

# BUILDING EXPANSION AND SECOND FLOOR ADDITION

## 483 BROADWAY , SOMERVILLE MA 02145



EXISTING BUILDING

PROPOSED BUILDING FACADE

### LOCUS MAP



### SITE AERIAL



#### GENERAL NOTES:

1. THE CONTRACTOR OR OWNER IS RESPONSIBLE FOR OBTAINING AND PAYING FOR ALL PERMITS REQUIRED FOR THIS PROJECT.
2. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE COMMONWEALTH OF CURRENT MASSACHUSETTS STATE BUILDING CODE (IBC 2015, 780 CMR 9TH EDITION) AND OTHER APPLICABLE CODES.
3. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR MEANS, METHODS, TECHNIQUES, SEQUENCING, SCHEDULING AND SAFETY FOR THIS PROJECT.
4. DIMENSIONS ARE NOT GUARANTEE, THE CONTRACTOR SHOULD VERIFY ALL DRAWING DIMENSIONS BEFORE PERFORM WORK.
5. THE CONTRACTOR SHALL WARRANTEE HIS WORK FOR A PERIOD OF ONE YEAR FROM THE DATE OF FINAL COMPLETION.
6. THE CONTRACTOR SHALL REPORT ANY DISCREPANCIES BETWEEN DRAWINGS SPECIFICATIONS OR FIELD CONDITIONS TO T DESIGN IMMEDIATELY.
7. CONCRETE AND REBAR STRENGTH SHALL HAVE MINIMUM OF 3,000 PSI AND 60,000 PSI RESPECTIVELY
8. NEW WINDOW MUST HAS DOUBLE PANE AND U FACTOR = 0.27



71B CLINTON ST Malden, MA 02148 Tel: 617 318-6056

PROJECT NAME  
483 BROADWAY - SOMERVILLE, MA 02145

CLIENT  
JOHN WOOD

PROJECT TEAM

Architect	Engineer
Nathalia Quirino	Nazieh R. Hammouri
857 888-1216	(857) 312-9212

No.	Description	Date
00	Issued for permit	12/10/2020
01	Issued for permit	04/19/2021
02	Issued for permit	10/05/2021



DRAWING TITLE  
COVER SHEET

DRAWING INFORMATION

April 18, 2021

DATE OF ISSUE

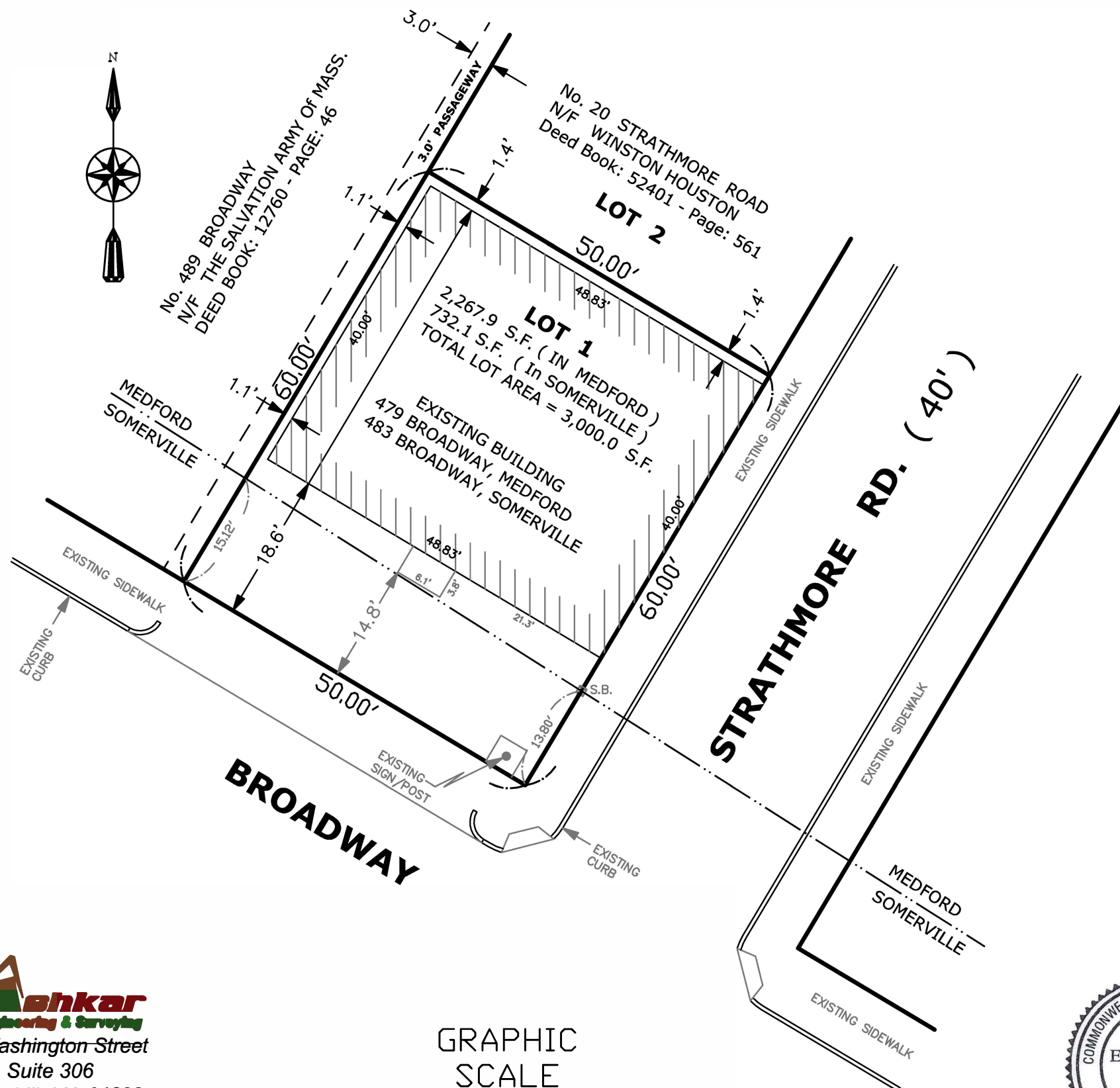
Issued for permit.

DESCRIPTION

S/ SCALE	Nathalia Quirino
SCALE	DRAWN BY
479J	479J
PROJECT #	FILE NAME

DRAWING NUMBER  
A100





1. Zoning Districts  
SOMERVILLE: NB  
MEDFORD: APT 2
2. The purpose of this plan is to show the results of a field retracement survey.
3. REFERENCES USED:
  - Assessor's Parcel ID # 40-A-3 ( Somerville )
  - Assessor's Parcel ID # Z-10 / 21 ( Medford )
  - Deed Book: 57106 - Pages: 422
  - Plan Book: 244 - Plan: 23 ( Lots # 1 )
  - Plan Book: 136 - Plan: 13
  - Plan No. 139 of 1931
  - Plan No. 243 of 1940
  - Plan No. 1334 of 1946
  - Plan @ the end of Deed Book: 5131
  - ( Recorded at the Middlesex County S. District Registry of Deeds )
4. THIS PLAN IS BASED ON AN " ON GROUND" SURVEY.

#### EXISTING

LOT AREA ( IN THE CITY OF MEDFORD ) = 2,277.0 S.F.  
LOT AREA ( IN THE CITY OF SOMERVILLE ) = 723.0 S.F.  
TOTAL LOT AREA = 3,000.0 S.F.

EXISTING BUILDING FOOTPRINTS: 1,953.2 S.F.  
EXISTING BUILDING COVERAGE: 65.10 %  
EXISTING OPEN SPACE : 34.89 %

## PLOT PLAN

( Showing an existing building )

479 BROADWAY, MEDFORD, MA.  
483 BROADWAY, SOMERVILLE, MA

Prepared for: John Wood  
Surveyed by: Michel G. El-Ashkar, PLS

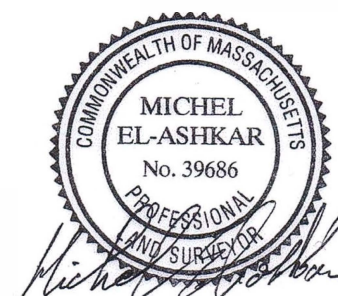
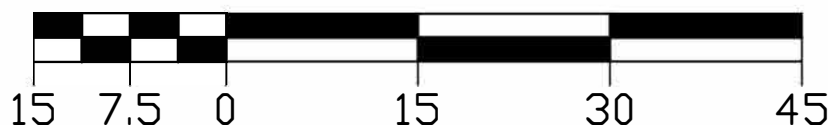
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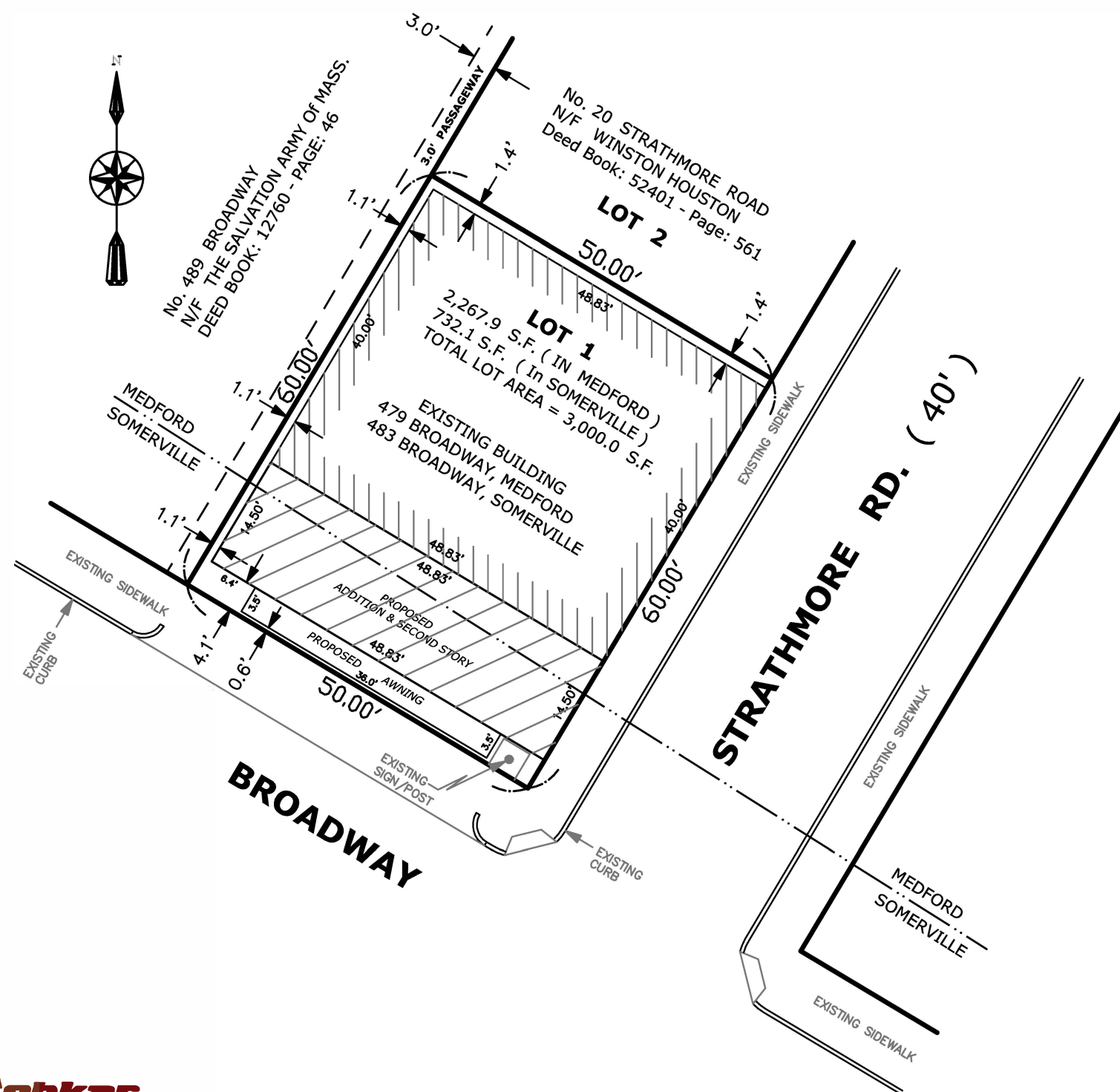
Date: January 4, 2021



70 Washington Street  
Suite 306  
Haverhill, MA 01832  
ph: (978) 914-6527  
fax: (978) 914-6528  
www.ashkarsurveying.com

GRAPHIC  
SCALE





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SOMERVILLE: NB  
MEDFORD: APT 2
- 2. The purpose of this plan is to show the results of a field retracement survey.**
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EXISTING BUILDING COVERAGE: 65.10 %  
EXISTING OPEN SPACE : 34.89 %

#### PROPOSED

PROPOSED ADDITION FOOTPRINTS IN SOMERVILLE: 505.11 S.F.  
PROPOSED ADDITION FOOTPRINTS IN MEDFORD: 202.89 S.F.  
TOTAL PROPOSED ADDITION FOOTPRINTS: 708.00 S.F.

TOTAL PROPOSED BUILDING COVERAGE: 88.70 %  
TOTAL PROPOSED OPEN SPACE: 11.29 %

## SITE PLAN

( Showing an addition to an existing building )

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483 BROADWAY, SOMERVILLE, MA

Prepared for: John Wood  
Surveyed by: Michel G. El-Ashkar, PLS

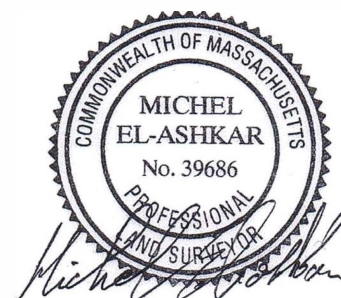
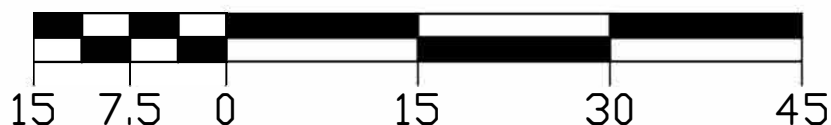
Scale: 1"= 15 ft.

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GRAPHIC  
SCALE

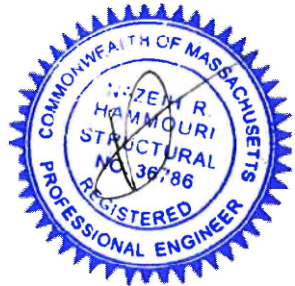


PROJECT NAME  
483 BROADWAY - SOMERVILLE, MA 02145

CLIENT  
JOHN WOOD

PROJECT TEAM  
Architect  
Nathália Quirino  
857 888-1216  
Engineer  
Nazieh R. Hammouri  
(857) 312-9212

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DRAWING TITLE

EXISTING FLOOR  
PLAN

DRAWING INFORMATION

April 18, 2021

DATE OF ISSUE

Issued for permit

DESCRIPTION

$\frac{1}{8}" = 1'-0"$  Nathalia Quirino

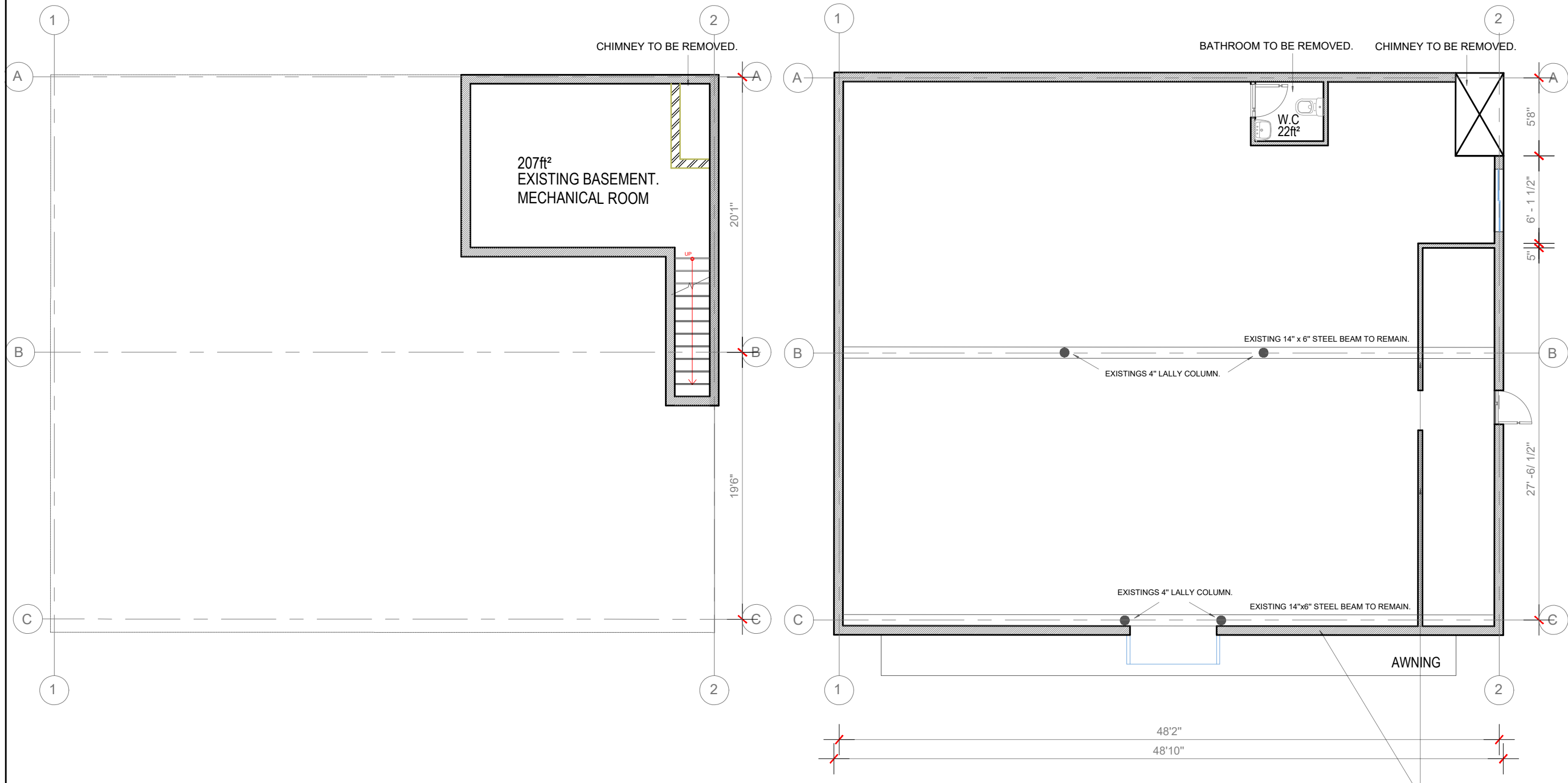
SCALE DRAWN BY

479J 479J

PROJECT # FILE NAME

DRAWING NUMBER

A101



1 Basement  
 $\frac{1}{8}" = 1'-0"$

2 Ground Level  
 $\frac{1}{8}" = 1'-0"$



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DRAWING TITLE

EGRESS PLAN

DRAWING INFORMATION

April 18, 2021

DATE OF ISSUE

Issued for permit

DESCRIPTION

NO SCALE Nathalia Quirino

SCALE DRAWN BY

479J 479J

PROJECT # FILE NAME

DRAWING NUMBER

A102

## EXITING LEGEND

EXIT ACCESS  
FIRE EXTINGUISHER

## SIGNAGE

TACTILE EXIT SIGNS SHALL BE PROVIDED AT LOCATIONS INCLUDING BUT NOT LIMITED TO:  
- GRADE LEVEL EXIT DOORS "EXIT"  
- EXIT DOORS LEADING TO GRADE LEVEL EXIT DOORS (STAIRWELL DOORS) "EXIT STAIR DOWN"  
- EXIT DOORS LEADING TO GRADE LEVEL EXTERIOR EXIT "EXIT"  
COMPLETE ADA SIGNAGE SHALL BE PROVIDED AS NON-GLARE, CONTRASTING BACKGROUND, 1/32" RAISED CHARACTERS, TEXT HEIGHT 5/8" TO 2" AND PICTOGRAMS SHALL BE 6" HIGH MIN. MOUNTING HEIGHT MIN. 4'-0" ABOVE FINISHED FLOOR TO LOWEST BRAILLE AND MAX. 5'-0" TO BOTTOM OF HIGHEST LINE OF RAISED TEXT. MOUNT SIGNS TO LATCH SIDE OF DOOR AT DOUBLE DOORS AT THE NEAREST WALL PREFERABLE AT THE RIGHT OF THE OPENING.

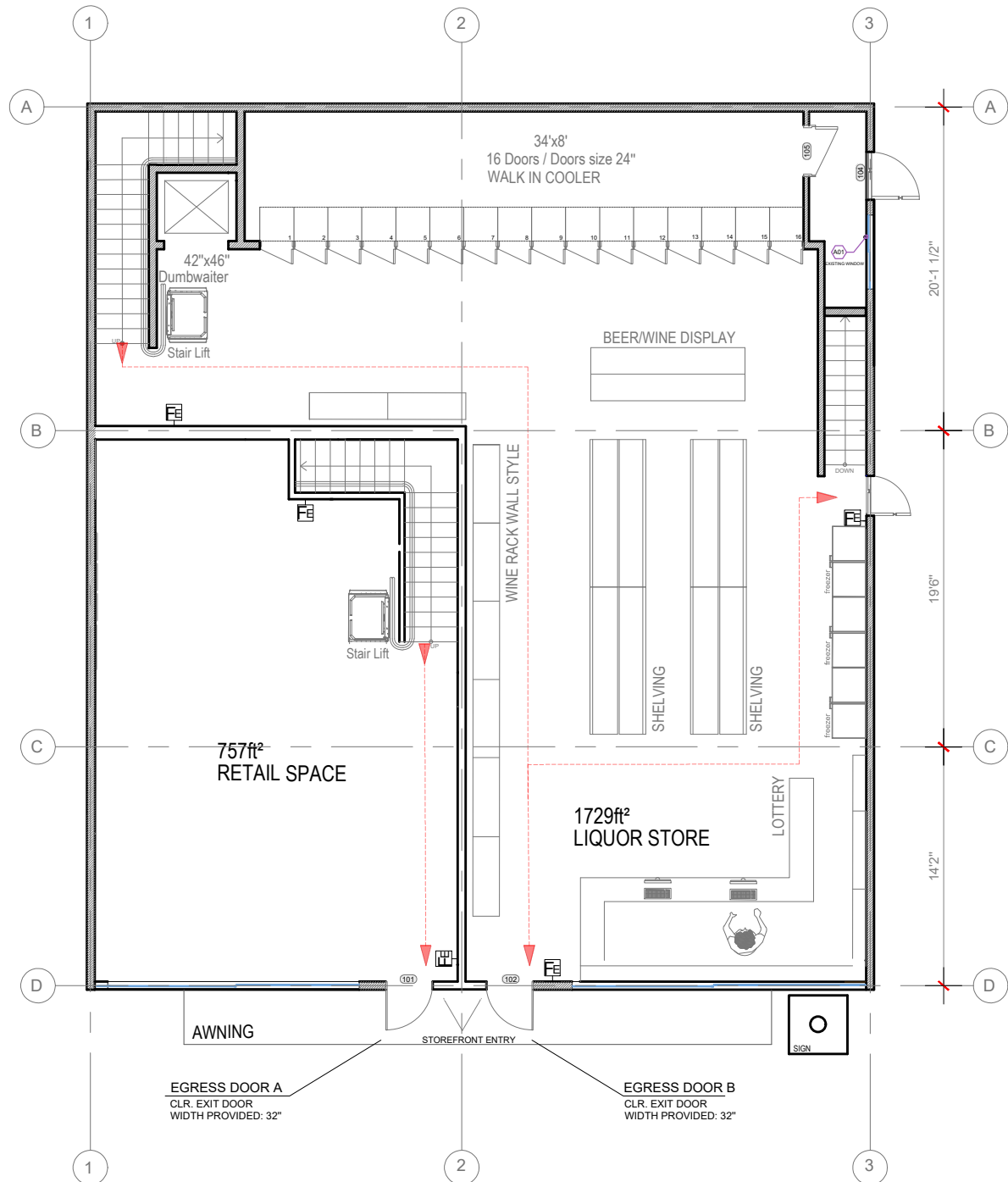
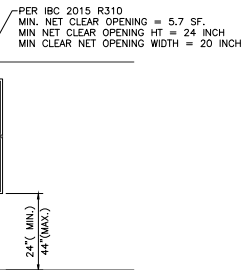
EXIT ROUTE



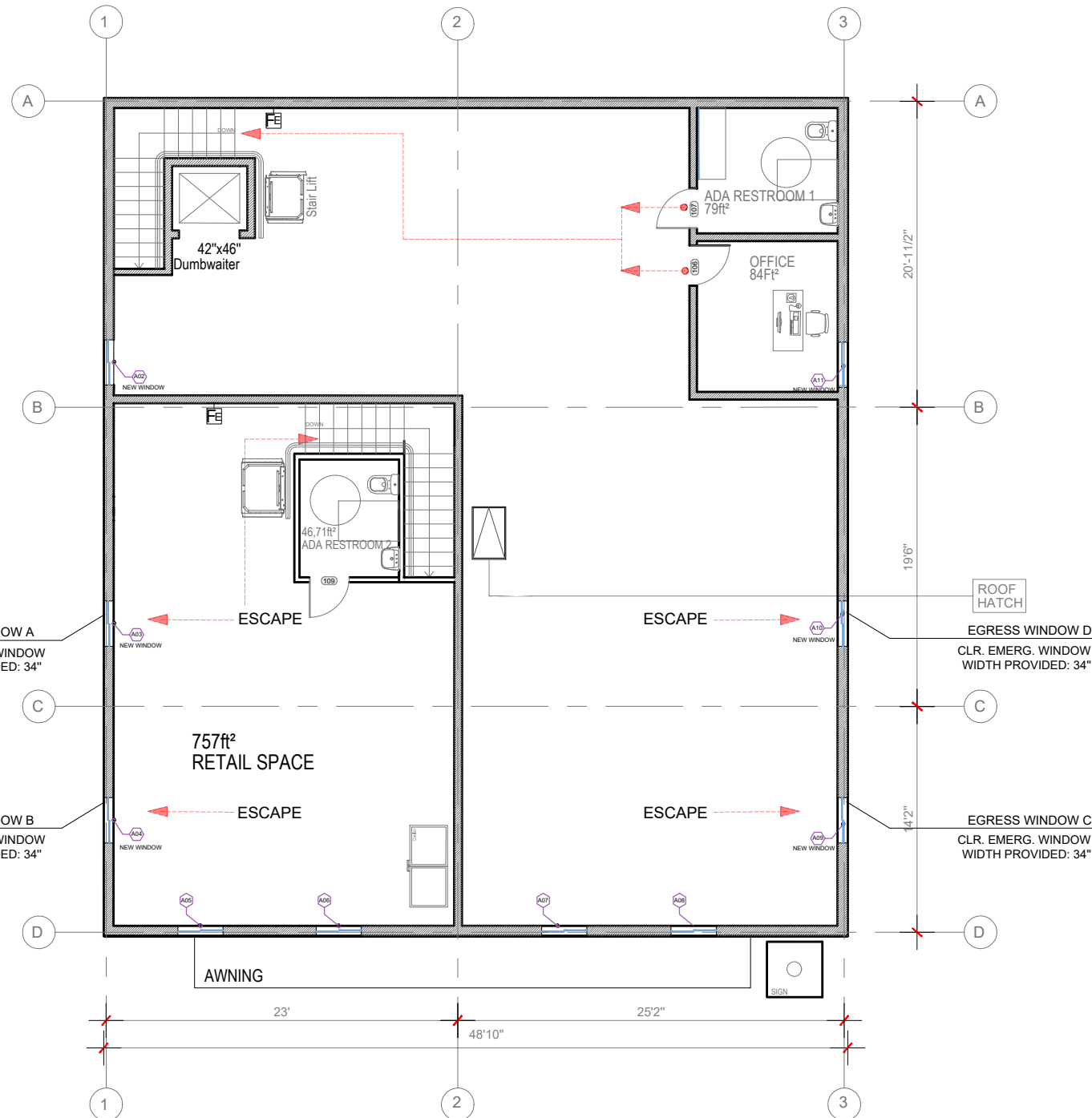
EXIT STAIR DOWN



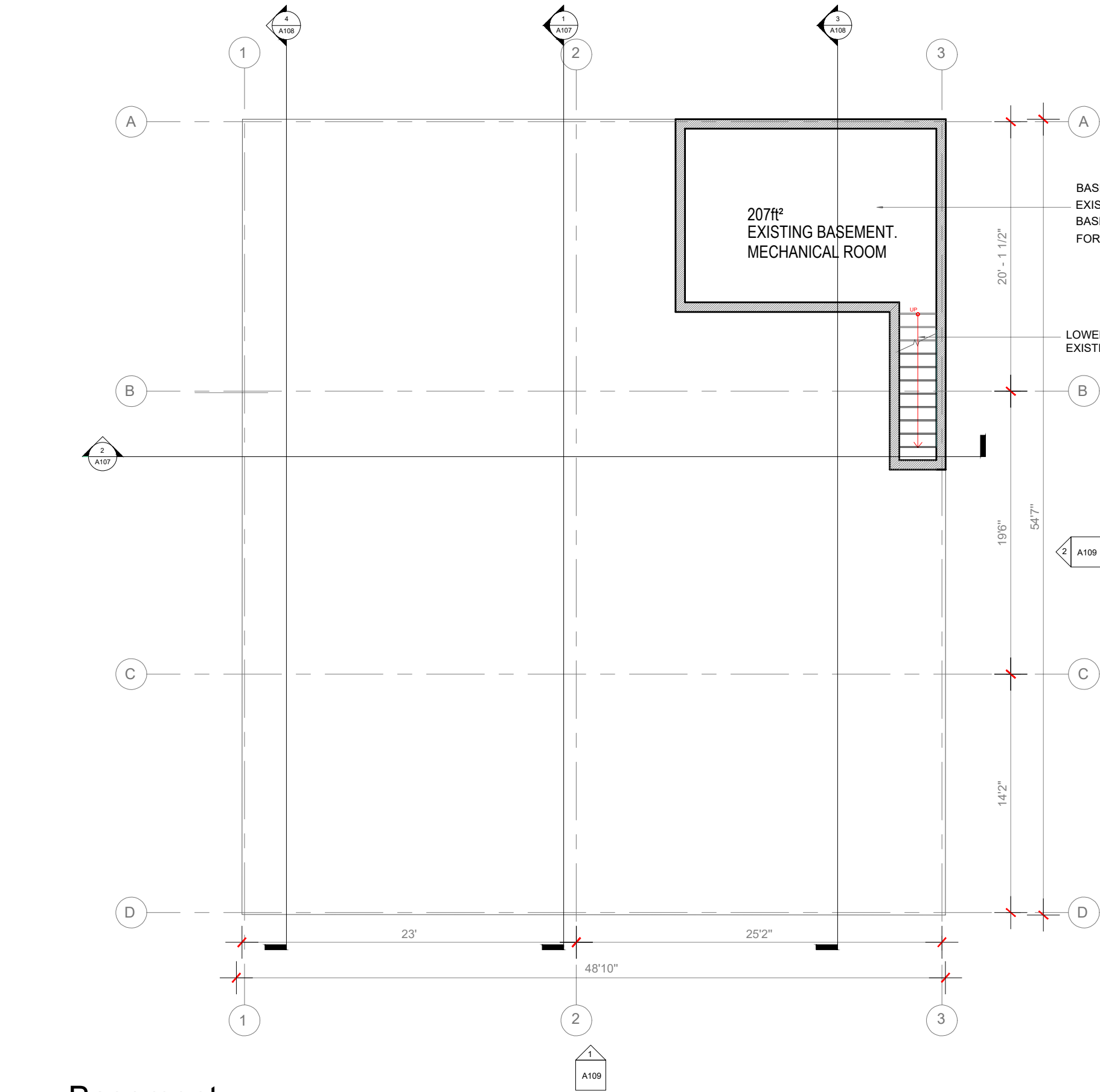
FIRE ESCAPE WINDOW DETAIL  
PER IBC 2015



1 Ground floor



2 Second floor



1 **Basement**  
1/8" = 1'0"

RISE  
ARCHITECTURE

71B CLINTON ST Malden, MA 02148 Tel: 617 318-6056

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Architect: Nathália Quirino (857) 888-1216  
Engineer: Nazieh R. Hammouri (857) 312-9212

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DRAWING TITLE  
**BASEMENT**

DRAWING INFORMATION  

April 18, 2021

DATE OF ISSUE  
Issued for permit

DESCRIPTION  
1/8" = 1'-0" Nathalia Quirino

SCALE  
479J DRAWN BY  
479J

PROJECT # FILE NAME

DRAWING NUMBER  
**A103**



PROJECT NAME  
483 BROADWAY - SOMERVILLE, MA 02145

CLIENT  
JOHN WOOD

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Architect  
Nathalia Quirino  
857 888-1216  
Engineer  
Nazieh R. Hammouri  
(857) 312-9212

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DRAWING TITLE

PROPOSED  
GROUND FLOOR

DRAWING INFORMATION

April 18, 2021

DATE OF ISSUE

Issued for permit

DESCRIPTION

1/8" = 1'-0" Nathalia Quirino

SCALE DRAWN BY

479J 479J

PROJECT # FILE NAME

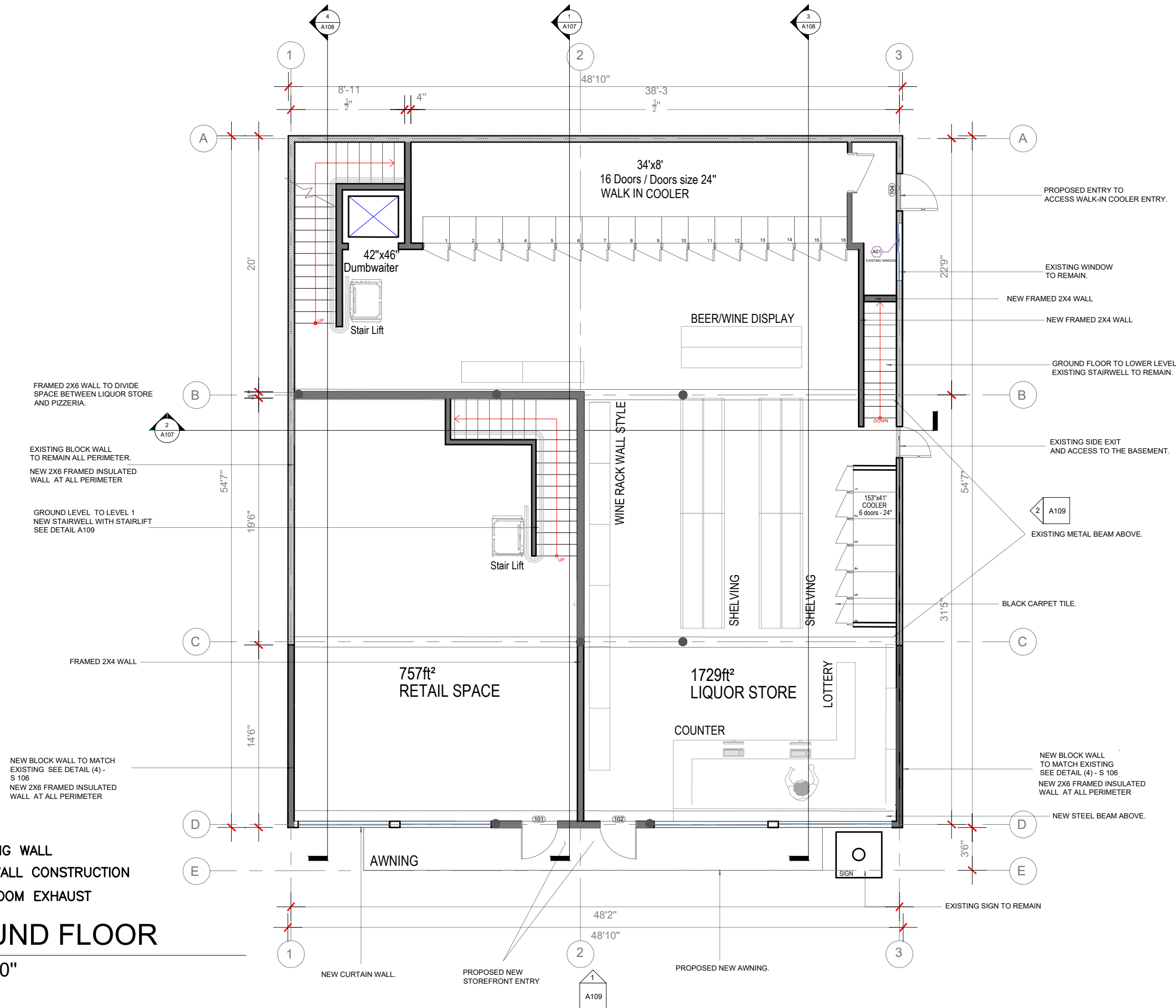
DRAWING NUMBER

A104

LEGEND

- EXISTING WALL
- NEW WALL CONSTRUCTION
- BATHROOM EXHAUST

1 GROUND FLOOR  
1/8" = 1'-0"

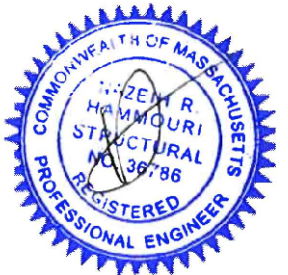


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DRAWING TITLE

PROPOSED  
LEVEL 1

DRAWING INFORMATION

April 18, 2021

DATE OF ISSUE

Issued for permit

DESCRIPTION

1/8" = 1'-0" Nathalia Quirino

SCALE DRAWN BY

479J 479J

PROJECT # FILE NAME

DRAWING NUMBER

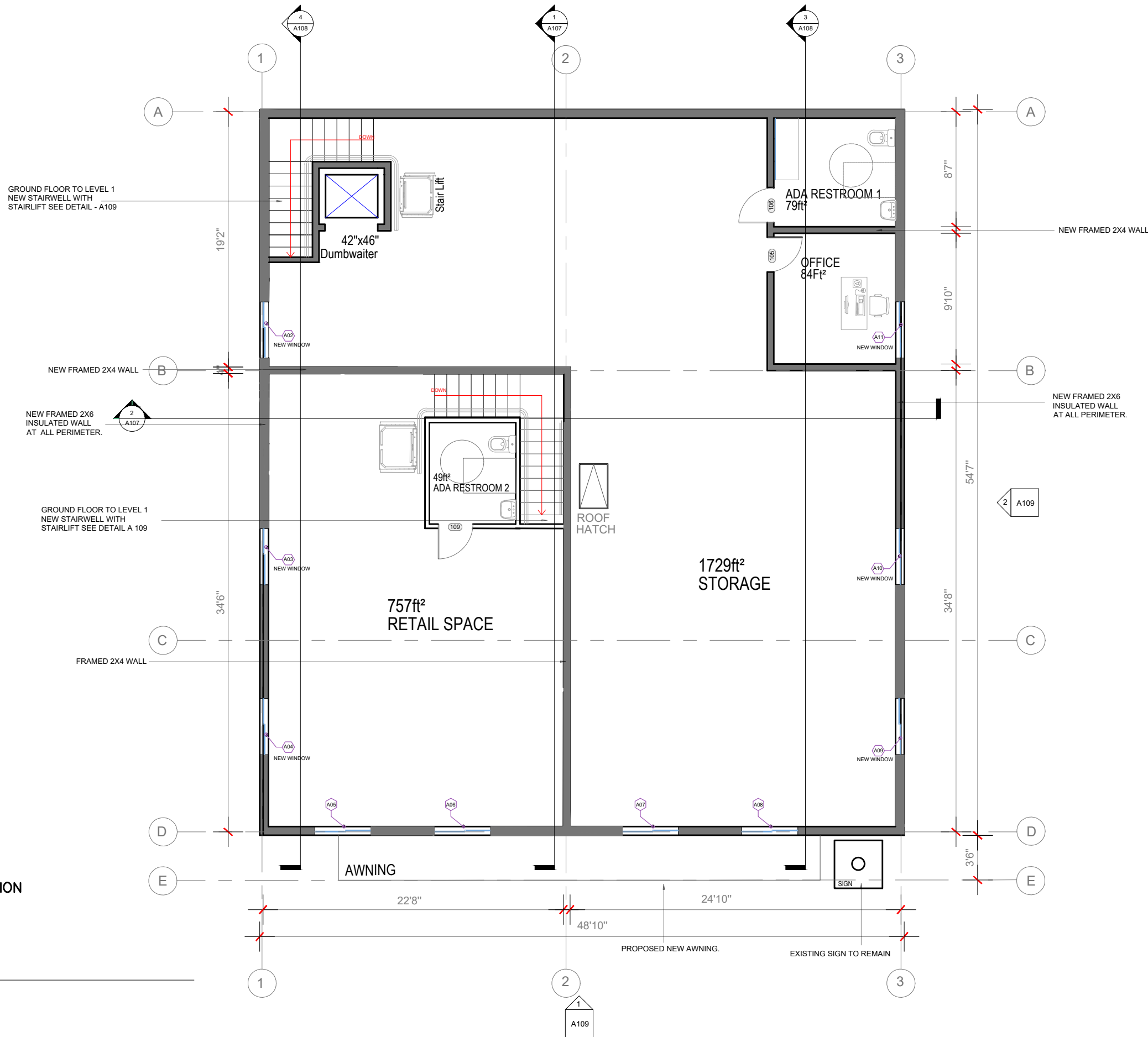
A105

LEGEND

- EXISTING WALL
- NEW WALL CONSTRUCTION
- BATHROOM EXHAUST

Second Floor

1  
1/8" = 1'-0"





PROJECT NAME  
483 BROADWAY - SOMERVILLE, MA 02145

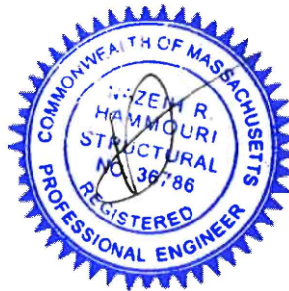
CLIENT  
JOHN WOOD

PROJECT TEAM

Architect  
Nathália Quirino  
857 888-1216

Engineer  
Nazieh R. Hammouri  
(857) 312-9212

No.	Description	Date
00	Issued for permit	12/10/2020
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DRAWING TITLE

ROOF PLAN

DRAWING INFORMATION

April 18, 2021

DATE OF ISSUE

Issued for permit

DESCRIPTION

$\frac{1}{8}" = 1'-0"$  Nathalia Quirino

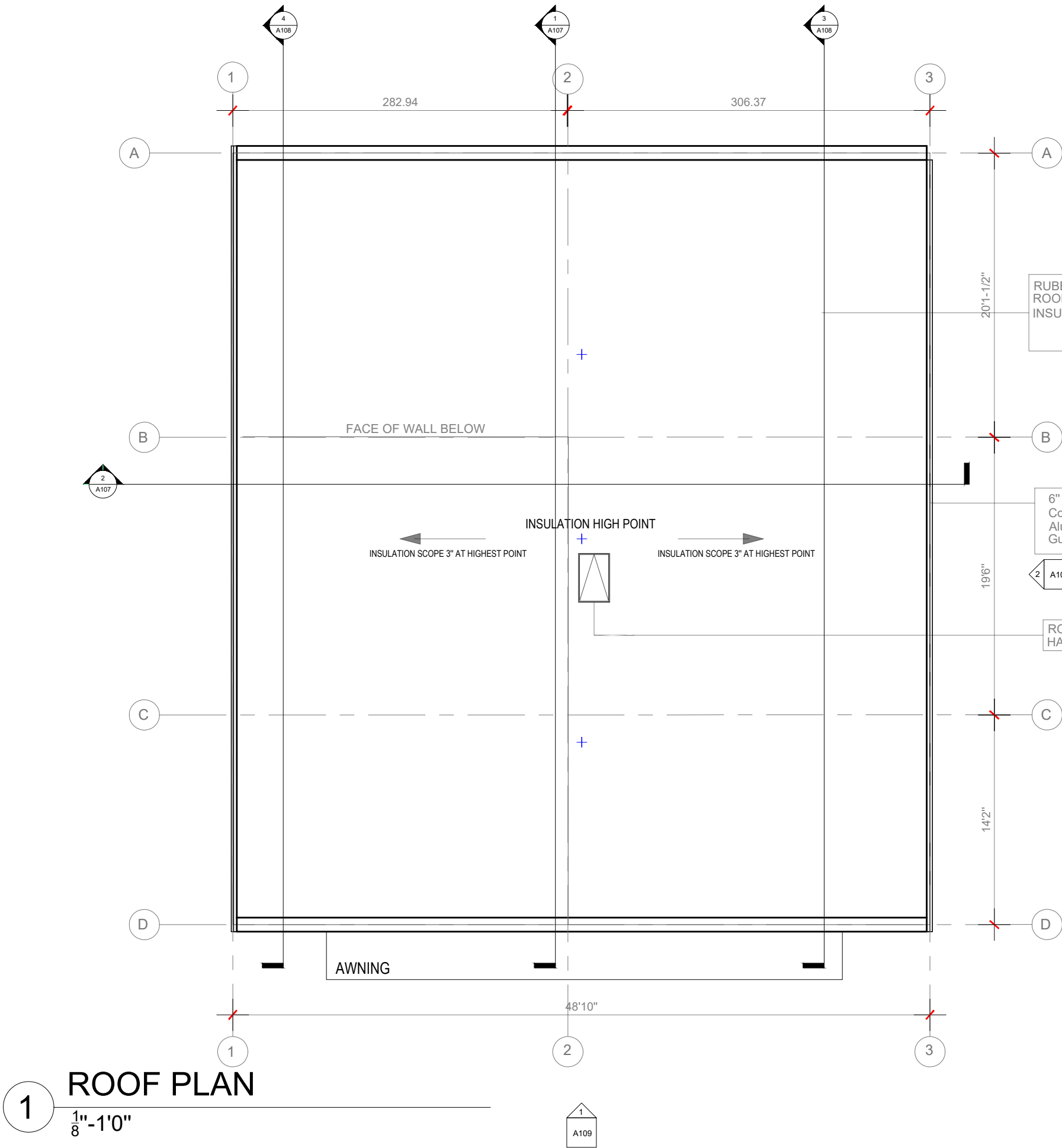
SCALE DRAWN BY

479J 479J

PROJECT # FILE NAME

DRAWING NUMBER

A106



## ROOF NOTES

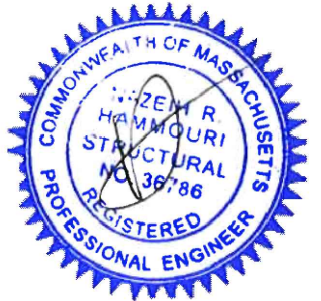
- RUBBER MEMBRANE SYSTEM SEE TYPICAL ROOF ASSEMBLY DETAIL ON DRAWING (1) S106
- PROVIDE PERMANENT HOT DIPPED GALVANIZED ANCHO POINTS COMPLYING WITH ANSI ASSE Z 359.1. ANCHOR POINTS SHALL BE SPACED 10' ON CENTER MAXIMUM AND NOT LESS THAN 10' FROM ROOF EDGE MINIMUM.
- PROVIDE ROOF HATCH RAIL SYSTEM COMPLYING WITH OSHA 29 CFR 1910.23 FROM SAME MANUFACTURE AS ROOF HATCH. RAIL SYSTEM SHALL BE PERMANENTLY MOUNTED TO ROOF HATCH

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DRAWING TITLE  
SECTION 1 & 2

DRAWING INFORMATION

April 18, 2021

DATE OF ISSUE

Issued for permit

DESCRIPTION

1/10" = 1'-0" Nathalia Quirino

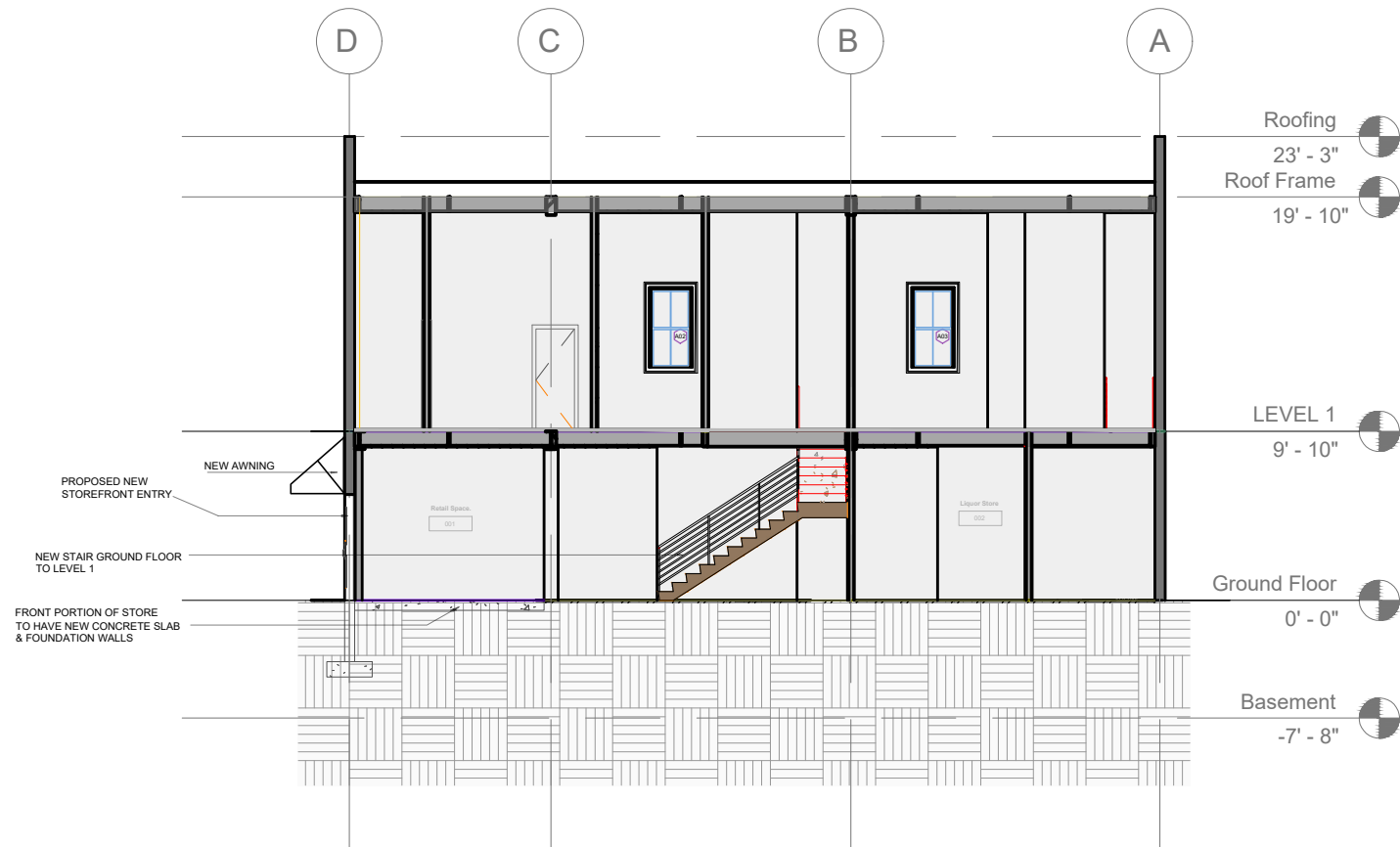
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479J 479J

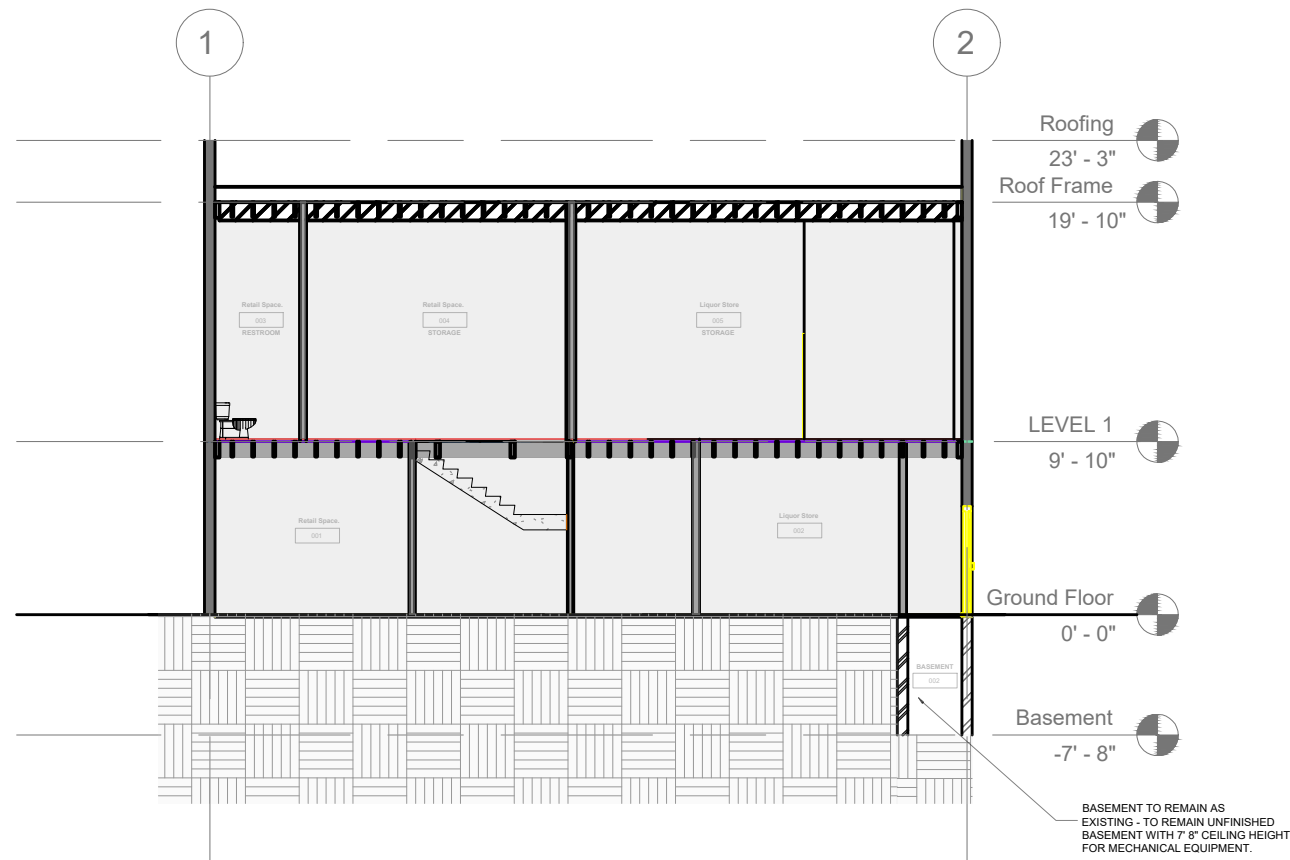
PROJECT # FILE NAME

DRAWING NUMBER

A107



1 SECTION 1  
1/10" - 1'0"



2 SECTION 2  
1/10" - 1'0"

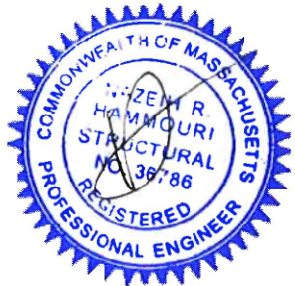


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DRAWING TITLE  
SECTION 3 & 4

DRAWING INFORMATION

April 18, 2021

DATE OF ISSUE

Issued for permit

DESCRIPTION

1/10" = 1'-0" Nathalia Quirino

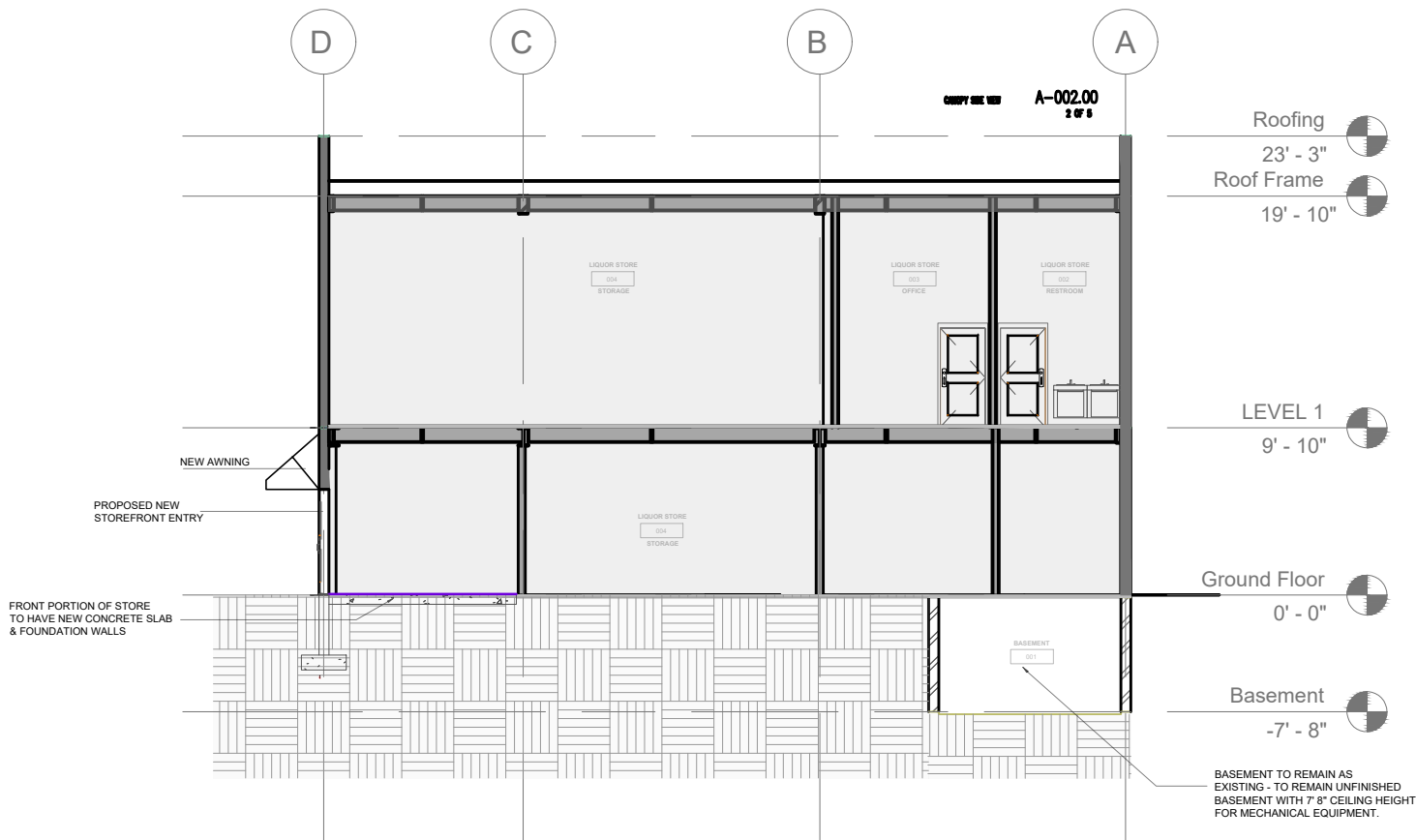
SCALE DRAWN BY

479J 479J

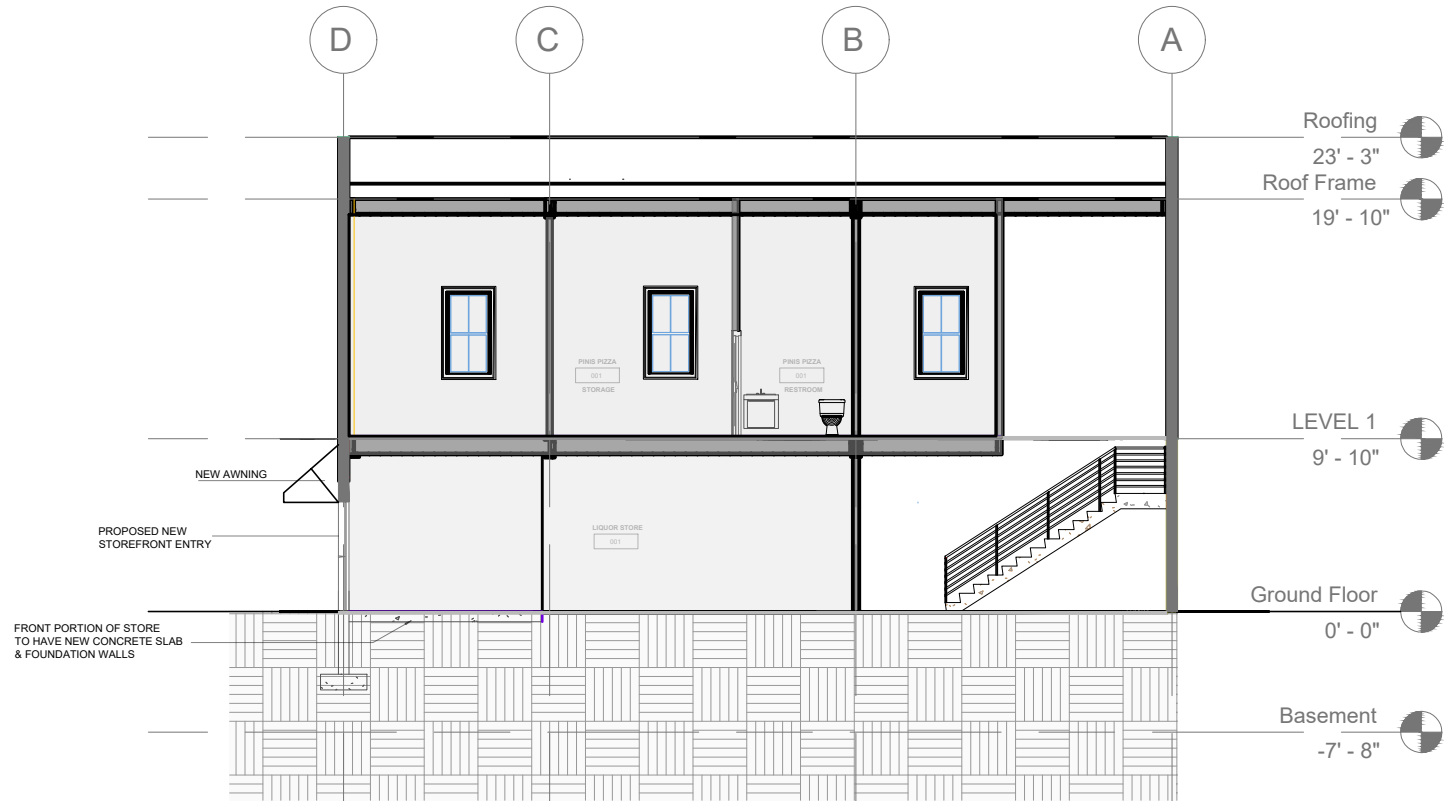
PROJECT # FILE NAME

DRAWING NUMBER

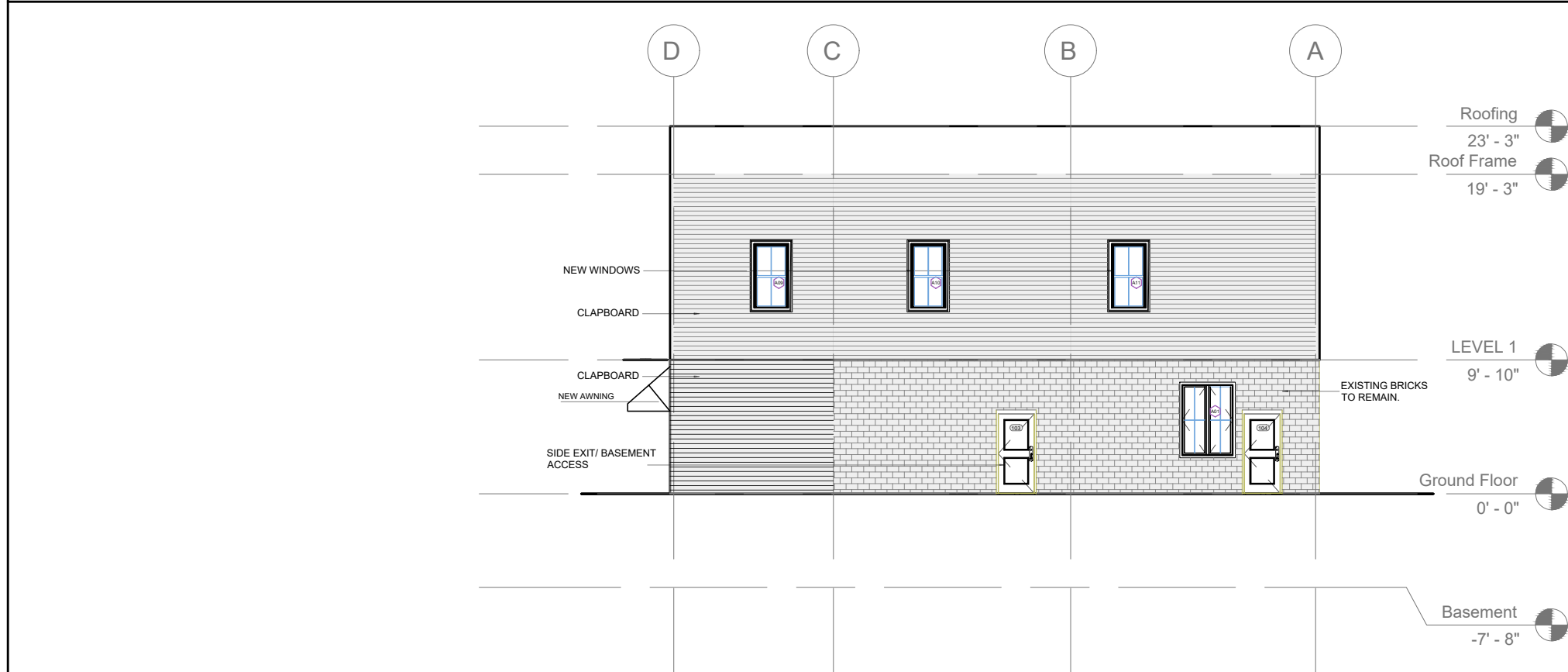
A108



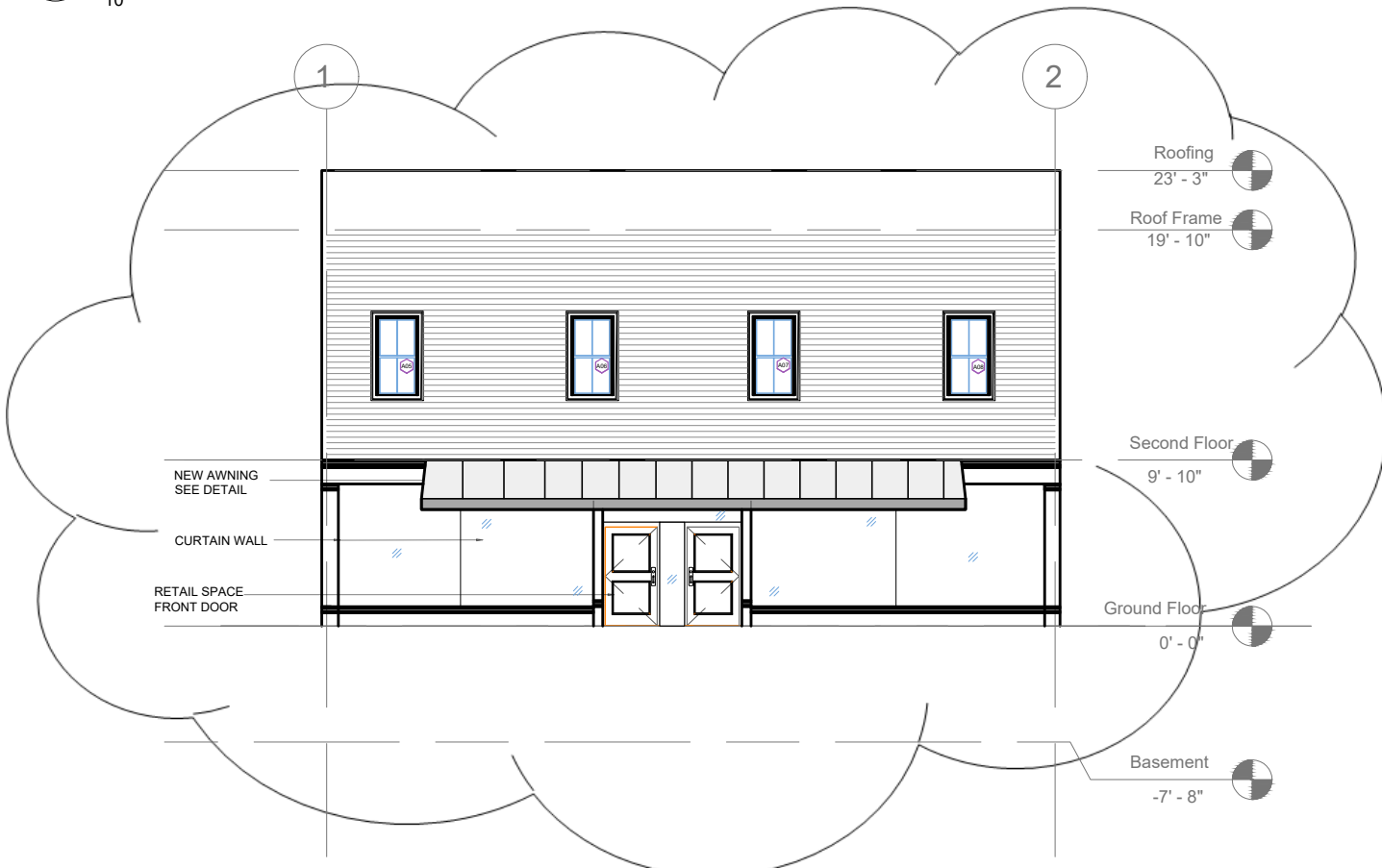
1 SECTION 3  
1/10" - 1'0"



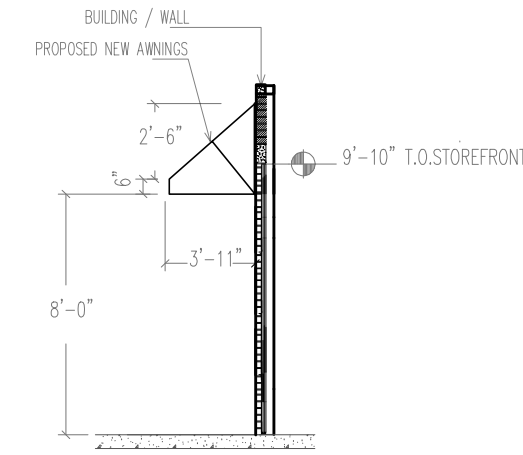
2 SECTION 4  
1/10" - 1'0"



1 ELEVATION 1  
1/10"=1'0"



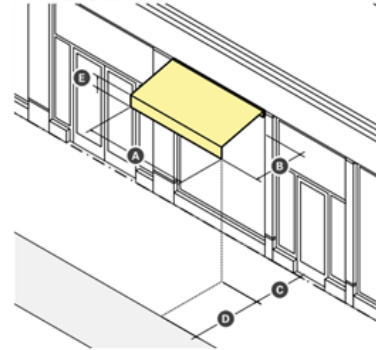
2 ELEVATION 2  
1/10"=1'0"



SIDE VIEW @ AWNING

AS PER SZO - PAGE 156

e. Awning  
i. An awning is a wall mounted frame covered with fabric or other material that provides shade and weather protection over a storefront or building entrance.



Dimensions	
A Width (min)	See ii Standards
B Projection (min)	3 ft
C CLEARANCE (min)	8 ft
Front Setback Encroachment (max)	
D Setback from Curb (min)	100%
E Valance Height (max)	2 ft
	12 in

AWNING DETAIL.

RISE  
ARCHITECTURE

71B CLINTON ST Malden, MA 02148 Tel: 617 318-6056

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COMMONWEALTH OF MASSACHUSETTS  
NAZIEH R. HAMMOURI  
STRUCTURAL  
NO. 36786  
REGISTERED  
PROFESSIONAL ENGINEER

DRAWING TITLE  
ELEVATIONS

DRAWING INFORMATION

April 18, 2021  
DATE OF ISSUE  
Issued for permit

DESCRIPTION  
1/10" = 1'-0" Nathalia Quirino

SCALE  
479J DRAWN BY  
479J

PROJECT # FILE NAME

DRAWING NUMBER  
A109



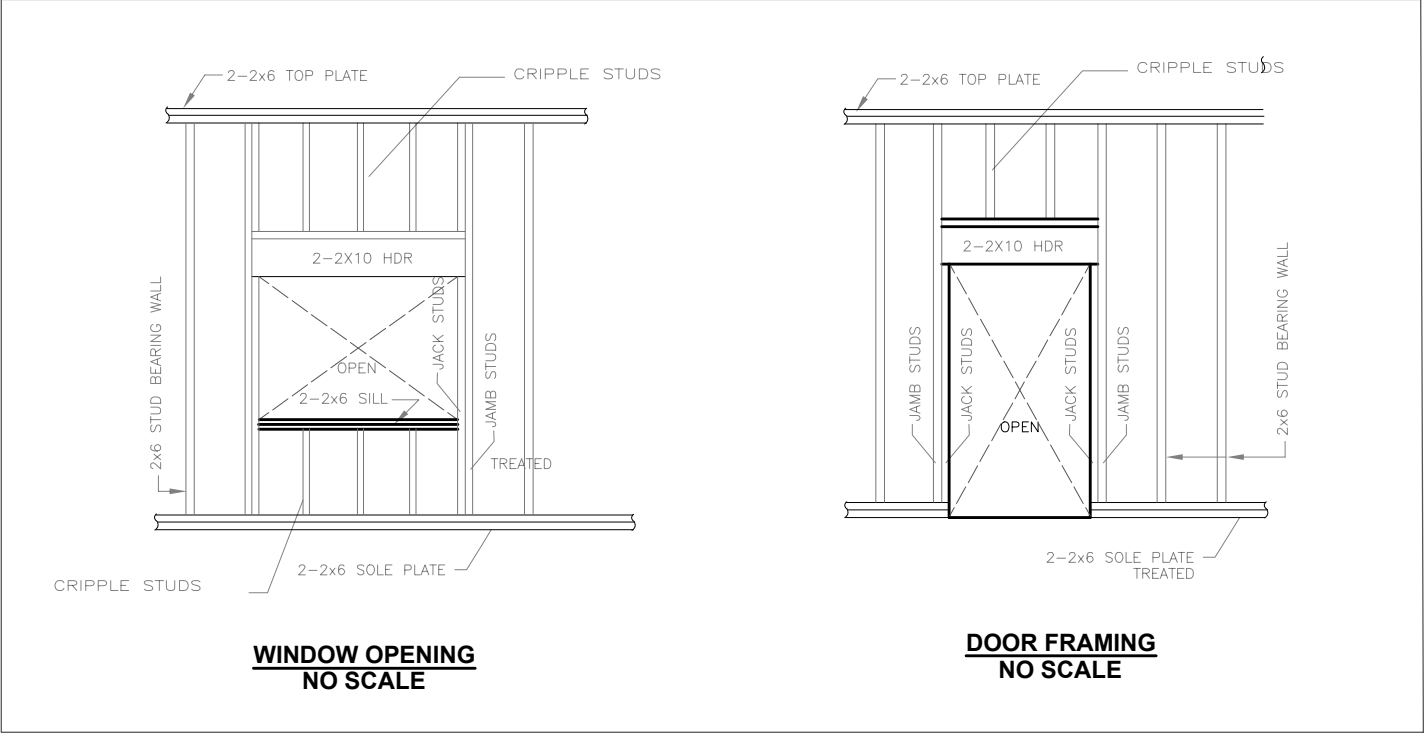
DOOR SCHEDULE

NO.	ROOM NAME	DOOR					
		WIDTH	HEIGHT	THICKNESS	MATERIAL	FINISH	TYPE
A101	STOREFRONT ENTRY 1	3' - 0"	8' - 0"		WOOD	PAINTED	TYPE A
A102	STOREFRONT ENTRY 2	3' - 0"	8' - 0"		WOOD	PAINTED	TYPE A
A103	SIDE EXIT - EXISTING.	3' - 0"	8' - 0"		WOOD	PAINTED	TYPE B
A104	SIDE ACCESS	2' - 8"	7' - 0"		WOOD	PAINTED	TYPE B
A106	OFFICE	2' - 8"	7' - 0"		WOOD	PAINTED	TYPE B
A105	RESTROOM 01	2' - 8"	7' - 0"		WOOD	PAINTED	TYPE B
A107	RESTROOM 02	2' - 8"	7' - 0"		WOOD	PAINTED	TYPE B

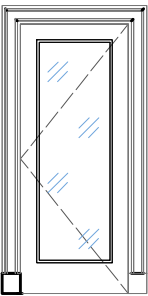
WINDOW SCHEDULE

NO.	ROOM NAME	WINDOW				
		WIDTH	HEIGHT	THICKNESS	TYPE	FINISH
A01	SIDE LIQUOR STORE (Existing)	4' - 6"	5' - 4"		TYPE A	
A02	LEFT SIDE (LEVEL 1)	2' - 8"	5' - 6"		TYPE B	
A03	LEFT SIDE (LEVEL 1)	2' - 8"	5' - 6"		TYPE B	
A04	LEFT SIDE (LEVEL 1)	2' - 8"	5' - 6"		TYPE B	
A05	FACADE (LEVEL 1)	2' - 8"	5' - 6"		TYPE B	
A06	FACADE (LEVEL 1)	2' - 8"	5' - 6"		TYPE B	
A07	FACADE (LEVEL 1)	2' - 8"	5' - 6"		TYPE B	
A08	FACADE (LEVEL 1)	2' - 8"	5' - 6"		TYPE B	
A09	RIGHT SIDE (LEVEL 1)	2' - 8"	5' - 6"		TYPE B	
A10	RIGHT SIDE (LEVEL 1)	2' - 8"	5' - 6"		TYPE B	
A11	RIGHT SIDE (LEVEL 1)	2' - 8"	5' - 6"		TYPE B	

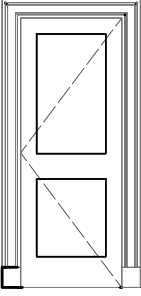
DOOR/WINDOW FRAME



DOOR TYPES

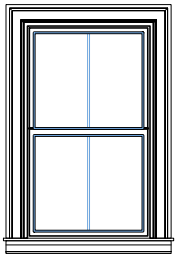


TYPE A  
SINGLE GLASS PANE EXTERIOR  
30" x 8'0"

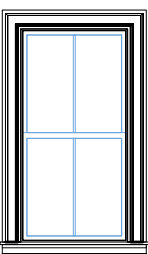


TYPE B  
SINGLE INTERIOR  
2'8" x 7'0"

WINDOW TYPES



TYPE A  
4'3" x 5'6"



TYPE B  
DOUBLE-HUNG  
2'8"x5'11"



71B CLINTON ST Malden, MA 02148 Tel: 617 318-6056

PROJECT NAME  
483 BROADWAY - SOMERVILLE, MA 02145

CLIENT  
JOHN WOOD

PROJECT TEAM  
Architect Nathália Quirino 857 888-1216  
Engineer Nazieh R. Hammouri (857) 312-9212

No.	Description	Date
00	Issued for permit	12/10/2020
01	Issued for permit	04/19/2021
02	Issued for permit	10/05/2021



DRAWING TITLE  
DOOR E WINDOWS  
SCHEDULE.

DRAWING INFORMATION

April 18, 2021.

DATE OF ISSUE

Issued for permit

DESCRIPTION

NO SCALE Nathalia Quirino

SCALE DRAWN BY

479J 479J

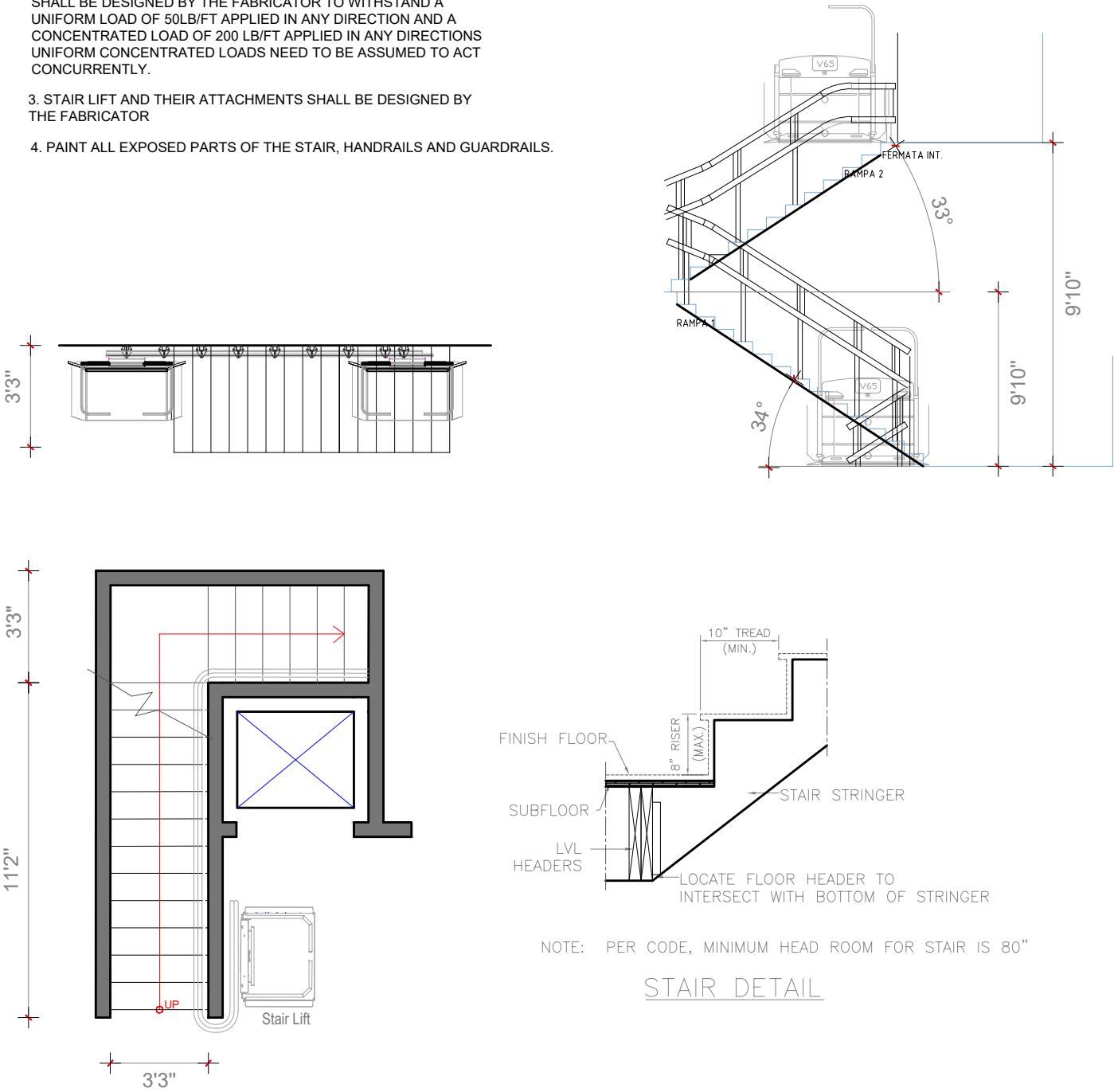
PROJECT # FILE NAME

DRAWING NUMBER

A110

STAIR NOTES

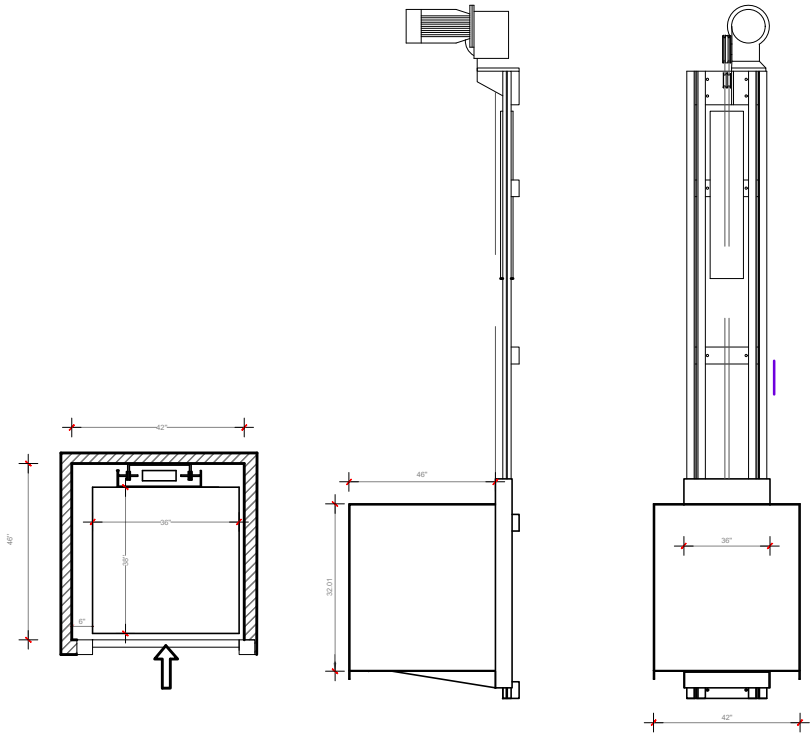
- 1. PROVIDE STAIR AND RAILING SHOP DRAWINGS.
- 2. HANDRAILS AND GUARDRAILS AND THEIR ATTACHMENTS SHALL BE DESIGNED BY THE FABRICATOR TO WITHSTAND A UNIFORM LOAD OF 50LB/FT APPLIED IN ANY DIRECTION AND A CONCENTRATED LOAD OF 200 LB/FT APPLIED IN ANY DIRECTIONS UNIFORM CONCENTRATED LOADS NEED TO BE ASSUMED TO ACT CONCURRENTLY.
- 3. STAIR LIFT AND THEIR ATTACHMENTS SHALL BE DESIGNED BY THE FABRICATOR
- 4. PAINT ALL EXPOSED PARTS OF THE STAIR, HANDRAILS AND GUARDRAILS.



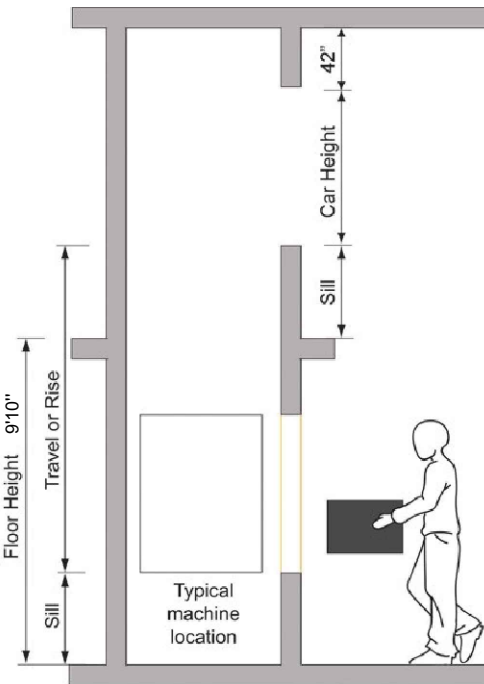
STAIR DETAIL

DUMBWAITER NOTES

- 1. DUMBWAITER AND ITS ACCESSORIES SHALL BE DESIGNED BY THE FABRICATOR.
- 2. DEPRESS THE SLAB AS REQUIRED UNDER THE LIFT PER MANUFACTURES RECOMMENDATION.



DUMBWAITER MACHINE DETAIL



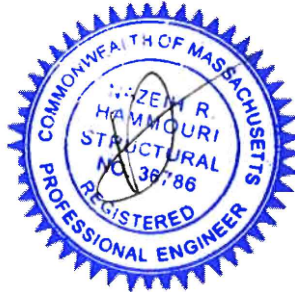
DUMBWAITER ILLUSTRATIVE DETAIL

PROJECT NAME  
483 BROADWAY - SOMERVILLE, MA 02145

CLIENT  
JOHN WOOD

PROJECT TEAM  
Architect Nathalia Quirino 857 888-1216  
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DRAWING TITLE  
STAIRS AND  
DUMBWAITER  
DETAILS.

DRAWING INFORMATION

April 18, 2021

DATE OF ISSUE

Issued for permit

DESCRIPTION

NO SCALE Nathalia Quirino

SCALE DRAWN BY

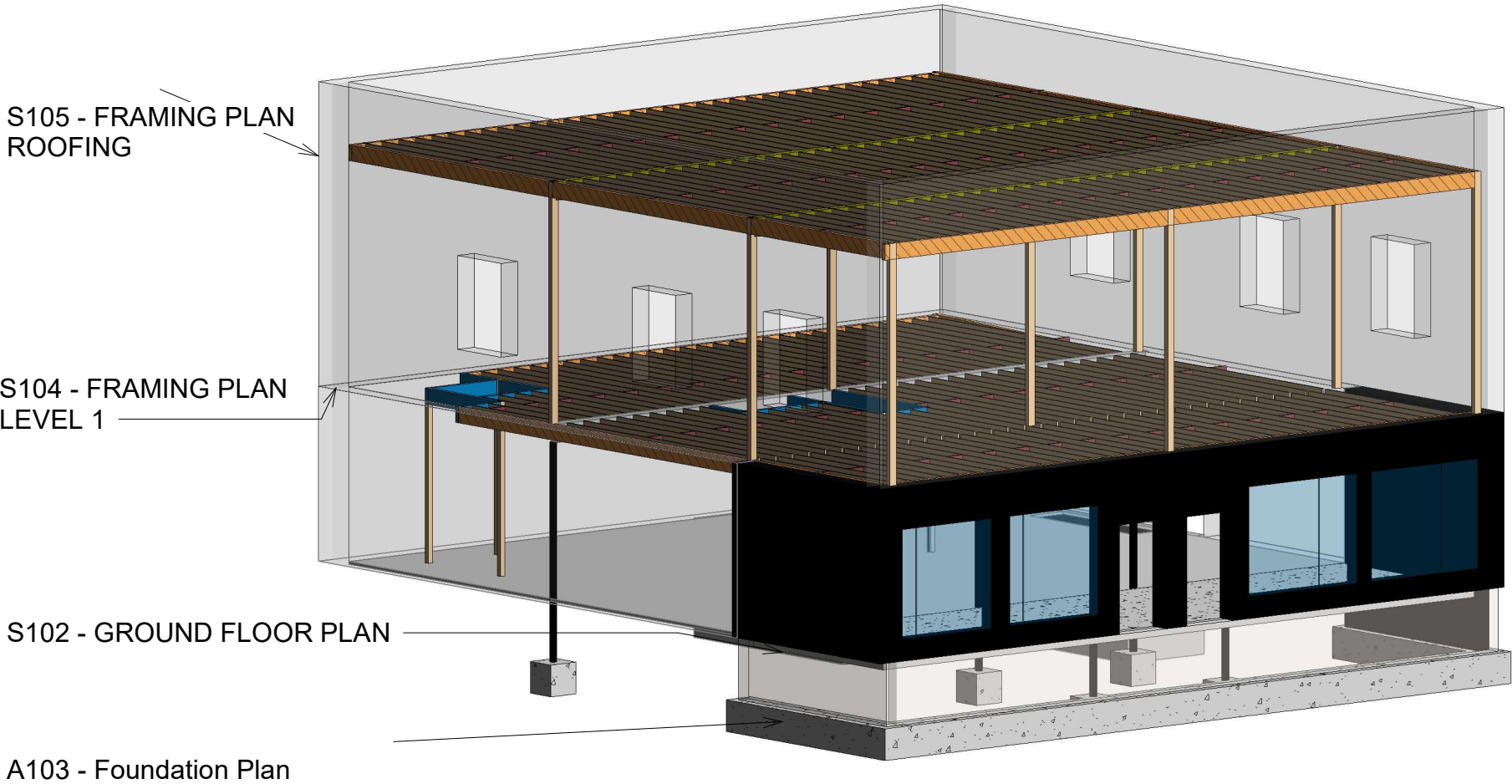
479J 479J

PROJECT # FILE NAME

DRAWING NUMBER

A111





STRUCTURAL NOTES

- A.GENERAL
- 1.ALL DESIGN AND CONSTRUCTION REQUIRED OF THE CONTRACTORS BY THE CONTRACT DOCUMENTS SHALL BE PERFORMED IN ACCORDANCE WITH THE LATEST ADOPTED STATE AND LOCAL BUILDING CODES AND OSHA REGULATIONS, SUPPLEMENTED BY THE CONTRACT DOCUMENTS. THE GOVERNING BUILDING CODE USED IN THE STRUCTURAL DESIGN IS THE MASSACHUSETTS BUILDING CODE 6th EDITION WITH THE LATEST ADOPTED AMENDMENTS.
- 2.STRUCTURAL CONTRACT DOCUMENTS SHALL BE USED IN CONJUNCTION WITH THE ARCHITECTURAL, MECHANICAL, ELECTRICAL, PLUMBING, FIRE PROTECTION, EQUIPMENT AND SITE CONTRACT DOCUMENTS, THE PROJECT SPECIFICATIONS AND THE SHOP DRAWINGS.
- 3.ALL DIMENSIONS, ELEVATIONS AND CONDITIONS SHALL BE VERIFIED IN THE FIELD BY THE GENERAL CONTRACTOR AND ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER FOR CLARIFICATION BEFORE PROCEEDING WITH THE AFFECTED PART OF THE WORK.
- 4.UNLESS OTHERWISE NOTED, DETAILS, SECTIONS AND NOTES SHOWN IN THE CONTRACT DOCUMENTS SHALL BE CONSIDERED TYPICAL FOR ALL SIMILAR CONDITIONS.

- B.SHOP DRAWINGS
- 1.SUBMIT SHOP DRAWINGS, REVIEWED AND APPROVED BY THE GENERAL CONTRACTOR, FOR CONCRETE AND GROUT MIX DESIGNS, CONCRETE AND MASONRY REINFORCING, STRUCTURAL STEEL, SHALL BE SUBMITTED TO THE ARCHITECT FOR APPROVAL BEFORE FABRICATION, MANUFACTURE, DELIVERY AND ERECTION CAN PROCEED.

- C.CAST-IN-PLACE CONCRETE
- 1.ALL CONCRETE SHALL BE READY MIX COMPLYING WITH THE REQUIREMENTS OF ASTM C94, AND SHALL BE NORMAL WEIGHT AND ATTAIN A MINIMUM ULTIMATE COMPRESSIVE STRENGTH OF 4000 PSI AT THE END OF 28 DAYS AS DETERMINED BY ASTM C39.

- D.CONCRETE AND MASONRY REINFORCING
- 1.ALL REINFORCING STEEL SHALL BE DEFORMED BARS CONFORMING TO ASTM A615 GRADE 60. ALL WELDED WIRE MESH (W.W.M.) SHALL BE SMOOTH BARS CONFORMING TO ASTM A185.

- E.CONVENTIONAL WOOD FRAMING
1. ALL SAWN LUMBER FRAMING MEMBERS SHALL BE SPRUCE-PINE-FIR WITH THE FOLLOWING MINIMUM GRADES: A. JOISTS, RAFTERS, SOLID AND BUILT-UP BEAMS, WALL STUDS AND LINTELS; NO. 1& NO.2 GRADE. B. SILLS AND PLATES; STUD GRADE. C. SOLID WOOD POSTS; NO. 1 GRADE. D. BRIDGING, BLOCKING AND NAILERS; STUD GRADE. 2. ALL "MICROLAM" MEMBERS SHALL HAVE THE FOLLOWING MINIMUM PROPERTIES: A. E = 2,000,000 PSI B. Fb = 2800 PSI C. Ft = 1850 PSI D. Fc (perpendicular) = 500 PSI E. Fc (parallel) = 2700 PSI F. Fv = 285 PSI 3. UNLESS OTHERWISE NOTED, ALL NAILING AND FASTENING SHALL BE IN ACCORDANCE WITH TABLE 2305.2, FASTENING SCHEDULE, 1993 BOCA BUILDING CODE. 4. WOOD SILLS BENEATH ALL INTERIOR AND EXTERIOR BEARING WALLS AND ALL MEMBERS EXPOSED TO WEATHER OR MOISTURE SHALL BE PRESERVATIVE TREATED IN ACCORDANCE WITH THE "AMERICAN WOOD PRESERVERS ASSOCIATION, STANDARD C1". 5. ALL STUD WALLS, BEARING AND NON-BEARING, SHALL HAVE ONE ROW OF CONTINUOUS 2X SOLID BLOCKING BETWEEN STUDS AT MID-HEIGHT. BLOCKING SIZE TO MATCH STUD SIZE. 6. FRAMING MEMBERS SHALL NOT BE NOTCHED, CUT OR ALTERED IN THE FIELD WITHOUT THE SPECIFIC APPROVAL OF THE ENGINEER. 7. ALL METAL CONNECTORS FOR WOOD CONSTRUCTION SHALL BE HOT- DIPPED GALVANIZED METAL SHAPES AS MANUFACTURED BY "SIMPSON STRONG-TIE COMPANY, INC." AND BE ATTACHED BY THE GENERAL CONTRACTOR AS PER THE "SIMPSON STRONG-TIE" SPECIFICATIONS. 8. ALL EXTERIOR WALL SHEATHING SHALL BE 5/8 INCH PLYWOOD EXTERIOR SHEATHING. 9. ALL ROOF SHEATHING SHALL BE 5/8 INCH APA RATED PLYWOOD SHEATHING 32/16. USE EXPOSURE 1 PANELS, EXCEPT USE EXTERIOR PANELS FOR STARTER STRIPS ALONG EAVES AND WHEN LONG CONSTRUCTION DELAYS ARE ANTICIPATED. APPLY PANELS WITH THE FACE GRAIN PERPENDICULAR TO THE RAFTERS OR TRUSSES AND CONTINUOUS OVER TWO OR MORE SPANS. INSTALL PANEL CLIPS ALONG PANEL ENDS BETWEEN EACH RAFTER OR TRUSS. ATTACH PANELS WITH GLUE AND 6d RING OR SCREW SHANK NAILS AT 6 INCHES ON CENTER AT PANEL EDGES AND 12 INCHES ON CENTER AT INTERMEDIATE SUPPORTS. 10. ALL FLOOR SHEATHING SHALL BE 3/4 INCH APA RATED "STUR-I-FLOOR", 24 O/C, TONGUE AND GROOVE. USE EXPOSURE 1 PANELS, APPLY PANELS WITH THE FACE GRAIN PERPENDICULAR TO THE JOISTS OR TRUSSES AND CONTINUOUS OVER TWO OR MORE SPANS. ATTACH PANELS BY GLUE-NAILING AS FOLLOWS: A. SPREAD GLUE IN ACCORDANCE WITH RECOMMENDATIONS OF GLUE MANUFACTURER AND INDUSTRY PRACTICE. B. STAGGER END JOINTS IN EACH SUCCEEDING ROW, LEAVING 1/8 INCH SPACE BETWEEN ALL END AND EDGE JOINTS, INCLUDING TONGUE AND GROOVE EDGES. C. COMPLETE ALL NAILING OF EACH PANEL BEFORE GLUE SETS WITH 6d RING- OR SCREW-SHANK NAILS AT 12 INCHES ON CENTER AT PANEL EDGES AND INTERMEDIATE SUPPORTS. 11. LEAD HOLES FOR WOOD SCREWS AND LAG BOLTS SHALL BE DRILLED 7/8 OF THE SHANK DIAMETER FOR THE DEPTH OF SHANK EMBEDMENT AND 7/8 OF THE THREADED PORTION DIAMETER FOR THE DEPTH OF THE THREAD EMBEDMENT.



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PROJECT NAME  
483 BROADWAY, SOMMERVILLE 02145  
CLIENT  
JOHN WOOD

PROJECT TEAM  
Architect  
Nathália Quirino  
857 888-1216  
Engineer  
Nazieh R. Hammouri  
857 312-9212

No.	Description	Date
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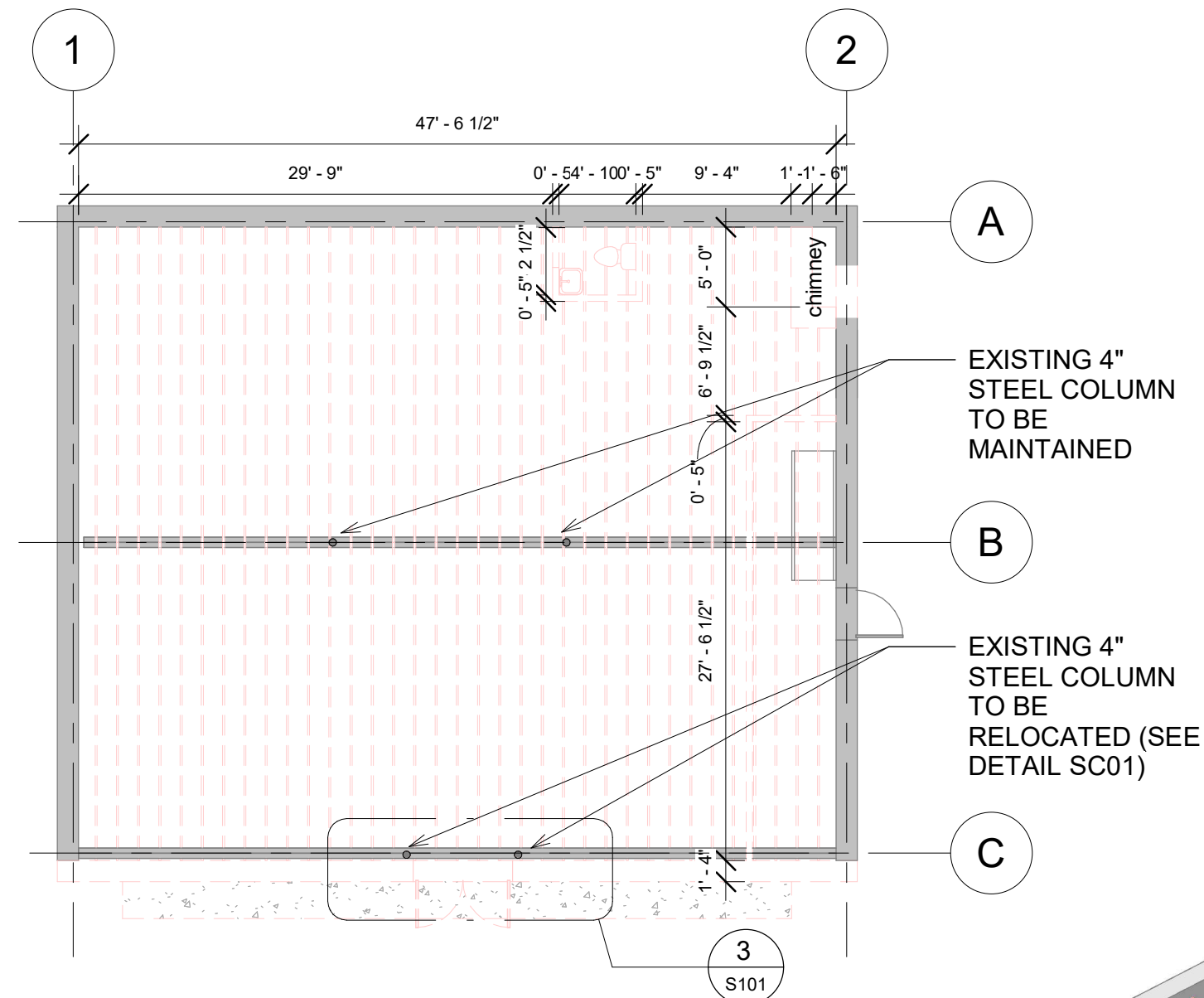


DRAWING TITLE  
OVERALL  
STRUCTURAL

DRAWING INFORMATION


04/18/2021	
DATE OF ISSUE	
Issued for Permit	
DESCRIPTION	NATHALIA QUIRINO MARINA RAMOS
SCALE	DRAWN BY
479J	479J
PROJECT #	FILE NAME


DRAWING NUMBER  
S100



1 Demolition Plan - Level 1  
1" = 10'-0"

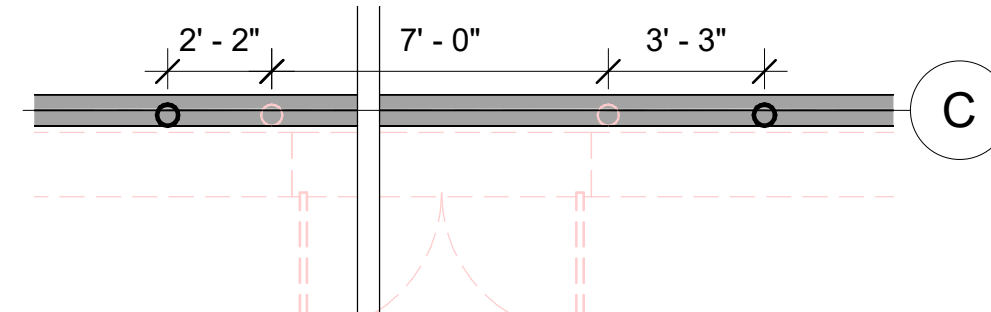
Legend

 Demolition

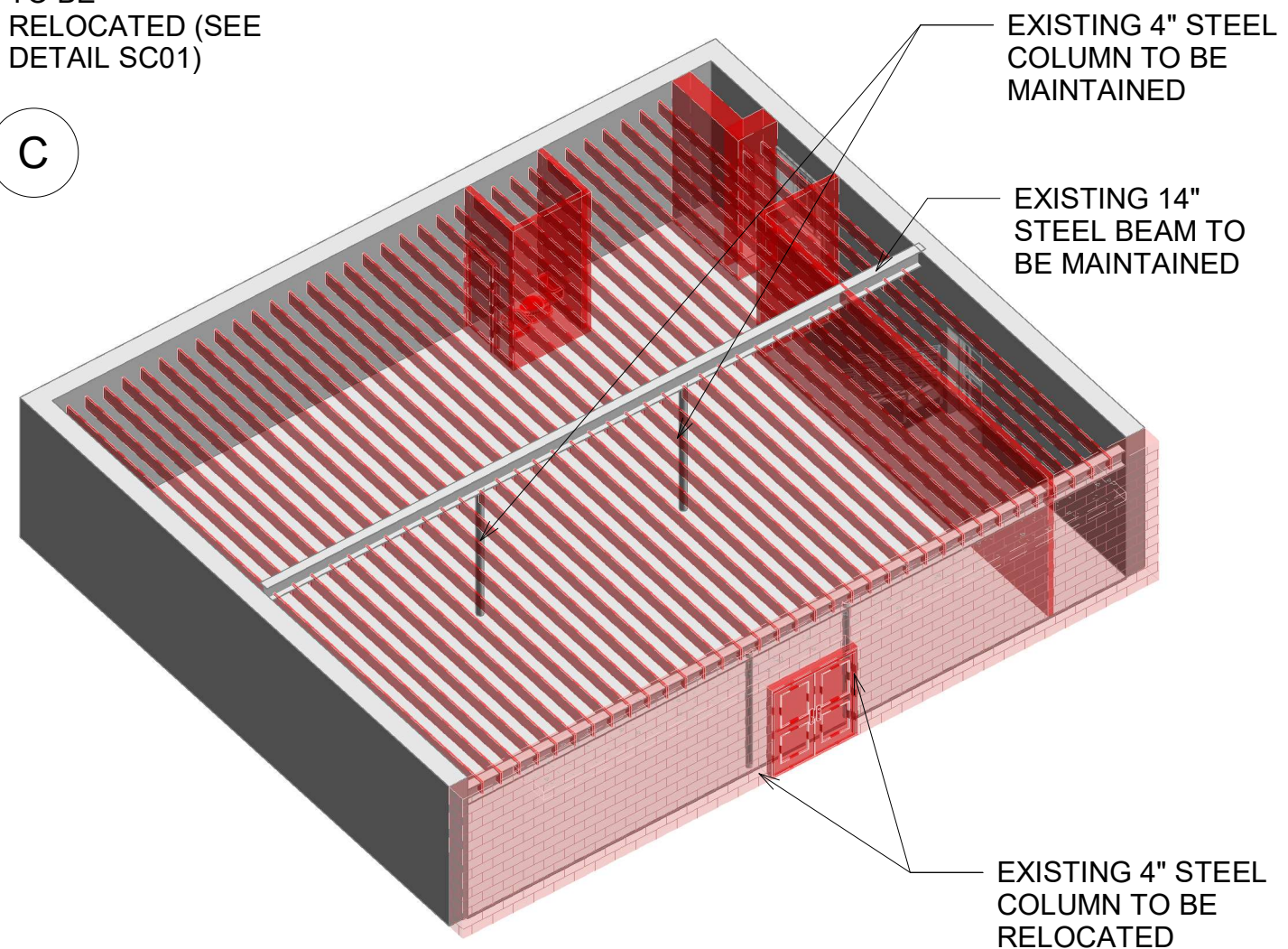
 Existing

## NOTES

- 1- EXISTING BEAM AND COLUMNS TO BE MAINTAINED
- 2- EXISTING STAIR TO THE BASEMENT TO BE MAINTAINED
- 3- FRONT WALL TO BE DEMOLISHED
- 4- ROOF FRMAING TO BE DEMOLISHED
- 5- EXISTING WASHROOM TO BE DEMOLISHED
- 6- CHIMINEY TO BE DEMOLISHED



3 SC01  
1/4" = 1'-0"



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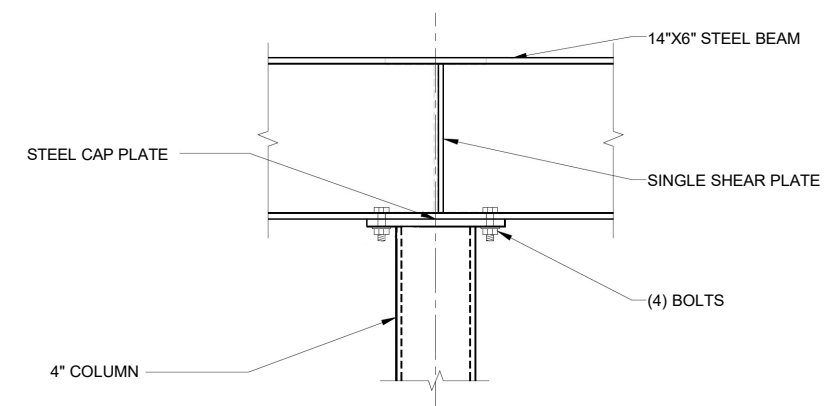
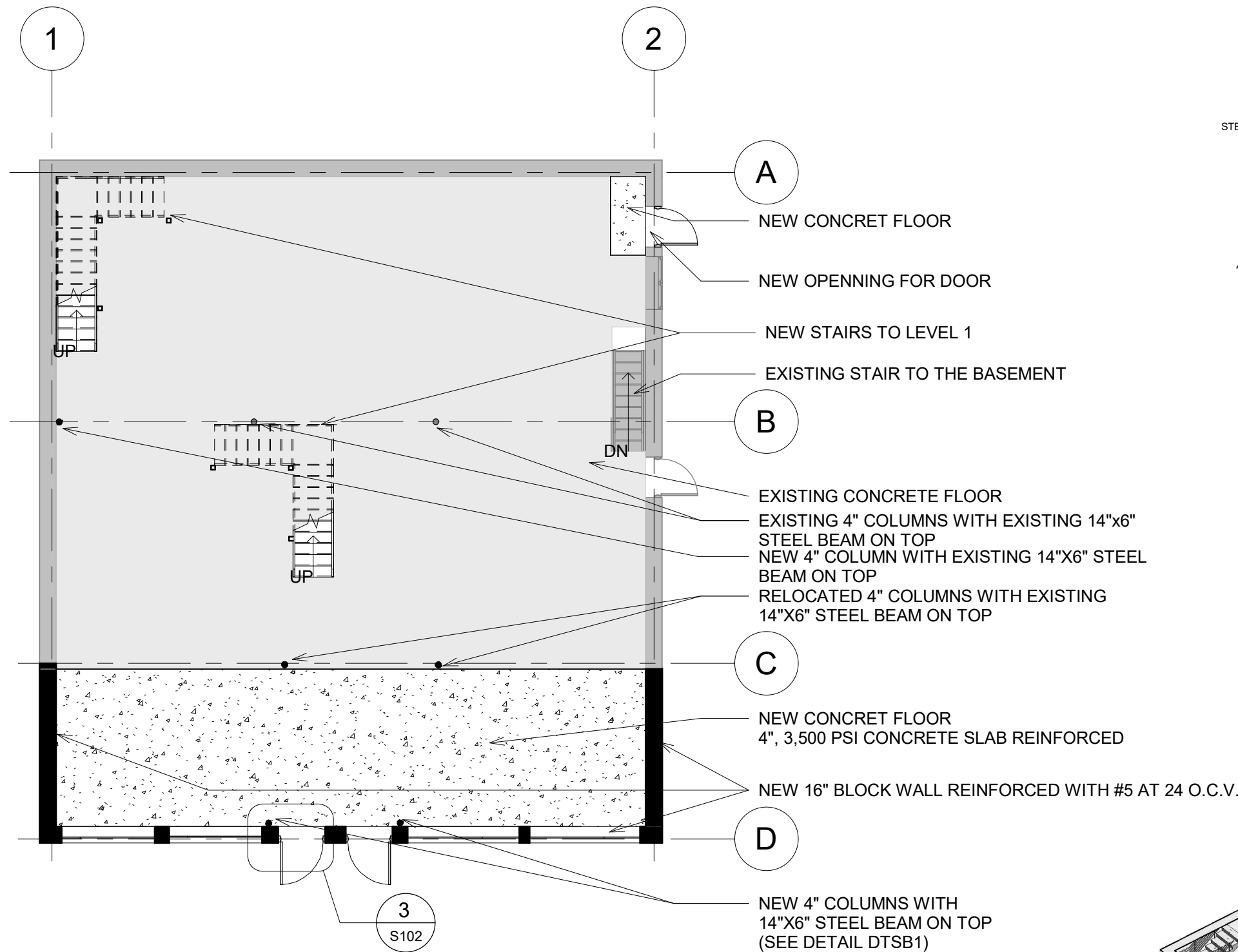
No.	Description	Date
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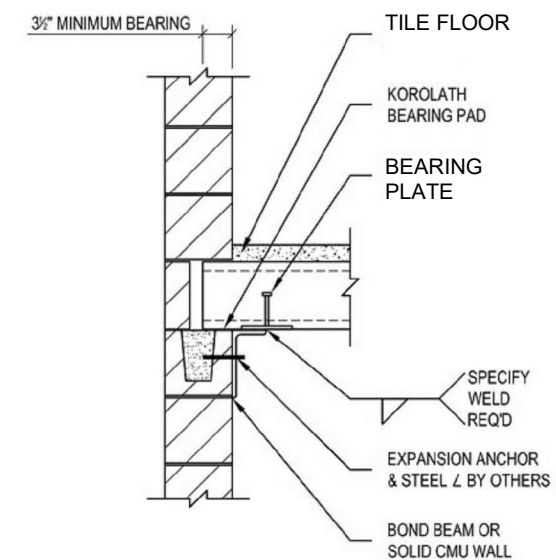
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Demolition

DRAWING INFORMATION	
04/18/2021	
DATE OF ISSUE	
Issued for Permit	
DESCRIPTION	
As indicated	Author
SCALE	DRAWN BY
479J	479J
PROJECT #	FILE NAME
DRAWING NUMBER	
S101	

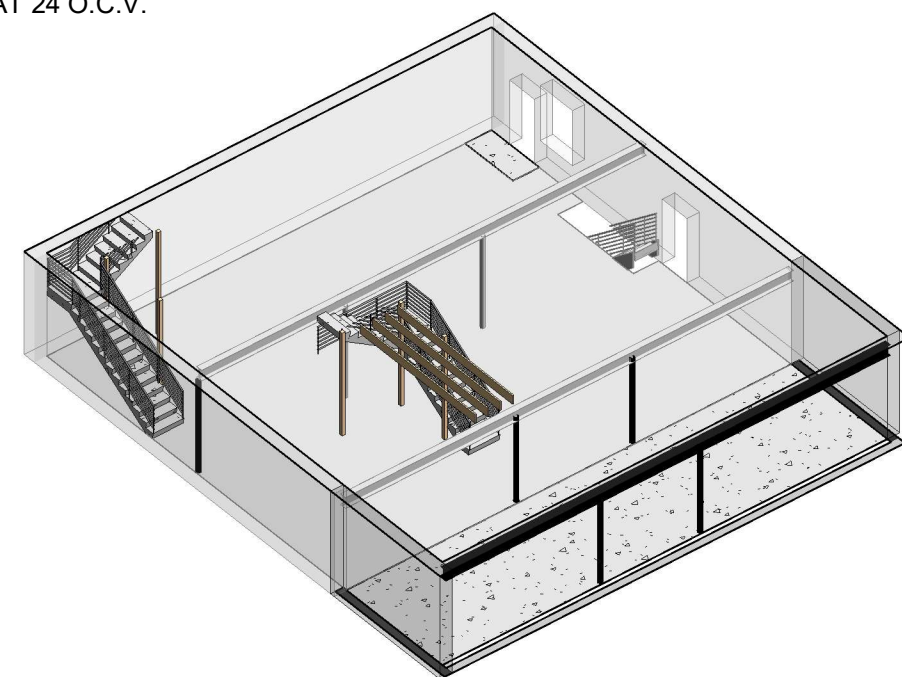




Detail DTSB1



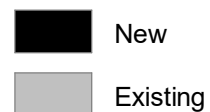
Detail DTSB2



## Floor Plan - Ground Floor

1" = 10'-0"

### Legend



**RISE**  
ARCHITECTURE

71B CLINTON ST - Malden, MA 02148 Tel: 617 318-6056

PROJECT NAME  
483 BROADWAY, SOMMERVILLE 02145  
CLIENT  
JOHN WOOD

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Architect  
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857 888-1216  
Engineer  
Nazieh R. Hammouri  
857 312-9212

No.	Description	Date
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DRAWING TITLE

Ground Floor Plan

DRAWING INFORMATION

04/18/2021

DATE OF ISSUE

Issued for Permit

DESCRIPTION

As indicated

SCALE

479J

PROJECT #

DRAWING NUMBER

NQ & MR

DRAWN BY

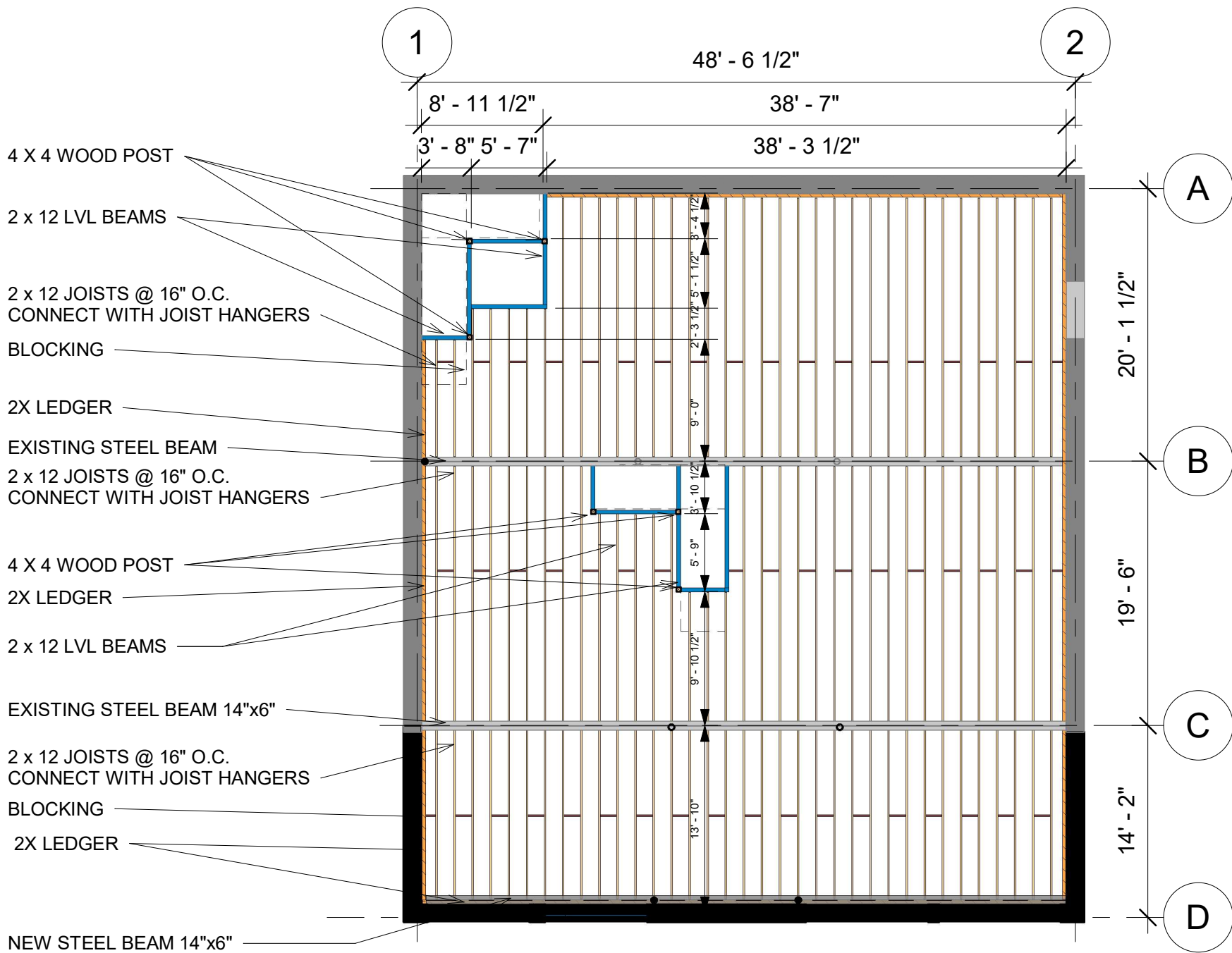
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FILE NAME

S102







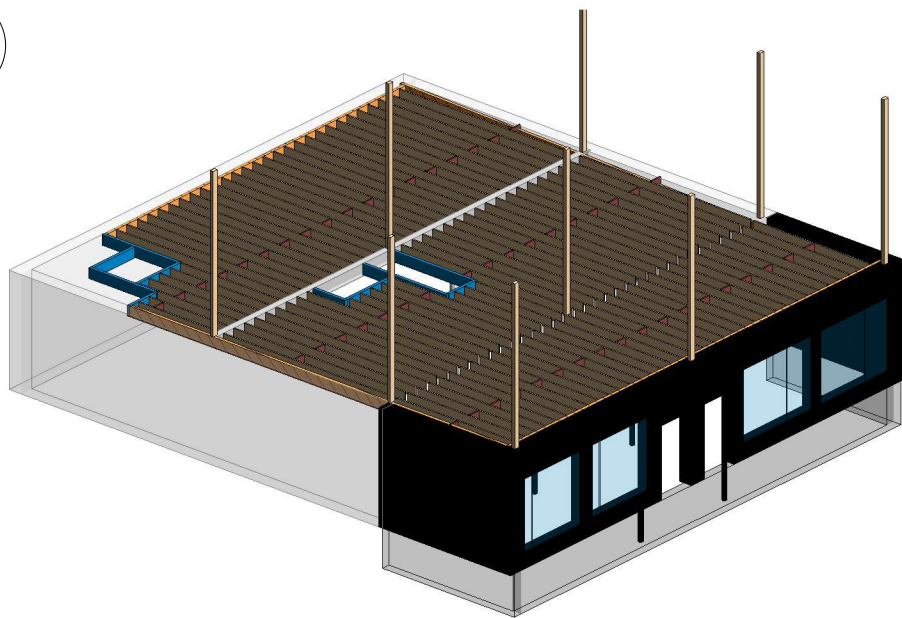
## Second floor framing plan

1

1" = 10'-0"

**Legend**

- 7 x 14 LVL
- 2 x 12 JOISTS @ 16" O.C. CONNECT WITH JOIST HANGERS
- 2X LEDGER
- BLOCKING
- 4 x 4 POST
- 4 x 6 POST
- NEW BLOCK WALL
- NEW WOOD FRAMING WALL
- 2 x 12 LVL BEAM



71B CLINTON ST - Malden, MA 02148 Tel: 617 318-6056

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Architect  
Nathalia Quirino  
857 888-1216  
Engineer  
Nazieh R. Hammouri  
857 312-9212

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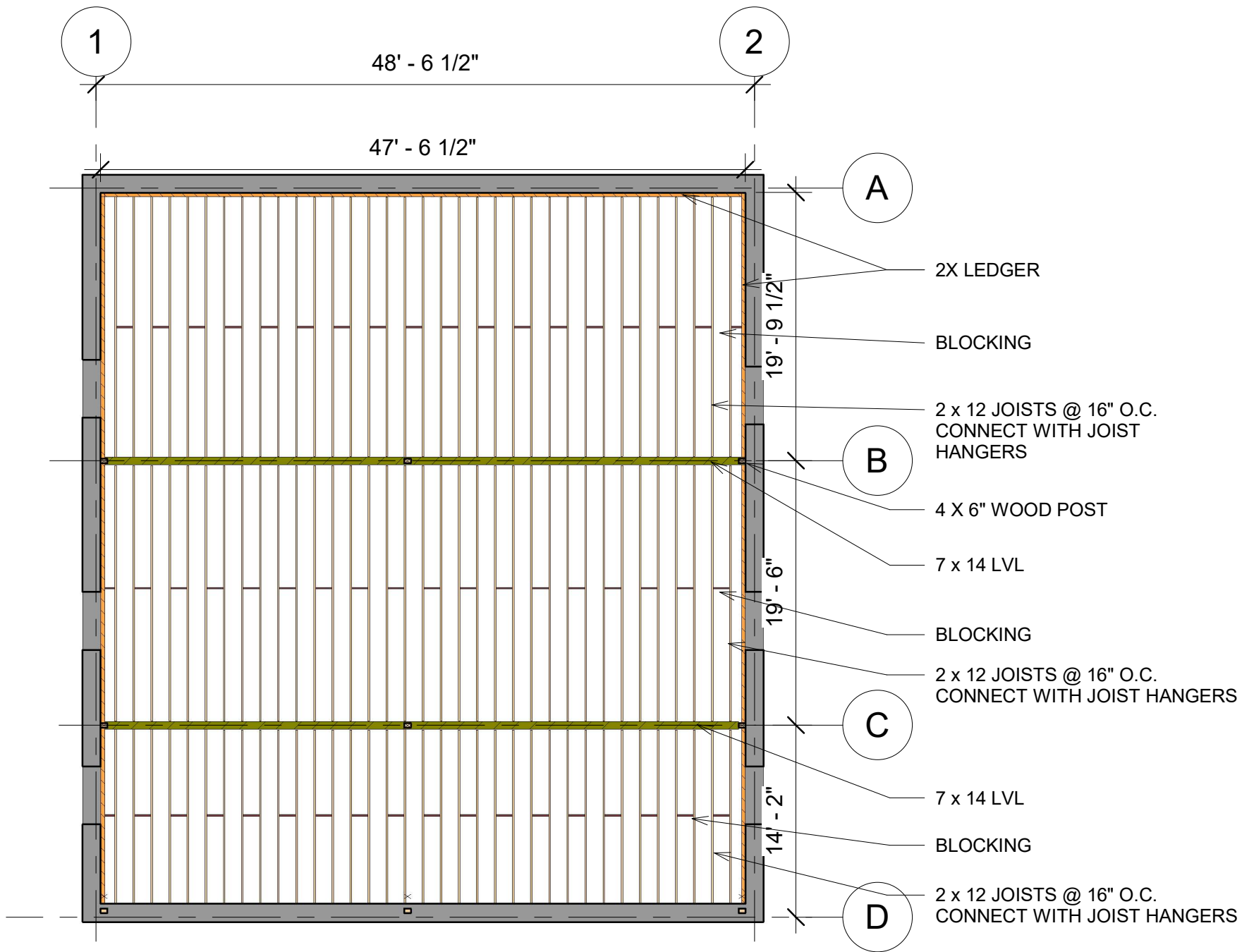
DRAWING TITLE  
Framing Plan - Level  
1

DRAWING INFORMATION

04/18/2021  
DATE OF ISSUE  
Issued for Permit  
DESCRIPTION  
As indicated  
SCALE  
479J  
PROJECT #

NQ & MR  
DRAWN BY  
479J  
FILE NAME

DRAWING NUMBER  
S104

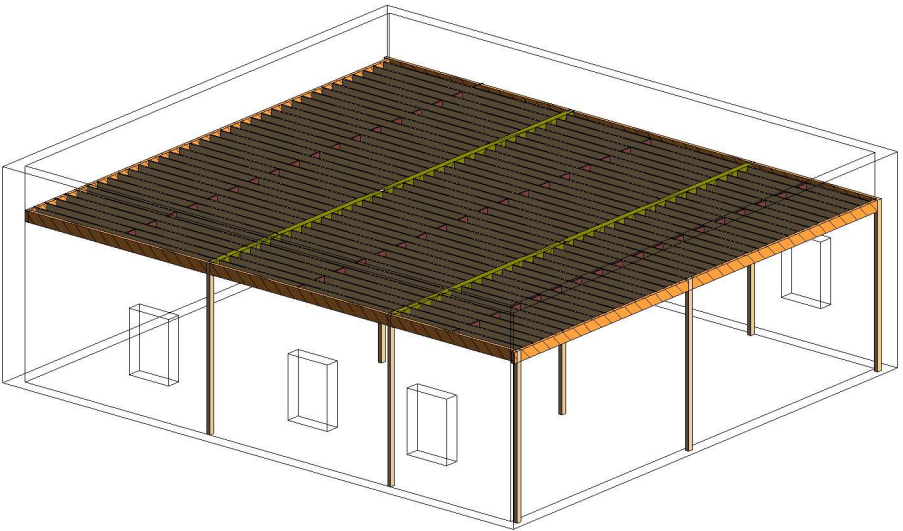


**Legend**

- 7 x 14 LVL
- 2 x 12 JOISTS @ 16" O.C. CONNECT WITH JOIST HANGERS
- 2X LEDGER
- BLOCKING
- 4 x 4 POST
- 4 x 6 POST
- NEW BLOCK WALL
- NEW WOOD FRAMING WALL
- 2 x 12 LVL BEAM

1 Framing Plan - Roof

1" = 10'-0"

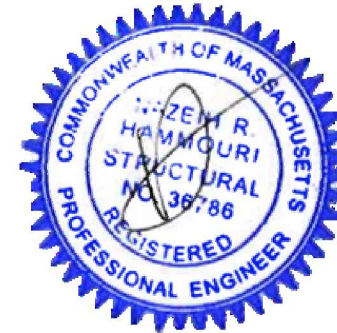


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Architect Nathalia Quirino 857 888-1216  
Engineer Nazieh R. Hammouri 857 312-9212

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DRAWING TITLE  
Framing Plan - Roofing

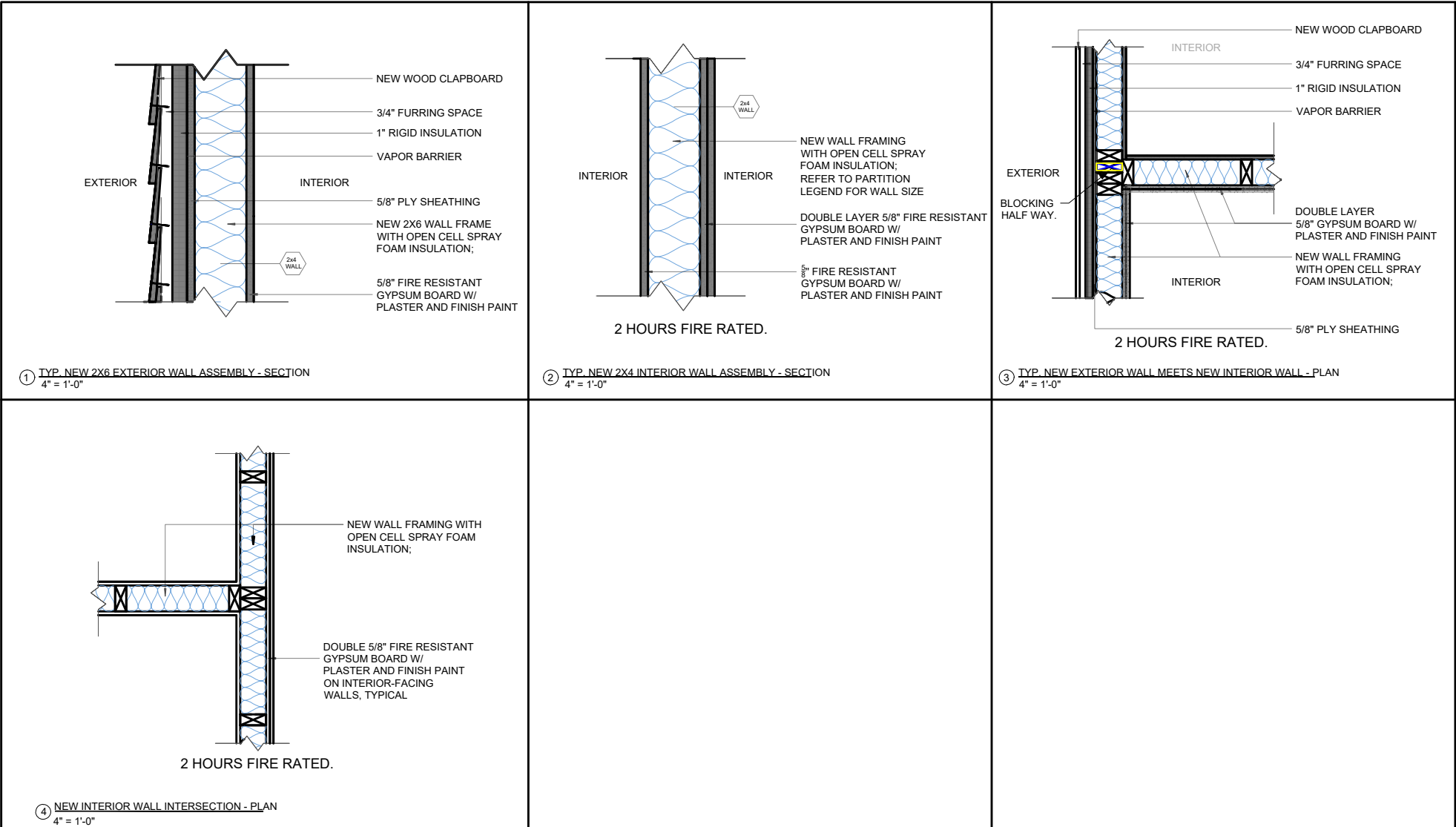
DRAWING INFORMATION

04/18/2021	Author
DATE OF ISSUE	
Issued for Permit	
DESCRIPTION	As indicated
SCALE	DRAWN BY
479J	479J
PROJECT #	FILE NAME

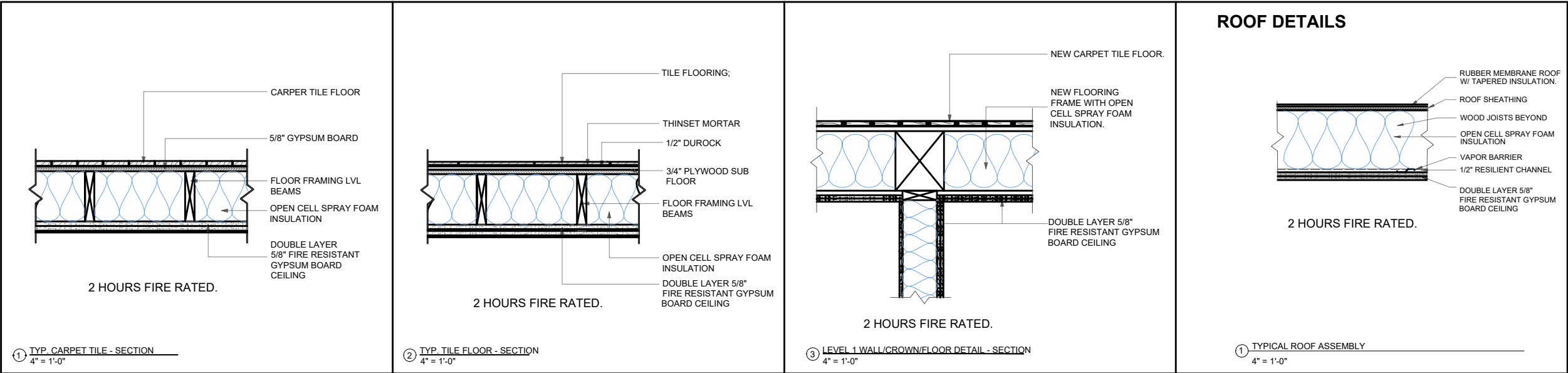
DRAWING NUMBER  
S105



WALL PARTITIONS



FLOOR & CEILING DETAILS



RISE

ARCHITECTURE

71B CLINTON ST Malden, MA 02148 Tel: 617 318-6056

PROJECT NAME

483BROADWAY - SOMERVILLE , MA 02145

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Engineer

Nazieh R. Hammouri

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DETAILS

DRAWING INFORMATION

April 18, 2021

DATE OF ISSUE

Issued for permit

DESCRIPTION

AS INDICATED

NQ & MR

SCALE

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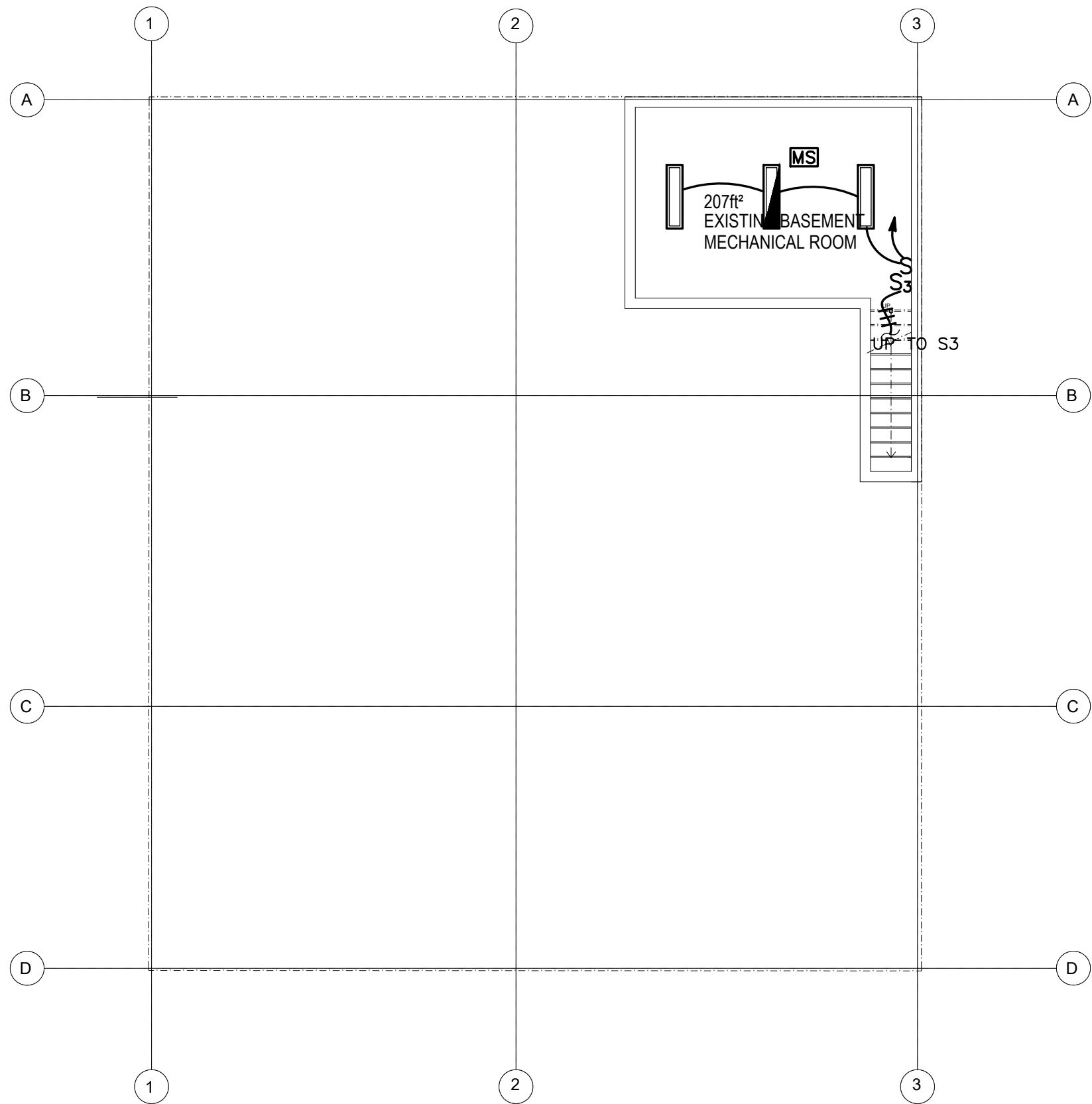
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PROJECT #

FILE NAME

DRAWING NUMBER

S106



71B CLINTON ST Malden, MA 02148 Tel: 617 318-6056

PROJECT NAME  
483 BROADWAY - SOMERVILLE, MA 02145

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Engineer Nazieh R. Hammouri (857) 312-9212

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#### ZADE ASSOCIATES LLC

CONSULTING ENGINEERS  
140 BEACH STREET, BOSTON, MA 02111  
TEL. (617) 338-4406  
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E-MAIL Zade@ZadeEngineering.com



*Muzaffer Muehtitizade*

DRAWING TITLE

BASEMENT

DRAWING INFORMATION

LIGHTING PLAN

March 31, 2021

DATE OF ISSUE

Issued for progress

DESCRIPTION

As indicated MP

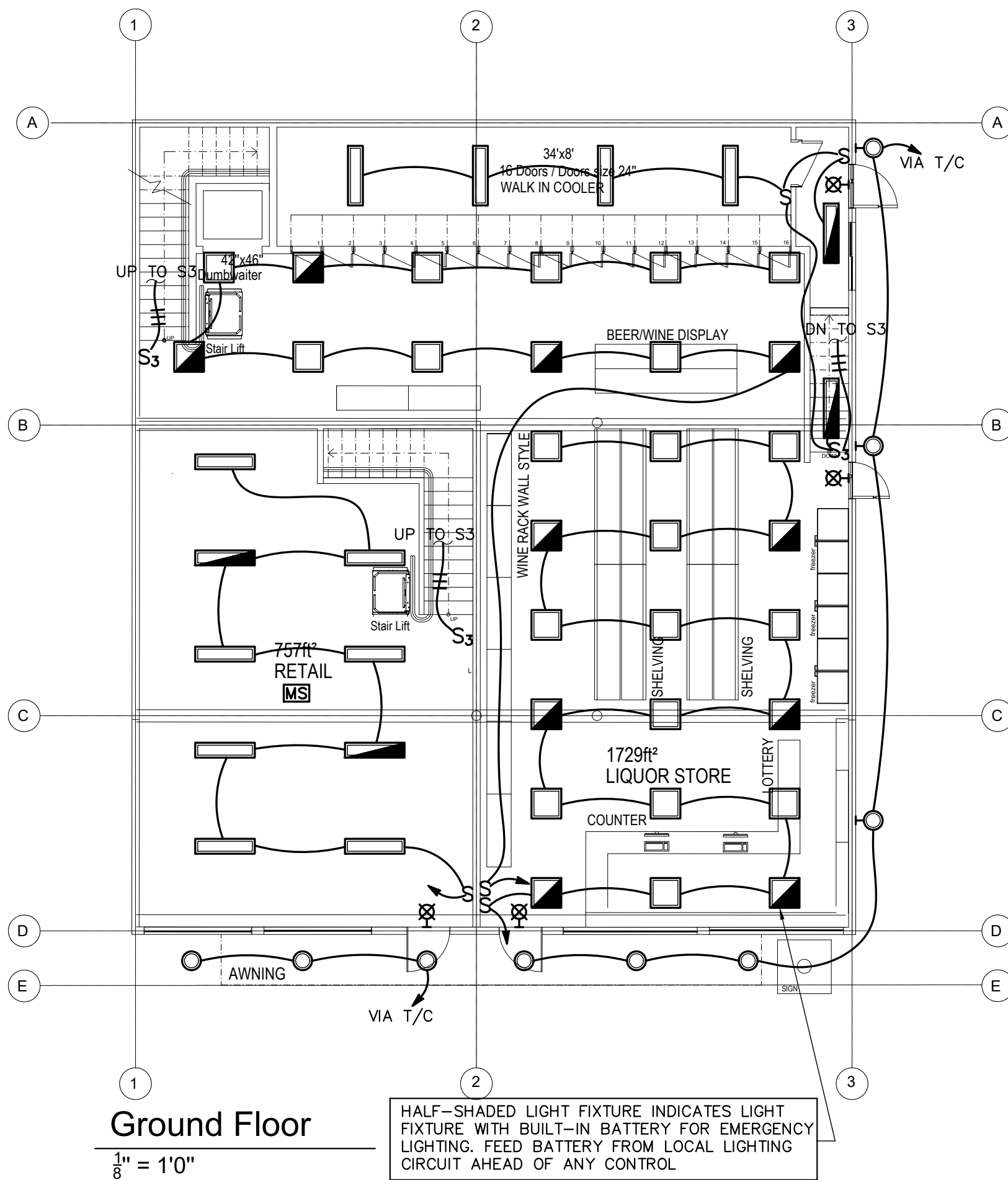
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479J 479J

PROJECT # FILE NAME

DRAWING NUMBER

E101



RISE  
ARCHITECTURE

71B CLINTON ST Malden, MA 02148 Tel: 617 318-6056

PROJECT NAME  
483 BROADWAY - SOMERVILLE, MA 02145

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*Muzaffer Muehizade*

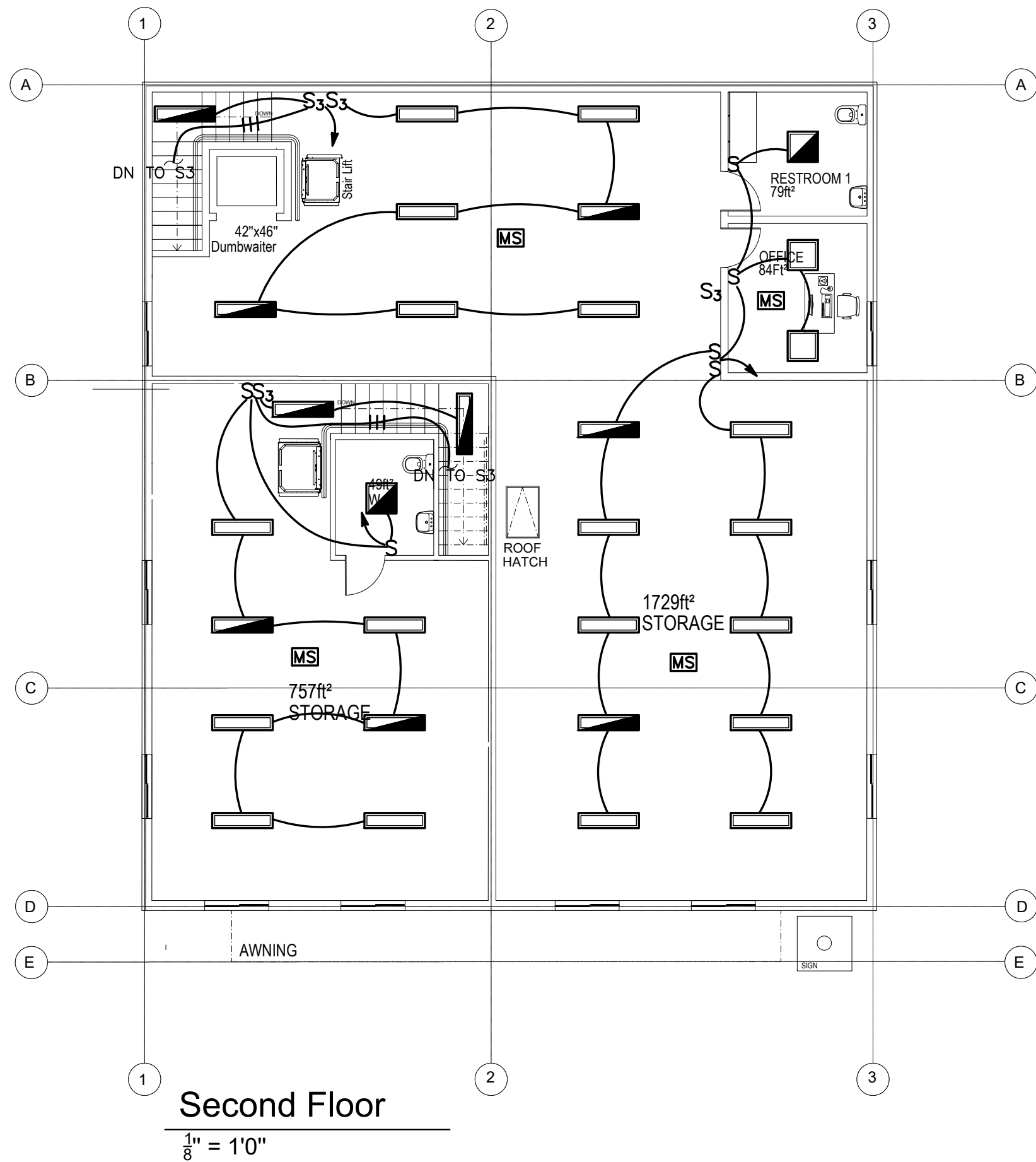
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GROUND FLOOR

DRAWING INFORMATION  
LIGHTING PLAN

March 31, 2021  
DATE OF ISSUE  
Issued for progress  
DESCRIPTION  
As indicated MP  
SCALE  
479J DRAWN BY  
479J  
PROJECT # FILE NAME

DRAWING NUMBER  
E102





71B CLINTON ST Malden, MA 02148 Tel: 617 318-6056

PROJECT NAME  
483 BROADWAY - SOMERVILLE, MA 02145

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DRAWING TITLE  
FIRST FLOOR

DRAWING INFORMATION  
LIGHTING PLAN

March 31, 2021  
DATE OF ISSUE  
Issued for progress  
DESCRIPTION  
As indicated MP  
SCALE DRAWN BY  
479J 479J  
PROJECT # FILE NAME

DRAWING NUMBER  
E103

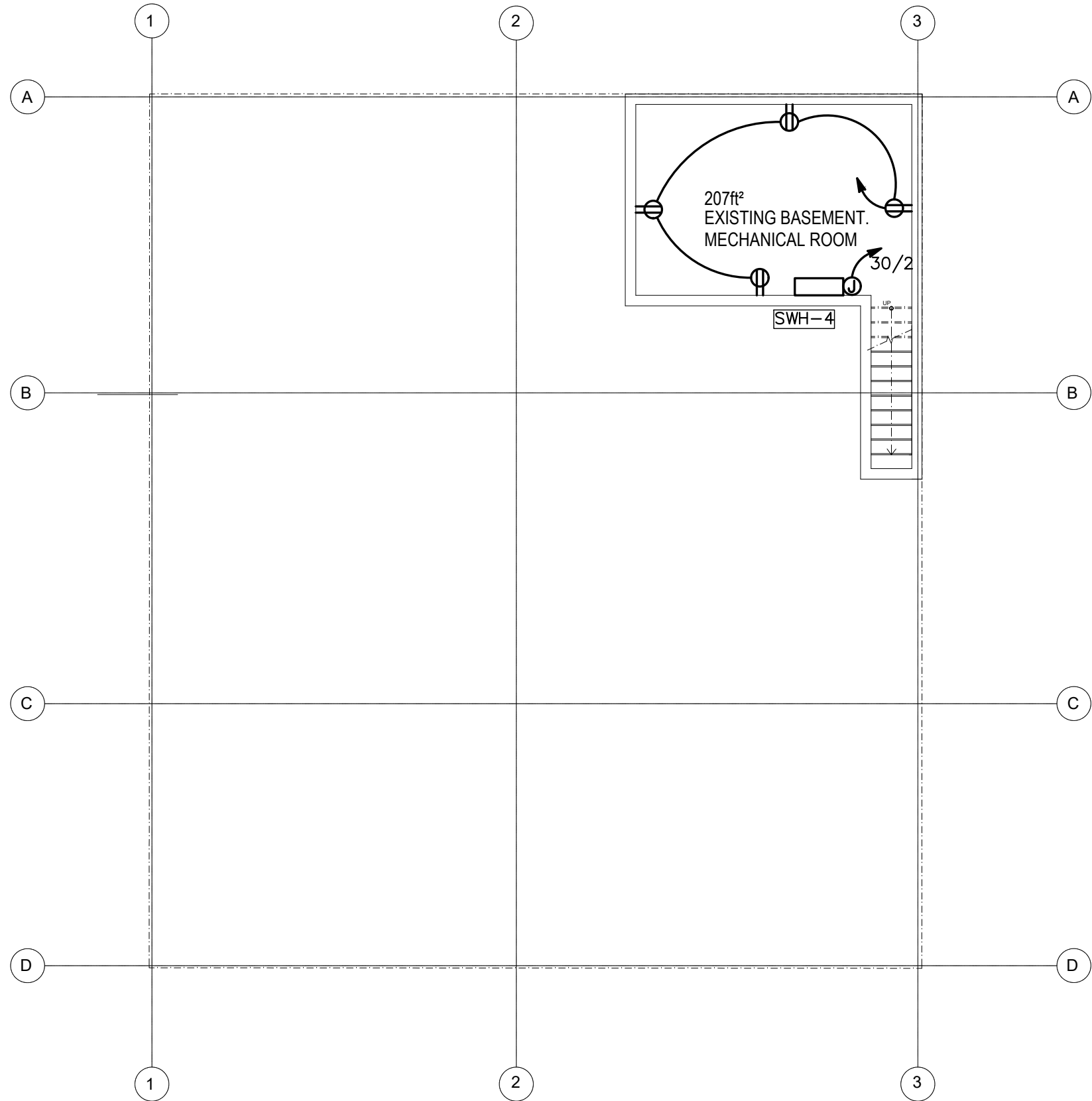
LOCATION OF ALL MECHANICAL EQUIPMENTS AND ELECTRICAL CHARACTERISTICS SHALL BE COORDINATED WITH MECHANICAL CONTRACTOR PRIOR TO ANY WORK DONE. ALL EQUIPMENT RELATING TO MECHANICAL COMPONENTS SHALL BE ORDERED ONLY AFTER THE APPROVAL OF MECHANICAL EQUIPMENT SHOP DRAWINGS

WIRING IN ALL EXPOSED AREAS SHALL BE IN METALLIC RACEWAYS AS WIREMOLD OR EQUAL. RACEWAYS SHALL BE PAINTED AS DIRECTED BY THE ARCHITECT. SURFACE RACEWAYS SHALL CLOSELY FOLLOW THE SURFACE AND WRAP AROUND THE BEAMS AS REQUIRED. PRIOR TO ANY INSTALLATION, SUBMIT LAYOUT SKETCH INDICATING PROPOSED ROUTING FOR APPROVAL. ARCHITECT HAS THE RIGHT TO MODIFY OR CHANGE LAYOUT AS NEEDED. ANY CHANGES PRIOR TO ANY INSTALLATION SHALL BE AT NO CHANGE TO CONTRACT PRICE.

UNLESS NOTED OTHERWISE ALL WIRING SHALL BE #12AWG, Cu, AND FED FROM PANEL TP VIA 20A/1P C.B. CIRCUITS LONGER THAN 100FT SHALL BE #10 CU

NO EXPOSED WIRING IS ALLOWED,  
ALL CONCEALED WIRING SHALL BE IN "MC".  
ALL WIRING IN BLOCK WALLS SHALL BE CONCEALED, RUN IN CONDUIT.

▼: INDICATES TEL/DATA COMBINATION OUTLET WITH CAT 5 TEL/DATA JACK. E.C. SHALL WIRE EACH OUTLET HOME RUN 4 PAIR CAT 6 CLP FOR TELEPHONE AND 4 PAIR CAT 6 CLP FOR DATA TO TELEPHONE AND DATA TERMINATION BOARDS RESPECTIVELY. TERMINATE AT TWO SEPARATE PUNCH DOWN BLOCKS. ALL WIRING AND TERMINATION'S SHALL BE PER CAT 6 SPECIFICATIONS, ALL WIRES SHALL BE PROPERLY LABELED AND RINGED OUT. KEEP WIRES MINIMUM 18" FROM POWER FEEDS AND FIXTURE BALLASTS



Basement

1/8" = 1'0"



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JOHN WOOD

PROJECT TEAM  
Architect Nathália Quirino 857 888-1216  
Engineer Nazieh R. Hammouri (857) 312-9212

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02	Issued for Permit	10/05/2021

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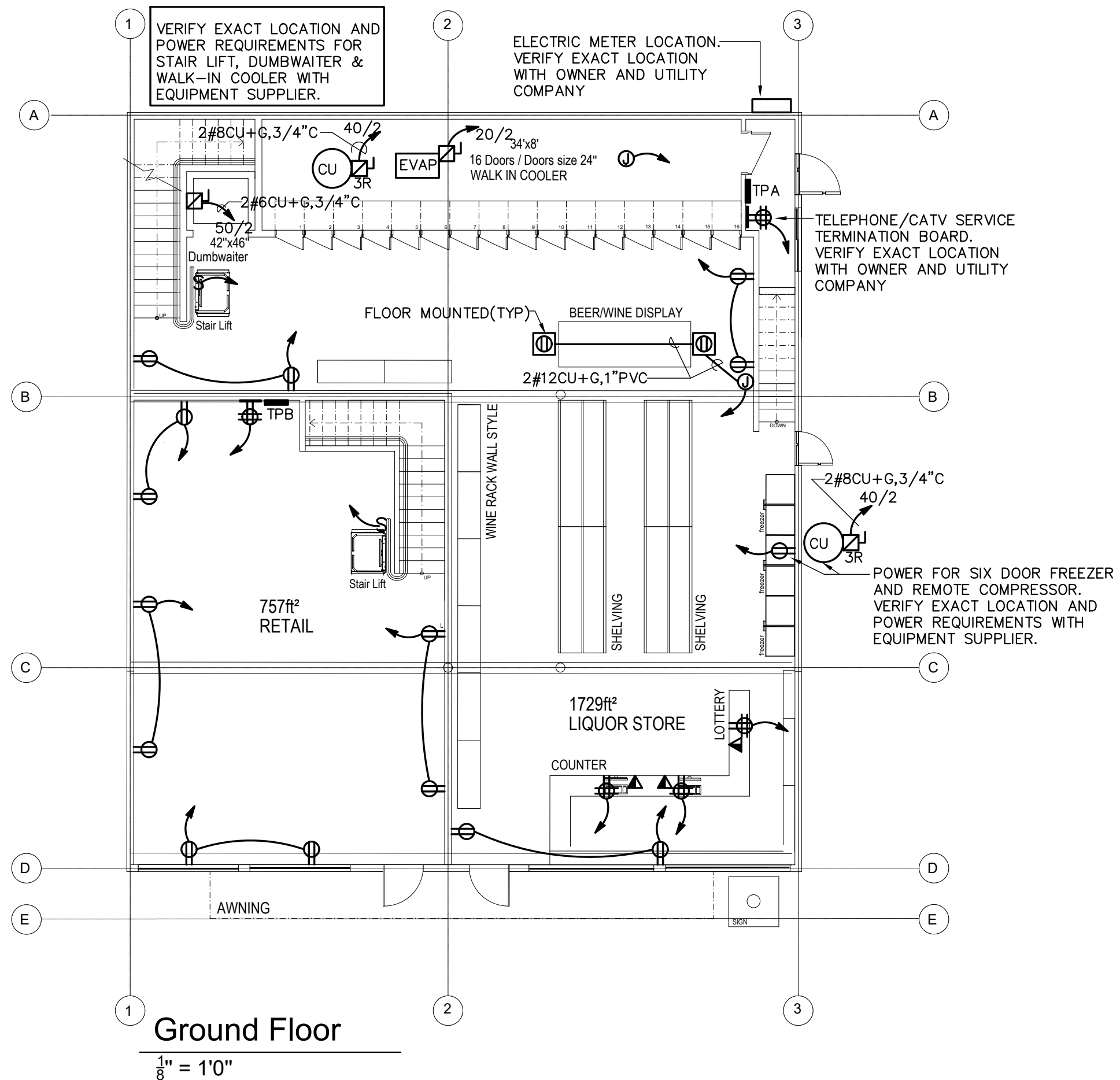
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DRAWING TITLE  
BASEMENT

DRAWING INFORMATION  
POWER PLAN

March 31, 2021  
DATE OF ISSUE  
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DESCRIPTION  
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479J 479J  
PROJECT # FILE NAME

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E104



RISE  
ARCHITECTURE

71B CLINTON ST Malden, MA 02148 Tel: 617 318-6056

PROJECT NAME  
483 BROADWAY - SOMERVILLE, MA 02145

CLIENT  
JOHN WOOD

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GROUND FLOOR

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POWER PLAN

March 31, 2021

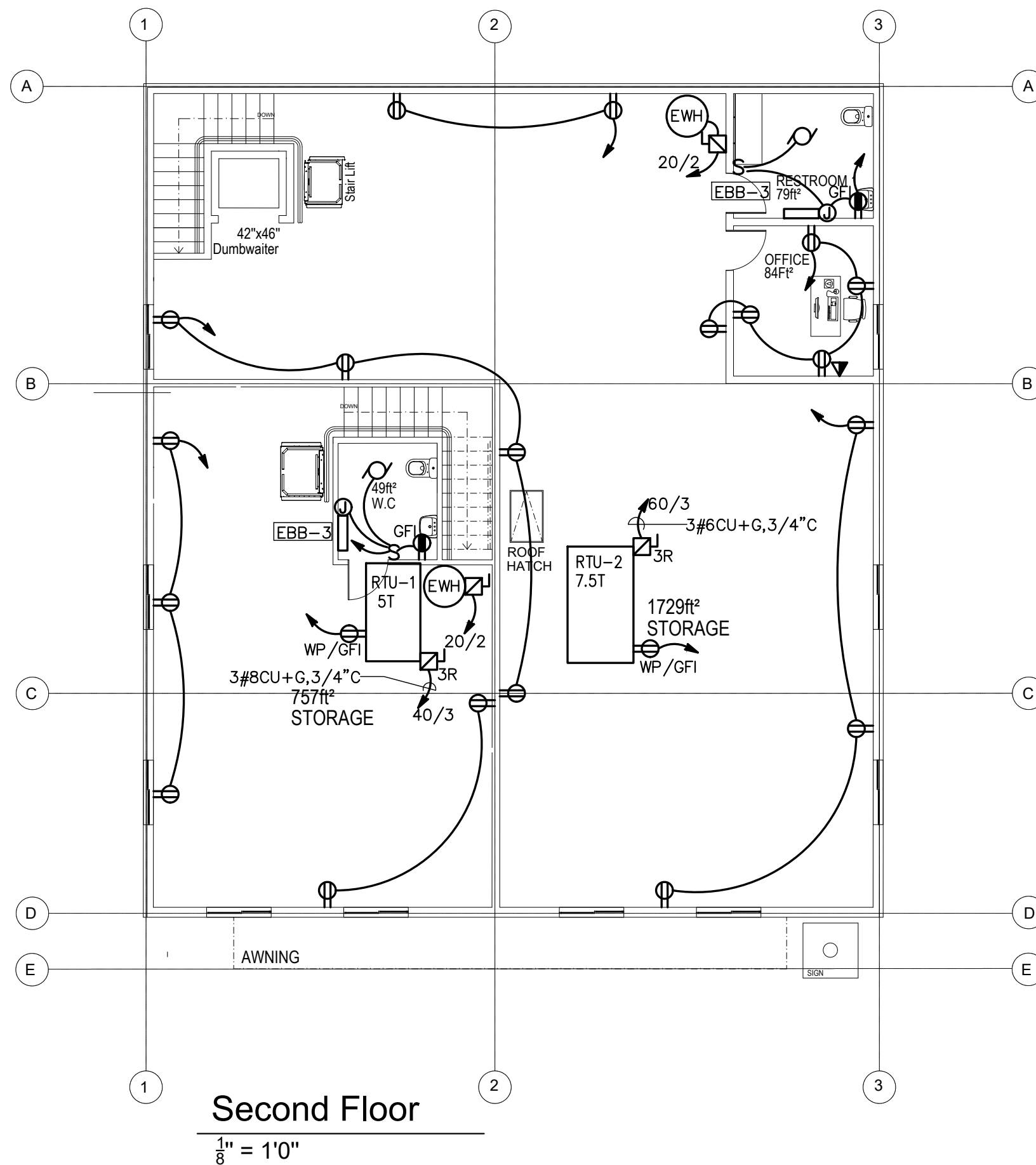
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**FIRST FLOOR**

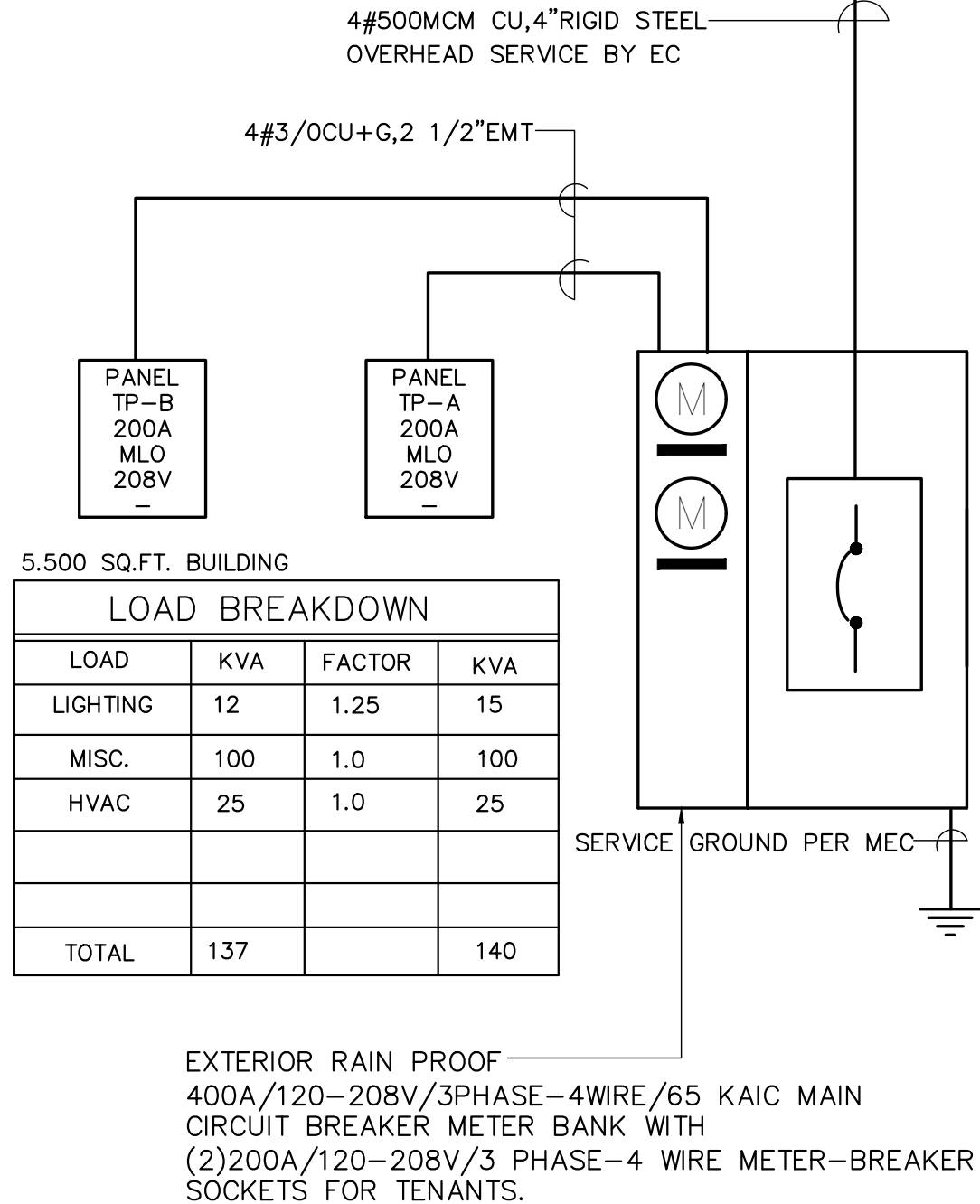
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**POWER PLAN**

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**E106**



EXISTING 400A/3PHASE METER AND PANEL SHALL BE REMOVED. EXISTING 400A/3PHASE OVERHEAD SERVICE SHALL BE RELOCATED TO EXTERIOR OF BUILDING. COORDINATE WITH UTILITY COMPANY AS REQUIRED.



POWER RISER DIAGRAM

NTS

SYMBOL LIST

- CEILING MOUNTED LIGHT FIXTURE.
- WALL MOUNTED LIGHT FIXTURE.
- 2'X2' OR 2'X4' FLUORESCENT LIGHT FIXTURE.
- 1'x4' FLUORESCENT WALL/CEILING MOUNTED LIGHT FIXTURE.
- SINGLE POLE LIGHT SWITCH
- THREE-WAY LIGHT SWITCHES
- DIMMER SWITCH MINIMUM 1000W OR AS REQUIRED PER CIRCUIT
- DUPLEX RECEPTACLE, 120V, 18" AFF.
- DUPLEX RECEPTACLE WITH GROUND FAULT INTERRUPTER 8" ABOVE COUNTER TO 120V DOUBLE DUPLEX CONVENIENCE RECEPTACLE
- DUPLEX RECEPTACLE ABOVE COUNTER, 8" ABOVE COUNTER TO C.
- MOTOR
- FUSED DISCONNECT SWITCH, (3R RAIN-PROOF).
- SYSTEM TYPE SMOKE DETECTOR
- DUCT SMOKE DETECTOR W/REMOTE TEST SWITCH
- HEAT DETECTOR
- FIRE ALARM PULL AND A/V DEVICE
- FIRE ALARM PULL STATION CENTERLINE 4'-0" AFF
- FIRE ALARM AUDIO/VISUAL UNIT. MTD. @ 6'-8" AFF
- FIRE ALARM LIGHT. MTD. @ 6'-8" AFF
- HOMERUN TO PANEL WITH CONDUCTOR.(HOT, NEUTRAL, GROUND)
- JUNCTION BOX
- LIGHTING & POWER PANEL, RECESSED
- FIRE ALARM CONTROL PANEL
- RACEWAY CONCEALED IN CEILING, PLENUM OR WALLS
- UNIVERSAL MOUNTING EXIT SIGN (DOUBLE FACED), ARROWS AS INDICATED.
- EMERGENCY BATTERY UNIT WITH MOUNTING BRACKET AND VOLTMETER.
- OCCUPANCY SENSOR



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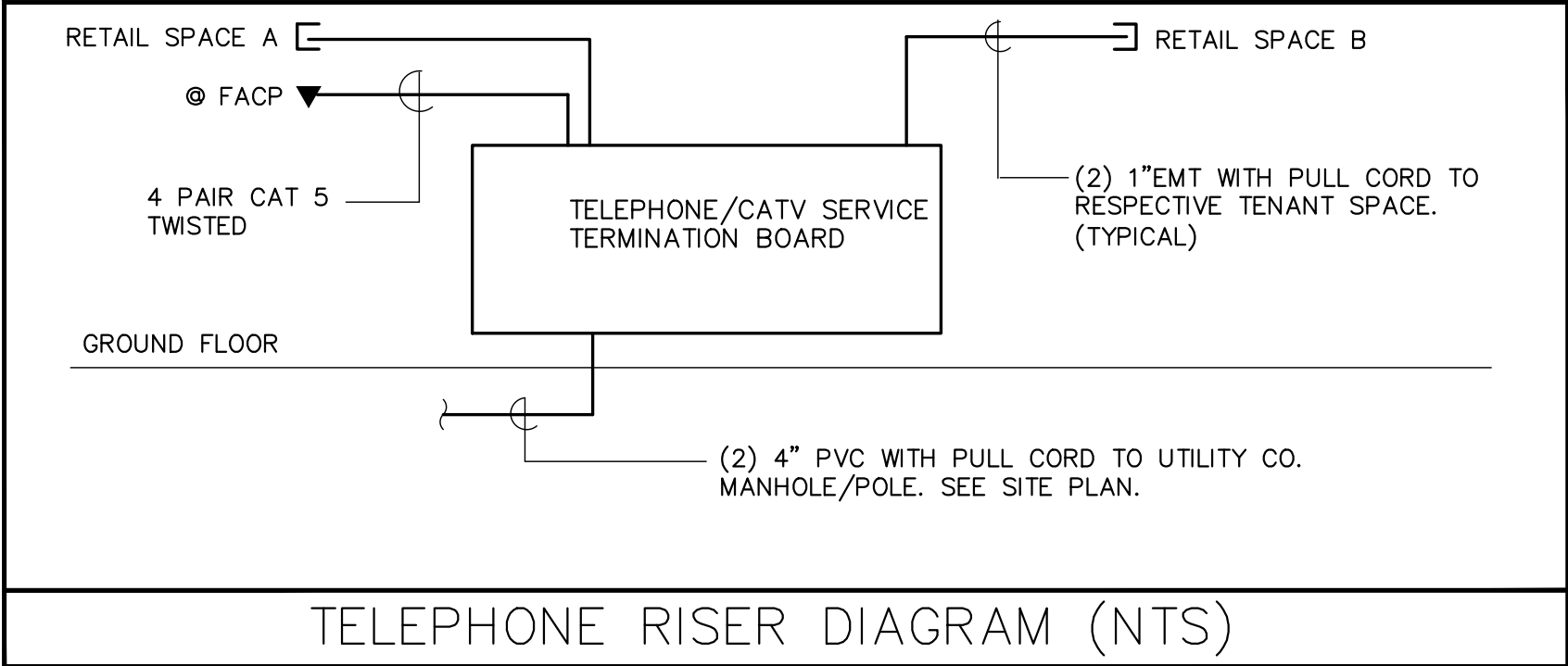
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E107

CONNECT ALL EXIT SIGNS AND EMERGENCY BATTERIES TO LOCAL LIGHTING CIRCUIT AHEAD OF ANY CONTROLS TYPICAL FOR ALL AREAS


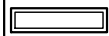



EXACT LOCATION AND TYPES OF ALL LIGHTING FIXTURES, MOUNTING HEIGHTS AND MOUNTING DETAILS SHALL BE COORDINATED WITH ARCHITECTURAL REFLECTED CEILING PLANS AND ANY CONFLICTS SHALL BE BROUGHT TO ARCHITECT’S ATTENTION PRIOR TO ANY WORK DONE. OBTAIN LATEST COPY OF THE CEILING PLAN FROM ARCHITECT PRIOR TO ANY WORK DONE.

TO MEET IECC CONTRACTOR SHALL PROVIDE IN EACH SPACE (EXCEPT CORRIDORS, BATHROOMS AND UTILITY/MECHANICAL ROOMS), CEILING MOUNTED OCCUPANCY SENSOR TO CONTROL LIGHTS IN THE SPACE. INSTALL SELF CONTAINED TYPE OR RELAY TYPE CEILING MOUNT SENSORS AS REQUIRED TO MATCH LOAD AND VOLTAGE CHARACTERISTICS. LOCATE SENSOR IN CEILING AWAY FROM THE DOOR NOT TO PICK UP NUICANCE ACTIVATION.

IN AREAS WHERE FIXTURES ARE MOUNTED INTO INSULATED CEILINGS, THIS CONTRACTOR SHALL PROVIDE HOODS, 3” LARGER THAN FIXTURES TO KEEP INSULATION AWAY FROM THE FIXTURES AND TO MAINTAIN INSULATION INTEGRITY OF THE CEILING, SEE ARCHITECTURAL DRAWINGS FOR AREAS WHERE THESE HOODS MAY BE REQUIRED.



PANEL SCHEDULE							
ITEM	VOLT/PHASE/WIRE	MLO	MCB	CIRC	F: Flush S: Surf.	P: Plug B: Bolt	BRANCH BREAKERS      SPR=SPARE SPC=SPACE
PANEL TP-A	120-208/1/3	200	-	42	S	B	(1)60/3, (1)50/2, (2)40/2, (1)30/2, (2)20/2, (29)20/1
PANEL TP-B	120-208/3/4	200	-	42	S	B	(1)40/3, (1)20/2, (30)20/1

LIGHT FIXTURE SCHEDULE					
TYPE	MANUFACTURER	CATALOG NUMBER	VOLT	LAMP	DESCRIPTION
	LITHONIA	CPX 2X2 3200LM 80CRI 40K SWL MIN10 ZT MVOLT	120	LED	2X2 RECESSED LIGHT (FOR EMERGENCY LIGHT PROVIDE (E10WLCP) OPTION
	LITHONIA	WL430L	120	LED	4' UTILITY LIGHT (FOR EMERGENCY LIGHT PROVIDE (EL14L) OPTION
	CARRY \$100/- PER	FIXTURE	120	LED	EXTERIOR WALL MOUNTED
	CARRY \$100/- PER	FIXTURE	120	LED	EXTERIOR DOWN LIGHT
	EMERGI-LITE	LEDPXN1/2R	120	-	EXIT SIGN WITH BUILT-IN BATTERY

RISE

ARCHITECTURE

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PROJECT NAME

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CLIENT

JOHN WOOD


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Architect      Engineer  
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857 888-1216      (857) 312-9212

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ELECTRICAL

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DETAILS

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E108

ELECTRICAL SPECIFICATIONS

1.1 General

- A. The General Conditions and Drawings issued for this Project shall be considered as part of the Electrical Specifications.
- B. The term "This Contractor" as used under this Section and wherever used on the Drawings shall mean the Electrical Contractor.

1.2 Scope of Work

- A. The work under this Specification includes the furnishing of all labor and material as specified herein and as shown on the Drawings necessary to install a complete and ready for operation. Manufacturer's catalogue numbers are shown for reference purposes only. They are meant to provide a general description of the design and quality of materials required. Equivalent products by other manufacturers will be considered.

1.3 Codes and Specifications

- A. The work shall be conducted in accordance with the latest rules and regulations of the State of MASSACHUSETTS and the local codes as most recently issued, OSHA codes, National Electrical Codes and NFPA.
- B. All exposed wiring shall be in electric metallic tubing. All concealed wiring shall be in accordance with local codes.
- C. All branch circuit conductors shall be copper, minimum #12 AWG size THHN or THWH as required, 600V rated.
- D. All feeder conductors shall be copper, AWG size as noted XHHW insulation, 600V.

1.4 Coordination of Work

- A. The Contractor shall schedule and coordinate his work with all trades involved to insure proper installation and operation.
- B. The Contract Drawings are diagrammatic only and indicate the extent, general locations and arrangement of the piping and wiring of equipment. The exact locations shall be coordinated with Architectural Drawings and Documents of other trades.
- C. This Contractor shall verify fixture mounting and location against plans, elevations and detail drawings. Exact location of all fixtures shall be confirmed with owner's representative prior to rough-in.
- D. Submit Shop Drawings and product data within thirty (30) days after award of the Contract. Check, stamp and mark with project name submittals before transmitting to Architect. Indicate deviations from Contract Documents.
- E. This Contractor shall give notices, file plans, obtain permits and licenses, pay fees and back charges, and obtain the necessary approvals from authorities that have jurisdiction.
- F. Material and equipment shall be UL, ASME and AGA approved for intended service.
- G. Guarantee work in writing for one year from date of final acceptance. Repair or replace defective materials or installation at no cost to Owner. Correct damage caused in making necessary repairs and replacements under guarantee at no cost to the Owner.
- H. Submit guarantee to Architect before final payment.



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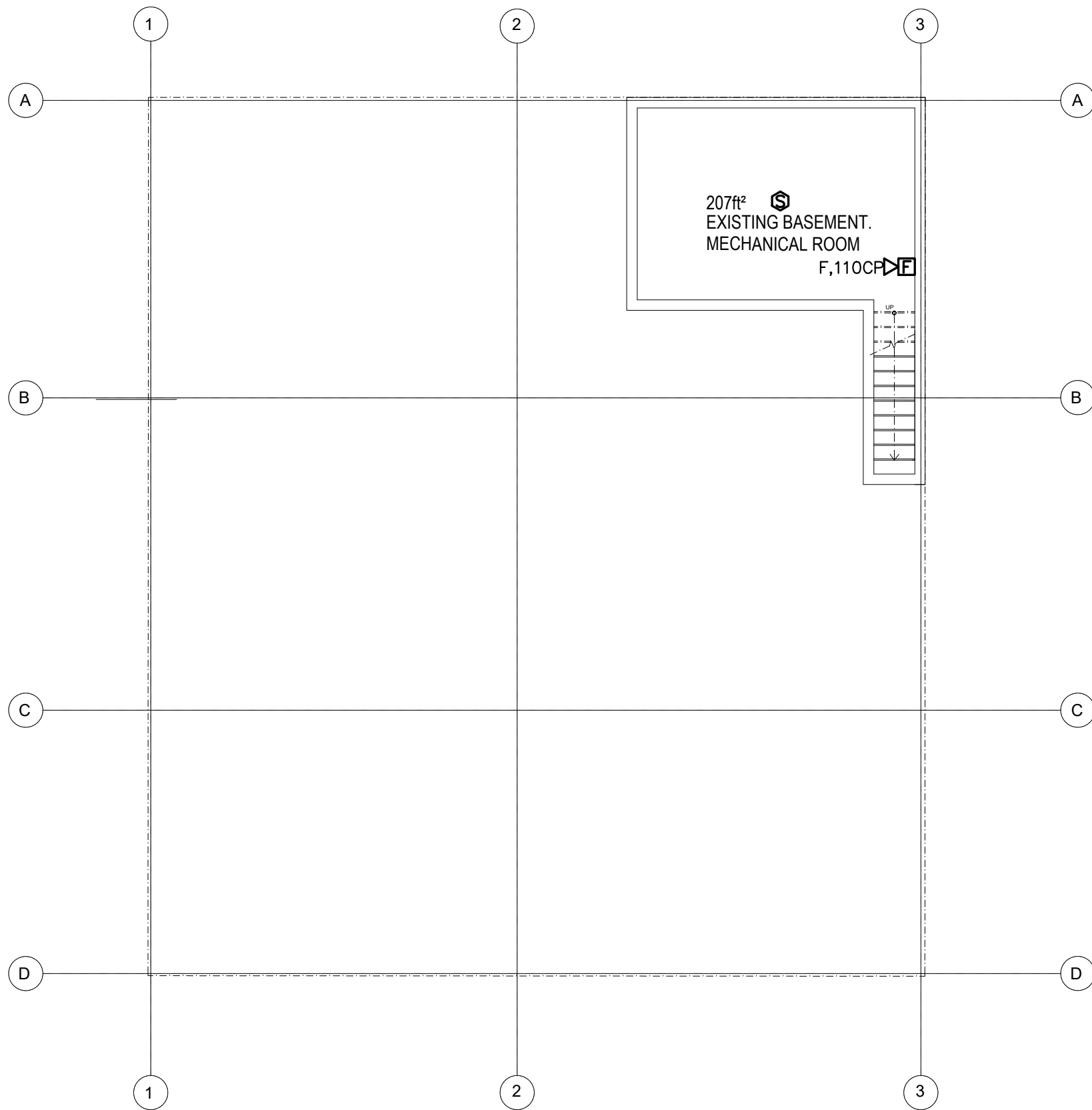
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PROJECT # FILE NAME

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E109





Basement

$\frac{1}{8}'' = 1'0''$



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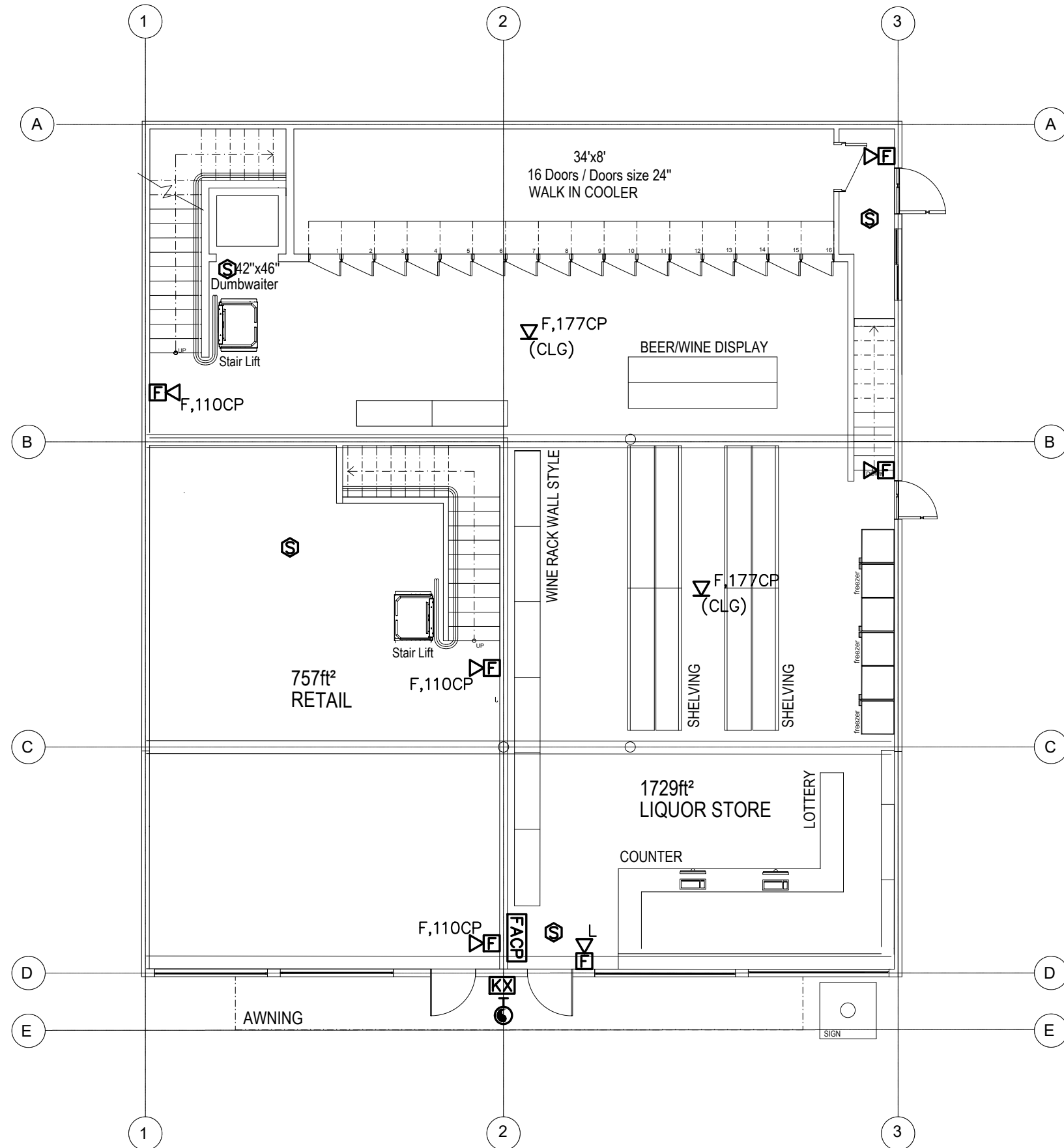
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BASEMENT

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FIRE ALARM PLAN

March 31, 2021  
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PROJECT # FILE NAME

DRAWING NUMBER  
FA101



## Ground Floor

$\frac{1}{8}" = 1'0"$

**RISE**  
ARCHITECTURE

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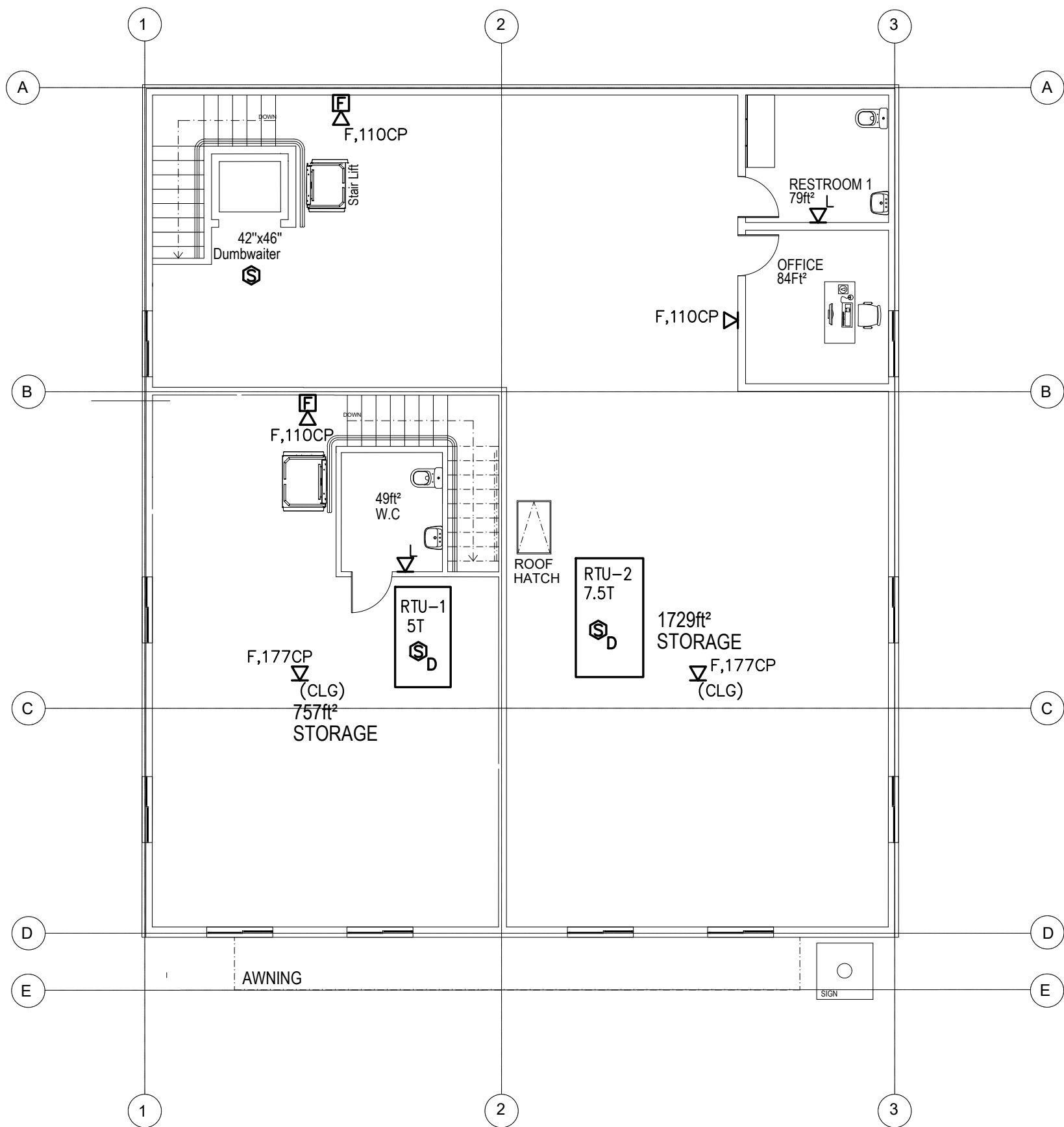


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**GROUND FLOOR**

DRAWING INFORMATION  
**FIRE ALARM PLAN**

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**FA102**



—ALL SMOKE DETECTOR LOCATIONS SHALL BE COORDINATED WITH LIGHTING AND HVAC PLANS IN FIELD SO THAT DETECTORS SHALL BE MINIMUM 3FT AWAY FROM SUPPLY DIFFUSER.

—DUCT SMOKE DETECTORS SHALL BE INSTALLED IN HEATED AREAS AT THE SUPPLY SIDE BEFORE THE FIRST TAKE OFF, MINIMUM 5FT AWAY FROM THE UNIT COIL. REMOTE TEST/INDICATOR LOCATIONS SHALL BE NEXT TO FACP PANEL OR AS DIRECTED BY THE FIRE DEPARTMENT.

—A/V DEVICE LOCATIONS ARE SHOWN BASED ON DISTANCE REQUIREMENTS. CONTRACTOR SHALL COORDINATE PHYSICAL STRUCTURES SO THAT VISIBLTY WILL BE MAINTAINED. PROPOSED CHANGES SHALL BE FORWARDED TO ARCHITECT/ENGINEER FOR APPROVAL.



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FIRST FLOOR

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FIRE ALARM PLAN


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FA103





CARRY THE COST OF BDA SYSTEM AS DEDUCT ALTERNATE BUT MINIMUM PROVIDE ALL NECESSARY STRUCTURE AND RACEWAYS TO BE ABLE TO INSTALL BDA SYSTEM PER IBC 915.2&3 UPON COMPLETION OF THE BUILDING EMPLOY A THIRD PARTY TESTING AGENCY TO ESTABLISH THE NEED TO INSTALL HEAD END EQUIPMENT OF A BDA SYSTEM TO MEET EMERGENCY SERVICES COMMUNICATION NEEDS AS TO BE DETERMINED BY THE FD.  
PROVIDE ADD ALTERNATE COST FOR ALL HARDWARE COMPONENTS AND INSTALLATION.  
RUN CONDUITS IN 2HR RATED ENCLOSURE.  
IF EQUIPMENT IS TO BE INSTALLED IT WILL BE HOUSED IN 2HR ENCLOSURE  
CARRY THE COST OF TESTING AGENCY IN BASE BID


FIRE ALARM SYMBOL LIST


- 


SYSTEM TYPE SMOKE DETECTOR, ANALOG ADDRESSABLE
- 

HEAT DETECTOR, ADDRESSABLE TYPE
- 

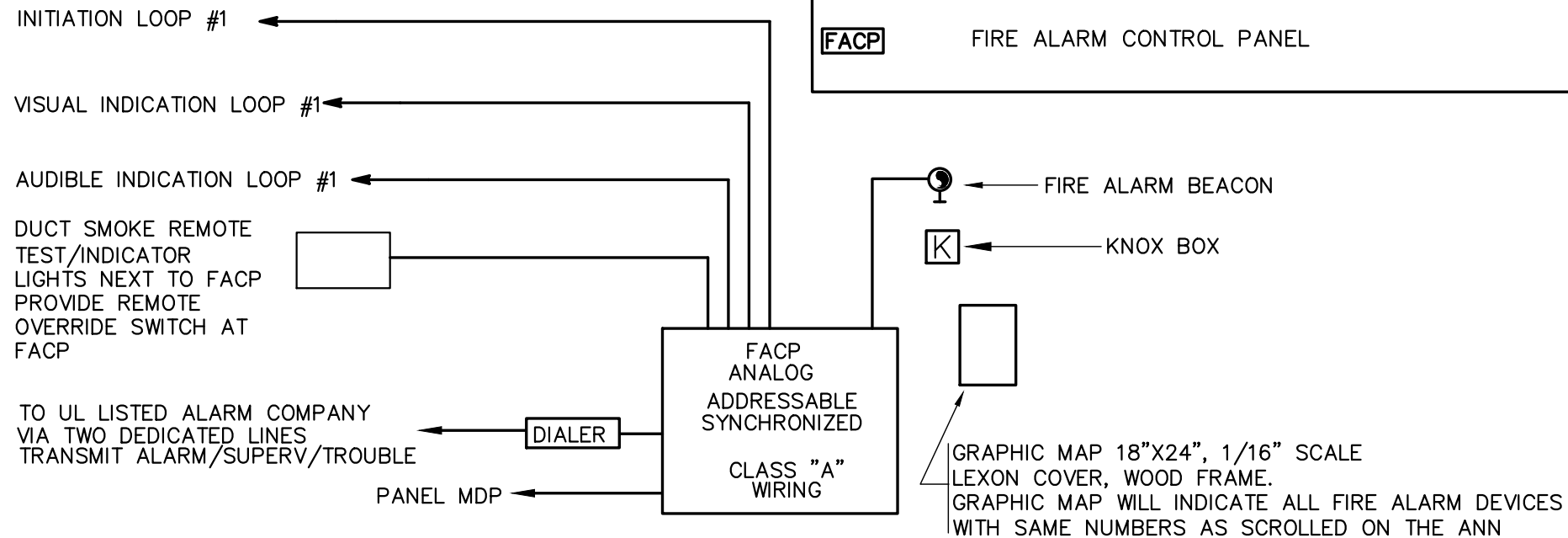
FIRE ALARM PULL AND A/V DEVICE MOUNTING HEIGHT SHALL BE COMPLY WITH NFPA 72.
- 

FIRE ALARM PULL STATION MOUNTING HEIGHT SHALL BE COMPLY WITH NFPA 72.  
(NOT LESS THAN 42 INCHES AND NOT MORE THAN 48 INCHES ABOVE FINISHED FLOOR.)
- 

FIRE ALARM HORN/STROBE(SYNCHRONIZED). 15 CD IN CORRIDORS, MIN 75 CD IN COMMON AREAS.  
THE ENTIRE STROBE LENS TO BE LOCATED NOT LESS THAN 80 INCHES ABOVE FINISHED FLOOR  
AND NOT MORE THAN 96 INCHES ABOVE FINISHED FLOOR AND COMPLY WITH NFPA 72.
- 

FIRE ALARM STROBE ONLY (SYNCHRONIZED). 15 CD IN CORRIDORS, MIN 75 CD IN COMMON AREAS  
THE ENTIRE STROBE LENS TO BE LOCATED NOT LESS THAN 80 INCHES ABOVE FINISHED FLOOR  
AND NOT MORE THAN 96 INCHES ABOVE FINISHED FLOOR AND COMPLY WITH NFPA 72.
- 

FIRE ALARM CONTROL PANEL



NOTES

- PROVIDE COMPLETE INTERLOCK WIRING FOR HVAC UNIT SHUT DOWN
- SEE FLOOR PLANS FOR DETECTOR TYPES AND LOCATIONS AND QUANTITIES.
- PROVIDE BATTERY CALCULATIONS AND ONE LINE WIRING DIAGRAM
- PROVIDE RADIO SIGNAL COVERAGE THROUGHOUT BUILDING AS REQUIRED PER 915.2&3
- PROVIDE TIER 2 DRAWINGS WITH COMPLETE WIRING DIAGRAMS AND DEVICE ADDRESSES AS REQUIRED FOR FIRE DEPARTMENT APPLICATION
- PROVIDE POWER BOOSTERS AS REQUIRED, PROVIDE SMOKE DETECTOR AT EACH BOOSTER LOCATION AND FACP LOCATION

SEQUENCE OF OPERATION

- UPON ACTIVATION OF ANY FIRE DETECTOR OR MANUAL PULL STATION
- FIRE ALARM PANEL WILL TRIP AND CALL FIRE DEPARTMENT
  - ALL AUDIO DEVICES WILL INITIATE ALARM SIGNAL TO ALERT ALL OCCUPANTS FOR ALARM CONDITION IN THE BUILDING FOR FULL EVACUATION.
  - ALL VISUAL DEVICES WILL ACTIVATE, THEY SHALL BE SYNCHRONIZED TYPE.
  - AIR HANDLER UNITS THAT HAS DUCT SMOKE DETECTORS WILL SHUT DOWN UPON ACTIVATION OF THE DUCT SMOKE DETECTOR.

FIRE ALARM SYSTEM RISER DIAGRAM



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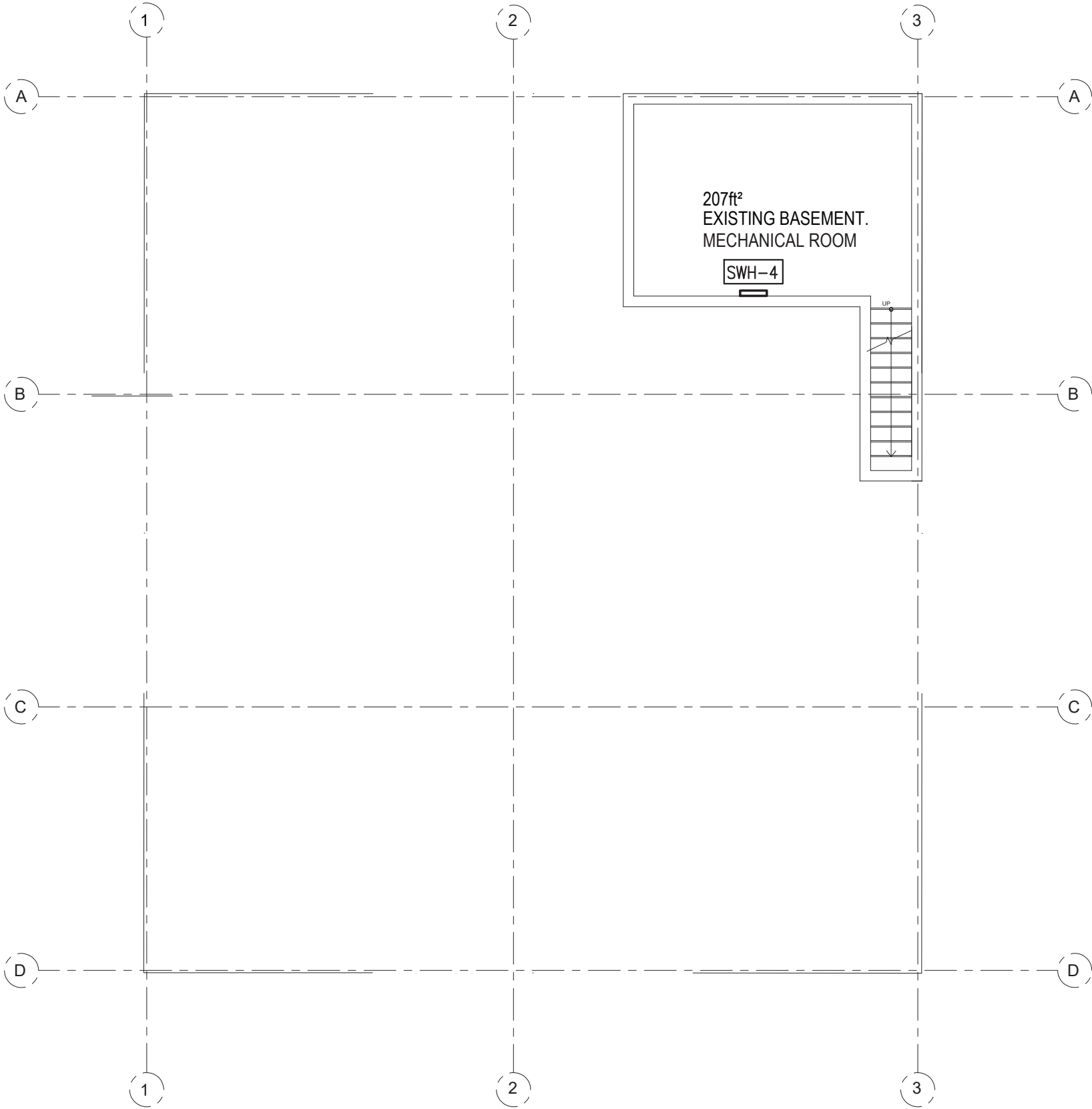
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FIRE ALARM

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FA104



1

Basement

1/8" = 1'0"



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**RISE**  
ARCHITECTURE

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**BASEMENT  
HVAC PLAN**

DRAWING INFORMATION

December 30, 2020

DATE OF ISSUE

Issued for permit

DESCRIPTION

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479J	479J
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**H101**

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FIRST FLOOR  
HVAC PLAN

DRAWING INFORMATION

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SCALE

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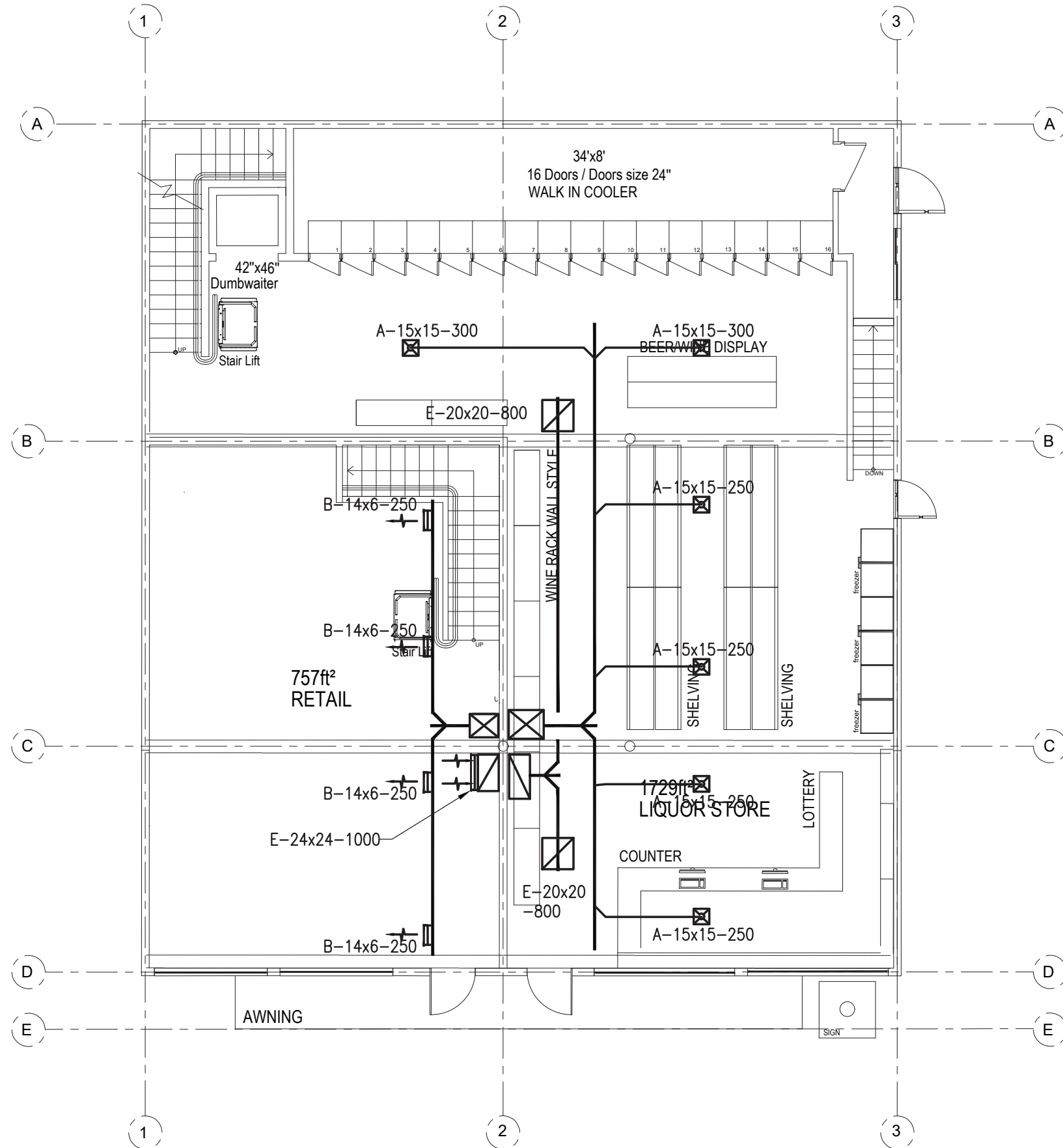
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PROJECT #

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H102



1

Ground Floor

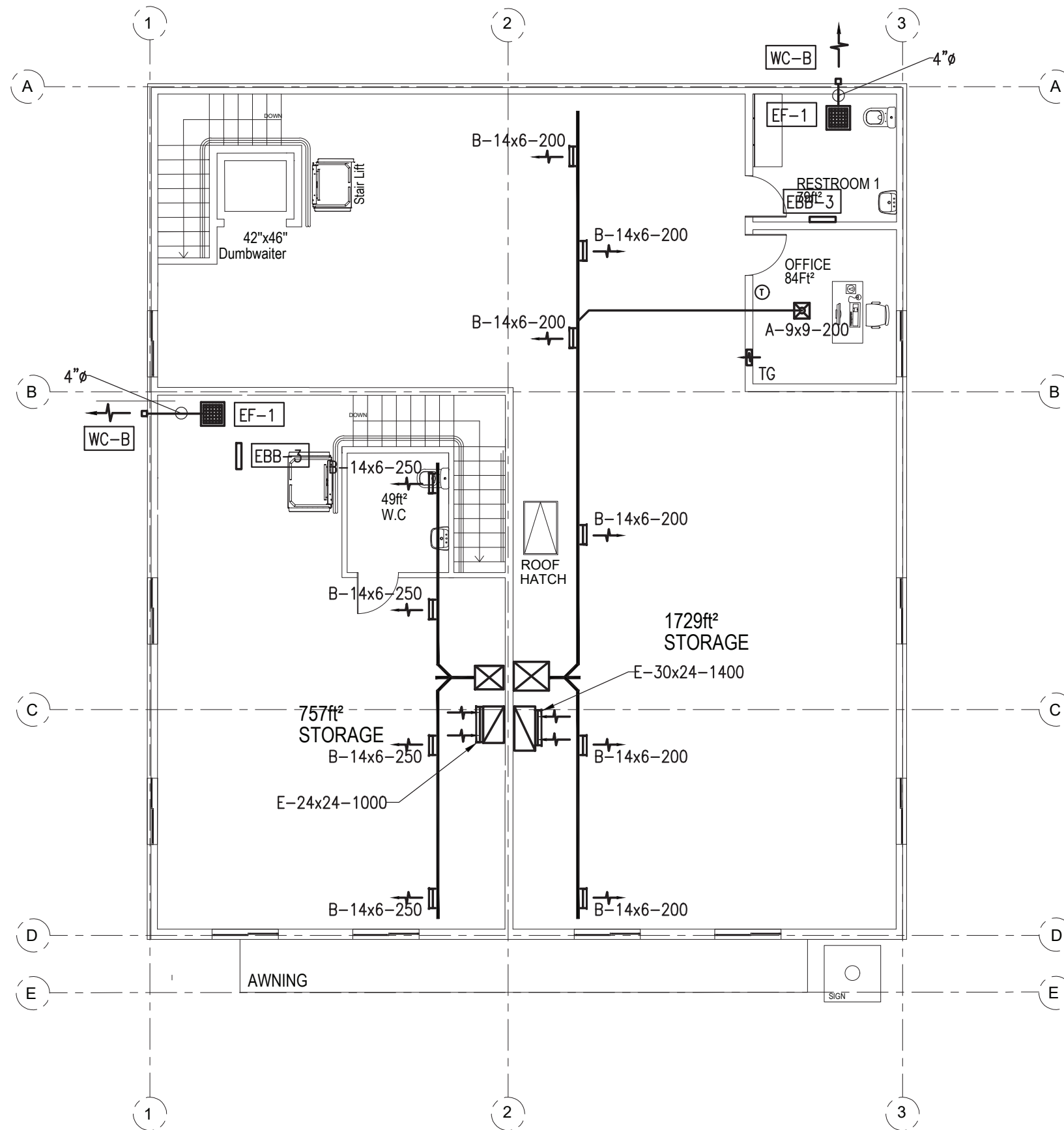
$\frac{1}{8}" = 1'0"$



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1

Second Floor

1/8" = 1'0"



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PROJECT NAME  
483 BROADWAY - SOMERVILLE, MA 02145  
CLIENT  
**JOHN WOOD**

PROJECT TEAM  
Architect Nathália Quirino 857 888-1216  
Engineer Nazieh R. Hammouri (857) 312-9212

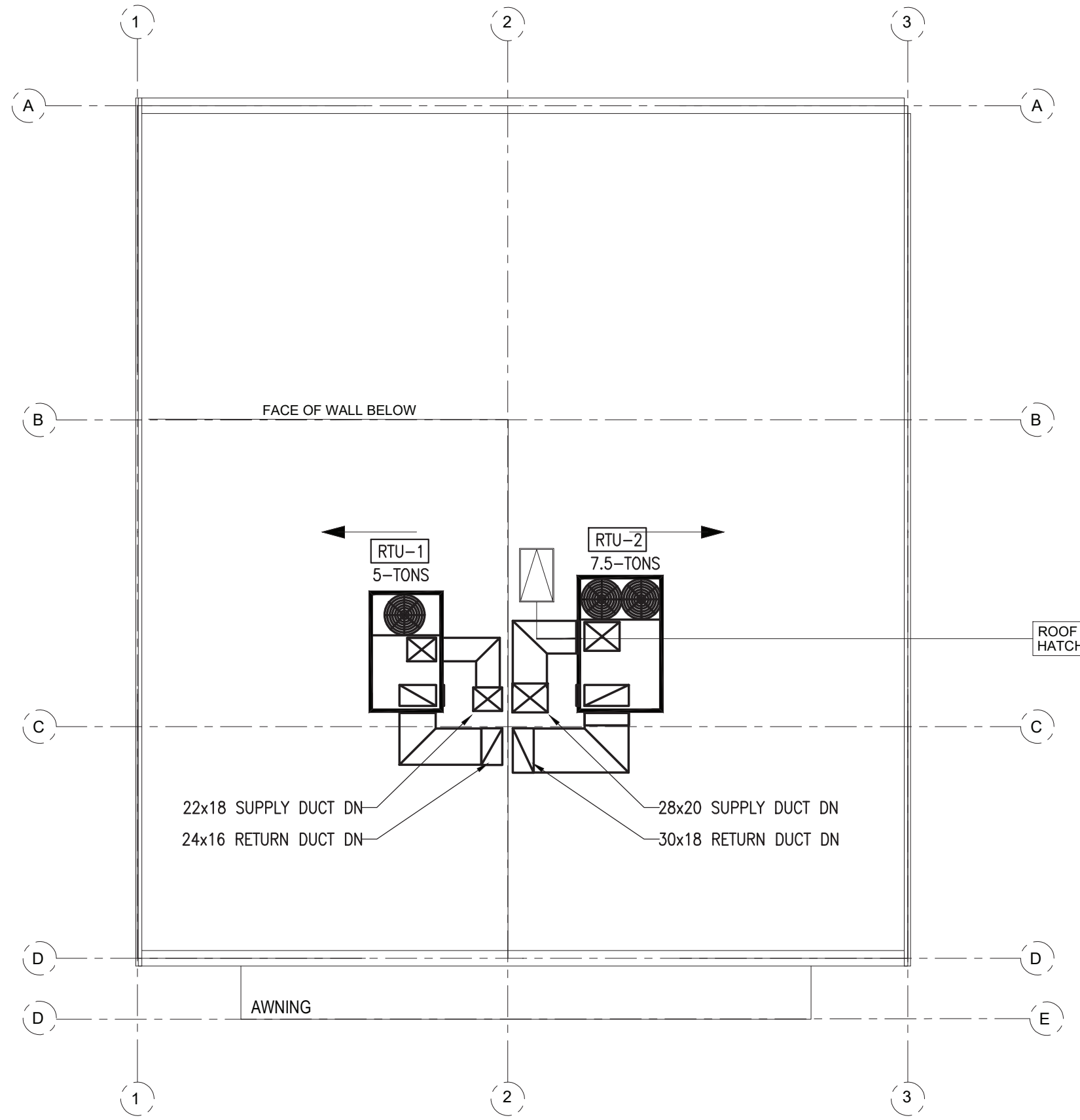
No.	Description	Date
01	Issued for permit	12/10/2020
02	Issued for Permit	04/19/2021
02	Issued for Permit	10/05/2021

DRAWING TITLE  
**SECOND FLOOR  
HVAC PLAN**

DRAWING INFORMATION

December 30, 2020  
DATE OF ISSUE  
Issued for permit  
DESCRIPTION  
As indicated OJ  
SCALE DRAWN BY  
479J 479J  
PROJECT # FILE NAME  
DRAWING NUMBER

H103



1 Roof Floor  
1/8" = 1'0"



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PROJECT TEAM

Architect	Engineer
Nathália Quirino	Nazieh R. Hammouri
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DRAWING TITLE

**ROOF  
HVAC PLAN**

DRAWING INFORMATION

December 30, 2020

DATE OF ISSUE

Issued for permit

DESCRIPTION

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479J	479J
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**H104**

GENERAL NOTES

- 1. PROVIDE ALL LABOR, MATERIALS AND EQUIPMENT NECESSARY TO EXECUTE THE WORK SHOWN AND DESCRIBED. INSTALLATION OF MATERIALS SHALL MEET ALL APPLICABLE STATE, FEDERAL AND MUNICIPAL REQUIREMENTS.
- 2. OBTAIN PERMITS AND PAY ALL FEES FOR WORK AND REQUIRED INSPECTIONS.
- 3. MAINTAIN LIABILITY INSURANCE TO PROTECT OWNER AND THE CONTRACTOR FROM ANY AND ALL CLAIMS UNDER THE WORKER’S COMPENSATION ACT.
- 4. THE DRAWINGS SHALL CONSIDERED DIAGRAMMATIC ONLY. ALL MEASUREMENTS SHALL BE TAKEN FROM BUILDING SITE AND ARCHITECT’S DRAWINGS.
- 5. PROVIDE TEMPORARY MATERIAL STORAGE AS REQUIRED AND BE RESPONSIBLE FOR ANY LOSS OR DAMAGE THERETO.
- 6. SUBMIT DIGITAL COPIES OF SHOP DRAWINGS FOR REVIEW COVERING MAJOR MANUFACTURED ITEMS, IE. AIR HANDLING UNITS, REGISTERS & DIFFUSERS, WIRING DIAGRAMS, ETC.
- 7. KEEP ACCURATE RECORD OF "AS-BUILT" DRAWINGS AND SUBMIT THESE BEFORE FINAL CERTIFICATE OF COMPLETION.
- 8. ON COMPLETION OF THE WORK, REMOVE FROM THE PREMISES ALL TOOLS, DEBRIS, SURPLUS AND WASTE MATERIALS RESULTING FROM OPERATIONS UNDER THIS SECTION. CLEAN ALL EQUIPMENT AND LEAVE ALL ITEMS IN PERFECT ORDER READY FOR OPERATION.
- 9. AFTER ACCEPTANCE, INSTRUCT OWNER IN EQUIPMENT OPERATION AND PROVIDE HIM WITH OPERATING AND MAINTENANCE MANUALS STANDARDS AND EXTENDED WARRANTY DOCUMENTS, INSPECTION CERTIFICATES AND COPIES OF SHOP DRAWINGS OF INSTALLED EQUIPMENT.
- 10. THE CONTRACTOR SHALL, BEFORE FINAL PAYMENT IS MADE, GUARANTEE ALL MATERIALS AND WORKMANSHIP SUPPLIED BY HIM IN THE PERFORMANCE OF THIS CONTRACT FOR A PERIOD OF ONE YEAR FROM DATE OF FINAL ACCEPTANCE AND SHALL, WHEN CALLED UPON, MAKE GOOD WITHOUT FURTHER COST TO THE OWNER SUCH DEFECTS AS MAY APPEAR WITHIN THIS PERIOD.
- 11. SUPPLY AND INSTALL DUCTWORK AS INDICATED ON DRAWING. DUCTWORK SHALL BE FABRICATED AND INSTALLED IN STRICT ACCORDANCE WITH LATEST ASHRAE & SMACNA STANDARDS AND SHALL BE MANUFACTURED OF GALVANIZED STEEL UNLESS SPECIFICALLY NOTED OTHERWISE.
- 12. ADJUST ALL FAN SPEEDS TO DELIVER SHOWN AIR QUANTITIES. BALANCE ALL AIR SYSTEMS AND SUPPLY WRITTEN AIR BALANCING REPORTS IN TRIPPLICATE. INCLUDE NECESSARY SPARE BELTS AND PULLEYS FOR FIELD ADJUSTMENT.
- 13. ALL VALVES AND FITTINGS SHALL BE SUITABLE FOR THIS PARTICULAR PIPING APPLICATION AND MINIMUM 150LBS PRESSURE RATING.

- 14. ALL DUCTWORK SHALL BE: 24 GAUGE UP TO 36 INCHES WIDE, 22 GAUGE 31 INCHES WIDE TO 60 INCHES WIDE, ROUND DUCT SHALL BE 24 GAUGE UO TO 10 INCHES DIAMETER, 22 GAUGE 11 TO 20 INCHES DIAMETER, 20 GAUGE ABOVE 20 INCHJES DIAMETER; ALL GALVINIZED SHEETMETAL. SEAL ALL JOINTS AND SLIPS WITH EC 800 OR OTHER SUITABLE SEALANT. ALL LONGITUDINAL SEAMS SHALL BE PITTSBURG LOCKING TAPE. ALL SLIPS SHALL BE REINFORCED BAR TYPE. FABRICATE AND INSTALL ALL DUCTS IN COMPLIANCE WITH SMACNA STANDARDS FOR LOW PRESURE DUCT CONSTRUCTION.
- 15. ALL DUCT CONNECTIONS TO FAN DRIVEN UNITS SHALL BE MADE WITH A FIREPROOF FLEXIBLE DUCT CONNECTOR.
- 16. BEFORE THE H.V.A.C. SYSTEM IS OPERATED, ALL DUCTS SHALL BE BLOWN OUT & THOUGHLY CLEANED. SYSTEM SHALL BE TEST AT FULL PRESSURE & ALL LEAKS & FAULTS CORRECTED.
- 17. INSTALL ALL PIPING AND VALVES AS HIGH AS POSSIBLE.
- 18. BALANCE THE AIR SYSTEM AS PER ASSOCIATED AIR BALANCING COUNCILS LATEST STANDARDS. SUBMIT BALANCING REPORT FOR ENGINEERS APPROVAL.
- 19. THESE DRAWINGS ARE DIAGRAMMATIC. FIELD CONDITIONS SHALL DETERMINE ACTUAL LOCATION OF ALL PIPING AND DUCTWORK.
- 20. ALL DUCT DIMENSIONS ARE CLEAR INSIDE DIMENSIONS.
- 21. DUCT CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LOCAL MECHANICAL CODE AND THE SHEET METAL AND AIR CONDITIONING CONTRACTORS NATIONAL ASSOCIATION DUCT CONSTRUCTION STANDARDS UNLESS OTHERWISE INDICATED IN THESE DRAWINGS OR IN THE SPECIFICATIONS.
- 22. ALL DUCT SUPPORTS SHALL BE CONSTRUCTED AND INSTALLED IN ACCORDANCE WITH SMACNA STANDARDS UNLESS OTHERWISE NOTED.

GENERAL NOTES

SHOULD ANY CONTRADICTION, AMBIGUITY, ERROR, INCONSISTENCY, OMISSION OR INCOMPLETE SYSTEM APPEAR IN OR BETWEEN ANY OF CONTRACT DOCUMENTS THE CONTRACTOR SHALL, BEFORE SUBMITTING THE FINAL BID AND SIGNING THE CONTRACT FOR CONSTRUCTION, NOTIFY THE ARCHITECT AND REQUEST A WRITTEN RESOLUTION AS TO WHICH METHODS OR MATERIALS WILL BE REQUIRED. IN THE EVENT OF CONFLICTING REQUIREMENTS OF STANDARDS , DRAWINGS AND SPECIFICATIONS, THE CONTRACTOR SHALL COMPLY WITH THE MORE STRINGENT REQUIREMENTS. BEFORE SUBMITTING THE FINAL BID AND THE SIGNING THE CONTRACT FOR THE CONSTRUCTION THE CONTRACTOR SHALL OBTAIN A WRITTEN INTERPRETATION FROM THE ARCHITECT, IN NO CASE SHALL THE CONTRACTOR PROCEED WITH THE AFFECTED WORK UNTIL ADVISED BY THE ARCHITECT.

IF THE CONTRACTOR FAILS TO MAKE A REQUEST FOR INTERPRETATION OR RESOLUTION NO EXCUSE WILL BE ACCEPTED FOR FAILURE TO CARRY OUT THE WORK IN A SATISFACTORY MANNER, AS INTERPRETED BY THE ARCHITECT. THIS GENERALLY MEANS THE USE OF THE HIGHEST QUALITY MATERIAL, MOST EXPENSIVE WAY OF PERFORMING WORK AND PROVIDING COMPLETE FUNCTIONING SYSTEM FOR PROPER OPERATION.

EACH AND EVERY TRADE OR SUBCONTRACTOR WILL BE DEEMED TO HAVE FAMILIARIZED THEMSELVES WITH ALL THE CONTRACT DOCUMENTS OF THIS PROJECT, INCLUDING ARCHITECTURAL, STRUCTURAL, MECHANICAL, ELECTRICAL AND SITE WORK, AND TO HAVE VISITED THE SITE, SO AS TO AVOID ERROR, OMISSIONS AND MISINTERPRETATIONS. RELATED INFORMATION MAY BE PROVIDED ON CONTRACT DOCUMENTS OTHER THAN THOSE ASSOCIATED WITH THE SUBCONTRACTOR’S TRADE. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING RELATED WORK OF ALL THE CONTRACT DOCUMENTS. NO ADDITIONAL COMPENSATION WILL BE AUTHORIZED FOR ALLEGED ERRORS, OMISSIONS AND MISINTERPRETATIONS WHETHER THEY ARE A RESULT OF FAILURE TO OBSERVE THIS REQUIREMENT OR NOT.



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SCALE	DRAWN BY
479J	479J
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H201

CONSTRUCTION NOTES

- ALL CEILING MOUNTED HVAC UNITS SHALL BE HUNG FROM STRUCTURAL STEEL WITH SPRING ISOLATORS,
- PROVIDE FLEXIBLE DUCT CONNECTIONS AT HVAC UNIT, AND ALL FANS
- PROVIDE ISOLATION VALVES, CONTROL VALVES, DRAIN AND STRAINER FOR ALL WATER BASED HVAC UNITS.
- PROVIDE SECONDARY DRAIN PAN WITH LEAK DETECTOR TO SHUT DOWN HVAC UNIT.
- MAINTAIN ACCESS DOORS AND CODE REQUIRED CLEARANCES FOR ALL FILTER REPLACEMENT, EQUIPMENT REPAIR AND ELECTRICAL CONTROLS,
- PRIOR TO ANY INSTALLATION, COORDINATE CLEARANCES WITH ALL TRADES.
- ALL CONDENSATE DRAINS SHALL RUN TO NEAREST STORM CONNECTION PROVIDED BY P.C. REFER TO PLUMBING DRAWINGS
- ALL CONDENSING UNITS SHALL BE MOUNTED ON CONCRETE PAD ON VIBRATION PADS, OR MOUNTED ON SLEEPERS ANCHORED TO ROOF.
- ALL SPLIT SYSTEM CONDENSER UNITS IF LOCATED AWAY FROM THE BUILDING SHALL BE PIPED UNDERGROUND UP TO BUILDING, PROVIDE MINIMUM 18” COVER.
- PROVIDE MAINTENANCE PADS MINIMUM 4” HIGH FOR ALL FLOOR-MOUNTED EQUIPMENT PUMPS AND BOILERS.
- PROVIDE 13 FILTERS FOR ALL INDOOR UNITS, MERV 8 FOR ESTAR/LEED BUILDINGS
- PROVIDE 11 FILTERS FOR ALL OUTSIDE AIR UNITS, MERV 8 FOR ESTAR/LEED BUILDINGS
- ALL PIPING CONNECTED TO VIBRATION-ISOLATED EQUIPMENT TO BE ISOLATED BY MEANS OF VIBRATION ISOLATORS, RESILIENT LATERAL SUPPORTS AND RESILIENT PENETRATION SLEEVE /SEALS. THIS APPLIES TO FIRST 50 FEET OF TOTAL PIPE LENGTH OR THE ENTIRE PIPE WITHIN MECH. ROOM (WHICHEVER IS LONGER). PIPES THAT ARE 4” DIAMETER OR LARGER TO BE ISOLATED THROUGHT THE BUILDING REFER TO SPEC SECTION 230548 FOR ADDITIONAL INFORMATION
- PROVIDE EXPANSION LOOPS AS REQUIRED
- ALL FRESH AIR DUCTS SHALL HAVE MOTORIZED DAMPERS INTERLOCKED WITH UNIT AND HAVE VOLUME DAMPERS

HVAC CONTRACTOR’S NOTES:

ALL OF THE HVAC WORK IS NOT NECESSARILY SHOWN OR NOTED ON THESE DRAWINGS. THE CONTRACTORS SHALL VISIT THE JOB SITE AND VERIFY ALL EXISTING CONDITIONS RELATED TO THE WORK PROPER TO BIDDING. THOSE ITEMS NOT SHOWN OR NOTED, BUT DEEMED NECESSARY FOR REMOVAL OR RELOCATION BY THE OWNER OR HIS REPRESENTATIVE SHALL BE PART OF THIS CONTRACT. THE SUBMISSION OF THE PROPOSALS SHALL BE CONSIDERED EVIDENCE THAT THE CONTRACTOR HAVE VISITED THE SITE. NO EXTRA PAYMENTS WILL BE ALLOWED, DUE TO EXTRA WORK MADE NECESSARY BY THE CONTRACTOR’S FAILURE TO VISIT THE JOB SITE.

INSULATION NOTES

CONTRACTOR SHALL FOLLOW THE MOST STRINGENT INSULATION REQUIREMENT FOR EACH ITEM

THE FOLLOWING SYSTEMS SHALL BE INSULATED.  
DUCT LINER SHALL BE CLOSED CELL TYPE, GERM PROOF

IECC 2015 REQUIREMENTS:

- HEATING HOT WATER MAINS AND BRANCHES:  
PIPING < 1” REQUIRES 1 1/2” INSULATION  
PIPING > 1½” REQUIRES 2” INSULATION
- SUPPLY & RETURN DUCTWORK FROM HVAC UNITS:  
1 1/2” INSULATION MIN. R-6

LEED/ASHRAE 2013 REQUIREMENTS:

- HEATING HOT WATER MAINS AND BRANCHES:  
PIPING < 1 1/2” REQUIRES 1½” INSULATION  
PIPING > 1½” REQUIRES 2” INSULATION
- SUPPLY & RETURN DUCTWORK FROM HVAC UNITS:  
1” INSULATION MIN. R-6

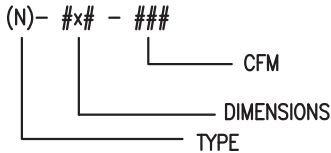
GENERAL INSULATION REQUIREMENTS:

- ALL LINED SUPPLY, RETURN AND TRANSFER DUCTWORK SHALL BE 1” DUCT LINER  
-DUCT INSUALTION SHALL CONTINUE OVER DUCT AT LINED POINT  
-FIRST 10’ OF SUPPLY AND RETURN FOR ALL ERU’S AND HVAC UNITS
- CONDENSATE DRAIN: 1”
- ALL DUCTWORK IN CEILING SPACE SHALL HAVE R-6 INSULATION,
- REFRIGERANT PIPING ¾” ARAMFLEX

ALL DUCTWORK ON ROOF OR UNCONDITIONED SPACE SHALL BE INSULATED WITH R-12 INSULATION AND COVERED WITH EPDM ROOFING MATERIAL FOR WATER TIGHT INSTALLATION.

DIFFUSER/REGISTER SCHEDULE

LEGEND:



TYPE	DESCRIPTION	MODEL (BASED ON TITUS)
A	LOUVER FACE CEILING DIFFUSER FOR SHEET ROCK CEILING INSTALLATION. PROVIDE ROUND TO SQUARE ADAPTOR. WITH OPPOSIBLE BLADE DAMPER	TITUS TDCA, BORDER 1
A1	LOUVER FACE CEILING DIFFUSER FOR 2’x2’ LAY-IN CEILING INSTALLATION. PROVIDE ROUND TO SQUARE ADAPTOR. WITH OPPOSIBLE BLADE DAMPER	TITUS TDCA, BORDER 3
B	DOUBLE DEFLECTION REGISTER FOR SHEET ROCK INSTALLATION. PROVIDE ROUND TO SQUARE ADAPTOR.	TITUS 272RS
E	DOUBLE DEFLECTION GRILLE FOR SHEET ROCK NSTALLATION. WITH OPPOSIBLE BLADE DAMPER	TITUS 25 RS
E1	DOUBLE DEFLECTION GRILLE FOR SHEET ROCK NSTALLATION. WITH OPPOSIBLE BLADE DAMPER ALUMINUM TYPE	TITUS 25 RS
F	PERFORATED SIGHT PROOF EGGCRATE GRILLE FOR SHEET ROCK CEILING INSTALLATION.	TITUS 45F
G	LINEAR DIFFUSER, LINEAR STYLE 1 1/2” SLOT SPACING WIDTH, 4 SLOT FOR SHEET ROCK CEILING INSTALLATION. 100 CFM/FT WITH DAMPER, INSULATED PLENUM	TITUS MLR-40, BORDER TYPE 22



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JOHN WOOD

PROJECT TEAM  
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DRAWING TITLE

HVAC NOTES

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479J	479J
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H202



HVAC SPECIFICATION

A. SCOPE OF WORK

- 1. NEW ROOFTOP UNITS
- 2. ELECTRIC HEATERS
- 3. DUCTWORK, GRILLES AND INSULATION.
- 4. CONTROLS AND CONTROL WIRING.
- 5. TESTING AND BALANCING.
- 6. PERMITS.
- 7. GUARANTEE AND WARRANTIES.

B. MATERIALS

- 1. ALL SUPPLY AND RETURN AIR DUCTWORK SHALL BE CONSTRUCTED FROM GALVANIZED SHEET METAL IN ACCORDANCE WITH "SMACNA" STANDARDS.
- 2. SUPPLY DUCTWORK AND OUTSIDE AIR DUCT SHALL BE INSULATED ON OUTSIDE WITH 1" THICK FIBERGLASS INSULATION WITH VAPOR BARRIERS. SUPPLY AND RETURN AIR DUCTWORK SHALL BE LINED WITH 1" FIBERGLASS INSULATION WHERE SHOWN ON DRAWING. INCREASE DUCT SIZE 1" ALL AROUND WHERE LINED.

C. EXECUTION

- 1. BEFORE BIDDING THE JOB CONTRACTOR SHALL VISIT THE JOB SITE AND VERIFY THE EXISITING CONDITIONS. REPORT ADVERSE CONDITIONS IN WRITING TO ARCHITECT.
- 2. INSTALL SMOKE DETECTOR IN RETURN DUCT.
- 3. ALL DUCT SIZES ARE CLEAR INSIDE DIMENSIONS.
- 4. COORDINATE ALL DUCTWORK WITH OTHER DISCIPLINES.
- 5. CONTRACTOR SHALL PROVIDE ALL CONTROLS AND CONTROL WIRING. CONTRACTOR SHALL VERIFY THAT THE THERMOSTAT MATCHES TO THE UNIT. PROVIDE ALL NECESSARY DEVICES TO OPERATE THE SYSTEM AS FOLLOWS:  

THERMOSTAT ASSEMBLIES TO BE COILED & ATTACHED TO DUCT OR JOIST FOR INSTALLATION BY TENANT.

TOILET ROOM EXHUAST FAN CONTROLLED BY WALL SWITCH.
- 6. GUARANTEE ALL WORK AND MATERIAL FOR ONE YEAR FROM THE DATE OF ACCEPTANCE.

FIRE RATED CEILING NOTES:

WHEN DUCT PENETRATE RATED CEILING:

- ALL RECESSED DIFFUSERS AND REGISTERS SHALL HAVE RADIATION DAMPERS.
- ALL UNITS DUCTED TO PLENUM SPACE SHALL HAVE CEILING FIRE DAMPERS TO MEET UL 555C
- ALL RETURN DUCTS SHALL BE BELOW THE RATED CEILING, DROPPED CEILING AREAS SHALL NOT BE RATED CEILING UNLESS SHOWN OTHERWISE
- ALL RETURN AIR GRILLES IN RATED CEILING SHALL HAVE CEILING FIRE DAMPERS
- ALL UNIT DISCHARGES SHALL BE OFFSET TO GET INTO PROPER JOIST SPACES, CARRY TRANSITION PIECE AS NEEDED
- ALL DUCTS LARGER THAN 4"Ø DIAMETER SHALL HAVE FIRE DAMPERS AT CEILING PENETRATIONS

CEILING RADIATION DAMPERS

CEILING RADIATION DAMPERS SHALL BE AS MANUFACTURED BY GREENHECK  
MODEL CRD-1WT FOR SIDE INLET  
MODEL CRD-2WT FOR TOP INLET

CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE UL LISTED DAMPER WITH THE UL LISTING OF THE CEILING

APPROVED CEILING RATINGS ARE  
L-528,546,558,562,574,576,581,583,585,592  
M-501,503,508  
P-533,538,545,547,548,554



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LEGEND

	SUPPLY AIR DUCT UP		HOT WATER RETURN PIPE
	SUPPLY AIR DUCT DOWN		HOT WATER SUPPLY PIPE
	RETURN AIR DUCT UP		CONDENSATE DRAIN PIPE
	RETURN AIR DUCT DOWN		PIPE UP
	VOLUME DAMPER		PIPE DOWN
	MOTORIZED DAMPER		BALL VALVE
	FIRE DAMPER		GATE VALVE
	1" LINED DUCTWORK		CHECK VALVE
	SUPPLY AIR REGISTER		STRAINER
	RETURN OR EXHAUST AIR REGISTER		UNION
	SUPPLY AIR DIFFUSER		3-WAY CONTROL VALVE
	CEILING TRANSFER GRILL		2-WAY CONTROL VALVE
	AD		BALANCING VALVE
	AV		THERMOMETER
	CFD		PRESSURE GAUGE
			FLEXIBLE PIPE CONNECTION

EQUIPMENT TAG NUMBERS

EF-#	EXHAUST FAN
CU-#	CONDENSING UNIT
AC-#	SPLIT SYSTEM AC UNIT
HVAC-#	AIR HANDLER UNIT
UH-#	UNIT HEATER UNIT

	E = EXHAUST RISER # = REFERS TO RISER DIAGRAM
	VS = SUPPLY VENTILATION RISER # = REFERS TO RISER DIAGRAM
	VR = RETURN VENTILATION RISER # = REFERS TO RISER DIAGRAM
	R = CONDENSER WATER RISER # = REFERS TO RISER DIAGRAM

AIR OUTLET + INLET DESIGNATION

EXAMPLE:  
TYPE OF GRILLE, DIFFUSER  
SEE SCHEDULE FOR SPECIFIC INFORMATION  
ABOUT THIS OUTLET/INLET TYPE

A-6x6-50

SIZE OF GRILLE, DIFFUSER

AIRFLOW

NOTE:

THIS DESIGNATION FORMAT IS TYPICAL FOR ALL DIFFUSERS, GRILLES, AND  
REGISTERS, LAY-IN OR SURFACE MOUNTED, FOR SUPPLY, RETURN OR EXH.

EQUIPMENT SYMBOLS

	ROOFTOP UNIT
	ROOFTOP UPBLAST EXHAUST FAN
	EXHAUST CONTROL VALVE
	ROOFTOP UPBLAST EXHAUST FAN
	CONSTANT AIRFLOW REGULATOR DEVICE
	FIRE AND SMOKE DAMPER
	VOLUME DAMPERS
	CABINET UNIT HEATER IN CEILING
	HORIZONTAL HVAC UNIT
	VERTICAL HVAC UNIT
	ROOF MOUNTED CONDENSING UNIT

CONTROL SYMBOLS

	WALL MOUNTED THERMOSTAT/SENSOR
	HUMIDISTAT/SENSOR
	LOCAL CONTROL PANEL



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WALL CAP SCHEDULE

TAG	BRAND	SIZE	DIMENSIONS	LOCATION	DUCT
WC-B	X-VENT THVB	4" VENT	7.5"x7.5"x1.5"	BATHROOM EXHAUST	ø4" -NO FLEX
WC-K	X-VENT THVB	6" VENT	10"x9"x5"	KITCHEN EXHAUST	ø6" W/FD AT CEILING PENETRATION
WC-D	X-VENT THVB	4" VENT	7.5"x7.5"x1.5"	DRYER EXHAUST-REMOVE SCREEN	ø4" AL WITH HARD ELBOW
WC-FA	X-VENT TEVB	6" VENT	7.5"x7.5"x1.5"	FRESH AIR INTAKE	ø6" -INSULATED

VYNIL COLOR TO MATCH SIDING,  
MATCH DUCT SIZE CONNECTED TO UNIT.  
ALL EXHAUST DUCTS SHALL HAVE R-6 INSULATION FIRST 10FT FROM EXTERIOR WALL IN  
ALL FRESH AIR INTAKE DUCTS SHALL HAVE MOTORIZED DAMPER AT ENVELOPE PENETRATION WITH ACCESS PANEL.  
DAMPER SHALL BE INTERLOCKED WITH HVAC UNIT  
FOR COMBINED BATHROOMS, USE 6" DUCT AFTER COMBINE AND USE WC-K WALL CAP  
COMBINE EXHAUST TO ONE WALL CAP WITH SEPARATE DUCT CONNECTIONS IF LOCATED NEXT TO EACH OTHER COORDINATE WITH ARCHITECT

ENERGY RECOVERY UNITS

TAG #	EQUIPMENT PERFORMANCE							DB	ESTAR	HVI	DESIGN	DIMENSIONS
	CFM	EFF HEAT	EFF COOL	ESP (IN WG)	VOLT	FLA (AMP)	MODEL					
ERU-1	95	%60	%80	0.40	120/1	1.4	PANASONIC-FV-10VEC1	-	YES	YES	IN/OUT OPPOSITE SIDE	28"LX23"WX9-6" DUCT

PROVIDE CONTROLS AS FOLLOWS  
-PROVIDE ON/OFF, LOW-HIGH, 20 MINJ ON/40 MIN OFF CYCLER  
-PROVIDE MERV 8 FILTER FOR STANDARD DESIGN

CEILING MOUNTED EXHAUST FAN

TAG	LOCATION	TYPE	DRIVE	CFM	V/ø	LAMP	SP	NOISE SONES	DIMENSIONS	PANASONIC MODEL	ESTAR	CONTROLS
EF-1	BATHROOM	CEILING	DIRECT	110	120/1	(2)PL18	0.1"	0.3	14.5"x17"x11.5"H-16LBS-6" DUCT	FV-05-11VKSL1	YES	HIGH/LOW FAN REQUIRES TWO WALL SWITCHES (HAS LIGHT)

PROVIDE PANASONIC FIRE DAMPER ENCLOSURE FOR ALL CEILING BATHROOM FANS.

ELECTRIC HEATER SCHEDULE

TYPE	KW	VOLT/PH	DIMENSIONS	MODEL NUMBER-COLOR BY ARCH
RWH-1	1	120/1		Q'MARK#CRA 1512-T2
RWH-2	2	120/1	19"HX16"WX4"D	Q'MARK# MCSSARWH1802/HTWHS1
RWH-4	4	208/1	19"HX16"WX4"D	Q'MARK# MCSSARWH4808/HTWHS1
SWH-4	4	208/1	19"HX16"WX4"D	Q'MARK# MCSSARWH4808/HTWHSM
EBB-2	0.4	120/1		Q'MARK#QMK-2512W-W/T'STAT
EBB-3	0.75	120/1		Q'MARK#QMK-2513W-W/T'STAT
EBB-4	1	120/1		Q'MARK#QMK-2514W-W/T'STAT
EBB-6	1.5	120/1		Q'MARK#QMK-2516W-W/T'STAT
UH-5	5	208/1		Q'MARK#MUH-35-W/T'STAT
CCH-4	4	208/1		Q'MARK#CDF548-W/T'STAT



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PROJECT NAME  
483 BROADWAY - SOMERVILLE, MA 02145  
  
CLIENT  
**JOHN WOOD**

PROJECT TEAM  
  
Architect                      Engineer  
Nathália Quirino            Nazieh R. Hammouri  
857 888-1216                    (857) 312-9212

No.	Description	Date
	Issued for permit	12/10/2020
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02	Issued for Permit	10/05/2021

DRAWING TITLE

HVAC SCHEDULES

DRAWING INFORMATION

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479J	479J
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H205

FIRE SAFE THROUGH FLOORS							
TYPE	SIZE	HILTI	MATERIAL	RATING	BOTTOM	TOP	CHASE WALL
STEEL/CAST COPPER/EMT	MAX 4"	FS-ONE	INTUMESCENT SEALANT	2HRS	FIRE STOP	FIRE STOP	REQUIRED
STEEL/CAST 4" EMT/ 2" FLEX	MAX 6" -	FS-ONE	INTUMESCENT SEALANT	2HRS	FIRE STOP	FIRE STOP	NOT REQUIRED
STEEL/CAST COPPER/EMT	MAX 4"	CP-620	FIRE FOAM	1HRS	FIRE STOP	FIRE STOP	REQUIRED
PEX	MAX 1"	CP 645	INTUMESCENT STRIP W/COLLAR	1HRS	BOTH SIDES	BOTH SIDES	NOT REQUIRED
PVC PIPE	MAX 2"	FS-ONE	INTUMESCENT SEALANT	1HRS	FIRE STOP	FIRE STOP	NOT REQUIRED
PVC PIPE	MAX 4"	FS-ONE	INTUMESCENT SEALANT	2HRS	FIRE STOP	FIRE STOP	REQUIRED
PVC PIPE	MAX 4"	CP 645	INTUMESCENT STRIP W/COLLAR	1HRS	COLLAR	FIRE STOP	NOT REQUIRED
REFRIGERANT	-	FS-ONE	INTUMESCENT SEALANT	1HRS	FIRE STOP	FIRE STOP	NOT REQUIRED
4" DUCT	MAX 4"	FS-ONE	INTUMESCENT SEALANT	1HRS	FIRE STOP	FIRE STOP	NOT REQUIRED
INSULATED COPPER/STEEL	MAX 2"	FS-ONE	INTUMESCENT SEALANT	1HRS	FIRE STOP	FIRE STOP	NOT REQUIRED
CABLES	MAX 2"	FS-ONE	INTUMESCENT SEALANT	1HRS	FIRE STOP	FIRE STOP	NOT REQUIRED

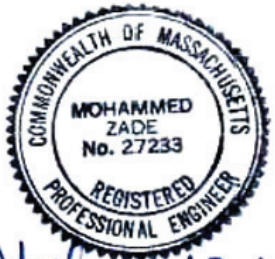
MAIN/BRANCH DUCT SCHEDULE	
SIZE	MAX. CFM
6" DIA	100
7" DIA	150
8" DIA	200
9" DIA	300
10" DIA	400
8x6	200
8x8	250
10x8	300
12x8	350
12x8	400
12x8	450
14x8	500
16x8	600
18x8 OR 16x10	700
20x8 OR 18x10	800
24x8 OR 20x10	1000
30x8 OR 24x10	1200
NOTE: MAXIMUM FLEXIBLE DUCT LENGTH SHALL BE 4' USE INSULATED SEMI RIGID BUCK DUCT.	

STANDARD SPLIT HEAT PUMP SYSTEM SCHEDULE (INDOOR)														
UNIT NO.	MITSUBISHI MODEL	RATED CAPACITY (BTU/H)	SEER	POWER SUPPLY	MCA	FAN MOTOR	AIRFLOW (LOW-MEDIUM HIGH)	SOUND LEVEL (LO-M1-M2-HI)	W	D	H	WEIGHT (LBS)	INTAKE AIR TEMP	
													MAX	MIN
ACU-1	PKA-A12HA7	12,000	15.3	208/230V 1 PHASE, 60HZ	1.0 A	0.76 F.L.A.	268-328-381 DRY CFM 240-293-342 WET CFM	34-40-45 DB(A)	30-11/16"	8-1/4"	11-3/4"	23	95°FDB 71°FWB	67°FDB 57°FWB

PROVIDE ME HVAC CONTROLLER WALL MOUNTED THERMOSTAT, DISCONNECT SWITCH

STANDARD SPLIT HEAT PUMP SYSTEM SCHEDULE (OUTDOOR)																
UNIT NO.	MITSUBISHI MODEL	RATED CAPACITY (BTU/H)	SEER	POWER SUPPLY	R.L.A.	MCA	MOCP	SOUND LEVEL	W	D	H	WEIGHT (LBS)	MAX REFRIDGERANT PIPE LENGTH (FT)	MAX REFRIDGERANT PIPE HEIGHT DIFF (FT)	INTAKE AIR TEMP	
															MAX	MIN
CU-1	PUZ-A12NHA4	12,000	16	208/1PHASE	DC	14	20	50 DB(A)	31-1/2"	11-1/4"	21-5/8"	88	100	100	D.B. 115° F	D.B. 0° F

- WITH EACH UNIT PROVIDE
- 3R RATED FUSED DISCONNECT SWITCH BY ELECTRICAL CONTRACTOR
  - PROVIDE MOUNTING STAND ABOVE SNOW LINE
  - PROVIDE WIND BAFFLE KIT FOR LOW AMBIENT OPERATION



*Mohammed Zade*

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**HVAC SCHEDULES**

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SCALE

DRAWN BY

479J

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PROJECT #

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DRAWING NUMBER

**H206**



GAS FIRED ROOFTOP UNIT SCHEDULE-208V																				
TAG NO.	NOMINAL CAP.-TONS	AIRFLOW CFM	MIN. O.A. CFM	COOLING-MBH		EVAP. FAN			GAS HEATING-MBH			COMPRESSOR		MCA	MOCP	EER	SEER	IPLV	MINIMUM CODE EER	STRETCH CODE
				TOTAL	SENS.	ESP	RPM	HP	INPUT	OUTPUT	EFF	RLA	LRA							
RTU-1	5	2,000	500	57.5	46	1.0"	1399	1 1/2	150/120	120	%80	15.9	110	30.1	45	12.5	15.2	-	12.0	YES-15.0/12.0
RTU-2	7 1/2	3,000	750	89	71.2	1.25"	939	2	224/180	184	%82	(2)13.6	(2)83	43.9	50	12.0	-	13.0/13.8	11.3	YES-11.5/11.9

NOTES: PROVIDE PROGRAMMABLE HONEYWELL T-7300 THERMOSTAT WITH LOCK COVER, PREFABRICATED ROOF CURB, 100% O.A. ECONOMIZER WITH ENTHALPY CONTROLLER, FUSED DISCONNECT SWITCH, CONVENIENCE OUTLET.  
LOW AMBIENT TEMPERATURE CONTROLLER AND RELIEF FAN WITH EACH UNIT.  
PROVIDE PRESSURE SENSOR WITH EACH UNIT TO SHUT DOWN UNIT UPON DUCT PRESSURES IN EXCESS OF 2" DUE TO SMOKE DAMPERS  
PROVIDE HIGH GAS, TWO STAGE COOLING W/HUMIDI-MIZER, CO2 SENSOR HIGH EFFICIENCY MEDIUM PRESSURE FAN,-E-COAT AL/CU COIL, OPEN MULTI PROTOCOL CONTROLLER, ENTHALPY ECONOMIZER , HACR BREAKER  
PROVIDE POWER EXHAUST, POWERED CONVENIENCE OUTLET

	IECC 2015	POWER	DIMENSIONS	WEIGHT Lbs.	dBA	CARRIER MODEL
	YES-15.0/13.0	208V/3ø	75"X47"X42"H	920	78.5	48 HC 06
	YES-11.0/11.2	208V/3ø	88"X60"X50"H	1215	80	48 HC 08



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479J	479J
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**H207**

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DRAWING TITLE

HVAC DETAILS

DRAWING INFORMATION

December 30, 2020

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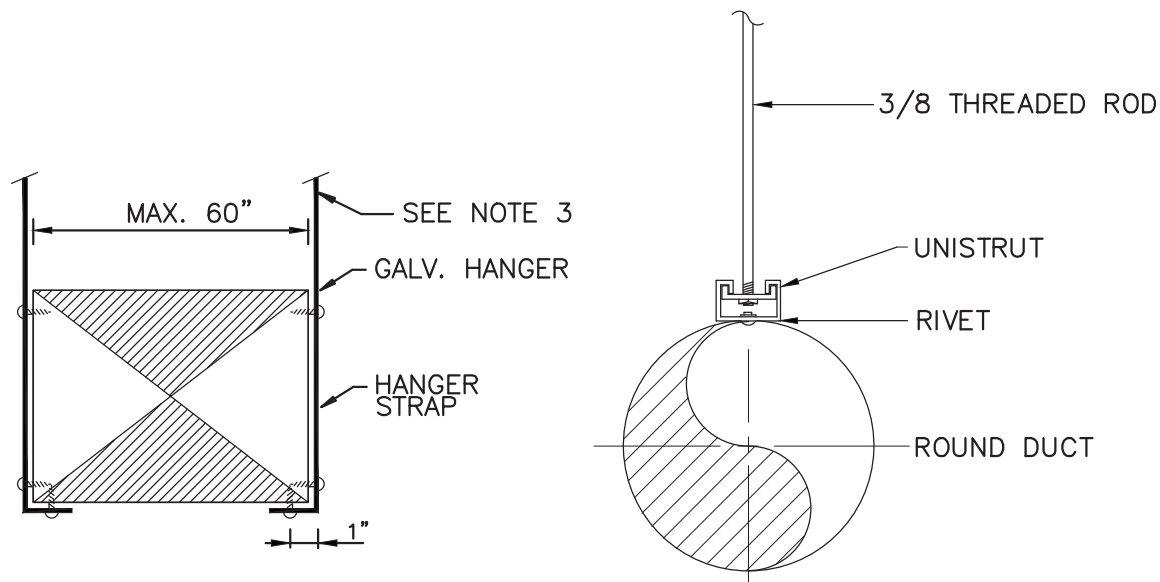
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SCALE	DRAWN BY
479J	479J
PROJECT #	FILE NAME

DRAWING NUMBER

H208

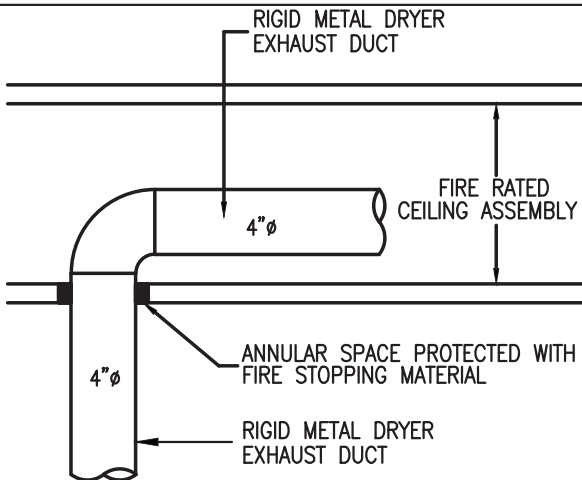


NOTES:

1. ON DUCTS OVER 48" WIDE, BOTTOM SHALL BE BRACED BY ANGLE. FOR CROSS SECTION AREA MORE THAN 8 SQ FT, DUCT SHALL BE BRACED BY ANGLES ON ALL FOUR SIDES.
2. CUTTING AND PATCHING SHALL BE LIMITED TO A MINIMUM AS REQUIRED FOR PROPER INSTALLATION.
3. SUPPORTS SHALL BE SPACED AND SIZED AS PER SMACNA.

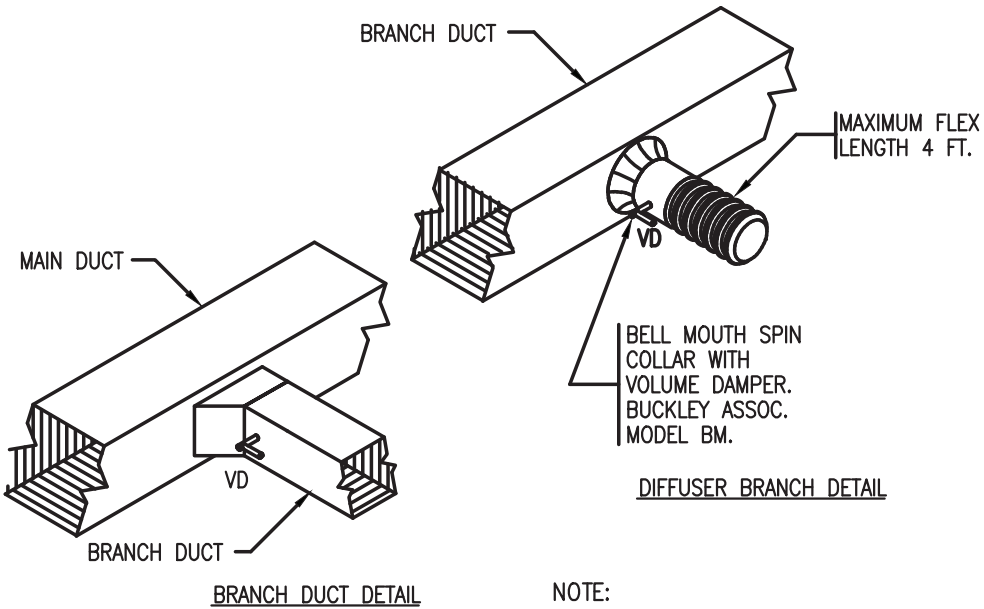
DUCT HANGER SUPPORT

NTS



FLOOR/CEILING DUCT PROTECTION DETAIL

NTS



NOTE:  
IN AREAS WITH SHEETROCK CEILINGS  
PROVIDE REMOTELY OPERATED VOLUME  
DAMPERS.

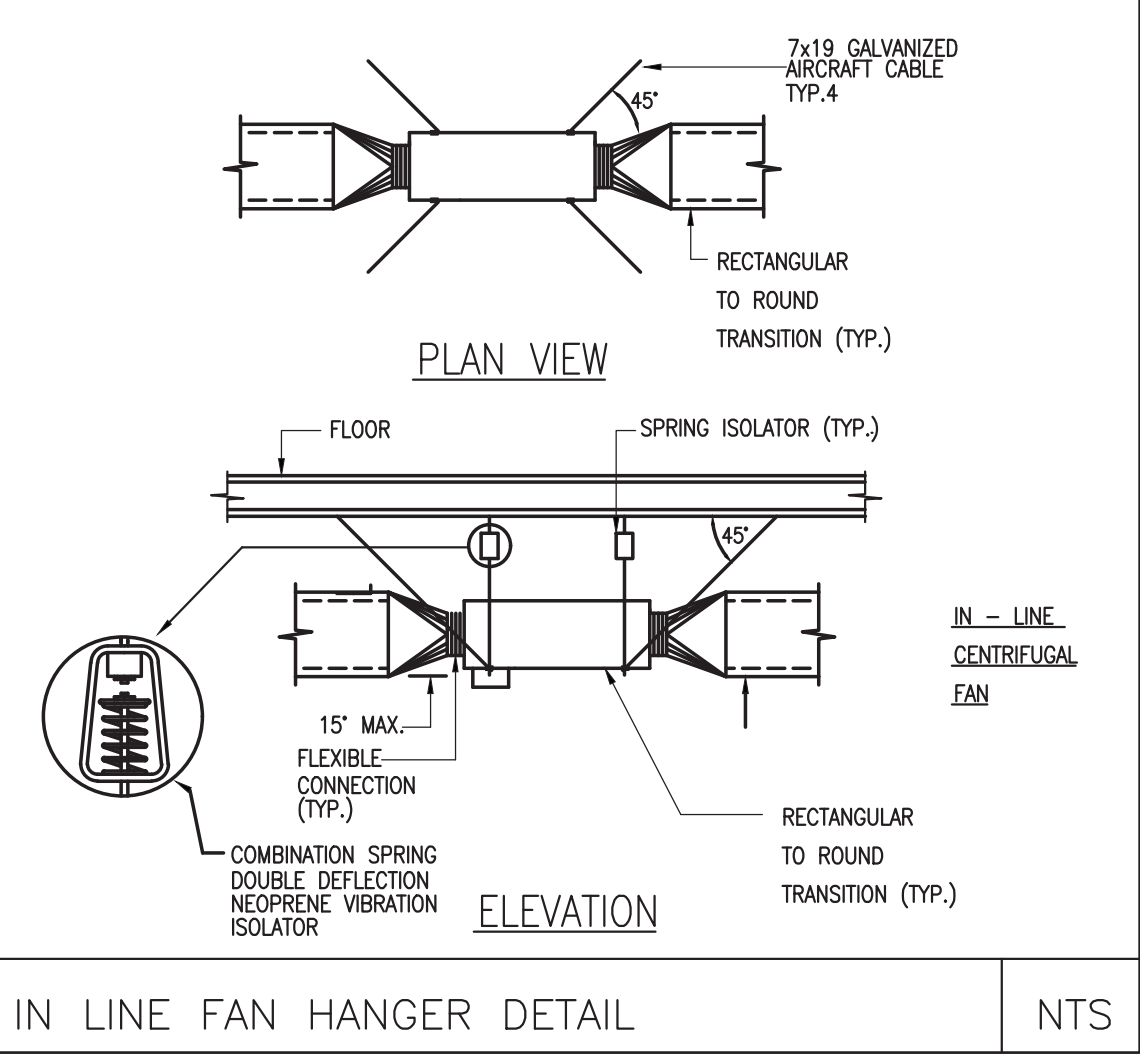
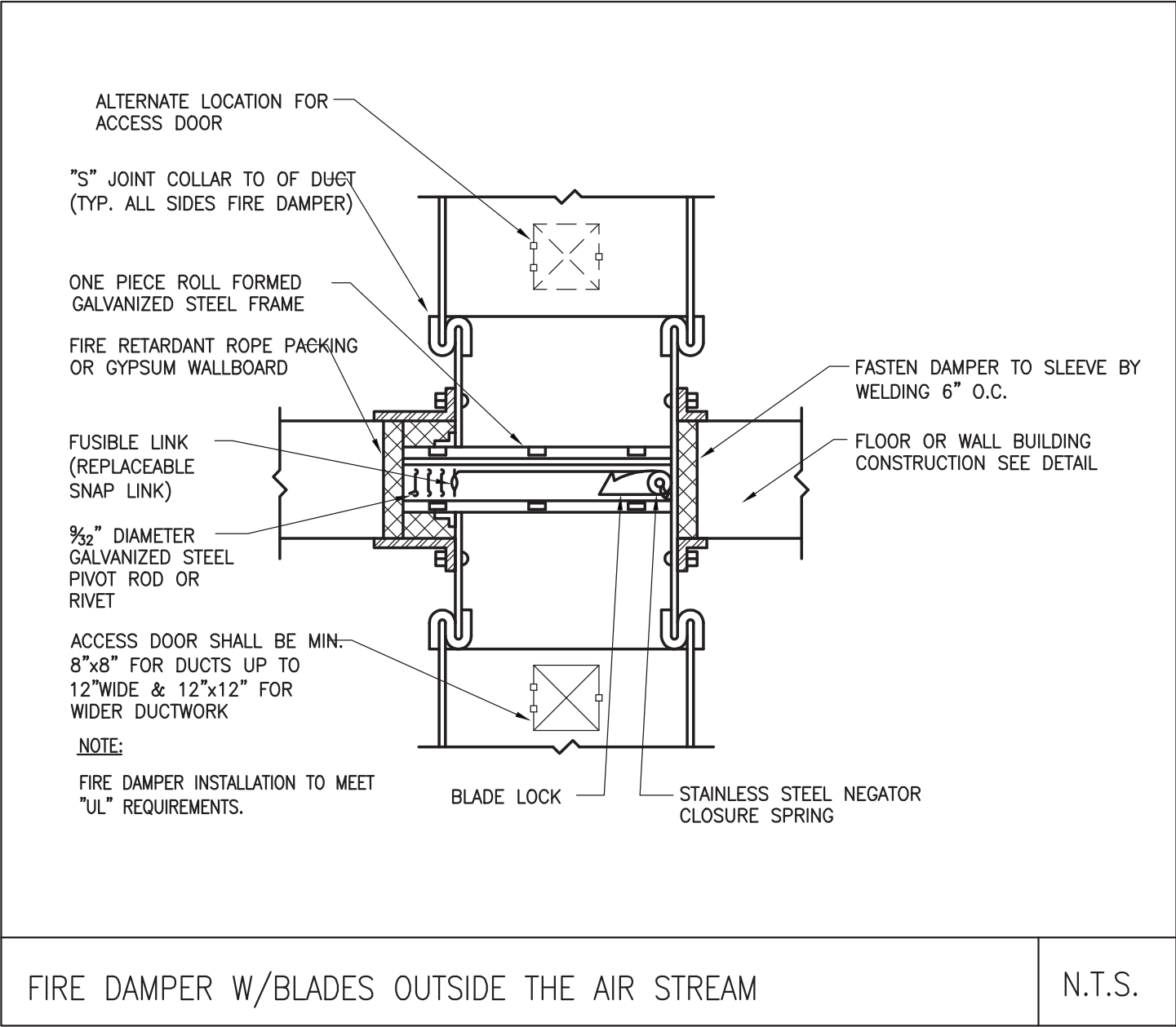
DUCT DETAILS

NTS



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DESCRIPTION

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SCALE 479J

DRAWN BY 479J

PROJECT #

FILE NAME

DRAWING NUMBER

H209

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**HVAC DETAILS**

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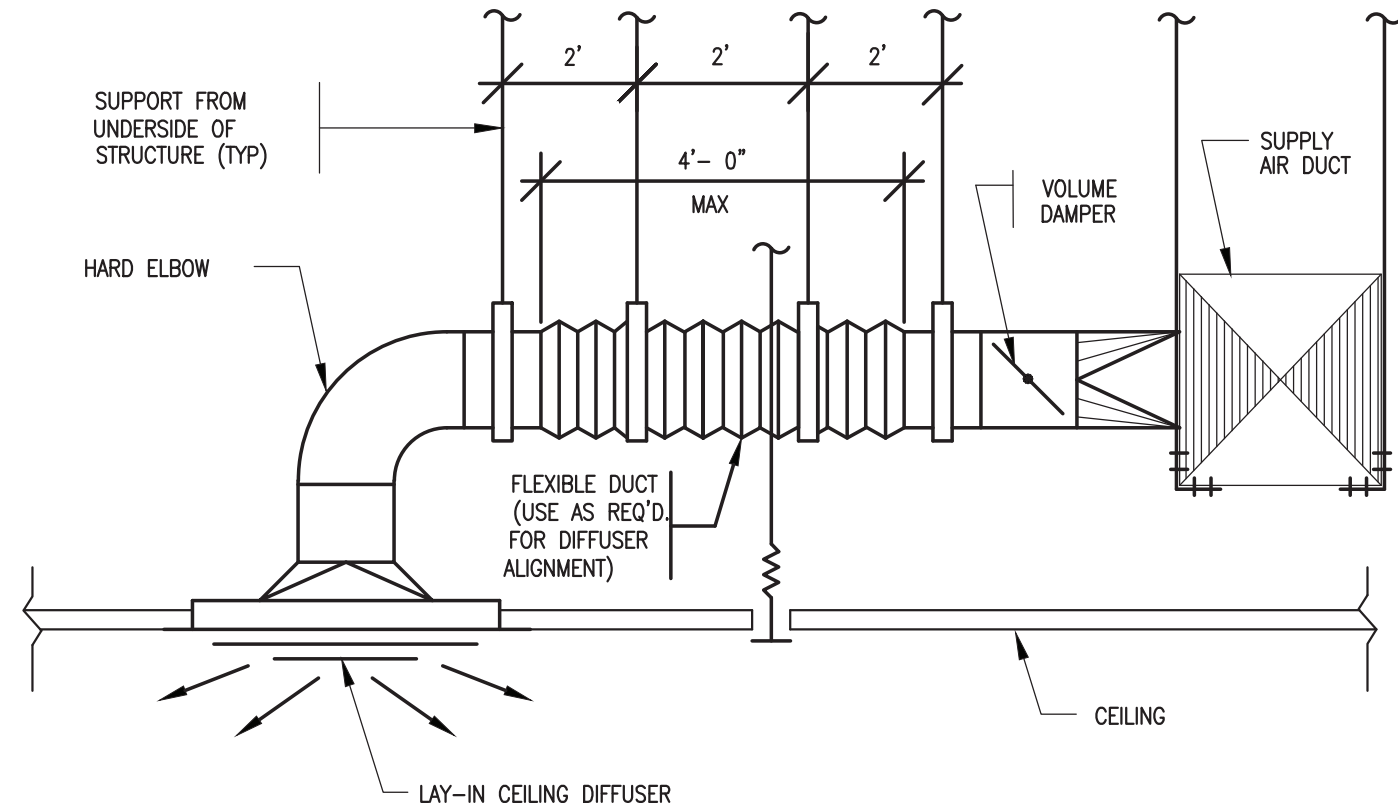
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479J 479J

PROJECT # FILE NAME

DRAWING NUMBER

**H210**

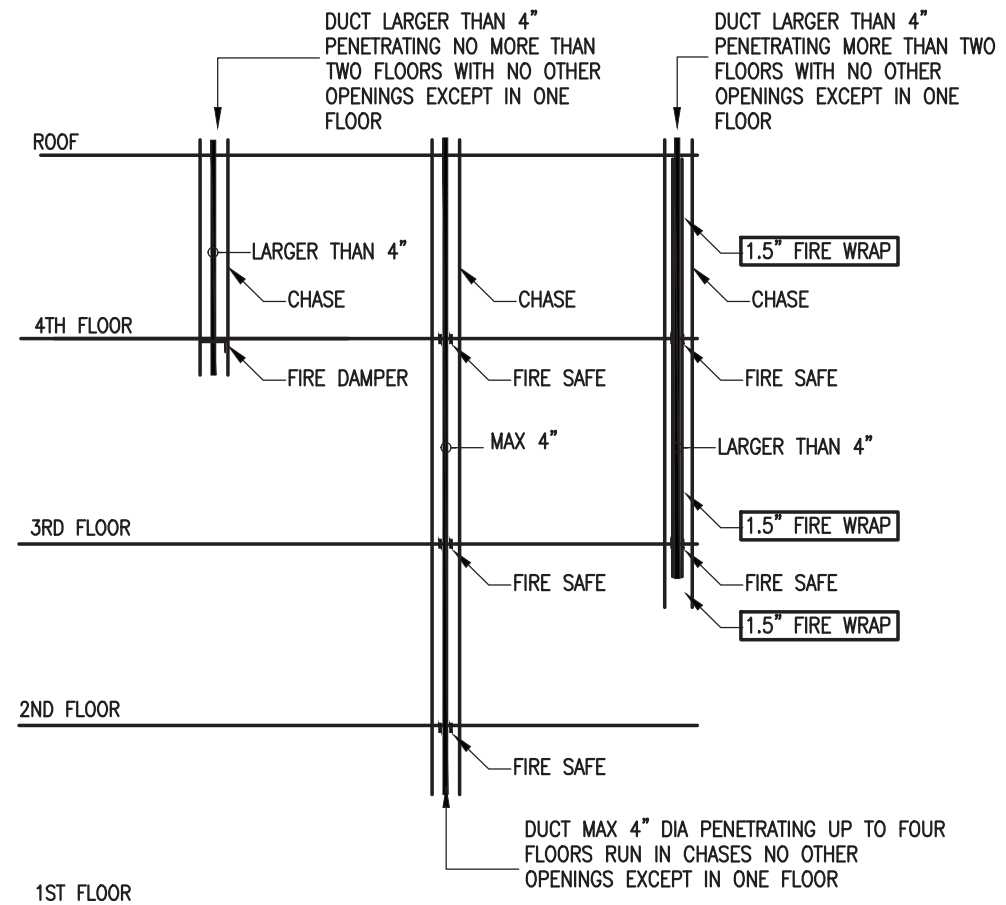


**NOTES:**

- ① MAXIMUM SAG 1/2" PER FOOT.

**CEILING DIFFUSER BRANCH DUCTS**

**N.T.S.**



PER IMC 2015 FIGURE 607.6.1(2)

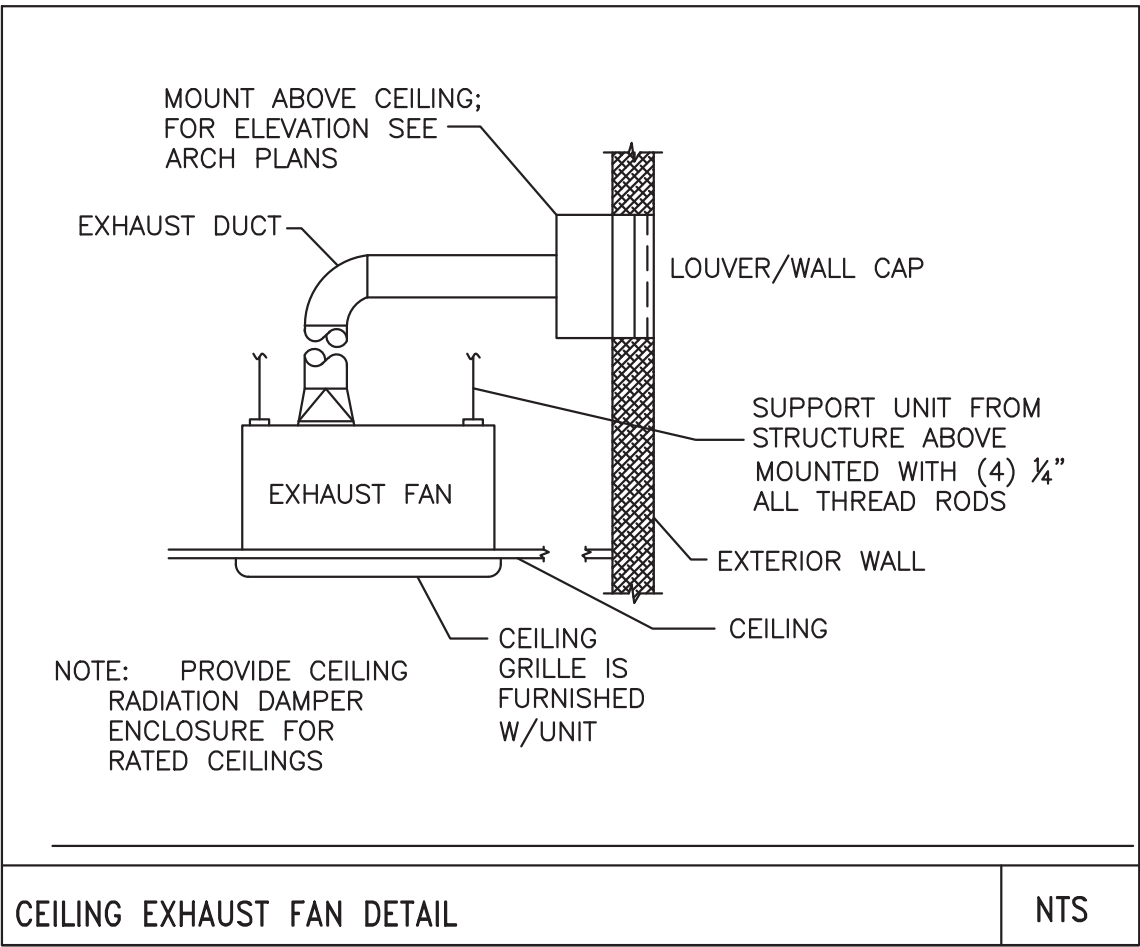
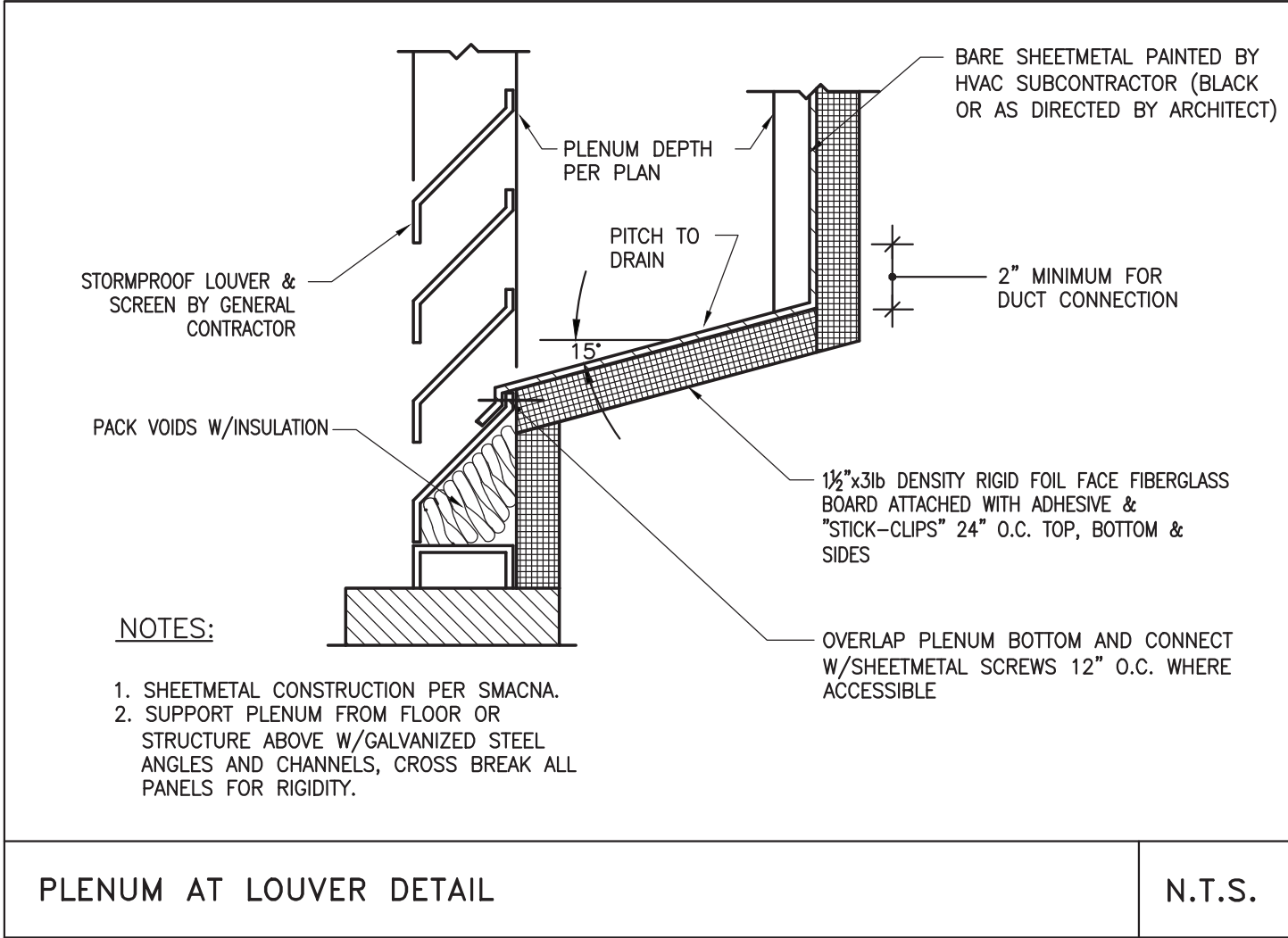
**DUCT RISER THROUGH FLOORS**



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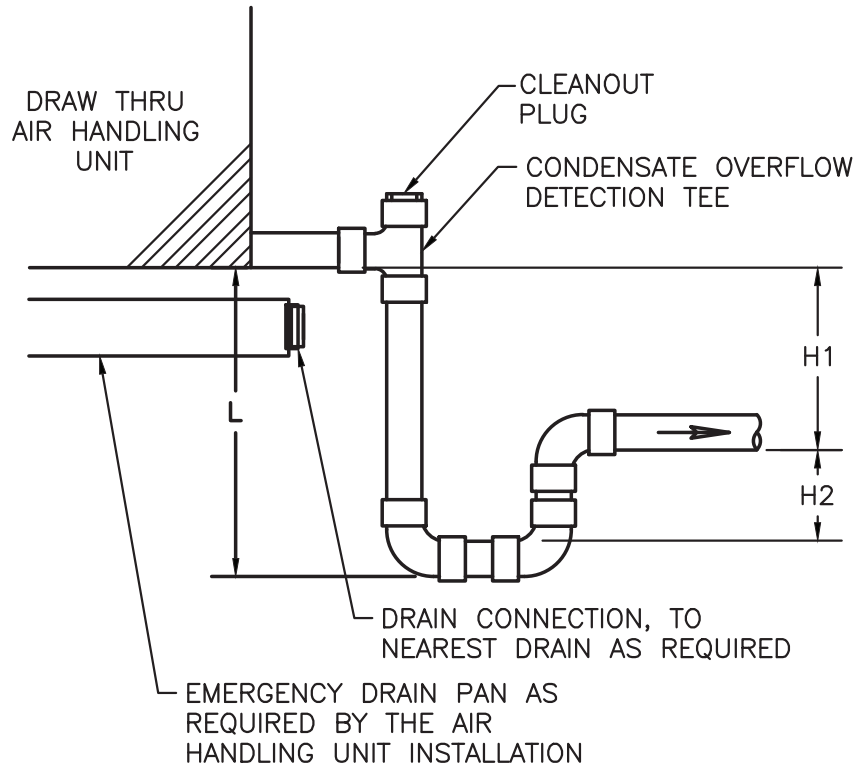
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PROJECT #

FILE NAME

DRAWING NUMBER

H211

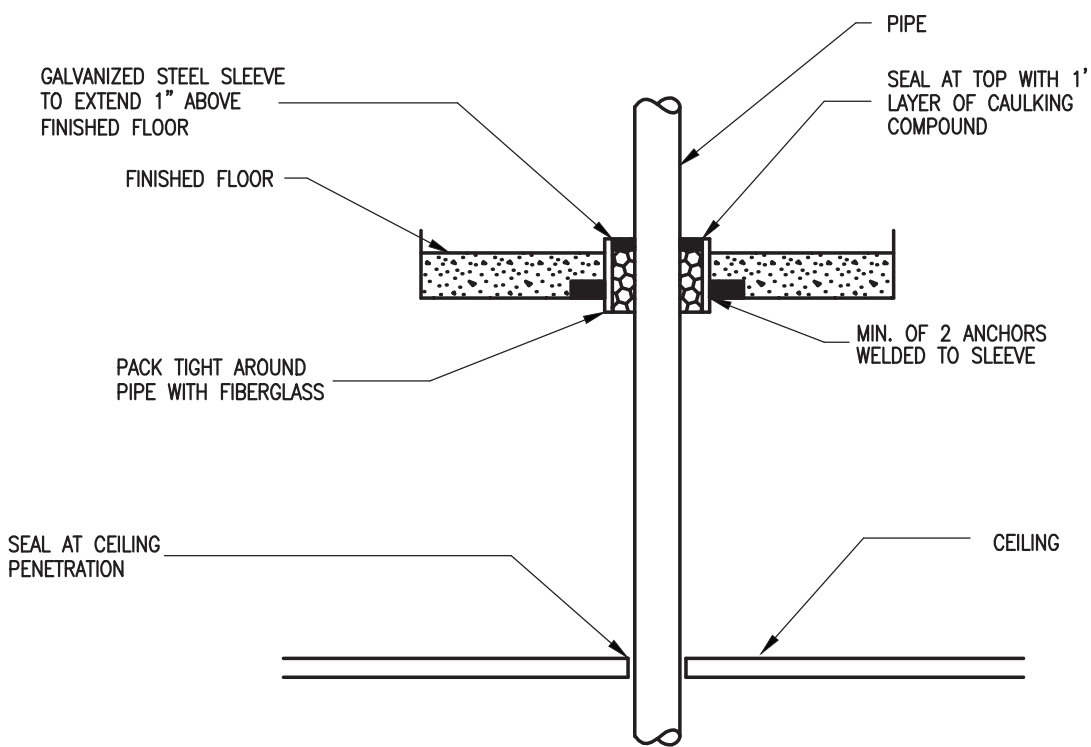


PITCH CONDENSATE DOWN TO NEAREST DRAIN, MIN 1/8"/FT.

H1 = MAX NEGATIVE STATIC PRESSURE PLUS 1"  
H2 = H1/2  
L = H1 + H2 + PIPE DIAMETER + INSULATION THICKNESS

CONDENSATE DRAIN DETAIL

NTS



PIPE SLEEVE THRU FLOOR PENTRATION DETAIL

NTS



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479J	479J
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H212

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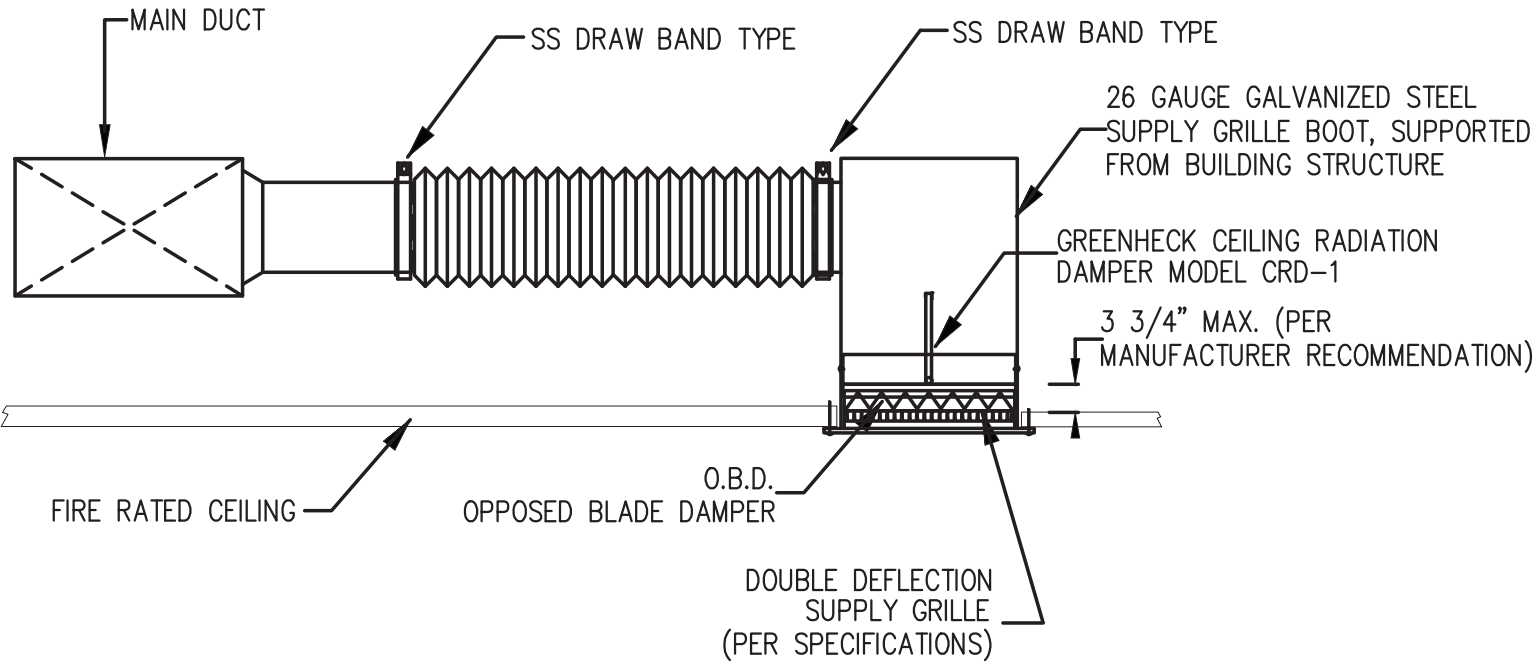
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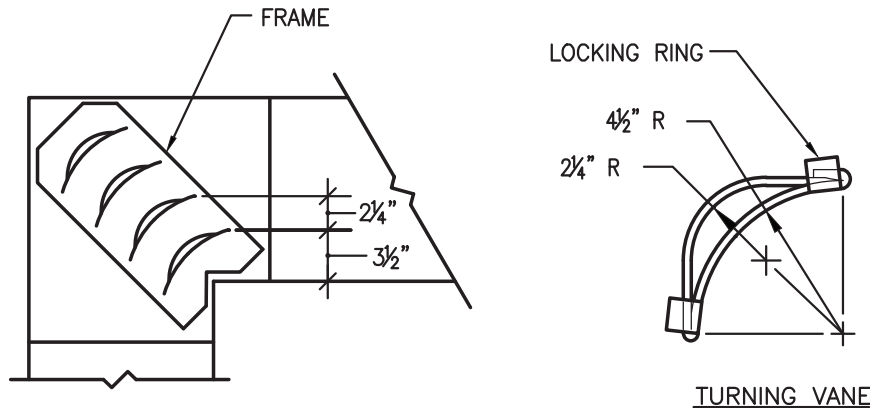
DRAWING NUMBER

H213



SUPPLY GRILLE/CRD INSTALLATION DETAIL

NTS



- NOTES:
1. LOCKING LUGS INTEGRAL WITH VANE.
  2. MAXIMUM UNSUPPORTED VANE LENGTH 48".
  3. FRAMES-BOLTED OR RIVETED TO ELBOW.
  4. VANES AND FRAMES-SAME GAUGE AS ELBOW.

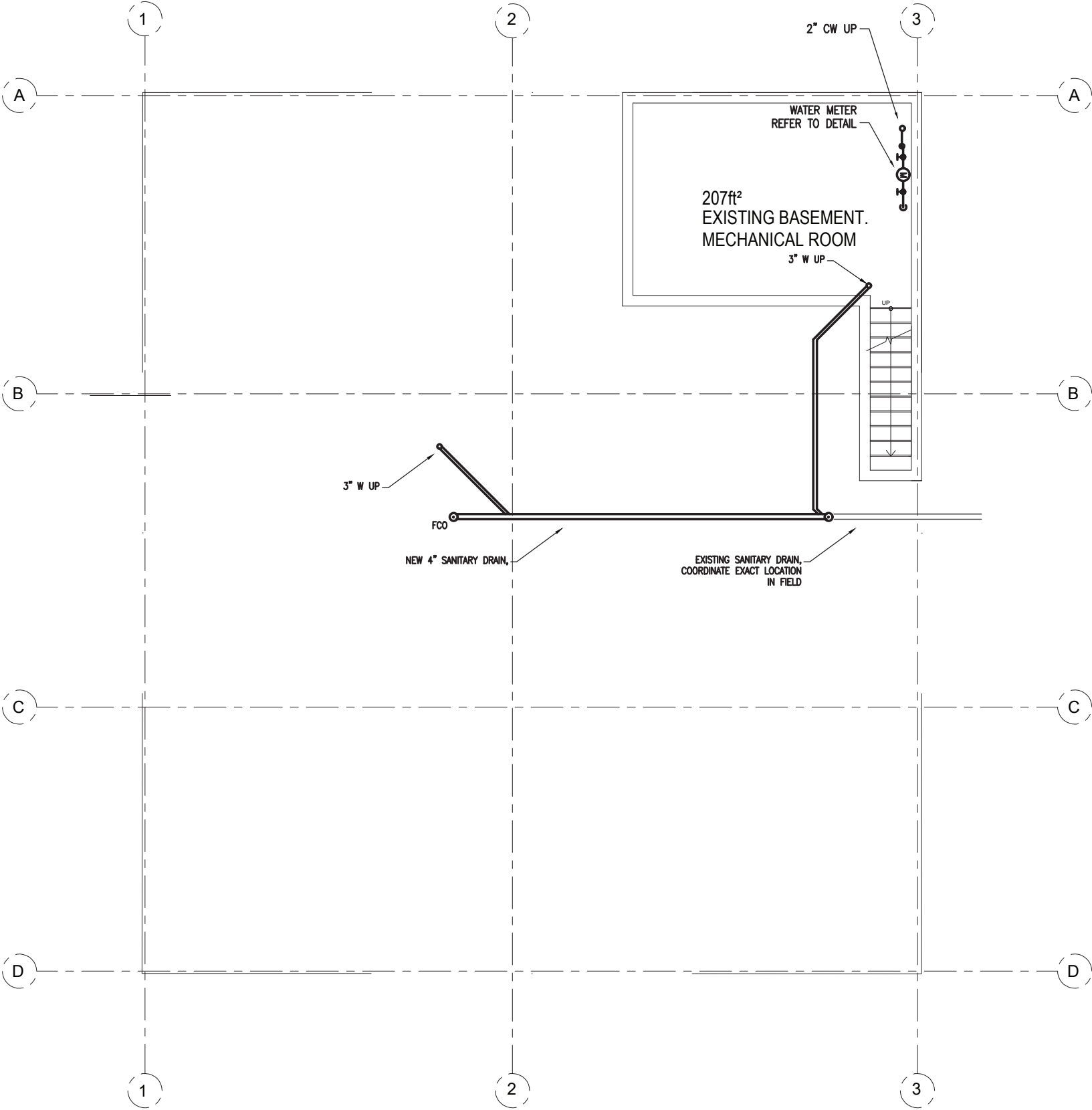
DOUBLE THICKNESS TURNING VANES FOR SQUARE ELBOW

N.T.S.



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1

Basement  
1/8" = 1'0"



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ARCHITECTURE

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DRAWING TITLE

**BASEMENT  
PLUMBING PLAN**

DRAWING INFORMATION

December 30, 2020

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DESCRIPTION

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479J	479J
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DRAWING NUMBER

**P101**



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DRAWING TITLE

FIRST FLOOR  
PLUMBING PLAN

DRAWING INFORMATION

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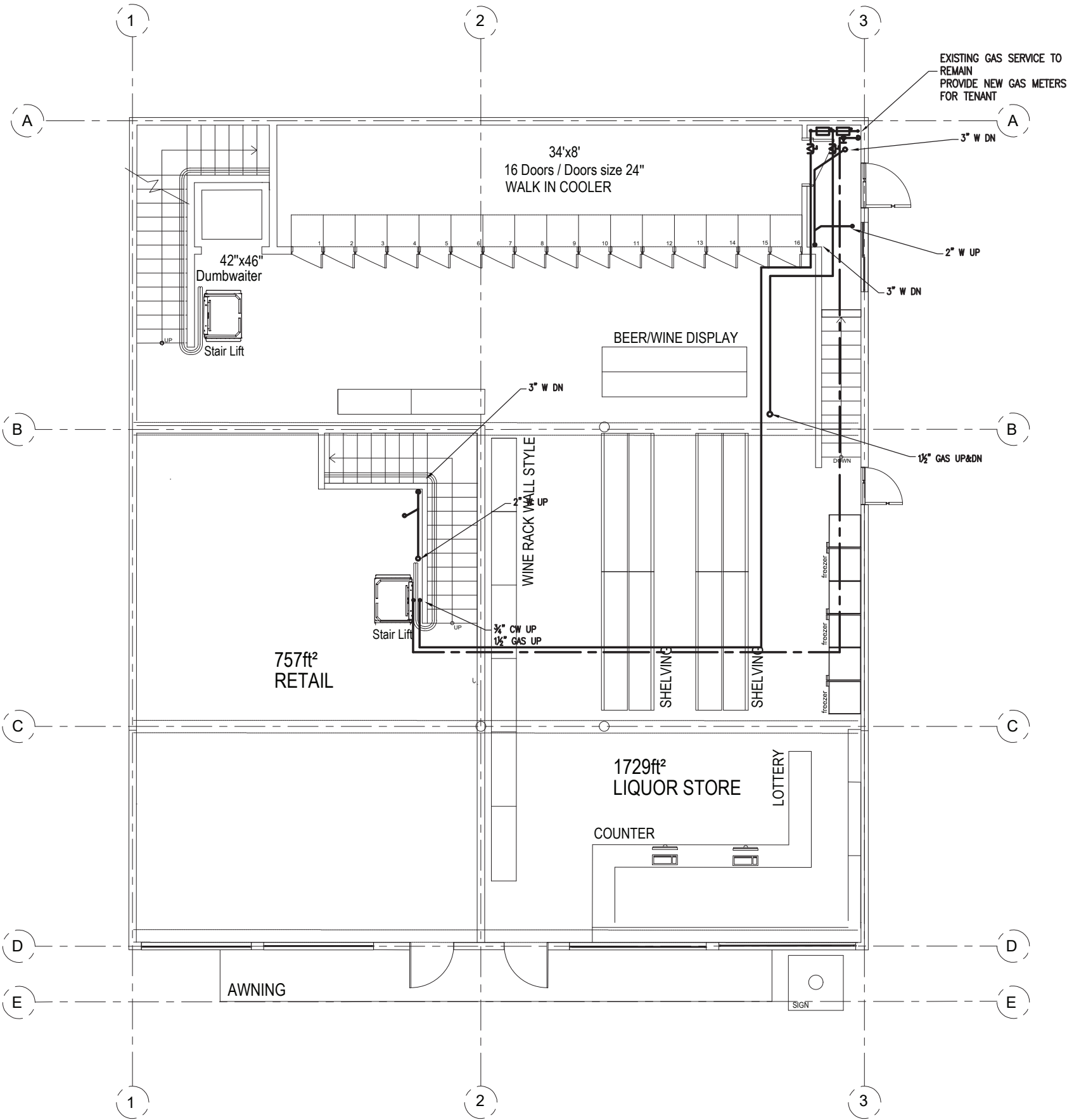
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DESCRIPTION

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SCALE	DRAWN BY
479J	479J
PROJECT #	FILE NAME

DRAWING NUMBER

P102

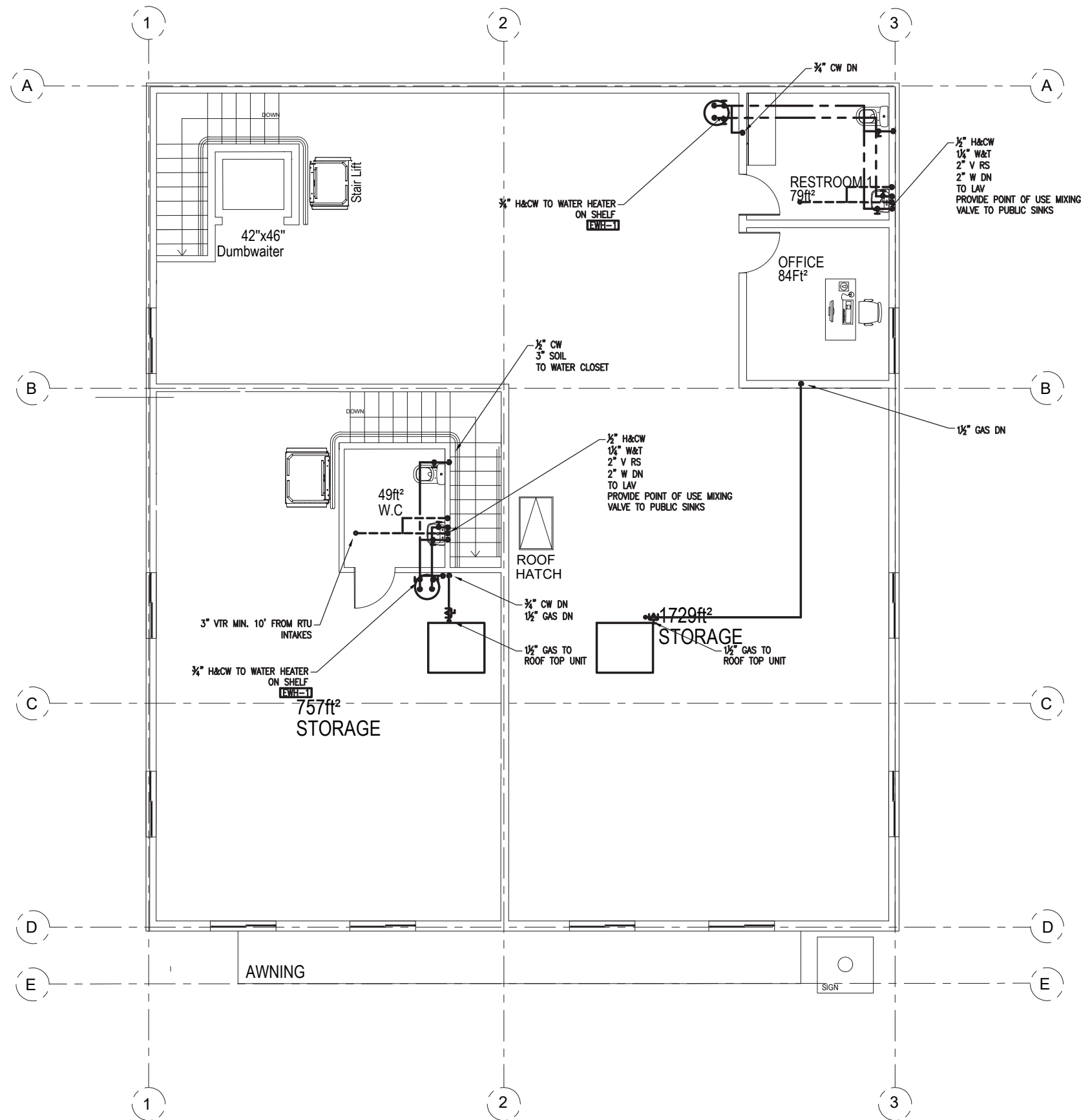


1 Ground Floor  
1/8" = 1'0"



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1 Second Floor  
1/8" = 1'0"

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DRAWING TITLE

**SECOND FLOOR PLUMBING PLAN**

DRAWING INFORMATION

December 30, 2020

DATE OF ISSUE

Issued for permit

DESCRIPTION

As indicated	RC
SCALE	DRAWN BY
479J	479J
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GENERAL NOTES

- 1) FOR EXACT LOCATION OF PLUMBING FIXTURES SEE ARCHITECTURAL DRAWINGS.
- 2) EXAMINE ALL CONTRACT DRAWINGS, GERNERAL CONDITIONS AND SPECIFICATIONS WHICH MAY AFFECT THE WORK.
- 3) ALL PLUMBING WORK MUST BE COORDINATED WITH ALL OTHER TRADES BEFORE PROCEEDING WITH INSTALLATION.
- 4) CHECK INVERT ELEVATIONS AND EXACT LOCATIONS OF ALL OUTSIDE UTILITIES BEFORE INSTALLING ANY UNDERGROUND.
- 5) NO CHANGES ARE TO BE MADE IN PLUMBING LAYOUT WITHOUT WRITTEN PERMISSION OF THE ARCHITECT.
- 6) NO PIPING SHALL RUN EXPOSED IN FINISHED AREAS.
- 7) ALL PLUMBING SYSTEM SHALL BE INSTALLED IN STRICT ACCORDANCE WITH THE LOCAL AND STATE PLUMBING CODES.
- 8) ROUGHING DIMENSIONS OF TOILET FIXTURES MUST BE COORDINATED WITH GENERAL CONTRACTOR.
- 9) INSTALL ALL HOT AND COLD WATER PIPING AS PER SPECIFICATIONS.
- 10) INSTALL SHUTOFF GATE VALVES ON ALL BRANCH SUPPLY LINES AND AT THE BASE OF HOT AND COLD WATER RISERS.
- 11) PLUMBING CONTRACTOR SHALL REQUIRES PANELS TO ACCESS THE CONCEALED PLUMBING CLEANOUTS, DRAINS, DEVICES AND CONTROLS. ACCESS PANELS SHALL BE FIRE RATED TO MATCH THE PENETRATING PARTITION OR CEILING TYPE. GENERAL CONTRACTOR SHALL INSTALL THE ACCESS PANELS.
- 12) INSTALL ALL FLOOR CLEANOUTS TO CLEAR EQUIPMENT.
- 13) PLUMBING CONTRACTOR SHALL OBTAIN AND PAY FOR ALL PERMITS, FEES AND CHARGES IN CONNECTION WITH THE WORK.
- 14) PLUMBING CONTRACTOR SHALL PROVIDE WATERTIGHT SLEEVES FOR ALL PIPES PASSING THRU BASEMENT WALLS.
- 15) INSTALL CLEANOUTS AT THE BASE OF ALL SANITARY STACKS.
- 16) INSTALL ALL HORIZONTAL RUNS OF PIPING AS HIGH AS POSSIBLE, PITCH ALL WATER PIPING TO DRAIN, DRAW OFFS AT ALL POINTS.
- 17) PLUMBING CONTRACTOR SHALL MAKE ALL FINAL CONNECTIONS TO OUTSIDE UTILITIES.
- 18) FOR PIPE SIZES NOT SHOWN ON PLANS SEE DETAILS & RISER DIAGRAMS.

INSULATION NOTES

THE FOLLOWING SYSTEMS SHALL BE INSULATED.

IECC 2012 REQUIREMENTS:

- 1. DOMESTIC HOT WATER MAINS AND BRANCHES:  
PIPING < 1” REQUIRES 1” INSULATION  
PIPING > 1½” REQUIRES 2” INSULATION
- GENERAL INSULATION REQUIREMENTS:

CW PIPING: ½” INSULATION  
HORIZONTAL STORM: ½” INSULATION

PIPING MATERIAL NOTES

SANITARY AND VENT: BELOW GROUND: SWCI WITH PUSH ON JOINTS.  
ABOVE GROUND: –SWCI WITH HUSKY 4–BAND CLAMPS  
WATER PIPING: TYPE ”L” COPPER WITH 95–5 SOLDER JOINTS  
GAS PIPING: SCHEDULE 40 ER/ERW BLACK STEEL WITH THREADED JOINTS OR WELDED.

PLUMBING SPECIFICATION

A. SCOPE OF WORK

- 1. SANITARY WASTE STORM AND VENT PIPING SYSTEM.
- 2. CONNECTION TO EXISTING SANITARY.
- 3. PLUMBING FIXTURES
- 4. WATER PIPING, VALVES, AND FITTINGS.
- 5. INSULATION.
- 6. PERMITS.
- 7. ALL CORE DRILLING AND PATCHING.

B. MATERIALS

- 1. SANITARY STORM AND VENT PIPING:

BELOW GROUND : CAST IRON  
ABOVE GROUND : CAST IRON  
WATER PIPING : TYPE ”L” COPPER

- 2. INSULATE ALL HOT AND COLD WATER PIPING WITH 1” FIBERGLASS INSULATION WITH ALL SERVICE JACKET. INSULATE PIPING BELOW HANDICAPPED LAVATORIES.
- 3. INSULATE HORIZONTAL STORM DRAIN WITH 1” FIBERGLASS INSULATION WITH ALL SERVICE JACKET.

3. PLUMBING FIXTURES:

REFER TO G.C. FOR PLUMBING FIXTURE SCHEDULE

C. EXECUTION

- 1. PRIOR TO BIDDING THE JOB THE CONTRACTOR SHALL VISIT THE JOB SITE AND VERIFY EXISTING CONDITIONS. REPORT ADVERSE CONDITIONS IN WRITING TO ARCHITECT.
- 2. ALL PLUMBING WORK SHALL COMPLY TO STATE AND LOCAL CODE REQUIREMENTS.
- 3. PLUMBING CONTRACTOR SHALL OBTAIN AND PAY FOR ALL PERMITS AND INSPECTIONS.
- 4. FURNISH ALL LABOR, MATERIALS, EQUIPMENT, AND SERVICES NECESSARY FOR THE PROPER AND COMPLETE INSTALLATION OF ALL PLUMBING WORK SHOWN ON THE DRAWING.
- 5. ALL NEW WASTE AND VENT PIPING SHALL BE APPROVED BY LOCAL INSPECTOR.
- 6. INSTALL BALL VALVE AND UNION ON ALL HOT AND COLD WATER CONNECTIONS TO EQUIPMENT.
- 7. GUARANTEE ALL WORK AND MATERIAL FOR ONE YEAR FROM THE DATE OF ACCEPTANCE.
- 8. ALL WATER PIPING IN EXTERIOR WALLS SHALL BE RUN ON THE WARM SIDE OF INSULATION



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No.	Description	Date
	Issued for permit	12/10/2020
01	Issued for permit	04/19/2021
02	Issued for Permit	10/052021

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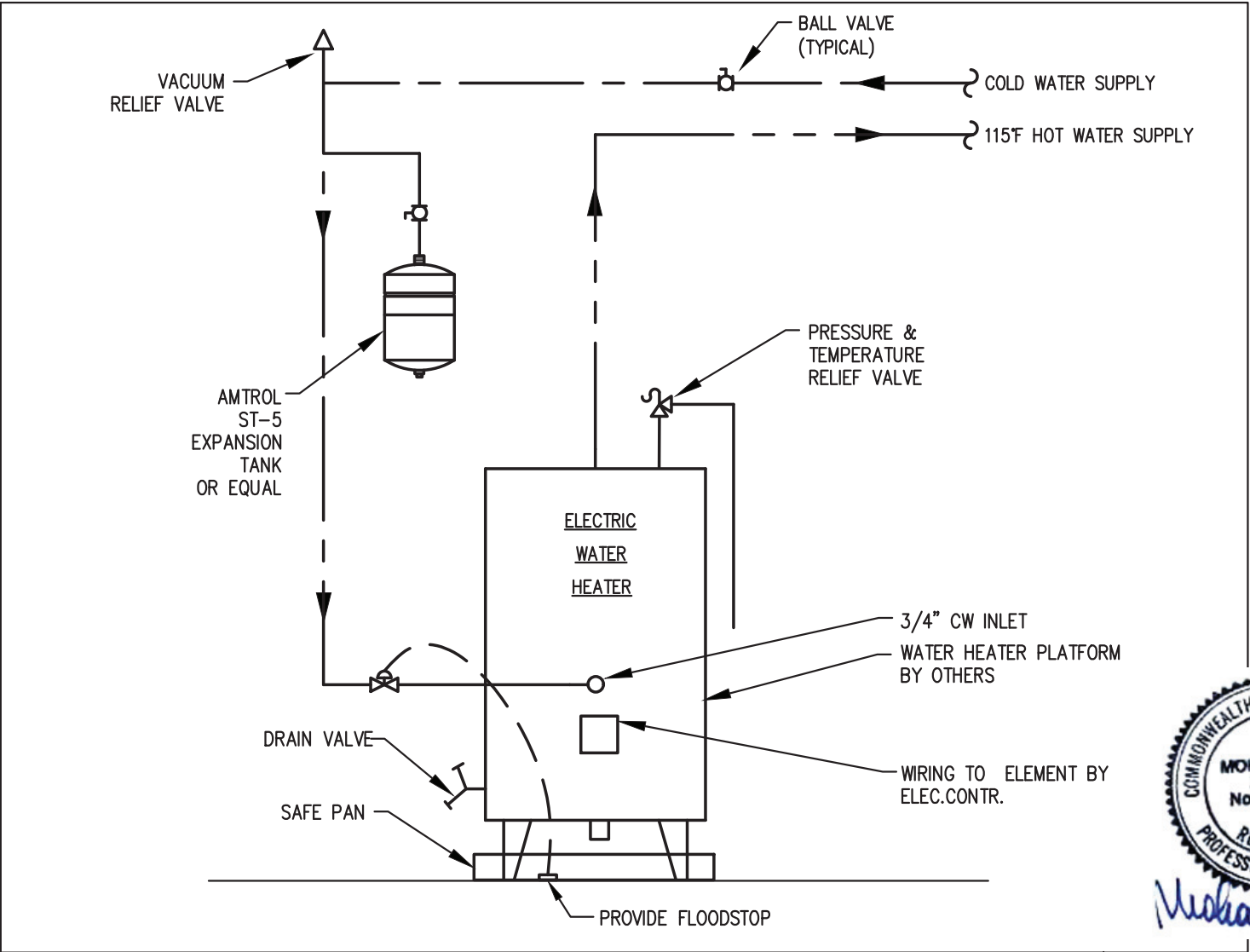
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SCHEDULE OF WATER HEATER

DESIGNATION	NAME	LOCATION	DESCRIPTION
EWH-1	ELECTRIC HOT WATER HEATER	MECHANICAL ROOM	STATE ELECTRIC WATER HEATER, MODEL ES6 DORT 20, 20 GAL. CAPACITY, 1.5 KW, 208V/1Ø, .93 EF, 21 GPH @90°F RISE RECOVERY, 31 GAL. FIRST HOUR RATING.

	EXISTING ABOVE FLOOR EXISTING UNDER FLOOR
	SANITARY ABOVE FLOOR SANITARY UNDER FLOOR
	VENT VENT BURIED
	COLD WATER HOT WATER
	HOT WATER CIRCULATION
	SHUT OFF VALVE
	CHECK VALVE
	FLOOR CLEANOUT CLEANOUT
	WALL CLEANOUT
	VENT RISER
	VENT THRU ROOF
	HUB DRAIN
	FLOOR DRAIN
	FLOOR CLEANOUT
	UNION
	HOSE BIBB
	ROOF DRAIN
	VENT STACK

PLUMBING LEGEND



ELECTRIC WATER HEATING PIPING DETAIL



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