

BUILDING CODE ANALYSIS

1. 2020 BUILDING CODE OF NEW YORK STATE (BASED ON 2018 IBC)

2. 2020 FIRE CODE OF NEW YORK STATE

3. 2020 ENERGY CONSERVATION CONSTRUCTION CODE OF NYS

4. 2020 PLUMBING, MECHANICAL, AND FUEL GAS CODES OF NYS

5. LOCAL ZONING AND AMENDMENTS AS APPLICABLE

6. PRIMARY USE: STORAGE / WAREHOUSE

6.1. OCCUPANCY GROUP: S-1 (MODERATE HAZARD STORAGE) OR S-2 (LOW HAZARD), DEPENDING ON STORED MATERIALS

6.2. ANCILLARY SPACES (OFFICES, RESTROOMS) MAY BE GROUP B (BUSINESS)

7. LIKELY: TYPE II-B (NON-COMBUSTIBLE, UNPROTECTED) OR TYPE III-B

7.1. DETERMINED BY STRUCTURAL SYSTEM, FIREPROOFING, AND MATERIALS

7.2. MUST BE VERIFIED FROM DRAWINGS

8.0 ONE STORY

8.1 APPROX. 20,000-60,000 SQUARE FEET (TYPICAL FOR WAREHOUSES; VERIFY ACTUAL)

8.2 TYPE II-B WITH S-1 OCCUPANCY ALLOWS:

8.3 MAX AREA: 24,000 SF (WITHOUT SPRINKLERS)

8.4 UNLIMITED AREA POSSIBLE WITH FIRE WALLS OR SPRINKLER SYSTEM (NFPA 13)

9.0 MINIMUM NUMBER OF EXITS:

9.1 TWO EXITS REQUIRED IF OCCUPANT LOAD EXCEEDS 49

9.2 EXIT ACCESS TRAVEL DISTANCE:

9.3 MAX 250 FEET IN SPRINKLERED BUILDINGS FOR S-1

9.4 EXIT WIDTHS:

9.5 MINIMUM 36 INCHES FOR CORRIDORS

9.6 MINIMUM 32 INCHES CLEAR FOR DOORS

9.7 WIDTH PER OCCUPANT LOAD AT 0.2"/OCCUPANT (SPRINKLERED BUILDINGS)

10. DESIGN LOADS (MINIMUM):

10.1 ROOF LIVE LOAD: 20 PSF

10.2 FLOOR LIVE LOAD: 125 PSF (STORAGE AREAS)

10.3 WIND LOAD: BASED ON ASCE 7-16 (LONG ISLAND WIND SPEED ZONE)

10.4 SEISMIC DESIGN CATEGORY: TYPICALLY B OR C FOR LONG ISLAND



Town of Islip
Geographic Table Design Requirements
For Commercial and Residential Permits
2020 NYS Uniform Code

The Town of Islip is within a hurricane prone region, Climate Zone 4a.

TABLE R301.2(1) CLIMATIC AND GEOGRAPHIC DESIGN CRITERIA													
GROUND SNOW LOAD	WIND DESIGN				SEISMIC DESIGN CATEGORY	SUBJECT TO DAMAGE FROM			WINTER DESIGN TEMP	ICE BARRIER REQUIRED	FLOOD HAZARDS	AIR FREEZING INDEX	MEAN ANNUAL TEMP
	Speed (mph)	Topographic Effects	Special Wind Region	Wind-Born Debris Zone		Weathering	Frost Line Depth	Termite					
20	130 Vult	no	no	1 Mile from Coast and Fire Island	B	Severe	BOF 3 FT BFG	Mod To Heavy	See Below	Yes	Call the Plans Examiners Office	599	51° F

MANUAL J CRITERIA REQUIRED IN SUBMITTED CALCULATIONS							
ELEVATION	LAT	WINTER HEATING	SUMMER COOLING	ALTITUDE CORRECTION FACTOR	INDOOR DESIGN TEMP	DESIGN TEMPERATURE COOLING	HEATING TEMPERATURE DIFFERENCE
108 FT	41° N	15° F	86° F	1.00	70° F	75° F	55° F
Cooling Temperature Difference	Wind Velocity Heating		Wind Velocity Cooling	Coincident Wet Bulb	Daily Range	Winter Humidity	Summer Humidity
11° F	15 MPH		7.5 MPH	72° F	Medium (M)	40%	32 GR @50% RH

IBC CLIMATIC AND GEOGRAPHIC DESIGN CRITERIA													
GROUND SNOW LOAD	WIND DESIGN				SEISMIC DESIGN CATEGORY	SUBJECT TO DAMAGE FROM			WINTER DESIGN TEMP	ICE BARRIER REQUIRED	FLOOD HAZARDS	AIR FREEZING INDEX	MEAN ANNUAL TEMP
	Speed (mph)	Topographic Effects	Special Wind Region	Wind-Born Debris Zone		Weathering	Frost Line Depth	Termite					
20	130 Vult	No	No	1 Mile from Coast and Fire Island	B	Severe	BOF 3 FT BFG	Mod To Heavy	See Below	Yes	Call the Plans Examiners Office	599	51° F

- Winter Design Temp:
- Interior spaces intended for human occupancy shall be provided with an indoor temperature of not less than 68° F at a point 3 feet above the floor on the design heating day
 - System design shall be based on max 72° F heating, minimum 75° F cooling
 - Degree days (NY LaGuardia) 4811, Winter Design Temp 15° F, Dry Bulb 89° F, Wet Bulb 75° F (2020 IPC Appendix D)
 - As per NYSBC 2020 Chapter 16 section 1609 and ASCE 7 2016, wind exposure category and surface roughness is B
 - Use C for both South Shore and Fire Island

GENERAL NOTES

1. ALL WORK SHALL CONFORM TO THE 2020 BUILDING CODE OF NEW YORK STATE (BCNYS) AND ALL OTHER APPLICABLE STATE AND LOCAL CODES INCLUDING:

1.1. 2020 FIRE CODE OF NEW YORK STATE

1.2. 2020 ENERGY CONSERVATION CONSTRUCTION CODE OF NEW YORK STATE

1.3. 2020 PLUMBING, MECHANICAL, AND FUEL GAS CODES OF NEW YORK STATE

1.4. NFPA 13 (AUTOMATIC SPRINKLER SYSTEM)

1.5. NFPA 70 (NATIONAL ELECTRICAL CODE)

1.6. ADA/ICC A117.1-2009 FOR ACCESSIBILITY

2. PRIMARY OCCUPANCY: S-1 (MODERATE-HAZARD STORAGE)

3. SECONDARY OCCUPANCY: B (BUSINESS - OFFICE AREA)

4. MIXED OCCUPANCY STRATEGY: {SEPARATED/NON-SEPARATED - TO MATCH DESIGN}

5. CONSTRUCTION TYPE: II-B: NON-COMBUSTIBLE, UNPROTECTED STRUCTURE

6. BUILDING IS SPRINKLERED THROUGHOUT PER NFPA 13

7. FIRE ALARM SYSTEM INSTALLED AS REQUIRED BY CODE

8. FIRE EXTINGUISHERS TO BE PROVIDED PER NFPA 10 AND LOCAL REQUIREMENTS

9. FIRE-RATE SEPARATIONS PROVIDED WHERE REQUIRED BETWEEN OCCUPANCIES OR INCIDENTAL USES

10. AUTOMATIC SPRINKLER SYSTEM REQUIRED PER SECTION 903.2.9

11. SPRINKLER SYSTEM TO BE DESIGNED TO NFPA 13 STANDARDS

12. FIRE ALARM SYSTEM MAY BE REQUIRED PER SECTION 907 DEPENDING ON OCCUPANT LOAD

13. OCCUPANT LOAD CALCULATION (TABLE 1004.5):

14. STORAGE (S-1): 300 SF / PERSON = 50 OCCUPANTS

15. OFFICE (B): 150 SF / PERSON = 20 OCCUPANTS

16. TOTAL: 70 OCCUPANTS

17. REQUIRED NUMBER OF EXITS: 2 OR MORE

18. EXIT TRAVEL DISTANCE (SPRINKLERED): MAX 400 FT -COMPLIANT

19. ALL OCCUPIED AREAS AND ROUTES TO BE ACCESSIBLE

20. ACCESSIBLE ENTRANCES AND TOILET ROOMS REQUIRED

21. CODE: 2020 ENERGY CONSERVATION CONSTRUCTION CODE OF NEW YORK STATE

22. BUILDING ENVELOPE, HVAC, LIGHTING TO COMPLY WITH PRESCRIPTIVE OR PERFORMANCE PATH

23. NYSTRECH ENERGY CODE MAY APPLY IF REQUIRED BY MUNICIPALITYCODES & STANDARDS

24. FIRE ALARM SYSTEM AS REQUIRED

25. PORTABLE FIRE EXTINGUISHERS PER NFPA 10

26. RATED SEPARATIONS INSTALLED WHERE REQUIRED

27. EXIT COUNT, WIDTH, TRAVEL DISTANCES, AND SIGNAGE TO COMPLY WITH CHAPTER 10

28. ILLUMINATED EXIT SIGNS AND EMERGENCY LIGHTING PROVIDED

29. BUILDING SHALL COMPLY WITH CHAPTER 11 AND ICC A117.1-2009

30. ACCESSIBLE ENTRANCES, ROUTES, AND RESTROOMS PROVIDED

31. ENVELOPE, HVAC, LIGHTING, AND WATER HEATING TO MEET OR EXCEED CODE

DOOR SCHEDULE

MARK	SIZE (NOMINAL)		TYPE
①	3'-8"	7'-2"	EXTERIOR DOOR
②	3'-2"	6'-8"	FRONT GLASS DOOR
③	3'-0"	6'-8"	INTERIOR DOORS
④	8'-0"	8'-0"	LOADING DOCK GARAGE DOOR
⑤	12'-0"	16'-0"	GARAGE DOOR
⑥	6'-0"	6'-0"	OFFICE SLIDING DOOR

DRAWING LEGEND

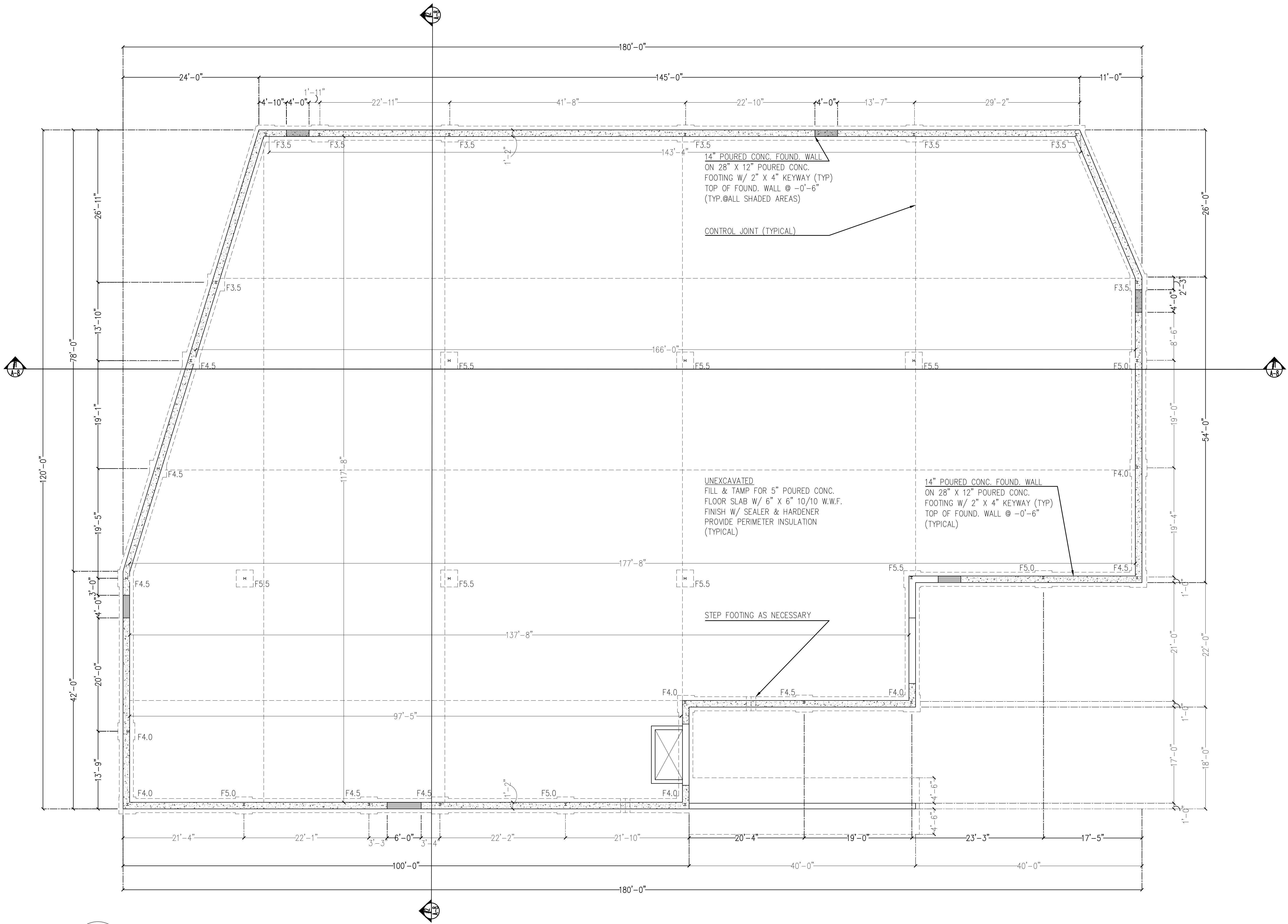
A0	COVER SHEET	A6	ELEVATIONS
A1	FOUNDATION PLAN	A7	WALL SECTIONS
A2	FIRST FLOOR PLAN	A8	SECTIONS
A3	ROOF PLAN	A9	DETAILS (1)
A4	REFLECTED CEILING PLAN	A10	DETAILS (2)
A5	EXIT PLAN		

B
DESIGN
R
G

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05.17.2025
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COVER SHEET #1

A0



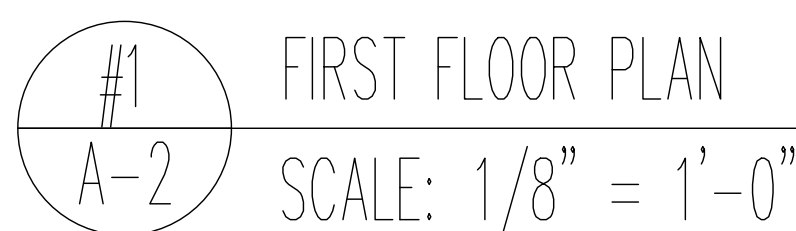
#1
A-1 FOUNDATION PLAN
SCALE: 1/8" = 1'-0"

B
DESIGN
R
G

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FOUNDATION PLAN
1" = 1' - 0"

A1



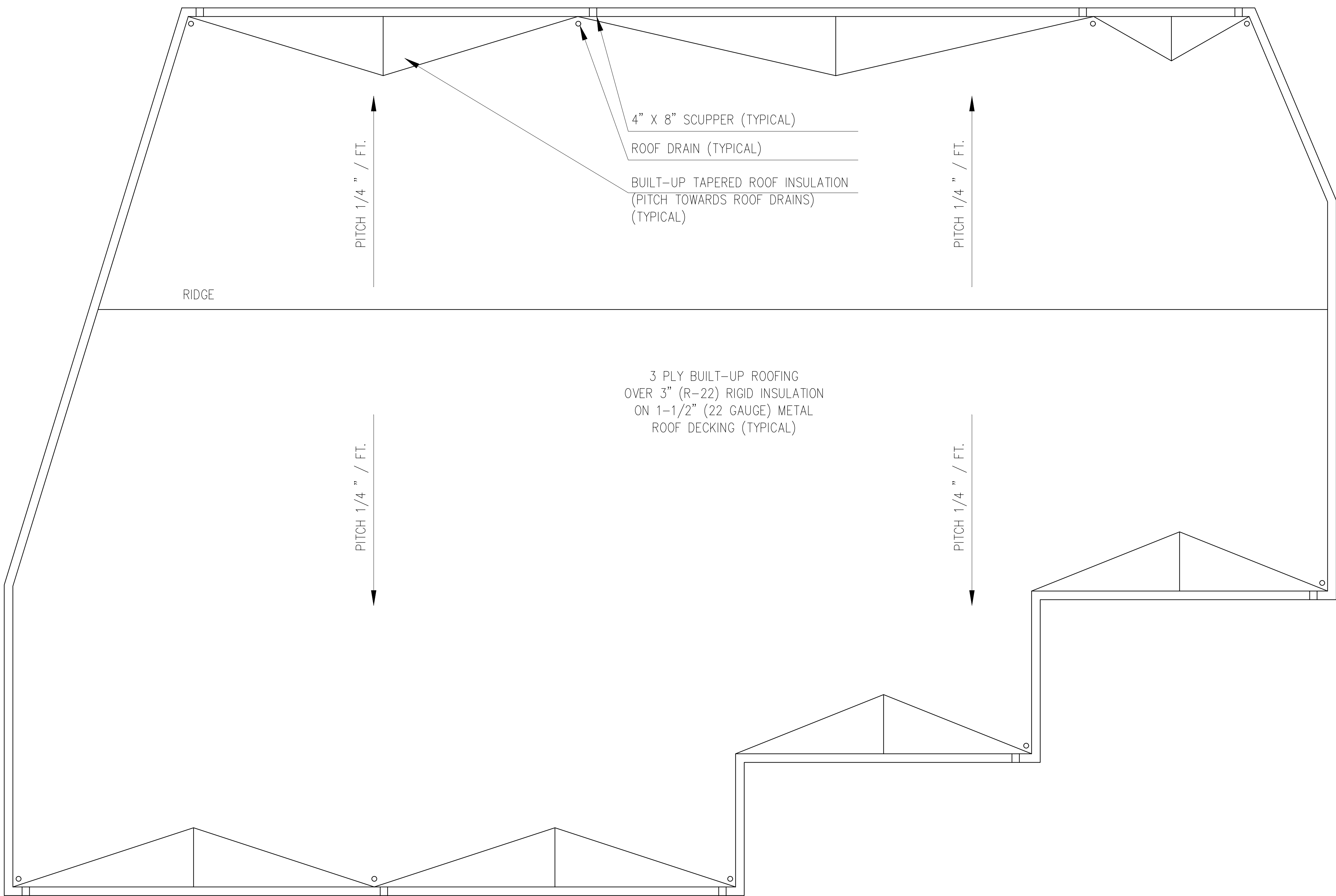
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FLOOR PLAN



#1
A-3

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

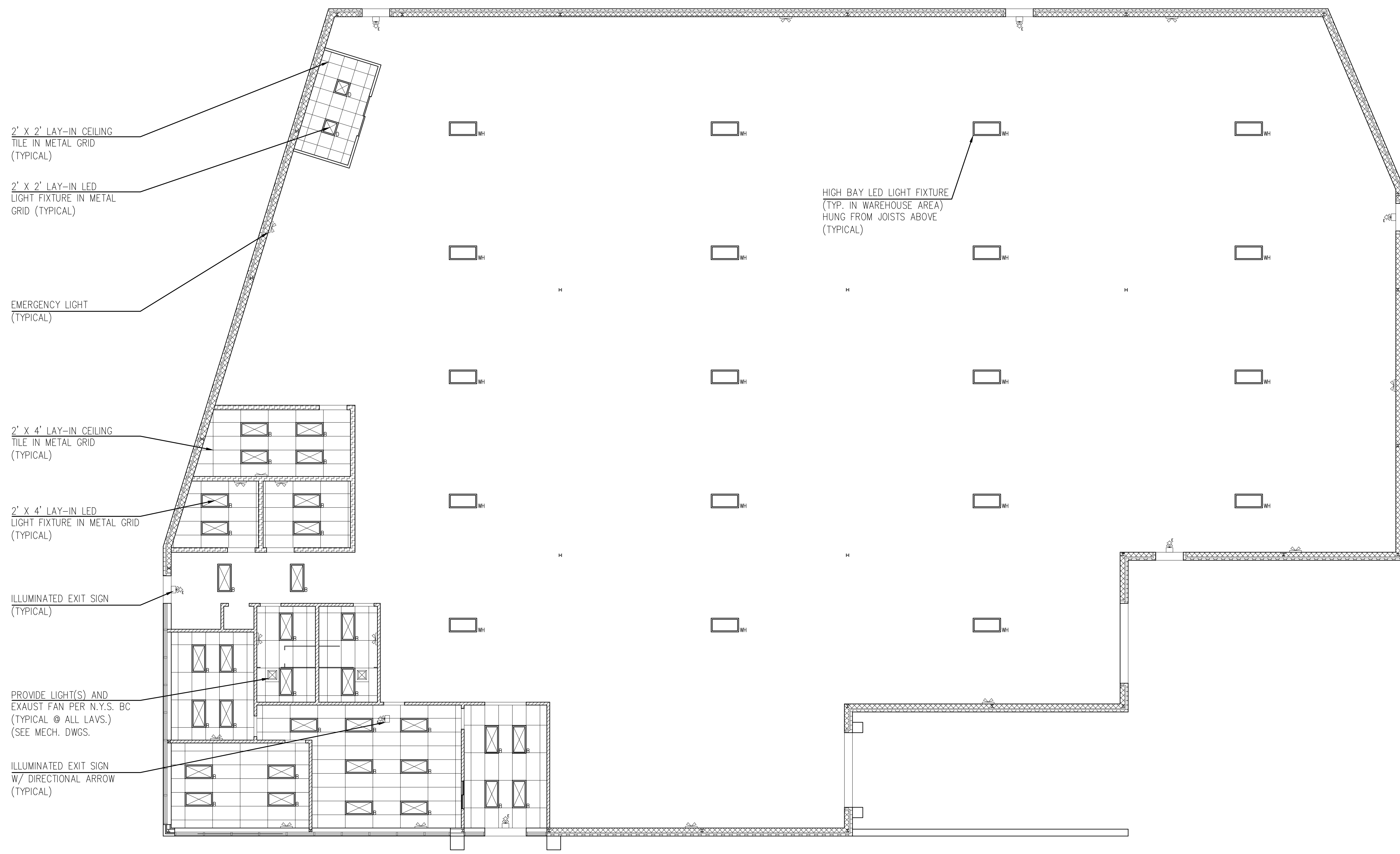


A3

ROOF PLAN
1" = 1' - 0"

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B
DESIGN
G R



#1
A-4

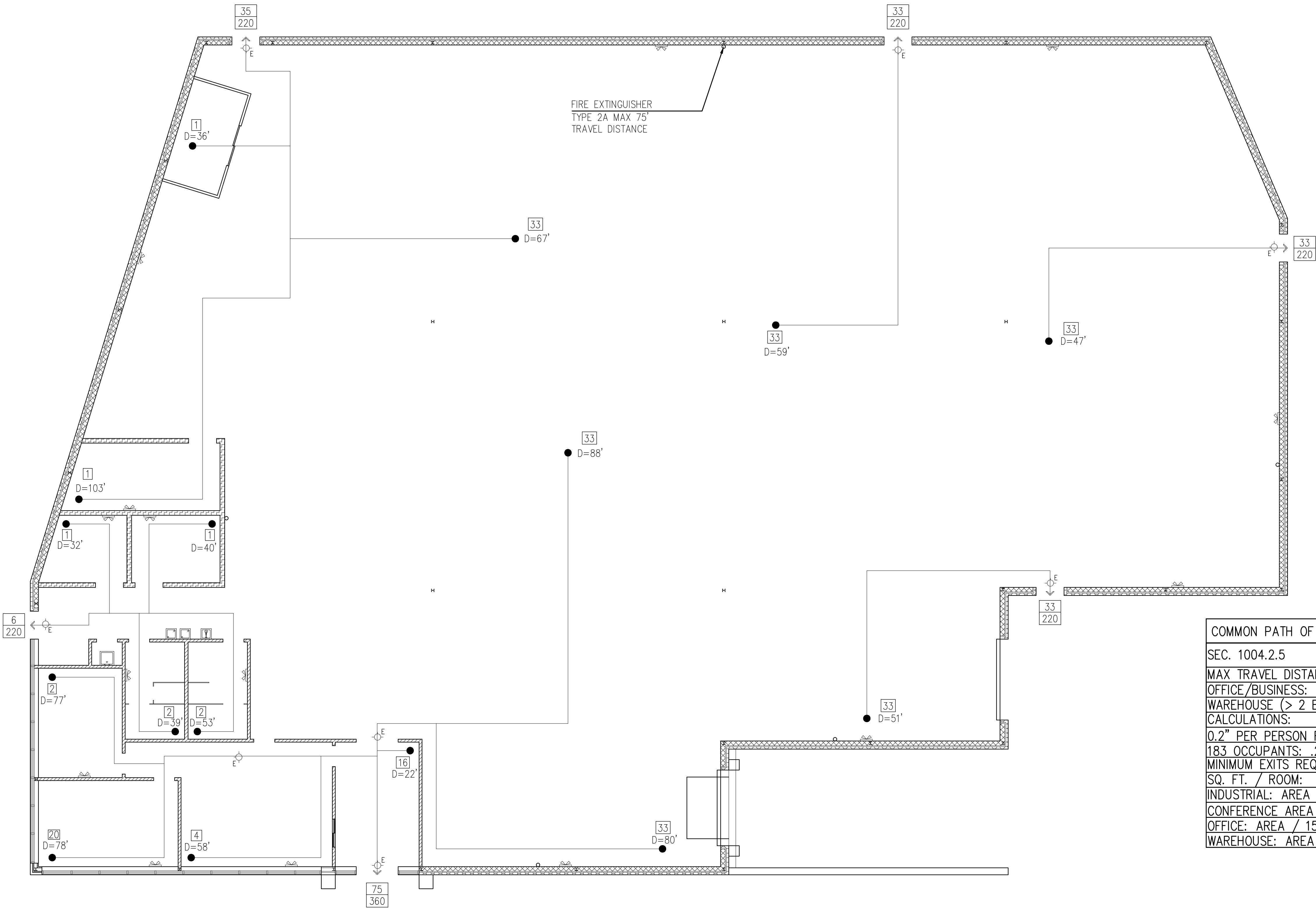
REFLECTED CEILING PLAN
SCALE: 1/8" = 1'-0"

B
DESIGN
R
G

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REFLECTED CEILING
PLAN
1/8" = 1' - 0"

A 4



COMMON PATH OF EGRESS TRAVEL	
SEC. 1004.2.5	
MAX TRAVEL DISTANCES:	
OFFICE/BUSINESS:	75'
WAREHOUSE (> 2 EXITS):	150'
CALCULATIONS:	
0.2" PER PERSON FOR DOOR WIDTH	
183 OCCUPANTS: .2" X 183=36.6"	
MINIMUM EXITS REQUIRED PER CODE: 2	
SQ. FT. / ROOM:	
INDUSTRIAL: AREA / 100	
CONFERENCE AREA / 15	
OFFICE: AREA / 150	
WAREHOUSE: AREA / 500	

#1
A-5

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

TOP OF METAL PANELS
ELEVATION: 24' - 0"

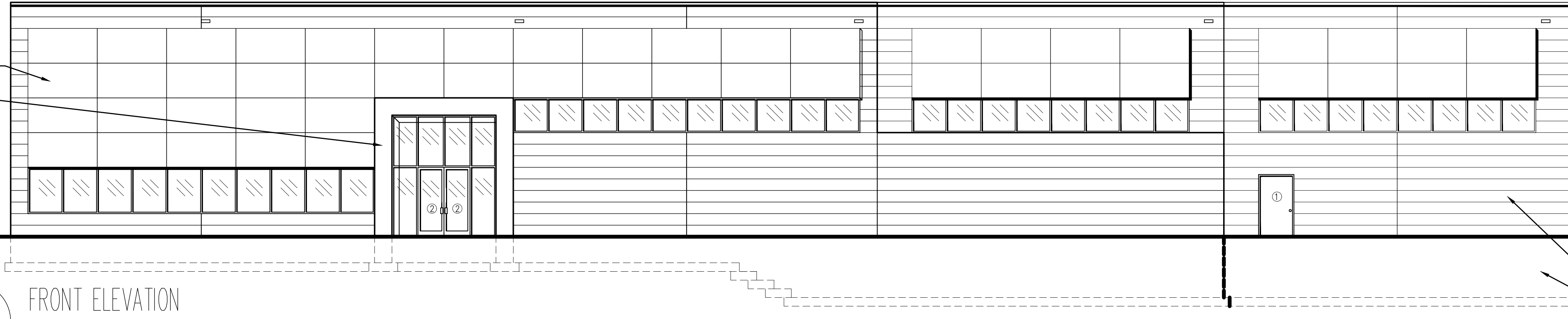
8' X 4' SURFACE MOUNTED SAF
SERIES 4000 ACM METAL PANELS
METAL PORTAL ENTRY
(SAF SERIES 4000 ACM PANELS)

BOTTOM OF METAL PANELS
TOP OF STOREFRONT DOOR/
WINDOWS
ELEVATION 8' - 0"

BOTTOM OF LOW WINDOWS
ELEVATION: 2' - 8"

#1
A-6

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



TOP OF WALL
ELEVATION: 27' - 0"

TOP OF METAL PANELS
ELEVATION: 24' - 0"

BOTTOM OF METAL PANELS
TOP OF HIGH WINDOWS
ELEVATION: 16' - 0"

TOP OF LOW WALL
BOTTOM OF HIGH WINDOWS
ELEVATION: 12' - 0"

TOP OF DOOR
ELEVATION: 7' - 0"

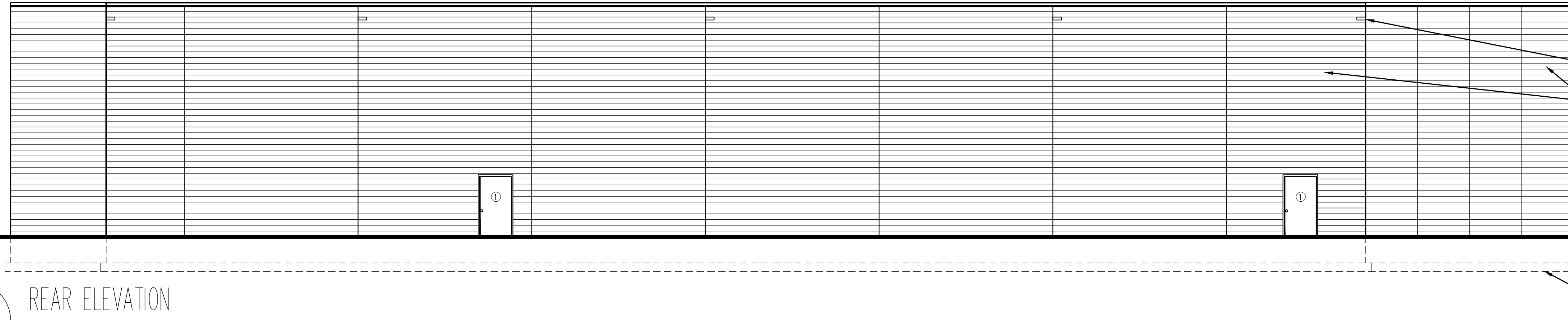
GRADE
ELEVATION: 0' - 0"

16" X 24" FACE BLOCK

FOUNDATION AS PER
STRUCTURAL DRAWINGS

#2
A-6

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



TOP OF WALL
ELEVATION: 27' - 0"

4" X 8" SCUPPER (TYPICAL)

8" X 16" FACE BLOCK

TOP OF DOOR
ELEVATION: 7' - 0"

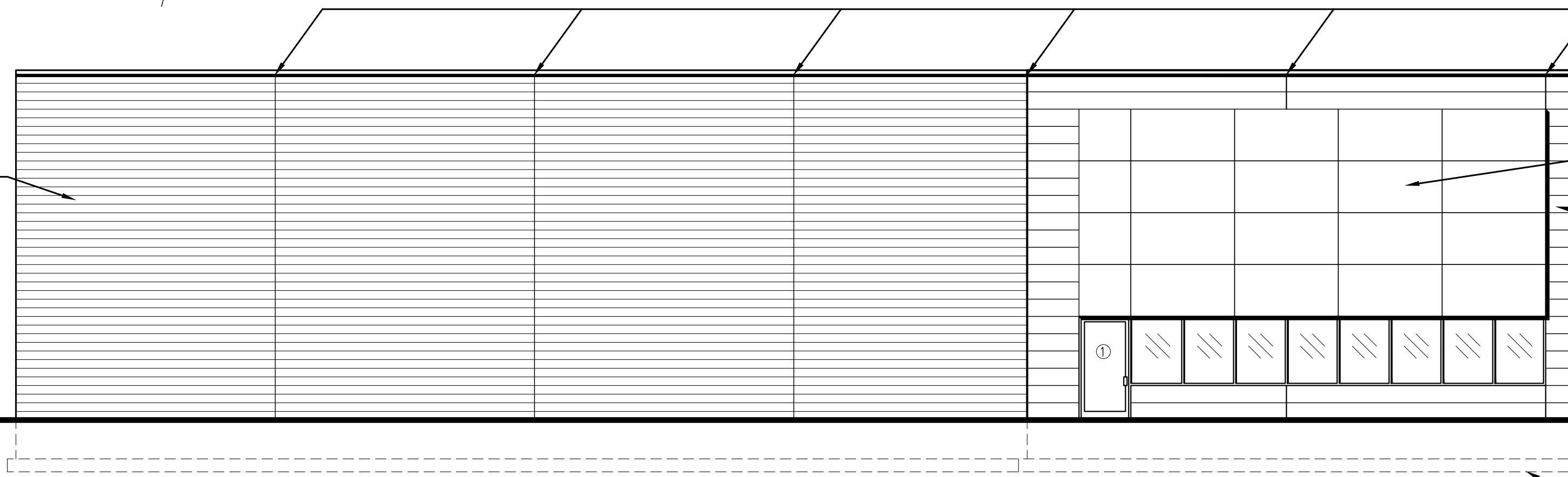
GRADE
ELEVATION: 0' - 0"

FOUNDATION AS PER
STRUCTURAL DRAWINGS

8" X 16" FACE BLOCK

#3
A-6

LEFT SIDE ELEVATION
SCALE: 1/8" = 1'-0"



CONTROL JOINT LOCATIONS

TOP OF WALL
ELEVATION: 27' - 0"

TOP OF METAL PANELS
ELEVATION: 24' - 0"

8' X 4' SURFACE MOUNTED SAF
SERIES 4000 ACM METAL PANELS

16" X 24" FACE BLOCK

BOTTOM OF METAL PANELS
TOP OF STOREFRONT DOOR/
WINDOWS
ELEVATION 8' - 0"

BOTTOM OF LOW WINDOWS
ELEVATION: 2' - 8"

GRADE
ELEVATION: 0' - 0"

FOUNDATION AS PER
STRUCTURAL DRAWINGS

16" X 24" FACE BLOCK

TOP OF OVERHEAD DOOR
ELEVATION: 16' - 0"

TOP OF LOW WALL
ELEVATION: 12' - 0"

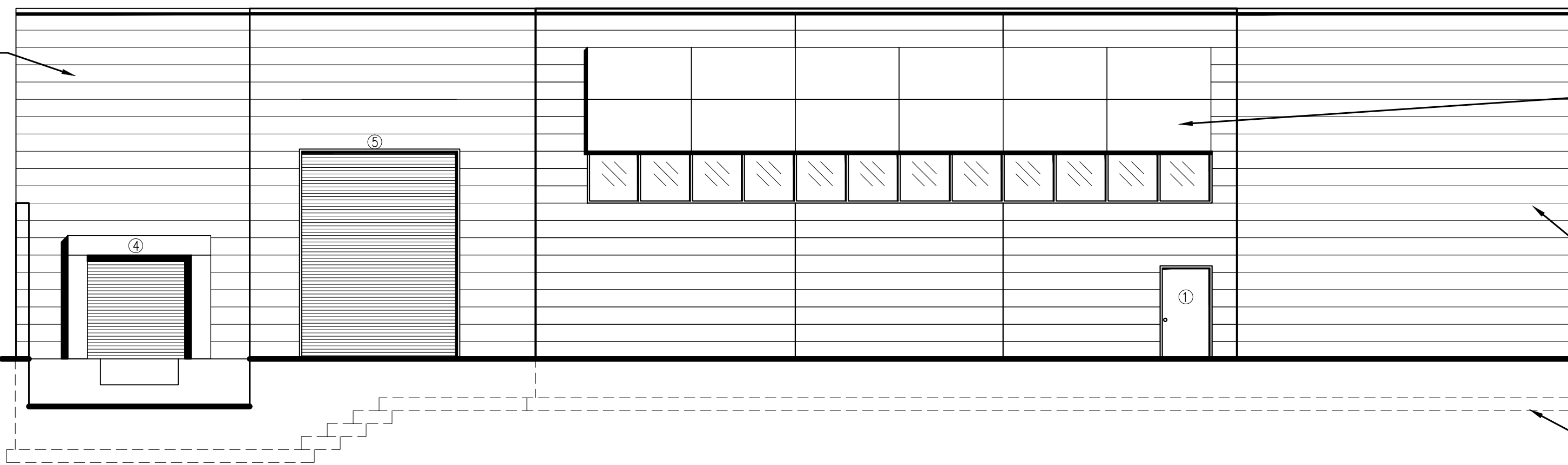
TOP OF OVERHEAD DOOR
ELEVATION: 8' - 0"

GRADE
ELEVATION: 0' - 0"

GRADE AT DOCK PIT
ELEVATION: -3' - 8"

#4
A-6

RIGHT SIDE ELEVATION
SCALE: 1/8" = 1'-0"



TOP OF WALL
ELEVATION: 27' - 0"

TOP OF METAL PANELS
ELEVATION: 24' - 0"

8' X 4' SURFACE MOUNTED SAF
SERIES 4000 ACM METAL PANELS

BOTTOM OF METAL PANELS
TOP OF HIGH WINDOWS
ELEVATION: 16' - 0"

BOTTOM OF HIGH WINDOWS
ELEVATION: 12' - 0"

16" X 24" FACE BLOCK

TOP OF DOOR
ELEVATION: 7' - 0"

GRADE
ELEVATION: 0' - 0"

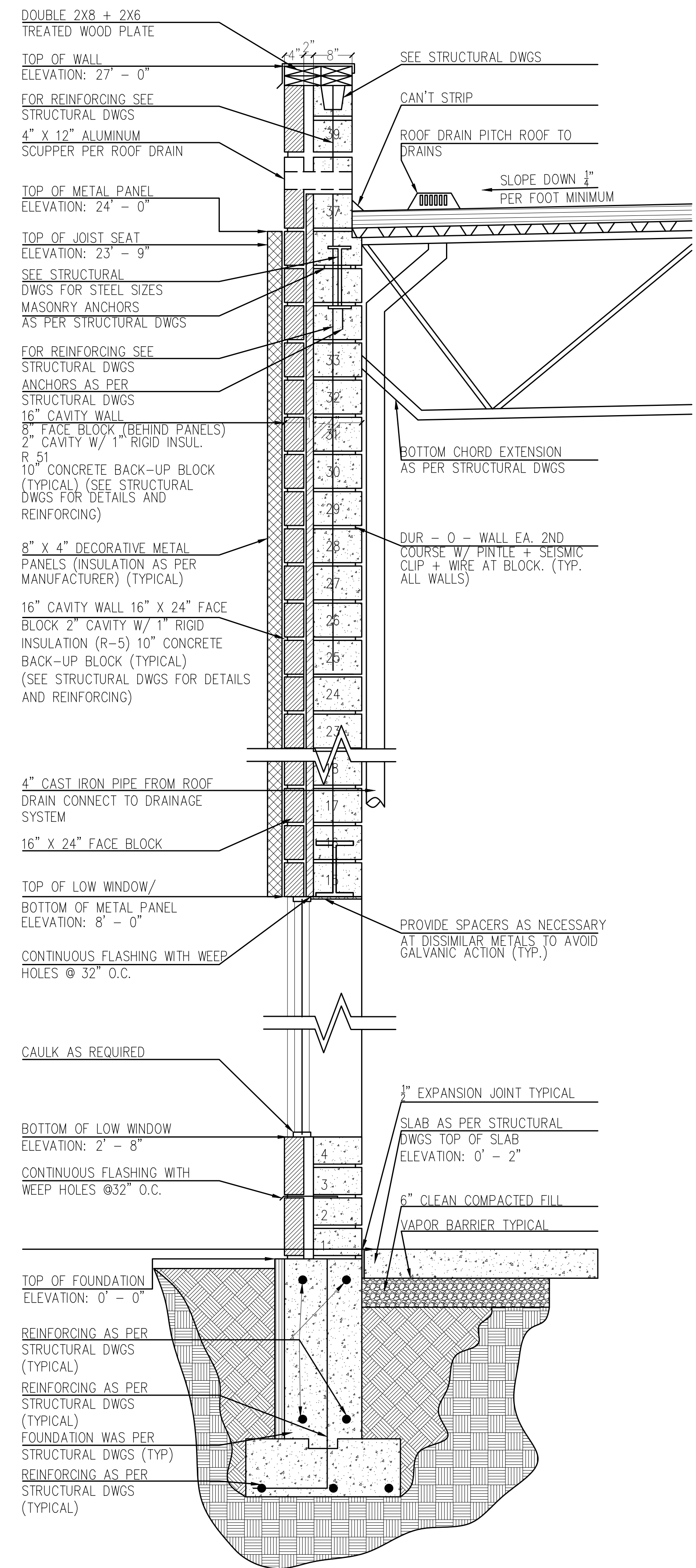
FOUNDATION AS PER
STRUCTURAL DRAWINGS

B
DESIGN
R
G

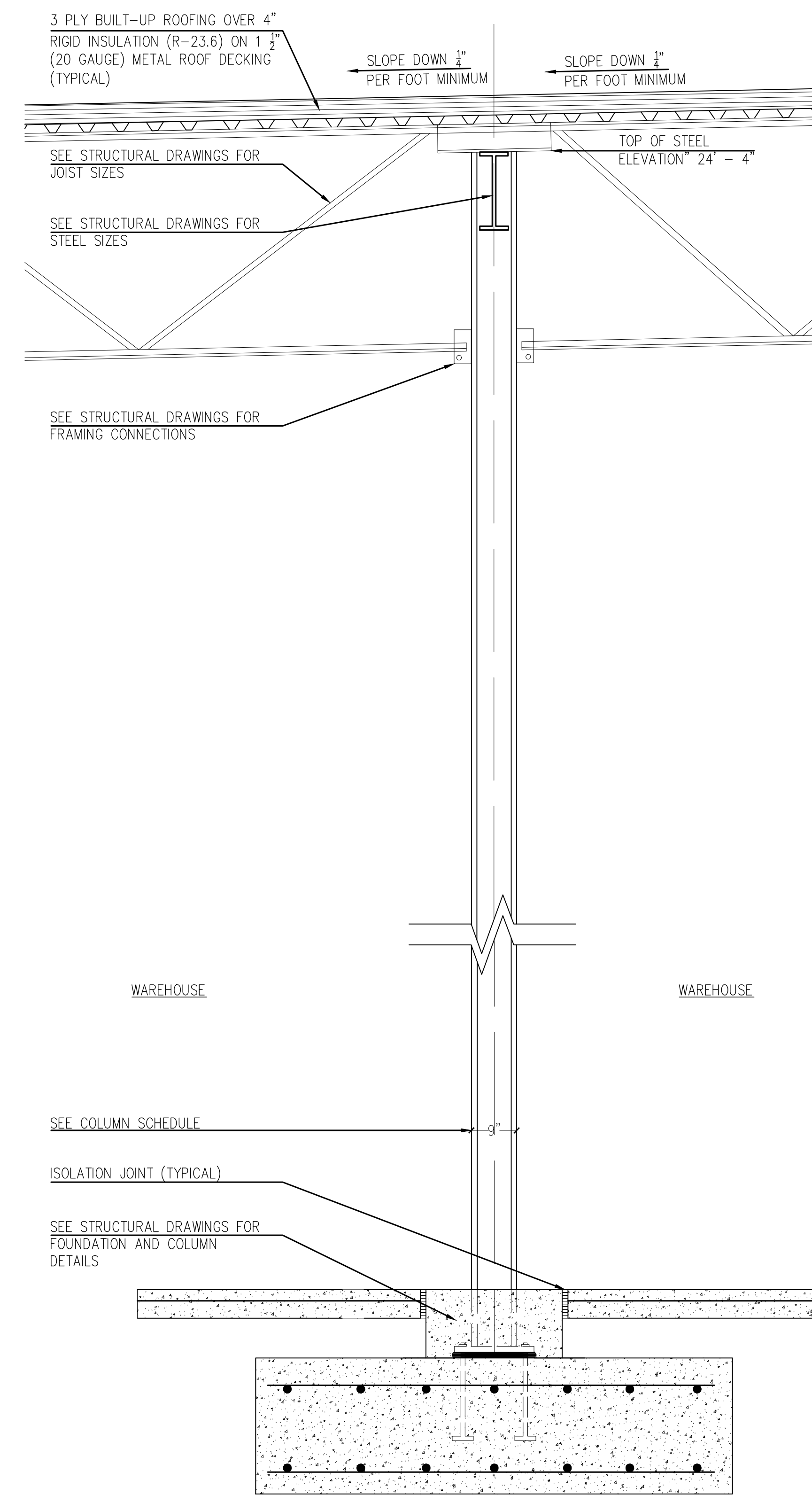
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05.17.2025
PROFESSOR CLEMENS

ELEVATIONS
1" = 1' - 0"

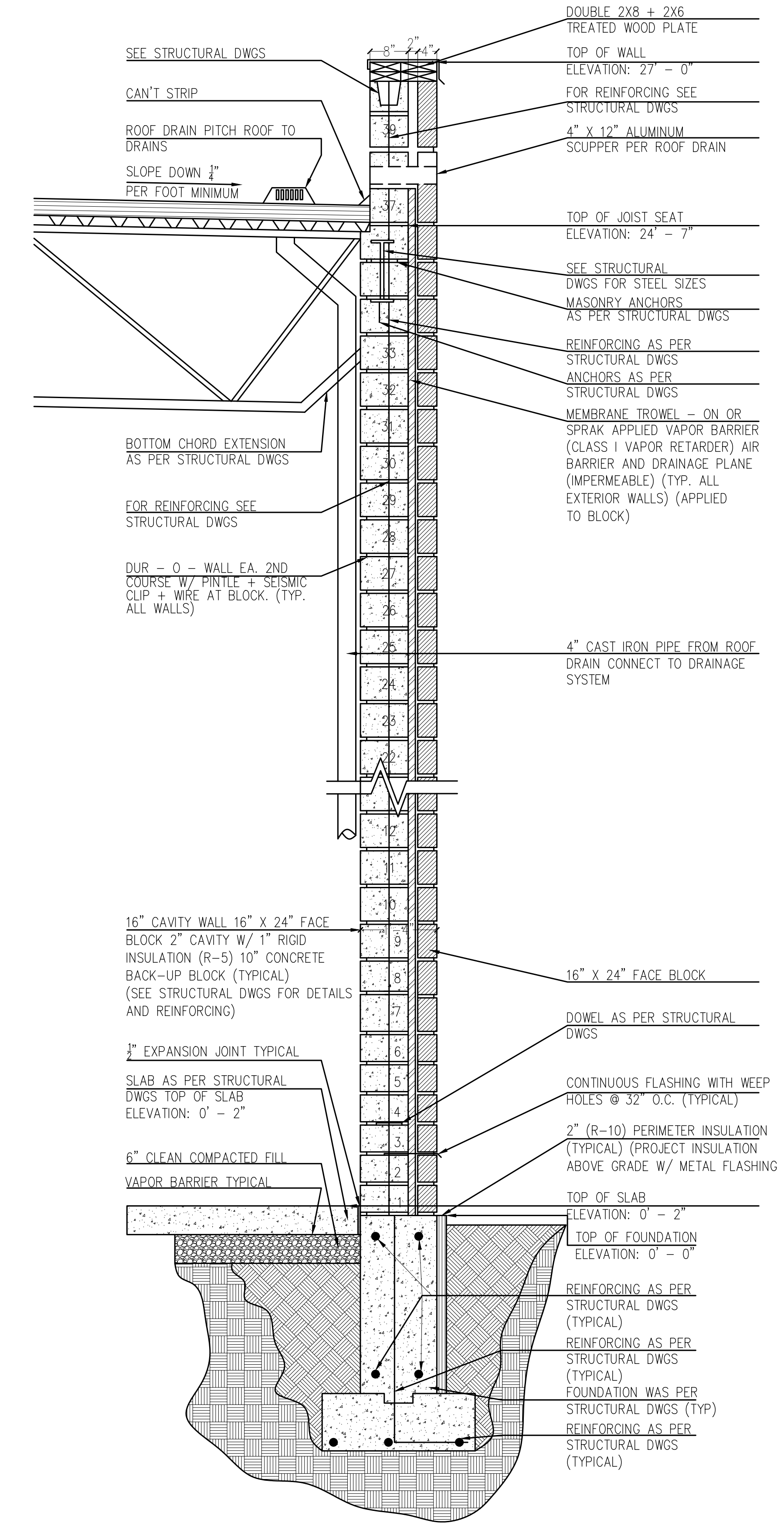
A6



#1
A-7
EXTERIOR WALL SECTION WITH LOW WINDOW
SCALE: 3/4" = 1'-0"



#2
A-7
INTERIOR COLUMN SECTION
SCALE: 3/4" = 1'-0"



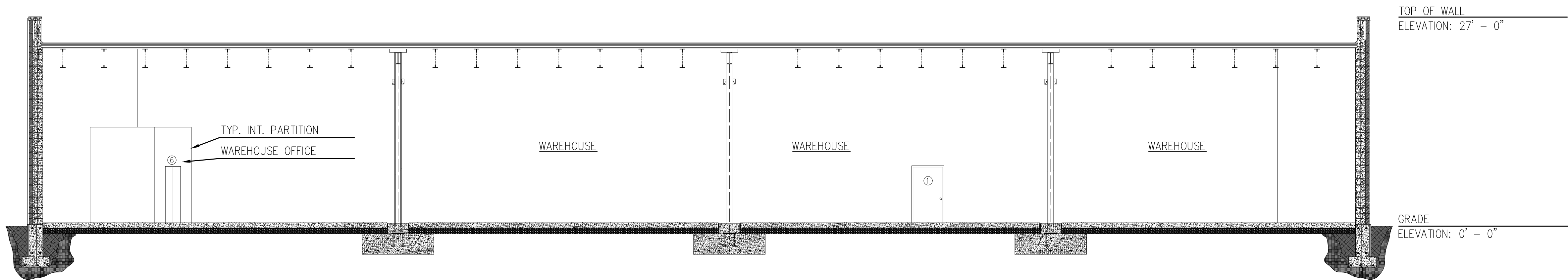
#3
A-7
EXTERIOR WALL SECTION
SCALE: 3/4" = 1'-0"

B DESIGN R G

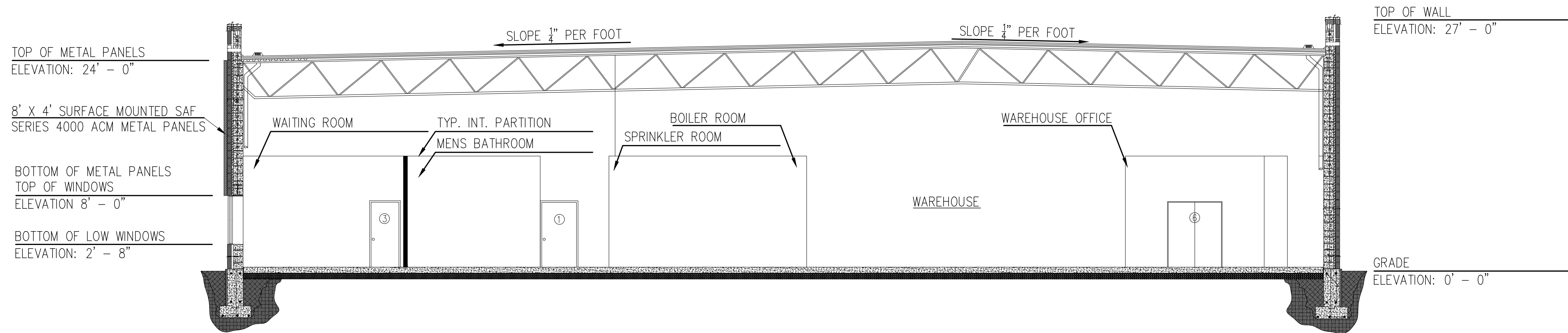
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WALL SECTIONS
3/4" = 1' - 0"

A7



#1
A-8 LONGITUDINAL SECTION
SCALE: 1/8" = 1'-0"



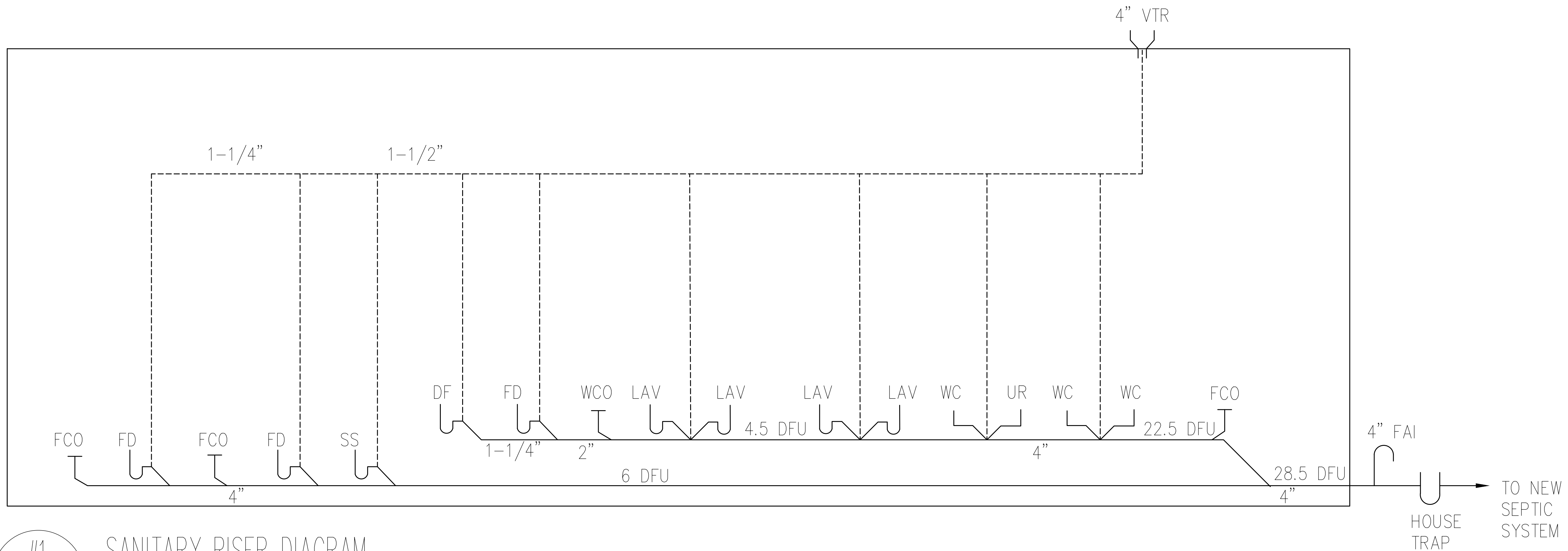
#2
A-8 CROSS SECTION
SCALE: 1/8" = 1'-0"

B
DESIGN
R
G

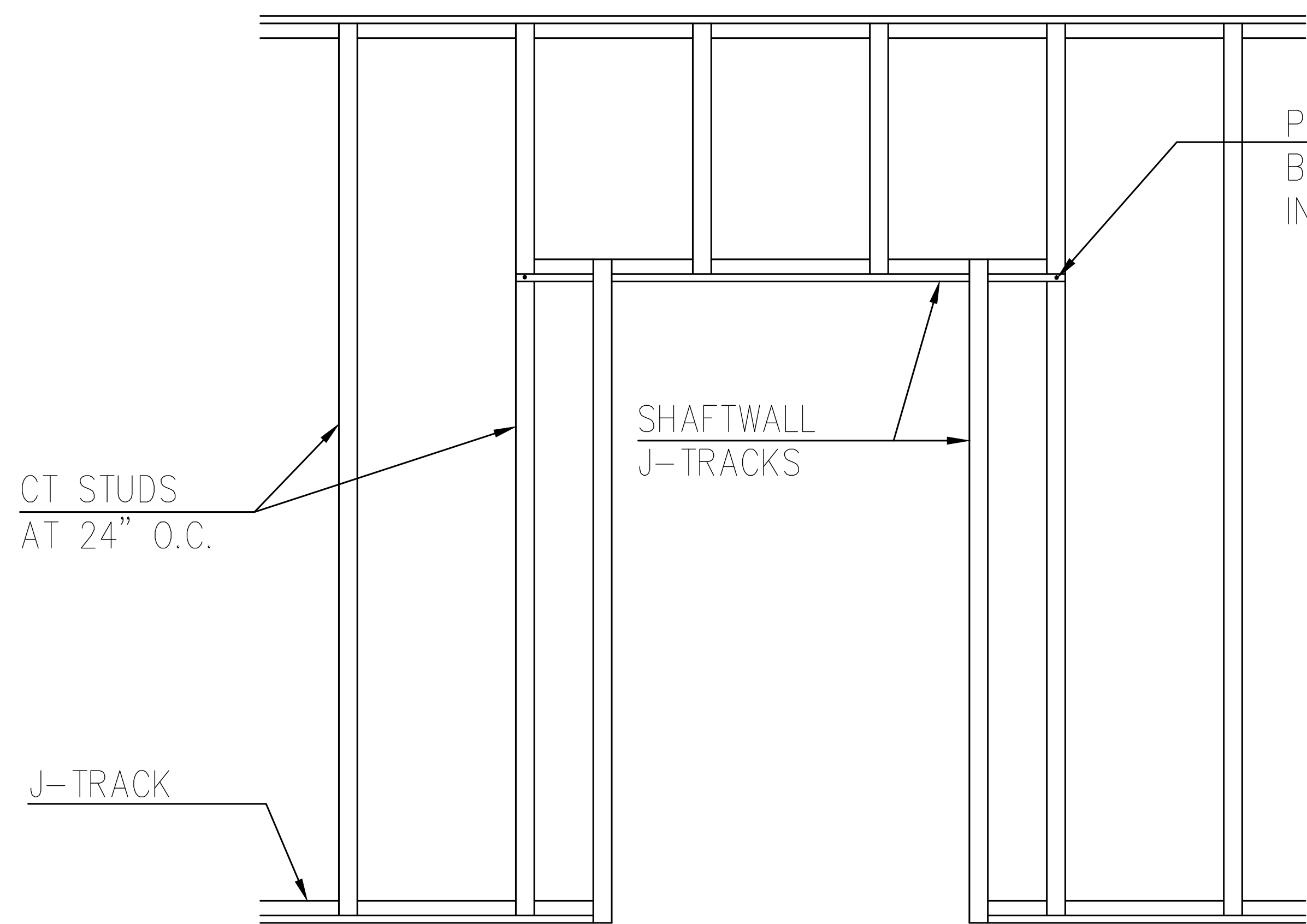
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SECTIONS
1/8" = 1'-0"

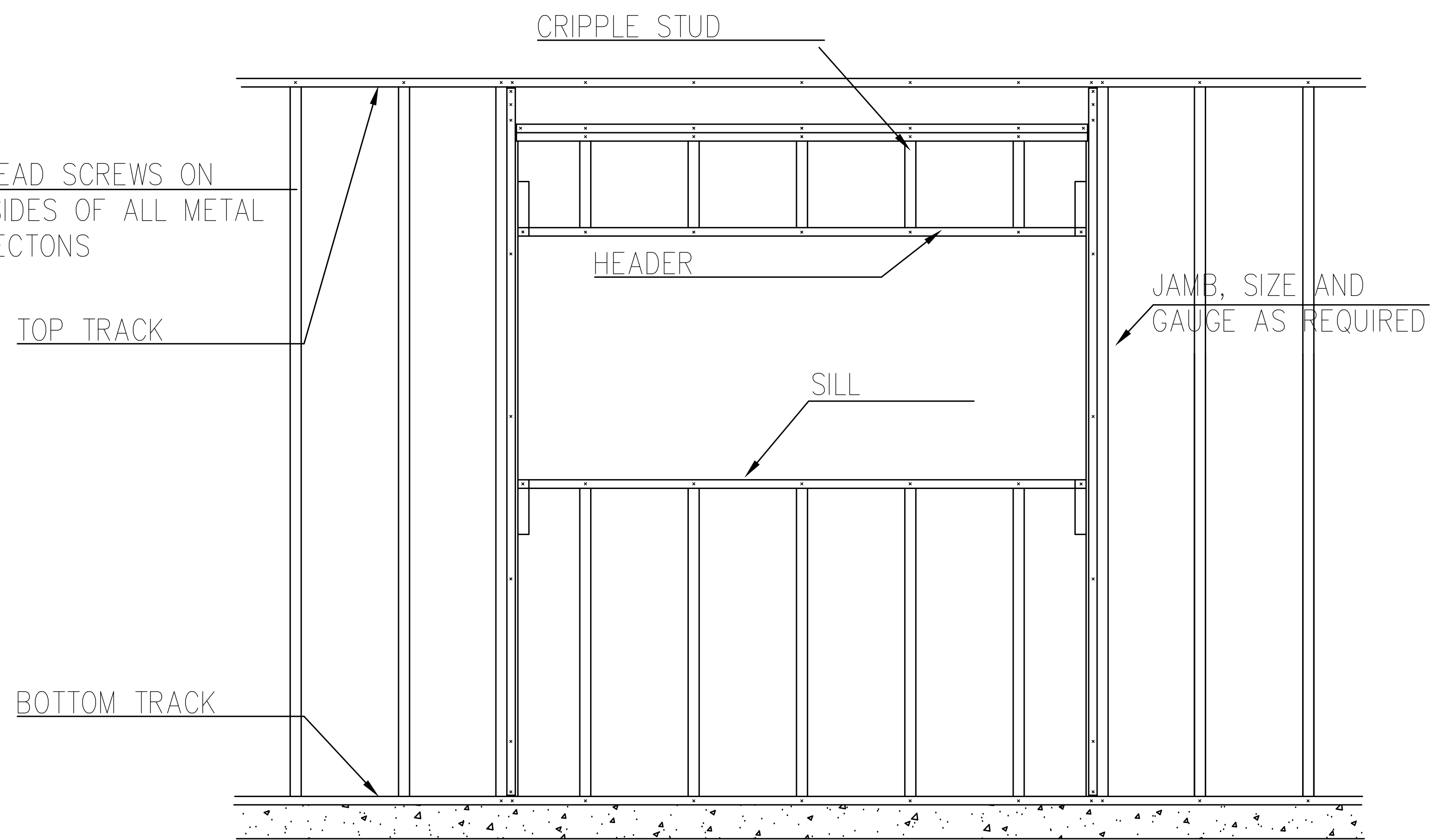
A8



#1
A-9
SANITARY RISER DIAGRAM
NTS



#2
A-9
DOOR OPENING DETAIL
SCALE: 1-1/2" = 1'-0"



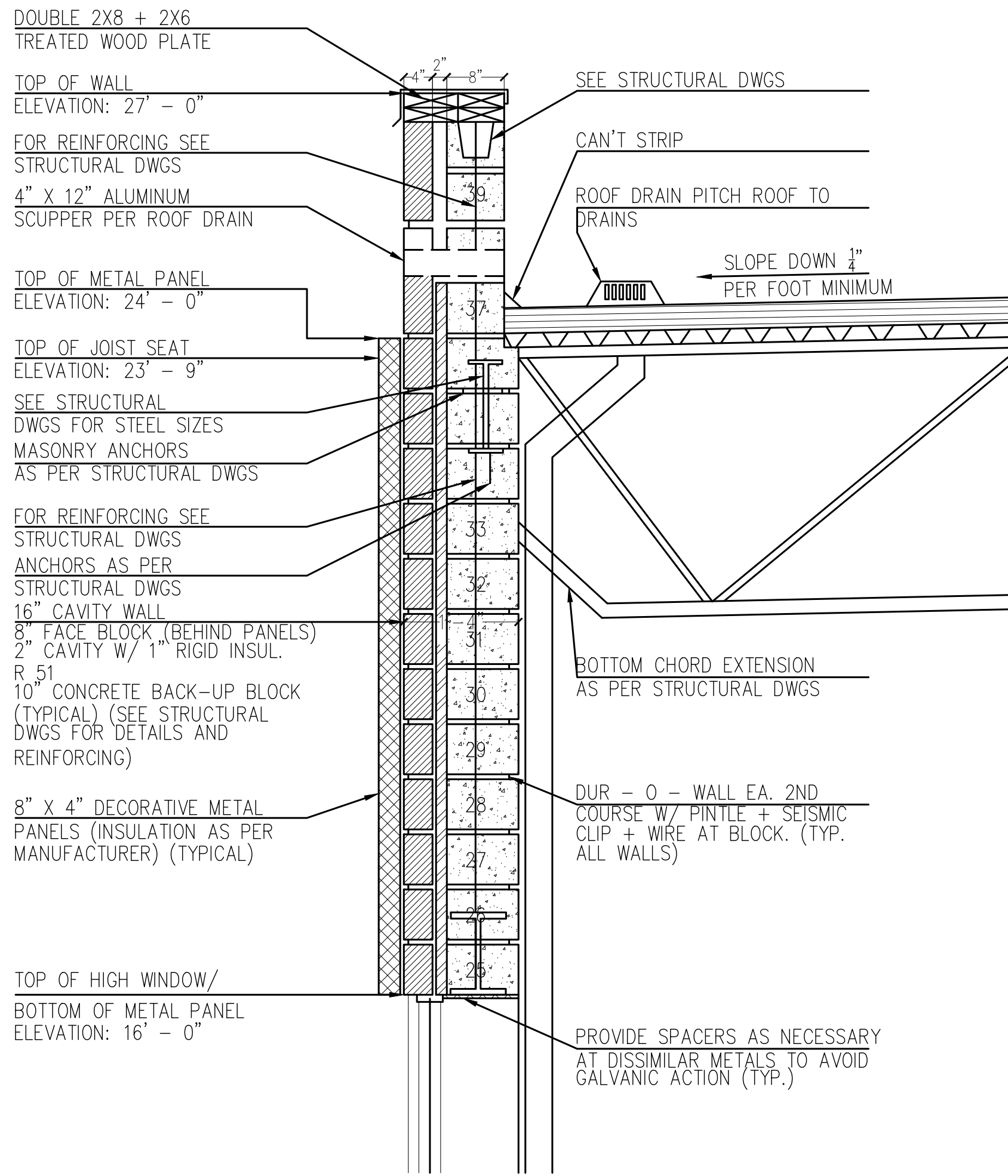
#3
A-9
WINDOW OPENING DETAIL
SCALE: 1-1/2" = 1'-0"

B
DESIGN
R
G

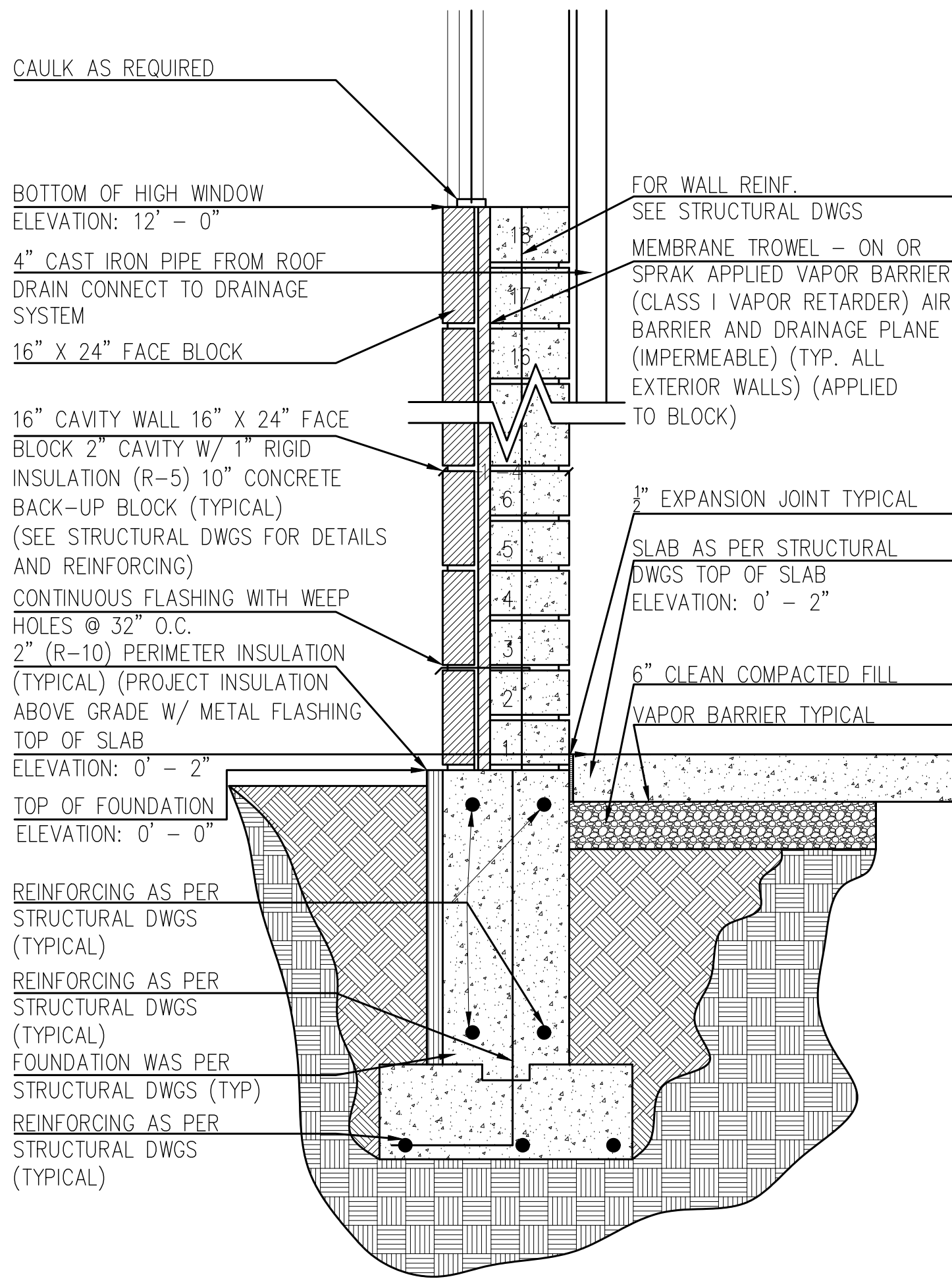
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DETAILS (1)
*VARIES

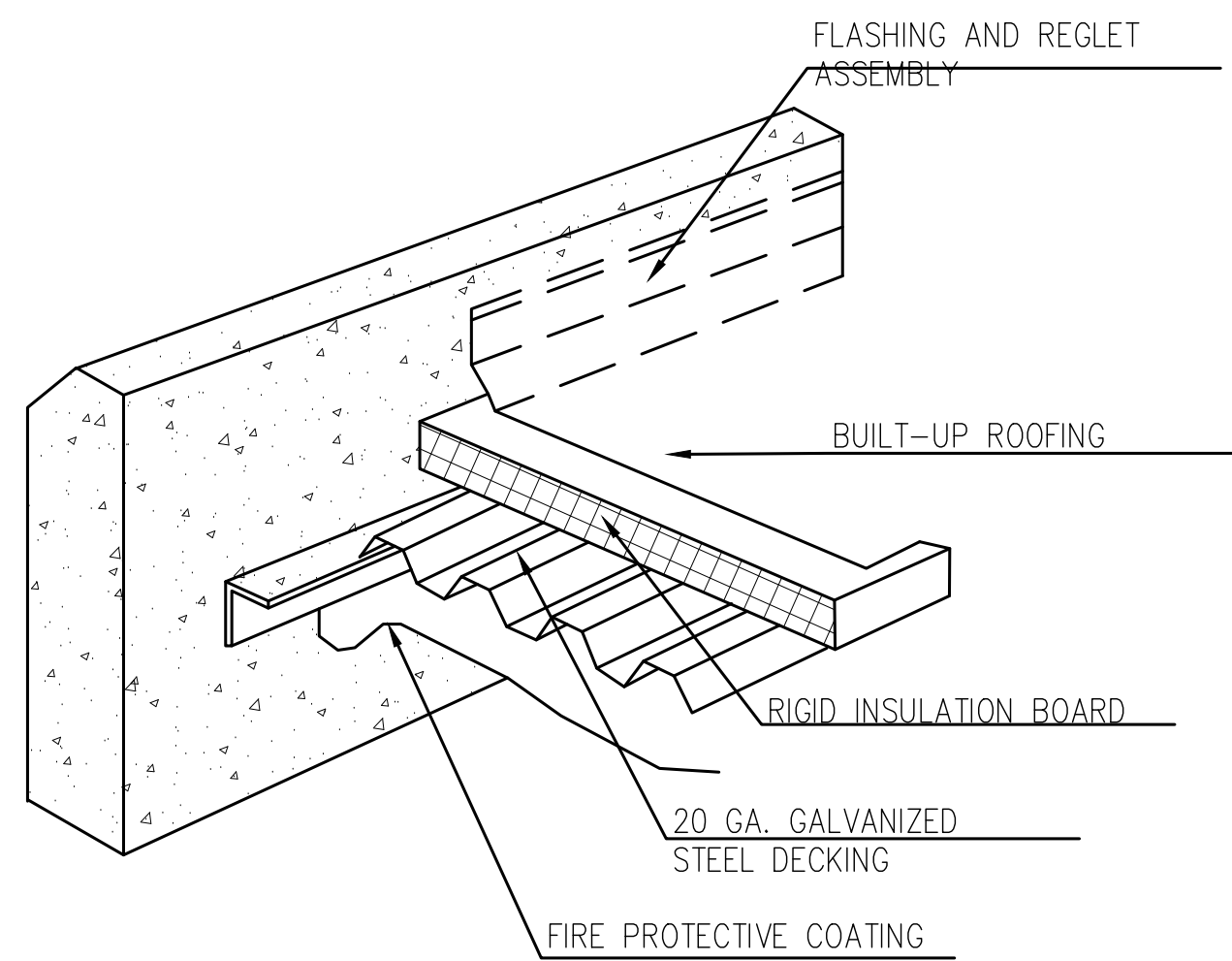
A9



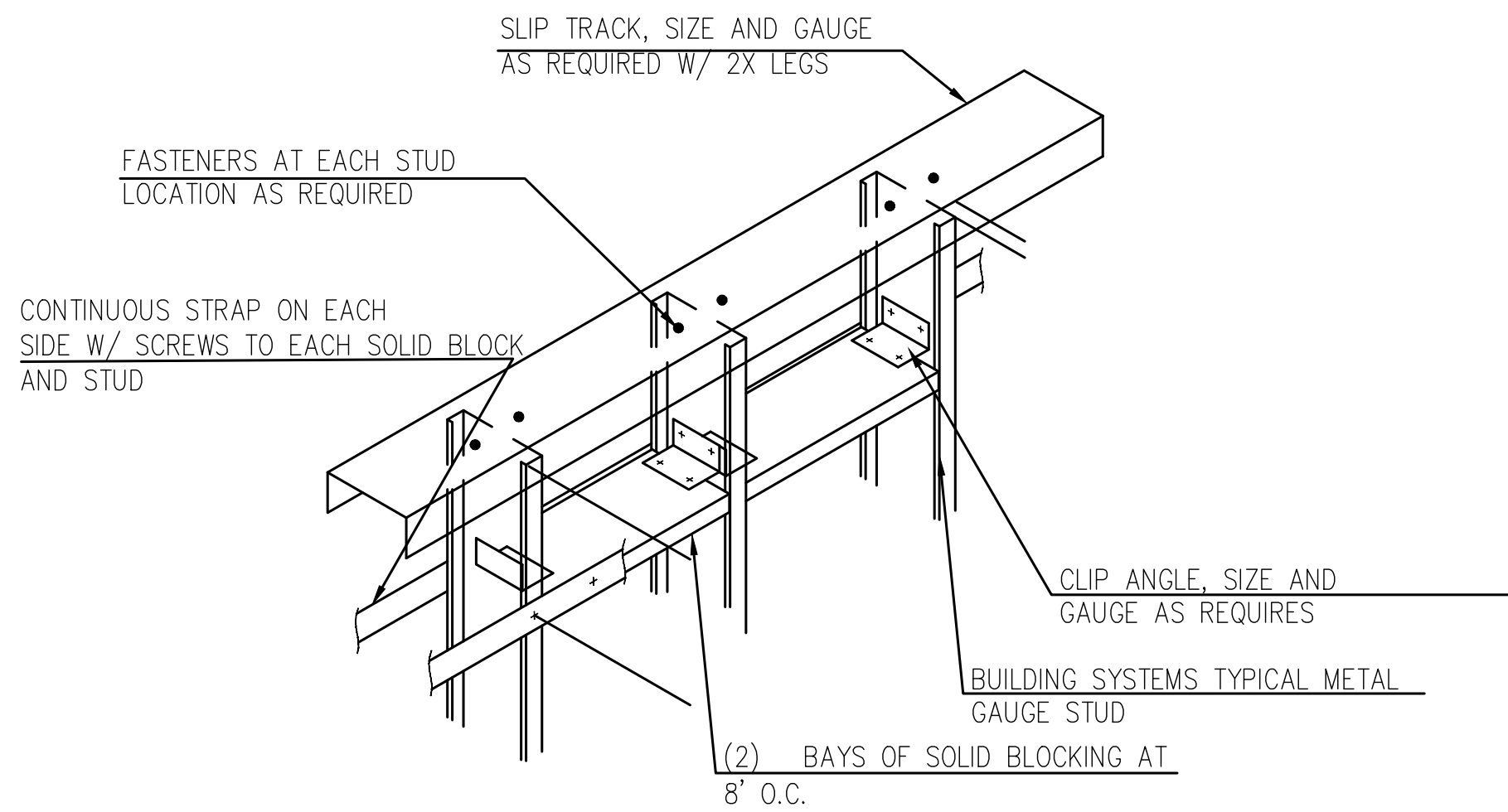
#1
A-10 TOP OF EXTERIOR WALL/ROOF DETAIL
SCALE: 3/4" = 1'-0"



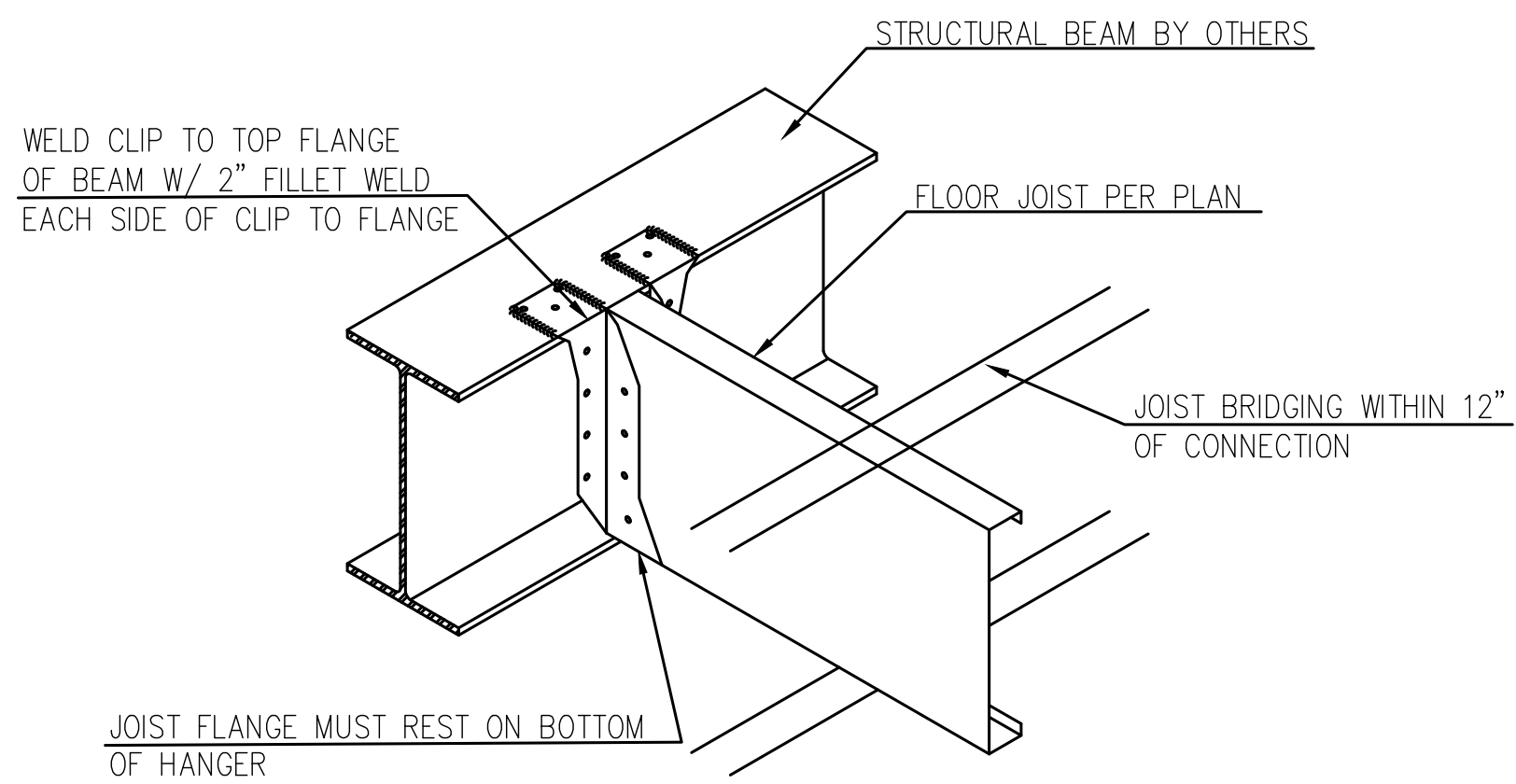
#2
A-10 BOTTOM OF WALL/FOUNDATION DETAIL
SCALE: 3/4" = 1'-0"



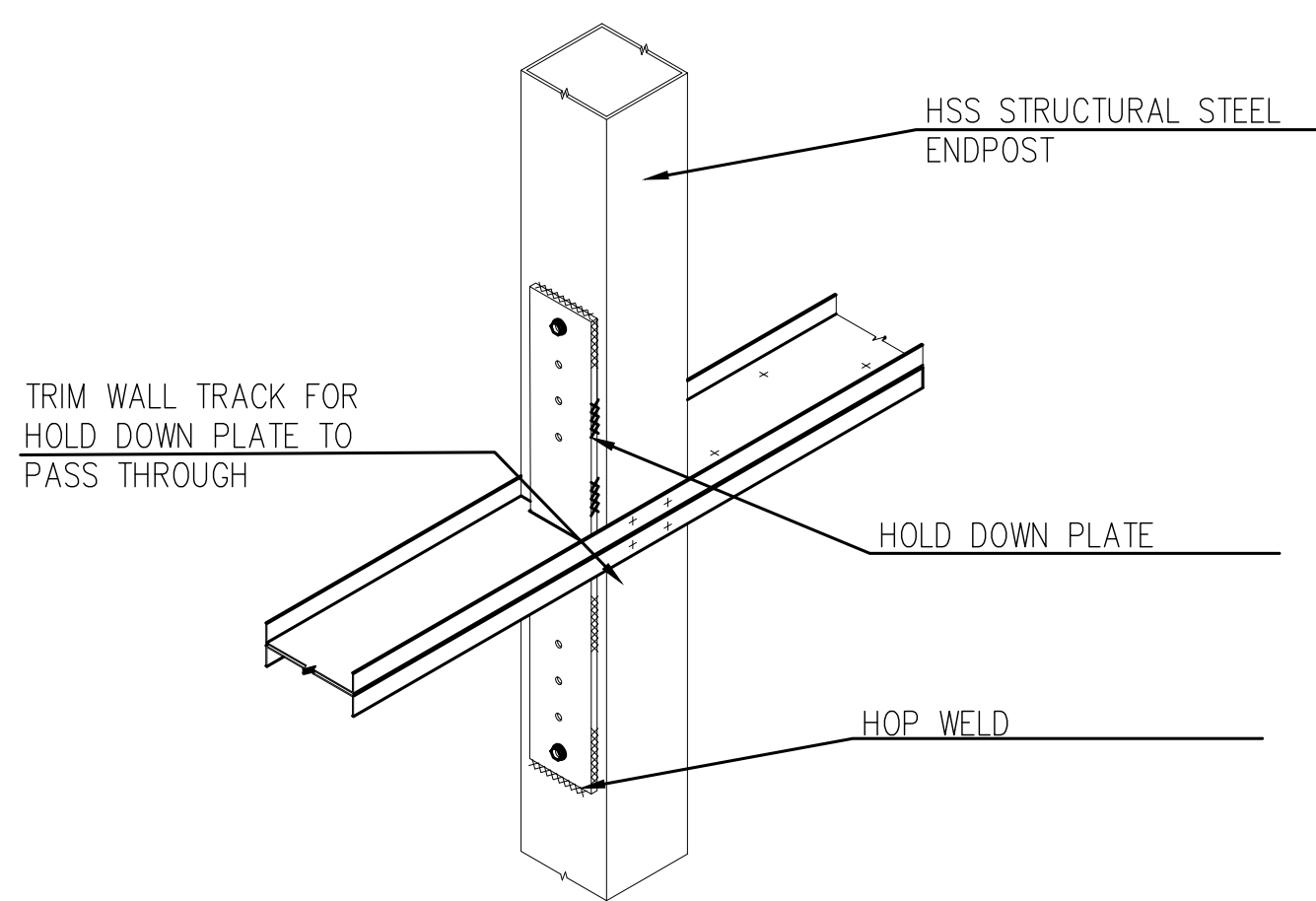
#3
A-10 BUILT UP ROOFING DETAIL
SCALE: 3/4" = 1'-0"



#4
A-10 STRAPPING AND BLOCKING DETAIL
SCALE: 3/4" = 1'-0"



#5
A-10 JOIST HANGER DETAIL
SCALE: 3/4" = 1'-0"



#6
A-10 HOLD DOWN PLATE DETAIL
SCALE: 3/4" = 1'-0"

B
DESIGN
R
G

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05.17.2025
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DETAILS (2)
3/4" = 1' - 0"

A10