-3 / 2-2-8 |
|                                      |  | Tues      | 5/17/2022                            | KBS-3582 - Colby College - Box 2-2-4         |
|                                      |  | Wed       | 5/18/2022                            | KBS-3582 - Colby College - Box 2-2-5         |
|                                      |  | Wed       | 5/18/2022                            | KBS-3582 - Colby College - Box 2-2-6         |
|                                      | Thur   | 5/19/2022 | KBS-3582 - Colby College - Box 2-2-9 |  |

April 14<sup>th</sup> – 1<sup>st</sup> Box Online 6 months after request for fully accessible buildings

April 25<sup>th</sup> – 1<sup>st</sup> Building Fully Online

May 6<sup>th</sup> – 1<sup>st</sup> Building Offline 3 Weeks After

May 19<sup>th</sup> – 2<sup>nd</sup> Building Offline 5 Weeks After Start of Production





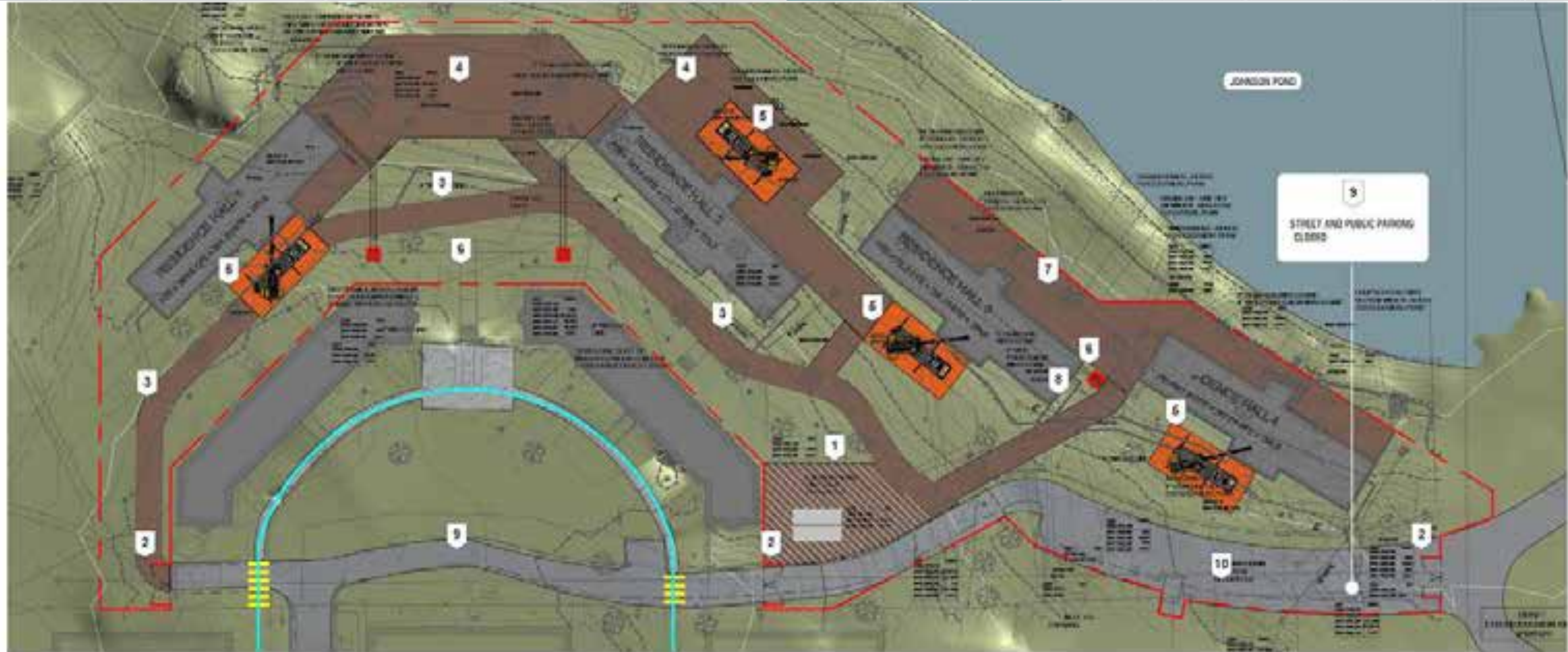




## Colby College Johnson Pond Houses - MILESTONES

| Activity                                     | Scheduled Completion | Actual Completion                  |
|--|----------------------|------------------------------------|
| # Elevator PDI/ABM/Ents.                     | Start 6/29?          |                                    |
| #1 Basement MEP Rough (Plumb, Elec Controls) | 6/21, 7/5, 7/7       | 6/24, 7/5, 7/7                     |
| #1 Above Ceiling 100% - Full Building        | 7/8                  |                                    |
| #1 Ceilings Floored/Complete                 | 7/15                 |                                    |
| #1 BATHROOM TILE COMPLETE                    | 7/29                 |                                    |
| #2 Elevator Shaft Ready for Startey !!!      | 6/24                 | 7/5?                               |
| #2 Basement MEPs (Elec, Plumbing) !!!        | 7/5                  | * 7/26                             |
| #2 Basement Drywall + Paint Complete !!!     | 8/1                  | * 8/9                              |
| #4 PEE LAST COMPLETE !!!                     | 7/12                 | * 7/19                             |
| HEADS IN BEDS !!!!!                          | 8/26 <sup>th</sup>   | <u>31</u> days left <sup>1/6</sup> |





**LEGEND**

**KEY NOTES**

-  PEDESTRIAN ACCESS
-  CONSTRUCTION FENCE BARRIER
-  LANDSCAPE PROTECTION

- 1** ONE TRUCK AND PARKING
- 2** GATED CONSTRUCTION ACCESS
- 3** 10 FT WIDE ROAD
- 4** EQUIPMENT AND MATERIAL LAYOUT
- 5** JUMP DRAIN PAD
- 6** CONSTRUCTION TRAP WATER AND JUMP LINE
- 7** DRIVE PATH FOR MACHINERY TO ACCESS SIDING
- 8** BOOM LIFT REQUIRED FOR ACCESS
- 9** CONCERN TO CLOSE ROAD FOR CONSTRUCTION ACCESS THROUGH 8/1/2022
- 10** PARKING CLOSED THROUGH 8/1/2022





## LEGEND



PEDESTRIAN ACCESS



CONSTRUCTION FENCE/WISDOM



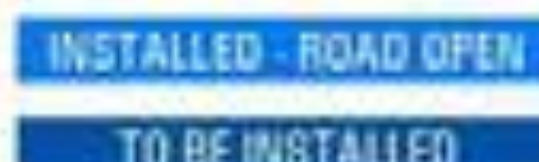
LANDSCAPE PROTECTION



RES HALL  
OPENING 2022



RES HALL  
OPENING OCT / JAN



INSTALLED - ROAD OPEN  
TO BE INSTALLED  
TEMPORARY ROAD PAVING

## KEY NOTES



1 RED OPEN ROAD TO PUBLIC TRAFFIC



2 OPEN NEW ROAD TO RES HALL 1 AND 2



3 TEMP STANDS UNTIL SPRING 2023



4 CONSTRUCTION ENTRY LOCATIONS



5 SECOND HEAVY AREA FOR RES HALL 3 AND 4



6 STORAGE AREA



7 OFFICE TRAILER / STORAGE CONTAINERS



8 EQUIPMENT PARKING AREA

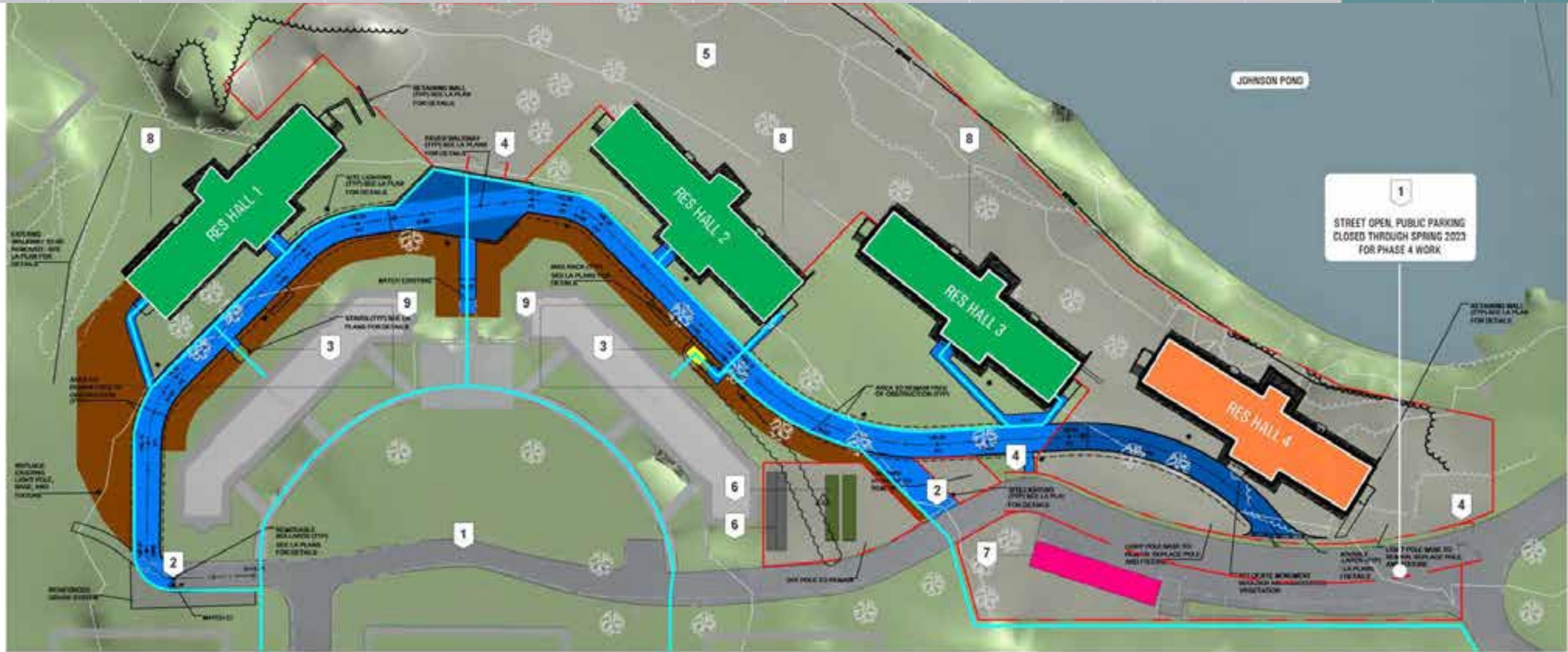


9 MAINTAIN ACCESS FOR DEBRIS/METAL/LANDSCAPING ACCOMPANY










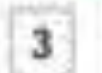



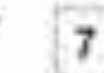

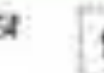


10 LANDSCAPING TO BE COMPLETED DURING PHASE 2





### LEGEND

-   
**PEDESTRIAN ACCESS**
-   
**CONSTRUCTION FENCE W/SCRIM**
-   
**LANDSCAPE PROTECTION**
-   
**RES HALL**  
 OPENING AUG 2022
-   
**RES HALL**  
 OPENING OCT / JAN
-   
**INSTALLED - ROAD OPEN**
-   
**INSTALLED - NOT OPEN**  
 TEMPORARY ROAD PAVING
-   
**1** REOPEN ROAD TO PUBLIC TRAFFIC
-   
**2** OPEN NEW ROAD TO RES HALL 1 AND 2
-   
**3** TEMP STAIRS UNTIL SPRING 2023
-   
**4** CONSTRUCTION GATE LOCATIONS
-   
**5** SECURED WORK AREA FOR RES HALL 4
-   
**6** OFFICE TRAILER / STORAGE CONTAINERS
-   
**7** EQUIPMENT PARKING AREA
-   
**8** MAINTAIN ACCESS FOR SIDING INSTALL. LANDSCAPING INCOMPLETE
-   
**9** LANDSCAPING TO BE COMPLETED DURING PHASE 3

### KEY NOTES

**1**  
 STREET OPEN, PUBLIC PARKING CLOSED THROUGH SPRING 2023 FOR PHASE 4 WORK



Tuesday  
8.16 Top 5

- Transformer Install
- Finish lobby tile Bldg 1
- Pre-Punch Rooms in Bldg 2
- Flood Ceilings in Bldg 2
- Pre-Punch Bldg 1 Common spaces
- \* **FINAL CLEAN**  
**D-DAY**

Wednesday  
8.17 Top 5

- Final Paint Bldg 1 Stair
- Complete install of all ext. WAP/camera etc
- Complete all door thresholds
- Final Paint Bldg 2
- Complete fine grading
- \* All of Bldg 1 must be punched







Milobones Week of  
7/15 -> Complex Prep  
7/15 -> Complex Mobil. Set  
7/14 -> K&S on site prep  
7/6 -> ABM Fresh start  
7/5 -> Box prep in Bldg

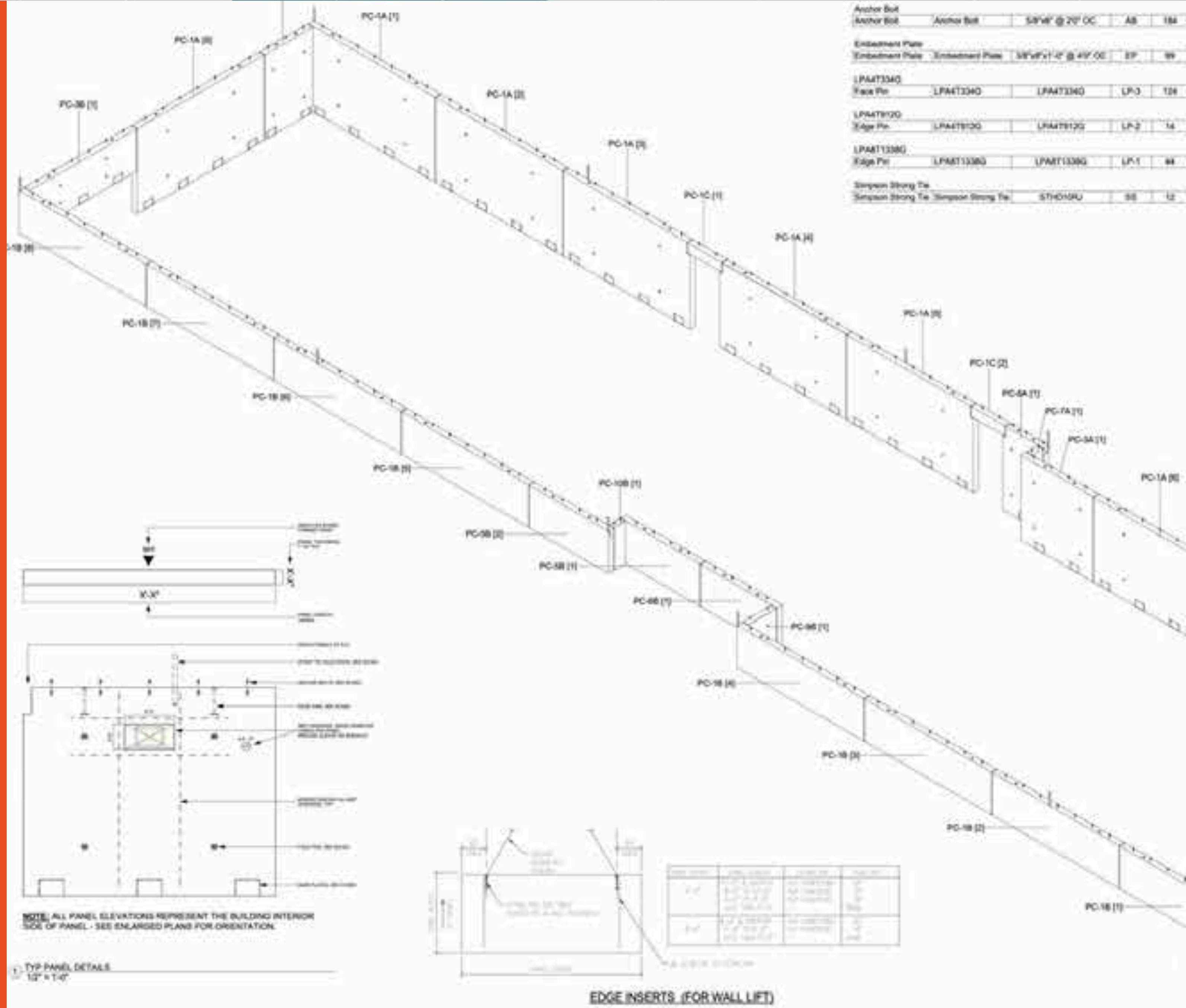


---

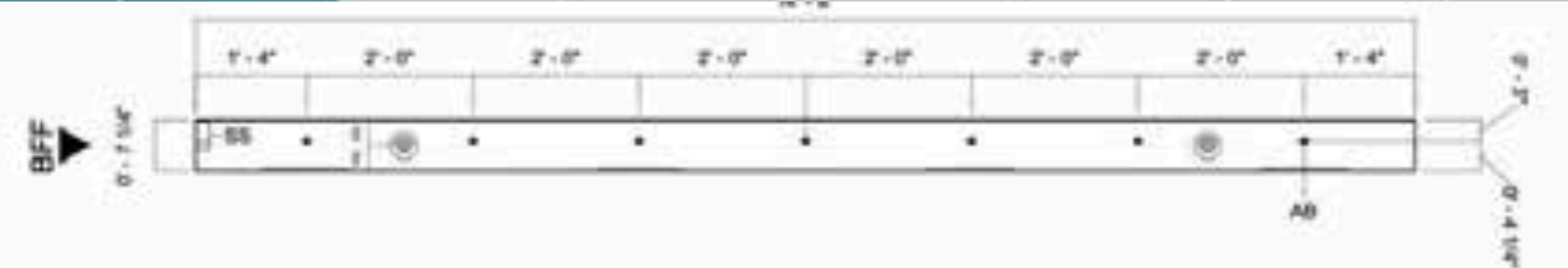
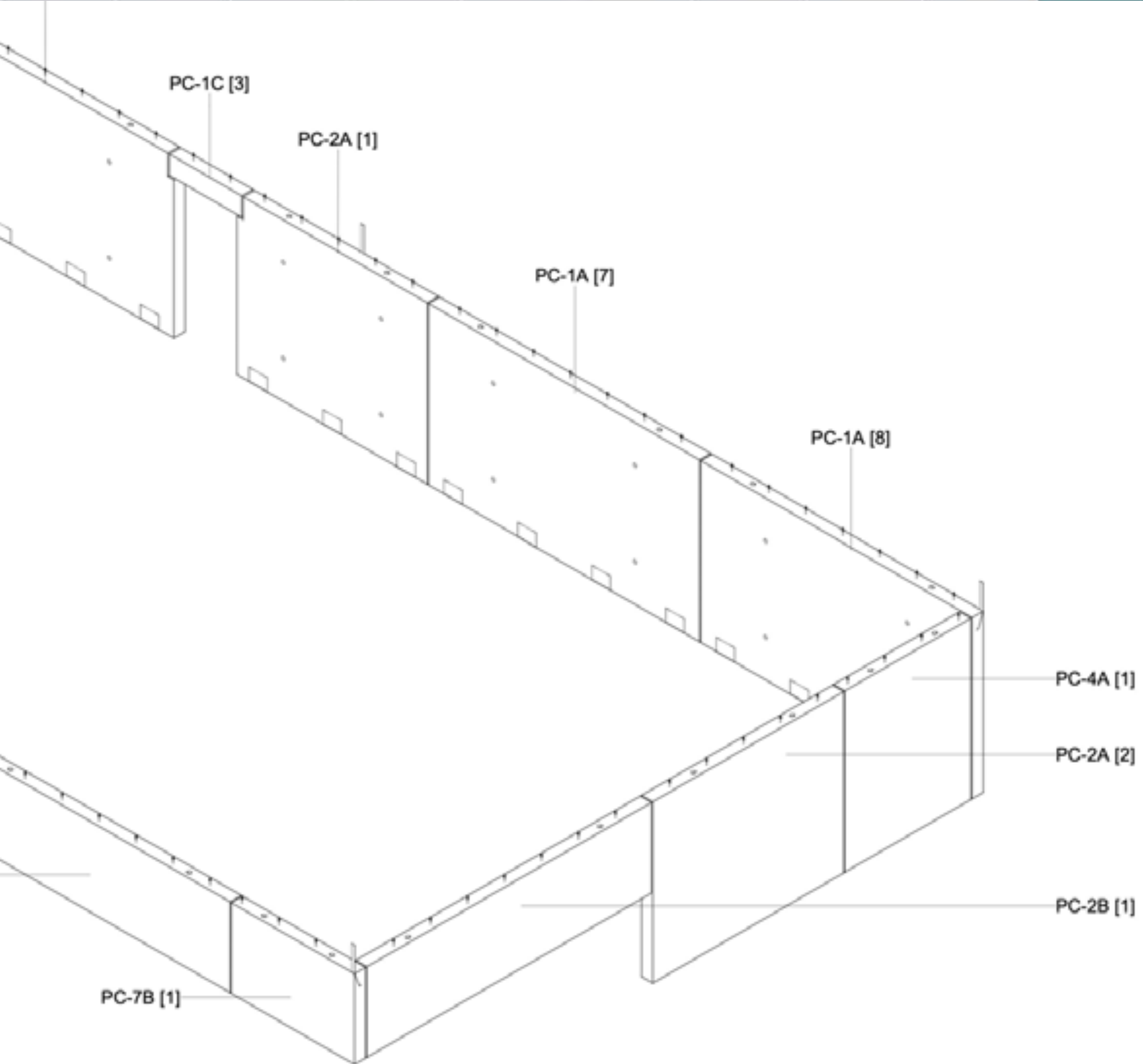
# Pre-Fabricated Foundations



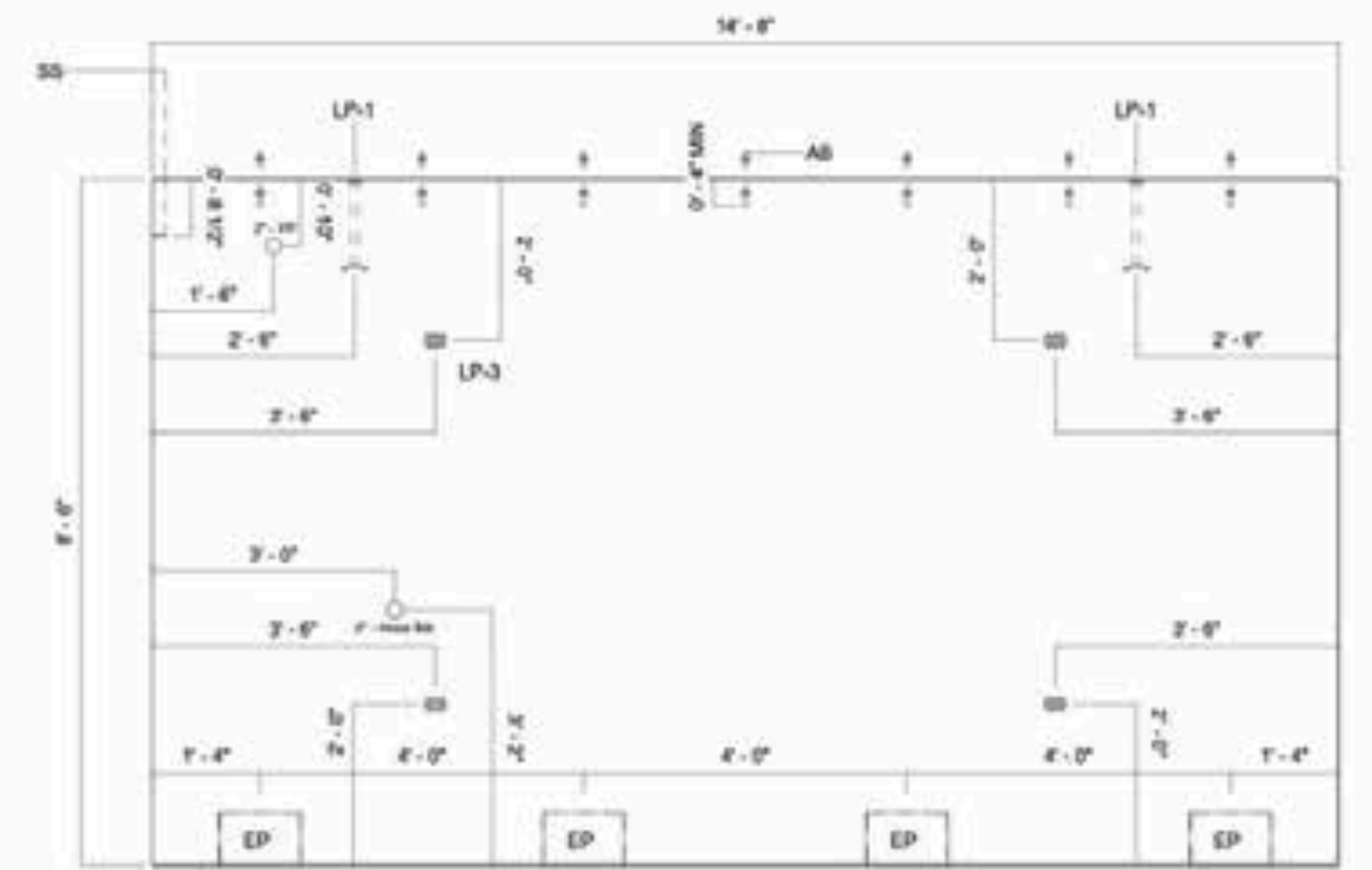
# SPRING 2022








1 PC-1A(1) - PLAN @ B1 / B3  
3/8" = 1'-0"



2 PC-1A(1) - ELEVATION @ B1 / B3  
3/8" = 1'-0"

| PC-1A(1)           |                                |          |        | Project Information   |          |
|--------------------|--------------------------------|----------|--------|---|----------|
| TYPE               | DESCRIPTION                    | QUANTITY | SYMBOL |   |          |
| Concrete Finish    | Indicates Board Formed Finish  |          | BFF    | Project number  | 80634    |
| Lifting Pin - Edge | LPMAT1338G                     |          | LP-1   | Date  | 01/31/22 |
| Lifting Pin - Edge | LPMAT912G                      |          | LP-2   | Drawn by  | COC      |
| Lifting Pin - Face | LPMAT334G                      |          | LP-3   | Checked by  | TEG / TD |
| Simpson Strap      | STHD10RU Strap Tie Holdowns    |          | SS     |  |          |
| Anchor Bolt        | 5/8" x 6" A.B. @ 2'-0" OC      |          | AB     |   |          |
| Embedment Plate    | PL3/8" x 6" x 1'-0" @ 4'-0" OC |          | EP     |   |          |



































2021

2022

JUL

AUG

SEPT

OCT

NOV

DEC

JAN

FEB

MAR

APR

MAY

JUN

JUL

AUG

SEPT

OCT

NOV

DEC

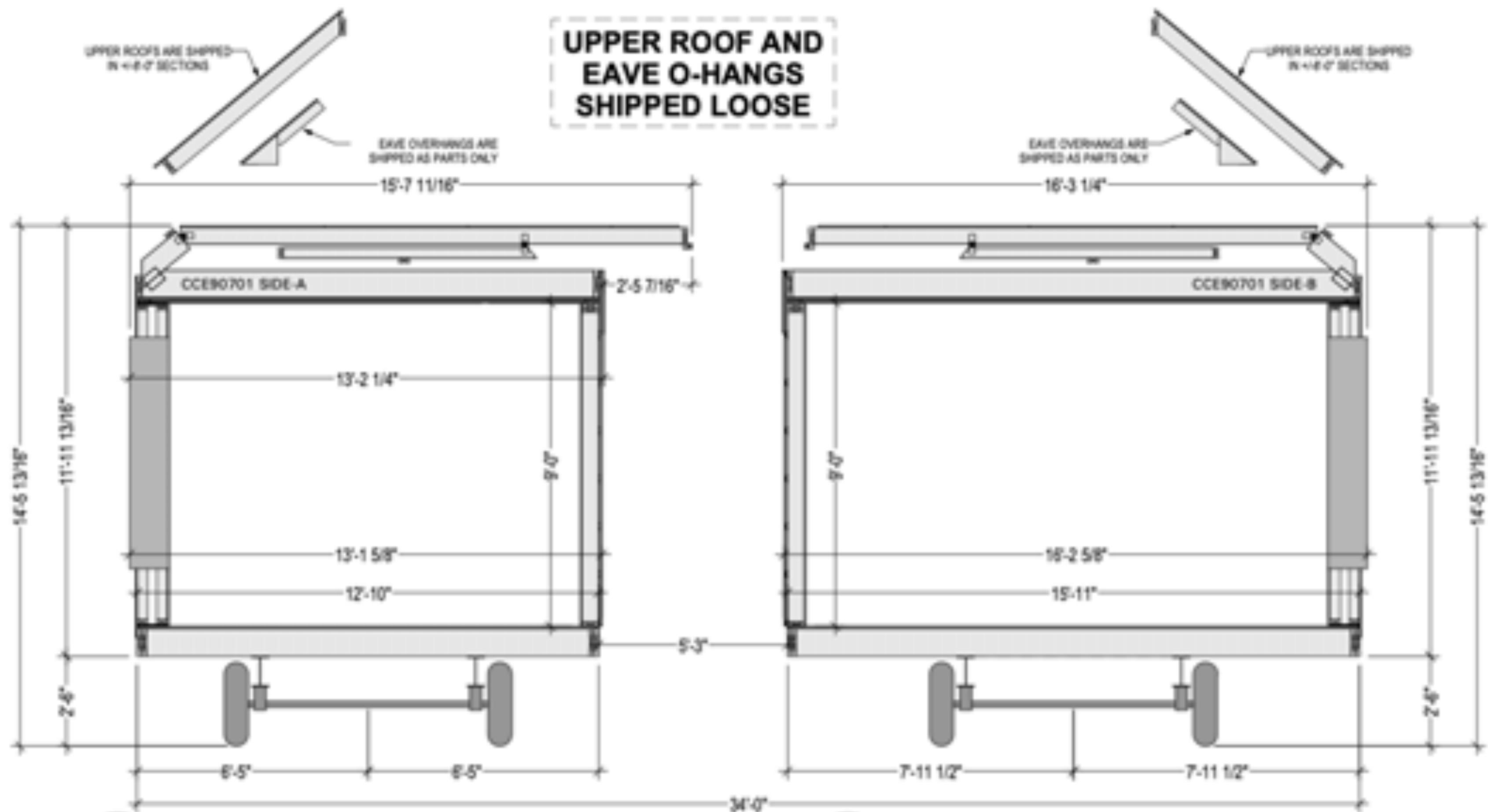




---

# Modular Time





**10 SHIPPING WIDTH/HEIGHT (NARROW BOX)**  
SCALE: 1/8"=1'-0"

**11 SHIPPING WIDTH/HEIGHT (WIDE BOX)**  
SCALE: 1/8"=1'-0"

**12'-10" WIDE ROOF BOXES "1 & 6"**

PROJECTED SHIPPING INFO:  
 W @ Eaves (S/L) = +/- 15'-8"  
 W @ Road = +/- 13'-2"  
 H w/ UF S/L = +/- 14'-6"  
 H w/ UF ON = N/A

**15'-11" WIDE ROOF BOXES "3, 4, 8 & 9"**

PROJECTED SHIPPING INFO:  
 W @ Eaves (S/L) = +/- 16'-3"  
 W @ Road = +/- 16'-3"  
 H w/ UF S/L = +/- 14'-6"  
 H w/ UF ON = N/A





























2021

2022

JUL

AUG

SEPT

OCT

NOV

DEC

JAN

FEB

MAR

APR

MAY

JUN

JUL

AUG

SEPT

OCT

NOV

DEC









---

# Mechanical Systems





# PASSIVE HOUSE MODELING

## PASSIVEHOUSE REQUIREMENTS

Certificate criteria: **PHIUS+ 2018**

### Heating demand

specific: **6.83 kBtu/ft<sup>2</sup>yr**  
 target: **6.9 kBtu/ft<sup>2</sup>yr**  
 total: **79,118.86 kBtu/yr**



### Cooling demand

sensible: **2.32 kBtu/ft<sup>2</sup>yr**  
 latent: **0.03 kBtu/ft<sup>2</sup>yr**  
 specific: **2.35 kBtu/ft<sup>2</sup>yr**  
 target: **4.5 kBtu/ft<sup>2</sup>yr**  
 total: **27,164.13 kBtu/yr**



### Heating load

specific: **6.03 Btu/hr ft<sup>2</sup>**  
 target: **6.3 Btu/hr ft<sup>2</sup>**  
 total: **69,875.72 Btu/hr**



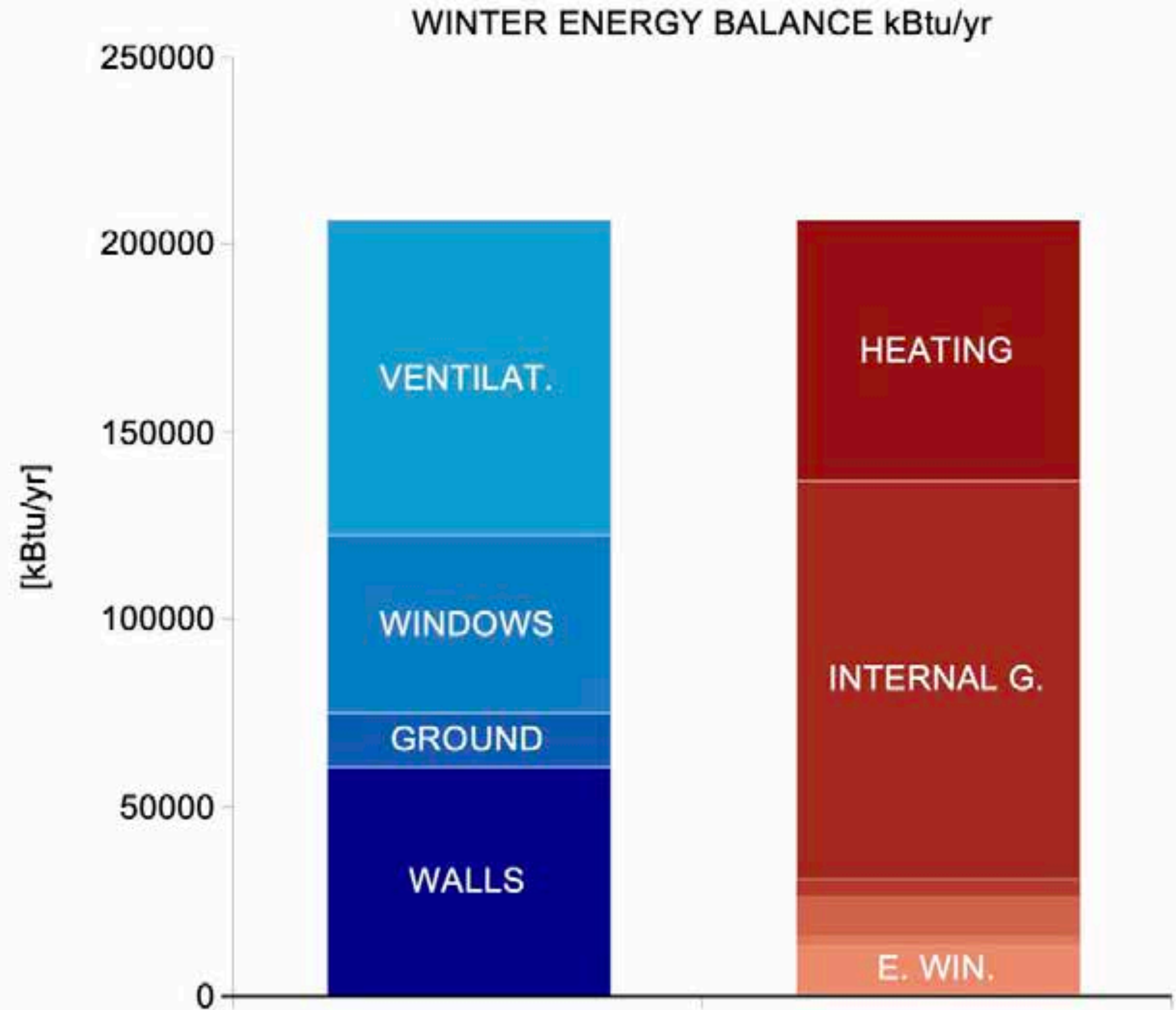
### Cooling load

specific: **1.96 Btu/hr ft<sup>2</sup>**  
 target: **2 Btu/hr ft<sup>2</sup>**  
 total: **22,733.8 Btu/hr**

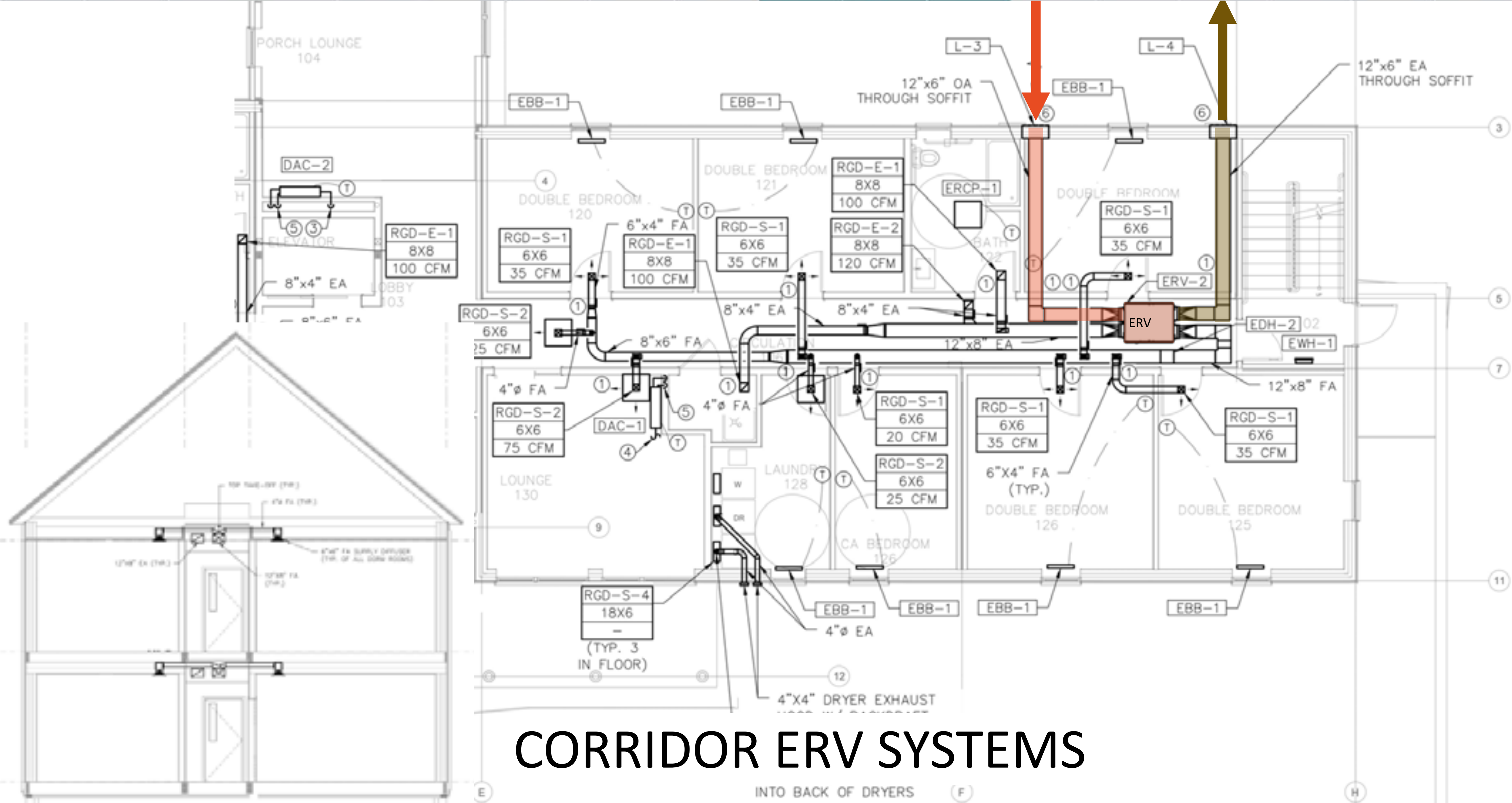




# WINTER ENERGY BALANCE



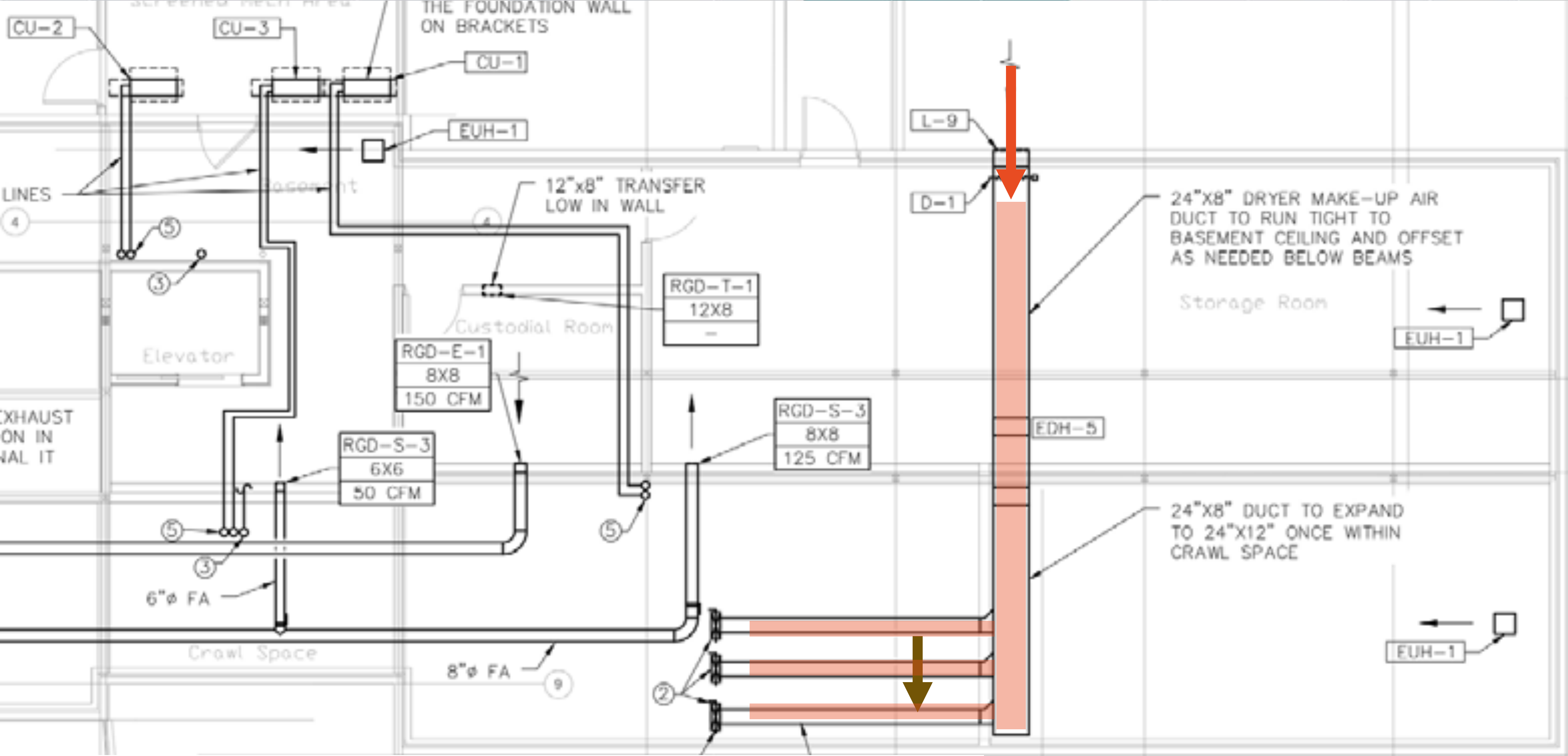




# CORRIDOR ERV SYSTEMS

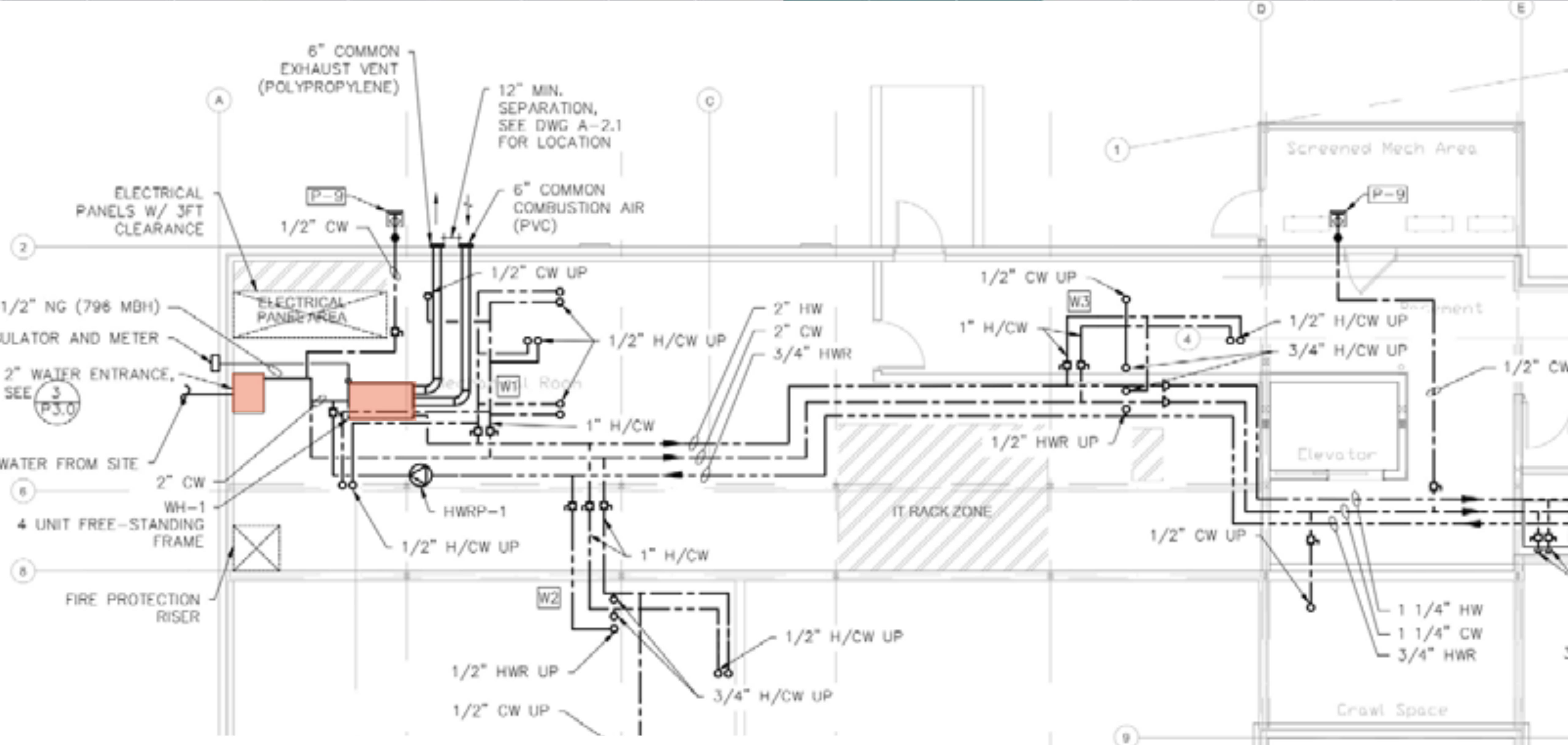
INTO BACK OF DRYERS





# DRYER VENTING & MAKE-UP AIR





# TANKLESS GAS HOT WATER



# ELECTRIC BASEBOARD HEAT





# PASSIVE HOUSE MODELING

## PASSIVEHOUSE REQUIREMENTS

Certificate criteria: **PHIUS+ 2018**

### Heating demand

specific: **6.83 kBtu/ft<sup>2</sup>yr**  
 target: **6.9 kBtu/ft<sup>2</sup>yr**  
 total: **79,118.86 kBtu/yr**



### Cooling demand

sensible: **2.32 kBtu/ft<sup>2</sup>yr**  
 latent: **0.03 kBtu/ft<sup>2</sup>yr**  
 specific: **2.35 kBtu/ft<sup>2</sup>yr**  
 target: **4.5 kBtu/ft<sup>2</sup>yr**  
 total: **27,164.13 kBtu/yr**



### Heating load

specific: **6.03 Btu/hr ft<sup>2</sup>**  
 target: **6.3 Btu/hr ft<sup>2</sup>**  
 total: **69,875.72 Btu/hr**



### Cooling load

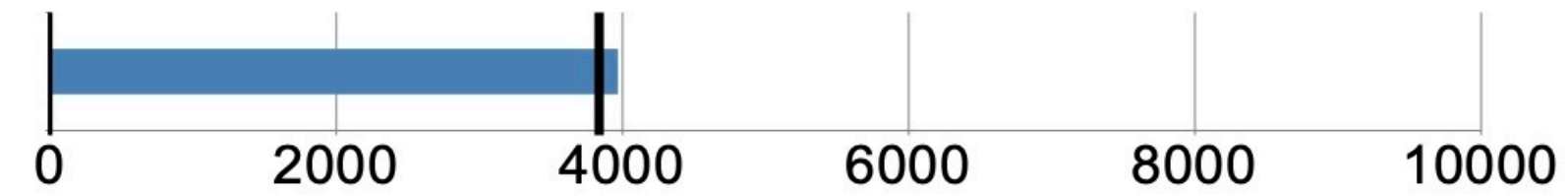
specific: **1.96 Btu/hr ft<sup>2</sup>**  
 target: **2 Btu/hr ft<sup>2</sup>**  
 total: **22,733.8 Btu/hr**





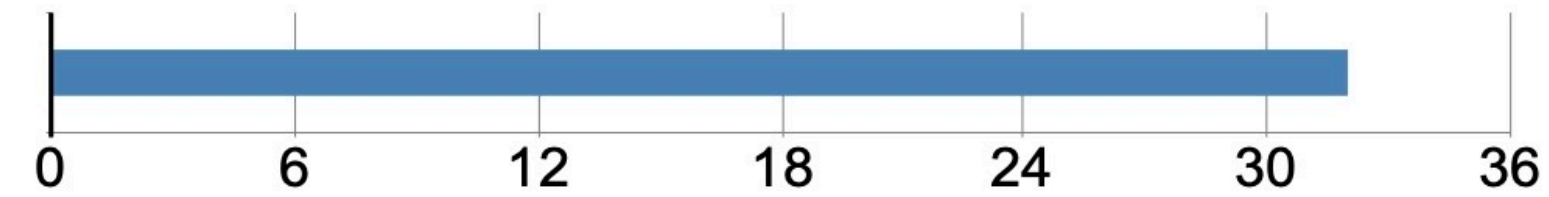
### Source energy

total: **237,197.35** kWh/yr  
 specific: **3,953** kWh/Person yr  
 target: **3,840** kWh/Person yr  
 total: **809,271.06** kBtu/yr  
 specific: **69.86** kBtu/ft<sup>2</sup>yr



### Site energy

total: **370,340.73** kBtu/yr  
 specific: **31.97** kBtu/ft<sup>2</sup>yr  
 total: **108,546.87** kWh/yr  
 specific: **9.37** kWh/ft<sup>2</sup>



### Air tightness

ACH50: **0.86** 1/hr  
 CFM50 per envelope area: **0.06** cfm/ft<sup>2</sup>  
 target: **0.86** 1/hr  
 target CFM50: **0.06** cfm/ft<sup>2</sup>



**NOT VERIFIED**



---

# Heads in Beds



Johnson Pond  
House 3





Johnson Pond  
House 1























2021

2022

JUL

AUG

SEPT

OCT

NOV

DEC

JAN

FEB

MAR

APR

MAY

JUN

JUL

AUG

SEPT

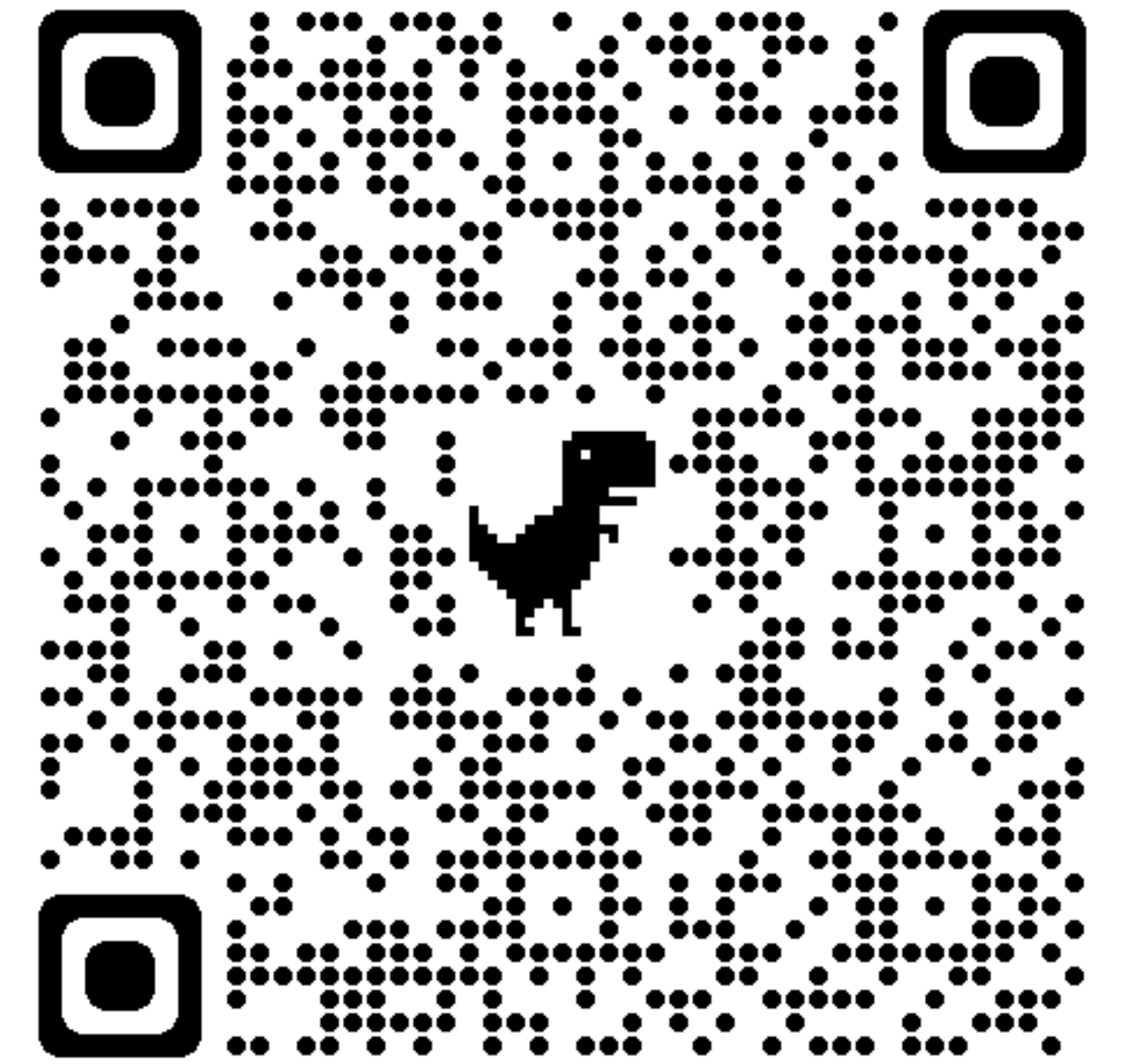
OCT

NOV

DEC







Scan to learn more!