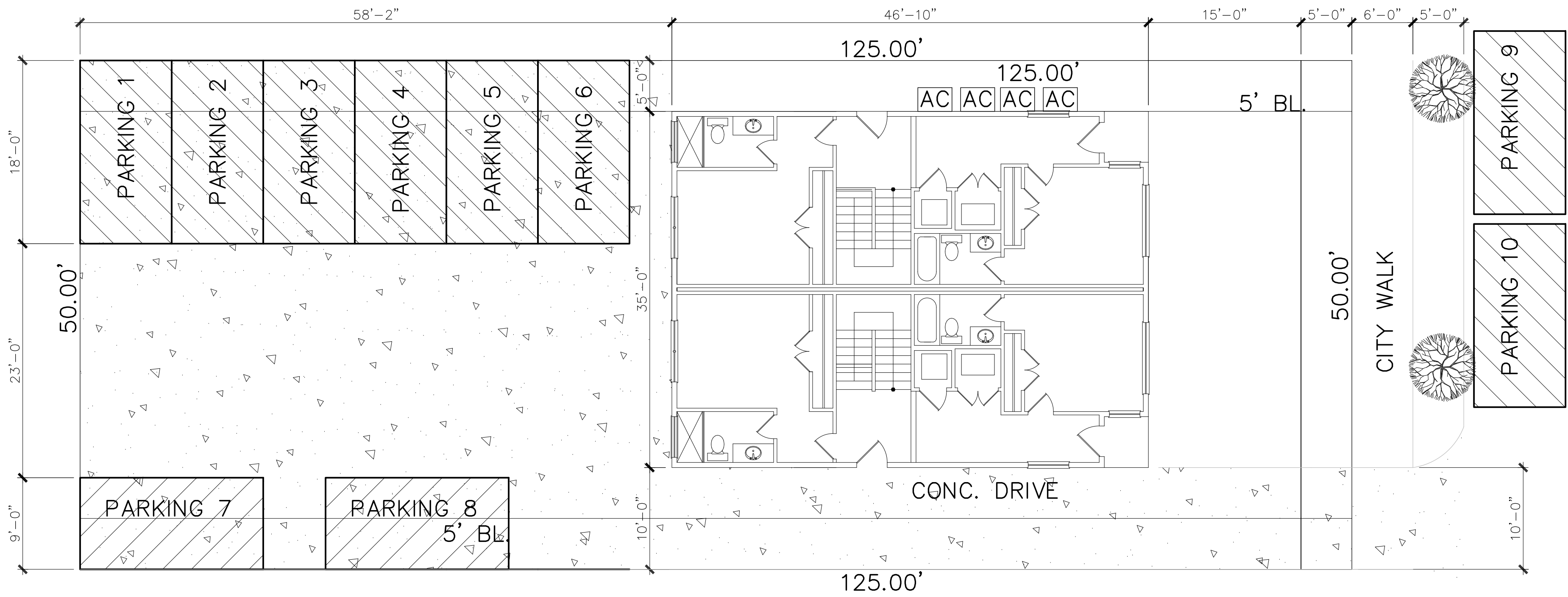
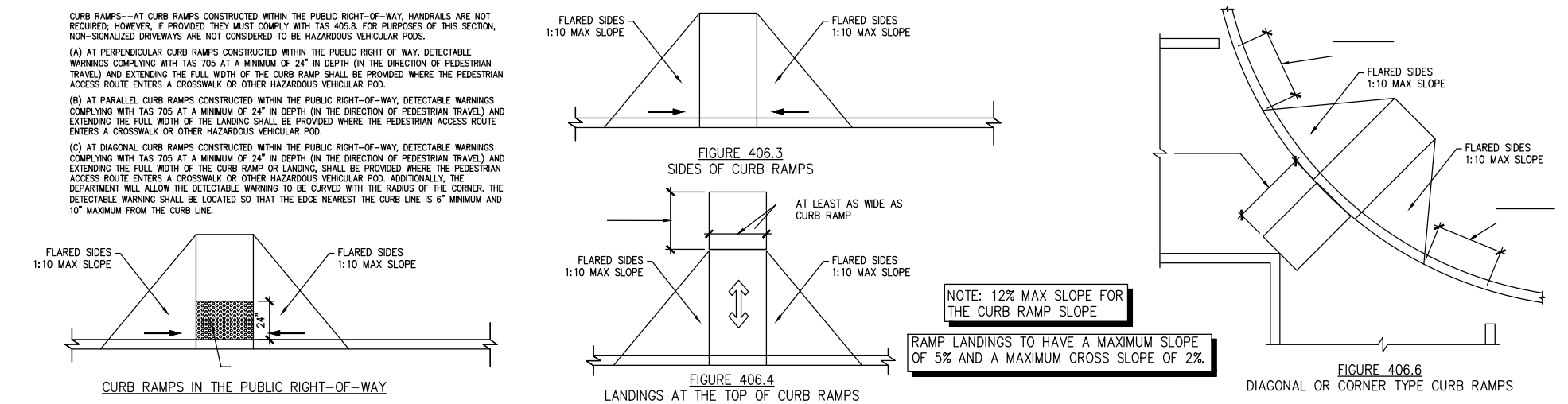


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FORT WORTH, 76244  
OFFICE: (214)-395-4688

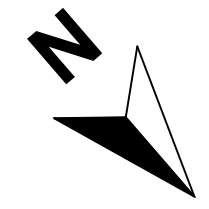
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NOTE: ALL LOT DIMENSIONS, SETBACKS, AND EASEMENTS TO BE VERIFIED BY CITY FOR PERMIT PRIOR TO CONSTRUCTION.

# PLOT PLAN

1/8" = 1'-0"



**E I**  
EDWARD & ISAAC  
DESIGNS LLC.  
5017 NASH LANE  
FORT WORTH, 76244  
OFFICE: (214)-395-4688

ADDRESS: 2820 WAYSIDE AVE  
SUBDIV.  
LOT: 6 BLOCK: 17  
CITY: FORT WORTH  
COUNTY: TARRANT STATE: TEXAS  
UNIT 1  
BUYER:

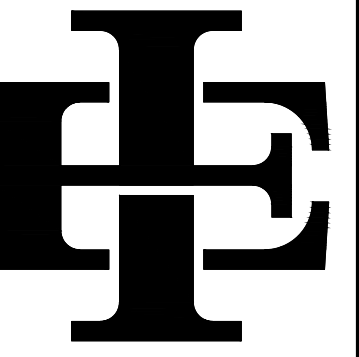
DATE: 06.10.2024  
LOT SQFT: 6250  
FLATWORK (SQ. FT)  
CITY WALK: 228  
APPROACH: 207  
DRIVE: 4008  
LEAD WALK: 87

OWNER INFORMATION

2820 WAYSIDE DR  
FORT WORTH, TX 76110  
LOT: 6 BLOCK: 17

ADDRESS:

ISSUE DATE	06.10.2024
DRAFTSPERSON	MEM
PROJECT NO.	000
PLAN NUMBER	2323
SHEET NUMBER	S-1



**EDWARD & ISAAC  
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FORT WORTH, TX 76244  
OFFICE: (214)-395-4688

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OWNER INFORMATION

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**2820 WAYSIDE AVENUE  
FORT WORTH, TX 76110  
LOT: 6 BLOCK: 17**

ISSUE DATE  
06.10.2024

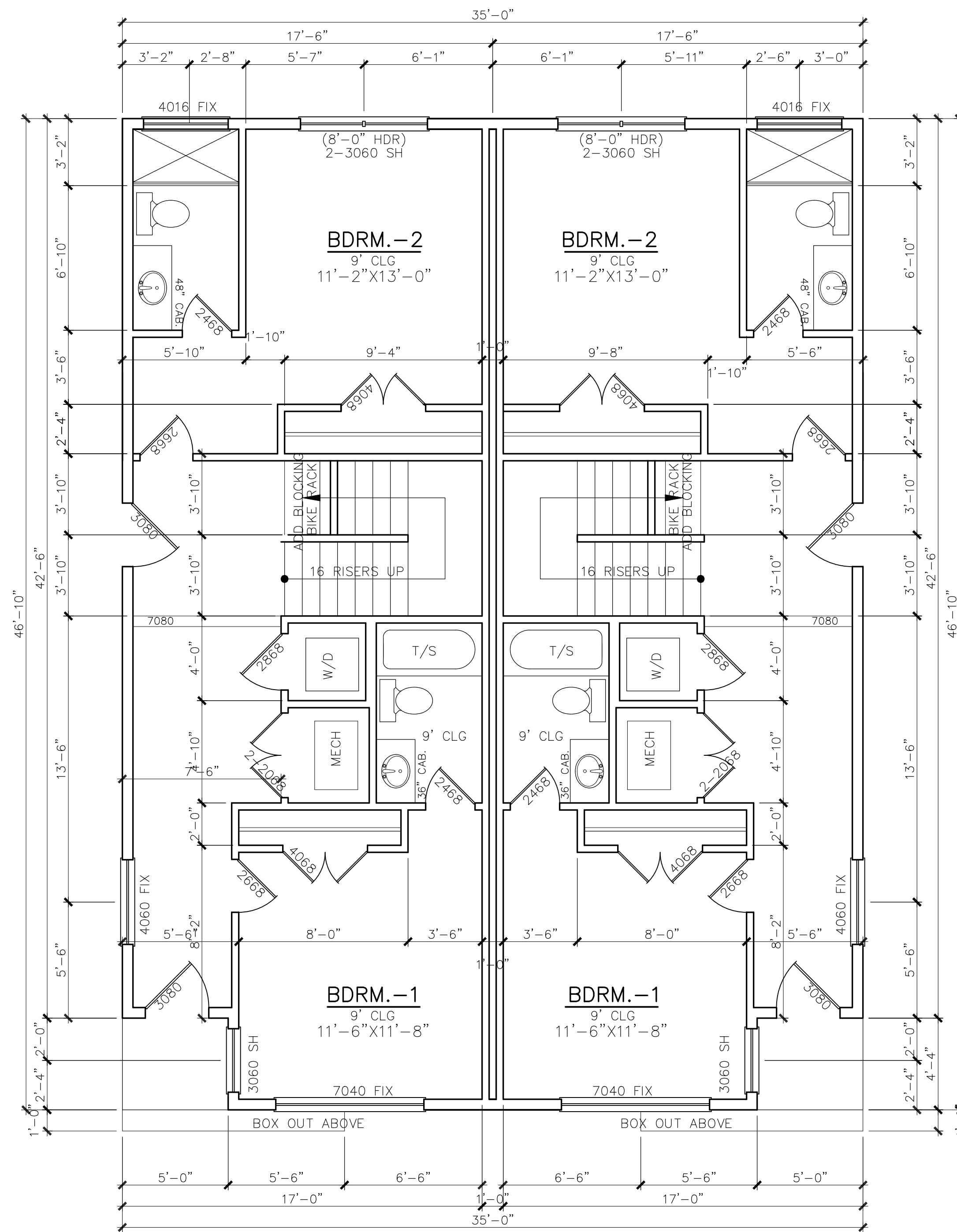
DRAFTSPERSON  
MEM

PROJECT NO.  
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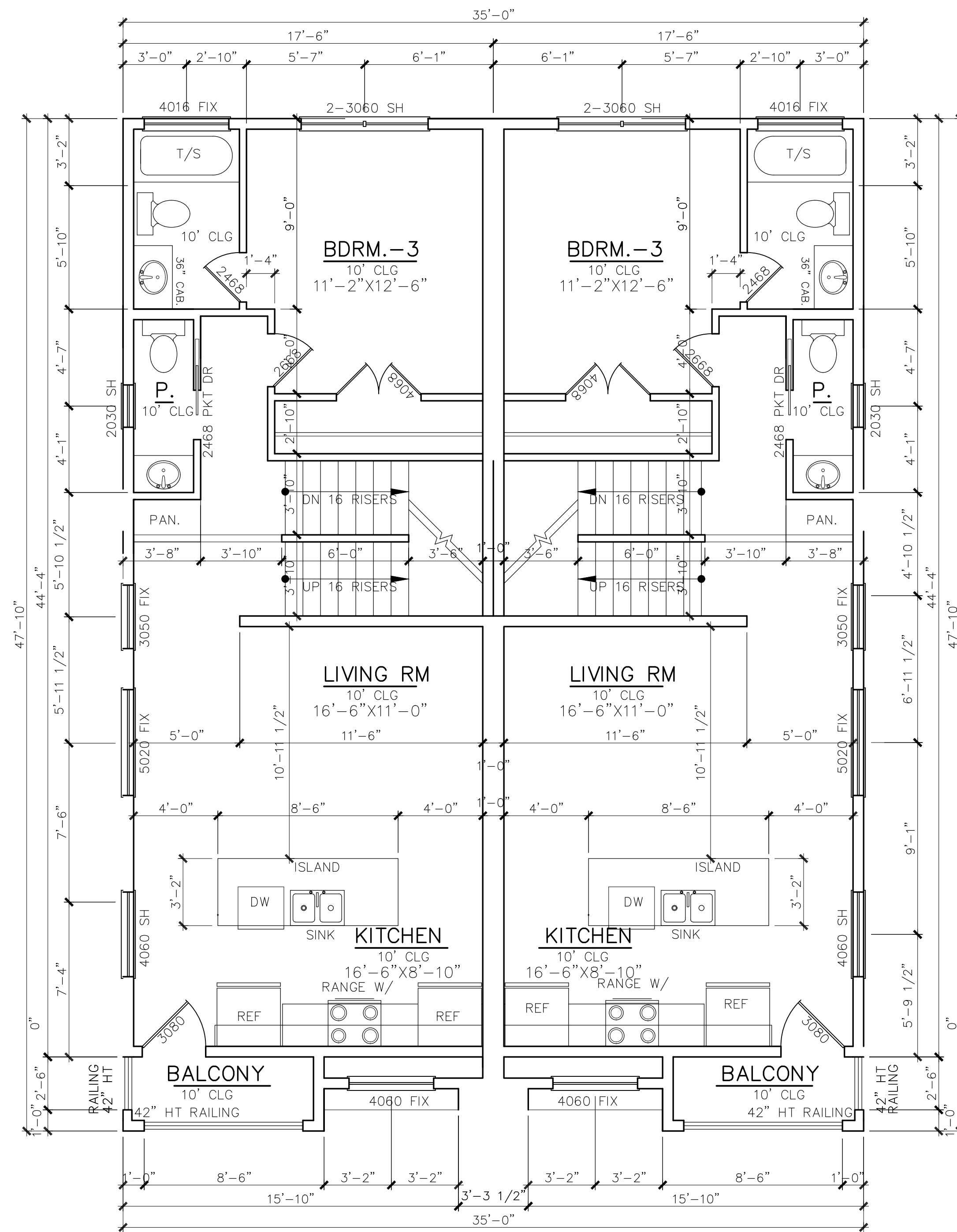
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2323

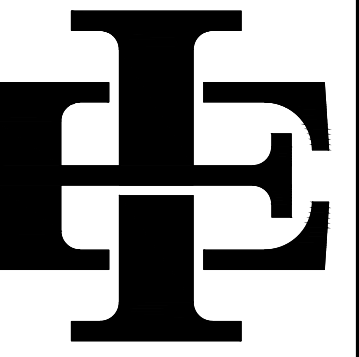
SHEET NUMBER

A-1



SQ. FOOTAGES -- UNIT 1	
First Floor	798 SQ. FT.
Second Floor	693 SQ. FT.
Third Floor	743 SQ. FT.
Total Living Area	2234 SQ. FT.
Total Slab	820 SQ. FT.
Porch	22 SQ. FT.
2nd Floor Balcony	33 SQ. FT.
Roof Top Decked	192 SQ. FT.
Covered Roof Top Stair	350 SQ. FT.
Total Under Roof	2831 SQ. FT.





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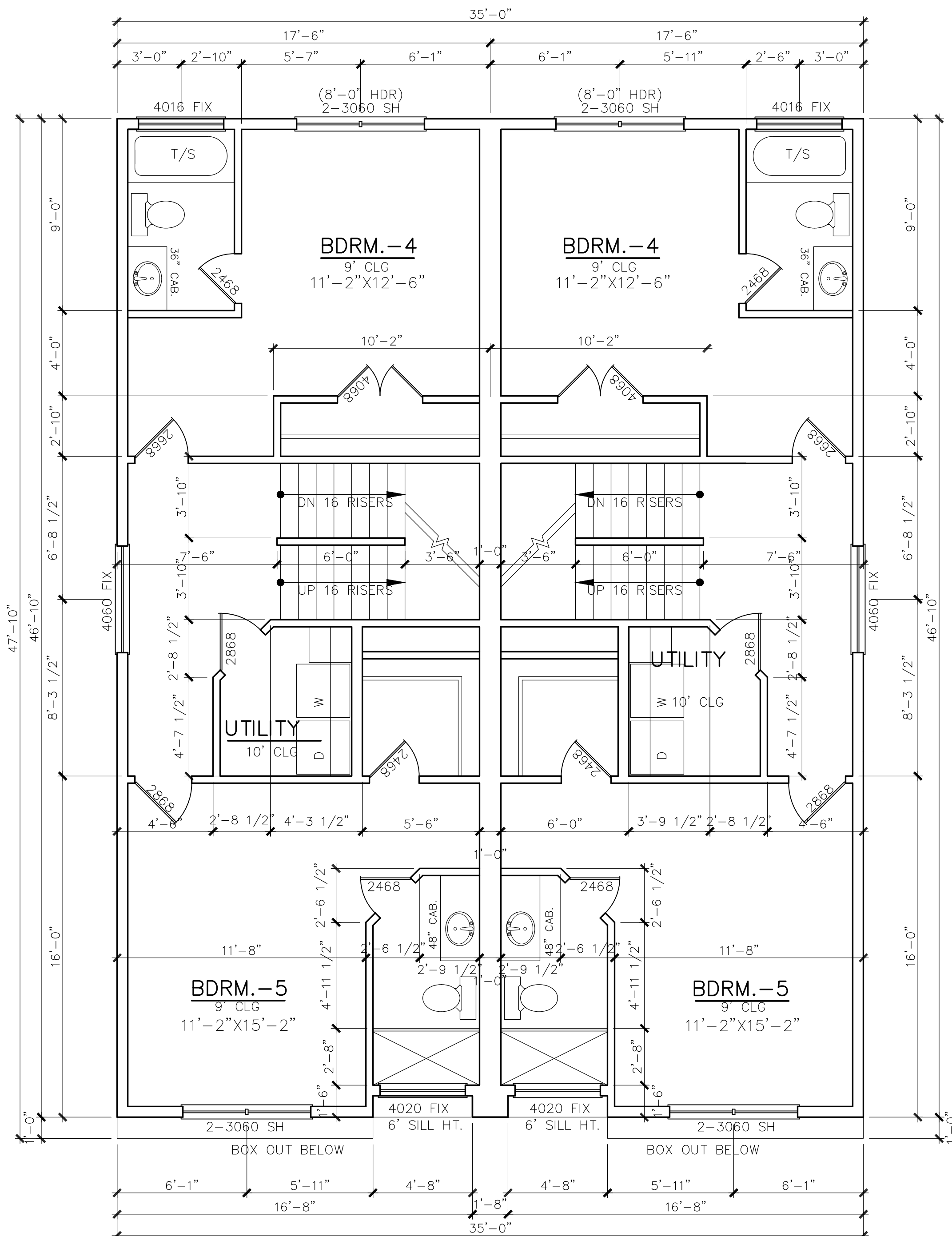
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PROJECT NO.  
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PLAN NUMBER  
2323

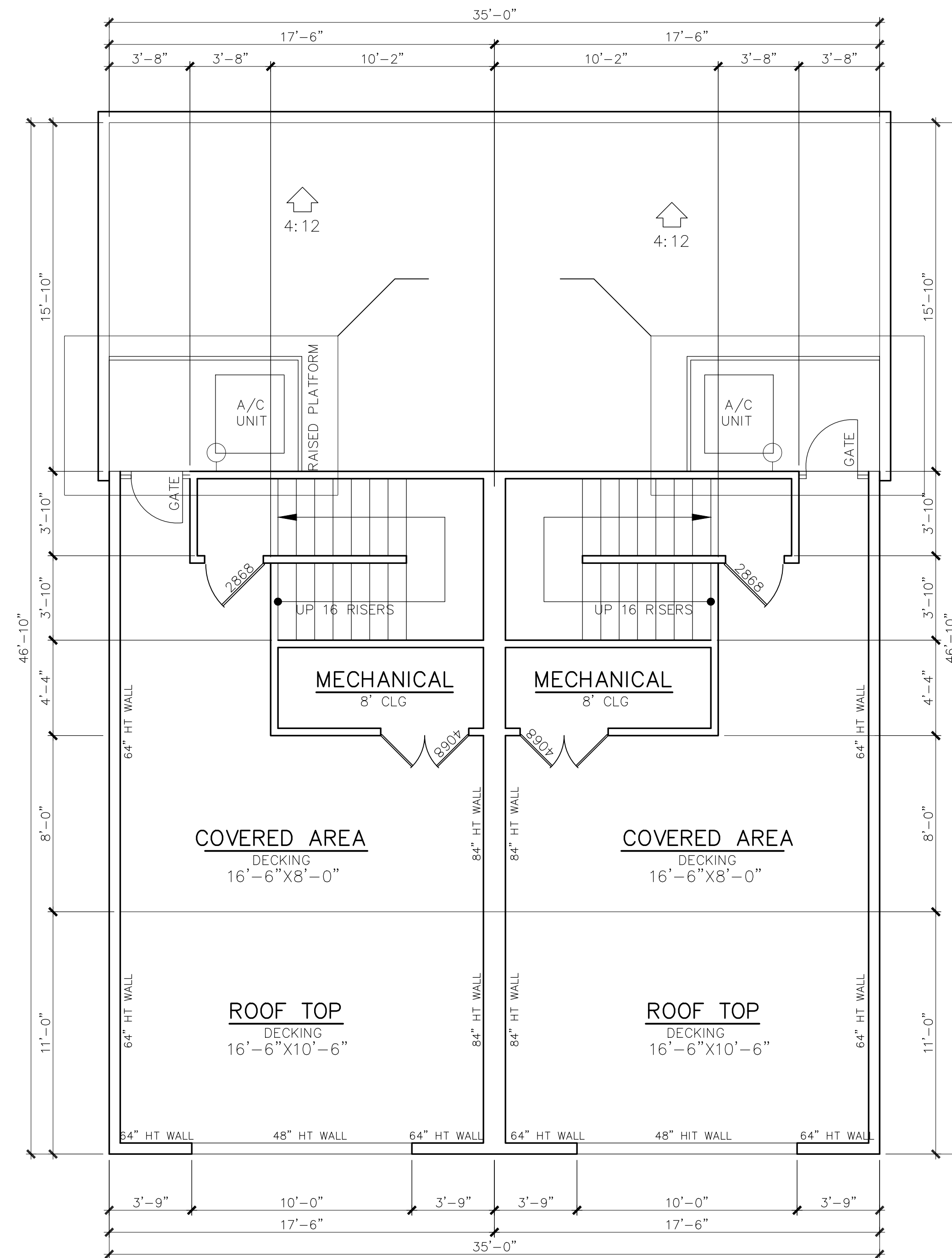
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A-2



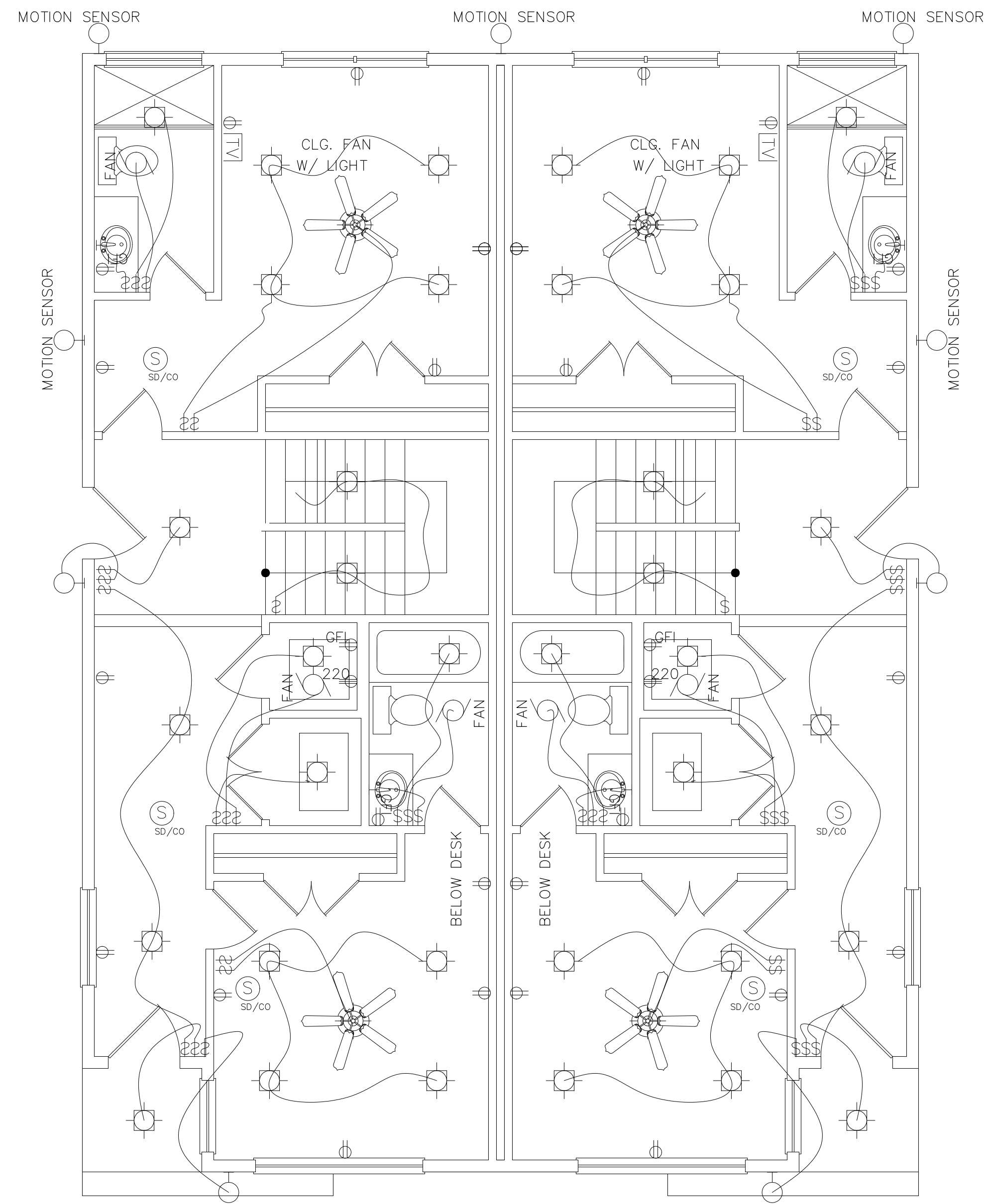
THIRD FLOOR PLAN

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



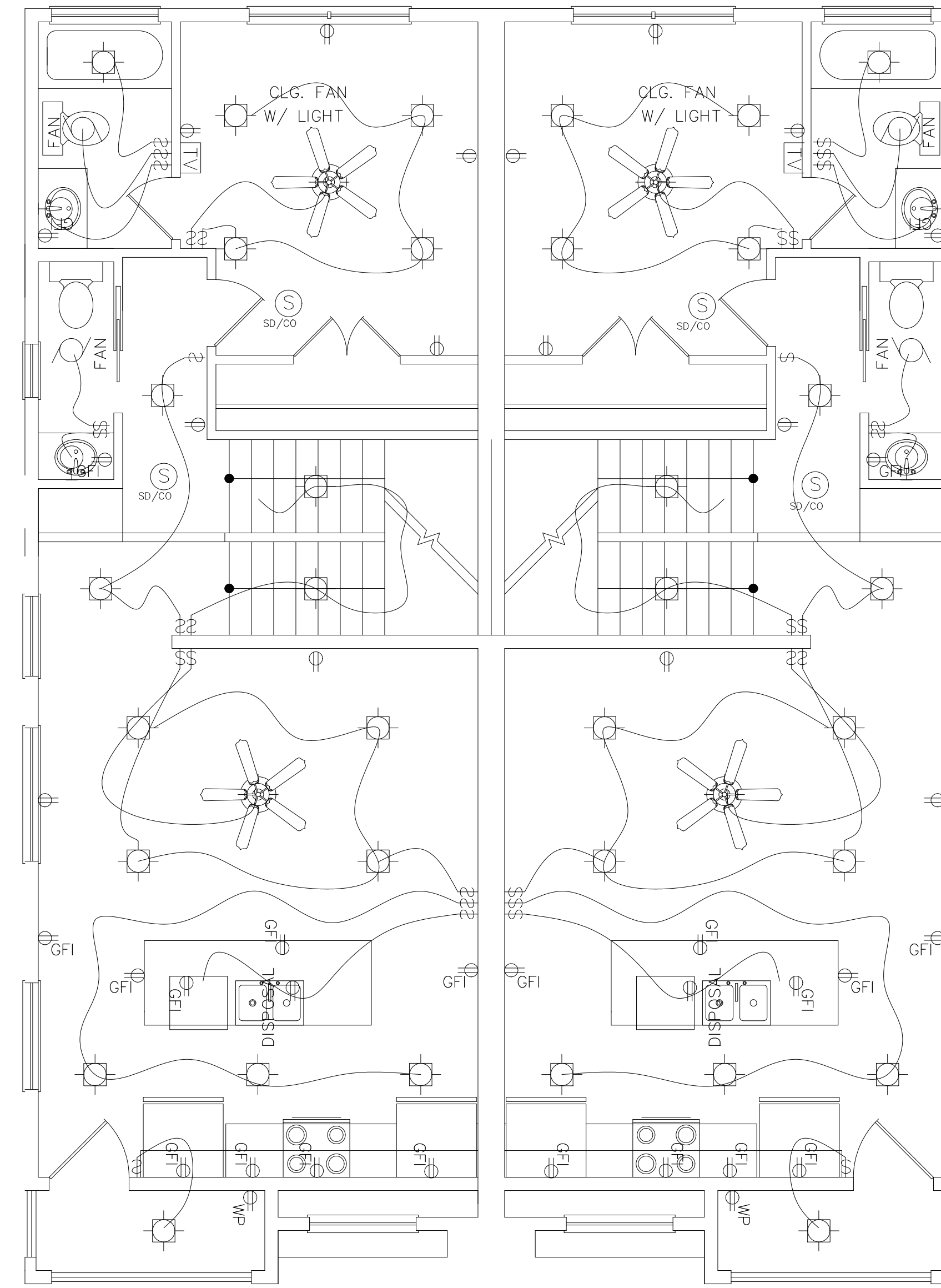
ROOF TOP

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



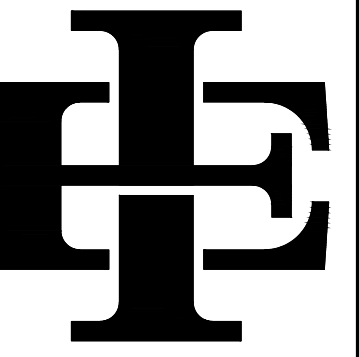
**FIRST FLOOR ELECTRICAL PLAN**

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



**SECOND FLOOR ELECTRICAL PLAN**

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



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FORT WORTH, 76244  
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OWNER INFORMATION

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FORT WORTH, TX 76110  
LOT: 6 BLOCK: 17

ADDRESS:

ISSUE DATE  
06.10.2024

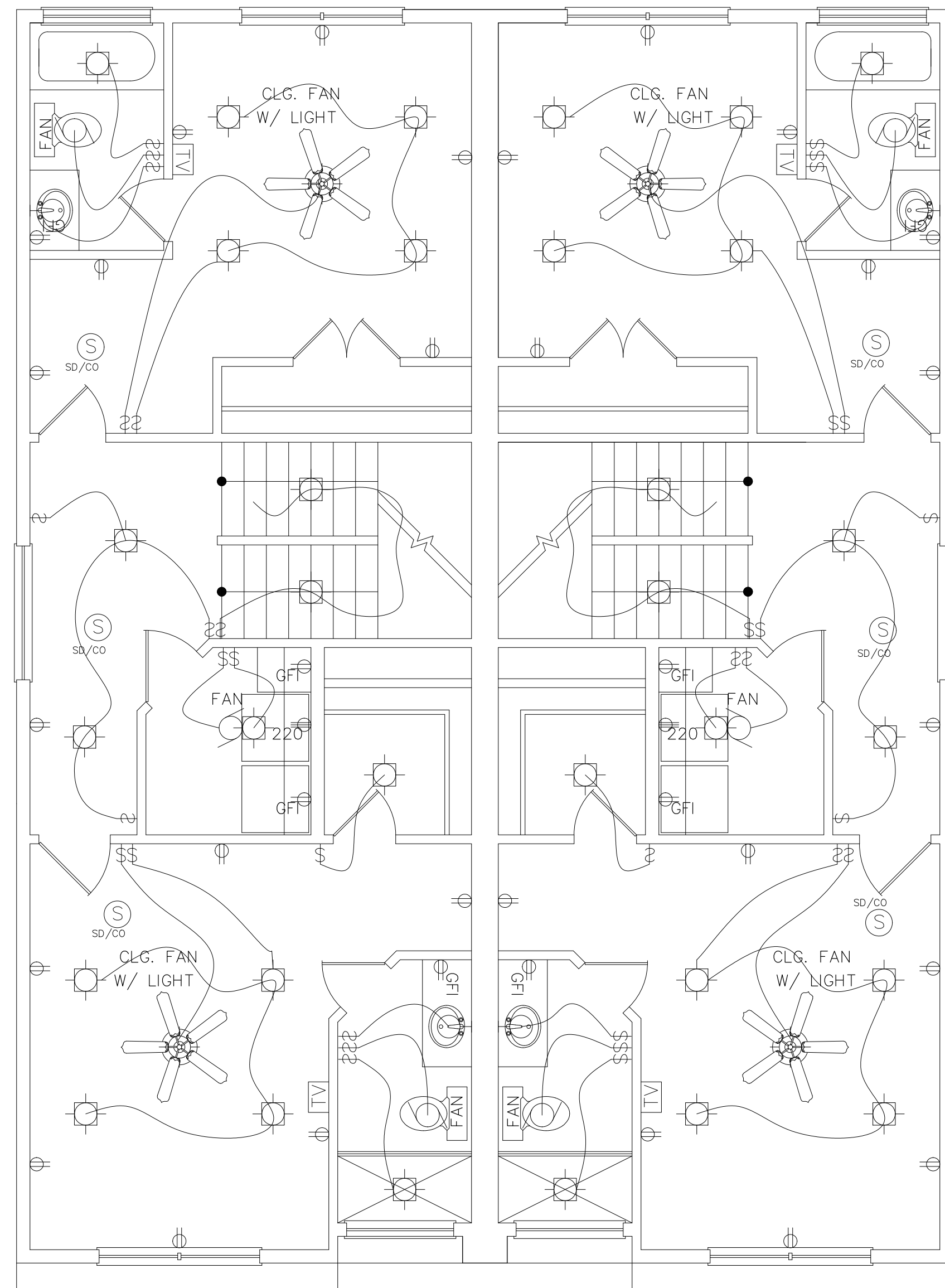
DRAFTSPERSON  
MEM

PROJECT NO.  
000

PLAN NUMBER  
2323

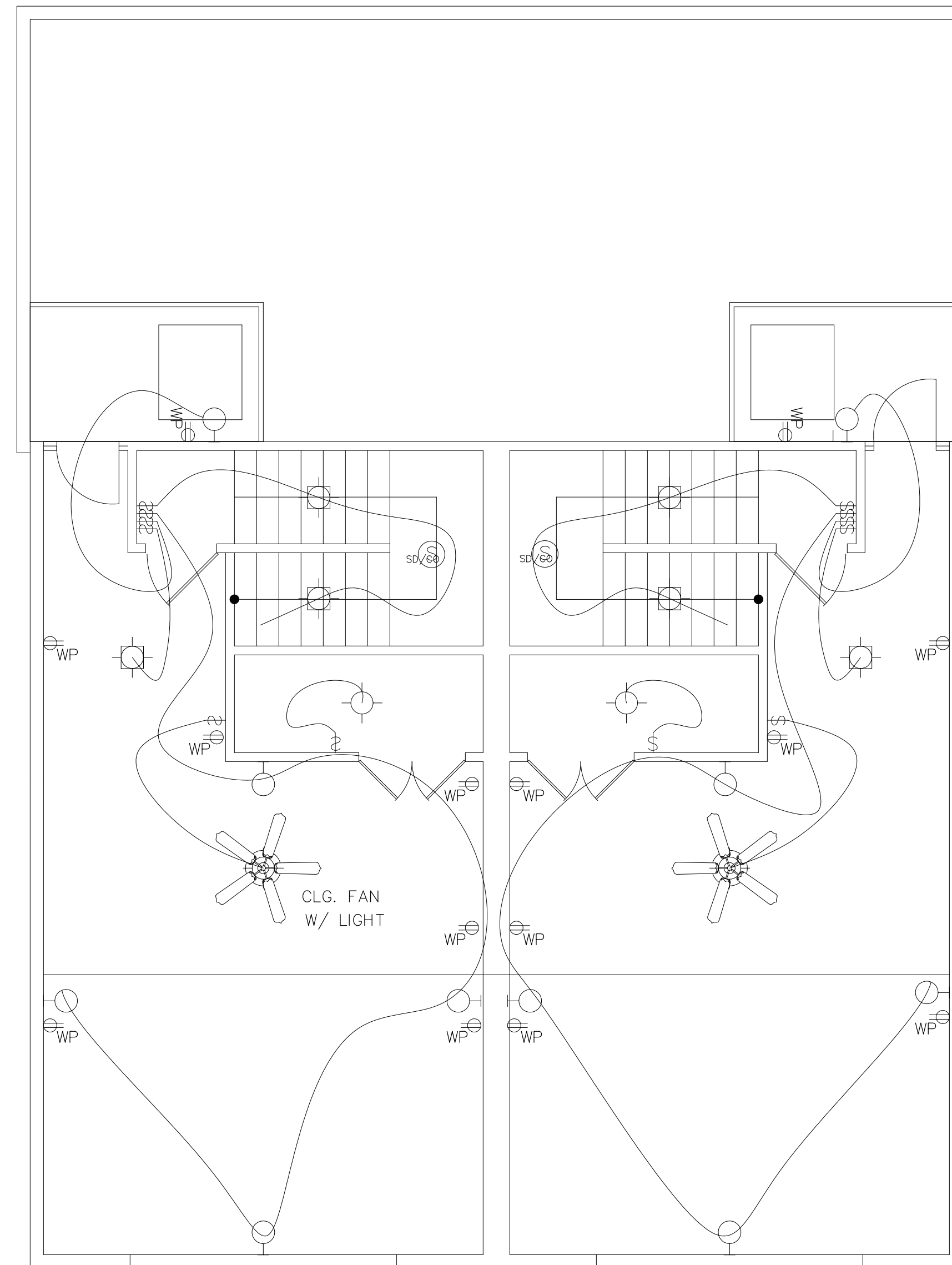
SHEET NUMBER

A-3



**THIRD FLOOR ELECTRICAL PLAN**

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



**ROOF TOP ELECTRICAL PLAN**

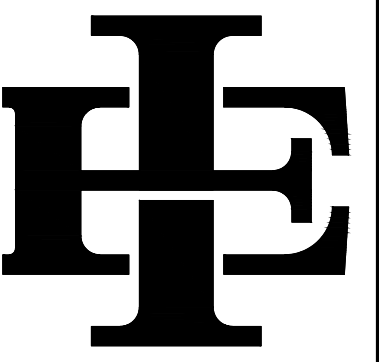
SCALE: 1/4" = 1'-0"

ELECTRICAL LEGEND	
	110 VOLT OUTLET
	220 VOLT OUTLET
	CEILING FAN
	RECESS CAN LIGHT FIXTURE
	CLG. MOUNTED LIGHT FIXTURE
	WALL MOUNTED LIGHT FIXTURE
	EXHAUST FAN
	SWITCH
	CABLE OUTLET
	TELEPHONE OUTLET
	DOORBELL CHIMES
	SMOKE DETECTOR

NOTE:  
SECURITY AND LANDSCAPE LIGHTING LOCATIONS PER OWNER.

GENERAL ELECTRICAL NOTES:

- 1.) NOT USED.
- 2.) ALL PLUGS AND SMOKE DETECTORS PER LOCAL CODES AND LOCATED ON PLAN. ALL SMOKE DETECTORS SHOULD BE IN AN AREA ACCESSIBLE BY 16' EXTENSION LADDER OR 6' STEP LADDER.
- 3.) NOT USED.
- 4.) EXTERIOR COLUMN AND PORCH LIGHTS TO BE AT 7'-0" A.F.F.
- 5.) BLOCK AND WIRE FOR CEILING FANS/LIGHTS AT FAMILY ROOM, GAMEROOM, AND ALL BEDROOMS. (SINGLE GANG BOX ONLY IN SECONDARY BEDROOM.)
- 6.) VANITY LIGHTS TO BE PLACE ABOVE ALL BATHROOM MIRRORS.
- 7.) DOORBELL WIRING PER PLAN BY COMMUNITY -- BUTTON TO BE AT 42" A.F.F. WHERE APPLICABLE AND LOCATION DENOTED ON PLAN.
- 8.) DOORBELL CHIMES PER PLAN (AT 6" DOWN FROM CEILING).
- 9.) MICROWAVE/VENTHOOD PLUG TO BE LOCATED AT 86" A.F.F. (IF OVER COOKTOP).
- 10.) VANITY LIGHT BOXES TO BE AT 86" A.F.F. (TO BOTTOM OF BOX).
- 11.) BATH VANITY PLUGS TO BE AT 41-1/2" A.F.F.
- 12.) INSTALL GFCI PLUGS AT ALL SINK VANITIES AND AT KITCHEN COUNTERTOPS.
- 13.) MICROWAVE PLUG TO BE @ 86" A.F.F. (IF OVER CABINETS).
- 14.) KITCHEN COUNTERTOP PLUGS AND SWITCHES TO BE HORIZONTAL AT 37 1/2" A.F.F. (TO BOTTOM OF BOX).
- 15.) SUPPLY TWO (2) LIGHTS IN ATTIC AT DISAPPEARING STAIR AND AT HVAC WORK PLATFORM AND HW PLATFORM (PER LOCAL CODES) TO BE SWITCHED IN ATTIC, ACCESSIBLE FROM ATTIC LADDER.
- 16.) NOT USED.
- 17.) SECURITY KEYPADS TO BE LOCATED ABOVE SWITCHES, PER PLAN.
- 18.) OPTIONAL INTERCOM SPEAKERS AT 52" A.F.F. TO BOTTOM OF RING.
- 19.) PHONE AND PLUGS FOR PLANNING CENTER TO BE AT 34-1/2" A.F.F TO BOTTOM
- 20.) 110V SERVICE OUTLET IN ATTIC NEAR DISAPPEARING STAIR.
- 21.) NO WIRES TO BE RUN OVER ATTIC CAT WALKS.



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FORT WORTH, 76244  
OFFICE: (214)-395-4688

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2820 WAYSIDE AVENUE  
FORT WORTH, TX 76110  
LOT: 6 BLOCK: 17

ADDRESS:

ISSUE DATE  
06.10.2024

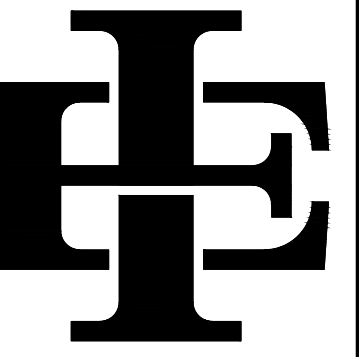
DRAFTSPERSON  
MEM

PROJECT NO.  
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PLAN NUMBER  
2323

SHEET NUMBER

A-4



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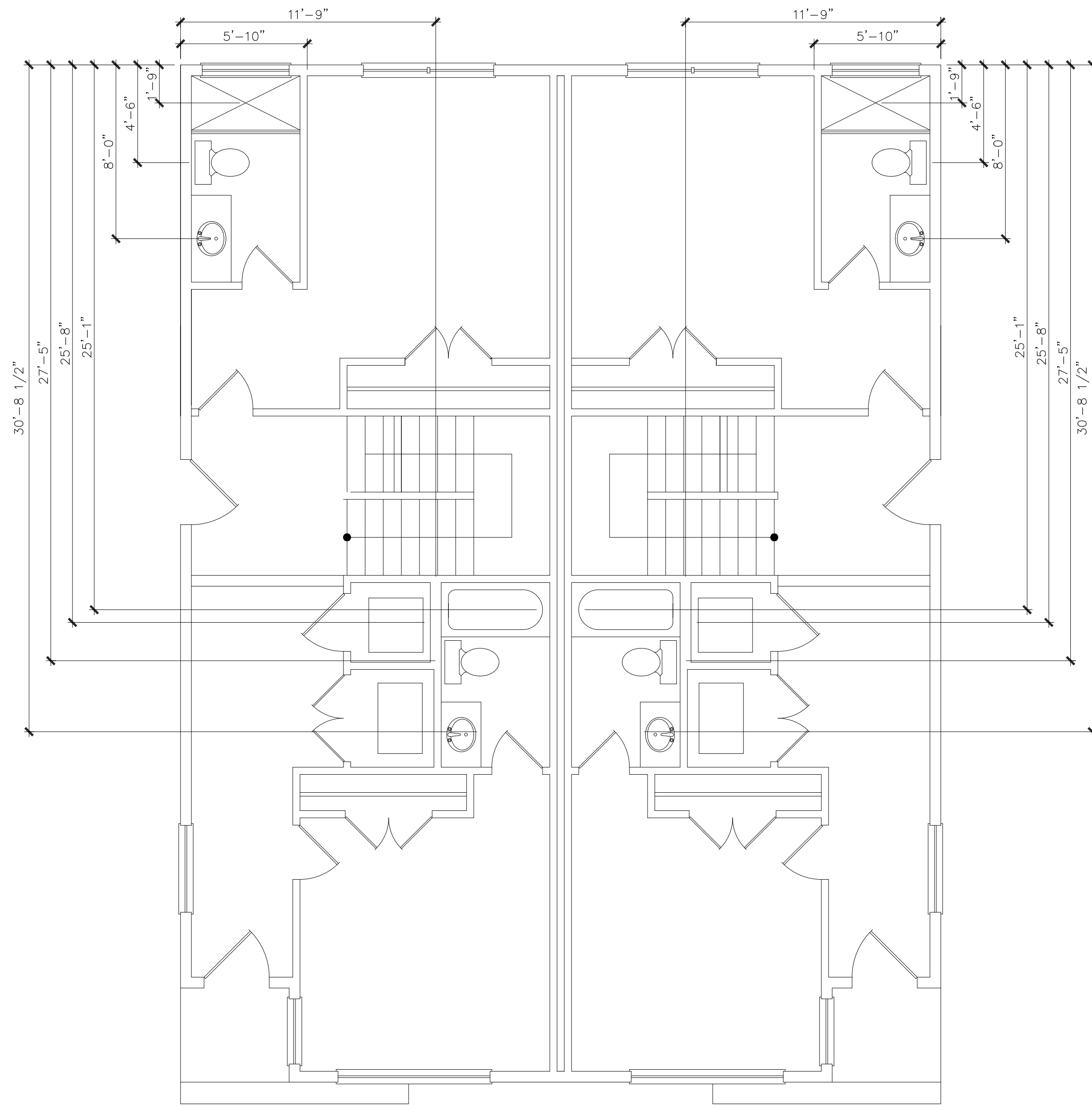
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MEM

PROJECT NO.  
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PLAN NUMBER  
2323

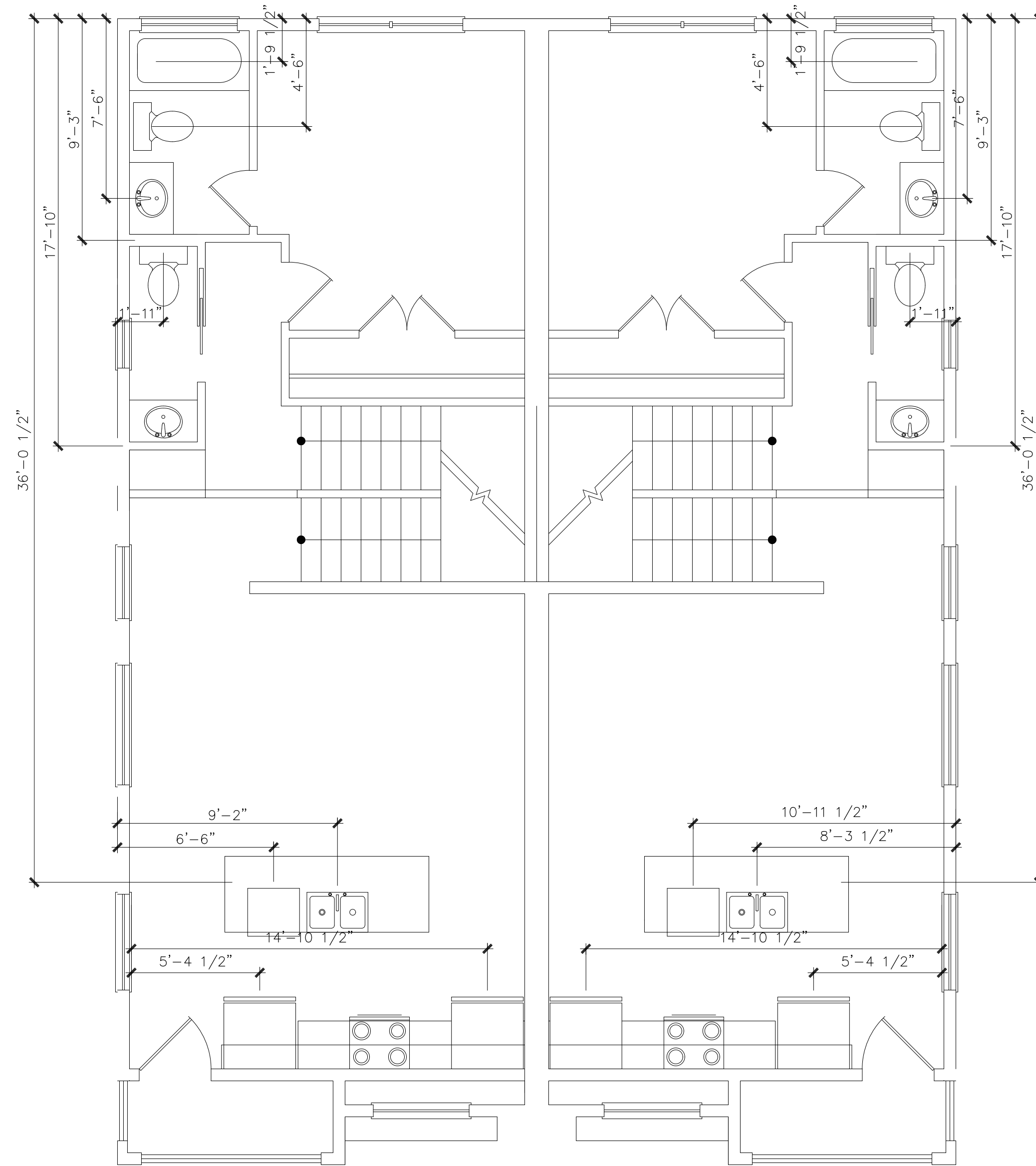
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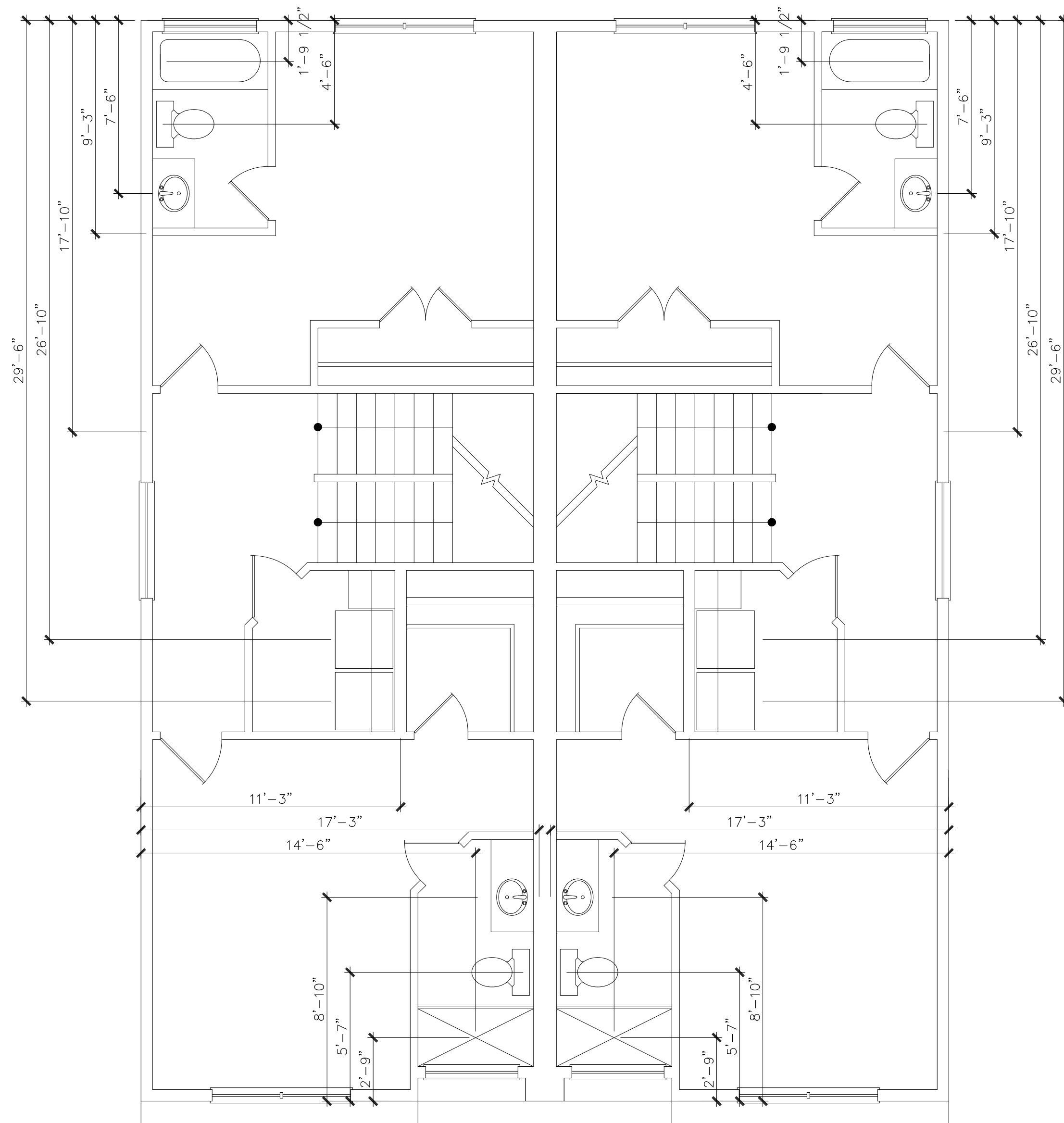
FIRST FLOOR PLUMBING PLAN

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



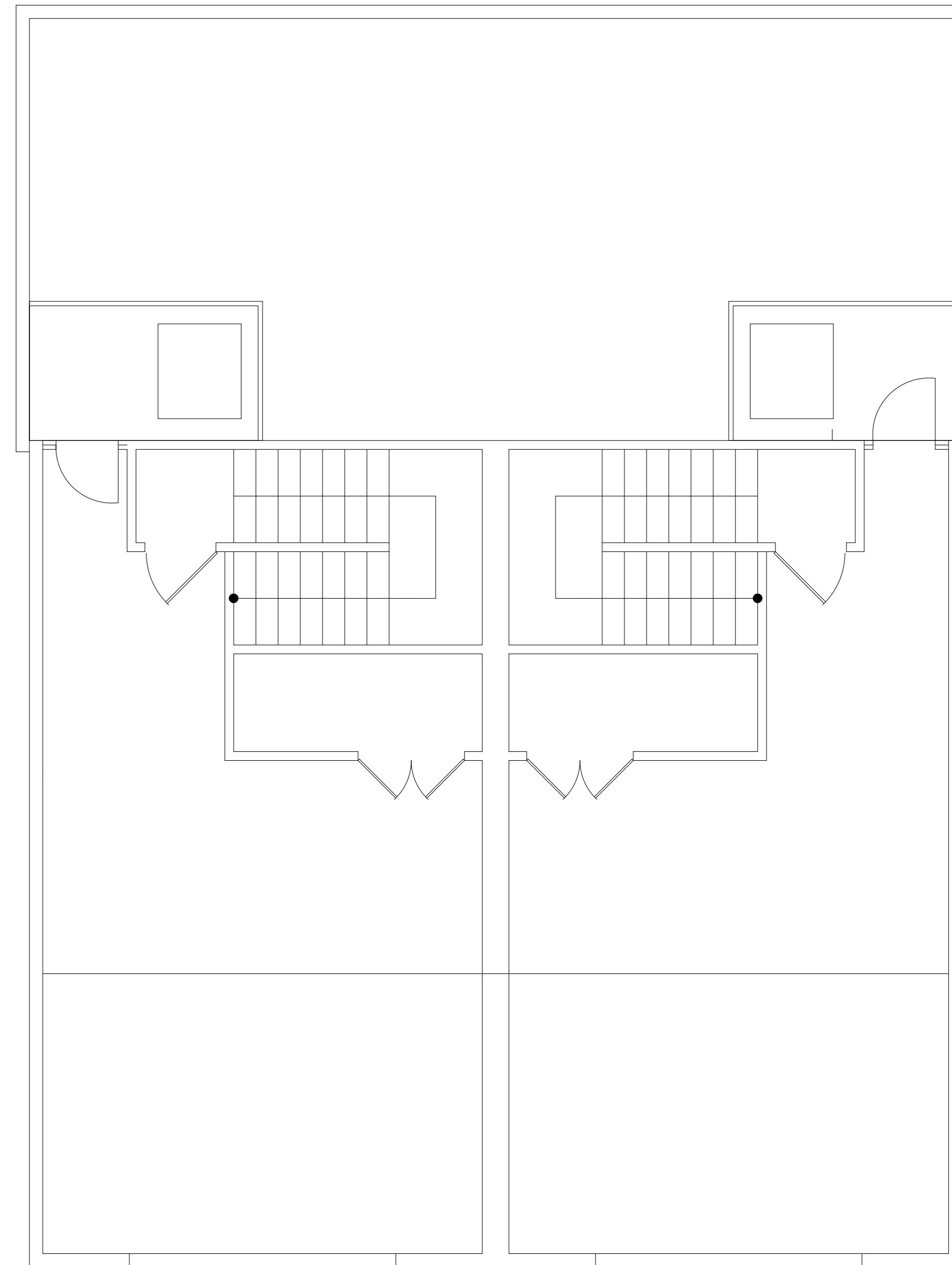
SECOND FLOOR PLUMBING PLAN

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



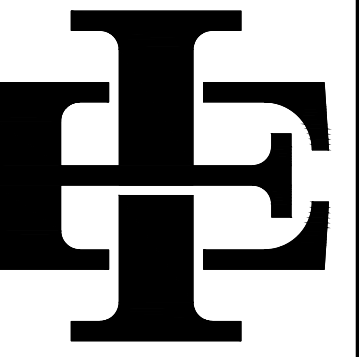
**THIRD FLOOR PLUMBING PLAN**

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



**ROOF TOP PLUMBING PLAN**

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



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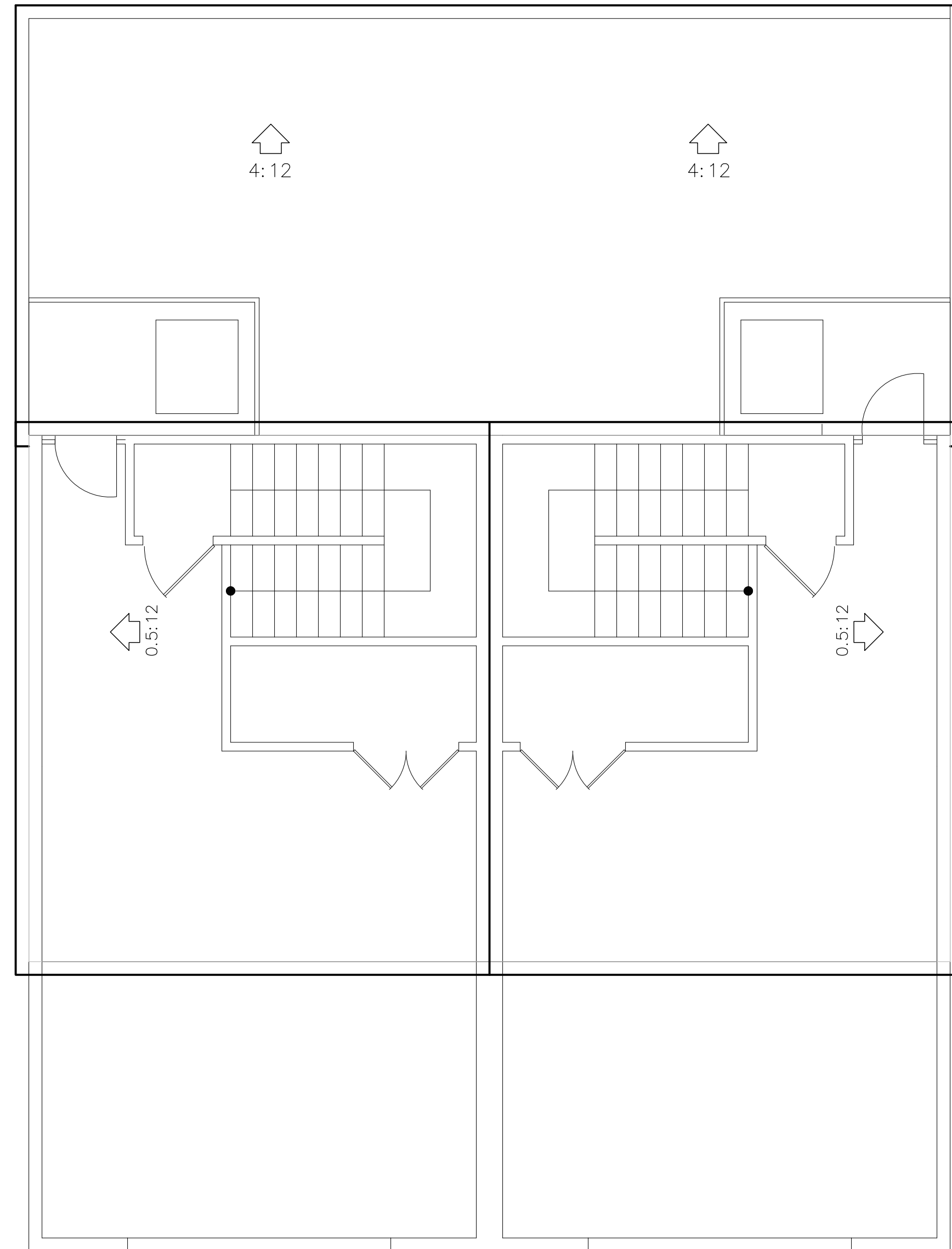
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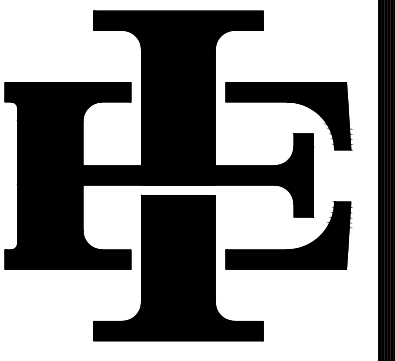
SHEET NUMBER

**A-6**



**ROOF DRAIN**

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



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MEM

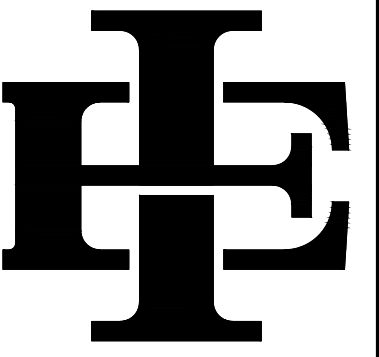
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PLAN NUMBER  
2323

SHEET NUMBER

**A-7**





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DESIGNS LLC.

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PROJECT NO.  
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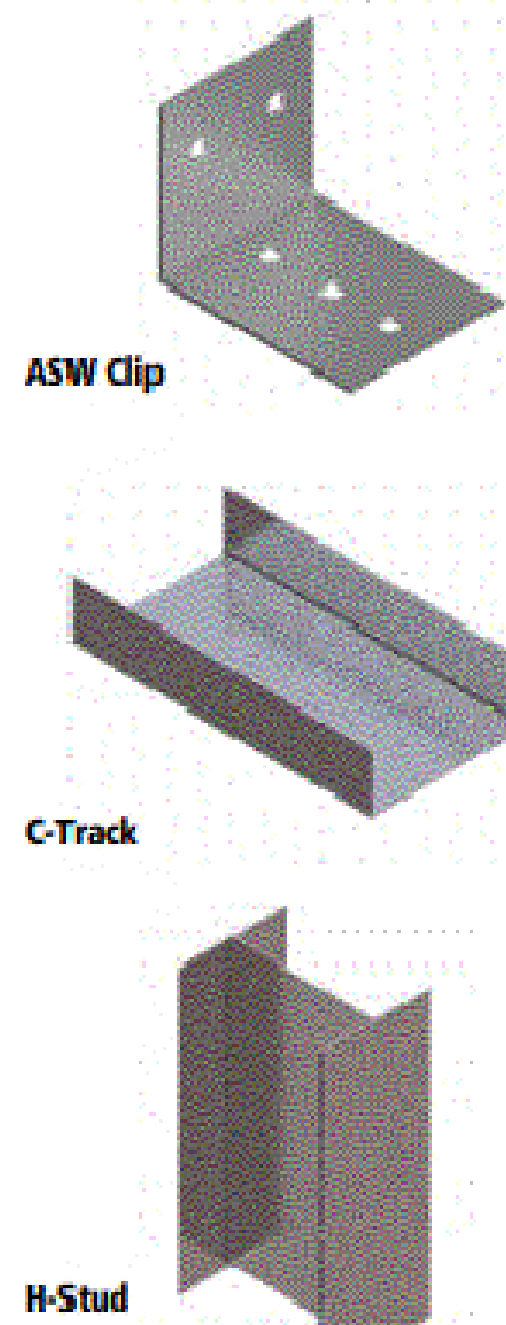
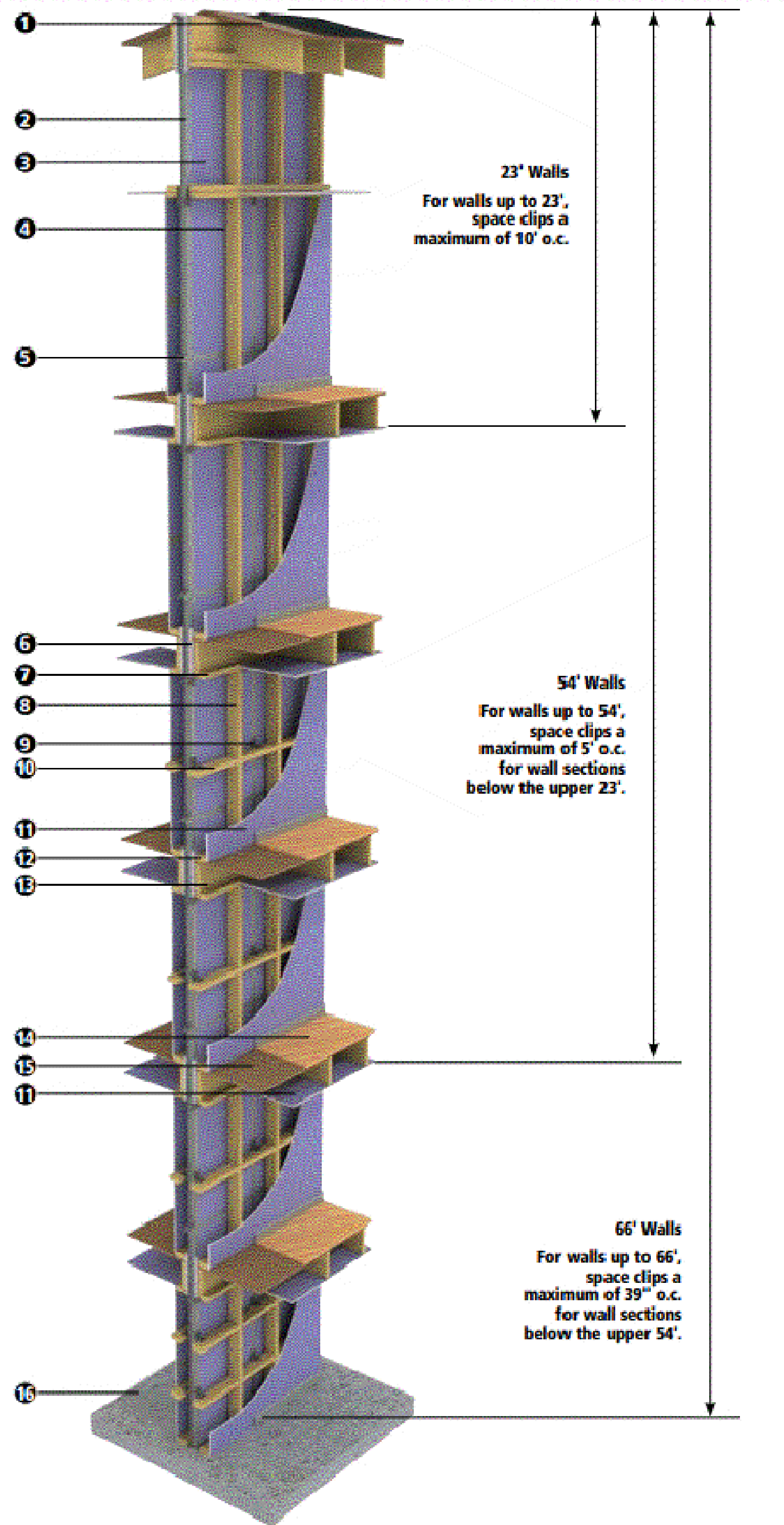
PLAN NUMBER  
2323

SHEET NUMBER

A-8

**AREA SEPARATION WALL  
LIMITING HEIGHTS**

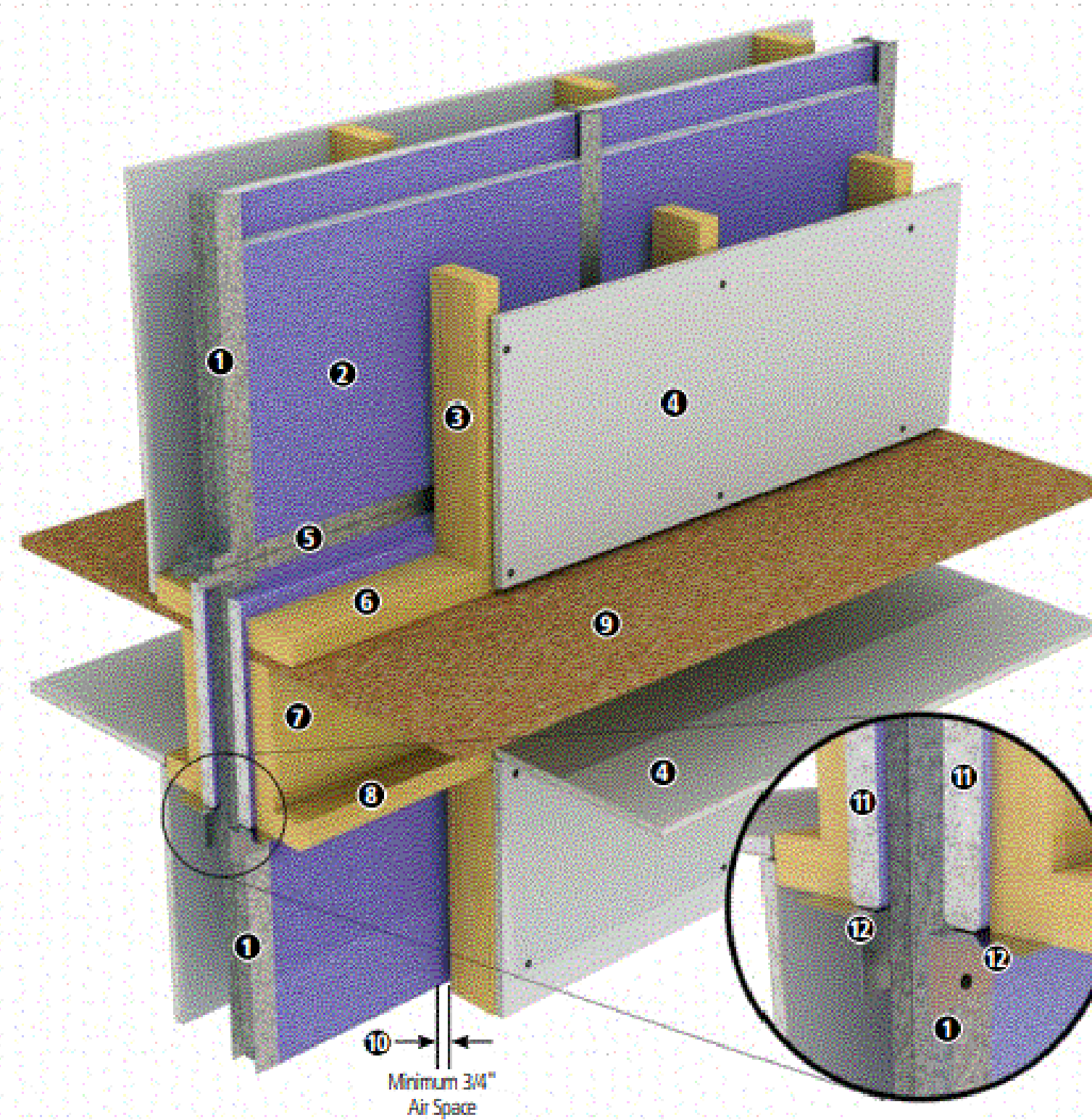
1. Roof
2. H-Stud
3. Two Layers 1" Shaftliner XP®
4. Minimum 3/4" Air Space
5. Double C-Track (Back-to-Back)
6. Fire Blocking 1" Shaftliner XP® or Mineral Wool
7. Top Plate
8. Stud
9. ASW Clip
10. Blocking
11. XP® Gypsum Board
12. Bottom Plate
13. Rim Joist
14. Finish Floor
15. Subfloor
16. Concrete Slab



The 2-Hour Area Separation Wall System is a 2-hour fire wall consisting of 2 in. (50.8 mm) light-gauge steel H-Studs that secure two layers of 1 in. (25.4 mm) shaftliner panels friction-fit between studs and a minimum 3/4 in. (19.1 mm) air space on each side.

**TYPICAL FLOOR/  
CEILING JUNCTURE**

1. H-Stud
2. Two Layers 1" Shaftliner XP®
3. Stud
4. Gypsum Board
5. Double C-Track (Back to Back)
6. Bottom Plate
7. Rim Joist
8. Top Plate
9. Subfloor
10. Minimum 3/4" Air Space
11. Fire Blocking 1" Fire-Shield® Shaftliner or Mineral Wool
12. ASW Clip



**NATIONAL GYPSUM COMPANY  
2-Hour Area Separation Wall System**

**Description**

National Gypsum Company produces three shaftliner products for use in the Area Separation Wall System:  
**Gold Bond® Fire-Shield® Shaftliner** consists of a fire-resistant Type X gypsum core encased in a heavy, moisture-resistant and green paper that is made from 100-percent recycled content.  
**Gold Bond® XP® Shaftliner** consists of a mold-, mildew-, moisture- and fire-resistant Type X gypsum core with a specially designed PURPLE® paper that offers superior resistance to mold and mildew.  
**Gold Bond® EXP® Shaftliner** consists of a fire-resistant Type X gypsum core encased in a coated, specially designed PURPLE® fiberglass mat for superior mold, mildew and moisture resistance.

The steel H-Studs are attached on each side to adjacent framing with aluminum ASW break-away clips. The clips melt when exposed to heat and allow the collapse of the fire-exposed unit without failure of the area separation wall.

The H-Studs are secured at the foundation by the flanges of the C-Track. The same track is used back-to-back at intermediate floors to provide a splicing means so that the system can be erected one floor at a time. C-Tracks are also used at the roof line or at the parapet and at the ends of walls.

For a 2-hour, fire-rated assembly without the need for battens, maintain a minimum 3/4 in. (19.1 mm) air space between the H-Stud assembly and any adjacent framing members. When you cannot maintain a minimum 3/4 in. (19.1 mm) air space, cover the H-Studs and C-Tracks by gypsum board battens. In lieu of battens, fasten gypsum board to the H-Studs, and treat joints with tape and joint compound to provide a finished wall surface.

Wood- or steel-stud framing walls on each side of the area separation wall system can be load bearing and can accommodate mechanical, electrical and plumbing systems. Install mineral wool or glass fiber insulation to provide higher STC ratings.

**Technical Data**

The Area Separation Wall System has a non-bearing wall rating of 2 hours and is listed in the UL Fire Resistance Directory as Design No. U347 and in the GA-600 Fire Resistance Manual as File Numbers ASW 0800, ASW 0981 and ASW 0998.

The Area Separation Wall System has been evaluated for code compliance in UL Evaluation Report UL E83501-01.

The Area Separation Wall System may be built up to a maximum of 66 ft. (20.1 m) high.

Do not use the Area Separation Wall System where exposure to constant dampness and/or water may occur.

Although steel framing and Gold Bond® Fire-Shield® Shaftliner can withstand temporary exposure to moisture during construction, protect the finished wall as soon as possible.

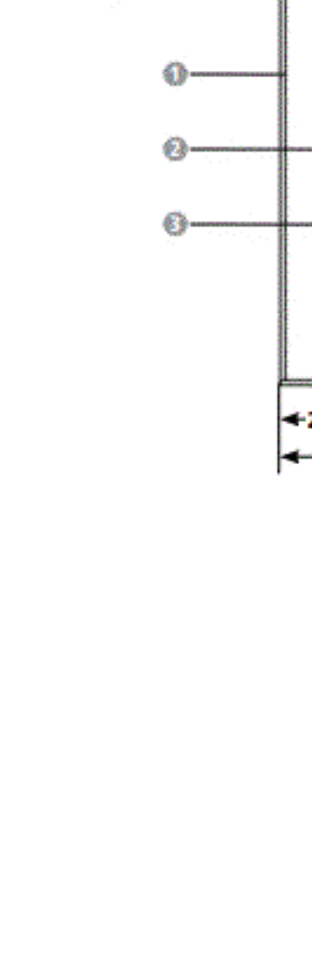
Properly size materials supplied to the jobsite, support off the ground, and protect from inclement weather.

**Installation**

1. Attach 2 in. (50.8 mm) C-Tracks to the top of the foundation 3/4 in. (19.1 mm) from the adjacent framed wall with fasteners spaced 24 in. (610 mm) o.c. Apply acoustical sealant along edges of track to minimize sound transmission.
2. Install C-Track on the ends of stepped foundation walls aligned with the Area Separation Wall and, if applicable, with fasteners 24 in. (610 mm) o.c. Caulk edges as with the floor track.
3. At the intersection of foundation and the exterior wall, begin erecting Area Separation Wall by inserting first layer of 1 in. (25.4 mm) shaftliner into C-Track. Insert second layer back-to-back with first layer and seat into C-Track. Shaftliner and studs may be set into position from the basement floor or fed down through the space provided between the floor framing from the floor above. Cap the terminating edge of the shaftliner panels with a vertical C-Track at the end of the foundation and fasten to the floor track with 3/8 in. (9.5 mm) Type 5 pan-head screws.

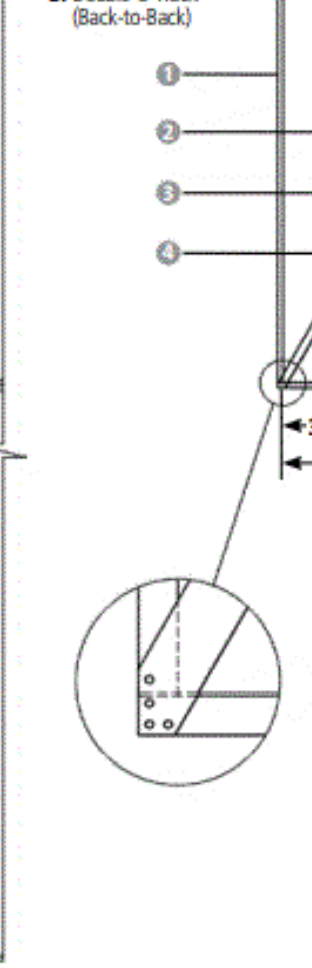
**2 FT. CANTILEVER**

1. 2" C-Track
2. 2" H-Stud
3. 1" Fire-Shield Shaftliner
4. Double C-Track (Back-to-Back)



**3 FT. CANTILEVER**

1. 2" C-Track
2. 2" H-Stud
3. 1" Fire-Shield Shaftliner
4. Diagonal Steel Strap
5. Double C-Track (Back-to-Back)



**CORNER DETAIL**

1. Gypsum Board
2. 2x4 Wood Stud
3. Insulation
4. Minimum 3/4" Air Space
5. 1" Fire-Shield Shaftliner
6. 2" C-Track
7. 2" H-Stud
8. ASW Clip



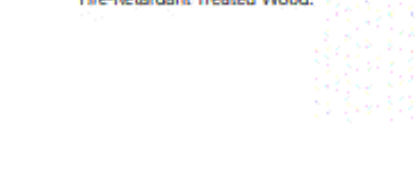
**4-WAY INTERSECTION DETAIL**

1. Gypsum Board
2. 2x4 Wood Stud
3. Insulation
4. Minimum 3/4" Air Space
5. 2" H-Stud
6. 2" C-Track
7. 1" Fire-Shield Shaftliner



**ROOF JUNCTION DETAIL**

1. Roof Deck
2. 2x2 Wood Ledger
3. 2" C-Track
4. Gypsum Board or Mineral Wool Fire Blocking
5. ASW Clip
6. Minimum 3/4" Air Space
7. 1" Fire-Shield Shaftliner
8. 5/8" Fire-Shield Gypsum Board, 4" Each Side When Roof Deck is Not Constructed With Fire-Retardant Treated Wood.



**ROOF PARAPET DETAIL**

1. Roof Deck
2. 2" C-Track
3. Gypsum Board or Mineral Wool Fire Blocking
4. Minimum 3/4" Air Space
5. ASW Clip
6. 1" Fire-Shield Shaftliner



**EXTERIOR WALL JUNCTION DETAIL**

1. Siding
2. 5/8" Fire-Shield Gypsum Sheathing, 4" Each Side
3. Insulation
4. 2x4 Wood Stud
5. 2" C-Track
6. Gypsum Board or Mineral Wool Fire Blocking
7. Minimum 3/4" Air Space
8. 1" Fire-Shield Shaftliner
9. ASW Clip
10. 2" H-Stud
11. Gypsum Board



**EXTERIOR WALL INTERSECTION DETAIL**

1. Siding
2. 5/8" Fire-Shield Gypsum Sheathing
3. Insulation
4. 2x4 Wood Stud
5. 2" C-Track
6. Gypsum Board or Mineral Wool Fire Blocking
7. Minimum 3/4" Air Space
8. 1" Fire-Shield Shaftliner
9. ASW Clip
10. 2" H-Stud
11. Gypsum Board



**FOUNDATION DETAIL**

1. Gypsum Board
2. 2x4 Wood Plate
3. Insulation
4. Minimum 3/4" Air Space
5. 1" Fire-Shield Shaftliner
6. Sealant
7. 2" C-Track
8. Fasteners 24" o.c. Max.

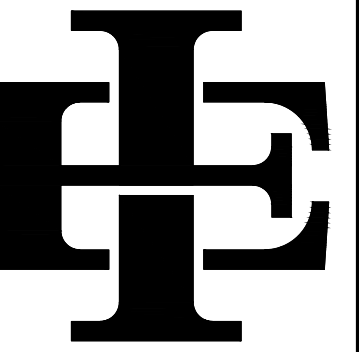


**FLOOR INTERSECTION DETAIL**

1. Subfloor
2. Sealant
3. 2" Wood Plate
4. Gypsum Board
5. Insulation
6. Minimum 3/4" Air Space
7. Rim Joist
8. Gypsum Board or Mineral Wool Fire Blocking
9. 1" Fire-Shield Shaftliner
10. ASW Clip
11. 2x4 Wood Stud
12. Ceiling







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LOT: 6 BLOCK: 17**

ISSUE DATE  
06.10.2024

DRAFTSPERSON  
MEM

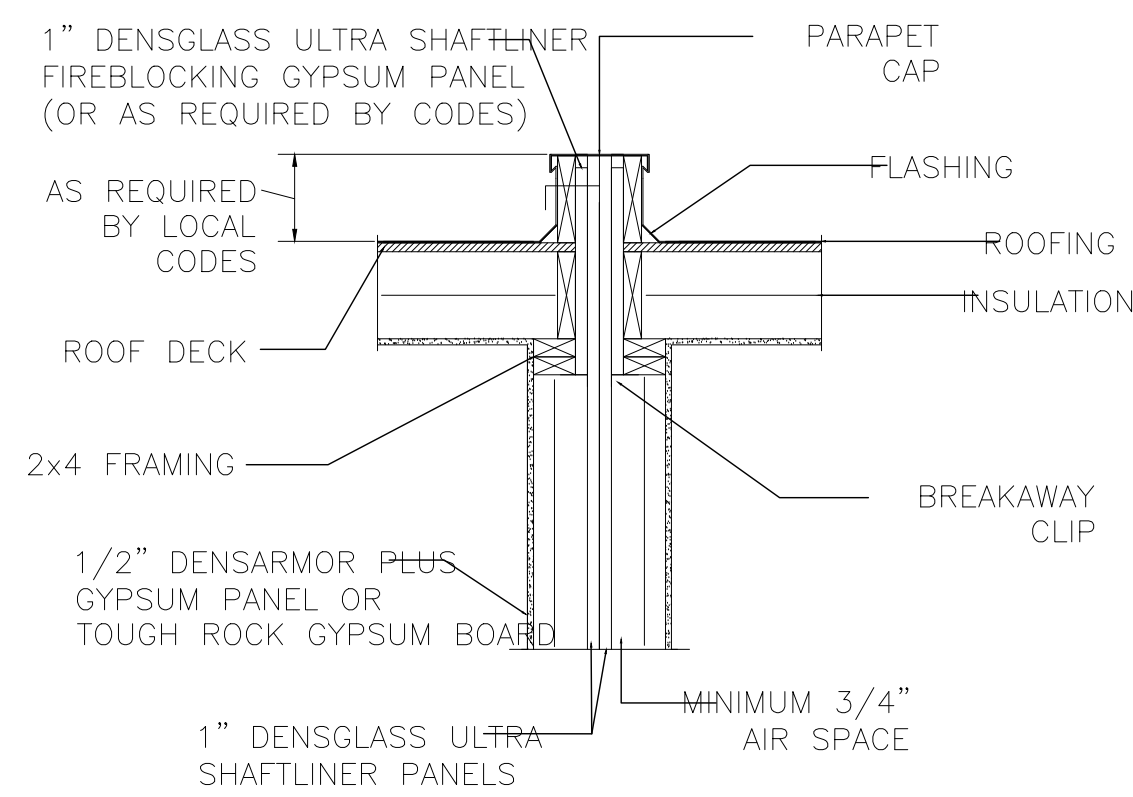
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PLAN NUMBER  
2323

SHEET NUMBER

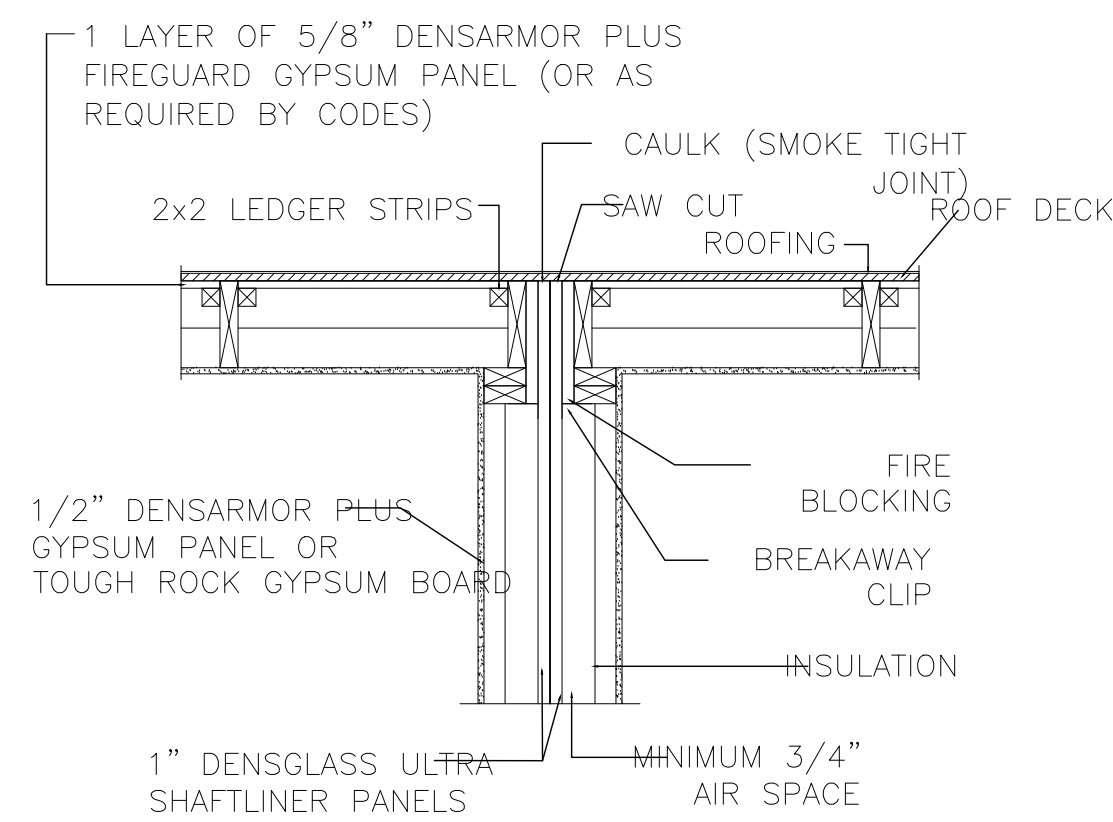
A-9

**TYPICAL ROOF PARAPET DETAIL**



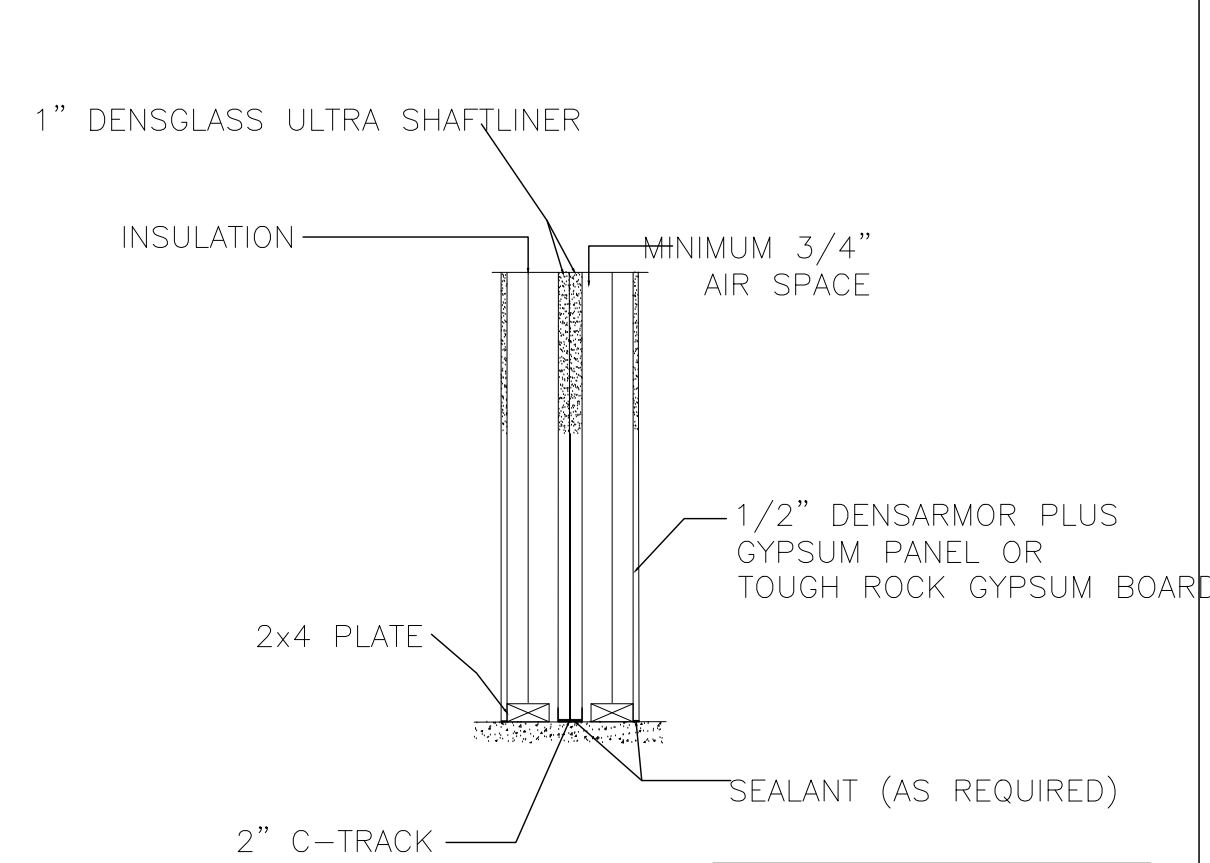
GEORGIN-PACIFIC GYPSUM, LLC IS PROVIDING THIS DETAIL AS A SERVICE TO OUR CUSTOMERS. PLEASE OBTAIN APPROVAL FROM THE PROJECT'S ARCHITECT, ENGINEER OR OTHER DESIGN AUTHORITY AND REVIEW WITH LOCAL BUILDING CODE OFFICIALS BEFORE YOU IMPLEMENT THIS DETAIL.

**TYPICAL ROOF JUNCTION DETAIL**



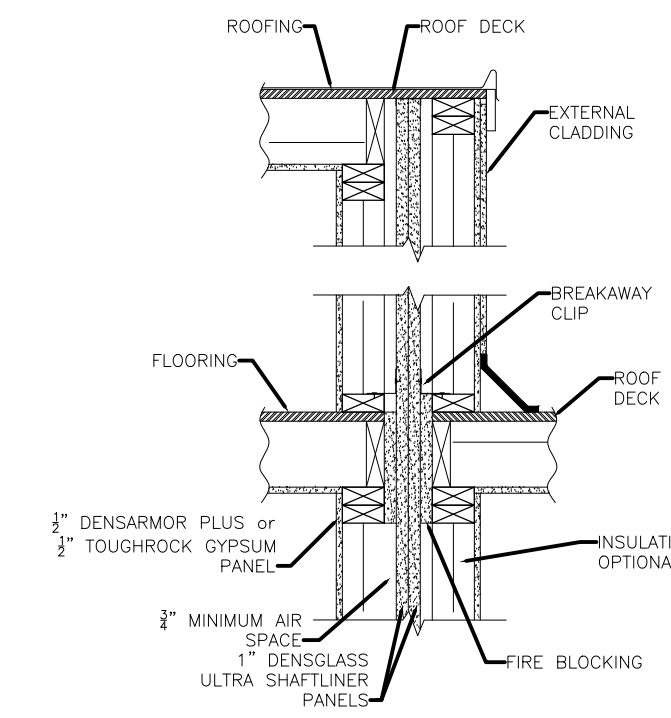
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**TYPICAL FOUNDATION DETAIL**



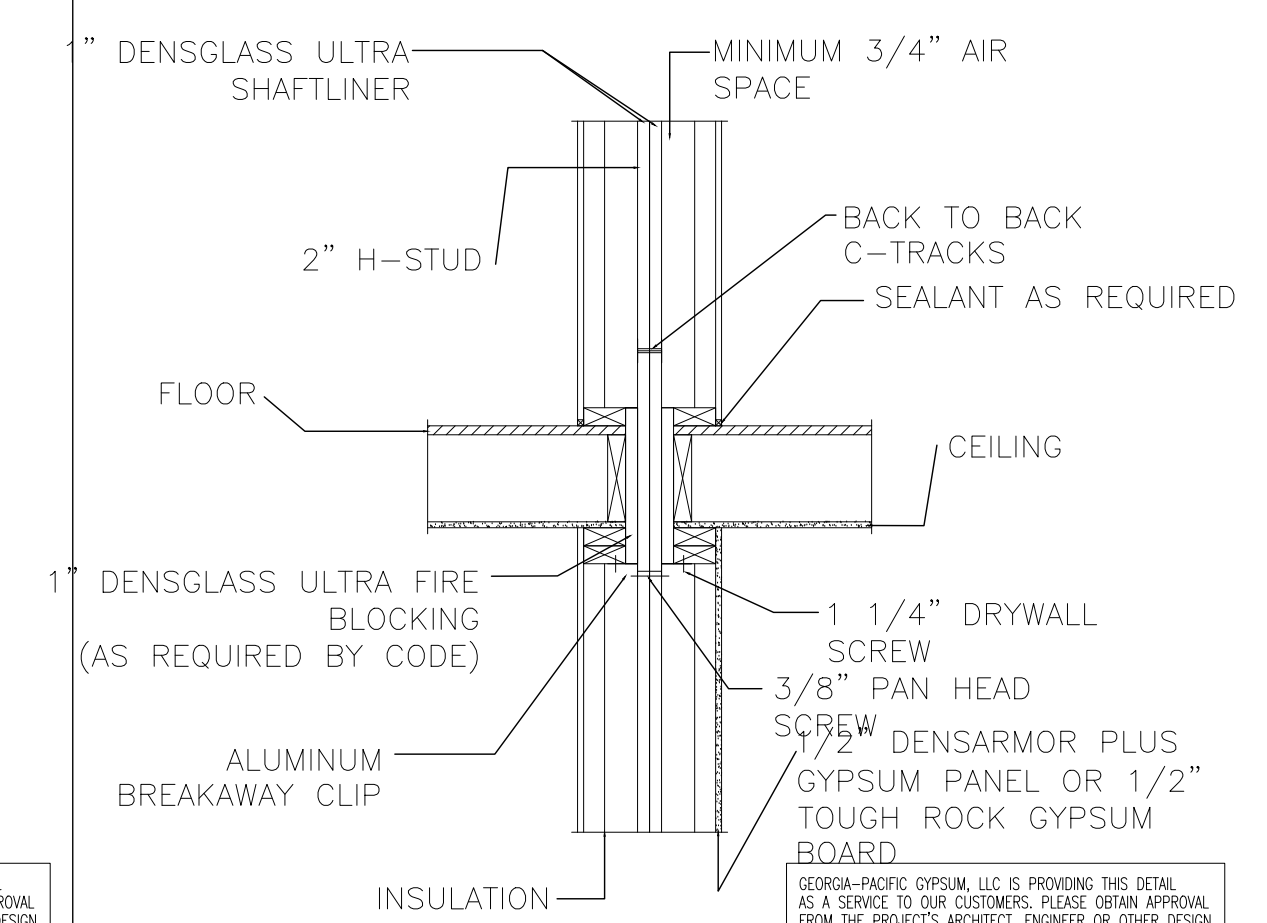
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**TYPICAL OFFSET ROOF/WALL DETAIL**



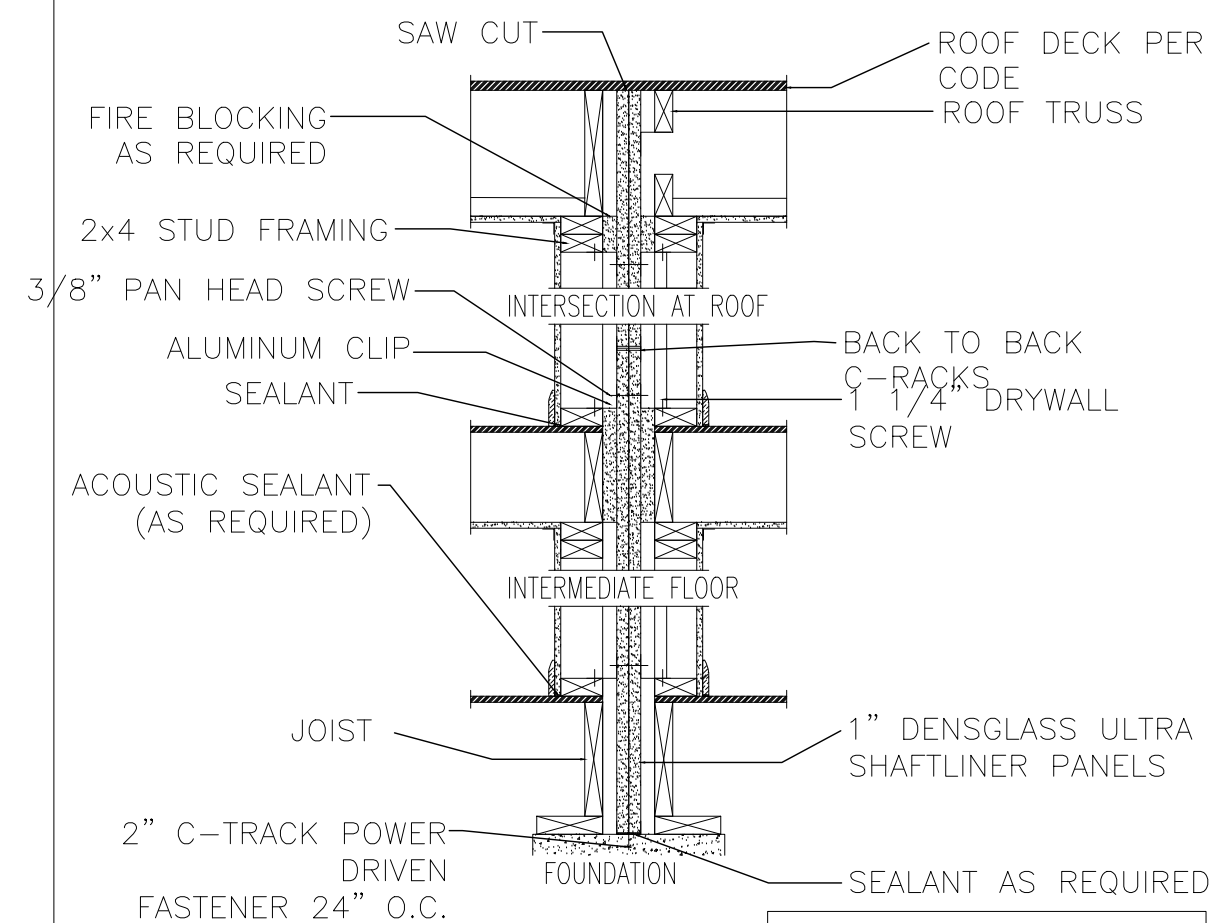
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**INTERMEDIATE FLOOR DETAIL**



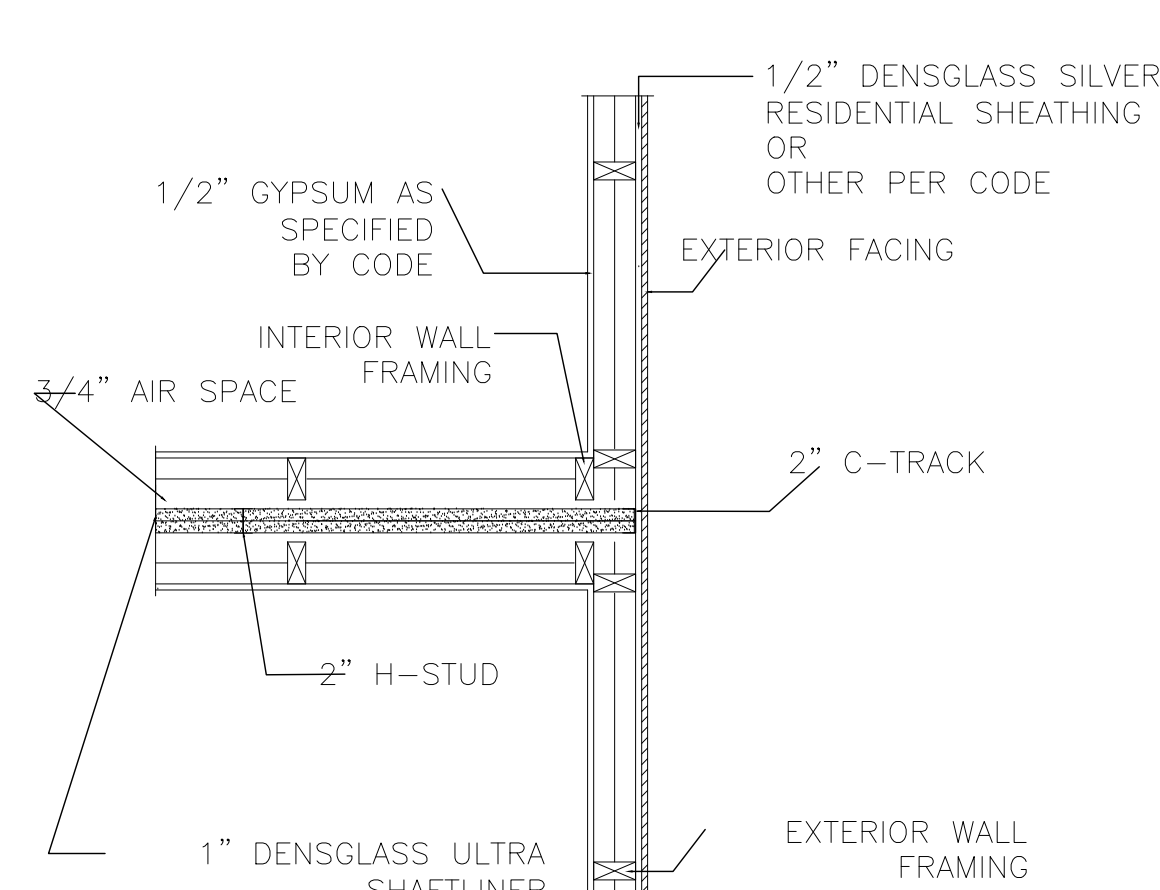
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**FULL WALL DETAIL**



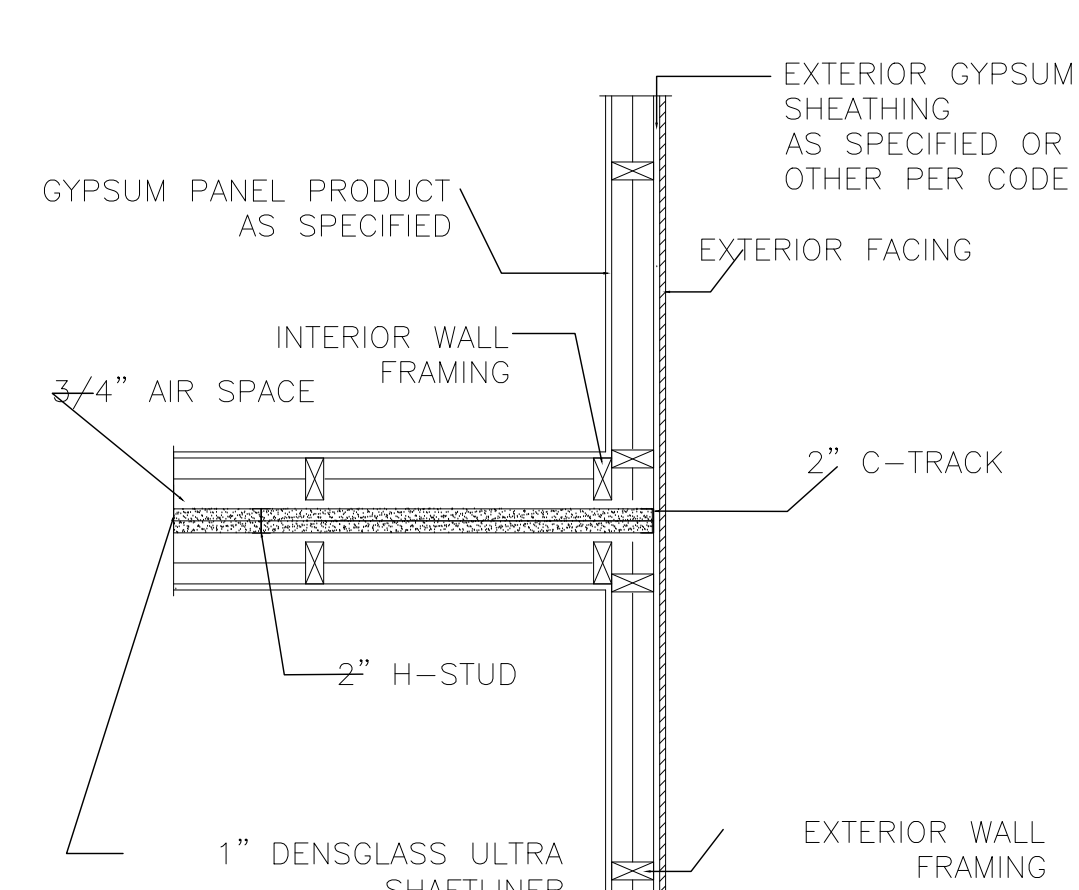
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**EXTERIOR WALL DETAIL**



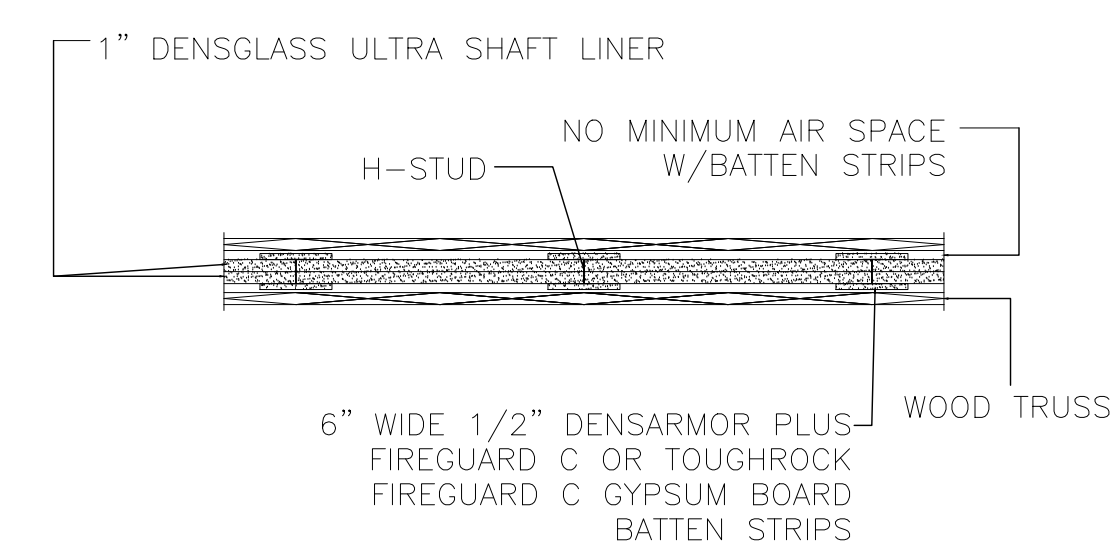
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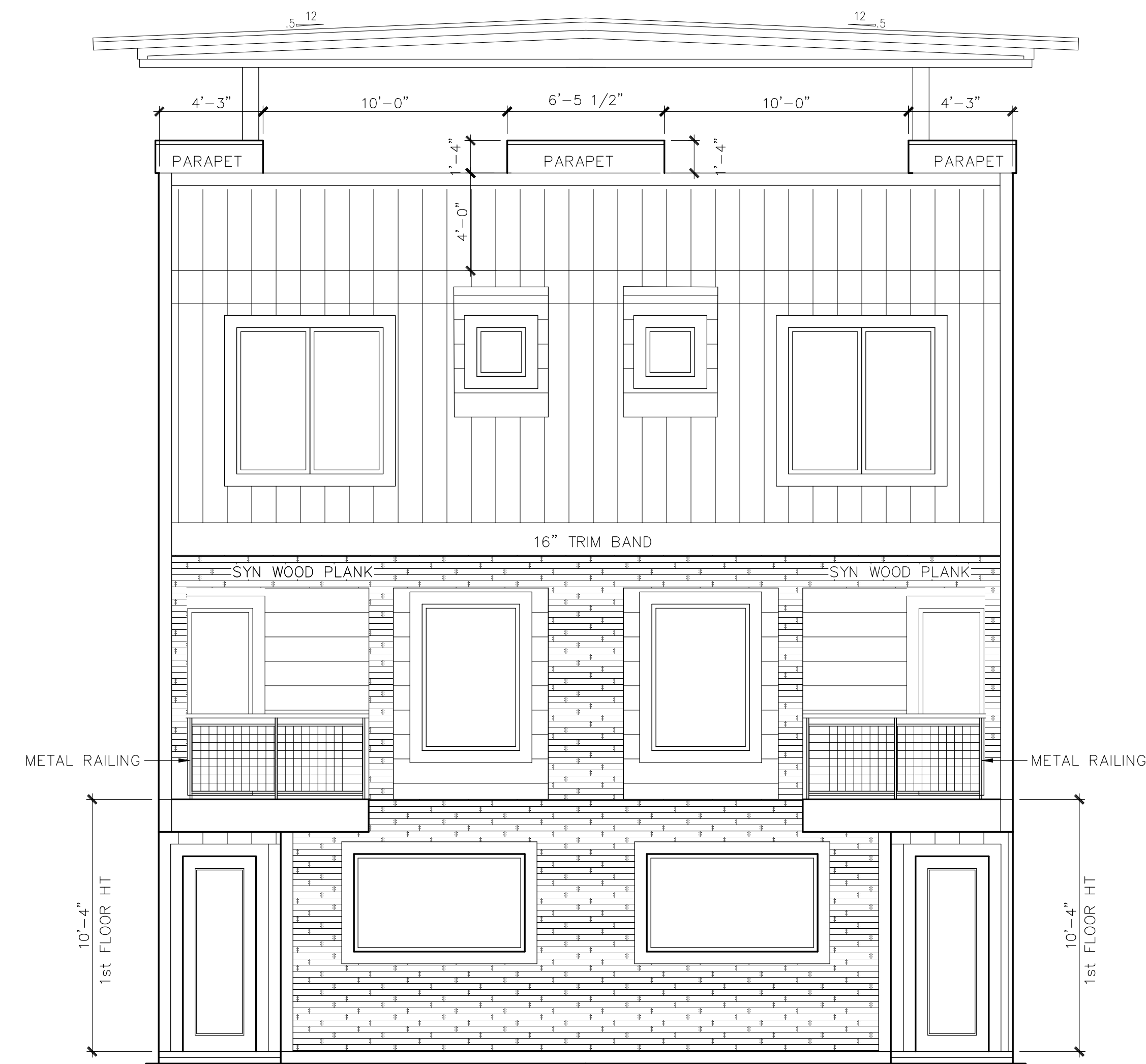
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**\*ATTIC DETAIL-ADJACENT TO TRUSSES**



\*ONLY APPLIES IF SOLID WALL IS ACCESSIBLE. IF NOT ACCESSIBLE, THE 1/2" TYPE C STRIPS ARE NOT REQUIRED.

GEORGIN-PACIFIC GYPSUM, LLC IS PROVIDING THIS DETAIL AS A SERVICE TO OUR CUSTOMERS. PLEASE OBTAIN APPROVAL FROM THE PROJECT'S ARCHITECT, ENGINEER OR OTHER DESIGN AUTHORITY AND REVIEW WITH LOCAL BUILDING CODE OFFICIALS BEFORE YOU IMPLEMENT THIS DETAIL.



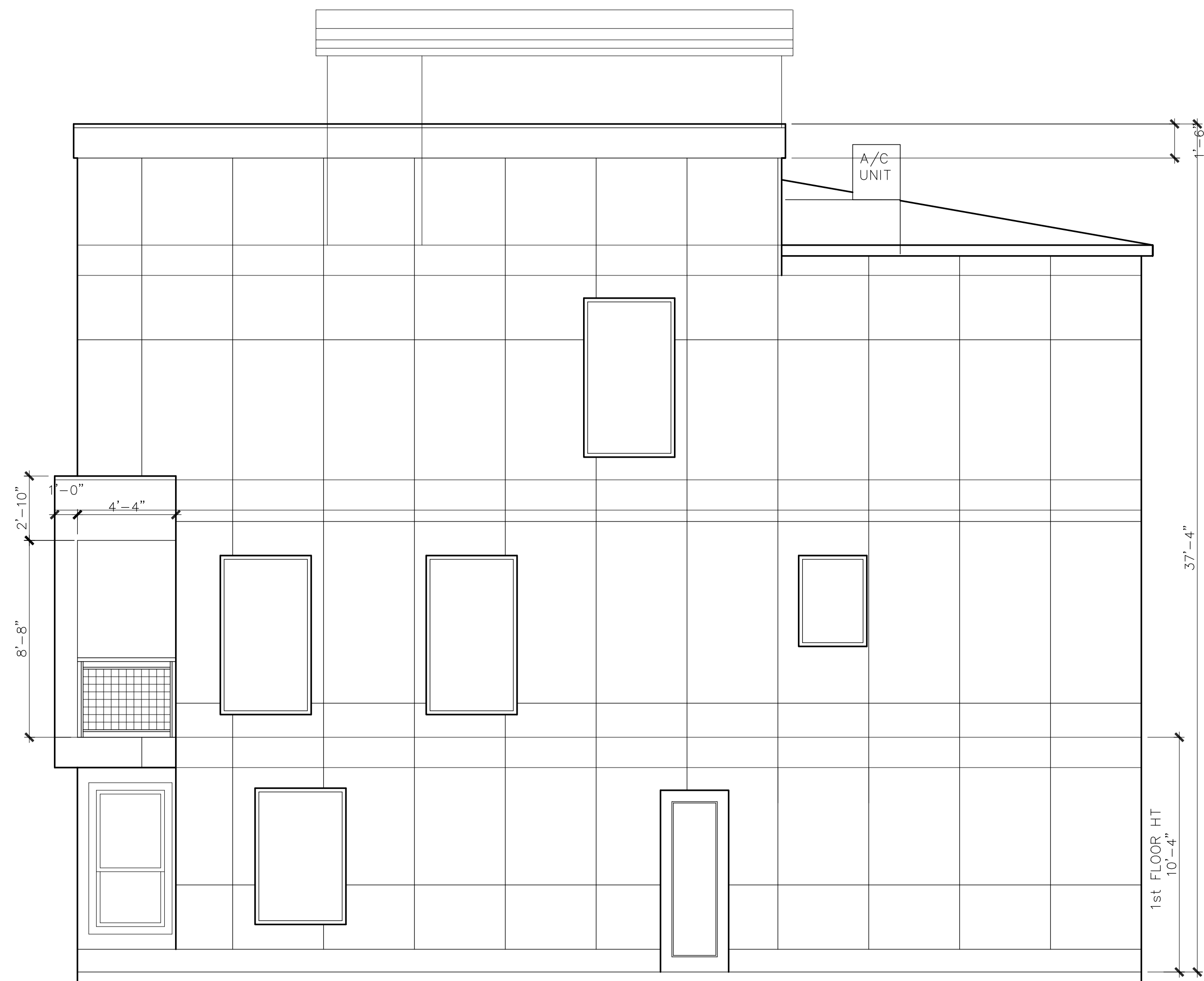
**FRONT ELEVATION**

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



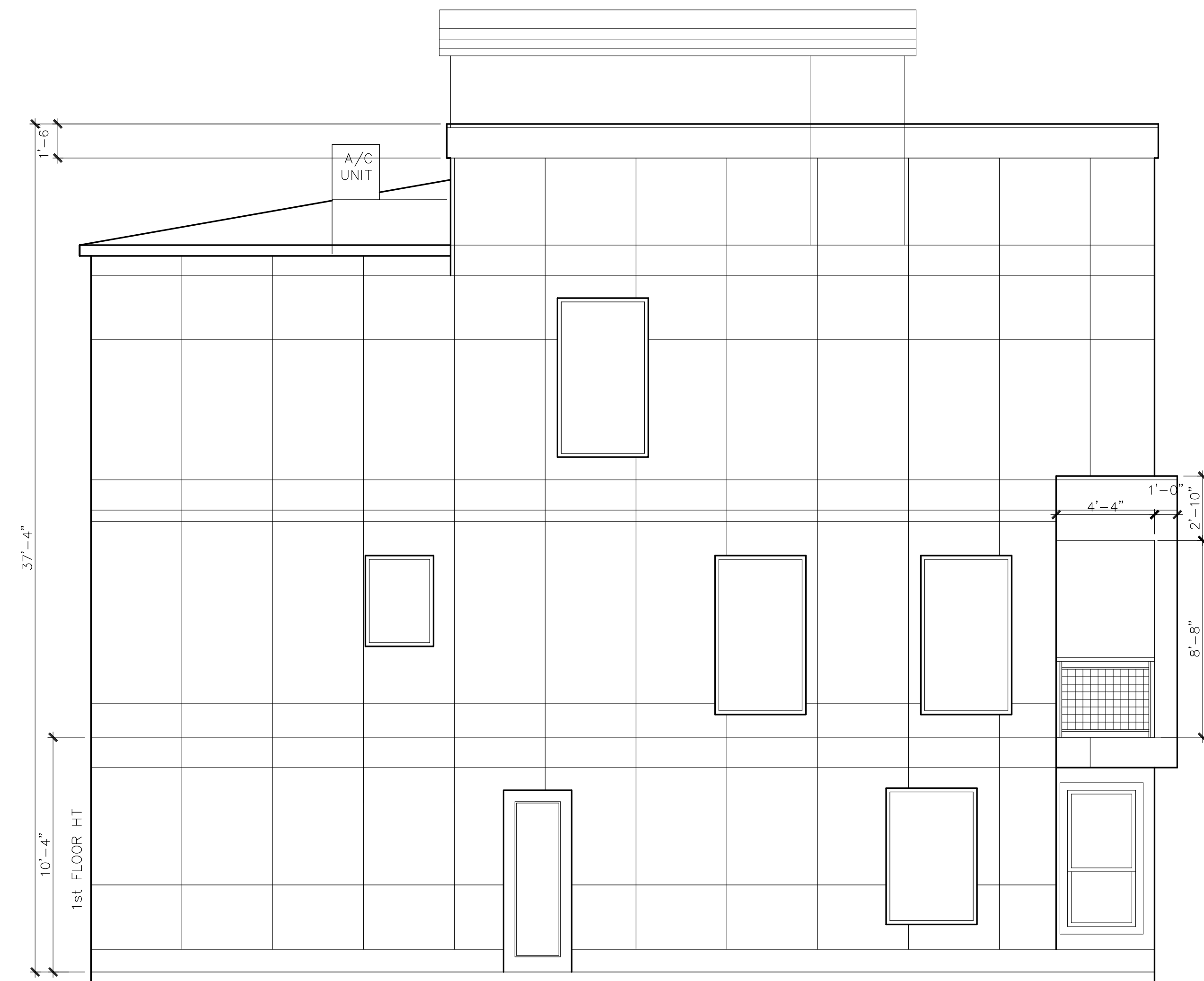
**REAR ELEVATION**

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



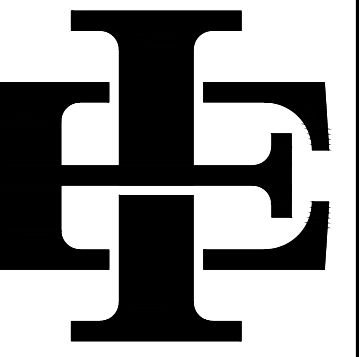
**RIGHT ELEVATION**

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



**LEFT ELEVATION**

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



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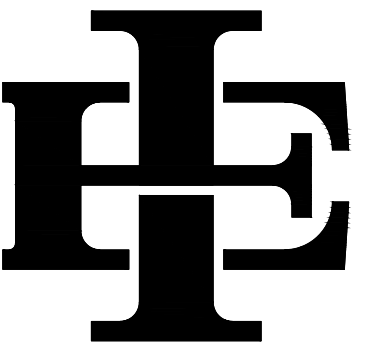
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SHEET NUMBER

A-11

### GREE DUCTFREE MINI-SPLITS OUTDOOR CONDENSING UNITS ROOF STAND CONFIGURATION AND ANCHOR SELECTION - WIND LOAD EXAMINATION

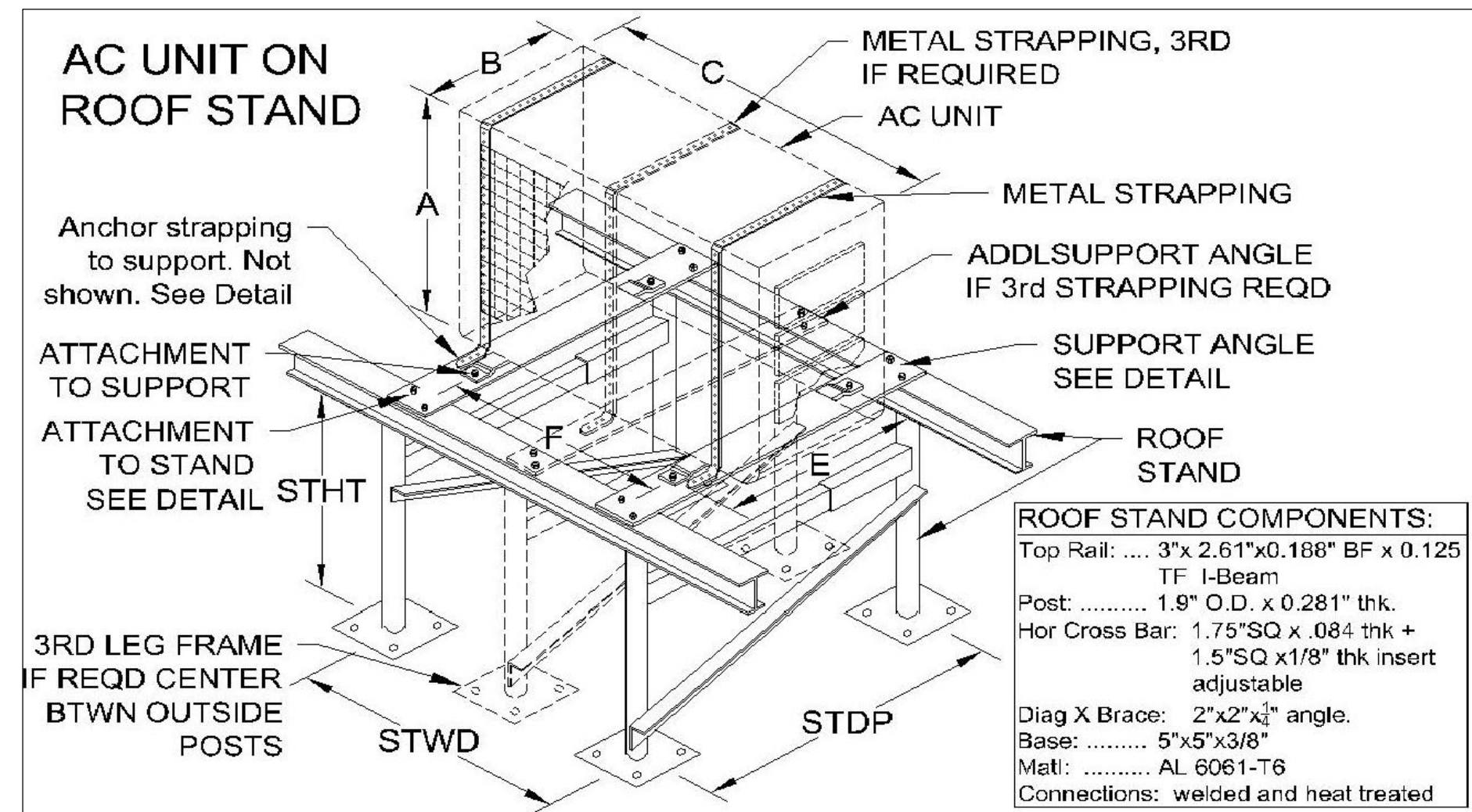
CODE: FMC and FBC 7th Ed. (2020) BLDG, ASCE 7-16  
MIAMI-DADE WIND SPEED = 195 MPH (Risk Cat. IV)

ENGINEERING CONFORMANCE ANALYSIS:  
THE TABLE SHOWS ROOF STAND AND ANCHOR TYPES FOR VARIOUS MODELS OF HVAC OUTDOOR EQUIPMENT UP TO 4.5 TONS THAT MEET THE FOLLOWING ANALYSIS: • OVERTURN • SLIDING • ANCHOR PULLOUT AND SHEAR STRENGTH • EQUIPMENT INTEGRITY.

TABLE A-2

LIVV GEN3 - Series		Weight (lbs)	Length C (in.)	Width B (in.)	Height A (in.)	Mount E (in.)	Mount F (in.)
Model No.							
LIVV09HP230V1AO		55	28.0	10.1	21.3	11.3	20.0
LIVV12HP230V1AO		63	28.0	10.1	21.3	11.3	20.0
LIVV18HP230V1AO		95	33.3	12.3	25.6	13.5	23.0
LIVV24HP230V1AO		97	33.3	12.3	25.6	13.5	23.0
LIVV30HP230V1AO		139	36.3	14.6	31.1	15.6	24.0
LIVV36HP230V1AO		140	36.3	14.6	31.1	15.6	24.0

Installation Requirements							Design Check: Nomnal / Reqd			
Roof Stand	Support Angle	Strapping					≥ 1.00 = OK			
Conc Anchor Type	Number of Leg Frames	Support Angle thickness (in.)	Unit foot to Support Anchor	# of Straps if Required	Gauge thickness	Conc Anc Pullout	Conc Anc Shear	Unit Foot Anchor Pullout		
A-1	2	1/4	A-4	Yes, 2	22ga	1.38	2.12	3.95		
A-1	2	1/4	A-4	Yes, 2	22ga	1.39	2.12	3.97		
A-2	2	1/4	A-4	Yes, 2	22ga	1.28	2.72	2.76		
A-2	2	1/4	A-4	Yes, 2	22ga	1.28	2.72	2.76		
A-3	2	1/4	A-4	Yes, 2	20ga	1.37	3.70	2.01		
A-3	2	1/4	A-4	Yes, 2	20ga	1.37	3.70	2.01		



Bri-Ko Engineering, Inc., Structural Analysis  
Spreadsheet designed by: B. Schwartz, PE  
Date data input: 25-Mar-21

Calc Sht: EC-1 Mechanical Equipment on Roof Stand Calc  
Description: Structural Analysis of roof stand mounted mechanical equipment to resist wind forces.  
Code: FBC 7th Ed. (2020) and ASCE 7-16.

**Design Methodology and Load Combinations:**  
Design Method: LRFD  $\Phi = 0.90$   
Load Combos: FBC Eqn. 16-6 0.9 D +1.0 W  
Wind Forces: based on ASCE 7-16 Eqn. 29.4-1, and FBC 1620.6

Ultimate Design Wind Speed, Vult (3-sec gust):	195 mph	Miami Dade
Nominal Design Wind Speed, Vasd:	151 mph	
Risk Category:	IV	Dir., Topo., Gust Effect: 0.90 1.00 N/A
Height, h:	60 ft	Exp. Cat.: Vel. Pres. Exp Coef., Kz: 1.137
Enclosure Cat.	N/A	
Velocity Pressure, $q_h = 0.00256 K_z K_{zt} K_d V^2$ (lb/ft <sup>2</sup> )	qh = 89.6 psf	
F = qh(GCr)Af (GCr) v, l = (1.5 ver., 1.9 lat.)	Fver, Flat: 149.4 psf, 189.2 psf	

**Limit States:** for illustration purposes only:  
Select UnitType: LIVV Select Model #: LIVV36HP230V1AO  
Number of Leg Frames is 2

**Loads, (lbs):** P1= 1482 P2= 548 P3= 596 PD= 140

**Resistance to sliding stand post:**  
Reqd. Shear/leg = 399 lbs Nominal Shear per leg: 850 lbs CHECKS OK

**Resistance to sliding anchors to support:**  
Reqd Sher/anc: 399 lbs Nom Shear per bolt: 900 lbs CHECKS OK

**Resistance to Moment and Uplift:** Use Load Combo: 0.90 D +1.00 W  
Overturn M at stand base: 83.8 k-in Base Pullup: 748 lbs  
Overturn M at unit foot: 26.3 k-in Foot Pullup: 878 lbs  
Nom Pullup Str, 4xConcAnc, Bolt: 5480 lbs 1700 lbs CHECKS OK

**Verification of Support Angle:**  
Forces, lbs: R1 = 457 R2 = 878 R3 = 604 R4 = 183  
Required Mom.: 4.7 k-in Reqd Section Modulus: 0.247 in<sup>3</sup>  
Use: 3"x3"x1/4" with Sx = 0.547 in<sup>3</sup>

**Unit Integrity:** If Required. Only if manufacturer does not state design wind pressure.  
Required tension on strap = 897 lbs  
Strap width, gauge = 1.375 in. 20ga min gauge thickness  
Steel Strength = 45 ksi min. Strength of strap = 981 lbs CHECKS OK

Roof Stand min, maxs:	Leg Max Forces (lbs)		
limits	STWD	STDP	STHT
min:	24 in.	28 in.	18 in.
max:	36 in.	36 in.	33 in.
			Tension: 5860
			Comp.: 6000
			Shear: 1700



TABLE A-1 ANCHOR TYPE AND ALLOWABLE STRENGTHS				
SYM	ANCHOR DESCRIPTION & MANUFACTURER	EMBED	STRENGTH AT MIN SPACING	
			PULL OUT (LBS)	SHEAR (LBS)
A-1	1/4" TAPCON (Buildex)	1-3/4"	505	415
A-2	5/16" Hvy Duty Tapcon (Buildex)	1-3/4"	695	760
A-3	3/8" WEDGE BOLT (Powers)	2-1/2"	1025	1370
A-4	1/4" A307 Bolt	N/A	1700	900
A-5	5/16" A307 Bolt	N/A	2500	1500

- Anchor Type is the minimum, higher strength types permitted.

#### GENERAL NOTES:

- THIS ENGINEERING REPORT DOCUMENTS THE ANALYSIS OF AC EQUIPMENT MOUNTED ON A ROOF STAND AND THE ASSOCIATED ANCHORING SYSTEMS TO RESIST DEAD WEIGHT AND WIND LOAD FORCES.
- THE LOAD PATH VERIFIED IS FROM THE EQUIPMENT AS A SINGLE UNIT, ENCLOSURE FASTENERS, UNIT LEG ANCHORS, ROOF STAND CROSS SUPPORT TO ROOF STAND.
- THE AC UNIT IS MOUNTED ON A METAL ROOF STAND WHICH IS SECURED TO THE ROOF.
- ANCHORS USED TO FASTEN THE UNIT TO THE ROOF STAND ARE A307 OR HIGHER STRENGTH STEEL BOLTS.
- THE ROOF STAND IS SUPPLIED BY THE MANUFACTURER INDICATED IN THIS DOCUMENT AND IS INSTALLED IN CONFORMANCE WITH THE ENGINEERING DOCUMENT REFERENCED.
- UNIT INTEGRITY, IF NOT DESIGNATED BY THE MANUFACTURER FOR THE STATED WIND PRESSURES, IS ADDRESSED BY STRAPPING ATTACHED TO THE UNIT AND ANCHORED TO THE SUPPORT ANGLES. THIS RESISTS SHELL AND FRAME SEPARATION.

#### CALCULATIONS:

- THE WIND LOAD ACTING NORMAL TO THE LARGE VERTICAL SIDE OF THE AC UNIT IS USED FOR WORST CASE SHEAR.
- THE WIND LOAD ACTING ON THE TOP OF THE UNIT UPWARD AND THE HORIZONTAL WIND LOAD IS USED TO CALCULATE UPLIFT AND MOMENT.
- THESE FORCES MUST BE RESISTED BY THE SHEAR AND TENSILE STRENGTH OF THE ANCHORS BOTH HOLDING THE UNIT TO THE SUPPORT BAR AND THE SUPPORT BAR TO THE ROOF STAND.
- THE MOMENT AND SHEAR MUST BE TRANSFERRED FROM THE AC UNIT TO THE ROOF STAND BY A SUPPORT BAR AS THE AC UNIT DEPTH IS LESS THAN THE ROOF STAND DEPTH.
- MAX MOMENT AND SHEAR TO THE SUPPORT BAR DETERMINE SELECTION OF THE SUPPORT BAR.

#### ROOF STAND NOTES:

- ROOF STAND IS BASED ON A DESIGN BY R.M. ENTERPRISES, PER ENGINEERING DRWG DATED 03-09-2012 SIGNED AND SEALED BY P.E.#56902, BUT VERIFIED BY BRI-KO ENGINEERING
- STHT = STAND HEIGHT WITH MIN 18", MAX 33".
- STWD = STAND WIDTH = 24" MIN, 36" MAX.
- STDP = STAND DEPTH = 28" MIN, 36" MAX.
- SUPPORT ANGLE AND FASTENERS OF SUPPORT TO STAND AND SUPPORT TO AC UNIT ARE DEFINED IN DETAIL BELOW.
- AC UNIT MUST BE CENTERED ON SUPPORT.W. (ROOF STAND LIMITS.) MAX COMPRESSION PER FOOT = 6000 LBS. MAX UPLIFT PER FOOT = 5860 LBS. MAX SHEAR PER TWO FEET = 1700 LBS.

Sheet: <b>ENG-1</b>	BRI-KO ENGINEERING INC	Cert. Of Auth.: #27622	tel: 954.648.6218
Doc: Page 1 of 1	This item has been digitally signed and sealed by Brian I Schwartz on the date adjacent to the seal. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.		
Issue Date: 25-Mar-21			
Dwn By: B.S.			
Dwg Size: 11x 17			