

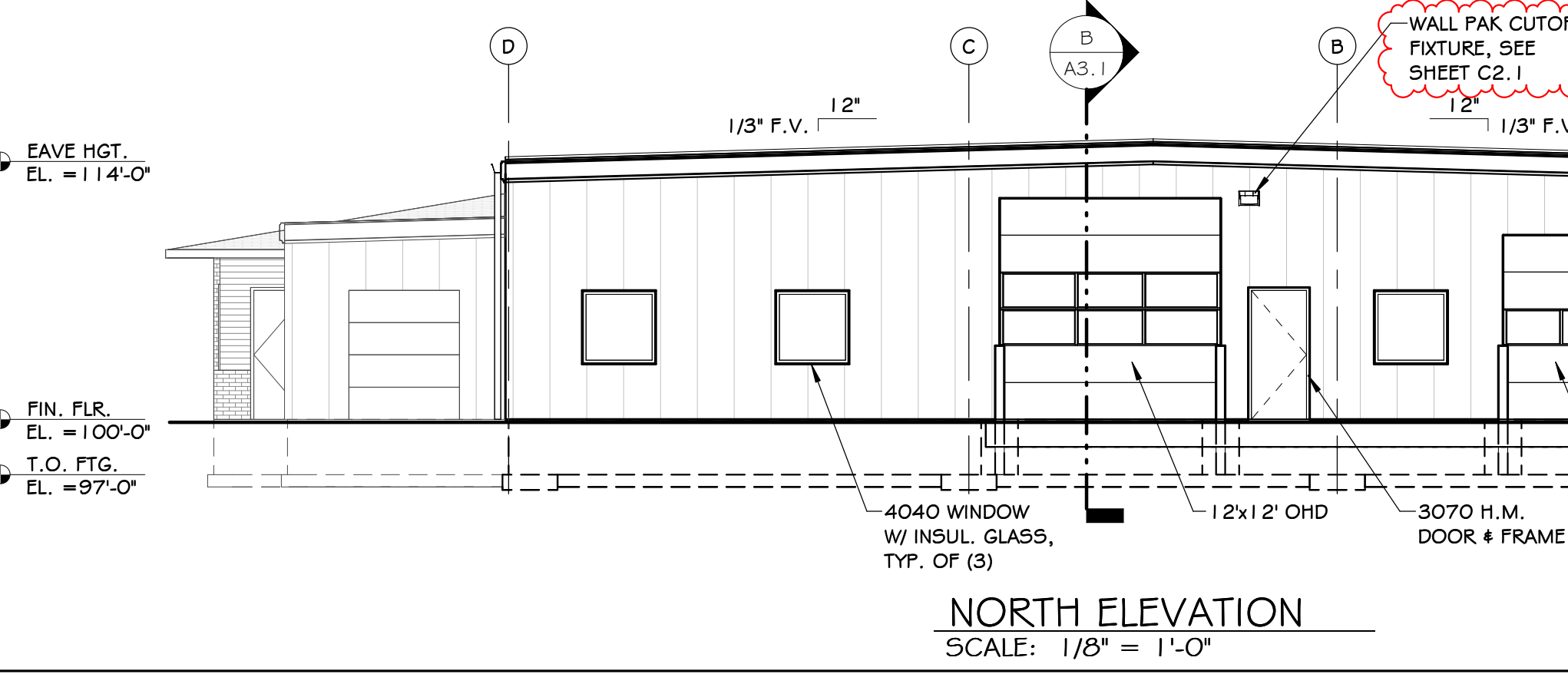
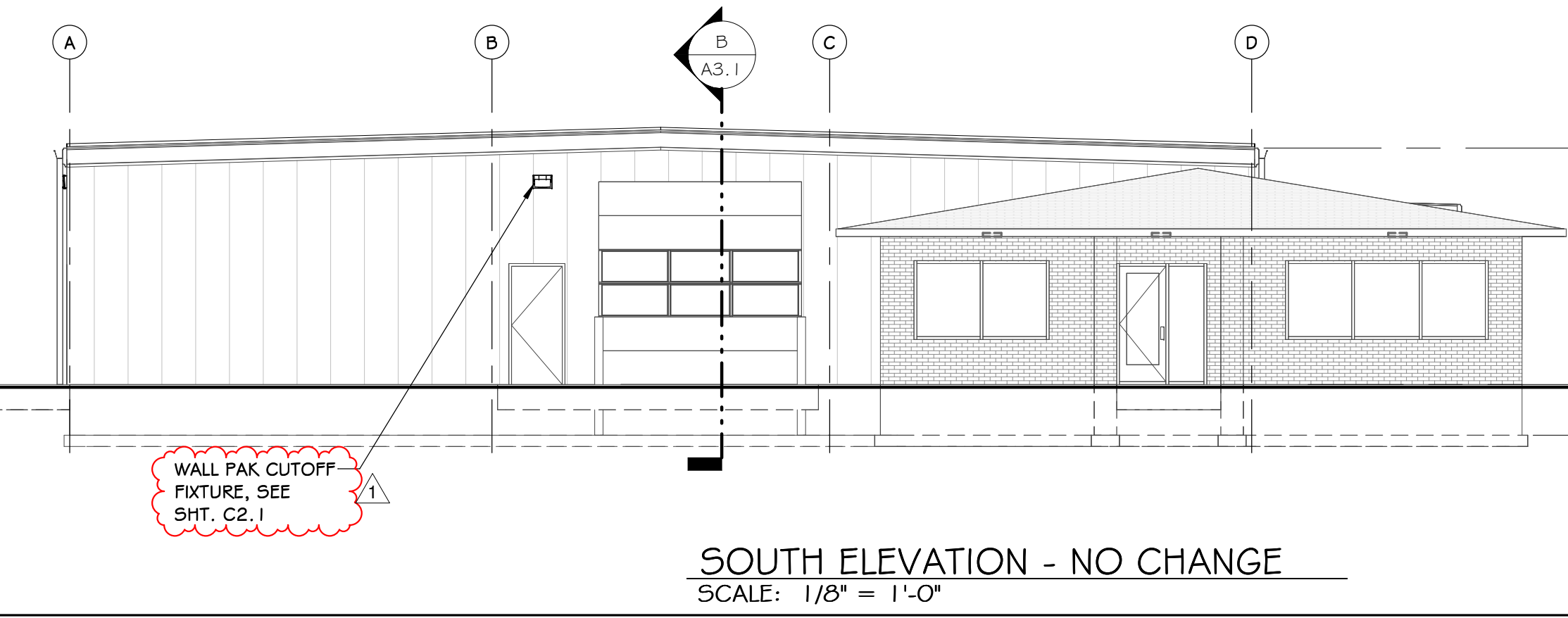
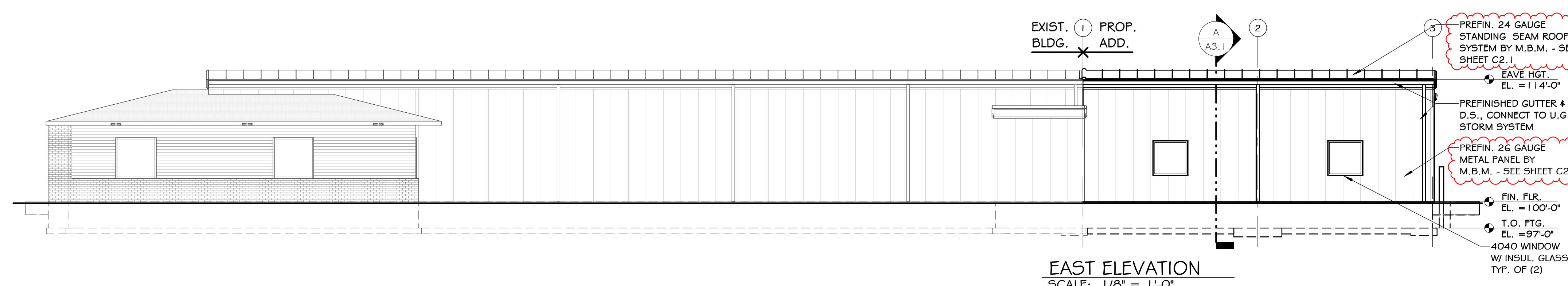
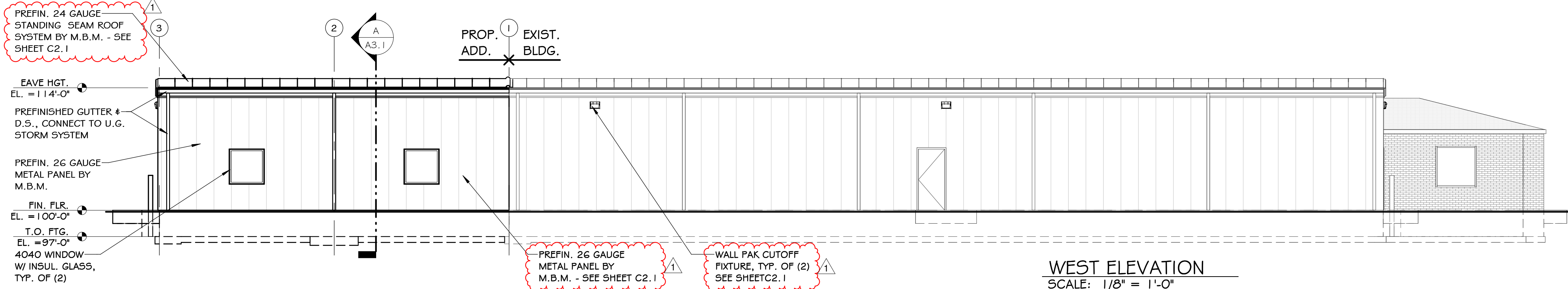
# PROP. ADDITION FOR: DOUG'S AUTO BODY

0-199 LAKE MICHIGAN DR. NW, GRAND RAPIDS, MI 49544

### GENERAL NOTES:

- MASONRY COURSING: COURSING WILL BE ESTABLISHED FROM FINISH GROUND FLOOR ELEVATION UNLESS INDICATED OTHERWISE.
  - FLOOR DRAINS: UNLESS REQUIRED OTHERWISE, SET ALL FLOOR DRAINS 1/4" BELOW FLOOR LINE AND PITCH FROM 24" RADIUS.
  - FIELD MEASURE AND VERIFY OR REVISE DIMENSIONAL INFORMATION TO THE EXTENT REQUIRED TO EXECUTE THE WORK REQUIRED ON THE CONTRACT DOCUMENTS.
  - UNLESS INDICATED OTHERWISE, INTERIOR WALLS SHALL EXTEND TO BOTTOM OF STRUCTURE.
  - UNLESS INDICATED OTHERWISE, FLOOR MATERIAL CHANGES SHALL OCCUR BENEATH DOORS OR THRESHOLDS.
  - UNLESS INDICATED OTHERWISE, ALL NEW AND EXISTING UNFINISHED EXPOSED TO VIEW MATERIALS AND SURFACES OCCURRING WITHIN AREAS OF RENOVATION SHALL RECEIVE A PAINT FINISH -- SEE SPEC.
  - WHERE RATED PARTITIONS ARE PENETRATED BY FIRE EXTINGUISHER CABINETS, WATER COOLERS, ELECTRICAL DISTRIBUTION PANELS AND OTHER SIMILAR ITEMS, PROVIDE RECESS OF EQUAL RATING TO PARTITION.
- GYPSUM BOARD PARTITION SYSTEMS:
    - EXTEND STUDS ABOVE CEILING TO BOTTOM OF STRUCTURE AND ANCHOR FIRMLY, USING SAME STUD SIZE AND SPACING. STUDS SHALL BE SPACED AT 16" O.C. UNLESS NOTED OTHERWISE.
    - EXTEND GYPSUM BOARD TO 3" ABOVE FINISH CEILING (MINIMUM). AT FIRE RATED PARTITIONS, GYPSUM BOARD SHALL EXTEND TO STRUCTURE OR RATED ASSEMBLY,
      - 1-HOUR FIRE RATED PARTITIONS SHALL BE
        - UL DESIGN # U465
      - 2-HOUR FIRE RATED PARTITIONS SHALL BE
        - UL DESIGN # U411
      - 3-HOUR FIRE RATED PARTITIONS SHALL BE
        - UL DESIGN # U435
    - ALL INTERIOR STUD PARTITIONS SHALL HAVE GYPSUM BOARD ON BOTH SIDES.
    - PROVIDE ADDITIONAL STUD WIDTHS (AND GAUGES) IN AREAS AS MAY BE REQUIRED OR INDICATED ON PLANS. IN NO CASE USE STUD SIZES (OR GAUGES) LESS THAN RECOMMENDED BY MANUFACTURER FOR SPAN AND LOADING INDICATED.
    - WHERE SOUND BATT INSULATION IS REQUIRED, PROVIDE UNFACED NOISE BARRIER BATT INSULATION BY OWENS CORNING FIBERGLAS TO FRICTION FIT IN STUD PARTITION FROM FLOOR TO 3" ABOVE HIGHEST CEILING LINE.
    - WHERE METAL STUDS ABUT VERTICALLY AGAINST STEEL FRAMING MEMBERS, ROOF/FLOOR/MEZZANINE DECK(S) PROVIDE DEFLECTION HEAD TRACK. ALLOW FOR 1" VERTICAL MOVEMENT.
- WHERE OPENINGS IN INTERIOR PARTITIONS OCCUR (INCLUDING DOORS AND WINDOWS), CONSTRUCTION ABOVE OPENINGS SHALL MATCH ADJ. CONSTRUCTION IN FINISH AND FIRE RATING.
  - TOILET ROOM ACCESSORIES WHERE APPLICABLE SHALL BE MANUFACTURED BY BOBRICK, BRADLEY, OR MIAMI CAREY AS FOLLOWS (BOBRICK NUMBERS SHOWN):
    - GRAB BARS - B6206x42, B6206x36 & B6206x18 (A5 OCCURS)
    - MIRRORS - B290 SERIES
    - TOWEL DISPENSER/DISPOSAL - B3944
    - TOILET PAPER DISPENSER - B605 (SG) OR B606 (DBL)
  - GENERAL CONTRACTOR IS TO VERIFY LOCATION OF ALL EMERGENCY AND EXIT LIGHTS WITH THE BUILDING OFFICIAL PRIOR TO INSTALLATION.
  - ALL SIGNAGE PROVIDING EMERGENCY INFORMATION, ROOM IDENTIFICATION AND CIRCULATION SHALL MEET BARRIER FREE DESIGN REQUIREMENTS.

**NOTE:**  
THE GENERAL CONTRACTOR IS TO VERIFY ALL EXISTING CONDITIONS PRIOR TO BEGINNING CONSTRUCTION. NOTIFY THE ARCHITECT/ENGINEER IMMEDIATELY IF EXISTING CONDITIONS INVALIDATE THE DRAWINGS OR WHEN QUESTIONS ARISE REGARDING THE INTENT OF THE DRAWINGS.



**CODE ANALYSIS:**  
Applicable Codes and Editions:  
Michigan Building Code (MBC): 2015  
Michigan Mechanical Code: 2015  
National Electric Code: 2017  
Americans with Disabilities Act Accessibility Guidelines: 2010 ADA-ABA

**I. USE GROUP:**  
By S-1 Nonseparated, Not Sprinklered  
Required Separation of Occupancies: Not Required

**II. HEIGHT & AREA**

Allowable Height:	40 Ft High/ 1 Story
Allowable Area:	9,000 s.f. (Table 506.2)
Open Area Increase:	5,484 s.f.
Total Allowable:	14,484 s.f.

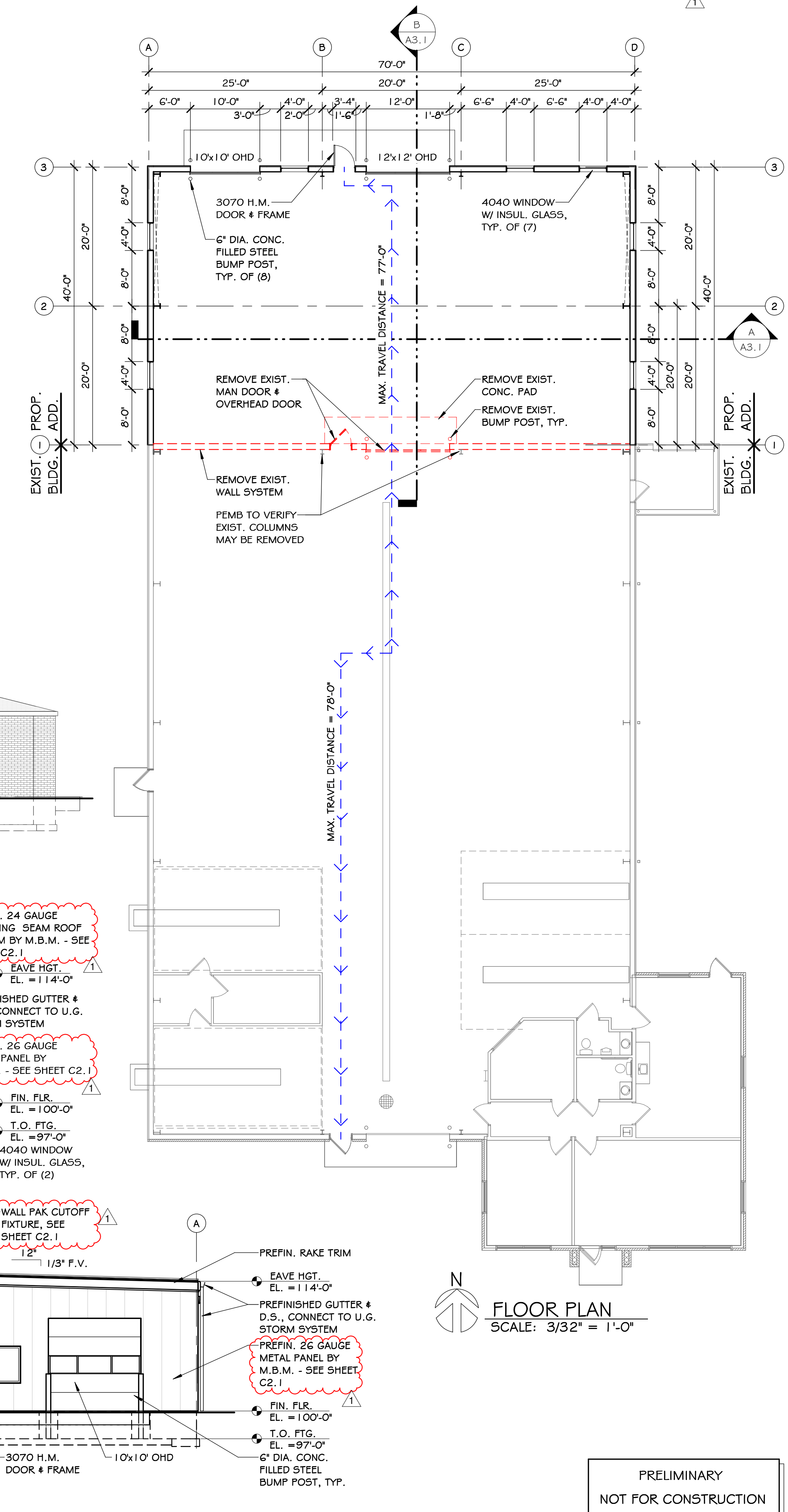
Actual Height: 15'-1 1/2", 1 story  
Actual Area: B = 1,340 s.f.  
Exist. Bldg.: S-1 = 6,788 s.f., 8,128 s.f.  
Prop. Add.: S-1 = 2,800 s.f.  
TOTAL 10,928 s.f.

**NOTE:**  
For Group S-1 occupancies, sprinklers are required if a fire area > 12,000 S.F.  
Fire area is less than 12,000 s.f.

**III. TYPES OF CONSTRUCTION**  
Type V-B: Non Combustible materials, except as where is permitted in Section 603.  
Building Elements Fire Resistance Ratings:  
Beaming walls: Exterior - 0 Hours Interior - 0 Hours (Table 601)  
Non Beaming walls/partitions: Exterior - 0 hours Interior - 0 Hours (Table 602)  
Floor Construction and ass. secondary members: 0 Hours  
Roof Construction and ass. secondary members: 0 Hours  
Fire Wall Fire Resistance Rating: NR  
Fire Barrier Fire Resistance Rating: NR  
Fire Partition Fire Resistance Rating: NR  
Fire Protection: NR

**IV. OCCUPANCY (Table 1004.1.2)**  
B: 100 gross (1,340/100 = 13), S-1: 500 gross (9,588/500 = 19)  
Occupant Load: 32  
Actual Occupancy: xx

**V. MEANS OF EGRESS**  
Exits Required: 2  
Exits Provided: 5  
Travel Distance- Max Allowed: 200'  
Travel Distance Max Actual: 78'  
Corridor Fire Rating: NR



**SHEET INDEX**

NO.	DESCRIPTION
A2.1	FLOOR PLAN/ ELEVATIONS
A3.1	BUILDING SECTIONS
S1.1	FOUNDATION PLAN/ DETAILS
C2.1	SITE DETAILS



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Proposed Addition For:

**DOUG'S AUTO BODY**

2,800 S.F. ADDITION

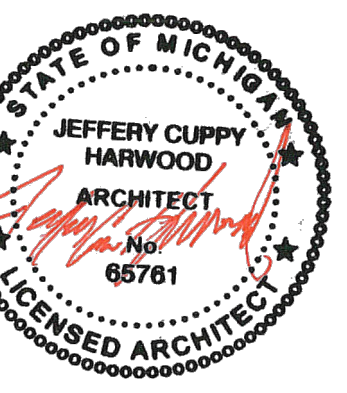
0-199 LAKE MICHIGAN DR.  
GRAND RAPIDS, MI 49544

**ISSUED FOR**

DATE	DESCRIPTION
03-29-24	REVIEW
05-09-24	SITE PLAN REVIEW

**Revision Schedule**

No.	Date	Description
1	08-02-24	PC MEETING REV.



Drawn by: KJB

**FLOOR PLAN/ ELEVATIONS**

SCALE: AS NOTED

Sheet No.  
**A2.1**

Project No.  
**24-011**

**PRELIMINARY  
NOT FOR CONSTRUCTION**

S:\DWG\24011 DOUG'S AUTO BODY REV\24011 DOUG'S AUTO BODY.rvt



ISSUED FOR	DATE	DESCRIPTION
	03-29-24	REVIEW
	05-09-24	SITE PLAN REVIEW

Revision Schedule

No.	Date	Description

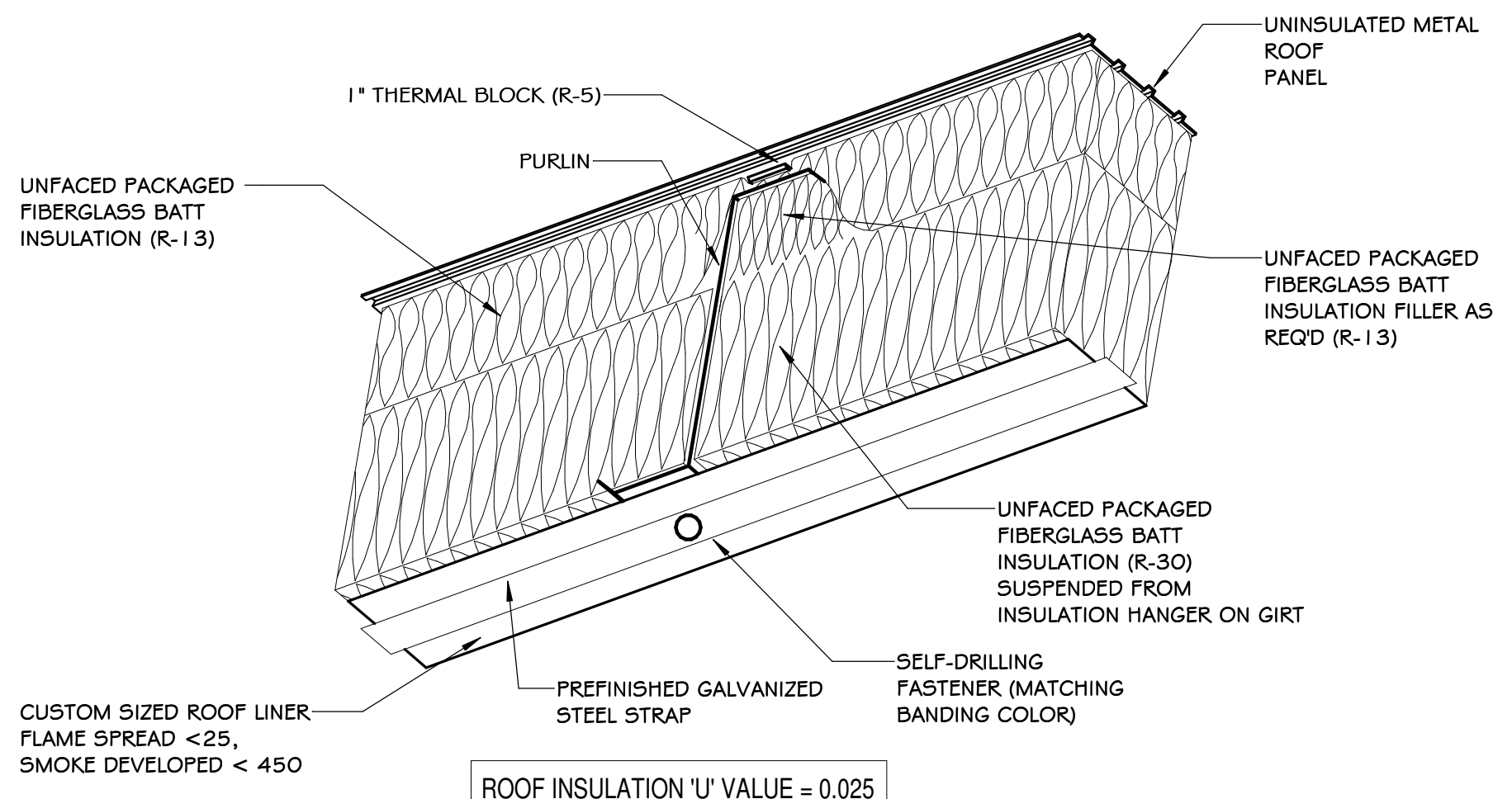
Drawn by: KJB

**BUILDING SECTIONS**

SCALE: AS NOTED

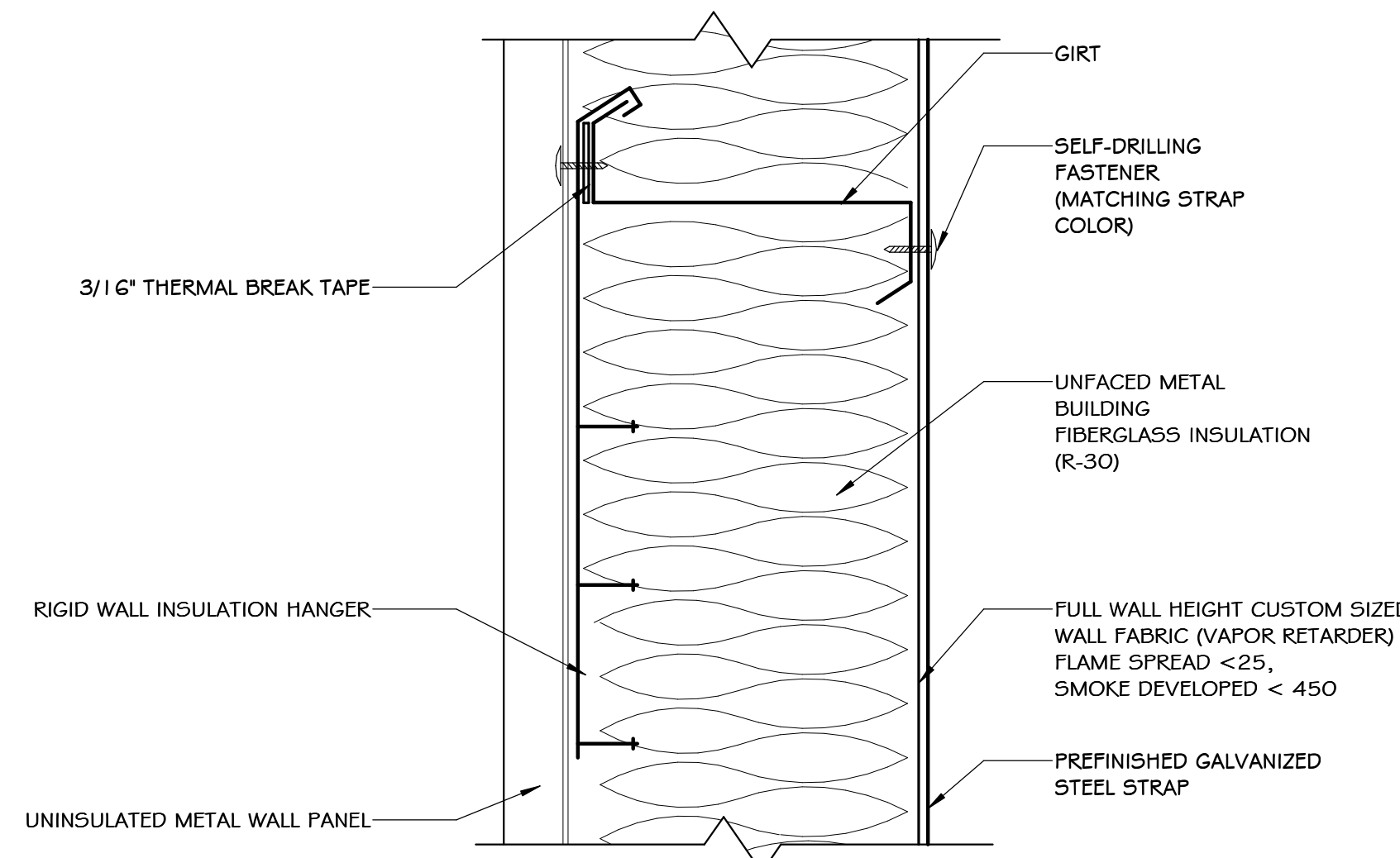
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**A3.1**

Project No.  
**24-011**



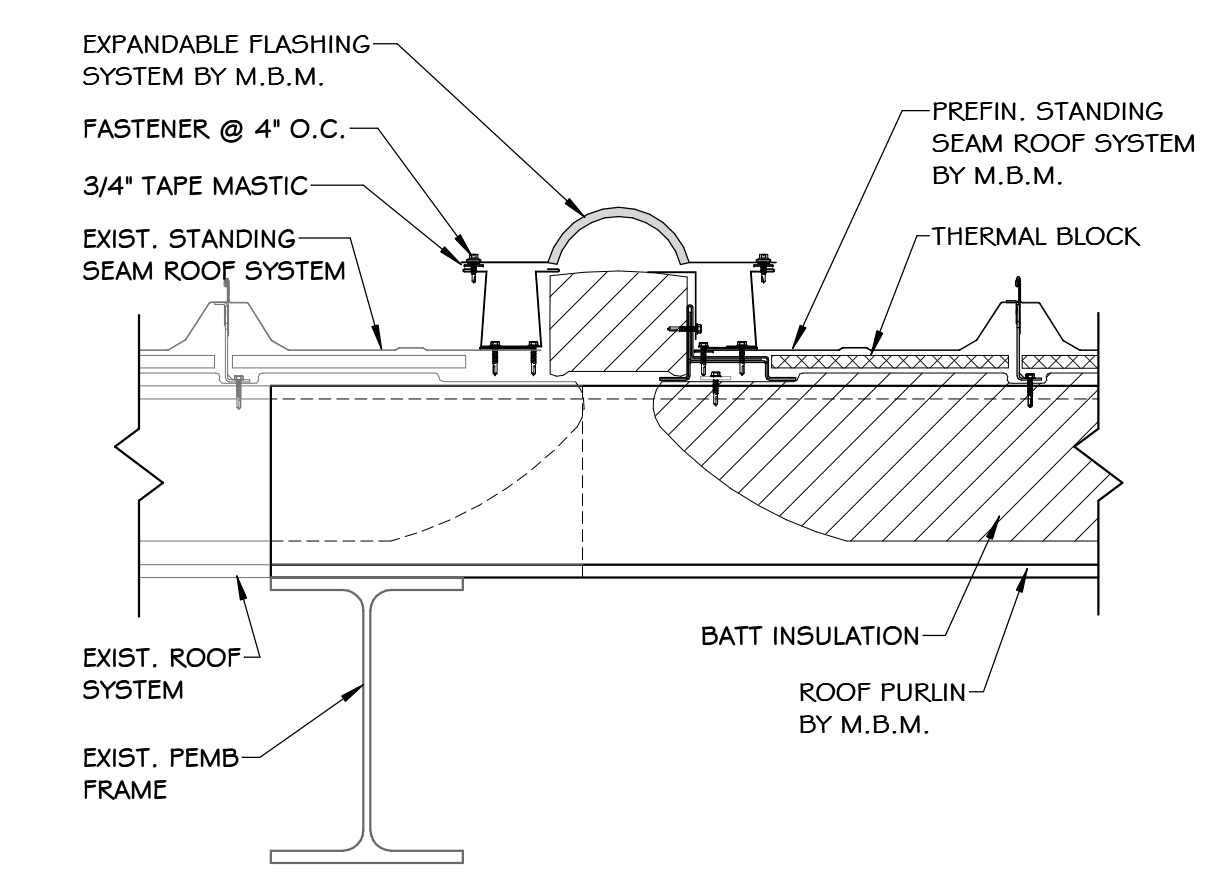
ROOF INSULATION 'U' VALUE = 0.025

**BASE BID METAL ROOF PANEL INSULATION SYSTEM WITH BANDED RETENTION SYSTEM**  
 NOT TO SCALE

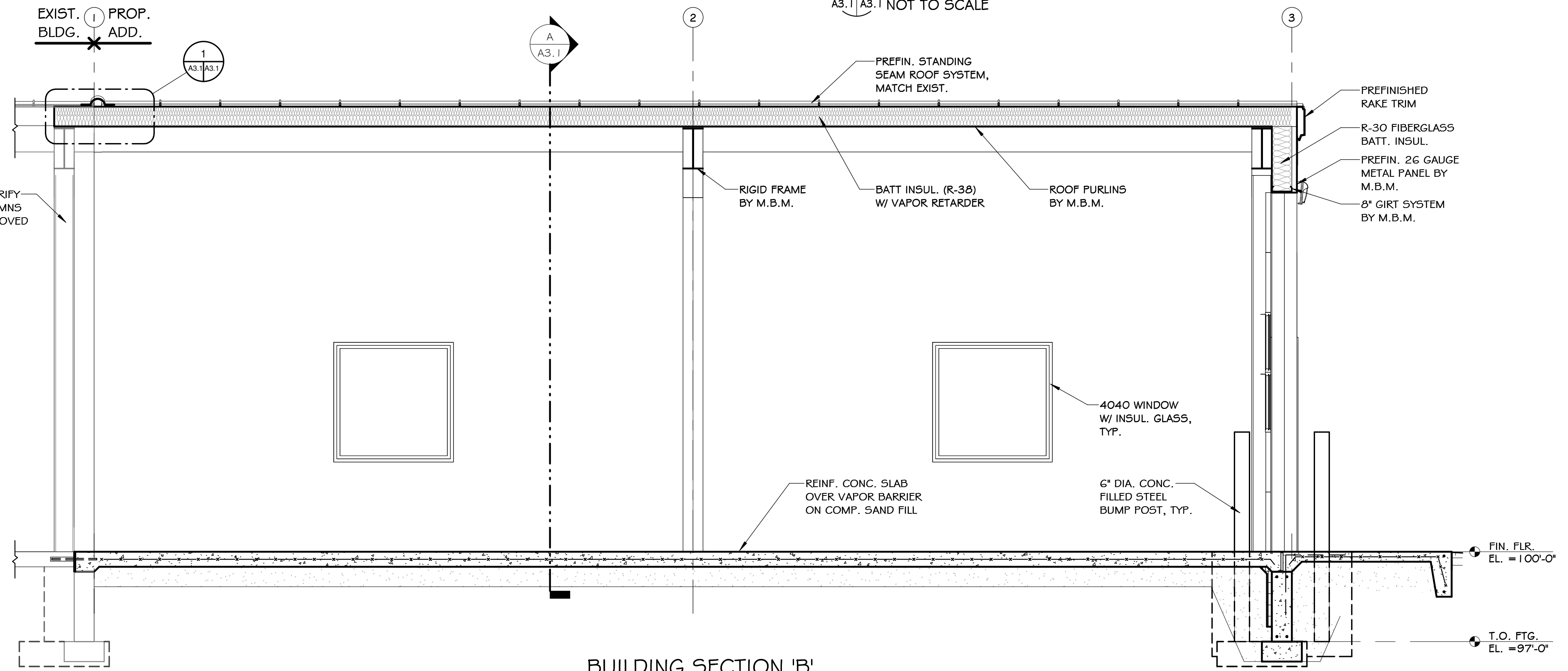


WALL INSULATION 'U' VALUE = 0.052

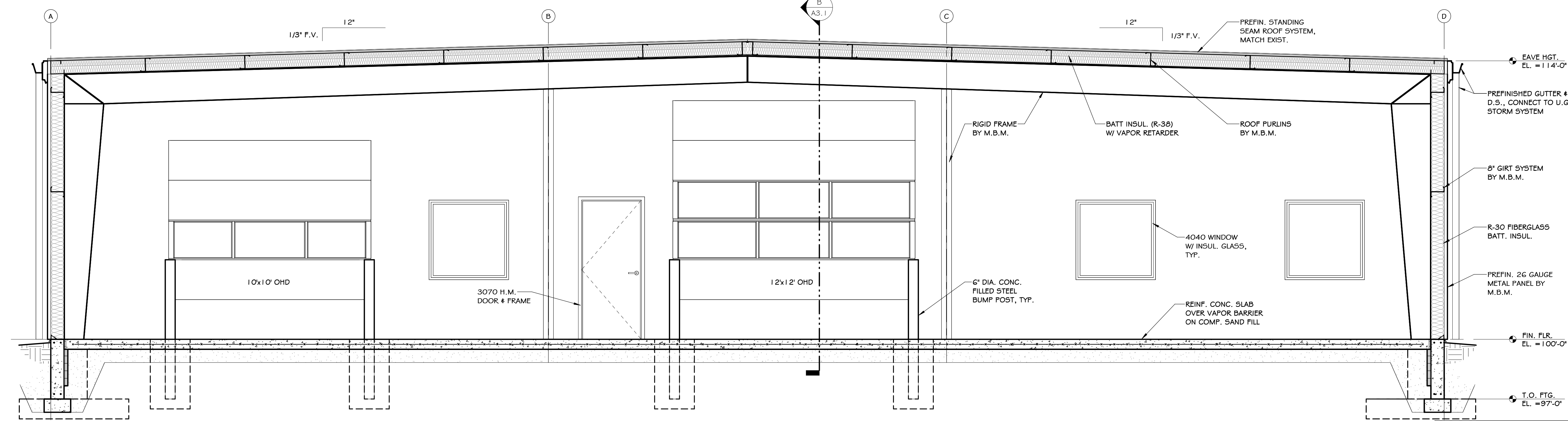
**BASE BID METAL WALL PANEL INSULATION SYSTEM DETAIL**  
 NOT TO SCALE



**EXPANSION JOINT DETAIL**  
 A3.1 A3.1 NOT TO SCALE



**BUILDING SECTION 'B'**  
 SCALE: 3/8" = 1'-0"



**BUILDING SECTION 'A'**  
 SCALE: 3/8" = 1'-0"

PRELIMINARY  
 NOT FOR CONSTRUCTION



GENERAL STRUCTURAL NOTES

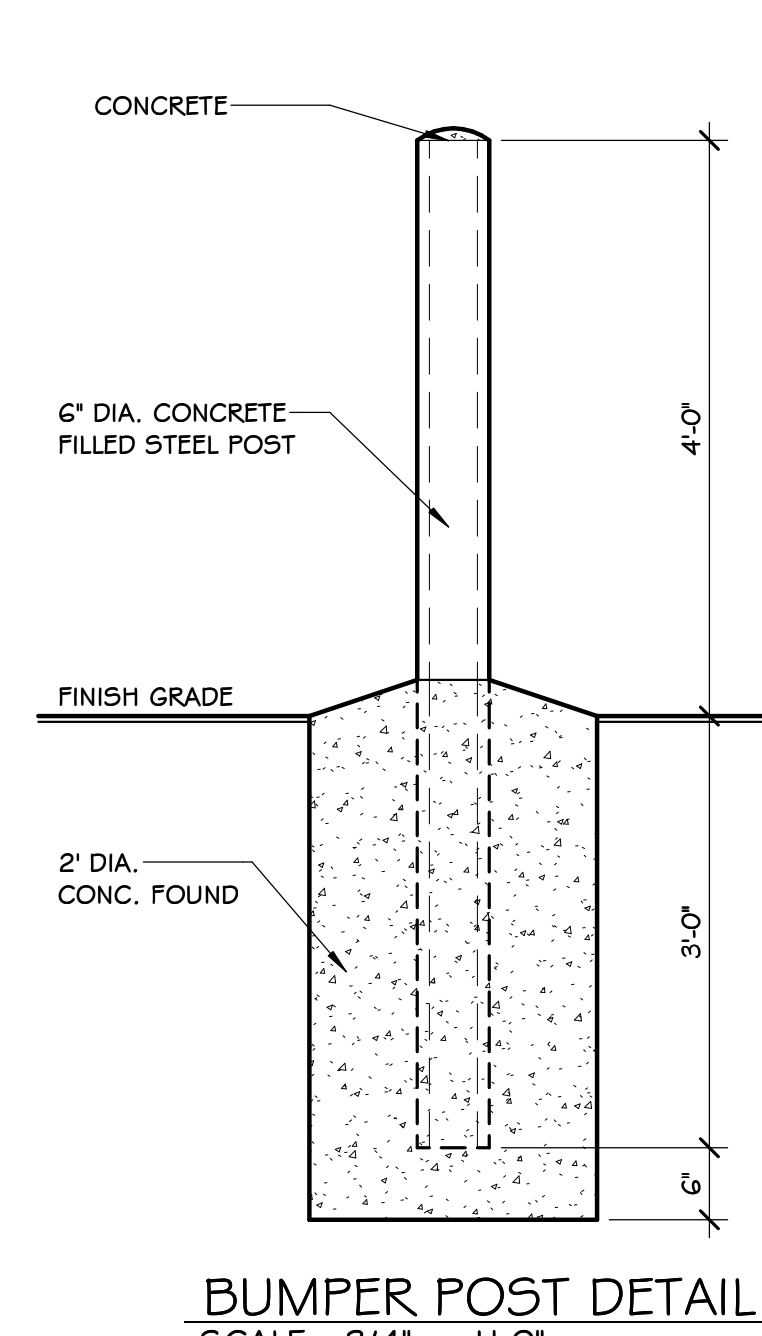
- GENERAL
- STRUCTURAL DESIGN OF THIS BUILDING IS IN ACCORDANCE WITH THE MICHIGAN BUILDING CODE (MBC) 2015 AND ASCE 7-10.
  - SEE SOILS REPORT FOR SPECIFIC REQUIREMENTS AND/OR RECOMMENDATIONS FOR THIS PROJECT.
  - ALL CODES OR STANDARDS LISTED SHALL REFERENCE THE CURRENT EDITION IN FORCE AT THE TIME THE PERMIT IS ISSUED FOR THE WORK.
  - ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. IF A DISCREPANCY IS FOUND WITHIN THE DOCUMENTS, THE STRICTEST PROVISION SHALL GOVERN, UNLESS SPECIFICALLY DIRECTED BY THE ENGINEER OF RECORD. ANY DISCREPANCIES SHALL BE IMMEDIATELY REPORTED TO THE ARCHITECT/ENGINEER OF RECORD PRIOR TO IMPLEMENTATION.
  - ANY MATERIAL OR LABOR NOT SHOWN ON THE DRAWINGS OR CALLED OUT IN THE SPECIFICATIONS BUT NECESSARY TO COMPLETE WORK OF SIMILAR NATURE OR COMPLY WITH APPLICABLE CODES SHALL BE FURNISHED/COMPLETED BY THE CONTRACTOR WITH NO ADDITIONAL COST.
  - IN THE EVENT THAT ANY DETAIL IS NOT NOTED IN THE DRAWINGS, DETAILS OF SIMILAR CONDITIONS MAY BE USED WITH THE APPROVAL OF THE ENGINEER OF RECORD.
  - ALL OPENINGS OR PENETRATIONS THROUGH AS WELL AS EMBEDMENT INTO STRUCTURAL ELEMENTS NOT SHOWN ON THE PLANS SHALL BE REVIEWED BY THE ENGINEER OF RECORD PRIOR TO THE WORK.
  - MATERIALS AND/OR EQUIPMENT SHALL NOT BE PLACED ON UNFINISHED FLOORS OR ROOFS IN EXCESS OF 20 PSF NOR ON FINISH FLOOR IN EXCESS OF THE DESIGN LOADS.
  - THIS STRUCTURE HAS BEEN DESIGNED SOLELY FOR IN-SERVICE LOAD CONDITIONS ON THE COMPLETED BUILDING. THE METHODS, PROCEDURES AND SEQUENCE OF CONSTRUCTION ARE THE RESPONSIBILITY OF THE CONTRACTOR. CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO MAINTAIN AND ENSURE THE INTEGRITY OF THE STRUCTURE AT ALL STAGES OF CONSTRUCTION. CONTRACTOR SHALL IMMEDIATELY NOTIFY THE STRUCTURAL ENGINEER OF ANY CONDITION WHICH MIGHT ENDANGER THE STABILITY OF THE STRUCTURE OR CAUSE DISTRESS IN ANY WAY.
  - ALL EXISTING CONDITIONS AND RELATED DIMENSIONS INDICATED IN THE CONTRACT DOCUMENTS SHALL BE FIELD VERIFIED PRIOR TO FABRICATION, ERECTION, OR CONSTRUCTION. ANY CONDITION THAT DIFFERS FROM THAT INDICATED IN THE CONTRACT DOCUMENTS SHALL BE SUBMITTED TO THE ARCHITECT FOR REVIEW PRIOR TO FABRICATION, ERECTION, AND/OR CONSTRUCTION.
  - PROVIDE SPECIAL INSPECTIONS IN ACCORDANCE WITH CHAPTER 17 OF THE MICHIGAN BUILDING CODE AND CONTRACT DOCUMENTS.
  - UNLESS NOTED OTHERWISE, ALL LOADS SPECIFIED IN THESE DOCUMENTS ARE NOMINAL COMBINED SERVICE LOADS AND ARE TO BE ENTERED INTO THE APPROPRIATE STRENGTH OR ALLOWABLE STRESS DESIGN LOAD COMBINATIONS WITH APPROPRIATE FACTORS AS DEFINED BY ASCE 7 BY THE DESIGN ENGINEER FOR BUILDING ELEMENTS.

CONCRETE

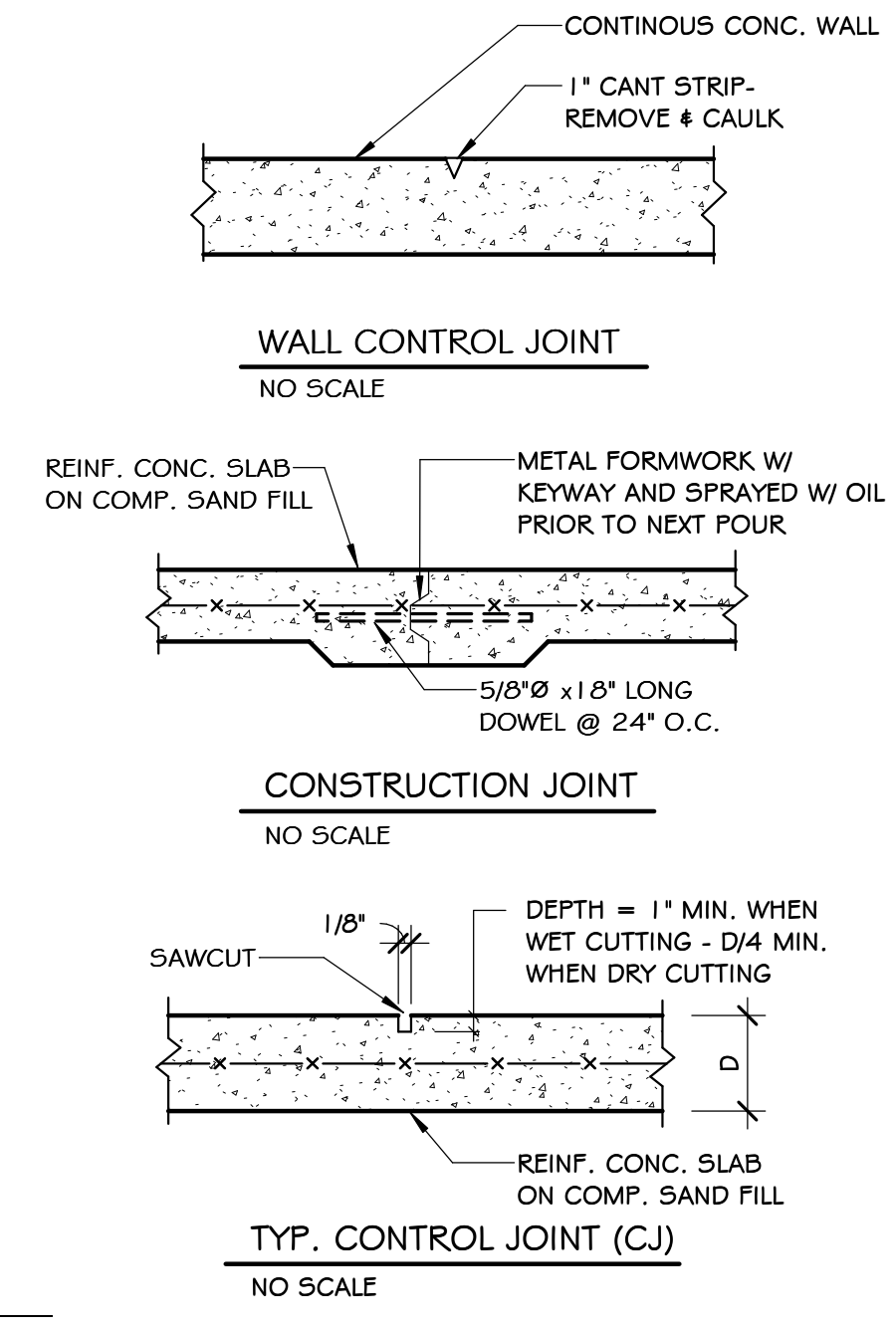
- ALL CONCRETE WORK SHALL BE COMPLETED IN ACCORDANCE WITH THE "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE" (ACI 318) AND WITH THE "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS" (ACI 301).
- PROVIDE SUBMITTALS FOR PRODUCT DATA, DESIGN MIXES, STEEL REINFORCEMENT SHOP DRAWINGS, MATERIAL TESTING REPORTS, AND MATERIAL CERTIFICATIONS.
- ALL EXPOSED EXTERIOR CONCRETE RETAINING AND FOUNDATION WALLS SHALL BE CONSIDERED TO HAVE AN ARCHITECTURALLY EXPOSED CLASS A FINISH IN ACCORDANCE WITH ACI 307. FINISH CONCRETE WALLS AS DIRECTED BY ARCHITECT.
- REPAIR AND PATCH DEFECTIVE AREAS AS DIRECTED BY ARCHITECT OR ENGINEER OF RECORD.
- CONCRETE MIX SHALL ADHERE TO ASTM C 94 WITH TESTING DONE BY AN INDEPENDENT TESTING AGENCY TO PERFORM MATERIAL EVALUATION TESTS. PROVIDE 7 AND 28 DAY CYLINDER TESTS. COMPLY WITH ASTM C143, C173, C31, AND C39.
- REINFORCING BARS SHALL BE DEFORMED BARS OF NEW BILLET STEEL CONFORMING TO ASTM A615, GRADE 60. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A185. WELDING OF REINFORCEMENT STEEL IS PROHIBITED UNLESS SPECIFICALLY DETAILED.
- ALL CONCRETE SLABS SHALL BE REINFORCED WITH WELDED WIRE FABRIC THAT CONFORMS TO ASTM A185 AS FOLLOWS UNLESS NOTED OTHERWISE. LAP MINIMUM ONE FULL MESH PLUS 2 INCHES IN ALL DIRECTIONS AND TIE TOGETHER.
  - 4 INCH CONCRETE SLAB 6"x6" W1.4XW1.4 (ALTERNATE: 20 LB/CUBIC YARD XOREX)
  - 6 INCH CONCRETE SLAB 6"x6" W2.1XW2.1 (ALTERNATE: 25 LB/CUBIC YARD XOREX)
  - 8 INCH CONCRETE SLAB 6"x6" W2.9XW2.9 (ALTERNATE: 35 LB/CUBIC YARD XOREX)
- PROVIDE DIAGONAL REINFORCEMENT ACROSS ALL CORNERS OF OPENINGS IN CONCRETE WALLS AND SLABS AS FOLLOWS UNLESS NOTED OTHERWISE:
  - 6 INCH CONCRETE THICKNESS (1) #4 X 44" LONG
  - 8 INCH CONCRETE THICKNESS (1) #5 X 48" LONG
  - 10 INCH CONCRETE THICKNESS (2) #4 X 44" LONG
  - 12 INCH CONCRETE THICKNESS (2) #5 X 48" LONG
- LAP ALL REINFORCEMENT AS NOTED IN THE CONCRETE REINFORCEMENT LAP SCHEDULE. PROVIDE CORNER BARS FOR ALL HORIZONTAL REINFORCEMENT. PROVIDE DOWELS FROM FOOTING EQUAL IN SIZE AND NUMBER TO VERTICAL WALL OR PIER REINFORCING UNLESS NOTED OTHERWISE.
- THE FOLLOWING MINIMUM COVER SHALL BE PROVIDED FOR THE REINFORCEMENT OF ALL CAST IN PLACE CONCRETE WORK:
  - CONCRETE CAST AGAINST A PERMANENTLY EXPOSED TO EARTH 3 INCHES
  - FORMED SURFACES PERMANENTLY EXPOSED TO EARTH OR WEATHER
    - BARS #5 AND SMALLER 1 1/2 INCHES
    - BARS #6 AND LARGER 2 INCHES
  - FORMED SURFACES NOT EXPOSED TO EARTH OR WEATHER
    - SLABS, WALLS, JOISTS 1 1/2 INCHES
    - BEAMS, COLUMNS 3/4 INCHES
- ALL EXPOSED EDGES OF CONCRETE PIERS, BEAMS, AND WALLS SHALL BE CHAMFERED 3/4 INCH X 45 DEGREES.
- PROVIDE ALL ACCESSORIES NECESSARY TO SUPPORT REINFORCEMENT AT POSITIONS SHOWN ON THE PLANS.
- REINFORCEMENT SHALL BE CONTINUOUS ACROSS JOINTS AND AROUND CORNERS, OR SPLICE BARS SHALL BE PROVIDED IN ACCORDANCE WITH ACI 318. BARS SHALL BE PROVIDED AT ALL WALL CORNERS OF SIZE AND SPACING EQUAL TO THE HORIZONTAL WALL REINFORCEMENT.
- THE USE OF ADMIXTURES MAY BE USED AS NECESSARY WITH SUBMITTAL PRODUCT SPEC SHEETS FOR REVIEW AS PART OF THE CONCRETE MIX DESIGN SUBMITTAL. EXTRA WATER SHALL NOT BE ADDED BEYOND WHAT IS SPECIFIED IN THE MIX DESIGN.
- ALL FILL MATERIAL SHALL BE THOROUGHLY COMPACTED TO A MINIMUM 95% MODIFIED PROCTOR PRIOR TO PLACEMENT OF CONCRETE. THERE SHALL BE A MINIMUM OF 6 INCHES OF CLEAN SAND UNDER ALL SLABS ON GRADE, UNLESS NOTED OTHERWISE IN THE GEOTECHNICAL REPORT OR DRAWINGS.
- ALL CONCRETE SHALL BE THOROUGHLY CONSOLIDATED BY SUITABLE MEANS DURING PLACEMENT. IF VIBRATORS ARE USED, DO NOT OVER-VIBRATE OR TRANSPORT CONCRETE ALONG FORMS BY VIBRATING. CONTROL JOINTS FOR SLABS ON GRADE SHALL MAINTAIN AN ASPECT RATIO LESS THAN 1.5, AND BE SPACED NOT MORE THAN 12 FEET ON CENTER EACH WAY. COORDINATE JOINT LOCATIONS WITH JOINTS IN FLOORING MATERIALS AND WITH CHANGES IN FLOOR FINISH MATERIAL.
- THE COMPRESSIVE STRENGTH OF ALL GROUT USED UNDER COLUMN BASE PLATES SHALL HAVE A MINIMUM STRENGTH EQUAL TO THAT OF THE SUPPORTING CONCRETE SUBSTRATE.
- GENERAL CONTRACTOR SHALL COORDINATE WITH ALL TRADES REGARDING OPENINGS, SLEEVES, ANCHORS, HANGERS, INSERTS, SLAB DEPRESSIONS AND OTHER ITEMS RELATED TO THE CONCRETE WORK PRIOR TO CONCRETE PLACEMENT. PITCH CONCRETE SLABS AS REQUIRED TO ALL FLOOR DRAINS.
- ANCHOR ROD AND OTHER EMBEDDED ITEMS SHALL BE SET BY TEMPLATE TO WITHIN 1/8 INCH TOLERANCE IN PLAN OR VERTICAL DIRECTION PRIOR TO CONCRETE PLACEMENT. TILTED OR MIS-PLACED ROD/EMBEDMENTS WILL NOT BE ACCEPTED. COORDINATE THESE ELEMENTS WITH CONCRETE REINFORCEMENT LOCATIONS.
- ANCHORS FOR EMBEDDED PLATES SHALL BE AS SHOWN ON THE DRAWINGS. HEADED STUDS SHALL CONFORM TO ASTM A108 AND AWS D1.1 GRADE B. REINFORCING BARS TO BE WELDED TO PLATES SHALL BE ASTM A615 GRADE 60 OR GRADE A706 GRADE 60.
- PROVIDE SKEETS IN CONCRETE WORK FOR STEEL PLACEMENT AS NEEDED. PROVIDE CONCRETE FILL AROUND STEEL AFTER PLACEMENT.
- COORDINATE ADMIXTURES AND CURING MEASURES TO BE COMPATIBLE WITH FLOORING MATERIALS AND ADHESIVES.

FOUNDATIONS

- FOOTING AND FOUNDATION CONCRETE MAY CONTAIN A MAXIMUM 25% FLYASH OR 30% GROUND BLAST FURNACE SLAG IN THE MIX.
- THE CONTRACTOR IS TO PROVIDE NECESSARY SHEETING, SHORING, BRACING, ETC. AS REQUIRED DURING EXCAVATIONS TO PROTECT SIDES OF EXCAVATION.
- THE CONTRACTOR SHALL FURNISH ALL REQUIRED DEWATERING EQUIPMENT TO MAINTAIN A DRY EXCAVATION UNTIL BACKFILL IS COMPLETE.
- CONCRETE SHALL NOT BE PLACED ON OR AGAINST SUB-GRADE CONTAINING FREE WATER, FROST OR ICE. UNLESS OTHERWISE NOTED, A 15 MIL (ASTM E 1745 CLASS A) VAPOR BARRIER WITH A PERMEABILITY RATE OF 0.01 PERFS OR LOW SHALL BE PLACED UNDER ALL SLABS ON GRADE AFTER UNDER FLOOR WORK AND COMPACTION IS COMPLETED. SEAL ALL LAPS AND PENETRATIONS. TURN UP VAPOR BARRIER AT ALL SLAB EDGES.
- TOP OF FOOTING ELEVATIONS NOTED ON PLAN ARE MINIMUM ELEVATIONS. FOOTINGS ARE TO BEAR ON UNDISTURBED NATURAL SOILS OR ENGINEERED FILL HAVING A MINIMUM NET ALLOWABLE BEARING CAPACITY LISTED IN THE ENGINEERING DATA TABLE.
- FOOTINGS SHALL BE CENTERED UNDER COLUMNS AND WALLS UNLESS SPECIFICALLY DETAILED OTHERWISE.
- FOUNDATION ELEMENTS THAT RETAIN EARTH ON BOTH SIDES SHALL BE BACKFILLED ON BOTH SIDES SIMULTANEOUSLY.
- FOUNDATION ELEMENTS THAT RETAIN EARTH ON ONE SIDE SHALL NOT BE BACKFILLED UNTIL CONCRETE HAS REACHED A MINIMUM OF 75% OF ITS 28 DAY STRENGTH, AND ALL NECESSARY TEMPORARY BRACING ELEMENTS ARE IN PLACE.



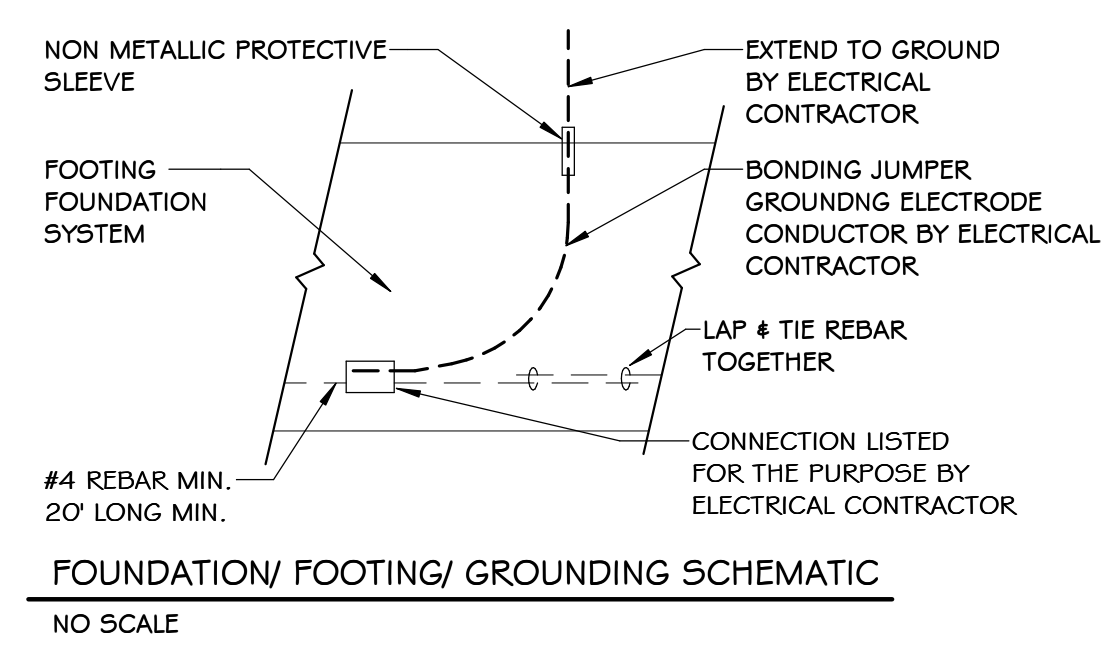
BUMPER POST DETAIL  
SCALE: 3/4" = 1'-0"



WALL CONTROL JOINT  
NO SCALE

CONSTRUCTION JOINT  
NO SCALE

TYP. CONTROL JOINT (CJ)  
NO SCALE



FOUNDATION/ FOOTING/ GROUNDING SCHEMATIC  
NO SCALE

DIAMETER	EMBEDMENT
5/8"	1'-0"
3/4"	1'-0"
7/8"	1'-3"
1"	1'-6"
1 1/8"	2'-0"
1 1/4"	2'-0"

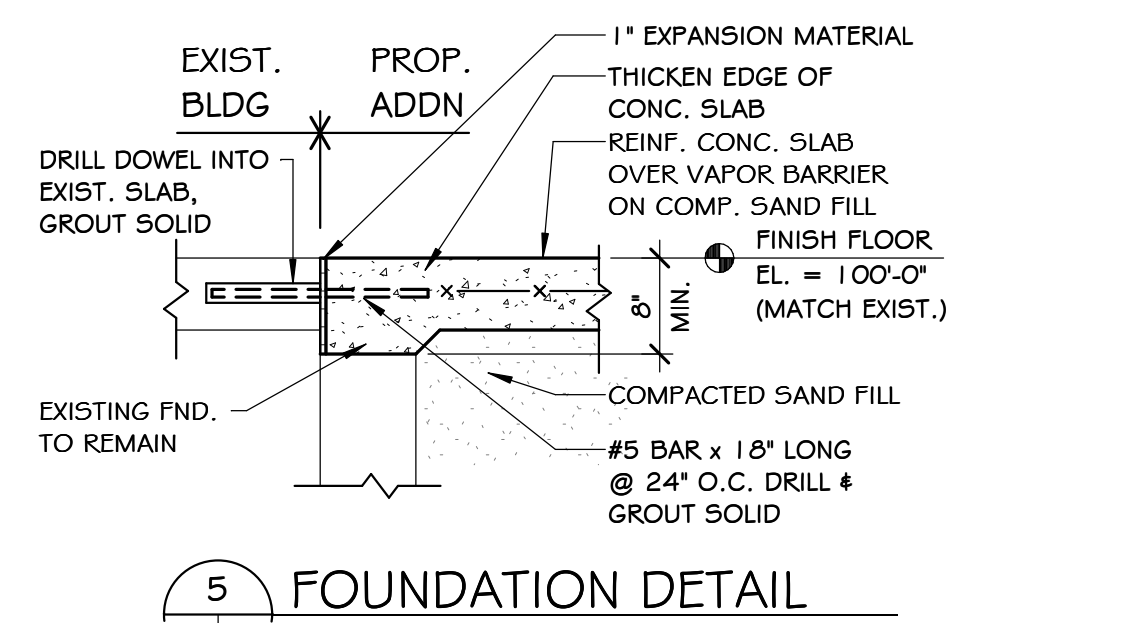
SCHEDULE OF MINIMUM RECOMMENDED ANCHOR BOLT EMBEDMENTS.

RECOMMENDED ANCHOR BOLT DETAIL

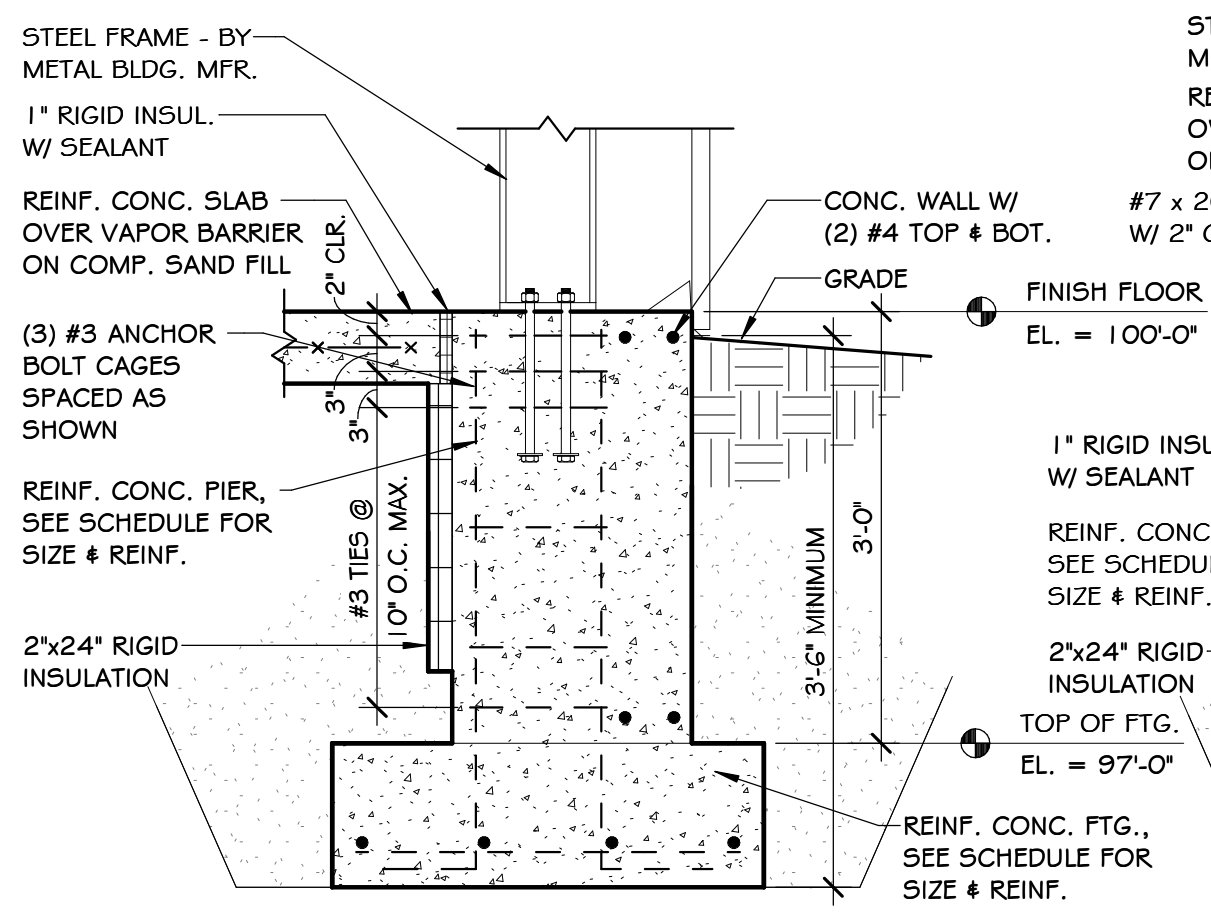
**ANCHOR BOLT NOTE:**  
CONTRACTOR TO PROVIDE WLP W/ ANCHOR BOLT LAYOUT TO COORDINATE CONCRETE PIERS. ANCHOR SIZES TO BE PER METAL BUILDING SHOP DRAWINGS.

**PIER NOTE:**  
PIER SIZE SHALL BE DETERMINED BY SHOP DRAWINGS FROM METAL BUILDING MANUFACTURER.

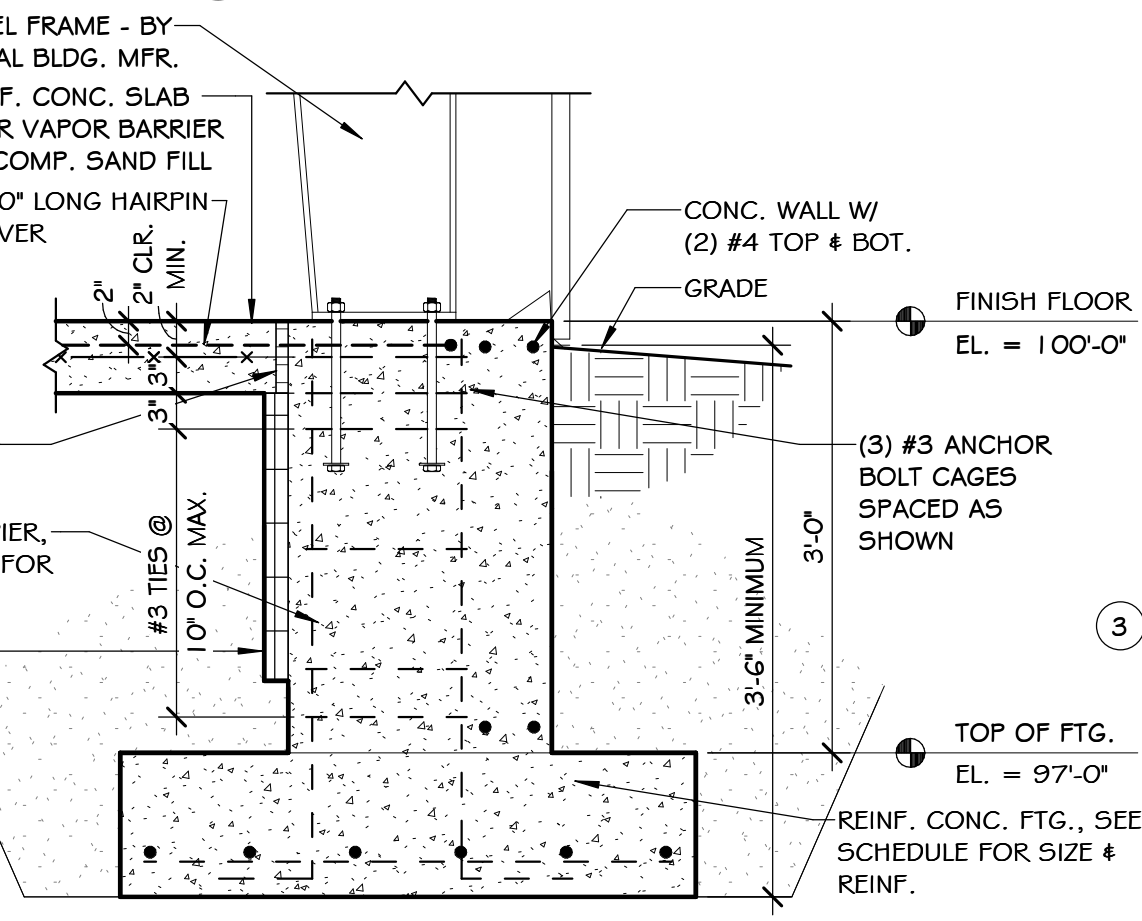
**REACTION NOTE:**  
CONTRACTOR TO PROVIDE WLP W/ METAL BUILDING MANUFACTURER FINAL REACTIONS TO COORDINATE FOUNDATION DESIGN.



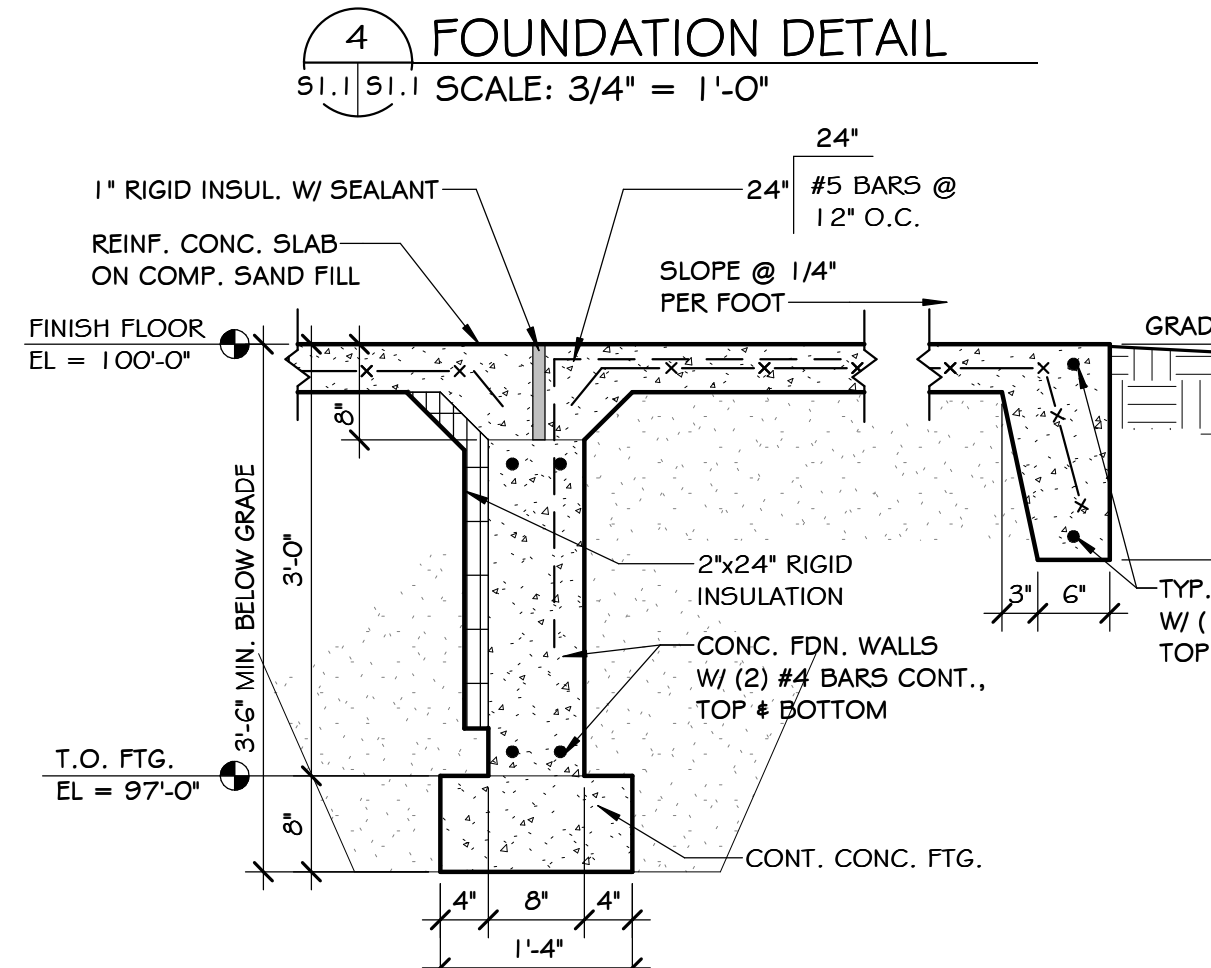
FOUNDATION DETAIL 5  
SCALE: 3/4" = 1'-0"



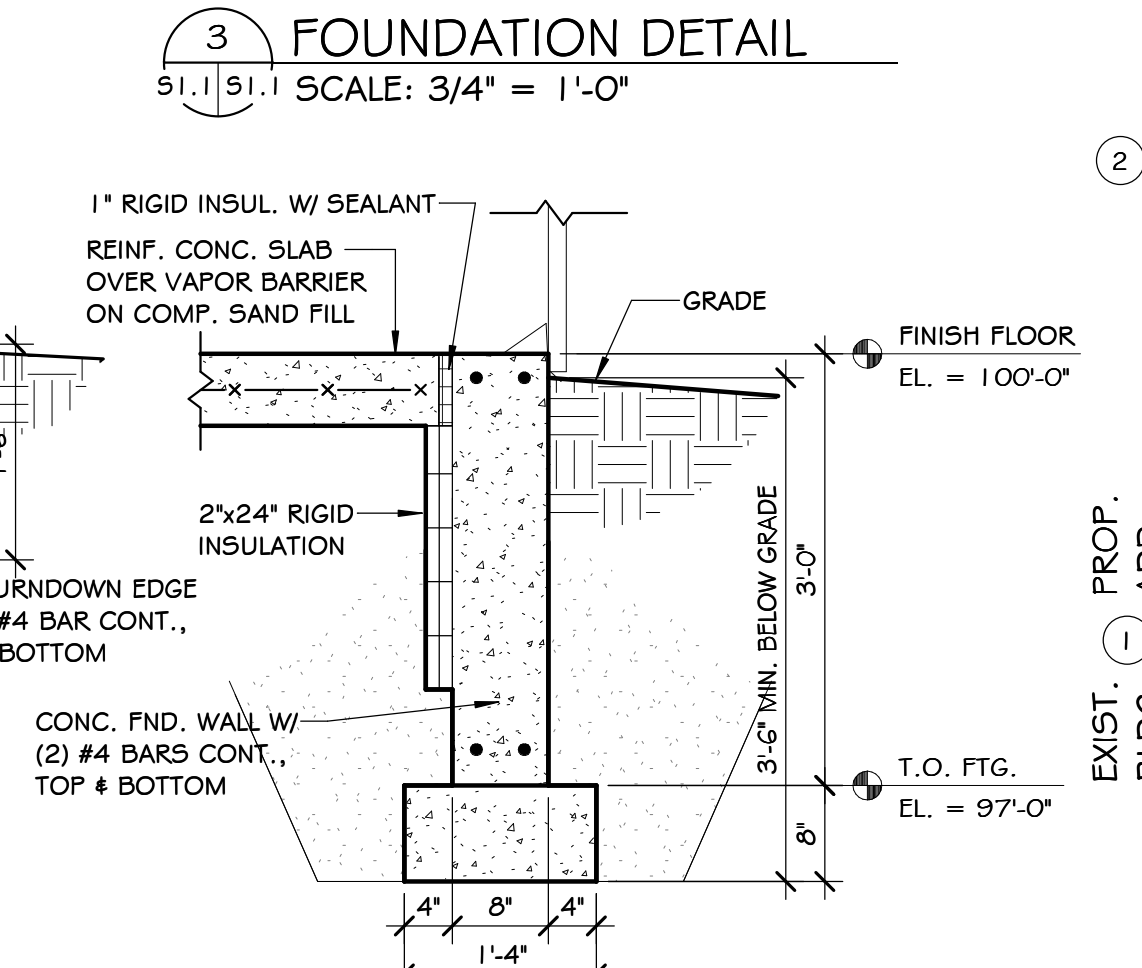
FOUNDATION DETAIL 4  
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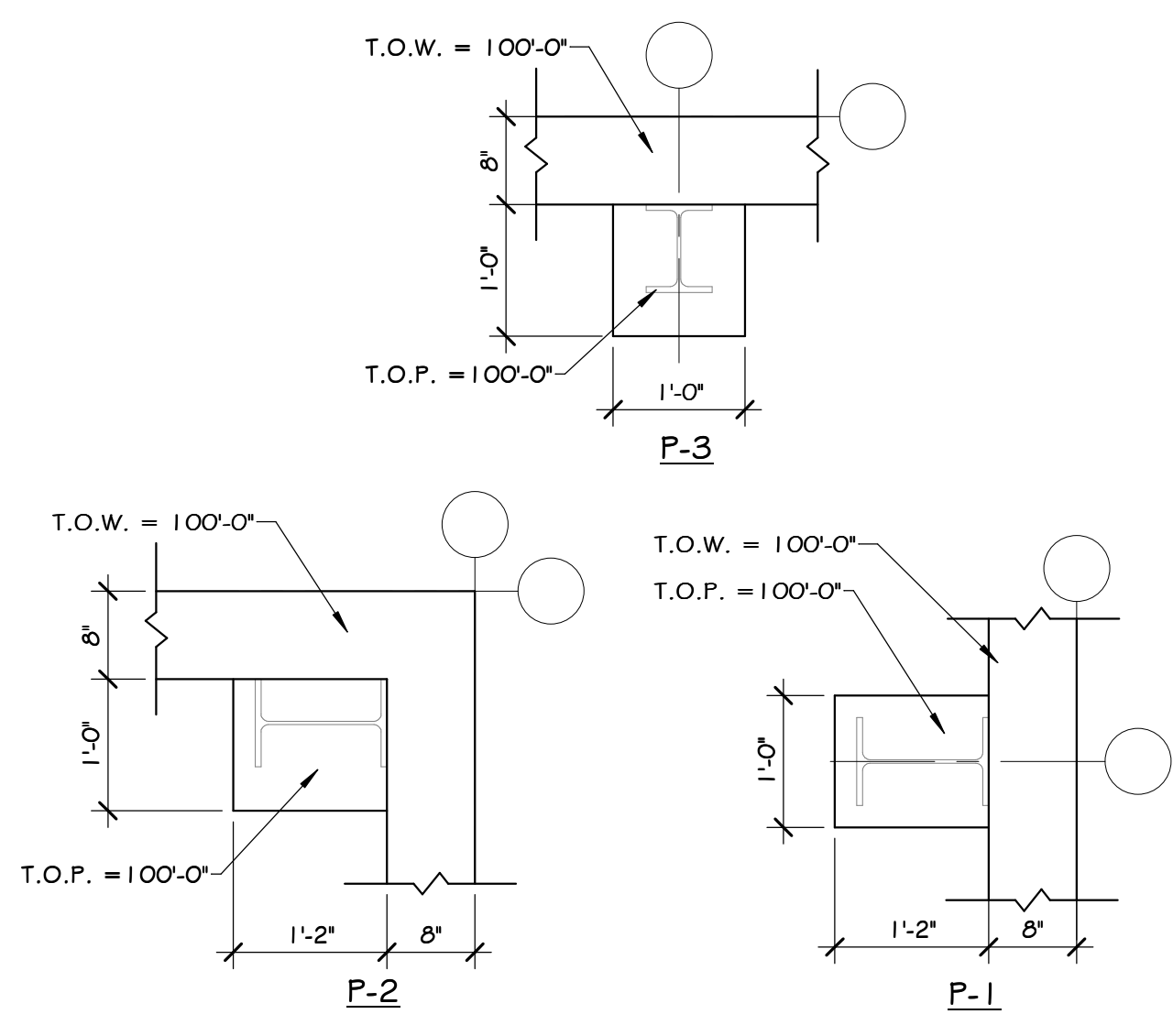
FOUNDATION DETAIL 3  
SCALE: 3/4" = 1'-0"



FOUNDATION DETAIL 2  
SCALE: 3/4" = 1'-0"



FOUNDATION DETAIL 1  
SCALE: 3/4" = 1'-0"



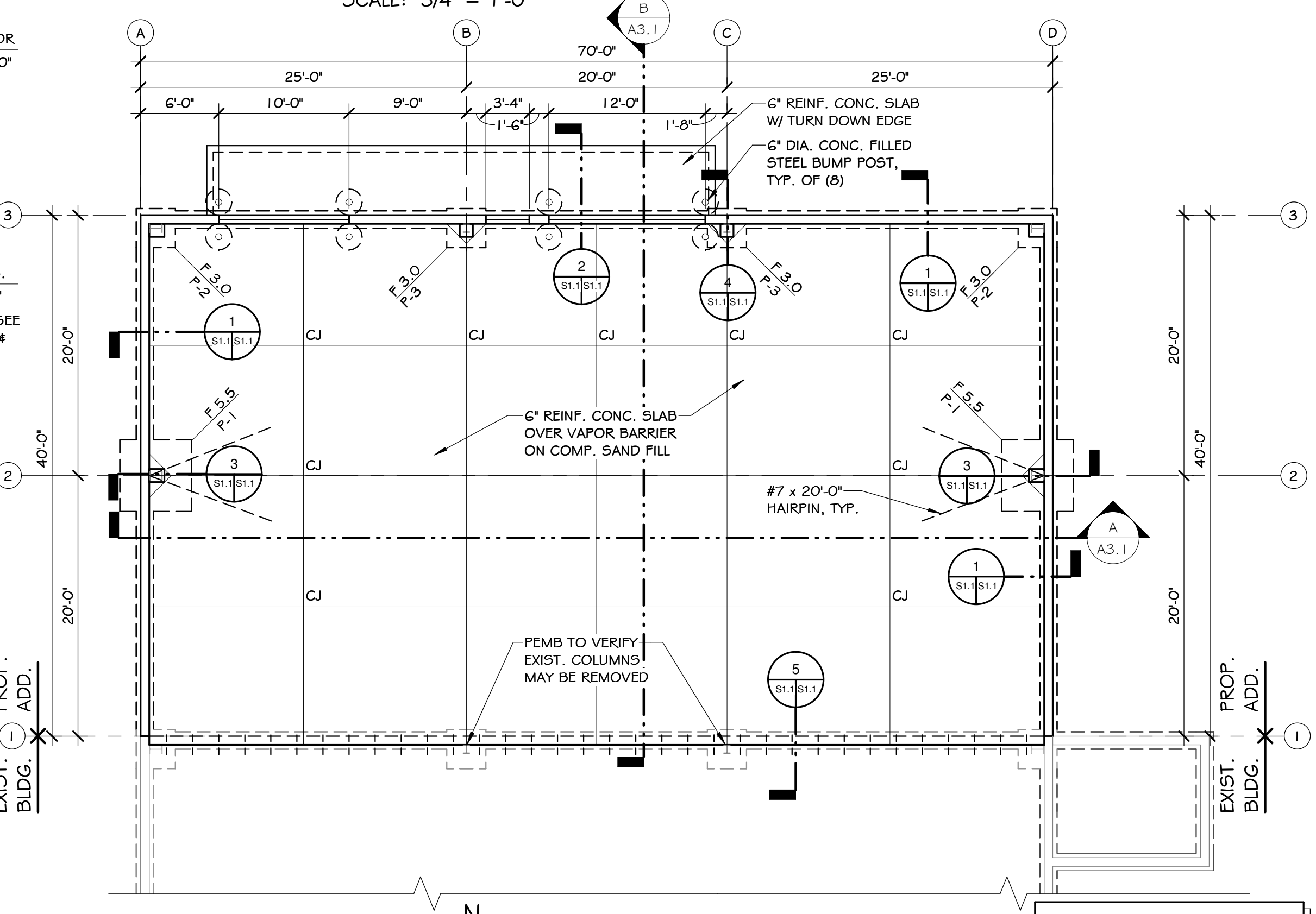
PIER TYPES  
SCALE: 3/4" = 1'-0"

FOOTING SCHEDULE (2000 P.S.F. SOIL)

SYMBOL	SIZE	REBAR
F 3.0	3'-0" x 3'-0" x 1'-0"	4 - #4 EACH WAY
F 5.5	5'-6" x 5'-6" x 1'-0"	7 - #5 EACH WAY

PIER SCHEDULE

SYMBOL	SIZE	REBAR
P-1	1'-2" x 1'-0"	4 - #5 VERT. #3 TIES @ 10" O.C.
P-2	1'-2" x 1'-0"	4 - #5 VERT. #3 TIES @ 10" O.C.
P-3	1'-0" x 1'-0"	4 - #5 VERT. #3 TIES @ 10" O.C.



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

ENGINEERING DATA  
Design Soil Bearing Pressure 2,000 psf

Design Stresses

Concrete

Footing and Foundations	f'c = 3,500 psi
Elevated and Topping Slabs	f'c = 3,500 psi
Slabs on Grade	f'c = 3,500 psi
Exterior Concrete (6% air entrained)	f'c = 4,000 psi
Reinforcing Steel	f'y = 60,000 psi

Masonry

Concrete Masonry Unit Assembly	f'm = 1,500 psi
Grout	f'c = 2,000 psi

Steel

W flange shapes (A992)	f'y = 50,000 psi
All other shapes & plate (A36)	f'y = 36,000 psi
HSS Rectangular shapes (A500)	f'y = 46,000 psi
HSS Round shapes (A500)	f'y = 42,000 psi
Steel Pipe (A53)	f'y = 35,000 psi
Light Gauge Steel	
18 gauge (43 ml) and lighter shapes	f'y = 33,000 psi
16 gauge (54 ml) and heavier shapes	f'y = 50,000 psi
Metal Deck	
Roof Deck	f'y = 33,000 psi
Non-Composite Floor Deck	f'y = 60,000 psi
Composite Deck	f'y = 50,000 psi
Structural Bolts	ASTM A325 or A490
Anchor Rod	ASTM F1554-36
Welding Electrodes	E70XX

Wood

Laminated Veneer Lumber (LVL)	f'y = 2,950 psi
Glue-Laminated Lumber	f'y = 2,600 psi

Structural Design Requirements

Live Load (LL Reductions used where permitted by code)

Manufacturing	200 psf
Mezzanine	125 psf
Roof	20 psf

Snow Load

Ground Snow Load (pg)	35 psf
Snow Exposure Factor (Ce)	1.0
Thermal Factor (Ct)	1.0
Importance Factor (Ia)	1.0
Flat Roof Snow Load (pf)	28 psf
Drift Snow Load Conditions per Code	

Wind Load

Ultimate Wind Speed (3 second gust)	115 mph
Basic Wind Speed (3 second gust)	89 mph
Wind Exposure Category	B
Building Risk Category	II
Importance Factor (Iw)	1.0
Internal Pressure Coefficient (GCp)	+/- 0.18



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Proposed Addition For:

DOUG'S AUTO BODY

2,800 S.F. ADDITION

0-199 LAKE MICHIGAN DR.  
GRAND RAPIDS, MI 49544

ISSUED FOR

DATE	DESCRIPTION
03-29-24	REVIEW
05-09-24	SITE PLAN REVIEW

Revision Schedule

No.	Date	Description
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Drawn by: KJB

FOUNDATION PLAN/ DETAILS

SCALE: AS NOTED

Sheet No. S1.1

Project No. 24-011

PRELIMINARY NOT FOR CONSTRUCTION

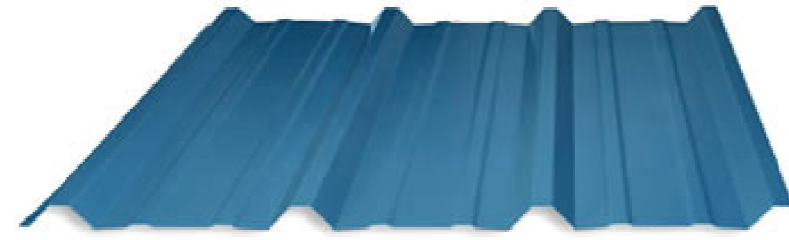
S:\DWG\24011 DOUG'S AUTOBODY\REV\24011 DOUG'S AUTOBODY.rvt



# Nucor Buildings Group R-Panel Metal Wall Panel System



The R-Panel wall is a strong, attractive wall panel ideal for commercial, community, and industrial applications. This panel delivers what most builders, contractors, and owners have come to expect from us in a versatile and attractive building system.



### Panel Credentials

- ASTM E283 Test Method for Determining Air Leakage Through Wall Systems
- ASTM E331 Test Method for Water Penetration of Exterior Wall Systems
- State of Florida Product Approval
- UL263 Fire Tests of Building Construction and Materials

### Panel Specifications

Gage	Thickness (in.)	Yield (ksi)	Tensile (ksi)	Panel Wt. (psf)	L (Gross) (in')	TOP IN COMPRESSION		BOTTOM IN COMPRESSION	
						S <sub>c</sub> (eff.) (in')	M <sub>c</sub> (kip-in)	S <sub>b</sub> (eff.) (in')	M <sub>b</sub> (kip-in)
26	0.0177	80	82	0.86	0.0490	0.0378	1.3590	0.0462	1.6593
24	0.0222	80	82	1.08	0.0633	0.0543	1.9520	0.0588	2.1133

### Panel Capacity (psf)

SPAN (ft.)	26 GAGE		24 GAGE	
	Pressure <sup>1</sup>	Section <sup>1,2</sup>	Pressure <sup>1</sup>	Section <sup>1,2</sup>
3.0	79	72	120	75
3.5	68	62	103	64
4.0	59	54	90	56
4.5	53	48	80	50
5.0	47	43	69	45
5.5	43	37	57	41
6.0	37	31	48	38
6.5	32	26	41	35
7.0	28	23	36	32
7.5	24	20	31	29

### NOTES

1. Section properties were calculated in accordance with AISI S100/CSA S136, 2016 Edition.
2. Panels were checked for bending, shear, combined bending and shear, web crippling, deflection and panel pullover.
3. Deflection is limited to Span/60.
4. Panel pullover limits are based on d/w = 0.44".
5. Thermal load has not been considered.
6. Capacities are based on a 3-span condition with equal length spans.
7. "Pressure" load is applied inward on the outer surface towards supports.
8. "Section" load is applied outward on the inner surface away from panel supports.



### PRODUCT SPECIFICATIONS



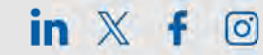
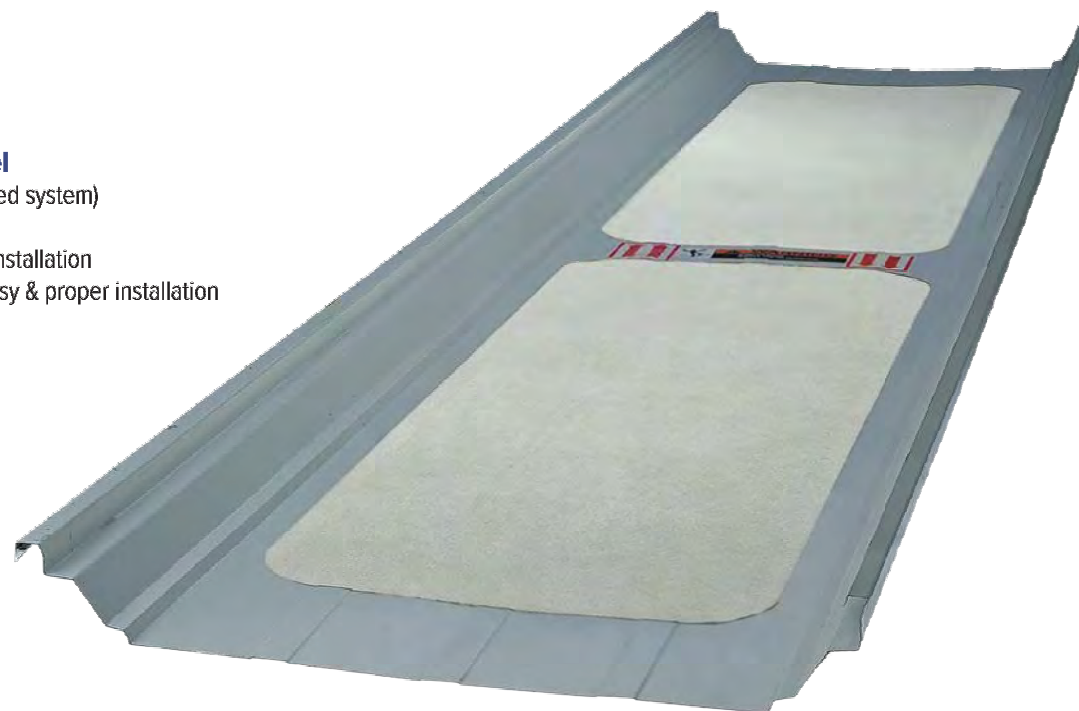
### Nucor CFR™ Standing Seam Roof Panels

- Standard 24" width by 3" nominal height
- Standard 24 ga. Galvalume - 50 KSI steel
- Standard SP & PVDF painted colors
- Minimum roof slope: 1/4:12
- Custom lengths 6'-0" to 55'-0"
- Designed for use with fiberglass batt or rigid board insulation
- Panels rated for UL Class 90, Miami-Dade, and Factory Mutual uplift approval
- Standard roof line trim & flashing to be 26 ga.
- Factory applied mastic in panel sidelap

### Nucor CFR™ Translucent Panel

- No through-fasteners (fully adhered system)
- UL Class 90 approved
- Shipped preassembled for easy installation
- Endlap splices are dimpled for easy & proper installation
- Weatheright system

**IMPORTANT:** Never walk, step, or stand on a translucent panel. Injury or death could result.



## PFX-3127

### LED WALL PACK



Utilizing the latest generation of LED chips, this uniquely designed wallpack delivers a similar light output to a 150/200 W metal halide but with only 1/3 energy consumption. Housing made of die-casting aluminum with reliable powder coating specifically for harsh outdoor environment. It is attractive in appearance and performance.

### AVAILABLE OPTIONS



Optional photo control

### FEATURES

#### LISTING

UL and CUL listed for wet locations

#### HOUSING

Die-cast aluminum body

#### LEDS

New generation COB technology

#### FINISH

UV stabilized powder coated finish

#### LENS

Heat and impact resistant borosilicate glass

#### OPTIONS

Finish - Bronze. Color option with adder

### SPECIFICATION

Example Model Number: PFX-3127E048UNV840T4ST-XXXXXXX

Model No. ▶ PFX-3127

System watts ▶ 48 W

Input Voltage ▶ UNV = 120-277 V

CRI ▶ 8 = 80 CRI

CCT ▶ 40 = 4000K

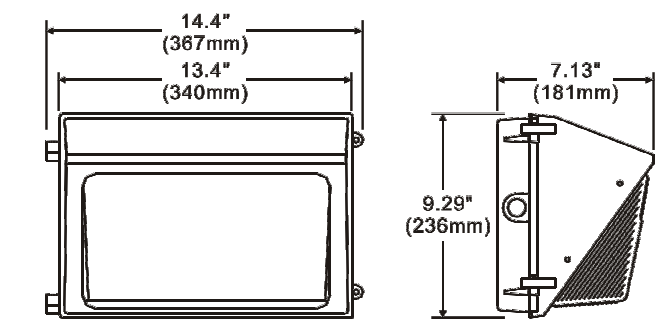
Light Distribution ▶ T4 = Type 4

Lumens ▶ 6127 lm\*\*

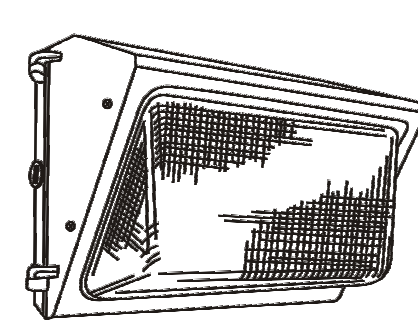
Power ▶ 48 W

Efficacy ▶ 127.65 lm/W

### DIMENSIONS



### LINE DRAWING



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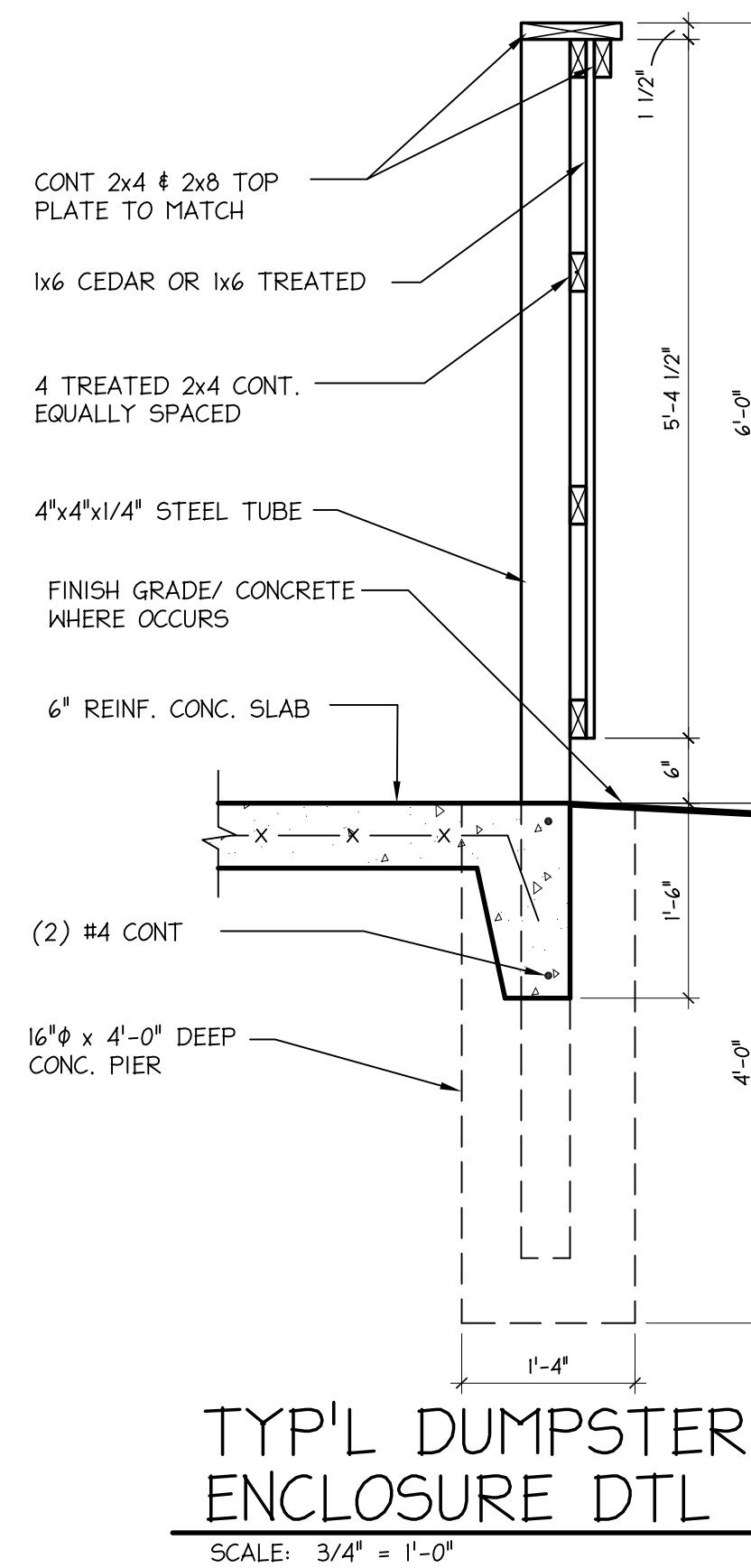
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3 Luger Rd. #1 - Denville, NJ 07834

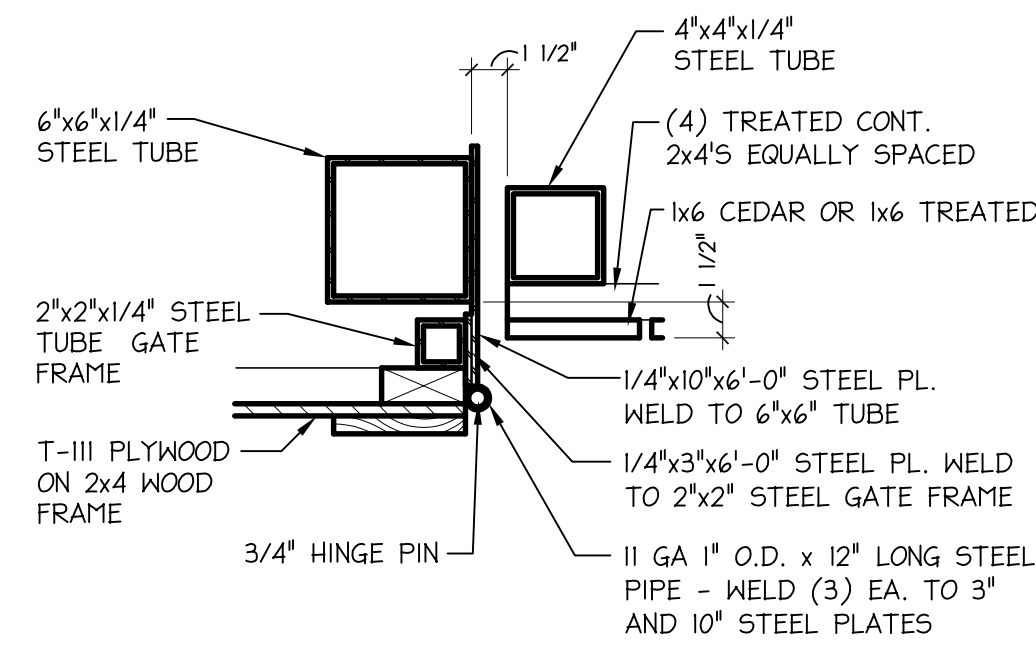
info@paraflex.com

paraflex.com

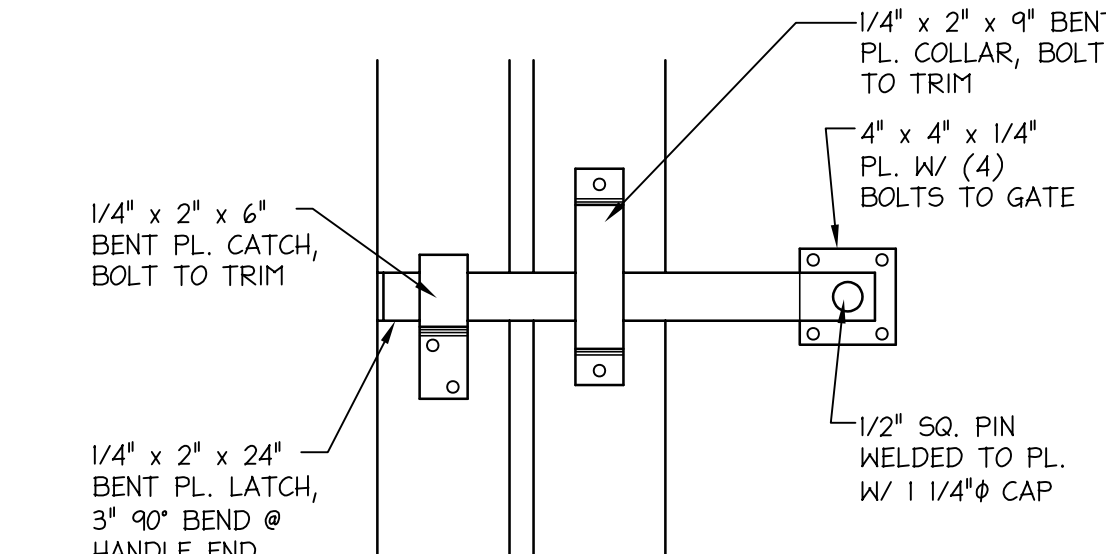
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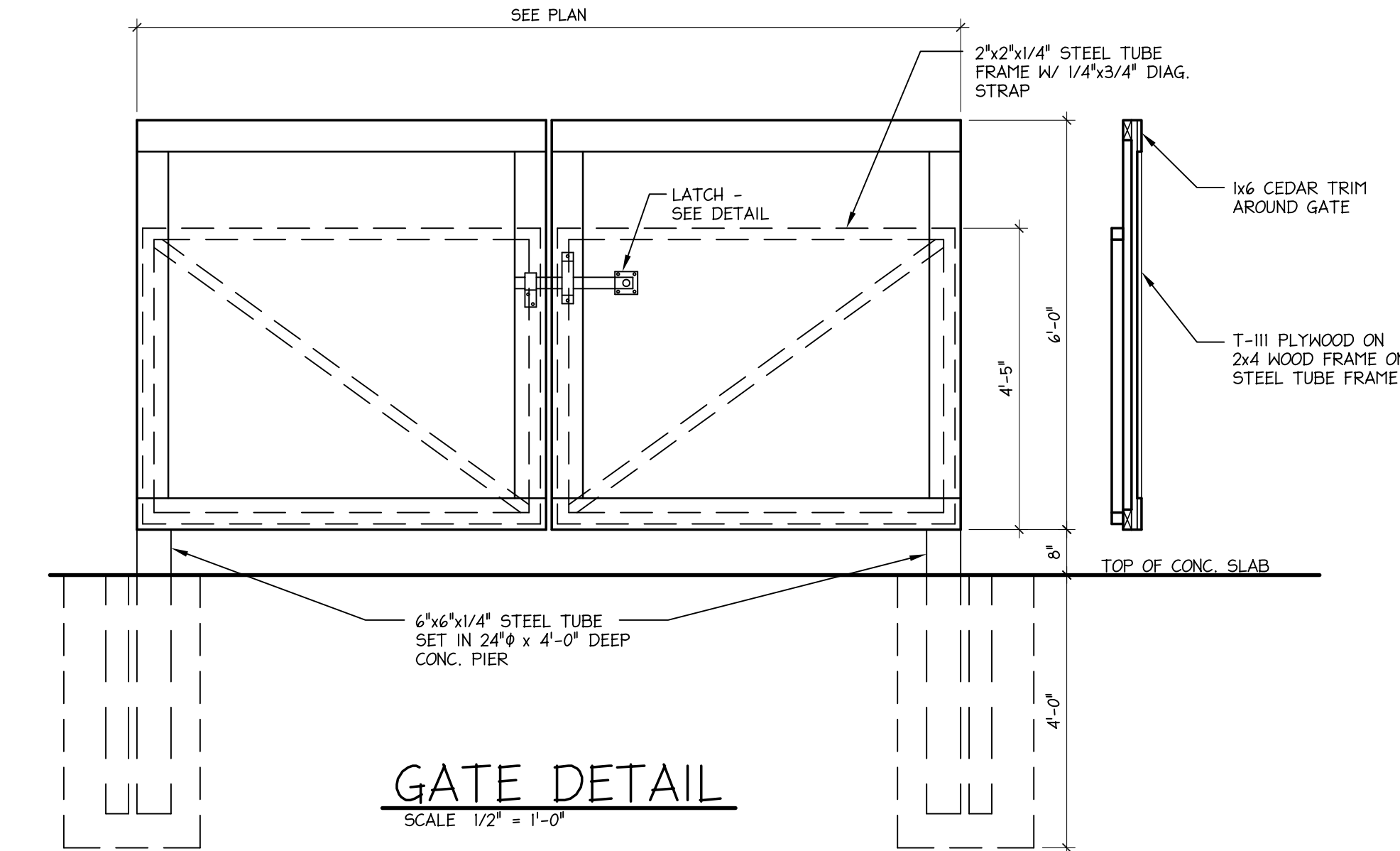
TYP'L DUMPSTER ENCLOSURE DTL  
SCALE: 3/4" = 1'-0"



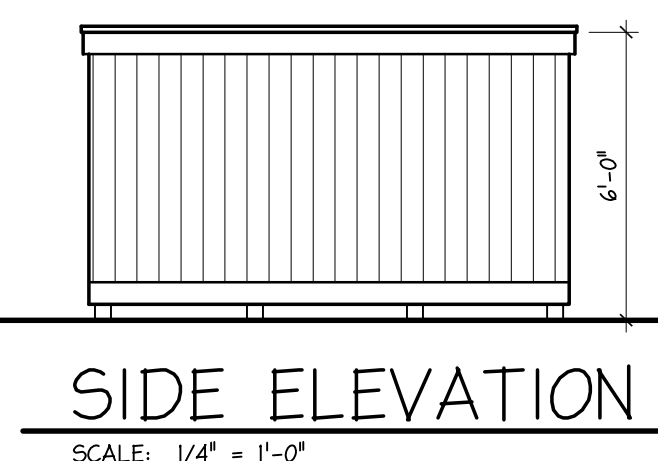
CORNER DETAIL  
SCALE 1 1/2" = 1'-0"



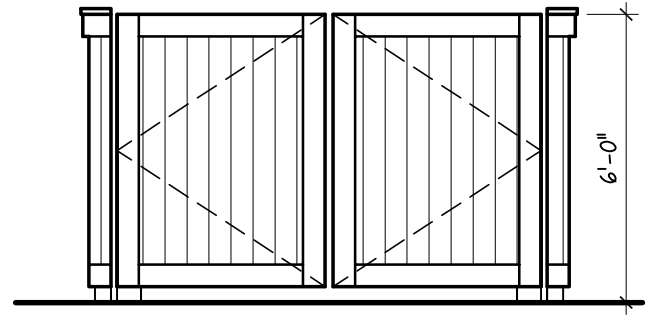
LATCH DETAIL  
SCALE 1 1/2" = 1'-0"



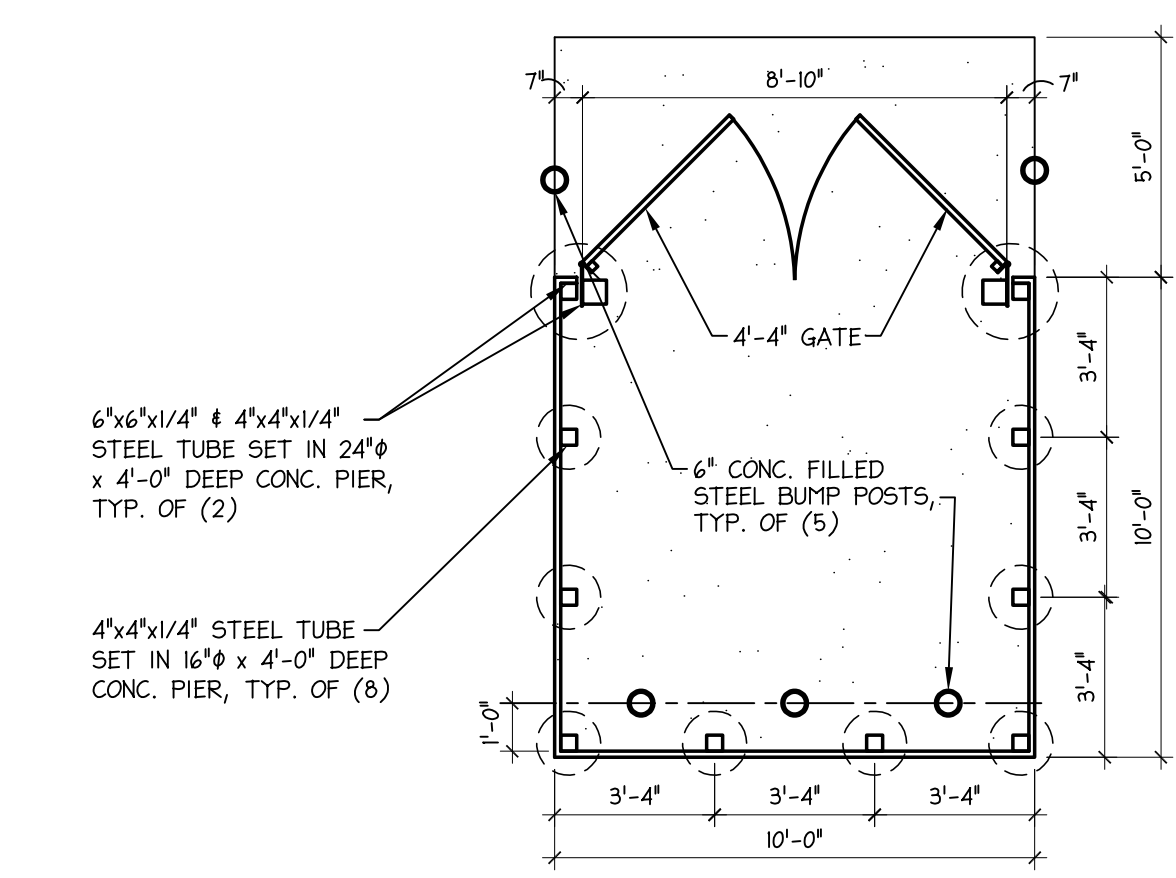
GATE DETAIL  
SCALE 1/2" = 1'-0"



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



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



DUMPSTER PLAN  
SCALE: 1/4" = 1'-0"



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PROPOSED DUMPSTER ENCLOSURE FOR:  
**DOUG'S AUTO BODY**

0-199 LAKE MICHIGAN DR.  
GRAND RAPIDS, MI 49544

ISSUED FOR  
07-29-24 CONSTRUCTION  
08-02-24 PC MEETING REVIEW

DRAWN BY: K.J.B

## SITE DETAILS

SHEET NUMBER  
**C-2.1**

JOB NUMBER  
24-011